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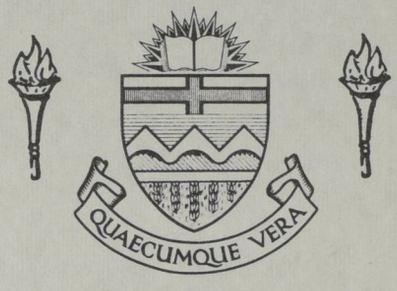

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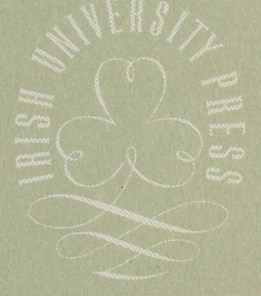

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Colonies

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1861–63

Colonies

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MAIL STEAMERS (NORTH AMERICA).

RETURN to an Order of the Honourable The House of Commons, dated 31 May 1861;—*for*,

A "RETURN for 1860 of all STEAMERS carrying MAILS between the United Kingdom and *North America*, with their Ports of Departure, Call, and Arrival, and Duration of Passage; showing the Despatch and Arrival of the Mails by each Steamer from and at *London* and *New York* respectively, with the Time occupied in Transmission; distinguishing between the BRITISH and UNITED STATES' PACKETS, and showing to which Companies they belonged, and whether Subsidized, or carrying Mails for Postage."

General Post Office,
26 June 1861.

ROWLAND HILL,
Secretary.

(*Mr. Baxter.*)

Ordered, by The House of Commons, *to be Printed,*
2 *July* 1861.

RETURN, for 1860, of all STEAMERS carrying MAILS between the United Kingdom and *North America*, with Mails by each Steamer from and at *London* and *New York* respectively, with the Time occupied in Transmission; belonged, and whether Subsidized or carrying Mails for Postage.

Note.—This Return relates only to such Steamers as were Mail Packets. The Post Office possesses no means of furnishing the

OUTWARD MAILS. - - - - - - - -

1. Despatch of Packet.		2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
Day.	Hour.						
1860:							
Jan. 4	2 30 p. m.	Anglo-Saxon -	Montreal Ocean -	British - -	Liverpool -	- - - - -	Portland - -
„ 7	7 30 „	Circassian -	Atlantic Royal Mail	ditto - -	Galway - -	- - - - -	St. John's, Newfoundland.
„ 7	9 50 a.m.	Africa - -	Cunard - - -	ditto - -	Liverpool -	- - - - -	New York -
„ 11	2 0 p.m.	Fulton - -	New York and Havre	United States -	Southampton -	- - - - -	- ditto - -
„ 11	2 0 „	Nova Scotian -	Montreal Ocean -	British - -	Liverpool -	Queenstown - -	Portland - -
„ 14	11 14 a.m.	America - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 18	4 0 p.m.	North American	Montreal Ocean -	ditto - -	- ditto - -	Queenstown - -	Portland - -
„ 21	10 17 a.m.	Asia - -	Cunard - - -	ditto - -	- ditto - -	- - - - -	New York -
„ 25	1 15 p.m.	North Briton -	Montreal Ocean -	ditto - -	- ditto - -	Queenstown - -	Portland - -
„ 28	11 0 a.m.	Canada - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
Feb. 1	2 0 p.m.	Arago - -	New York and Havre	United States -	Southampton -	- - - - -	New York -
„ 1	2 35 „	Bohemian -	Montreal Ocean -	British - -	Liverpool -	Queenstown - -	Portland - -
„ 4	7 0 „	Prince Albert -	Atlantic Royal Mail	ditto - -	Galway - -	- - - - -	St. John's -
„ 4	5 30 „	Arabia - -	Cunard - - -	ditto - -	Liverpool -	- - - - -	New York -
„ 8	0 10 „	Vigo - -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	- - - - -	- ditto - -
„ 8	11 30 a.m.	Hungarian -	Montreal Ocean -	British - -	- ditto - -	Queenstown - -	Wrecked off Cape
„ 11	11 0 „	Europa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 15	1 45 p.m.	Edinburgh -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	- - - - -	New York -
„ 15	2 15 „	Anglo-Saxon -	Montreal Ocean -	British - -	- ditto - -	Queenstown - -	Portland - -
„ 18	9 36 a.m.	Africa - -	Cunard - - -	ditto - -	- ditto - -	- - - - -	New York -
„ 23	2 0 p.m.	New York -	North German Lloyd	United States -	Southampton -	- - - - -	- ditto - -
„ 25	10 50 a.m.	America - -	Cunard - - -	British - -	Liverpool -	Queenstown and Halifax	Boston - -
„ 29	2 30 p.m.	City of Baltimore	Liverpool, New York and Philadelphia.	United States -	- ditto - -	- - - - -	New York -
„ 29	0 10 „	North American	Montreal Ocean -	British - -	- ditto - -	Queenstown - -	Portland - -
March 3	4 45 „	Asia - -	Cunard - - -	ditto - -	- ditto - -	- - - - -	New York -
„ 5	5 0 „	Circassian -	Atlantic Royal Mail	ditto - -	Galway - -	- - - - -	St. John's -
„ 7	2 0 „	Fulton - -	New York and Havre	United States -	Southampton -	- - - - -	New York -
„ 7	Noon -	North Briton -	Montreal Ocean -	British - -	Liverpool -	Queenstown - -	Portland - -
„ 10	0 19 p. m.	Canada - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 14	1 0 „	City of Washington	Liverpool, New York and Philadelphia.	United States -	- ditto - -	- - - - -	New York -
„ 14	0 45 „	Bohemian -	Montreal Ocean -	British - -	- ditto - -	Queenstown - -	Portland - -
„ 17	4 25 „	Arabia - -	Cunard - - -	ditto - -	- ditto - -	- - - - -	New York -
„ 21	11 45 a.m.	Kangaroo -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	- - - - -	- ditto - -
„ 21	11 43 „	Canadian -	Montreal Ocean -	British - -	- ditto - -	Queenstown - -	Portland - -
„ 24	10 55 „	Niagara - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 28	0 40 p.m.	Edinburgh -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 28	Noon -	Anglo-Saxon -	Montreal Ocean -	British - -	- ditto - -	- ditto - - -	Portland - -
„ 31	6 0 p.m.	Prince Albert -	Atlantic Royal Mail	ditto - -	Galway - -	- - - - -	St. John's -
„ 31	2 25 „	Persia - -	Cunard - - -	ditto - -	Liverpool -	Queenstown - -	New York -
April 4	2 0 „	Arago - -	New York and Havre	United States -	Southampton -	- - - - -	- ditto - -
„ 4	10 0 a.m.	North American	Montreal Ocean -	British - -	Liverpool -	Queenstown - -	Portland - -
„ 7	11 0 „	America - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 11	1 30 p.m.	City of Baltimore	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 11	0 45 „	Australasian -	Montreal Ocean -	British - -	- ditto - -	- ditto - - -	Portland - -
„ 14	3 30 „	Africa - -	Cunard - - -	ditto - -	- ditto - -	- ditto - - -	New York -
„ 18	2 0 „	Vanderbilt -	C. Vanderbilt - -	United States -	Southampton -	- - - - -	- ditto - -
„ 18	10 0 a.m.	North Briton -	Montreal Ocean -	British - -	Liverpool -	Queenstown and Rivière du Loup.	Quebec - -
„ 21	11 34 „	Canada - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 25	1 20 p.m.	City of Washington	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 25	1 30 „	Bohemian -	Montreal Ocean -	British - -	- ditto - -	Queenstown and Rivière du Loup.	Quebec - -
„ 28	6 0 „	Brazil - -	Atlantic Royal Mail	ditto - -	Galway - -	- - - - -	St. John's -
„ 28	0 50 „	Asia - -	Cunard - - -	ditto - -	Liverpool -	Queenstown - -	New York -
May 1	2 0 „	Illinois - -	C. Vanderbilt - -	United States -	Southampton -	- - - - -	- ditto - -
„ 2	2 0 „	Fulton - -	New York and Havre	ditto - -	- ditto - -	- - - - -	- ditto - -
„ 2	9 15 a.m.	Canadian -	Montreal Ocean -	British - -	Liverpool -	Queenstown - -	Quebec - -
„ 5	10 15 „	Europa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 9	2 0 p.m.	Adriatic - -	North Atlantic Steam Navigation.	United States -	Southampton -	- - - - -	New York -
„ 9	1 45 „	Anglo-Saxon -	Montreal Ocean -	British - -	Liverpool -	Queenstown - -	Quebec - -
„ 12	2 5 „	Persia - -	Cunard - - -	ditto - -	- ditto - -	- ditto - - -	New York -
„ 16	4 0 „	Palestine -	Montreal Ocean -	ditto - -	- ditto - -	- ditto - - -	Quebec - -

their Ports of Departure, Call and Arrival, and Duration of Passage; showing the Despatch and Arrival of the distinguishing between the BRITISH and UNITED STATES' PACKETS, and showing to which Companies they

information called for in respect to any Steamer which sailed during the period of the Return, but was not a Mail Packet.

OUTWARD MAILS.

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from London.		11. Mails arrived at New York.		12. Time occupied in Transmission of Mails.		13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.	Days.	Hours.	
1860:		D. H.	1860:		1860:				
- - Not known - -		- - -	Jan. - 3	8 0 p.m. -	- - No return - -		- -	- -	Subsidized.
Jan. - 20	7 30 a.m. -	12 12	„ - 6	8 0 „ -					- ditto.
„ - 23	1 0 „ -	15 5¼	„ - 6	8 0 p.m. -	Jan. - 23	1 0 a.m. -	16	17	- ditto.
„ - 28	Not known -	- - -	„ - 11	9 45 a.m. -					For postage.
„ - 28	11 15 a.m. -	16 21¼	„ - 11	8 0 p.m. -					Subsidized.
Feb. - 4	6 52 „ -	20 19¾	„ - 14	8 0 „ -	- - No return - -		- -	- -	- ditto.
„ - 4	9 30 „ -	16 17½	„ - 18	8 0 „ -					- ditto.
„ - 5	3 10 p.m. -	15 5	„ - 20	8 0 „ -	Feb. - 5	3 10 p.m. -	15	19¼	- ditto.
„ - 8	9 0 „ -	14 7¾	„ - 25	8 0 „ -					- ditto.
„ - 12	0 19 „ -	15 1¼	„ - 28	8 0 „ -					- ditto.
„ - 15	Not known -	- - -	Feb. - 1	9 45 a.m. -	- - No return - -		- -	- -	For postage.
„ - 14	11 50 a.m. -	12 21¼	„ - 1	8 0 p.m. -					Subsidized.
„ - 15	11 0 p.m. -	11 4	„ - 3	8 0 „ -					- ditto.
„ - 18	7 40 a.m. -	13 14¼	„ - 3	8 0 „ -	Feb. - 18	7 40 a.m. -	14	11¾	- ditto.
„ - 24	Not known -	- - -	„ - 7	8 0 „ -					For postage.
Sable - -	- - -	- - -	„ - 8	8 0 „ -					Subsidized.
Feb. - 24	7 30 a.m. -	12 20½	„ - 11	8 0 „ -	- - No return - -		- -	- -	- ditto.
Mar. - 1	Not known -	- - -	„ - 14	8 0 „ -					For postage.
„ - 1	2 45 p.m. -	14 23½	„ - 15	8 0 „ -					Subsidized.
„ - 4	9 53 a.m. -	15 0¼	„ - 17	8 0 „ -	Mar. - 4	9 35 a.m. -	15	13½	- ditto.
„ - 11	Not known -	- - -	„ - 22	9 45 a.m. -	- - No return - -		- -	- -	For postage.
„ - 13	6 0 p.m. -	17 7½	„ - 25	8 0 p.m. -					Subsidized.
„ - 14	11 15 a.m. -	13 20¾	„ - 28	8 0 „ -	Mar. - 14	11 15 a.m. -	14	15¼	For postage.
„ - 13	5 10 p.m. -	13 5	„ - 29	8 0 „ -	- - No return - -		- -	- -	Subsidized.
„ - 16	8 0 a.m. -	12 15¼	Mar. - 2	8 0 „ -	Mar. - 16	8 0 a.m. -	13	12	- ditto.
„ - 15	11 0 „ -	9 18	„ - 2	8 0 „ -	- - No return - -		- -	- -	- ditto.
„ - 20	8 30 „ -	12 18½	„ - 7	9 45 a.m. -	Mar. - 20	8 30 a.m. -	12	22¾	For postage.
„ - 21	11 50 „ -	13 23¾	„ - 7	8 0 p.m. -					
„ - 25	7 30 „ -	14 19¼	„ - 10	8 0 „ -	- - No return - -		- -	- -	Subsidized.
„ - 28	10 0 „ -	13 21	„ - 13	8 0 „ -	Mar. - 28	10 0 a.m. -	14	14	For postage.
„ - 27	9 0 „ -	12 20¼	„ - 14	8 0 „ -	- - No return - -		- -	- -	Subsidized.
„ - 30	8 18 „ -	12 16	„ - 16	8 0 „ -	Mar. - 30	8 18 a.m. -	13	12¼	- ditto.
April - 6	11 10 „ -	15 23½	„ - 20	8 0 „ -	April - 6	11 10 „ -	16	15¼	For postage.
„ - 6	11 30 p.m. -	16 11¾	„ - 21	8 0 „ -					Subsidized.
„ - 9	0 30 „ -	16 1½	„ - 24	8 0 „ -					- ditto.
„ - 12	Not known -	- - -	„ - 28	8 0 „ -	- - No return - -		- -	- -	For postage.
„ - 10	10 45 p.m. -	13 10¾	„ - 28	8 0 „ -					Subsidized.
„ - 9	11 30 a.m. -	8 17½	„ - 30	8 0 „ -					- ditto.
„ - 12	3 55 „ -	11 13	„ - 31	8 0 „ -	April - 12	3 55 a.m. -	11	8	- ditto.
„ - 18	Not known -	- - -	April - 4	9 45 a.m. -					For postage.
„ - 19	9 30 p.m. -	15 11½	„ - 4	8 0 p.m. -					Subsidized.
„ - 23	1 14 a.m. -	15 14¼	„ - 7	8 0 „ -					- ditto.
„ - 24	Not known -	- - -	„ - 11	8 0 „ -	- - No return - -		- -	- -	For postage
- - Not known - -		- - -	„ - 11	8 0 „ -					Subsidized.
April - 27	4 20 a.m. -	12 12¾	„ - 14	8 0 „ -	April - 27	4 20 a.m. -	12	8¼	- ditto.
„ - 28	9 15 „ -	9 19¼	„ - 18	9 45 a.m. -	„ - 28	9 15 „ -	9	23½	For postage.
May - 1	4 0 „ -	12 18	„ - 18	8 0 p.m. -					Subsidized.
„ - 4	6 0 „ -	12 18½	„ - 21	8 0 „ -	- - No return - -		- -	- -	- ditto.
„ - 7	8 45 „ -	11 19½	„ - 21	8 0 „ -	May - 7	8 45 a.m. -	15	12¾	For postage.
„ - 7	5 30 „ -	11 16	„ - 25	8 0 „ -					Subsidized.
„ - 6	2 0 p.m. -	7 20	- - -	- - -	- - No return - -		- -	- -	- ditto.
„ - 11	3 0 a.m. -	12 14¼	„ - 28	8 0 „ -	May - 11	3 0 a.m. -	12	7	- ditto.
„ - 13	Not known -	- - -	May - 1	9 45 a.m. -					For postage.
- - No return - -		- - -	„ - 2	0 45 „ -					- ditto.
- - ditto - - -		- - -	„ - 2	8 0 p.m. -					Subsidized.
May - 17	10 21 a.m. -	12 0	„ - 5	8 0 „ -	- - No return - -		- -	- -	- ditto.
„ - 19	Not known -	- - -	„ - 9	9 45 a.m. -					For postage.
- - No return - -		- - -	„ - 9	8 0 p.m. -					Subsidized.
May - 23	3 3 p.m. -	11 1	„ - 12	8 0 „ -	May - 23	3 3 p.m. -	10	19	- ditto.
„ - 28	4 0 „ -	12 0	„ - 16	8 0 „ -	- - No return - -		- -	- -	- ditto.

OUTWARD MAILS—*continued.*

1. Despatch of Packet. Day.	Hour.	2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
1860:							
May 16	3 45 p. m.	Glasgow	Liverpool, New York, and Philadelphia.	United States	Liverpool	Queenstown	New York
„ 19	9 45 a. m.	Arabia	Cunard	British	ditto	Queenstown and Halifax	Boston
„ 23	2 0 p. m.	Vanderbilt	C. Vanderbilt	United States	Southampton	- - - - -	New York
„ 23	1 0 „	Nova Scotia	Montreal Ocean	British	Liverpool	Queenstown and Rivière du Loup.	Quebec
„ 26	6 0 „	Prince Albert	Atlantic Royal Mail	ditto	Galway	- - - - -	St. John's
„ 26	11 40 a. m.	Africa	Cunard	ditto	Liverpool	Queenstown	New York
„ 30	2 0 p. m.	Arago	New York and Havre	United States	Southampton	- - - - -	ditto
„ 30	4 0 „	North Briton	Montreal Ocean	British	Liverpool	Londonderry	Quebec
June 2	9 50 a. m.	Niagara	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 6	2 0 p. m.	Illinois	C. Vanderbilt	United States	Southampton	Queenstown	New York
„ 6	1 10 „	Bohemian	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 9	11 55 a. m.	Asia	Cunard	ditto	ditto	Queenstown	New York
„ 13	2 0 p. m.	New York	North German Lloyd	United States	Southampton	- - - - -	ditto
„ 13	3 30 „	Melita	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 16	9 20 a. m.	Europa	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 20	2 0 p. m.	Adriatic	North Atlantic Steam Navigation.	United States	Southampton	- - - - -	New York
„ 20	1 0 „	Anglo-Saxon	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 23	Not known	Golden Fleece	Atlantic Royal Mail	ditto	Galway	- - - - -	St. John's, Newfoundland.
„ 23	11 10 a. m.	Persia	Cunard	ditto	Liverpool	Queenstown	New York
„ 27	4 15 p. m.	Parana	Atlantic Royal Mail	ditto	Galway	St. John's, Newfoundland	ditto
„ 27	2 0 „	Fulton	New York and Havre	United States	Southampton	- - - - -	ditto
„ 27	3 45 „	Palestine	Montreal Ocean	British	Liverpool	Londonderry and Rivière du Loup.	Quebec
„ 30	5 10 „	Arabia	Cunard	ditto	ditto	Queenstown and Halifax	Boston
July 4	2 0 „	Vanderbilt	C. Vanderbilt	United States	Southampton	- - - - -	New York
„ 4	11 0 a. m.	Nova Scotian	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 7	10 40 „	Africa	Cunard	ditto	ditto	Queenstown	New York
„ 11	2 30 p. m.	Connaught	Atlantic Royal Mail	ditto	Galway	St. John's, Newfoundland	Boston
„ 11	1 40 „	Vigo	Liverpool, New York, and Philadelphia.	United States	Liverpool	Queenstown	New York
„ 11	3 0 „	North Briton	Montreal Ocean	British	ditto	Galway and St. John's, Newfoundland.	Quebec
„ 14	4 0 „	Canada	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 18	2 0 „	Illinois	C. Vanderbilt	United States	Southampton	- - - - -	New York
„ 18	11 0 a. m.	Bohemian	Montreal Ocean	British	Liverpool	Londonderry and Rivière du Loup.	Quebec
„ 21	11 6 „	Asia	Cunard	ditto	ditto	Queenstown	New York
„ 24	2 30 p. m.	Prince Albert	Atlantic Royal Mail	ditto	Galway	St. John's, Newfoundland	ditto
„ 25	2 0 „	Arago	New York and Havre	United States	Southampton	- - - - -	ditto
„ 26	5 30 „	Canadian	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 28	4 8 „	Europa	Cunard	ditto	ditto	Queenstown and Halifax	Boston
August 1	2 0 „	Adriatic	North Atlantic Steam Navigation.	United States	Southampton	- - - - -	New York
„ 2	Noon	Anglo-Saxon	Montreal Ocean	British	Liverpool	Londonderry and Rivière du Loup.	Quebec
„ 4	10 30 a. m.	Persia	Cunard	ditto	ditto	Queenstown	New York
„ 7	3 0 p. m.	Parana	Atlantic Royal Mail	ditto	Galway	St. John's, Newfoundland	Boston
„ 8	2 0 „	New York	North German Lloyd	United States	Southampton	- - - - -	New York
„ 9	4 0 „	North American	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 11	1 55 „	Arabia	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 15	2 0 „	Vanderbilt	C. Vanderbilt	United States	Southampton	- - - - -	New York
„ 16	11 25 „	Nova Scotian	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 18	10 55 a. m.	Africa	Cunard	ditto	ditto	Queenstown	New York
„ 22	2 0 p. m.	Fulton	New York and Havre	United States	Southampton	- - - - -	ditto
„ 23	3 40 „	Palestine	Montreal Ocean	British	Liverpool	Londonderry and Rivière du Loup.	Quebec
„ 25	2 0 „	America	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 28	3 0 „	Prince Albert	Atlantic Royal Mail	ditto	Galway	St. John's	New York
„ 29	2 0 „	Illinois	C. Vanderbilt	United States	Southampton	- - - - -	ditto
„ 30	11 45 a. m.	Bohemian	Montreal Ocean	British	Liverpool	Londonderry	Quebec
Sept. 1	11 0 „	Asia	Cunard	ditto	ditto	Queenstown	New York
„ 5	2 0 p. m.	Bremen	North German Lloyd	United States	Southampton	- - - - -	ditto
„ 6	2 0 „	Jura	Montreal Ocean	British	Liverpool	Londonderry and Rivière du Loup.	Quebec
„ 8	1 19 „	Europa	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 12	2 0 „	Adriatic	North Atlantic	United States	Southampton	- - - - -	New York
„ 13	10 0 a. m.	Anglo-Saxon	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 15	9 40 „	Persia	Cunard	ditto	ditto	Queenstown	New York
„ 19	2 0 p. m.	Arago	New York and Havre	United States	Southampton	- - - - -	ditto
„ 20	3 0 „	North American	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 22	0 45 „	Canada	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 25	2 45 „	Connaught	Atlantic Royal Mail	ditto	Galway	Vessel lost on outward voyage	
„ 26	2 0 „	Vanderbilt	C. Vanderbilt	United States	Southampton	- - - - -	New York
„ 27	10 0 a. m.	North Briton	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 29	9 32 „	Africa	Cunard	ditto	ditto	Queenstown	New York
Oct. 3	2 0 p. m.	New York	North German Lloyd	United States	Southampton	- - - - -	ditto
„ 4	1 0 „	Nova Scotian	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 6	10 50 a. m.	Arabia	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 10	2 0 p. m.	Illinois	C. Vanderbilt	United States	Southampton	- - - - -	New York

- - - - - - - - - - OUTWARD MAILS—*continued.*

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from London.		11. Mails arrived at New York.		12. Time occupied in Transmission of Mails.		13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.	Days.	Hours.	
1860:		D. H.	1860:		1860:				
May - 30	11 0 a.m. -	13 19¼	May - 16	8 0 p.m. -	May - 30	11 0 a.m. -	13	15	For postage.
„ - 29	7 10 p.m. -	10 9½	„ - 19	8 0 „ -	- - No return - -		- -	- -	Subsidized.
June - 3	7 0 a.m. -	10 17	„ - 23	9 45 a.m. -	June - 3	7 0 a.m. -	10	21¼	For postage.
„ - 4	8 30 p.m. -	12 7½	„ - 23	8 0 p.m.	- - No return - -		- -	- -	Subsidized.
„ - 5	6 0 a.m. -	9 12	„ - 25	8 0 „					- ditto.
„ - 8	7 0 „ -	12 19¼	„ - 26	8 0 „ -	June - 8	7 0 a.m. -	12	11	- ditto.
„ 11	9 50 p.m. -	12 7¾	„ - 30	9 45 a.m. -	„ - 11	9 50 p.m. -	12	12	For postage.
„ - 11	10 0 a.m. -	11 18	„ - 30	8 0 p.m.					Subsidized.
„ - 15	7 55 a.m. -	12 21¾	June - 2	8 0 „	- - No return - -		- -	- -	- ditto.
- - No return - -		- - -	„ - 6	9 45 a.m.					For postage.
June - 18	7 25 a.m. -	11 18¼	„ - 6	8 0 p.m. -	- - No return - -		- -	- -	Subsidized.
„ - 21	7 30 „ -	11 19½	„ - 9	8 0 „ -	June - 21	7 30 a.m. -	11	11½	- ditto.
„ - 25	5 40 p.m. -	12 3¾	„ - 13	9 45 a.m. -	„ - 25	5 40 p.m. -	12	8	For postage.
- - No return - -		- - -	„ - 13	8 0 p.m.	- - No return - -		- -	- -	Subsidized.
June - 28	8 0 a.m. -	11 22¾	„ - 16	8 0 „					- ditto.
„ - 30	4 40 p.m. -	10 2¾	„ - 20	9 45 a.m. -	June - 30	4 40 p.m. -	10	7	For postage.
July - 1	2 22 a.m. -	10 13¼	„ - 20	8 0 p.m.	- - No return - -		- -	- -	Subsidized.
- - No return - -		- - -	„ - 22	8 0 „					- ditto.
July - 5	0 37 a.m. -	11 13½	„ - 23	8 0 „ -	July - 5	0 37 a.m. -	11	4½	- ditto.
„ - 9	10 0 a.m. -	11 17¾	„ - 25	8 0 „ -	„ - 9	10 0 „ -	13	14	- ditto.
„ - 9	3 40 „ -	11 13¾	„ - 27	9 45 a.m. -	„ - 9	3 40 „ -	11	18	For postage.
„ - 8	8 0 p.m. -	11 4¼	„ - 27	8 0 p.m.	- - No return - -		- -	- -	Subsidized.
„ - 12	4 45 a.m. -	11 11½	„ - 30	8 0 „					- ditto.
„ - 15	3 20 „ -	10 13¼	July - 4	9 45 a.m. -	July - 15	3 20 a.m. -	10	17½	For postage.
„ - 16	10 0 „ -	11 23	„ - 4	8 0 p.m. -	- - No return - -		- -	- -	Subsidized.
„ - 20	10 45 „ -	13 0	„ - 7	8 0 „ -	July - 20	10 45 a.m. -	12	14¾	- ditto.
„ - 24	5 0 p.m. -	12 14½	„ - 10	8 0 „ -	- - No return - -		- -	- -	- ditto.
„ - 27	9 45 a.m. -	15 20	„ - 11	8 0 „ -	July - 27	9 45 a.m. -	15	13¾	For postage.
„ - 26	1 30 p.m. -	14 22½	„ - 12	8 0 „	- - No return - -		- -	- -	Subsidized.
„ - 27	5 35 a.m. -	12 13½	„ - 14	8 0 „					- ditto.
August 1	6 0 p.m. -	14 4	„ - 18	9 45 a.m. -	August 1	6 0 p.m. -	14	8¼	For postage.
July - 30	4 30 a.m. -	11 17½	„ - 18	8 0 p.m. -	- - No return - -		- -	- -	Subsidized.
August 2	3 30 p.m. -	12 4½	„ - 21	8 0 „ -	August 2	3 30 p.m. -	11	19½	- ditto.
„ - 4	Noon - -	10 21½	„ - 23	8 0 „ -	„ - 4	Noon - -	11	16	- ditto.
„ - 7	0 40 a.m. -	12 10¾	„ - 25	9 45 a.m. -	„ - 7	0 40 a.m. -	12	15	For postage.
„ - 8	9 30 p.m. -	13 4	„ - 26	8 0 p.m. -	„ - 9	11 0 „ -	13	15	Subsidized.
„ - 9	5 30 „ -	12 1¼	„ - 28	8 0 „ -	- - No return - -		- -	- -	- ditto.
„ - 11	8 0 a.m. -	9 18	August 1	9 45 a.m. -	August 11	8 0 a.m. -	9	22¼	For postage.
„ - 15	10 30 a.m. -	12 22½	„ - 2	8 0 p.m. -	„ - 16	10 45 p.m. -	14	2¾	Subsidized.
„ - 15	6 52 „ -	10 20¼	„ - 4	8 0 „ -	„ - 15	6 52 a.m. -	10	10¾	- ditto.
„ - 18	3 5 „ -	10 12	„ - 6	8 0 „ -	- - No return - -		- -	- -	- ditto.
„ - 21	0 45 „ -	12 10¾	„ - 8	9 45 a.m. -	August 21	0 45 a.m. -	12	15	For postage.
„ - 20	7 0 p.m. -	11 3	„ - 9	8 0 p.m. -	„ - 22	10 40 „ -	12	14¾	Subsidized.
„ - 22	2 35 „ -	11 0¾	„ - 11	8 0 „ -	„ - 23	6 10 „ -	11	10¼	- ditto.
„ - 26	3 7 „ -	11 1	„ - 15	9 45 a.m. -	„ - 26	3 7 p.m. -	11	5¼	For postage.
„ - 28	16 35 a.m. -	11 19¼	„ - 16	8 0 p.m. -	„ - 29	10 45 a.m. -	12	14¾	Subsidized.
„ - 31	2 35 „ -	12 15¾	„ - 18	8 0 „ -	„ - 31	2 35 „ -	12	6½	- ditto.
Sept. - 4	7 50 „ -	12 17¾	„ - 22	9 45 a.m. -	Sept. - 4	7 50 „ -	12	22	For postage.
„ - 4	8 0 p.m. -	12 4¼	„ - 23	8 0 p.m. -	„ - 4	10 45 „ -	11	14¾	Subsidized.
„ - 8	11 50 a.m. -	13 21¾	„ - 25	8 0 „ -	„ - 8	11 45 p.m. -	14	3¾	- ditto.
„ - 9	5 0 p.m. -	12 2	„ - 27	8 0 „ -	„ - 9	5 0 „ -	12	21	- ditto.
„ - 12	6 40 „ -	14 4¾	„ - 29	9 45 a.m. -	„ - 12	6 40 „ -	14	9	For postage.
„ - 10	1 30 „ -	11 1¾	„ - 30	8 0 p.m. -	„ - 13	3 0 „ -	13	19	Subsidized.
„ - 13	0 45 „ -	12 1¾	Sept. - 1	8 0 „ -	„ - 13	0 45 „ -	11	16¾	- ditto.
„ - 19	1 0 „ -	13 23	„ - 5	9 45 a.m. -	„ - 19	1 0 „ -	14	3¼	For postage.
„ - 16	Midnight -	10 10	„ - 6	8 0 p.m. -	„ - 18	10 50 a.m. -	11	14¾	Subsidized.
„ - 21	9 50 a.m. -	12 20½	„ - 8	8 0 „ -	„ - 21	11 55 p.m. -	13	4	- ditto.
„ - 24	1 5 „ -	11 11	„ - 12	9 45 a.m. -	„ - 24	1 5 a.m. -	11	15¼	For postage.
„ - 26	7 30 „ -	12 21½	„ - 13	8 0 p.m. -	„ - 27	10 45 „ -	13	14¾	Subsidized.
„ - 27	0 50 „ -	11 15¼	„ - 15	8 0 „ -	„ - 27	0 50 „ -	11	4¾	- ditto.
October 3	9 40 „ -	13 19¾	„ - 19	9 45 a.m. -	October 3	9 40 „ -	14	- -	For postage.
„ - 2	6 0 p.m. -	12 3	„ - 20	8 0 p.m. -	„ - 4	10 50 „ -	13	14¾	Subsidized.
„ - 5	7 15 a.m. -	12 18½	„ - 22	8 0 „ -	„ - 5	5 35 p.m. -	12	21½	- ditto.
- - -	- - -	- - -	„ - 24	8 0 „ -	- - -	- - -	- -	- -	- ditto.
October 7	0 15 a.m. -	10 10¼	„ - 26	9 45 a.m. -	„ - 7	0 15 a.m. -	10	14½	For postage.
„ - 12	5 30 „ -	14 19½	„ - 27	8 0 p.m. -	„ - 13	10 40 „ -	15	14¾	Subsidized.
„ - 12	2 0 p.m. -	13 4½	„ - 29	8 0 „ -	„ - 12	2 0 p.m. -	12	18	- ditto.
„ - 17	7 15 a.m. -	13 17¼	October 3	9 45 a.m. -	„ - 17	7 15 a.m. -	13	21½	For postage.
„ - 19	11 0 „ -	14 22	„ - 4	8 0 p.m. -	„ - 20	9 45 p.m.	16	1¾	Subsidized.
„ - 17	1 50 p.m. -	11 3	„ - 6	8 0 „ -	„ - 18	0 10 a.m. -	11	4¼	- ditto.
„ - 30	7 0 „ -	20 5	„ - 10	9 45 a.m. -	„ - 30	7 0 p.m. -	20	9¼	For postage.

Outward Mails—*continued.*

1. Despatch of Packet. Day.	1. Despatch of Packet. Hour.	2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
1860:							
Oct. 11	4 0 p. m.	Canadian	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 13	10 0 a. m.	Asia	Cunard	ditto	ditto	Queenstown	New York
„ 17	2 0 p. m.	Fulton	New York and Havre	United States	Southampton	- - - - -	ditto
„ 18	1 0 „	Bohemian	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 20	1 29 „	Europa	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 23	1 10 „	Prince Albert	Atlantic Royal Mail	ditto	Galway	St. John's	New York
„ 25	4 0 „	Anglo-Saxon	Montreal Ocean	ditto	Liverpool	Londonderry	Quebec
„ 26	2 0 „	Adriatic	North Atlantic	United States	Southampton	- - - - -	New York
„ 27	9 40 a. m.	Persia	Cunard	British	Liverpool	Queenstown	ditto
„ 31	2 0 p. m.	Bremen	North German Lloyd	United States	Southampton	- - - - -	ditto
Nov. 1	0 45 „	North American	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 3	10 36 a. m.	Canada	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 7	2 0 p. m.	Vanderbilt	C. Vanderbilt	United States	Southampton	- - - - -	New York
„ 8	2 25 „	Palestine	Montreal Ocean	British	Liverpool	Londonderry	Portland
„ 10	8 40 a. m.	Africa	Cunard	ditto	ditto	Queenstown	New York
„ 14	2 0 p. m.	Arago	New York and Havre	United States	Southampton	- - - - -	ditto
„ 15	1 0 „	Nova Scotian	Montreal Ocean	British	Liverpool	Londonderry	Portland
„ 17	11 0 a. m.	Arabia	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 21	2 0 p. m.	Saxonia	Hamburgh American Company.	United States	Southampton	- - - - -	New York
„ 22	2 30 „	Canadian	Montreal Ocean	British	Liverpool	Londonderry	Portland
„ 24	8 45 a. m.	Asia	Cunard	ditto	ditto	Queenstown	New York
„ 28	2 0 p. m.	New York	North German Lloyd	United States	Southampton	- - - - -	ditto
„ 29	Noon	North Briton	Montreal Ocean	British	Liverpool	Londonderry	Portland
Dec. 1	11 20 a. m.	Europa	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 5	2 0 p. m.	Atlantic	North Atlantic	United States	Southampton	- - - - -	New York
„ 6	2 0 „	Bohemian	Montreal Ocean	British	Liverpool	Londonderry	Portland
„ 8	4 26 „	Persia	Cunard	ditto	ditto	Queenstown	New York
„ 12	2 0 „	Fulton	New York and Havre	United States	Southampton	- - - - -	ditto
„ 13	11 45 a. m.	Anglo-Saxon	Montreal Ocean	British	Liverpool	Londonderry	Portland
„ 15	10 40 „	Canada	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 19	1 10 p. m.	Kangaroo	Liverpool, New York and Philadelphia.	United States	ditto	Queenstown	New York
„ 20	1 45 „	North American	Montreal Ocean	British	ditto	Londonderry	Portland
„ 22	2 40 „	Australasian	Cunard	ditto	ditto	Queenstown	New York
„ 27	11 10 a. m.	Nova Scotian	Montreal Ocean	ditto	ditto	Londonderry	Portland
„ 29	10 35 „	America	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 31	2 0 p. m.	Bremen	North German Lloyd	United States	Southampton	- - - - -	New York

In the case of all Mail Packets proceeding to New York, the time given in column 11 is the time at which the packet arrived at New York. In all other

HOMEWARD MAILS.

1. Despatch of Packet. Day.	1. Despatch of Packet. Hour.	2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
1860:							
Jan. 5	6 0 a. m.	Asia	Cunard	British	New York	- - - - -	Liverpool
„ 7	Noon	Arago	New York and Havre	United States	ditto	- - - - -	Southampton
„ 7	Not known	North Briton	Montreal Ocean	British	Portland	Queenstown	Liverpool
„ 10	2 0 p. m.	Prince Albert	Atlantic Royal Mail	ditto	St. John's, Newfoundland.	- - - - -	Galway
„ 11	1 20 „	Canada	Cunard	ditto	Boston	Halifax and Queenstown	Liverpool
„ 14	Noon	Kangaroo	Liverpool, New York and Philadelphia.	United States	New York	- - - - -	ditto
„ 14	Not known	Bohemian	Montreal Ocean	British	Portland	Queenstown	ditto
„ 18	1 10 p. m.	Arabia	Cunard	ditto	New York	- - - - -	ditto
„ 21	Noon	New York	North German Lloyd	United States	ditto	- - - - -	Southampton
„ 21	Not known	Hungarian	Montreal Ocean	British	Portland	Queenstown	Liverpool
„ 25	0 5 p. m.	Europa	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 28	Noon	Edinburgh	Liverpool, New York and Philadelphia.	United States	New York	- - - - -	ditto
„ 28	3 30 p. m.	Anglo-Saxon	Montreal Ocean	British	Portland	Queenstown	ditto
Feb. 1	1 35 „	Africa	Cunard	ditto	New York	- - - - -	ditto
„ 4	Noon	Fulton	New York and Havre	United States	ditto	- - - - -	Southampton
„ 4	10 15 p. m.	Nova Scotian	Montreal Ocean	British	Portland	Queenstown	Liverpool
„ 8	1 30 „	America	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 9	9 0 a. m.	Circassian	Atlantic Royal Mail	ditto	St. John's	- - - - -	Galway
„ 11	Noon	City of Baltimore.	Liverpool, New York and Philadelphia.	United States	New York	- - - - -	Liverpool
„ 11	5 30 p. m.	North American	Montreal Ocean	British	Portland	Queenstown	ditto
„ 15	0 30 „	Asia	Cunard	ditto	New York	ditto	ditto
„ 18	Noon	City of Washington.	Liverpool, New York and Philadelphia.	United States	ditto	- - - - -	ditto

- - - - - - - - - - OUTWARD MAILS—*continued.*

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from London.		11. Mails arrived at New York.		12. Time occupied in Transmission of Mails.		13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.	Days.	Hours.	
1860:		D. H.	1860:		1860:				
October 26	9 0 p.m.	15 5	October 11	8 0 p.m.	October 30	8 15 a.m.	18	12¼	Subsidized.
„ - 28	3 35 „	15 5½	„ - 13	8 0 „	„ - 28	3 35 p.m.	14	19½	- ditto.
„ - 31	5 50 „	14 3¾	„ - 17	9 45 a.m.	„ - 31	5 50 „	14	8	For postage.
Nov. - 2	1 0 „	15 0	„ - 18	8 0 p.m.	Nov. - 4	10 45 a.m.	16	14¾	Subsidized.
„ - 4	1 30 „	15 0	„ - 20	8 0 „	„ - 5	5 30 „	15	9½	- ditto.
„ - 7	5 10 „	15 4	„ - 22	8 0 „	„ - 7	5 10 p.m.	15	21¼	- ditto.
„ - 6	3 0 „	11 23	„ - 25	8 0 „	„ - 8	10 50 a.m.	13	14¾	- ditto.
„ - 5	10 0 a.m.	9 20	„ - 26	9 45 a.m.	„ - 5	10 0 „	10	0¾	For postage.
„ - 6	11 15 p.m.	10 13½	„ - 27	8 0 p.m.	„ - 6	11 15 p.m.	10	3¼	Subsidized.
„ - 12	2 25 a.m.	11 12½	„ - 31	9 45 a.m.	„ - 12	2 25 a.m.	11	16¾	For postage.
„ - 11	8 0 p.m.	10 7¼	Nov. - 1	8 0 p.m.	„ - 13	7 0 „	11	11	Subsidized.
„ - 15	1 5 a.m.	11 14½	„ - 3	8 0 „	- - No return - -		- -	- -	- ditto.
„ - 18	1 40 p.m.	10 23¾	„ - 7	9 45 a.m.	Nov. - 18	1 40 p.m.	11	4	For postage.
„ - 21	2 0 „	12 23½	„ - 8	8 0 p.m.	„ - 22	11 55 „	14	4	Subsidized.
„ - 23	1 30 „	13 4¾	„ - 10	8 0 „	„ - 23	1 30 „	12	17½	- ditto.
„ - 28	6 10 a.m.	13 16¼	„ - 14	9 45 a.m.	„ - 28	6 10 a.m.	13	20½	For postage.
„ - 28	4 0 „	12 15	„ - 15	8 0 p.m.	„ - 29	1 10 „	13	5¼	Subsidized.
„ - 29	8 40 „	11 21¾	„ - 17	8 0 „	- - No return - -		- -	- -	- ditto.
- - No return - -		- - -	„ - 21	9 45 a.m.					For postage.
Dec. - 5	4 30 p.m.	13 2	„ - 22	8 0 p.m.	Dec. - 7	0 10 a.m.	14	4¼	Subsidized.
„ - 7	5 30 „	13 8¾	„ - 24	8 0 „	„ - 7	5 30 p.m.	12	21¼	- ditto.
„ - 14	1 0 a.m.	15 11	„ - 28	9 45 a.m.	„ - 14	1 0 a.m.	15	15¼	For postage.
„ - 12	9 0 p.m.	13 9	„ - 29	8 0 p.m.	„ - 14	0 40 „	14	4¾	Subsidized.
„ - 15	10 8 a.m.	13 22¾	Dec. - 1	8 0 „	- - No return - -		- -	- -	- ditto.
„ - 19	9 25 „	13 19½	„ - 5	9 45 a.m.	Dec. - 19	9 25 a.m.	13	23¾	For postage.
„ - 19	7 0 p.m.	13 5	„ - 6	8 0 p.m.	- - No return - -		- -	- -	Subsidized.
„ - 20	1 40 „	11 21¼	„ - 8	8 0 „	Dec. - 20	1 40 p.m.	11	17¾	- ditto.
„ - 22	1 0 „	9 23	„ - 12	9 45 a.m.	„ - 22	1 0 „	10	3¼	For postage.
„ - 25	10 0 a.m.	11 22¼	„ - 13	8 0 p.m.	- - No return - -		- -	- -	Subsidized.
„ - 26	7 45 p.m.	11 9	„ - 15	8 0 „					- ditto.
„ - 31	10 50 a.m.	11 21¾	„ - 19	8 0 „	Dec. - 31	10 50 a.m.	11	14¾	For postage.
„ - 31	11 0 a.m.	10 21¼	„ - 20	8 0 „	- - No return - -		- -	- -	Subsidized.
1861:					1861:				
January 3	2 10 „	11 11½	„ - 22	8 0 „	January 3	2 10 a.m.	11	6¼	- ditto.
„ - 9	11 0 p.m.	13 11¾	„ - 27	8 0 „	- - No return - -		- -	- -	- ditto.
„ - 13	Noon - -	15 1½	„ - 29	8 0 „					- ditto.
„ - 15	4 35 p.m.	15 2½	„ - 31	9 45 a.m.	January 15	4 35 p.m.	15	6¾	For postage.

cases the time given in this column is that at which the mails reached the New York Post Office, including the time occupied in the transit overland.

- - - - - - - - - HOMEWARD MAILS.

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from New York.		11. Mails arrived in London.		12. Time occupied in Transmission of Mails.		13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.	Days.	Hours.	
1860:		D. H.	1860:		1860:				
January 16	3 55 a.m.	10 22	January 5	6 0 a.m.	January 16	3 10 p.m.	11	9¼	Subsidized.
„ - 20	2 0 p.m.	13 2	„ - 7	Noon - -	„ - 20	6 41 „	13	6¾	For postage.
„ - 18	8 20 a.m.	- - -	- - No return - -		„ - 18	11 25 a.m.	- -	- -	Subsidized.
„ - 16	11 0 „	5 21			„ - 18	5 5 „	- -	- -	- ditto.
„ - 23	10 15 „	11 21	January 10	- - -	„ - 23	10 14 p.m.	- -	- -	- ditto.
„ - 26	9 30 „	11 21½	„ - 14	Noon - -	„ - 26	10 5 „	12	10	For postage.
„ - 25	1 0 p.m.	- - -	- - No return - -		„ - 25	10 15 „	- -	- -	Subsidized.
„ - 29	7 30 „	11 6½	January 18	1 10 p.m.	„ - 30	5 10 a.m.	11	16	- ditto.
February 2	6 30 „	12 6½	„ - 21	Noon - -	February 2	5 20 „	11	17¼	For postage.
„ - 2	6 0 a.m.	- - -	- - No return - -		„ - 2	5 15 „	- -	- -	Subsidized.
„ - 5	8 0 „	10 20	January 24	- - -	„ - 5	6 45 p.m.	- -	- -	- ditto.
„ - 10	0 25 „	12 12½	„ - 28	Noon - -	„ - 10	11 30 a.m.	12	23½	For postage.
„ - 8	3 0 p.m.	10 23½	- - No return - -		„ - 8	11 20 p.m.	- -	- -	Subsidized.
„ - 13	9 25 a.m.	11 19¾	February 1	1 35 p.m.	„ - 13	9 55 „	12	8¼	- ditto.
„ - 17	10 15 „	12 22¼	„ - 4	Noon - -	„ - 17	3 45 „	13	3¾	For postage.
„ - 16	10 15 p.m.	12 0	- - No return - -		„ - 17	5 56 a.m.	- -	- -	Subsidized.
„ - 21	1 30 „	13 0	February 7	- - -	„ - 21	11 40 p.m.	- -	- -	- ditto.
„ - 16	10 0 „	7 13	- - No return - -		„ - 18	5 40 a.m.	- -	- -	- ditto.
„ - 23	7 25 a.m.	11 19½	February 11	Noon - -	„ - 23	3 5 p.m.	12	3	For postage.
„ - 23	4 30 „	11 11	- - No return - -		„ - 23	5 20 a.m.	- -	- -	Subsidized.
„ - 27	2 5 „	11 13½	February 15	0 30 p.m.	„ - 27	3 20 p.m.	12	2¾	- ditto.
March - 1	1 45 p.m.	12 1¾	„ - 18	Noon - -	March - 1	9 55 „	11	10	For postage.

HOMEWARD MAILS—*continued.*

1. Despatch of Packet. Day.	Hour.	2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
1860:							
Feb. 18	4 45 p. m.	North Briton	Montreal Ocean	British	Portland	Queenstown	Liverpool
„ 22	0 10 „	Canada	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 25	Noon	Kangaroo	Liverpool, New York, and Philadelphia.	United States	New York		ditto
„ 25	2 30 p. m.	Bohemian	Montreal Ocean	British	Portland	Queenstown	ditto
March 1	Midnight	Arabia	Cunard	ditto	New York		ditto
„ 3	Noon	Arago	New York and Havre	United States	ditto		Southampton
„ 4	9 0 p. m.	Anglo-Saxon	Montreal Ocean	British	Portland	Queenstown	Liverpool
„ 6	7 0 „	Prince Albert	Atlantic Royal Mail	ditto	St. John's		Galway
„ 7	0 5 „	Europa	Cunard	ditto	Boston	Halifax and Queenstown	Liverpool
„ 10	Noon	Edinburgh	Liverpool, New York, and Philadelphia.	United States	New York		ditto
„ 14	0 10 p. m.	Africa	Cunard	British	ditto		ditto
„ 17	Noon	New York	North German Lloyd	United States	ditto		Southampton
„ 17	4 55 p. m.	North American	Montreal Ocean	British	Portland	Queenstown	Liverpool
„ 21	10 10 a. m.	America	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 24	Noon	Vanderbilt	C. Vanderbilt	United States	New York		Southampton
„ 24	3 45 p. m.	Nova Scotian	Montreal Ocean	British	Portland	Queenstown	Liverpool
„ 28	0 15 „	Asia	Cunard	ditto	New York		ditto
„ 31	4 0 „	North Briton	Montreal Ocean	ditto	Portland	Queenstown	ditto
„ 31	Noon	Fulton	New York and Havre	United States	New York		Southampton
April 4	10 8 a. m.	Canada	Cunard	British	Boston	Halifax and Queenstown	Liverpool
„ 4	6 0 „	Circassian	Atlantic Royal Mail	ditto	St. John's		Galway
„ 7	Noon	Illinois	C. Vanderbilt	United States	New York		Southampton
„ 7	4 15 p. m.	Bohemian	Montreal Ocean	British	Portland	Queenstown	Liverpool
„ 11	11 15 a. m.	Arabia	Cunard	ditto	New York		ditto
„ 14	Noon	Adriatic	North Atlantic	United States	ditto		Southampton
„ 14	5 0 p. m.	Canadian	Montreal Ocean	British	Portland	Queenstown	Liverpool
„ 18	9 45 a. m.	Niagara	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 21	Noon	Edinburgh	Liverpool, New York and Philadelphia.	United States	New York		ditto
„ 21	4 30 p. m.	Anglo-Saxon	Montreal Ocean	British	Portland	Queenstown	ditto
„ 25	10 50 a. m.	Persia	Cunard	ditto	New York	ditto	ditto
„ 28	Noon	Arago	New York and Havre	United States	ditto		Southampton
„ 28	4 0 p. m.	North American	Montreal Ocean	British	Portland	Queenstown	Liverpool
May 1	4 0 a. m.	Prince Albert	Atlantic Royal Mail	ditto	St. John's		Galway
„ 2	10 0 „	America	Cunard	ditto	Boston	Halifax and Queenstown	Liverpool
„ 5	3 0 p. m.	Vanderbilt	C. Vanderbilt	United States	New York		Southampton
„ 5	5 0 „	Australasian	Montreal Ocean	British	Portland	Queenstown	Liverpool
„ 9	10 35 a. m.	Africa	Cunard	ditto	New York	ditto	ditto
„ 12	Noon	New York	North German Lloyd	United States	ditto		Southampton
„ 12	10 0 a. m.	North Briton	Montreal Ocean	British	Quebec	Queenstown	Liverpool
„ 16	9 12 „	Canada	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 19	2 0 p. m.	Illinois	C. Vanderbilt	United States	New York		Southampton
„ 19	10 0 a. m.	Bohemian	Montreal Ocean	British	Quebec	Queenstown	Liverpool
„ 23	10 0 „	Asia	Cunard	ditto	New York	ditto	ditto
„ 26	Noon	Fulton	New York and Havre	United States	ditto		Southampton
„ 26	10 0 a. m.	Canadian	Montreal Ocean	British	Quebec	Queenstown	Liverpool
„ 30	9 10 „	Europa	Cunard	ditto	Boston	Halifax and Queenstown	ditto
June 1	11 0 a. m.	Brazil	Atlantic Royal Mail	ditto	St. John's		Galway
„ 2	10 10 „	Anglo-Saxon	Montreal Ocean	ditto	Quebec	Rivière du Loup and Queenstown.	Liverpool
„ 2	2 0 p. m.	Adriatic	North Atlantic Steam Navigation.	United States	New York		Southampton
„ 6	9 45 a. m.	Persia	Cunard	British	ditto	Queenstown	Liverpool
„ 9	Noon	Glasgow	Liverpool, New York and Philadelphia.	United States	ditto		ditto
„ 9	10 30 a. m.	Palestine	Montreal Ocean	British	Quebec	Queenstown	ditto
„ 13	10 55 „	Arabia	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 16	2 0 p. m.	Vanderbilt	C. Vanderbilt	United States	New York		Southampton
„ 16	10 0 a. m.	Nova Scotian	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 20	9 8 „	Africa	Cunard	ditto	New York	Queenstown	ditto
„ 23	Noon	Arago	New York and Havre	United States	ditto		ditto
„ 23	10 0 a. m.	North Briton	Montreal Ocean	British	Quebec	Londonderry	ditto
„ 26	5 0 „	Prince Albert	Atlantic Royal Mail	ditto	St. John's		Galway
„ 27	1 38 p. m.	Niagara	Cunard	ditto	Boston	Halifax and Queenstown	Liverpool
„ 30	Noon	Illinois	C. Vanderbilt	United States	New York		Southampton
„ 30	10 0 a. m.	Bohemian	Montreal Ocean	British	Quebec	Londonderry	Liverpool
July 4	9 0 a. m.	Asia	Cunard	ditto	New York	Queenstown	ditto
„ 7	Noon	New York	North German Lloyd	United States	ditto		Southampton
„ 7	10 0 a. m.	Melita	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 11	0 45 p. m.	Europa	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 14	0 30 „	Adriatic	North Atlantic	United States	New York		Southampton
„ 14	10 30 a. m.	Anglo-Saxon	Montreal Ocean	British	Quebec	Rivière du Loup and Londonderry.	Liverpool
„ 17	4 0 p. m.	Parana	Atlantic Royal Mail	ditto	New York	St. John's	Galway
„ 18	4 23 „	Persia	Cunard	ditto	ditto	Queenstown	Liverpool
„ 21	Noon	Fulton	New York and Havre	United States	ditto		Southampton
„ 21	10 0 a. m.	Palestine	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 25	Not known	Golden Fleece	Atlantic Royal Mail	ditto	St. John's		Galway
„ 25	1 0 p. m.	Arabia	Cunard	ditto	Boston	Halifax and Queenstown	Liverpool
„ 28	Noon	Vanderbilt	C. Vanderbilt	United States	New York		Southampton
„ 28	10 0 a. m.	Nova Scotian	Montreal Ocean	British	Quebec	Londonderry	Liverpool

- - - - - - - - - - HOMEWARD MAILS—*continued.*

8. Date of Arrival of Packet. Day.	Hour.	9. Duration of Passage. D.	H.	10. Mails despatched from New York. Day.	Hour.	11. Mails arrived in London. Day.	Hour.	12. Time occupied in Transmission of Mails. Days.	Hours.	13. Whether Packet Subsidized, or carrying Mails for Postage.
1860:				1860:		1860:				
Feb. 29	1 55 p. m.	10	21¼	- - No return	- -	Feb. - 29	10 45 p. m.	- -	- -	Subsidized.
March 4	9 10 „	11	9	Feb. - 21	- - -	March - 5	5 15 „	- -	- -	- ditto.
„ - 8	11 40 a. m.	11	23¾	„ - 25	Noon - -	„ - 8	10 5 „	11	10	For postage.
„ - 7	9 5 p. m.	11	6½	- - No return	- -	„ - 8	5 30 a. m.	- -	- -	Subsidized.
„ - 12	6 25 „	10	18½	March - 1	Midnight -	„ - 13	5 20 „	11	5¼	- ditto.
„ - 16	7 10 „	13	7¼	„ - 3	Noon - -	„ - 16	10 0 p. m.	13	10	For postage.
„ - 16	5 50 a. m.	11	8¾	- - No return	- -	„ - 16	11 35 a. m.	- -	- -	Subsidized.
„ - 13	7 0 „	6	12			„ - 14	0 30 p. m.	- -	- -	- ditto.
„ - 19	7 0 p. m.	12	7	March - 6	- - -	„ - 20	5 50 a. m.	- -	- -	- ditto.
„ - 22	10 52 a. m.	11	23	„ - 10	Noon - -	„ - 22	8 45 p. m.	12	8¾	For postage.
„ - 26	3 10 „	11	15	„ - 14	0 10 p. m.	„ - 26	3 15 „	12	3	Subsidized.
„ - 30	6 0 p. m.	13	6	„ - 17	Noon - -	„ - 30	10 15 „	13	10¼	For postage.
„ - 29	9 30 a. m.	11	16½	- - -	- - -	„ - 29	11 30 a. m.	- -	- -	Subsidized.
April 2	8 40 „	11	22½	March - 20	- - -	April - 2	5 25 p. m.	- -	- -	- ditto.
„ - 4	8 50 „	10	20¾	„ - 24	Noon - -	„ - 4	Noon - -	11	- -	For postage.
„ - 5	10 35 p. m.	12	6¾	- - No return	- -	„ - 6	5 53 a. m.	- -	- -	Subsidized.
„ - 8	0 40 „	11	0½	March - 28	0 15 p. m.	„ - 9	5 15 „	11	17	- ditto.
„ - 11	8 15 „	11	4¼	- - No return	- -	„ - 12	5 23 „	- -	- -	- ditto.
„ - 11	3 30 „	11	3½	March - 31	Noon - -	„ - 11	8 20 p. m.	11	8¼	For postage.
„ - 15	5 0 „	11	6¾	April - 3	- - -	„ - 16	5 20 a. m.	- -	- -	Subsidized.
„ - 13	7 0 „	9	13	- - No return	- -	„ - 15	5 0 „	- -	- -	- ditto.
„ - 23	11 30 a. m.	15	23½	April - 7	Noon - -	„ - 23	3 30 p. m.	16	3½	For postage.
„ - 19	8 0 p. m.	12	3¾	- - No return	- -	„ - 20	5 15 a. m.	- -	- -	Subsidized.
„ - 22	9 40 „	11	10½	April - 11	11 15 a. m.	„ - 23	5 10 „	11	18	- ditto.
„ - 25	2 0 a. m.	10	14	„ - 14	Noon - -	„ - 25	10 25 „	10	22½	For postage.
„ - 27	1 20 p. m.	12	20	- - No return	- -	„ - 27	11 30 „	- -	- -	Subsidized.
„ - 30	6 30 a. m.	11	20¾	April - 17	- - -	„ - 30	11 35 „	- -	- -	- ditto.
May 6	2 5 a. m.	15	14	„ - 21	Noon - -	May - 6	6 40 p. m.	15	6¾	For postage.
„ - 3	7 15 „	11	14¾	- - No return	- -	„ - 3	5 0 a. m.	- -	- -	Subsidized.
„ - 5	11 0 „	10	0¼	April - 25	10 50 a. m.	„ - 6	5 0 „	10	18¼	- ditto.
„ - 12	2 0 „	13	14	„ - 28	Noon - -	„ - 12	6 10 „	13	18¼	For postage.
„ - 10	4 15 p. m.	12	0¼	- - No return	- -	„ - 11	5 11 „	- -	- -	Subsidized.
„ - 8	2 30 „	7	10½			„ - 10	5 0 „	- -	- -	- ditto.
„ - 15	0 55 „	13	3	May - 1	- - -	„ - 16	5 5 „	- -	- -	- ditto.
„ - 16	1 45 a. m.	10	10¾	„ - 5	3 0 p. m.	„ - 16	4 0 p. m.	11	1	For postage.
„ - 17	8 0 „	11	15	- - No return	- -	„ - 17	11 30 a. m.	- -	- -	Subsidized.
„ - 20	8 45 „	10	22¼	May - 9	10 35 a. m.	„ - 21	5 6 „	11	18½	- ditto.
„ - 25	6 0 p. m.	13	6	„ - 12	Noon - -	„ - 25	10 55 p. m.	13	11	For postage.
„ - 24	11 30 „	12	13½	- - No return	- -	„ - 25	5 16 a. m.	- -	- -	Subsidized.
„ - 28	3 30 „	12	6¼	May - 15	- - -	„ - 29	5 13 „	- -	- -	- ditto.
June 1	1 30 „	12	23¼	„ - 19	2 0 p. m.	June - 1	5 15 p. m.	12	3¼	For postage.
„ - 1	7 30 a. m.	12	21½	- - No return	- -	„ - 1	11 25 a. m.	- -	- -	Subsidized.
„ - 3	2 45 p. m.	11	4¾	May - 23	10 0 a. m.	„ - 4	5 15 „	11	19¼	- ditto.
„ - 7	2 30 a. m.	11	14½	„ - 26	Noon - -	„ - 7	6 7 „	11	18	For postage.
„ - 12	4 45 p. m.	17	6¾	- - No return	- -	„ - 12	5 10 „	- -	- -	Subsidized.
„ - 10	4 45 „	11	7½	May - 29	- - -	„ - 11	5 12 „	- -	- -	- ditto.
„ - 12	3 30 a. m.	10	16½	- - No return	- -	- - -	- - -	- -	- -	- ditto.
„ - 14	6 30 „	11	20¼			„ - 14	11 20 a. m.	- -	- -	- ditto.
„ - 12	0 20 p. m.	9	22¼	June - 2	2 0 p. m.	„ - 12	4 10 p. m.	10	2¼	For postage.
„ - 16	6 25 a. m.	9	20¾	„ - 6	9 45 a. m.	„ - 16	11 30 a. m.	10	1¾	Subsidized.
„ - 22	3 47 p. m.	13	3¾	„ - 9	Noon - -	„ - 22	11 30 „	12	23½	For postage.
„ - 22	11 0 a. m.	13	0½	- - No return	- -	„ - 22	11 25 „	- -	- -	Subsidized.
„ - 23	3 25 p. m.	10	4½	June - 12	- - -	„ - 24	5 40 „	- -	- -	- ditto.
„ - 26	6 30 „	10	4½	„ - 16	2 0 p. m.	„ - 26	10 45 p. m.	10	8¾	For postage.
„ - 27	7 0 „	11	9	- - No return	- -	„ - 28	5 15 a. m.	- -	- -	Subsidized.
July 2	7 30 a. m.	11	22¼	June - 20	9 8 a. m.	July - 2	11 30 „	12	2¼	- ditto.
„ - 6	8 30 p. m.	13	8½	„ - 23	Noon - -	„ - 6	11 35 p. m.	13	11½	For postage.
„ - 4	3 22 a. m.	10	17¼	- - No return	- -	„ - 4	11 20 a. m.	- -	- -	Subsidized.
„ - 2	4 0 „	5	23			„ - 3	- - -	- -	- -	- ditto.
„ - 8	11 40 p. m.	11	10	June - 27	- - -	„ - 9	5 5 a. m.	- -	- -	- ditto.
„ - 13	3 0 „	13	3	„ - 30	Noon - -	„ - 13	6 25 p. m.	13	6½	For postage.
„ - 10	8 0 „	10	10	- - No return	- -	„ - 11	5 16 a. m.	- -	- -	Subsidized.
„ - 15	5 30 „	11	8½	July - 4	9 0 a. m.	„ - 16	5 10 „	11	20¼	- ditto.
„ - 19	7 30 a. m.	11	19½	„ - 7	Noon - -	„ - 19	11 35 „	11	23½	For postage.
„ - 19	11 7 „	12	1	- - No return	- -	„ - 20	5 20 „	- -	- -	Subsidized.
„ - 22	4 15 „	10	15½	July - 10	- - -	„ - 22	5 33 „	- -	- -	- ditto.
„ - 24	11 30 „	9	23	„ - 14	0 30 p. m.	„ - 24	3 15 p. m.	10	2¾	For postage.
„ - 24	2 20 p. m.	10	3¾	- - No return	- -	„ - 25	5 10 a. m.	- -	- -	Subsidized.
„ - 28	2 5 „	10	21	July - 17	4 0 p. m.	„ - 30	5 0 „	12	13	- ditto.
„ - 28	5 30 a. m.	9	13	„ - 18	4 23 „	„ - 29	5 0 „	10	12½	- ditto.
August 2	2 0 „	11	14	„ - 21	Noon - -	August 2	5 45 „	11	17¾	For postage.
July 31	10 0 p. m.	10	12	- - No return	- -	„ - 1	5 7 „	- -	- -	Subsidized.
August 2	9 0 a. m.	-	-			„ - 3	Noon - -	- -	- -	- ditto.
„ - 4	11 15 „	9	22¼	July - 24	- - -	„ - 5	5 15 a. m.	- -	- -	- ditto.
„ - 7	8 50 „	9	20¾	„ - 28	Noon - -	„ - 7	0 10 „	9	12¼	For postage.
„ - 7	6 0 p. m.	10	8	- - No return	- -	„ - 8	5 15 „	- -	- -	Subsidized.

HOMEWARD MAILS—*continued.*

1. Despatch of Packet.		2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
Day.	Hour.						
1860:							
August 1	3 30 p.m.	Africa	Cunard	British	New York	Queenstown	Liverpool
„ 4	Noon	Bremen	North German Lloyd	United States	ditto	- - - - -	Southampton
„ 4	9 45 a.m.	North Briton	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 7	0 20 p.m.	Connaught	Atlantic Royal Mail	ditto	Boston	St. John's	Galway
„ 8	11 4 a.m.	Canada	Cunard	ditto	ditto	Halifax and Queenstown	Liverpool
„ 11	Noon	Illinois	C. Vanderbilt	United States	New York	- - - - -	Southampton
„ 11	10 0 a.m.	Bohemian	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 14	1 0 p.m.	Prince Albert	Atlantic Royal Mail	ditto	New York	St. John's	Galway
„ 15	1 30 „	Asia	Cunard	ditto	ditto	Queenstown	Liverpool
„ 18	Noon	Arago	New York and Havre	United States	ditto	- - - - -	Southampton
„ 18	10 0 a.m.	Canadian	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 22	11 20 „	Europa	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 25	Noon	Adriatic	North Atlantic	United States	New York	- - - - -	Southampton
„ 25	10 30 a.m.	Anglo-Saxon	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 28	9 30 „	Parana	Atlantic Royal Mail	ditto	Boston	St. John's	Galway
„ 29	3 44 p.m.	Persia	Cunard	ditto	New York	Queenstown	Liverpool
Sept. 1	Noon	New York	North German Lloyd	United States	ditto	- - - - -	Southampton
„ 1	10 0 a.m.	North American	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 5	11 20 „	Arabia	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 8	Noon	Vanderbilt	C. Vanderbilt	United States	New York	- - - - -	Southampton
„ 8	10 0 a.m.	Nova Scotian	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 11	3 0 p.m.	Prince Albert	Atlantic Royal Mail	ditto	New York	St. John's	Galway
„ 12	1 40 „	Africa	Cunard	ditto	ditto	Queenstown	Liverpool
„ 15	Noon	Fulton	New York and Havre	United States	ditto	- - - - -	Southampton
„ 15	11 30 a.m.	Palestine	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 19	10 40 „	America	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 22	2 0 p.m.	Illinois	C. Vanderbilt	United States	New York	- - - - -	Southampton
„ 22	2 0 „	Bohemian	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 26	1 15 „	Asia	Cunard	ditto	New York	Queenstown	ditto
„ 29	3 0 „	Bremen	North German Lloyd	United States	ditto	- - - - -	Southampton
„ 29	10 30 a.m.	Jura	Montreal Ocean	British	Quebec	Londonderry	Liverpool
Oct. 3	11 10 „	Europa	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 6	10 0 a.m.	Adriatic	North Atlantic	United States	New York	- - - - -	Southampton
„ 6	10 0 „	Anglo-Saxon	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 10	1 31 p.m.	Persia	Cunard	ditto	New York	Queenstown	ditto
„ 13	Noon	Arago	New York and Havre	United States	ditto	- - - - -	Southampton
„ 13	9 50 a.m.	North America	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 17	11 4 „	Canada	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 20	Noon	Vanderbilt	C. Vanderbilt	United States	New York	- - - - -	Southampton
„ 20	10 10 a.m.	North Briton	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 24	1 0 p.m.	Africa	Cunard	ditto	New York	Queenstown	ditto
„ 27	Noon	New York	North German Lloyd	United States	ditto	- - - - -	Southampton
„ 27	10 0 a.m.	Nova Scotian	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 31	11 0 „	Arabia	Cunard	ditto	Boston	Halifax and Queenstown	ditto
Nov. 3	Noon	Borussia	Hamburg American Company.	United States	New York	- - - - -	Southampton
„ 4	7 0 a.m.	Canadian	Montreal Ocean	British	Quebec	Londonderry	ditto
„ 7	0 10 p.m.	Asia	Cunard	ditto	New York	Queenstown	Liverpool
„ 10	Noon	Fulton	New York and Havre	United States	ditto	- - - - -	Southampton
„ 10	10 30 a.m.	Bohemian	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 14	11 10 „	Europa	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 17	Noon	Atlantic	North Atlantic	United States	New York	- - - - -	Southampton
„ 17	10 0 a.m.	Anglo-Saxon	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 20	0 15 p.m.	Prince Albert	Atlantic Royal Mail	ditto	New York	St. John's	Galway
„ 21	1 0 „	Persia	Cunard	ditto	ditto	Queenstown	Liverpool
„ 24	Noon	Bremen	North German Lloyd	United States	ditto	- - - - -	Southampton
„ 24	10 0 a.m.	North American	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 28	10 33 „	Canada	Cunard	ditto	Boston	Halifax and Queenstown	ditto
Dec. 1	1 0 p.m.	City of Baltimore	Liverpool, New York and Philadelphia.	United States	New York	- - - - -	ditto
„ 1	4 0 „	Palestine	Montreal Ocean	British	Portland	Londonderry	ditto
„ 5	0 10 „	Africa	Cunard	ditto	New York	Queenstown	ditto
„ 8	Noon	Arago	New York and Havre	United States	ditto	- - - - -	Southampton
„ 8	5 45 p.m.	Nova Scotian	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 12	11 0 a.m.	Arabia	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 15	Noon	City of Washington.	Liverpool, New York and Philadelphia.	United States	New York	- - - - -	ditto
„ 15	4 0 p.m.	Canadian	Montreal Ocean	British	Portland	Londonderry	ditto
„ 19	Noon	Asia	Cunard	ditto	New York	Queenstown	ditto
„ 22	Noon	New York	North German Lloyd	United States	ditto	- - - - -	Southampton
„ 22	5 0 p.m.	North Briton	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 26	10 23 a.m.	Europa	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 29	Noon	Etna	Liverpool, New York and Philadelphia.	United States	New York	- - - - -	ditto
„ 29	4 0 p.m.	Bohemian	Montreal Ocean	British	Portland	Londonderry	ditto

In the case of all Mail Packets sailing from New York, the day and hour given in column 10 are those on which the

HOMEWARD MAILS—*continued.*

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from New York.		11. Mails arrived in London.		12. Time occupied in Transmission of Mails.		13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.	Days.	Hours.	
1860:		D. H.	1860:		1860:				
August 12	6 0 p.m.	11 2¼	August 1	3 30 p.m.	August 13	5 50 a.m.	11	14¼	Subsidized.
„ 17	7 0 a.m.	12 19	„ 4	Noon	„ 17	11 45 „	12	23¾	For postage.
„ 15	8 0 „	10 22¼	No return		„ 15	11 25 „			Subsidized.
„ 20	5 20 „	12 17	August 7		„ 21	5 20 „			ditto.
„ 21	11 30 „	13 0½	„ 7		„ 22	5 20 „			ditto.
„ 24	10 0 „	12 22	„ 11	Noon	„ 24	1 45 p.m.	13	1¾	For postage.
„ 21	10 30 p.m.	10 12½	No return		„ 22	5 20 a.m.			Subsidized.
„ 24	5 0 „	10 4	August 14	1 0 p.m.	„ 26	5 0 „	11	16	ditto.
„ 26	3 30 „	11 2	„ 15	1 30 „	„ 27	5 8 „	11	15¾	ditto.
„ 30	11 30 „	12 11½	„ 18	Noon	„ 31	3 15 „	12	15¼	For postage.
„ 28	8 0 „	10 10	No return		„ 29	5 20 „			Subsidized.
Sept. 2	2 34 „	11 3¼	August 21		Sept. 3	5 20 „			ditto.
„ 4	11 30 „	10 11½	„ 25	Noon	„ 4	3 15 p.m.	10	3½	For postage.
„ 5	5 0 a.m.	10 18½	No return		„ 6	5 20 a.m.			Subsidized.
„ 7	6 45 „	9 21¼	August 28		„ 8	11 25 „			ditto.
„ 8	4 26 „	9 12¾	„ 29	3 44 p.m.	„ 8	11 25 „	9	19¾	ditto.
„ 14	10 15 „	12 22¼	Sept. 1	Noon	„ 14	1 5 p.m.	13	1	For postage.
„ 11	Noon	10 2	No return		„ 12	5 25 a.m.			Subsidized.
„ 15	9 40 p.m.	10 10½	Sept. 4		„ 16	5 0 „			ditto.
„ 19	7 30 a.m.	10 19½	„ 8	Noon	„ 19	11 45 „	10	23¾	For postage.
„ 20	3 0 „	11 17	No return		„ 19	0 2 „			Subsidized.
„ 21	4 30 p.m.	10 1½	Sept. 11	3 0 p.m.	„ 23	5 0 „	11	14	ditto.
„ 23	2 0 „	11 0¼	„ 12	1 40 „	„ 24	5 16 „	11	15½	ditto.
„ 26	4 0 „	11 4	„ 15	Noon	„ 26	8 20 p.m.	11	8¼	For postage.
„ 26	11 30 „	11 12	No return		„ 26	5 25 a.m.			Subsidized.
„ 30	11 57 a.m.	11 1¼	Sept. 18		October 1	5 15 „			ditto.
October 6	10 30 „	13 20½	„ 22	2 0 p.m.	„ 6	0 40 p.m.	13	22¾	For postage.
„ 2	11 0 p.m.	10 9	No return		„ 3	7 40 a.m.			Subsidized.
„ 7	6 18 a.m.	10 17	Sept. 26	1 15 p.m.	„ 7	7 14 „	10	18	ditto.
„ 11	5 30 p.m.	12 2½	„ 29	3 0 „	„ 11	10 40 p.m.	12	7¾	For postage.
„ 9	6 0 a.m.	9 19½	No return		„ 9	6 50 „			Subsidized.
„ 14	9 16 p.m.	11 10	October 2		„ 15	5 15 a.m.			ditto.
„ 16	3 0 „	10 5	„ 6	10 0 a.m.	„ 16	6 30 p.m.	10	8½	For postage.
„ 16	11 0 „	10 13	No return		„ 17	7 35 a.m.			Subsidized.
„ 20	1 0 „	9 23½	October 10	1 31 p.m.	„ 20	6 47 p.m.	10	5¼	ditto.
„ 26	10 30 a.m.	12 22½	„ 13	Noon	„ 26	1 0 „	13	1	For postage.
„ 23	7 50 p.m.	9 10	No return		„ 23	6 50 „			Subsidized.
„ 28	7 40 „	11 8½	October 16		„ 29	5 25 a.m.			ditto.
Nov. 1	4 0 „	12 4	„ 20	Noon	Nov. 1	8 15 p.m.	12	8¼	For postage.
„ 1	11 50 „	12 13¾	No return		October 31	10 30 a.m.			Subsidized.
„ 5	1 0 „	12 0	October 24	1 0 p.m.	Nov. 5	6 50 p.m.	12	5¾	ditto.
Landed mails at Plymouth 12 November.	11 0 a.m.		„ 27	Noon	„ 13	5 10 a.m.	16	17¼	For postage.
Nov. 8	6 0 p.m.	12 8	No return		Nov. 8	6 47 p.m.			Subsidized.
„ 12	8 10 a.m.	11 21¼	October 30		„ 12	7 20 a.m.			ditto.
„ 18	6 0 „	14 18	Nov. 3	Noon	„ 18	1 15 p.m.	15	1¼	For postage.
„ 15	10 0 „	11 3	No return		„ 15	6 55 „			Subsidized.
„ 19	3 11 p.m.	12 3	Nov. 7	0 10 p.m.	„ 19	6 45 „	12	6½	ditto.
„ 23	1 30 a.m.	12 13⅓	„ 10	Noon	„ 23	5 1 a.m.	12	17	For postage.
„ 24	7 0 p.m.	14 8½	No return		„ 25	7 40 „			Subsidized.
„ 26	9 18 „	12 10¼	Nov. 13		„ 26	7 53 p.m.			ditto.
„ 30	1 30 a.m.	12 13½	„ 17	Noon	„ 30	5 0 a.m.	12	17	For postage.
„ 29	11 0 p.m.	12 13	No return		„ 29	6 48 p.m.			Subsidized.
Dec. 5	3 40 a.m.	14 15½	Nov. 20	0 15 p.m.	Dec. 6	6 40 a.m.	15	18½	ditto.
„ 2	1 15 p.m.	11 0¼	„ 21	1 0 „	„ 3	5 20 „	11	16¼	ditto.
„ 6	0 25 „	12 0½	„ 24	Noon	„ 6	3 10 p.m.	12	3⅓	For postage.
„ 7	4 30 a.m.	12 18½	No return		„ 7	7 20 a.m.			Subsidized.
„ 9	9 30 p.m.	11 11½	Nov. 27		„ 10	7 30 „			ditto.
„ 12	8 55 „	11 8	Dec. 1	1 0 p.m.	„ 13	5 20 „	11	16¼	For postage.
„ 14	10 0 a.m.	12 18	No return		„ 14	7 30 „			Subsidized.
„ 18	1 0 „	12 12¾	Dec. 5	0 10 p.m.	„ 17	6 25 p.m.	12	6¼	ditto.
„ 21	4 15 p.m.	13 4¼	„ 8	Noon	„ 21	8 15 „	13	8¼	For postage.
„ 20	9 0 a.m.	11 15¼	No return		„ 20	8 0 „			Subsidized.
„ 23	Noon	11 1	Dec. 11		„ 24	9 30 a.m.			ditto.
„ 30	2 35 p.m.	15 2½	„ 15	Noon	„ 31	5 45 „	15	17¾	For postage.
„ 29	10 0 a.m.	13 18	No return		„ 29	7 10 p.m.			Subsidized.
1861:					1861:				
January 2	6 6 a.m.	13 18	Dec. 19	Noon	January 2	8 18 a.m.	13	20¼	ditto.
„ 6	10 15 p.m.	15 10¼	„ 22	Noon	„ 7	1 15 „	15	13¼	For postage.
„ 7	6 0 a.m.	15 13	No return		„ 7	7 30 „			Subsidized.
„ 7	1 0 p.m.	12 2½	Dec. 25		„ 7	7 4 p.m.			ditto.
„ 10	9 15 a.m.	11 21¼	„ 29	Noon	„ 10	9 15 „	12	9¼	For postage.
„ 10	9 0 „	11 17	No return		„ 10	8 30 a.m.			Subsidized.

packet sailed from New York. In no other case can the hour at which the mails were despatched from New York be given.

William James Page,
Principal Clerk for Foreign and Colonial Business.

MAIL STEAMERS (NORTH AMERICA).

RETURN, for 1860, of all STEAMERS carrying MAILS between the United Kingdom and *North America*, with their Ports of Departure, Call, and Arrival, and Duration of Passage; showing the Despatch and Arrival of the Mails by each Steamer from and at *London* and *New York* respectively, with the Time occupied in Transmission; distinguishing between the British and United States' Packets, and showing to which Companies they belonged, and whether Subsidized, or carrying Mails for Postage.

(*Mr. Baxter.*)

Ordered, by The House of Commons, *to be Printed,*
2 *July* 1861.

395.

Under 2 oz.

MAIL STEAMERS (NORTH AMERICA).

RETURN to an Order of the Honourable The House of Commons, dated 4 June 1861;--*for*,

A RETURN "of all STEAMERS carrying MAILS between the United Kingdom and *North America*, with their Ports of Departure, Call, and Arrival, and Duration of Passage; showing the Despatch and Arrival of the Mails by each Steamer from and at *London* and *New York* respectively, with the Time occupied in Transmission; distinguishing between the BRITISH and UNITED STATES' PACKETS, and showing to which Companies they belonged, and whether Subsidized, or carrying Mails for Postage, from the 1st day of January to the 31st day of May 1861 (in continuation of the Return ordered on the 31st day of May)."

General Post Office,
1 August 1861.

J. TILLEY,
Assistant Secretary.

(*Sir Edward Grogan.*)

Ordered, by The House of Commons, *to be Printed*,
6 *August* 1861.

RETURN of all STEAMERS carrying MAILS between the United Kingdom and *North America*, with their
by each Steamer from and at *London* and *New York* respectively, with the Time occupied in Transmission;
belonged, and whether Subsidized, or carrying Mails for Postage, from the 1st day of January to the 31st day

Note.—This Return relates only to such Steamers as were Mail Packets. The Post Office possesses no means of furnishing the

OUTWARD MAILS. - - - - - - - -

1. Despatch of Packet.		2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
Day.	Hour.						
1861:							
Jan. 2	1 30 p. m.	Edinburgh -	Liverpool, New York and Philadelphia.	United States -	Liverpool -	Queenstown - -	New York -
„ 3	4 0 „	Canadian -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 5	1 30 „	Asia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 9	2 0 „	Arago - -	New York and Havre	United States -	Southampton -	- - - - -	- ditto - -
„ 10	11 0 a.m.	North Briton -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 12	11 38 „	Niagara - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 16	1 20 p. m.	Etna - -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 17	3 0 „	Bohemian -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 19	11 55 a.m.	Arabia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 23	5 0 p.m.	Vigo - -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	- ditto - - -	- ditto - -
„ 24	4 15 „	Anglo-Saxon -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 26	10 45 a.m.	Canada - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 29	2 0 p. m.	New York -	North German Lloyd	United States -	Southampton -	- - - - -	New York -
„ 30	1 15 „	City of Baltimore	Liverpool, New York and Philadelphia.	ditto - -	Liverpool -	Queenstown - -	- ditto - -
„ 31	1 30 „	North American	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
Feb. 2	11 40 a.m.	Africa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 6	2 0 p. m.	Fulton - -	New York and Havre	United States -	Southampton -	- - - - -	- ditto - -
„ 7	10 10 a. m.	Nova Scotian -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 9	10 35 „	America - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 13	0 50 p.m.	Edinburgh -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 14	2 30 „	Canadian -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 16	11 50 a. m.	Australasian -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	Broke down, and returned to Queenstown.
„ 20	2 0 p. m.	Bremen - -	North German Lloyd	United States -	Southampton -	- - - - -	New York -
„ 21	6 15 „	North Briton -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 23	10 21 a.m.	Niagara - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 27	0 35 p.m.	Etna - -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 28	1 0 „	Palestine - -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
March 2	11 45 a. m.	Arabia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 6	2 0 p. m.	Arago - -	New York and Havre	United States -	Southampton -	- - - - -	- ditto - -
„ 8	8 40 a.m.	Bohemian -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 9	9 40 „	Canada - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 13	0 50 p.m.	City of Baltimore	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 14	11 30 a. m.	North American	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 16	10 30 „	Africa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 20	2 0 p.m.	New York -	North German Lloyd	United States -	Southampton -	- - - - -	- ditto - -
„ 21	3 0 „	Nova Scotian -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 23	8 25 a.m.	America - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 27	11 30 „	Edinburgh -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 28	Noon -	Canadian -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 30	Noon -	Persia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
April 3	2 0 p.m.	Fulton - -	New York and Havre	United States -	Southampton -	- - - - -	- ditto - -
„ 4	3 50 „	North Briton -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 6	9 7 a.m.	Niagara - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 9	1 10 p.m.	Columbia -	Atlantic Royal Mail	ditto - -	Galway - -	St. John's - - -	- ditto - -
„ 10	0 5 „	City of Washington	Liverpool, New York and Philadelphia.	United States -	Liverpool -	Queenstown - -	New York -
„ 11	2 0 „	Jura - -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 13	10 50 a.m.	Asia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 17	2 0 p. m.	Bremen - -	North German Lloyd	United States -	Southampton -	- - - - -	- ditto - -
„ 18	1 15 „	Bohemian -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Quebec - -
„ 20	3 30 „	Arabia - -	Cunard - - -	ditto - -	- ditto - -	Halifax and Queenstown	Boston - -
„ 23	1 15 „	Adriatic - -	Atlantic Royal Mail	ditto - -	Galway - -	St. John's - - -	New York -
„ 24	10 55 „	City of Baltimore	Liverpool, New York and Philadelphia.	United States -	Liverpool -	Queenstown - -	- ditto - -
„ 25	11 0 a.m.	North American	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 27	10 42 „	Africa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -

Ports of Departure, Call and Arrival, and Duration of Passage; showing the Despatch and Arrival of the Mails distinguishing between the BRITISH and UNITED STATES' PACKETS, and showing to which Companies they of May 1861.

information called for in respect to any Steamer which sailed during the period of the Return, but was not a Mail Packet.

OUTWARD MAILS.

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from London.		11. Mails arrived at New York.		12. Time occupied in Transmission of Mails.	13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.		
1861:		D. H.	1861:		1861:		D. H.	
Jan. - 17	10 25 p.m. -	15 9	Jan. - 2	8 0 p.m. -	Jan. - 17	10 25 p.m. -	15 2½	For postage.
„ - 17	4 0 „ -	14 0	„ - 3	8 0 „ -	„ - 18	11 55 „ -	15 4	Subsidized.
„ - 19	8 0 a.m. -	13 18½	„ - 5	8 0 „ -	„ - 19	8 0 a.m. -	13 12	- ditto.
„ - 23	9 0 „ -	13 19	„ - 9	9 45 a.m. -	„ - 23	9 0 „ -	13 23¼	For postage.
„ - 23	4 30 p.m. -	13 5½	„ - 10	8 0 p.m. -	„ - 25	1 15 p.m. -	14 17¼	Subsidized.
„ - 20	5 20 a.m. -	13 17¾	„ - 12	8 0 „ -	- - No return - -		- - -	- ditto.
„ - 28	5 30 p.m. -	12 4¼	„ - 16	8 0 „ -	Jan. - 28	5 30 p.m. -	11 21½	For postage.
„ - 30	10 0 a.m. -	12 19	„ - 17	8 0 „ -	„ - 31	7 35 „ -	13 23½	Subsidized.
Feb. - 1	8 40 p.m. -	13 8¾	„ - 19	8 0 „ -	Feb. - 1	8 40 „ -	13 0¾	- ditto.
„ - 8	5 25 „ -	16 0½	„ - 23	8 0 „ -	„ - 8	5 25 „ -	15 21½	For postage.
„ - 6	10 0 „ -	13 5¾	„ - 24	8 0 „ -	„ - 8	0 50 a.m. -	14 4¾	Subsidized.
„ - 10	0 28 „ -	15 1¾	„ - 26	8 0 „ -	- - No return - -		- - -	- ditto.
„ - 14	8 40 a.m. -	15 18¾	„ - 28	8 0 „ -	„ - 14	8 40 a.m. -	16 12¾	For postage.
„ - 16	2 10 „ -	16 6¼	„ - 30	8 0 „ -	„ - 16	2 10 „ -	16 6¼	- ditto.
„ - 17	1 0 „ -	16 11½	„ - 31	8 0 „ -	„ - 19	0 10 „ -	18 4¼	Subsidized.
„ - 17	8 45 „ -	14 21	Feb. - 2	8 0 p.m. -	„ - 17	8 45 „ -	14 12¾	- ditto.
„ - 19	5 40 p.m. -	13 3¾	„ - 6	9 45 a.m. -	„ - 19	5 40 p.m. -	13 8	For postage.
„ - 20	Midnight -	13 13¾	„ - 7	8 0 p.m. -	„ - 22	0 20 „ -	14 16¼	Subsidized.
„ - 24	8 45 a.m. -	14 22¼	„ - 9	8 0 „ -	„ - 25	5 0 a.m. -	15 9	- ditto.
Mar. - 1	7 55 p.m. -	16 7	„ - 13	8 0 „ -	Mar. - 1	7 55 p.m. -	16 0	For postage.
Feb. - 28	7 0 a.m. -	13 16½	„ - 14	8 0 „ -	„ - 1	0 5 a.m. -	14 4	Subsidized.
- - -	Mails transferred to Arabia.	- - -	„ - 16	8 0 „ -	- - -	- - -	- - -	- ditto.
„ - 7	10 0 p.m. -	15 8	„ - 20	9 45 a.m. -	Mar. - 7	10 0 p.m. -	15 12¼	For postage.
„ - 7	5 0 „ -	13 22¾	„ - 21	8 0 p.m. -	„ - 9	11 50 „ -	16 3¾	Subsidized.
„ - 11	5 38 „ -	16 7¼	„ - 23	8 0 „ -	„ - 12	6 10 a.m. -	16 10¼	- ditto.
„ - 14	8 20 a.m. -	14 19¾	„ - 27	8 0 „ -	„ - 14	8 20 „ -	14 12¼	For postage.
„ - 17	8 0 „ -	16 19	„ - 28	8 0 „ -	„ - 18	11 50 p.m. -	18 3¾	Subsidized.
„ - 16	8 0 p.m. -	14 8¼	Mar. - 2	8 0 „ -	„ - 16	8 0 „ -	14 0	- ditto.
„ - 22	0 40 „ -	15 22¾	„ - 6	9 45 a.m. -	„ - 22	0 40 p.m. -	16 3	For postage.
„ - 24	11 30 „ -	16 14¾	„ - 7	8 0 p.m. -	„ - 25	11 50 „ -	18 3¾	Subsidized.
„ - 25	0 30 a.m. -	15 14¾	„ - 9	8 0 „ -	„ - 25	5 50 „ -	15 21¾	- ditto.
„ - 28	8 30 „ -	14 19¾	„ - 13	8 0 „ -	„ - 28	8 30 a.m. -	14 12½	For postage.
April - 1	4 0 „ -	17 16½	„ - 14	8 0 „ -	April - 1	Midnight -	18 4	Subsidized.
Mar. - 31	5 45 „ -	14 19¼	„ - 16	8 0 „ -	Mar. - 31	5 45 a.m. -	14 9¾	- ditto.
April - 2	7 55 „ -	12 18	„ - 20	9 45 a.m. -	April - 2	7 55 „ -	12 22¼	For postage.
„ - 3	3 0 p.m. -	13 0	„ - 21	8 0 p.m. -	„ - 4	Midnight -	14 4	Subsidized.
„ - 5	6 20 a.m. -	12 22	„ - 23	8 0 „ -	„ - 5	5 50 p.m. -	12 21¾	- ditto.
„ - 8	4 20 p.m. -	12 4¾	„ - 27	8 0 „ -	„ - 8	4 20 „ -	11 20¼	For postage.
„ - 8	6 0 a.m. -	10 18	„ - 28	8 0 „ -	„ - 8	11 50 „ -	11 3¾	Subsidized.
„ - 9	8 10 „ -	9 20¼	„ - 30	8 0 „ -	„ - 9	8 10 a.m. -	9 12¼	- ditto.
„ - 15	4 16 „ -	11 14¼	April - 3	9 45 a.m. -	„ - 15	4 16 „ -	11 18½	For postage.
„ - 16	2 0 „ -	11 10¼	„ - 4	8 0 p.m. -	„ - 16	11 55 p.m. -	12 4	Subsidized.
„ - 20	8 58 p.m. -	14 11¾	„ - 6	8 0 „ -	„ - 22	5 25 a.m. -	15 9½	- ditto.
„ - 27	7 30 a.m. -	17 18¼	„ - 8	8 0 „ -	- - No return - -		- - -	- ditto.
„ - 23	10 40 p.m. -	13 10½	„ - 10	8 0 „ -	April - 23	10 40 p.m. -	13 2¾	For postage.
„ - 24	9 0 a.m. -	12 19	„ - 11	8 0 „ -	„ - 26	8 30 „ -	15 0½	Subsidized.
„ - 25	8 0 „ -	11 21¼	„ - 13	8 0 „ -	„ - 25	8 0 a.m. -	11 12	- ditto.
„ - 29	4 55 p.m. -	12 3	„ - 17	9 45 a.m. -	„ - 29	4 55 p.m. -	12 7¼	For postage.
May - 1	10 0 p.m. -	13 8¾	„ - 18	8 0 p.m. -	May - 4	11 10 a.m. -	15 15¼	Subsidized.
„ - 1	4 45 a.m. -	10 13¾	„ - 20	8 0 „ -	„ - 1	5 15 p.m. -	10 21¼	- ditto.
„ - 2	10 0 p.m. -	9 8¾	„ - 22	8 0 „ -	„ - 2	10 0 „ -	10 2	- ditto.
„ - 6	6 0 a.m. -	11 7	„ - 24	8 0 „ -	„ - 6	6 0 a.m. -	11 10	For postage.
„ - 8	10 0 p.m. -	13 11	„ - 25	8 0 „ -	„ - 11	9 30 „ -	15 13½	Subsidized.
„ - 9	1 46 „ -	12 3	„ - 27	8 0 „ -	„ - 9	1 46 p.m. -	11 17¾	- ditto.

Outward Mails—*continued.*

1. Despatch of Packet. Day.	Hour.	2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
1861:							
May 1	2 0 p.m.	Arago	New York and Havre	United States	Southampton		New York
„ 2	1 30 „	Nova Scotian	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 4	3 30 „	Europa	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 8	11 10 a.m.	Edinburgh	Liverpool, New York, and Philadelphia.	United States	ditto	Queenstown	New York
„ 9	11 0 „	Canadian	Montreal Ocean	British	ditto	Londonderry	Quebec
„ 11	10 52 „	Persia	Cunard	ditto	ditto	Queenstown	New York
„ 15	2 0 p.m.	New York	North German Lloyd	United States	Southampton		ditto
„ 18	4 15 „	North Briton	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 18	1 34 „	America	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 22	2 0 „	Borussia	Hamburgh American Company.	United States	Southampton		New York
„ 22	5 5 „	City of Washington.	Liverpool, New York, and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 23	6 15 „	Hibernian	Montreal Ocean	British	ditto	Londonderry	Quebec
„ 25	10 42 a.m.	Australasian	Cunard	ditto	ditto	Queenstown	New York
„ 29	2 0 p.m.	Fulton	New York and Havre	United States	Southampton		ditto
„ 30	4 20 „	Bohemian	Montreal Ocean	British	Liverpool	Londonderry	Quebec

In the case of all Mail Packets proceeding to New York, the time given in column 11 is the time at which the packet arrived at New York. In all

* The Mails forwarded by the "North Briton" on this occasion were made up for transmission

HOMEWARD MAILS.

1. Despatch of Packet. Day.	Hour.	2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
1861:							
Jan. 2	11 8 a.m.	Persia	Cunard	British	New York	Queenstown	Liverpool
„ 5	Noon	Fulton	New York and Havre	United States	ditto		Southampton
„ 5	4 30 p.m.	Anglo-Saxon	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 9	10 0 a.m.	Canada	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 12	Noon	Kangaroo	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 12	6 0 p.m.	North American	Montreal Ocean	British	Portland	St. John's and Londonderry.	ditto
„ 16	10 37 a.m.	Australasian	Cunard	ditto	New York	Queenstown	ditto
„ 19	Noon	Bremen	North German Lloyd	United States	ditto		Southampton
„ 20	4 0 a.m.	Nova Scotian	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 23	10 15 p.m.	America	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 26	Noon	Edinburgh	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 27	10 0 a.m.	Canadian	Montreal Ocean	British	Portland	Londonderry	ditto
„ 30	10 30 „	Asia	Cunard	ditto	New York	Queenstown	ditto
Feb. 2	Noon	Arago	New York and Havre	United States	ditto		Southampton
„ 3	4 0 a.m.	North Briton	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 6	9 30 „	Niagara	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 9	Noon	Etna	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 12	6 0 a.m.	Bohemian	Montreal Ocean	British	Portland	Londonderry	ditto
„ 13	10 17 „	Arabia	Cunard	ditto	New York	Queenstown	ditto
„ 16	Noon	Vigo	Liverpool, New York, and Philadelphia.	United States	ditto	Queenstown	ditto
„ 17	4 0 p.m.	Anglo-Saxon	Montreal Ocean	British	Portland	Londonderry	ditto
„ 20	10 40 a.m.	Canada	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 23	Noon	City of Baltimore	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 24	11 0 a.m.	North American	Montreal Ocean	British	Portland	Londonderry	ditto
„ 27	10 10 „	Africa	Cunard	ditto	New York	Queenstown	ditto
March 2	Noon	Fulton	New York and Havre	United States	ditto		Southampton
„ 2	4 0 p.m.	Nova Scotian	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 6	9 10 a.m.	America	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 9	Noon	Edinburgh	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 9	4 0 p.m.	Canadian	Montreal Ocean	British	Portland	Londonderry	ditto
„ 13	4 0 „	Adriatic	Chartered for single voyage by Cunard Company.	ditto	New York		Queenstown
„ 16	Noon	Bremen	North German Lloyd	United States	ditto		Southampton
„ 16	5 0 p.m.	North Briton	Montreal Ocean	British	Portland	Londonderry	Liverpool

Outward Mails—*continued.*

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from London.		11. Mails arrived at New York.		12. Time occupied in Transmission of Mails.	13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.		
1861:		D. H.	1861:		1861:		D. H.	
May - 14	6 45 p. m.	13 4¾	May - 1	9 45 a. m.	May - 14	6 45 p. m.	13 9	For postage.
„ - 15	7 20 „	13 5¾	„ - 2	8 0 p. m.	„ - 16	10 40 „	14 2¾	Subsidized.
„ - 15	11 55 „	11 8½	„ - 4	8 0 „	„ - 16	5 28 a. m.	11 9½	- ditto.
„ - 21	4 17 „	13 5	„ - 8	8 0 „	„ - 21	4 17 p. m.	12 20¼	For postage.
„ - 20	7 30 „	11 8½	„ - 9	8 0 „	„ - 21	10 50 „	12 2¾	Subsidized.
„ - 21	7 35 „	10 8¾	„ - 11	8 0 „	„ - 21	7 35 „	9 23½	- ditto.
„ - 28	6 30 a. m.	12 16½	„ - 15	9 45 a. m.	„ - 28	6 30 a. m.	12 20¾	For postage.
- - -	- No return -	- - -	„ - 16	8 0 p. m. *	- - -	- No return -	- - -	Subsidized.
„ - 31	9 0 p. m.	13 7½	„ - 18	8 0 „	June - 1	5 25 p. m.	13 21½	- ditto.
June - 4	3 55 „	13 2	„ - 22	10 30 a. m.	„ - 4	3 55 „	13 5½	For postage.
„ - 5	1 20 „	13 8¼	„ - 22	8 0 p. m.	„ - 5	1 20 „	13 17¼	- ditto.
„ - 5	6 0 a. m.	12 11¾	„ - 23	8 0 „	„ - 6	10 35 „	14 2½	Subsidized.
„ - 5	5 5 p. m.	11 6½	„ - 25	8 0 „	„ - 5	5 5 „	10 21	- ditto.
„ - 10	4 30 a. m.	11 14½	„ - 29	9 45 a. m.	„ - 10	4 30 a. m.	11 18¾	For postage.
„ - 13	0 20 „	13 8	„ - 30	8 0 p. m.	„ - 13	10 45 p. m.	14 2¾	Subsidized.

other cases the time given in this column is that at which the mails reached the New York Post Office, including the time occupied in the transit overland.
by the "Hibernian," which broke down between Liverpool and Londonderry.

HOMEWARD MAILS.

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from New York.		11. Mails arrived in London.		12. Time occupied in Transmission of Mails.	13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.		
1861:		D. H.	1861:		1861:		D. H.	
Jan. - 13	1 5 a. m.	10 14	Jan. - 2	11 8 a. m.	Jan. - 13	8 5 a. m.	10 21	Subsidized.
„ - 18	3 0 p. m.	13 3	„ - 5	Noon	„ - 18	7 30 p. m.	13 7½	For postage.
„ - 19	3 0 a. m.	13 10½	- -	No return	„ - 19	7 55 a. m.	- - -	Subsidized.
„ - 21	3 30 p. m.	12 5½	Jan. - 8	- - -	„ - 21	7 23 p. m.	- - -	- ditto.
„ - 25	3 45 „	13 3¾	„ - 12	Noon	„ - 26	6 7 a. m.	13 18	For postage.
„ - 23	9 15 a. m.	10 15¼	- -	No return	„ - 24	7 40 p. m.	- - -	Subsidized.
„ - 27	1 45 p. m.	11 3¼	Jan. - 16	10 37 a. m.	„ - 27	6 0 a. m.	10 19½	- ditto.
„ - 30	6 0 „	11 6	„ - 19	Noon	„ - 30	10 50 p. m.	11 10¾	For postage.
Feb. - 1	8 0 a. m.	12 4	- -	No return	Feb. - 1	8 5 a. m.	- - -	Subsidized.
„ - 5	0 25 p. m.	12 14¼	Jan. - 22	- - -	„ - 5	7 30 p. m.	- - -	- ditto.
„ - 7	8 0 „	12 8	„ - 26	Noon	„ - 8	5 45 a. m.	12 17¾	For postage.
„ - 7	9 0 a. m.	10 23	- -	No return	„ - 7	7 10 p. m.	- - -	Subsidized.
„ - 11	10 5 „	11 23½	Jan. - 30	10 30 a. m.	„ - 11	7 20 a. m.	11 20¾	- ditto.
„ - 17	4 0 „	14 16	Feb. - 2	Noon	„ - 17	1 20 „	14 13¼	For postage.
„ - 15	2 30 p. m.	12 10½	- -	No return	„ - 15	6 52 p. m.	- - -	Subsidized.
„ - 18	8 33 a. m.	11 23	Feb. - 5	- - -	„ - 18	7 25 a. m.	- - -	- ditto.
„ - 20	9 0 „	10 21	„ - 9	Noon	„ - 20	10 10 p. m.	11 10¼	For postage.
„ - 23	2 0 p. m.	11 8	- -	No return	„ - 23	6 50 „	- - -	Subsidized.
„ - 24	2 35 „	11 4¼	Feb. - 13	10 17 a. m.	„ - 25	5 15 a. m.	11 19	- ditto.
Mar. - 1	6 0 a. m.	11 18	„ - 16	Noon	Mar. - 1	3 40 p. m.	13 3¾	For postage.
Feb. - 28	Noon	10 20	- -	No return	Feb. - 28	6 55 „	- - -	Subsidized.
Mar. - 3	4 44 a. m.	10 18	Feb. - 19	- - -	Mar. - 3	7 27 a. m.	- - -	- ditto.
„ - 6	5 0 p. m.	11 5	„ - 23	Noon	„ - 7	5 10 „	11 17¼	For postage.
„ - 7	11 0 a. m.	11 0	- -	No return	„ - 7	6 54 p. m.	- - -	Subsidized.
„ - 11	1 15 „	11 15	Feb. - 27	10 10 a. m.	„ - 11	7 13 a. m.	11 21	- ditto.
„ - 13	1 30 „	10 13½	Mar. - 2	Noon	„ - 14	5 15 „	11 17¼	For postage.
„ - 14	10 0 „	11 18	- -	No return	„ - 14	6 50 p. m.	- - -	Subsidized.
„ - 18	0 10 „	11 15	Mar. - 5	- - -	„ - 18	7 15 a. m.	- - -	- ditto.
„ - 21	3 0 p. m.	12 3	„ - 9	Noon	„ - 21	11 25 p. m.	12 11½	For postage.
„ - 20	10 0 a. m.	10 18	- -	No return	„ - 20	7 6 „	- - -	Subsidized.
„ - 23	4 45 „	9 12¾	Mar. - 13	4 0 p. m.	„ - 24	7 5 a. m.	10 15	- ditto.
„ - 28	5 0 „	11 17	„ - 16	Noon	„ - 28	10 24 „	11 22½	For postage.
„ - 28	5 0 „	11 12	- -	No return	„ - 28	3 14 p. m.	- - -	Subsidized.

HOMEWARD MAILS—*continued.*

1. Despatch of Packet.		2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
Day.	Hour.						
1861:							
March 20	1 0 p.m.	Niagara	Cunard	British	Boston	Halifax and Queenstown	Liverpool
„ 23	Noon	Etna	Liverpool, New York and Philadelphia.	United States	New York	Queenstown	ditto
„ 23	7 0 p.m.	Palestine	Montreal Ocean	British	Portland	Londonderry	ditto
„ 27	9 0 a.m.	Arabia	Cunard	ditto	New York	Queenstown	ditto
„ 30	Noon	Arago	New York and Havre	United States	ditto	- - - - -	Southampton
„ 31	0 30 a.m.	Bohemian	Montreal Ocean	British	Portland	Londonderry	Liverpool
April 3	10 40 a.m.	Canada	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 6	Noon	City of Baltimore	Liverpool, New York and Philadelphia.	United States	New York	Queenstown	ditto
„ 6	8 30 p.m.	North American	Montreal Ocean	British	Portland	Londonderry	ditto
„ 10	4 30 „	Africa	Cunard	ditto	New York	Queenstown	ditto
„ 13	Noon	New York	North German Lloyd	United States	ditto	- - - - -	Southampton
„ 13	4 30 p.m.	Nova Scotian	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 17	11 35 a.m.	America	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 20	Noon	Edinburgh	Liverpool, New York and Philadelphia.	United States	New York	Queenstown	ditto
„ 20	5 30 p.m.	Canadian	Montreal Ocean	British	Portland	Londonderry	ditto
„ 25	7 0 a.m.	Persia	Cunard	ditto	New York	Queenstown	ditto
„ 27	Noon	Fulton	New York and Havre	United States	ditto	- - - - -	Southampton
„ 27	5 0 p.m.	North Briton	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 30	3 0 „	Columbia	Atlantic Royal Mail	ditto	Boston	St. John's	Galway
May 1	0 28 p.m.	Niagara	Cunard	ditto	ditto	Halifax and Queenstown	Liverpool
„ 4	Noon	Bavaria	Hamburg American Company.	United States	New York	- - - - -	Southampton
„ 4	Noon	City of Washington.	Liverpool, New York and Philadelphia.	ditto	ditto	- - - - -	Queenstown
„ 4	11 0 a.m.	Jura	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 8	1 0 p.m.	Asia	Cunard	ditto	New York	Queenstown	ditto
„ 11	Noon	Bremen	North German Lloyd	United States	ditto	- - - - -	Southampton
„ 11	9 55 a.m.	Bohemian	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 14	10 0 „	Adriatic	Atlantic Royal Mail	ditto	New York	St. John's	Galway
„ 15	11 50 „	Arabia	Cunard	ditto	Boston	Halifax and Queenstown	Liverpool
„ 18	Noon	City of Baltimore	Liverpool, New York and Philadelphia.	United States	New York	- - - - -	Queenstown
„ 18	Noon	Hammonia	Hamburg American Company.	ditto	ditto	- - - - -	Southampton
„ 18	9 45 a.m.	North American	Montreal Ocean	British	Quebec	- - - - -	- - Broke down; landed Mails at Queenstown.
„ 22	3 35 p.m.	Africa	Cunard	ditto	New York	Queenstown	Liverpool
„ 24	- - -	Nova Scotian	Montreal Ocean	ditto	Portland	Londonderry	ditto
„ 25	Noon	Arago	New York and Havre	United States	New York	- - - - -	Southampton
„ 29	11 15 a.m.	Europa	Cunard	British	Boston	Halifax and Queenstown	Liverpool

In the case of all Mail Packets sailing from New York, the day and hour given in column 10 are those on which the

HOMEWARD MAILS—*continued.*

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from New York.		11. Mails arrived in London.		12. Time occupied in Transmission of Mails.	13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.		
1861:		D. H.	1861:		1861:		D. H.	
April - 3	3 10 p.m. -	14 2¼	Mar. - 19	- - -	April - 3	6 50 p.m. -	- - -	Subsidized.
„ - 4	10 30 a.m. -	11 22½	„ - 23	Noon - -	„ - 4	10 15 „ -	12 10¼	For postage.
„ - 5	2 0 p.m. -	12 19	- - No return - -		„ - 5	6 52 „ -	- - -	Subsidized.
„ - 8	7 30 „ -	12 10½	Mar. - 27	9 0 a.m. -	„ - 8	6 55 „ -	12 10	- ditto.
„ - 14	8 0 „ -	15 8	„ - 30	Noon - -	„ - 14	11 0 „ -	15 11	For postage.
„ - 13	10 45 a.m. -	13 10¼	- - No return - -		„ - 13	6 50 „ -	- - -	Subsidized.
„ - 16	2 10 „ -	12 15½	April - 2	- - -	„ - 16	7 52 a.m. -	- - -	- ditto.
„ - 18	10 0 p.m. -	12 10	„ - 6	Noon - -	„ - 19	11 28 „ -	12 23½	For postage.
„ - 19	5 20 a.m. -	12 8¾	- - No return - -		„ - 19	7 21 „ -	- - -	Subsidized.
„ - 22	5 45 „ -	11 13¼	April - 10	4 30 p.m. -	„ - 22	3 35 p.m. -	11 23	- ditto.
„ - 26	1 0 „ -	12 13	„ - 13	Noon - -	„ - 26	5 0 a.m. -	12 17	For postage.
„ - 26	11 0 „ -	12 18½	- - No return - -		„ - 26	7 0 p.m. -	- - -	Subsidized.
„ - 29	11 35 p.m. -	12 12	April - 16	- - -	„ - 30	7 12 a.m. -	- - -	- ditto.
May - 4	4 0 a.m. -	13 16	„ - 20	Noon - -	May - 4	3 20 p.m. -	14 3¼	For postage.
„ - 2	4 0 „ -	11 10½	- - No return - -		„ - 2	3 20 „ -	- - -	Subsidized.
„ - 5	5 45 „ -	9 22¾	April - 24	- - -	„ - 5	7 30 a.m. -	- - -	- ditto.
„ - 9	8 0 p.m. -	12 8	„ - 27	Noon - -	„ - 9	11 10 p.m. -	- - -	For postage.
„ - 9	10 30 „ -	12 5½	- - No return - -		„ - 10	7 10 a.m. -	- - -	Subsidized.
„ - 14	3 30 a.m. -	13 12½	April - 29	- - -	„ - 15	10 26 „ -	- - -	- ditto.
„ - 13	10 50 „ -	11 22¼	„ - 30	- - -	„ - 13	6 45 p.m. -	- - -	- ditto.
„ - 17	8 40 „ -	12 20¾	May - 4	Noon - -	„ - 17	Noon - -	13 0	For postage.
„ - 15	11 0 p.m. -	11 11	„ - 4	Noon - -	Brought Mails for Ireland only		- - -	- ditto.
„ - 14	10 0 „ -	10 11	- - No return - -		May - 15	10 26 a.m. -	- - -	Subsidized.
„ - 20	10 5 „ -	12 9	May - 8	1 0 p.m. -	„ - 21	7 20 „ -	12 18¼	- ditto.
„ - 23	8 40 a.m. -	11 20¾	„ - 11	Noon - -	„ - 23	11 30 „ -	11 23½	For postage.
„ - 23	10 45 „ -	12 0¾	- - No return - -		„ - 23	6 50 p.m. -	- - -	Subsidized.
„ - 24	6 0 „ -	9 20	May - 14	10 0 a.m. -	„ - 25	7 22 a.m. -	10 21¼	- ditto.
„ - 25	11 30 p.m. -	10 11¾	„ - 14	- - -	„ - 26	7 23 „ -	- - -	- ditto.
„ - 28	3 30 „ -	10 3½	„ - 18	Noon - -	Brought Mails for Ireland only		- - -	For postage.
„ - 30	4 30 „ -	12 4½	„ - 18	Noon - -	May - 30	8 0 p.m. -	12 8	- ditto.
June - 2	11 30 „ -	15 13¾	- - No return - -		June - 3	5 25 a.m. -	- - -	Subsidized.
„ - 3	5 0 a.m. -	11 13½	May - 22	3 35 p.m. -	„ - 3	7 15 „ -	11 15¾	- ditto.
„ - 6	8 30 „ -	- - -	- - No return - -		„ - 6	7 38 „ -	- - -	- ditto.
„ - 7	10 0 p.m. -	13 10	May - 25	Noon - -	„ - 8	2 40 „ -	13 14¾	For postage.
„ - 9	11 40 a.m. -	11 0½	„ - 28	- - -	„ - 10	5 15 „ -	- - -	Subsidized.

Packet sailed from New York. In no other case can the hour at which the Mails were despatched from New York be given.

William James Page,
Principal Clerk for Foreign and Colonial Business.

MAIL STEAMERS (NORTH AMERICA).

RETURN of all STEAMERS carrying MAILS between the United Kingdom and *North America*, with their Ports of Departure, Call, and Arrival, and Duration of Passage; showing the Despatch and Arrival of the Mails by each Steamer from and at *London* and *New York* respectively, with the Time occupied in Transmission; distinguishing between the British and United States' Packets, and showing to which Companies they belonged, and whether Subsidized, or carrying Mails for Postage, from 1st January to 31st May 1861 (in continuation of Parl. Paper, No. 395, of the present Session).

(*Sir Edward Grogan.*)

Ordered, by The House of Commons, *to be Printed,*
6 *August* 1861.

548.

Under 1 *oz.*

POST OFFICE (CANADIAN MAILS).

RETURN to an Order of the Honourable the House of Commons, dated 4 June 1861;--*for*,

A RETURN, "Actual or Estimated, of the GROSS POSTAGE accruing to the POST OFFICE REVENUE of *Great Britain* during the Years 1859 and 1860 respectively, on LETTERS, NEWSPAPERS, and other Mail Matter, conveyed by the CANADIAN MAIL LINE of STEAMERS; separating the Outward from the Inward Receipts, and distinguishing the Proportion accruing on International Letters, &c., passing between the United Kingdom on the one side, and the United States and Canada respectively on the other, from the Proportion accruing on Letters, &c., passing between Foreign Countries or British Colonies and the United States and Canada respectively, in transit through the United Kingdom."

General Post Office, 11 July 1861.

J. TILLEY, Assistant Secretary.

AN ESTIMATED STATEMENT of the Gross Postage accruing to the Post Office Revenue of *Great Britain* during the Years 1859 and 1860 respectively, on Letters, Newspapers, and other Mail Matter, conveyed by the Canadian Mail Line of Steamers; separating the Outward from the Inward Receipts, and distinguishing the Proportion accruing on International Letters, &c., passing between the United Kingdom on the one side, and the United States and Canada respectively on the other, from the Proportion accruing on Letters, &c., passing between Foreign Countries or British Colonies and the United States and Canada respectively, in transit through the United Kingdom.

	1859.			1860.		
	Outward.	Inward.	TOTAL.	Outward.	Inward.	TOTAL.
	£.	£.	£.	£.	£.	£.
Correspondence between the United Kingdom and the United States and Canada - -	2,514	2,606	5,120	7,301	2,821	10,122
Transit Correspondence -	257	295	552	795	129	924
	2,771	2,901	5,672	8,096	2,950	11,046

General Post Office, 2 July 1861.

Frank Ives Scudamore.

POST OFFICE (CANADIAN MAILS).

RETURN of the Estimated Gross Postage accruing to the Post Office Revenue of *Great Britain* during the Years 1859 and 1860 respectively, on Letters, Newspapers, and other Mail Matter, conveyed by the Canadian Mail Line of Steamers; &c.

(*Mr. Haliburton.*)

Ordered, by The House of Commons, *to be Printed,*
15 *July* 1861.

430.

CANADA GRAND TRUNK RAILWAY.

RETURN to an Address of the Honourable The House of Commons, dated 13 June 1861;—*for*,

"COPY or EXTRACTS of CORRESPONDENCE between the War Department and the Canadian Government, respecting the Transfer and Sale of LAND at *Sarnia*, for the Use of the GRAND TRUNK RAILWAY of *Canada*."

N. B.—No direct correspondence between the War Department and the Canadian Government on this subject can be traced. The enclosed Correspondence, however, bears on the subject.

War Office, 25 June 1861.

THOMAS GEORGE BARING.

(*Lord John Manners.*)

Ordered, by The House of Commons, *to be Printed*, 26 *June* 1861.

COPY or EXTRACTS of CORRESPONDENCE between the War Department and the Canadian Government, respecting the Transfer and Sale of LAND at *Sarnia*, for the use of the GRAND TRUNK RAILWAY of *Canada*.

— No. 1. —

(Ordnance, No. 110.)

Office of Ordnance, Montreal,
Sir, 11 July 1853.

WE have the honour to forward herewith for the consideration of the Master General and Board, applications that have been preferred on behalf of the contractors for the construction of the Toronto and Sarnia Railway, with the view of acquiring by purchase those portions of the Ordnance Reserve at Point Edward in Sarnia, which are not required for military purposes, and of renting the land which is reserved.

The quantity of land required by the Railway Company is stated by the Commanding Royal Engineer, in his Minute of 18th May, to be 331 acres, of which 170 are swamp, and we would respectfully invite the Master General and Board's attention to that officer's opinion as to the value of the property, and to the Honourable J. A. Macdonald's communication of the 9th ultimo, in which the reasons for so large a space of ground being required at the terminus of the Canadian Grand Trunk Railway on Lake Huron are explained, and as it is doubtless of much importance to the Company that they should receive as early a notification as possible of the ultimate decision of the Master General and Board upon their enlarged requirements, we forward the present report without awaiting the receipt of the instructions which the Commissioner Royal Engineer, in his Minute of the 8th instant, states he is expecting, in reference to his report to the Inspector General of Fortifications of the 18th May.

We have, &c.
(signed) *William Bell*,
Colonel Commanding, Royal Artillery.
M. C. Dixon,
Colonel Commanding, Royal Engineer.
M. W. Blenkarne, D. O. S.
J. S. Elliott,
O. S., Head Quarters.

G. Butler, Esq.,
&c. &c. &c.

Enclosures to the foregoing.

Gentlemen, Toronto, 5 January 1853.

I AM directed by the directors of the Toronto and Guelph Railway Company to ask if you will consent to lease them any portion of the Ordnance property at Port Sarnia. They are especially desirous of obtaining possession (as tenants) of the point of land projecting into the river above the village.

It is the intention of the company to extend their road to Sarnia, and they are anxious to obtain the right of occupying the land referred to, as presenting the most eligible point of connecting with the navigation.

I am, &c.
(signed) *W. Shanley*,
Chief Engineer, Toronto and Guelph Railway Company.

The Respective Officers,
Her Majesty's Ordnance, Montreal.

Gentlemen, Kingston, 6 June 1853.

THE contractors for the construction of the Toronto and Sarnia Railway find it necessary for their purposes to obtain the control of the marsh and shoal at Point Edward in Sarnia; they are aware that this shoal, as well as the point, belong to the military Government, and have therefore instructed me to apply for the right of occupancy. It is of importance that a title should be given them for as much of the point and bay as is not absolutely required for military purposes; and for whatever may be reserved for those purposes, they desire to obtain a license of occupation on the usual terms. As the place applied for is of little value, and as the dredging and filling up of the marsh will increase the salubrity of the vicinity, and thus preserve the health of any garrison that may be stationed there, they trust there will be no difficulty in obtaining their object.

The contractors are desirous of pressing their works with all speed, and will therefore be much obliged by your taking their application into your favourable consideration as early as conveniently may be.

I have, &c.

The Respective Officers, (signed) *John A. Macdonald*, Solicitor.
&c. &c. &c.
Montreal.

Gentlemen, Daneganas Hotel, Montreal, 9 June 1853.

I HAVE the honour to acknowledge the receipt of your letter of the 8th instant, on the subject of the land required for the terminus, at Port Sarnia, of the Grand Trunk Railway.

Since Mr. Shanley applied for the occupancy of the Ordnance property there, the character and requirements of the road have materially altered; instead of being a local railway depending principally on the way traffic between Toronto and Sarnia, it has become a portion of the great provincial line which is to connect Lake Huron with the Atlantic.

It is confidently anticipated that the advantages offered by this line of railway, will secure for it a large share of the traffic and travel of the north-western section of the United States.

In order to compete successfully for this trade with the American lines, it will be necessary to make very extensive arrangements for the reception, stowage, and transmission of the products of the west, and the land now applied for will not be more than sufficient for the purpose.

The drainage and filling up of the swamp will be a very expensive affair, and cannot be satisfactorily done unless the whole of the wet land is thoroughly reclaimed.

If the land in its present state is considered of any value, the contractors will be prepared to pay for it, and will take every precaution that may be suggested by the military authorities to avoid interference with the military works and position.

The railway companies in the United States have suffered great inconvenience from the limited size of the lands originally purchased by them for depôts, and have in many instances been obliged to expend large sums of money in extending their grounds, an expense which might in a great measure have been saved, had their purchases been sufficiently extensive in the first place, and before the construction of the railways had increased the value of the surrounding property.

This error has been avoided by the railway lately constructed; for instance, the Ogdensburgh Railway Company have acquired for their terminus on the St. Lawrence, as I am informed, considerably more than 100 acres, and its requirements cannot be at all equal to those of the Grand Trunk Railways.

The contractors are bound to furnish to the Company valid and indefeasible titles to the lands required for the railways, as the Company could not safely erect the necessary buildings on land not belonging to them.

It is therefore hoped that their application for the purchase of the Ordnance property not required for military purposes will be favourably received. They would also desire to lease the reserved lands, or to get a license of occupation for it so long as it is not required by Her Majesty's Ordnance.

I have, &c.

(signed) *John A. Macdonald.*

— No. 2. —

(No. 132.)

Royal Engineer Head Quarters Office, Montreal,

Sir, 18 May 1853.

WITH reference to the enclosed application from the directors of the Toronto and Guelph Railway Company, requesting a lease of a portion of the military Reserve, near Port Sarnia, I forward copies of two plans obtained from the chief engineer, showing the extent of land which the Company are desirous of obtaining.

A simlar concession having been granted to several railway companies, where the occupation of the ground did not interfere with proposed defensive works, I see no objection to the accommodation now asked for, being afforded to the Toronto and Guelph Railway Company for a continuation of their line to Port Sarnia; but the demand of 331 acres appears exorbitant, and as 100 feet in width is sufficient for a double track, I recommend the Company be only allowed to occupy such quantity, in addition thereto, as may be necessary for a terminus, if one should be required on the bank of the River St. Clair.

The land the Company desire to lease contains, as above stated, about 331 acres, whereof 170 acres are swamp.

* See *P. S.* The value of the land is 10 *s.* per acre for the dry land, and * £.... per acre for the marsh.

No revenue is derived from the property.

The Lieutenant General Commanding, in forwarding to me his opinion on the present application, has been pleased to favour me with the copy of a note made by the late Lieutenant General Sir B. D'Urban, Commander of the Forces, respecting the importance of occupying Port Sarnia Reserve, by a tower and battery, but it will be seen by the enclosed plans that the railway works will not interfere with either of those projected works.

I have, &c.
(signed) *M. C. Dixon,*
Colonel Commanding, Royal Engineer, Canada.

Lieutenant General
Sir John Fox Burgoyne, G. C. B.,
&c. &c. &c.

P. S.—With respect to the foregoing valuation of the Reserve, the land for agricultural purposes would not realise more than the sum stated, namely, 10 *s.* per acre, whilst, perhaps, in the hands of a speculator, 100 *l.* per acre might not be thought too much for the whole property.

(signed) *M. C. D.*

P. S.— In obedience to your Minute, No. 4908, I forward a copy of a sketch, which was attached to the note of the late Lieutenant General Sir B. D'Urban, referred to by the Lieutenant General Commanding in the Military Secretary's letter of the 6th May last, and have marked on the plans returned with this letter, the ground necessary to be retained for the towers and batteries at Point Edward. The Ordnance own no property opposite to the Black River, whereas the second tower and battery referred to by Sir B. D'Urban would be erected, such site being on an Indian reserve, which is in course of sale for settlement by the provincial Government.

(signed) *M. C. Dixon,*
Colonel Commanding, Royal Engineer, Canada.

12 September 1853.

Enclosures to the foregoing,

(R. 7259.)

Gentlemen, Toronto, 5 January 1853.

I AM instructed by the directors of the Toronto and Guelph Railway Company, to ask if you will consent to lease them any portion of the Ordnance property at Port Sarnia. They are especially desirous of obtaining possession (as tenants) of the point of land projecting into the river above the village.

It is the intention of the Company to extend their road to Sarnia, and they are anxious to obtain the right of occupying the land referred to, as presenting the most eligible point for connecting with the navigation.

I have, &c.
(signed) *W. Shanley,*
Chief Engineer,
Toronto and Guelph Railway Company.

The Respective Officers
H. M. Hon. Board of Ordnance,
Montreal.

(R. 7,259.)

Military Secretary's Office, Montreal,
Sir, 6 May 1853.

HAVING duly submitted to the Lieutenant General Commanding your letter, dated Montreal, 5th May 1853, relating to an application from the Toronto and Guelph Railway Company, to occupy a part of the Military Reserve at Point Edward, near Port Sarnia, I have the honour, by order, to state in reply, that while the Lieutenant General is not aware of immediate objections to the proposal contained in your letter, he considers it right to transmit for your information, the accompanying copy of a note by the late Lieutenant General, Sir Benjamin D'Urban, on the importance of Point Edward as a military position.

I have, &c.
(signed) *H. Rowan*,
Military Secretary.

Colonel Dixon,
Commanding Royal Engineers,
Canada.

(Extract.)

PORT SARNIA.

"A TOWER, with a heavy traversing gun, at Point Edward, would give us the command of "the entrance of Lake Huron, and if this should cause the Americans to resort to the "Black River, and a canal to enter Lake Huron, another battery must be placed near "Sarnia, to command the entrance of the Black River. These works would have nothing "to fear from the United States Fort Gratiot. As it is, the Americans can prevent our "intercourse with Lake Huron, while we have no control over theirs."

(No. 277.)

Gentlemen, 21 December 1853. (T. 724.)

THE Lords Commissioners of Her Majesty's Treasury having authorized the sale to the Toronto and Guelph Railway Company, at a fair and reasonable price, of the portion of the Military Reserve at Point Edward and Port Sarnia, which is necessary for the extension of the line of railway across the reserve,

I have received the Board's commands to notify the same to you, in reply to your letter of the 11th July last.

I have, &c.
(signed) *G. Butler.*

The Respective Officers,
Montreal.

— No. 3. —

(Ordnance, No 89.)

Office of Ordnance, Montreal,
Sir, 30 July 1855.

WE have the honour to submit for consideration, with reference to the order of 21st December 1853 (T. 724), authorising the sale to the "Toronto and Guelph" Railway Company, since incorporated into the Grand Trunk Railway of Canada, at a fair and reasonable price, of the portion of the Sarnia Reserve required for the purposes of that work, the correspondence shown in the margin,* from which it will be observed that in consideration of the sum of 10*s.* currency per acre, which is held to be the actual present value of the Reserve, it is proposed to dispose of the whole block described on the plan, with the exception of that part comprised within the radius of 300 yards round the projected work of defence; which is to be resumable whenever required for purposes of defence or military occupation, and is to be subject to the payment

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* Letter of Messrs. Gzowski & Co., 17th February 1855. Report thereon of Commander Royal Engineer, 26th February 1855.
Letter of respective officers to Provincial Secretary, 22d March 1855. Reply of Provincial Secretary, 23d June 1855.
Mr. Elliott's report of 10th July, with letter to Messrs. Gzowski & Co. of 14th, and their reply of 20th July 1855.

payment of an annual rent of 10*l.* currency for a term of 30 years renewable, as well as to the stipulation, that no stone buildings be erected within the radius on the north side of the line of railroad.

With this arrangement the contractors, Messrs. Gzowski & Co., have expressed themselves satisfied, and the provincial Government have given their assent to the disposal of the land in the manner above explained, upon the understanding that the purchase money shall be held available for payment into the military or provincial chest according to the result of the negotiations now pending in reference to the transfer of Ordnance lands to the Canadian Government.

We accordingly request that authority may be granted for a deed and lease to be prepared in favour of Messrs. Gyowski & Co., upon the terms specified in our letter to them of the 14th instant.

We have &c.
(signed) *William Bell*,
Colonel Commanding, Royal Artillery.
W. R. Ord,
Colonel Commanding, Royal Engineer.
M. W. Blenkarne, D. O. S.

J. Wood, Esq., &c. &c. &c.

P. S.—The plan will accompany the Commanding Royal Engineer's report to the Inspector General of Fortifications.

(Enclosures.)

Gentlemen, Toronto, 17 February 1855.

We have the honour to acknowledge receipt of your communication of 1st instant, and return the plan therein contained; we beg also to enclose a duplicate of that plan, with the railway buildings planned thereon, as shown in a plan sent in our report of the 9th August; we will manage to retire those intruding upon the proposed Reserve.

We take leave to state respectfully, but distinctly, that the quantity of land proposed to be assigned by you is entirely inadequate in quantity, and objectionable in shape, especially when its condition is considered, to meet the requirements of the Grand Trunk Company.

The entire Reserve at Sarnia is very low, and no portion of it can be used for our purposes, without being materially raised, while not less than three-fourths is marsh or swamp, requiring to be actually made before it will be serviceable for any purpose; and we presume we need not inform you that the most expensive mode of acquiring land is to create it, by filling a swamp or water lot. It is only the positive absence of any other suitable terminal point for the Grand Trunk Railway that forces us upon the Reserve. We received the impression from your letter, especially from that of the 18th August last, that the representation made by our agent, the Honourable J. A. Macdonald, the present Attorney General, dated 9th June 1853, and the communications which we ourselves had the honour to address to you subsequently, had satisfied you that in asking for a title for such portion of the Reserve as was not deemed indispensable for military purposes, and the license of occupation of the latter if so required, we ask for no more than would be essential for the reasonable accommodation at its chief terminus of the gigantic railway enterprise with which we are connected, and for which it is our province to provide the right of way, &c.

We do not know that we can better demonstrate the utter insufficiency of the quantity of land you propose to grant, than by calling your attention to the fact that the frontage on the river is only about 900 feet wide, affording only berths for two steamers, after allowing for a slip for the ferry boat, while the Great Western Company have a water frontage exceeding one and a half miles in length, at Windsor, and which they find it necessary to extend.

The railways terminating at Chicago and Milwankie have enormous depôt grounds, and all complain of not having enough to permit the more advantageous distribution of their machine shops, passenger and merchandise sheds, wood sheds, &c. The Great Western Company, that require so much room at Windsor, is only 230 miles in length, while that of the Grand Trunk will exceed 1,100 miles, and the American railroads named by us, possessing very large though insufficient depôt grounds, will be mere feeders of the Grand Trunk.

Sarnia is the principal and only safe port on Lake Huron, and the natural eastern harbour of Lakes Superior and Michigan, and Huron; when the railway is finished, vessels will be deterred from going further down, exposing themselves to the expense and risk of passing over the shoals between Sarnia and Windsor, known as "St. Clair Flats."

We

We do not think we are over sanguine in anticipating that the business of the Grand Trunk Railway will require, before any distant day, that the depôt accommodation at Sarnia be extended beyond what will be afforded by so much of the Ordnance Reserve as can be made available, notwithstanding the very great expense of reclaiming it.

Upon the portion reserved for military purposes, and which we desire to lease, no permanent buildings will be erected.

Having assented to all the modifications in our plans, desired in your letter of the 18th August, we hope you will now complete the arrangements with as little delay as possible.

We have, &c.

The Respective Officers (signed) *C. J. Gzowski & Co.*
H. M. Ordnance, Montreal.

Sir, Office of Ordnance, Montreal, 22 March 1855.

We have the honour to transmit, for the information of his Excellency the Governor General in Council, a copy of a communication from the Board of Ordnance, authorizing the disposal, for purposes of the Grand Trunk Railway, of those portions of the Sarnia Reserve which are required for the terminus of the work in that locality, and to state that all the necessary preliminaries have been arranged as to the parts to be sold, and the quantity of the Reserve to be leased, and that it only remains to be ascertained, with reference to the contemplated transfer of the Ordnance lands of the province, whether any objection exists on the part of the Provincial Government, to the ratification of the sale, with the understanding that the purchase money shall be held available for payment into the military or provincial chest, according to the result of the arrangements now pending.

We accordingly request you will favour us by communicating the decision of his Excellency in Council upon this point as early as may be convenient.

We have, &c.
(signed) *William Bell*,
Colonel Commanding Royal Artillery.
J. S. Elliott, O. S.
W. R. Ord,
Colonel Commanding Royal Engineer.
W. H. Blenkarne, D. O. S.

The Honourable the Provincial Secretary,
Quebec.

Secretary's Office, Quebec,
23 June 1855.

Gentlemen,

I am commanded by the Governor General to inform you, that his Excellency has had under his consideration in Council, your letter of the 22d March last, enclosing a copy of a letter from the Board of Ordnance, authorizing the disposal to the Grand Trunk Railway Company of such portions of the Sarnia Reserve, as may be required for the terminus of the railroad in that locality.

In reference thereto, I am to inform you, in reply to your inquiry upon that head, that no objection exists on the part of the Provincial Government to the ratification of the sale or lease of the lands in question, upon the proposed understanding that the purchase money shall be held available for payment into the military or provincial chest, according to the result of the arrangements now pending, in reference to the transfer of Ordnance lands, to the Provincial Government.

I have, &c.

The Respective Officers (signed) *E. A. Meredith*,
of Her Majesty's Ordnance, Montreal. Assistant Secretary.

Office of Ordnance, Montreal,
14 July 1855.

Gentlemen,

With reference to your letter of 17th February last, on the subject of the quantity of the Sarnia Reserve, which you require for the purposes of the Grand Trunk Railway.

I am instructed by the respective officers to acquaint you that there is no military objection to the disposal of the tracts designated swamp, water, and rushes, and brush, on the enclosed plan; and 10 *s.* currency per acre is proposed as the price to be charged for the whole block, with the exception of the portion comprised within the radius of 300 yards round the projected work of defence, for which an annual rent of 10 *l.* currency per annum will be required for a term of 30 years, renewable, but resumable whenever the land may be required for purposes of defence, or military occupation.

The conditions upon which the lands referred to will be sold and leased, are, that the Government or Ordnance should, at all times, have a right of way through the property

 sold,

sold, that no stone buildings be erected within the radius on the north side of the line of railroad, that should any claims for improvements be urged by squatters or other occupants, they must be arranged by the company.

You will be pleased to communicate your assent to the foregoing terms, and when the arrangements, which are pending, with respect to the Ordnance lands in Canada, are finally completed; you will receive an intimation as to the mode in which you will be required to pay the rent and purchase money.

I have, &c.

Messrs. Gzowski & Co., (signed) *W. H. Blenkarne*, D. O. S.
Toronto.

Sir, Toronto, 20 July 1855.

We have the honour to acknowledge the receipt of your communication of the 14th instant, setting forth the terms and conditions on which your department is willing to dispose of the Sarnia Reserve to us.

We beg to assent to all of them, and will be glad to receive the deed and lease at your early convenience.

We have, &c.

To Captain Blenkarne, (signed) *C. J. Gzowski & Co.*
Ordnance Storekeeper, Montreal.

Letter to Secretary to the Ordnance from the Respective Officers, Montreal, dated 30 July 1855.

Subject.

Proposed appropriation of the Sarnia Reserve to the purposes of the Grand Trunk Railway, excepting the portion reserved for defensive objects.

Board's Order thereon, dated 14 September 1855.

Acquaint the respective officers at Montreal, that the several steps reported in their letter have been approved, and direct them to put the contractors for the Grand Trunk Railway (Messrs Gzowski & Co.) into possession of the Sarnia Reserve on the conditions therein detailed.

The Respective Officers, Montreal. (signed) *C. Poignand*,
Pro. Secretary.

— No. 4. —

(No. 55.)

Royal Engineer Head Quarter Office,

Sir, Montreal, 13 August 1855.

I have the honour to forward herewith a copy of the correspondence * relating to the sale of part of the Military Reserve at Port Sarnia, Canada West, to the Toronto and Guelph section of the Grand Trunk Railroad Company. The sanction for this transfer is contained in Master General's and Board's Order, 21st December 1853 (T. 724), which authorized the sale of so much of the land as the Company might require for the extension of their line through the Reserve, at a fair and reasonable price. Enclosed is a plan of the Reserve, showing the portion which in consequence of application having been made, the respective officers consider may be sold to the Company, and have informed the Secretary for Ordnance accordingly.

The demand for so large a tract by the Company, is owing to this point being the terminus of the Grand Trunk Railway in Canada, and its being the intention of the Company to erect a large establishment in connexion with the terminus, as well as extensive wharfage and storehouses on the left bank of the River St. Clare.

The content of the land thus proposed to be sold is about 644 acres, large portions of which being in swamp and marsh.

Its

---

* *See* Letter marked "Ordnance, No. 89."

Its value for agricultural purposes, 10 *s.* per acre, from which no income is derived at present. I would, therefore, recommend its sale to the Company at the above rate, as well as the lease to it of the ground reserved for a tower and battery, on the usual terms of military resumption; also with the condition, that no building of stone or brick be erected thereon, at 10 *l.* per annum.

I have, &c.
(signed) *W. R. Ord,*
Colonel Commanding Royal Engineer, Canada.

Lieutenant General
Sir J. F. Burgoyne, G. C. B.,
&c. &c. &c.

— No. 5. —

(No. 66.)

War Department, Montreal,
27 January 1856.

Sir,

With reference to our letter of the 25th instant, No. 65, reporting the passage of the Ordnance Lands Transfer Bill, we have the honour to transmit herewith for approval and completion, the deed (in duplicate), which has been prepared by the acting solicitor of the Department at Toronto, in favour of Messrs. Gzowski & Co., for the portion of the Sarnia Reserve which is authorized by the Order of 14th September 1855 (S. 7656) to be granted to those parties for the purposes of the Grand Trunk Railway Company.

We also enclose the blank form of lease (in duplicate) heretofore in use in this command, with plan endorsed thereon, showing the portion of the same Reserve, which is retained for defence, and which is to be leased under the order quoted, for a term of 30 years, renewable to the same parties, subject to payment of an annual rental of 10 *l.* currency, and to summary resumption, as well as restrictions against building with stone; and we beg to recommend that the document may be so amended as to meet the requirements of the new Act, and be then returned to us, after execution, for delivery to Messrs. Gzowski & Co., and record in this office.

We beg at the same time respectfully to suggest, with reference to the decision communicated in your letter of the 18th February last, 166–7, that no officer would hereafter be appointed for the execution of deeds and leases in Canada, that we may be favoured with instructions for our guidance, in regard to the course to be adopted, with respect to the issue of leases which are, from time to time ordered to be granted for lands or premises now vested in the Secretary of State for War.

We have, &c.
(signed) *William Bell,*
Colonel Commanding Royal Artillery.
W. R. Ord,
Colonel Commanding Royal Engineer.
W. H. Blenkarne, D. O. S.

H. R. Drewry, Esq.,
&c. &c. &c.

CANADA GRAND TRUNK RAILWAY.

COPY or EXTRACTS of CORRESPONDENCE between the War Department and the Canadian Government respecting the Transfer and Sale of LAND at *Sarnia*, for the use of the GRAND TRUNK RAILWAY of *Canada*.

(*Lord John Manners.*)

Ordered, by The House of Commons, *to be Printed*,
26 *June* 1861.

379. *Under* 2 *oz.*

EMIGRATION (NORTH AMERICAN COLONIES).

RETURN to an Address of the Honourable The House of Commons, dated 17 April 1861;—*for*,

"COPIES or EXTRACTS of DESPATCHES relative to EMIGRATION to the NORTH AMERICAN COLONIES (in continuation of Parliamentary Paper, No. 606 of Session 1860)."

Colonial Office, 19 April 1861.

C. FORTESCUE.

(*Mr. Chichester Fortescue.*)

Ordered, by The House of Commons, *to be Printed*, 23 *April* 1861.

SCHEDULE.

CANADA.

No. in Series.	From whom.	Number and Date.	SUBJECT.	Page.
1	Lieutenant General Sir W. F. Williams, Bart., to the Duke of Newcastle.	20 February 1861 (No. 19.)	Annual Report of the Chief Emigrant Agent for the Year 1860 enclosed.	3

NEW BRUNSWICK.

2	The Hon. J. H. T. Manners Sutton to the Duke of Newcastle.	22 May 1860 (No. 18.)	Arrival of the ships "Hiawatha" and "Argentinus" reported, and the usual Ship Returns enclosed.	28
3	Ditto ditto - - -	14 September 1860 (No. 33.)	Arrival of the ships "Hiawatha" and "Elizabeth" reported, and the usual Ship Returns enclosed.	30

COPIES or EXTRACTS of DESPATCHES relative to EMIGRATION to the NORTH AMERICAN COLONIES (in continuation of Parliamentary Paper, No. 606 of Session 1860).

CANADA.

— No. 1. —

(No. 19.)

COPY of a DESPATCH from Lieutenant General Sir *W. F. Williams*, Bart., to His Grace the Duke of Newcastle, K.G.

Quebec, 20 February 1861.
(Received 8 March 1861.)

My Lord Duke,

I HAVE the honour to transmit herewith the Chief Emigrant Agent's Annual Report for 1860.

I have, &c.
(signed) *W. F. Williams*,
Lieut. General administering the Government.

His Grace
The Duke of Newcastle, K.G.

Enclosure 1.

ANNUAL REPORT of the CHIEF EMIGRATION AGENT, 1860.

To His Excellency the Administrator of the Government.

Office of Her Majesty's Chief Agent for
the Superintendence of Emigration to Canada,
Quebec, 31 December 1860.

May it please your Excellency,

I HAVE the honour to submit to your Excellency, for the information of Her Majesty's Government, my Annual Report on the Immigration to the Province during the year 1860, accompanied by the usual Statistical Tables.

On a reference to Table No. 1, in the Appendix, which furnishes the return of the season's immigration, it will be seen that the number of persons landed at this port during the season was 10,150 souls, 1,551 of whom were cabin, and 8,599 steerage passengers, showing an increase, when compared with that of 1859, of 1,372 persons.

They were classed as follows:—

	CABIN.	STEERAGE.	
Male adults	864	3,972	
Female „	500	2,678	
Children, males	69	831	
„ females	88	801	
Infants	30	317	
	1,551	8,599	
TOTAL			10,150

7,836 of whom embarked from ports in the United Kingdom, and 2,314 from the continent of Europe.

On a further reference to this Table, it will be seen that the number of vessels engaged in the conveyance of these emigrants was 76, 37 of which were steamers, and 186.

and 39 sailing vessels. The former class had an average passage of 12 days from Liverpool, and 16 days from Glasgow, and the latter had an average passage of 40 days from the United Kingdom, and 44 days from the continent. Distinguishing the cabin from the steerage, the following is the comparison:

	NO.	CABIN.	STEERAGE.
Liverpool, steam ships - - - - -	29	1,375	4,590
Glasgow „ - - - - -	8	122	845
United Kingdom, sailing vessels - - -	20	14	890
Continent - „ - - - -	19	40	2,274
	76	1,551	8,599

Of the sailing vessels from the United Kingdom, but 7 had a sufficient number of passengers on board to bring them within the regulations of the Passenger Act: 3 vessels brought out 439 passengers from England, and 4 vessels 360 persons from Ireland.

Table No. 2 presents a comparison of the number of passengers from each port and country during the seasons of 1859 and 1860, from which it will be seen, that of the whole emigration from the United Kingdom (7,836), 6,359 embarked at Liverpool, and 974 at Glasgow. Of the remainder, 122 came from English, 376 from Irish, and 5 from Scotch ports. Of the whole number, 6,932 came by steamers, and but 904 by sailing vessels; thus confining the emigration, we may almost say, to the steamers' ports.

The nationalities of the passengers embarked at Liverpool, always various, were as follows:—

English - - - - - - -	2,349
Irish - - - - - - - -	2,383
Scotch - - - - - - -	997
German - - - - - - -	190
Norwegians - - - - - -	28
Danes - - - - - - -	74
Italian - - - - - - -	1
American - - - - - - -	4
Colonists - - - - - - -	333
	6,359

From Glasgow, the proportions were as follows:—

English - - - - - - -	21
Irish - - - - - - - -	71
Scotch - - - - - - -	853
German - - - - - - -	2
Colonists - - - - - - -	32
	979

Many of the above stated on their arrival here, that they had proceeded from their homes to Liverpool and Glasgow to avail themselves of the steamers.

This shows a growing preference of steamers over sailing vessels, which, in a few years, may be expected to supersede the latter entirely with reference to the carriage of passengers. In all cases where circumstances will permit, persons desirous of emigrating will find it their interest to secure a passage by steamer in preference to sailing vessels; and, in fact, the former will be found the cheapest in the end, if time, health, and comfort are fully considered.

The emigration has been very healthy, the mortality among the steerage passengers being confined to sailing vessels, with the exception of an elderly person who died suddenly on board a steamer, on the day of her arrival from Liverpool.

The deaths among those from the United Kingdom were but 3, from Germany 5, and

and from Norway 19, in all 27; 17 of which occurred on the passage, and 10 in the quarantine hospital.

The following is a comparative statement of the arrivals from Europe in 1859 and 1860:—

	1859.		1860.	
	CABIN.	STEERAGE.	CABIN.	STEERAGE.
England	1,493	3,353	1,382	5,099
Ireland	4	413	1	375
Scotland	158	635	128	851
Germany	8	963	- -	533
Norway	57	1,694	40	1,741
	1,720	7,058	1,551	8,599
TOTAL	8,778		10,150	

Showing a decrease in the emigration of 1860 of 169 in the number of cabin, but an increase of 1,541 on the steerage.

Distinguishing the origin or nationality of the immigrants of the two seasons, they will appear as follows:—

	1860.	1859.
English	2,491	2,610
Irish	2,831	1,248
Scotch	1,850	1,787
Germans	725	1,100
Norwegians	1,809	1,751
Danes	74	—
Italians	1	—
Belgians	- -	5
Americans	4	—
Colonists	365	277
	10,150	8,778

The increase appears to be chiefly on the Irish, which is equal to nearly 127 per cent.; on the German there is a falling off of more than 34 per cent. All the other nationalities show a small increase.

Of those from the United Kingdom, it is estimated that about three-fourths of the English and Scotch remained within the province, and about one-fifth of the Irish.

The increase in the latter may, in a great measure, be attributed to the period during which the mail steamers made Queenstown their port of call, which was during the first six spring trips, when these vessels brought out 1,992 passengers, viz., 227 cabin, and 1,765 steerage, of which number, 1,052 were native Irish; and by the returns received, it appears that of the whole number brought out by these vessels, 1,319 were provided with through tickets, and proceeded direct to the United States, and 556 were similarly provided for different parts of Canada, leaving 117 unaccounted for.

On the 23 remaining trips of this line, calling at Londonderry, they brought out 3,965 passengers, of which number 2,130 had their destination in Canada, and 1,320 in the United States, and 515 were unaccounted for, being chiefly cabin passengers, or persons who may have remained a short time in this district either for business or pleasure.

The steamers from Glasgow brought out 967 souls, equal to 841½ adults; of this number, 177½ adults proceeded direct to the United States, and 664 remained in the province.

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Of the emigration of Germans, including Prussians, the number this season shows a considerable falling off, being but 725 against 1,100 received in 1859. This is to be attributed in a great measure to the difficulty they have in getting vessels direct; the parties engaged in the passenger traffic being more deeply interested in the New York route, which port, having the advantage of a line of steamers direct from Hamburg and Bremen, enables them to afford the emigrants greater facilities and despatch, to the discouragement of this route; and it has come to my knowledge that numbers of emigrants who were desirous of coming by Quebec were unable to do so from the impossibility of procuring a passage.

The several German governments, it appears, are more disposed to impede than favour the diffusion of information upon emigration, and thus emigrants arriving from the interior at Bremen or Hamburg, ignorant and unadvised, are at the mercy of the shipping agents, who forward them by whichever route is most advantageous to themselves.

It is, however, satisfactory to know, that of the German emigrants who have landed here, more than half have settled within the province, and that the country continues to receive additional numbers by the route of the United States. Several parties are reported to have reached the Kingston and Ottawa agencies during the past season, who were coming out to join their friends, and were obliged to take the New York route, not being able to procure passage to Quebec.

At Paper No. 5 of the Appendix I have appended copy of the Report of Mr. Sinn, the German agent attached to this office, the result of his personal inspection and inquiry among his countrymen settled in the Ottawa country, which gives a satisfactory account of their progress and present condition. It appears that 95 German families have settled in that country within the past 18 months, and that they are so well satisfied with their position that they have written to their friends; from which circumstance, a considerable addition to their number may be expected during the ensuing season.

The Norwegian emigrants, as in previous years, have nearly all proceeded to the Western States. The large settlements of these people in Illinois and Wisconsin naturally tend to draw their countrymen around them: every vessel which arrives here has always a majority of her passengers who are coming out to join their friends, and who exercise an important influence upon the others. These just arrived in a strange country, and unacquainted with our language, naturally prefer to accompany their countrymen to encountering difficulties of which they have no proper knowledge, and which parties, from interested motives, are more inclined to exaggerate than otherwise.

Of the 1,781 Norwegians who arrived at this port during the past season, about 60 have remained in the province; nine families, numbering 50 souls, have proceeded to settle in the district of Gaspé; they were accompanied by Mr. Closter, who rendered them every assistance in selecting their lands, which they have taken up in the township of Mal Bay. A copy of Mr. Closter's Report will be seen at Paper No. 6 of the Appendix, and to which I would beg to refer.

The progress of this settlement has so far been satisfactory, and it promises favourable results. By a letter received from Mr. Eden, the Crown Land Agent at Gaspé, in November, he writes as follows:—

"You will be pleased to hear that the Norwegian settlers are making great progress, and appear to be perfectly satisfied with the lands they have taken for their settlement; they have now six habitable houses of a good size; the road is also fast progressing; one quarter of a mile is cleared and turnpiked, and nearly one mile cleared, grubbed, and ready for turnpiking. No further work can be done during the winter, with the exception of cutting down and clearing the road, agreeable to contract."

I shall watch with much interest the future progress of this settlement, as on its results will in a great measure depend the success of our Norwegian settlements within Canada. The selection of Gaspé as a nucleus around which to draw Norwegian immigrants has many advantages. Its situation is such that vessels from Europe may land their passengers without being subjected to more than a few hours' detention; and, when landed, the emigrant is within a few miles of the Government lands, should he be disposed to settle on a farm of his own, or of the large fishing establishments, where steady employment, with wages according to capability, is offered to all inclined to work; and an emigrant family at Gaspé can locate themselves on a lot of land for less money than they would have to pay at Quebec for their inland transport to the Western States.

Table No. 3 furnishes a return of the adult steerage male emigration, distinguishing the trades and callings. The number embarked was 3,976, who were classed as follows:—

	Total.	British.	Foreign.
Farmers - - - -	1,624	848	776
Labourers - - - -	1,269	1,267	2
Mechanics - - - -	362	323	39
Professional men - - -	9	8	1
Clerks, agents, and traders -	318	315	3
Servants - - - -	32	30	2
Miscellaneous - - -	362	344	18
Total - - -	3,976	3,135	841

The incomplete form in which many of the ships' lists continue to be made in regard to classification, will account for the appearance of so large a number under the head of Miscellaneous.

The number of persons who were aided in their emigration during the past season was 130, 120 of whom were from Ireland, and 10 from England.

Of those from Ireland, 76 received 1 *l.* sterling each on landing, and consisted of 44 female and 18 male adults, and 14 children sent out by the New Ross Union, and 4 children from the Clonmel Union, who were proceeding to join their parents in Western Canada. Of the females from the New Ross Union, 7 were accompanied by children, and 37 were single females from 18 to 30 years of age: the latter all readily found employment. Of the male adults, some of them were old and infirm, and two were cripples; and it has been found necessary to send three of this party back to their native place, owing to their ill health and infirmity rendering them unable to support themselves in this country, and dependent on casual public charity. Steps have been taken to obtain repayment from the guardians of the union for the expense of their passage back to Ireland.

The other party consisted of 22 females and 18 young men from the estates of Lord Palmerston, in the county of Sligo. They appear to have been provided with a free passage, and, being all able young men and women, found immediate employment in the rural districts.

The 10 youths from England were from the Wandsworth and Leeds Reformatories. They received 30*s.* sterling each on landing, and were directed up the Ottawa, where they were all immediately employed, and are reported as doing well.

Table No. 4 presents a comparative statement of the number of emigrants landed at this port from the year 1829 to the present time, a period of 32 years, numbering in the aggregate 932,689 souls.

The general treatment experienced by the emigrants during the passage to this port during the past season has been most satisfactory; and no complaints have been made which required the intervention of this office.

The condition of the emigrants has also on the whole been satisfactory, and no cases of extreme want have come under my notice. The large proportion of our immigration from the United Kingdom, having come out by steamers, were, with very few exceptions, provided with through tickets, and generally proceeded by the Grand Trunk Railway to their destinations within a very few hours of their arrival.

A large portion of the English and Scotch were farmers and mechanics. The former appeared generally in comfortable circumstances, and have mostly settled within the province. There is no means of ascertaining the amount of capital they brought out, but it was probably considerable, as a number of cases came within my knowledge where the individuals brought out from 300 *l.* to 1,000 *l.* sterling.

The Irish were chiefly of the labouring class, who, with the mechanics above referred to, mostly proceeded to the United States.

But few of the emigrants have come out without a destination in view; and, consequently, in the early part of the season, when there was a demand in this district for both male and female labour, it was found impossible to induce them

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to remain, although in many cases, particularly with reference to domestic servants, the most liberal wages were offered.

The following is a proximate statement of the arrivals and distribution of immigrants within the province during the past year :—

Landed at Quebec		10,150
Arrived in Canada, *viâ* the Route of the United States :—		
By steamer to Portland, from January to April	663	
Ditto - - ditto - - November to 31 December	141	
By route of Suspension Bridge to Hamilton, as per Return from Mr. Dixon, 7,622, of whom there remained in Canada	2,175	
By steamers on Lake Ontario, from Rochester, Oswego, Cape Vincent, Ogdensburg, &c., as per Return from Mr. Hawke	1,650	
By Lake Champlain, as per Return from Mr. Daley	200	
		4,829
Total Arrivals		14,979
Distribution :		
Of the arrivals by Quebec, there proceeded to the Eastern States	3,039	
Ditto, Western States	4,113	
		7,152
Remaining in Canada		7,827

Of this number there appear to have settled in—

Western Canada	4,769
Ottawa District	614
Eastern Canada	1,200
Gaspé	50
Prince Edward Island	32
Unknown, but presumed to have remained in Canada	1,162
	7,827

The amount of emigrant tax realised in the course of the past season was $.9,830. 50, of which $.9,808. 50 was collected at Quebec, and $.22 at Montreal.

The expenditure incurred under the superintendence of this department during the season of 1860, amounted to—

	$. c.
For the Quarantine Establishment at Grosse Isle	8,664 48
For emigration, in the direct relief and assistance to destitute persons	4,748 64
For agency charges, salaries, rent, &c.	13,100 71
TOTAL $.	26,513 83

The several heads of expenditure on account of the Quarantine Establishment were as follows :—

	$. c.
Pay of wintering party, 1859 and 1860	789 20
Pay of officers and staff	6,142 42
Hospital supplies	272 07
Cartage	184 00
Sundries	88 91
Steamboat service	1,187 88
TOTAL $.	8,664 48

This shows a decrease, when compared with the expenditure of 1859, of $.2,453. 91 :—

	$. c.
On cost of establishment	2,016 54
Ditto - steamboat service	437 37
TOTAL	$.2,453 91

This would appear to be the lowest possible cost of the maintenance of this establishment, with a due regard to its efficiency.

The

The expenditure incurred on account of immigration at the several agencies throughout the province, for the year ending 31st December, has been as follows:—

		$. c.	$. c.
Quebec	Transport	2,633 50	
	Provisions	21 81	
	Agency charges	1,150 00	
	Salaries	2,277 80	
			6,083 11
Montreal	Transport	191 75	
	Provisions	9 15	
	Agency charges	292 85	
	Salaries	1,255 00	
			1,748 75
Ottawa	Transport	197 12	
	Provisions $14. 60, and medical aid $40	54 60	
	Agency charges	397 33	
	Salaries	1,240 00	
			1,889 05
Toronto and Kingston	Transport	850 52	
	Provisions	84 80	
	Agency charges	786 32	
	Salaries	3,617 00	
			5,338 64
Hamilton	Transport	561 88	
	Provisions	143 51	
	Agency charges	284 41	
	Salaries	1,800 00	
			2,789 80
	TOTAL $.		17,849 35

From this statement it will be seen that the total direct relief extended to destitute emigrants throughout the Province has been—

	$. c.
For transport	4,434 77
For provisions, &c.	313 87
TOTAL $.	4,748 64

The number of persons assisted at the Quebec Agency was 918 souls, viz., 254 male adults, 318 females, and 346 children, equal to 683 adults, at an average cost for transport of $\$.3\frac{61}{100}$ each. They were forwarded to—

Places in Canada East	189	
Ottawa District	68½	
Canada West	207	
United States	213	
The United Kingdom	5½	
		683 adults.

Of the above, there were from—

England	55½	
Ireland	329	
Scotland	6	
Germany	68	
Norway	224½	
		683 adults.

At Montreal, Mr. Daley reports that he assisted 106 souls, equal to 73 adults, at an average cost for transport of $\$.2\frac{62}{100}$.

Male adults	26	
Female adults	41	
Children	39	
		106

They

They were forwarded to—

Canada West - - - -	68 ½	
Eastern Townships - - -	2	
Quebec - - - - -	1	
United States - - - -	1	
		73 adults.

At Toronto, Mr. Hawke reports that the number of persons who received assistance was 970, at an average cost of 93 cents each. They were forwarded to the nearest point to their destination on the line of railroad and steamboat travel within the Province. A large number were proceeding to their friends. In addition to the above, a number received assistance in bread and temporary shelter in the emigrant sheds.

At Ottawa, Mr. Clemow afforded assistance to 113 persons, equal to 88 adults, at an average cost for transport of $\$.2\frac{24}{100}$. They were chiefly forwarded to the Upper Ottawa to friends.

Mr. Dixon, the agent at Hamilton, reports the arrivals at that agency during the season at 7,622, 419 of whom came by the way of Quebec, and 7,263 by the route of the United States and Suspension Bridge; 5,447 proceeded to the Western States, and 2,175 settled in Canada; 871 persons were assisted to reach their friends in different sections of the Province, of which number 839 came into the Province by the United States, and 32 by the way of Quebec.

With reference to the prospects for 1861, they are on the whole more satisfactory than any we have had for several years past. Having within the present month had occasion to address a letter to the Secretary of the Bureau of Agriculture especially on this subject, I cannot do better than repeat the opinions therein stated:—

"As to the demand for labour, and the prospects which Canada offers as a home for the industrial classes of Great Britain in the approaching season of 1861, I have to state that the circumstances which called forth my remarks at the close of last season continue without much change. The country still holds out no encouragement to persons seeking situations as clerks; nor do I think the amount of employment or the remuneration generally offered to mechanics likely, for some time, to benefit that class of our emigrants, unless they should desire to establish themselves in our rising towns and villages, many good openings for which occur throughout our rural districts.

"The general prospects of the Province have, however, greatly improved during the past year; and our farmers, who are now realising the benefit of the most abundant harvest they have had for years, will be able to afford increased employment to agricultural labourers—men who can plough, mow, and reap, and who understand draining—to which class chiefly does this country at present offer the certainty of steady employment.

"The class of people whom we want, and who cannot fail to do well, are those who, having a small amount of capital, are prepared to purchase and settle on our lands, and make homes for themselves in the forest, as the inhabitants of this free and fertile land have done before them. The hardships to be encountered now are less than they were 25 years ago, when a few thousand people were scattered over a long frontier of country.

"Mr. Hawke, the chief agent in Western Canada, wrote me on the 28th November, that the prospects there 'are greatly improved; and it is known that there are large quantities of farm produce yet to be brought to market, all of which is in demand at fair prices. Business is expanding, and, consequently, the demand for skilled and unskilled labour is much greater than it has been since 1857. Real estate, which has been almost unsaleable for years past at almost any price, begins to be inquired for, and sales are effected at fair prices.

"'The quantity of fall-wheat sown is large: the sowing was early, and the tillage excellent; and the young wheat looks strong and healthy. But our farmers no longer rely, as in former times, almost exclusively on their fall-wheat crop. Unusually extensive preparations have been made for spring sowing, and for these preparations farmers have been much favoured by the mildness of the weather.

"'I am, however, opposed to holding out encouragement to any class of settlers, except farmers with means sufficient to enable them to buy or stock rented farms. There are plenty of such to be had on favourable terms, and the parties are sure

of

of doing well, if they and their families have a reasonable amount of prudence and industry.' "

Mr. Hawke, from his position and long and intimate acquaintance with the western section of the Province, may be presumed to afford, in the extract from his letter just quoted, the most reliable evidence in regard to that portion of Canada.

From the information which has reached me, I am of opinion that we may look for a considerable increase of our immigration during the ensuing season. Inquiries are now being made, and particular information sought, by parties in the United Kingdom, contemplating emigration, several of which have been addressed to this office from persons possessing excellent qualifications as settlers.

The reports from Norway and Germany also speak of numerous inquiries respecting Canada, and that we may look for a considerable increase in the arrivals from those countries next spring.

The visit of His Royal Highness the Prince of Wales, so gratifying in every respect to the inhabitants of this Province, cannot but exercise an important influence, and be the means of more fully directing the attention of the people of the mother country to our yet undeveloped resources.

We may also anticipate that the present excited state of the public mind in the United States (which all must deplore) will doubtless exercise a considerable influence on the European immigration of the next season, and lead a larger proportion of settlers to the public lands of Canada rather than to those of the North Western States.

A large edition of the Government pamphlet, corrected and brought down to the present period, and accompanied by an excellent map, is in course of publication, under the authority of the Honourable the Commissioner of Crown Lands, chiefly for distribution throughout the United Kingdom, which will place much valuable and useful information at the disposal of all parties desirous of emigrating to Canada.

It is understood to be the intention of the Provincial Government to authorise the establishment at Liverpool of a reference office for the emigrants resorting to that port for embarkation to this continent. This measure, properly carried out, cannot fail to result beneficially to the interests of Canada. Of the large numbers of families who annually leave the mother country, it is true that a considerable proportion have already fixed on their destination, and cannot be diverted from it. But there are still many who have not yet finally decided on their place of settlement. These sail for New York or Quebec, and, without special intention to do so, flow with the stream that sets from those two ports always westward. If the influence of the American Emigration Agents and Colonizers, and that exercised equally from interested motives by the forwarders, both by rail and by water, is not counteracted by information of Canada previously furnished, they cannot be induced to break from the great line of travel. They are hurried along, and find themselves in the Far-West without the means of returning to ascertain whether the climate, lands, and Government of Canada would not have suited their circumstances very much better than the prairies.

With proper activity in the diffusion of correct knowledge respecting this country, and all its advantages for settlement, by means of the books and maps which have been carefully compiled and prepared for the purpose, and through a due attention to the individual applications for advice and information which will be addressed to the recognised agent of the Government of Canada, he cannot fail to bring the advantages which this Province offers to the British emigrant under the consideration of many valuable settlers, who would otherwise know little of the country beyond its name. Time will be required to show the full result of the measure; but I confidently anticipate the early appearance of advantage from it.

I beg to furnish copies of the Reports that have reached me from the several inland agencies, comprehending reviews of the business that has been carried through in the season just passed, and referring to the prospects offering themselves for the immigration of the next year.

Submitting this Report to your Excellency's favourable consideration,

I have, &c.

(signed) *A. C. Buchanan,*
Chief Agent.

Enclosure 2.

APPENDIX to ANNUAL REPORT of the CHIEF EMIGRATION AGENT, 1860.

CANADA.

No. 1.

RETURN of the Number of Emigrants Embarked, with the Number of Births and Deaths during the Voyage and in Quarantine, the Total Number landed at *Quebec*, distinguishing Males from Females and Adults from Children, with the Number of Souls from each Country; also the Number of Vessels, Tonnage, and Seamen Employed, and the Average Length of Passage, during the Season of 1860.

WHENCE.	Number of Vessels.	Average Days on Passage.	Tonnage.	Number of Seamen.	NUMBER EMBARKED.							BIRTHS.		Total Souls on Board.	DEATHS ON THE PASSAGE.					
					Cabin Passengers.	Adults.		Children, 1 to 14 years.		Infants.	Total. Steerage.				Adults.		Children, 1 to 14 Years.		Infants.	Total.
						M.	F.	M.	F.			M.	F.		M.	F.	M.	F.		
England - - - - Steamers	29	12	37,327	2,322	1,375	2,395	1,438	325	299	134	4,591	-	-	5,966	-	-	1	-	-	1
England - - - - Sailing Vessels	9	40	7,304	170	7	209	162	58	53	26	508	1	-	515	-	-	-	-	-	-
Ireland - - - - - - - -	8	39	3,237	116	1	161	158	18	27	12	376	-	1	377	-	1	-	-	1	2
Scotland - - - - Steamers	8	16	8,186	443	122	367	270	103	75	30	845	-	-	967	-	-	-	-	-	-
Scotland - - - - Sailing Vessels	3	40	1,842	63	6	3	2	1	-	-	6	-	-	12	-	-	-	-	-	-
Germany - - - - - - - -	5	59	2,455	90	-	210	148	88	66	21	533	3	2	533	-	-	2	-	2	4
Norway - - - - - - - -	14	39	5,788	205	40	631	504	242	285	91	1,753	5	2	1,793	3	1	-	-	6	10
New Brunswick, Nova Scotia, &c. - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL - - -	76	-	66,139	3,409	1,551	3,976	2,682	835	805	314	8,612	9	5	10,163	3	2	3	-	9	17
Classification of Cabin Passengers - - -						864	500	69	88	30	1,551									
TOTAL - -						4,840	3,182	904	893	344	10,163									

WHENCE.	DEATHS IN QUARANTINE.						TOTAL DEATHS.	TOTAL LANDED IN THE COLONY.									GRAND TOTAL Landed in the Colony.
	Adults.		Children, 1 to 14 Years.		Infants.	Total.		Adults.		Children, 1 to 14 Years.		Total.		Infants.	Total Steerage.	Cabin Passengers.	
	M.	F.	M.	F.				M.	F.	M.	F.	M.	F.				
England - - - - Steamers	-	-	-	-	-	-	1	2,395	1,438	324	299	2,719	1,737	134	4,590	1,375	5,965
England - - - - Sailing Vessels	-	-	-	-	-	-	-	209	162	58	53	267	215	27	509	7	516
Ireland - - - - - - - -	-	-	-	-	-	-	2	161	157	18	27	179	184	12	375	1	376
Scotland - - - - Steamers	-	-	-	-	-	-	-	367	270	103	75	470	345	30	845	122	967
Scotland - - - - Sailing Vessels	-	-	-	-	-	-	-	3	2	1	-	4	2	-	6	6	12
Germany - - - - - - - -	-	-	1	-	-	1	5	210	148	85	66	295	214	24	533	-	533
Norway - - - - - - - -	1	2	-	4	2	9	19	627	501	242	281	869	782	90	1,741	40	1,781
New Brunswick, Nova Scotia, &c. - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL - - -	1	2	1	4	2	10	27	3,972	2,678	831	801	4,803	3,479	317	8,599	1,551	10,150

Emigration Department, Quebec,
31 December 1860.

A. C. Buchanan,
Chief Agent.

No. 2.

ABSTRACT STATEMENT of the Number of Emigrants landed in the Province, distinguishing the Countries and Ports whence they Sailed, during the Seasons of 1859 and 1860.

	1859.	1860.
ENGLAND:		
Bristol	7	9
Cardiff	1	—
Hull	56	—
Liverpool	4,522	6,359
London	35	—
Maryport	5	—
Newport	7	—
Penzance	6	—
Plymouth	170	110
Poole	14	—
Portsmouth	6	—
Shields	1	—
Southampton	2	—
Sunderland	—	3
Torquay	5	—
Truro	6	—
Tynemouth	3	—
TOTAL	4,846	6,481
IRELAND:		
Belfast	13	1
Cork	3	—
Limerick	110	140
Londonderry	63	—
New Ross	194	228
Tralee	8	—
Wexford	22	—
Youghal	4	7
TOTAL	417	376
SCOTLAND:		
Aberdeen	117	—
Glasgow	612	974
Greenock	2	—
Montrose	62	5
TOTAL	793	979
GERMANY:		
Bremen	63	—
Hamburg	901	533
TOTAL	964	533
NORWAY and SWEDEN:		
Arendal	—	6
Bergen	356	578
Christiana	448	247
Drammen	168	257
Drontheim	110	155
Gothenburg	41	—
Grimstadt	—	1
Krageröe	58	17
Porsgrund	404	363
Stavanger	171	157
TOTAL	1,756	1,781
BELGIUM:		
Antwerp	2	—

RECAPITULATION.

England	4,846	6,481
Ireland	417	376
Scotland	793	979
Germany	964	533
Norway and Sweden	1,756	1,781
Belgium	2	—
TOTAL	8,778	10,150

Government Emigration Office, Quebec,
31 December 1860.

A. C. Buchanan,
Chief Agent.

No. 3.

RETURN of the Trades and Callings of the Immigration of 1860.

	British.	Foreign.		British.	Foreign.
Bakers	24	1	Painters and glaziers	16	—
Bookbinders and printers	8	—	Plumbers, tinsmiths, &c.	3	—
Bricklayers and masons	13	3	Professional men	8	1
Brickmakers	2	—			
Butchers	5	—	Ropemakers	1	—
Cabinet-makers	6	—	Saddlers and harness-makers	2	2
Carpenters, &c.	51	9	Sailmakers	1	—
Carvers and gilders	4	—	Sawyers	5	—
Coachmakers	1	—	Servants	30	2
Coopers	9	4	Shipwrights	2	—
Clerks, traders, &c.	315	3	Shoemakers	9	5
Dyers	1	—	Smiths	36	2
Engineers	15	—	Tailors	38	5
Farmers, gardeners, &c.	848	776	Watchmakers	6	1
Factory spinners	2	—	Wool and flax dressers	2	1
Hatters	2	—	Wheelwrights	7	1
Labourers	1,267	2	Weavers	6	2
Millers and millwrights	6	3	Miscellaneous and unenumerated	344	18
Miners	28	1			
Moulders and foundrymen	12	—	TOTAL	3,135	841

Government Emigration Office, Quebec,
31 December 1860.

A. C. Buchanan,
Chief Agent.

No. 4.

COMPARATIVE STATEMENT of the Number of Emigrants arrived at the Port of *Quebec* since the Year 1829, inclusive.

	1829 to 1833.	1834 to 1838.	1839 to 1843.	1844 to 1848.	1849 to 1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.
England	43,386	28,561	30,791	60,453	47,405	18,175	6,754	10,353	15,471	6,441	4,846	6,481
Ireland	102,266	54,904	74,981	112,192	93,883	16,165	4,106	1,688	2,016	1,153	417	376
Scotland	20,143	11,061	16,311	12,767	25,127	6,446	4,859	2,794	3,218	1,424	793	979
Continent of Europe	15	485	- -	9,728	16,867	11,537	4,864	7,343	11,368	3,578	2,722	2,314
Lower Provinces	1,889	1,346	1,777	1,219	4,455	857	691	261	24	214	—	—
	167,699	96,357	123,860	196,359	187,737	53,183	21,274	22,439	32,097	12 810	8,778	10,150

GRAND TOTAL - - - 932,743.

Emigration Department, Quebec,
31 December 1860.

A. C. Buchanan,
Chief Agent.

No. 5. CANADA.

Government Emigration Office,
Quebec, 20 October 1860.

Sir,

According to your letter, with instructions, of the 11th ultimo, "to furnish the Government with some reliable information respecting the Prussian immigrants who have settled within the past few years on the Upper Ottawa," I proceeded at once to that district, and have now the honour to submit the following Report:—

The statement annexed herewith shows, that 95 Prussian or German families have actually settled on the Upper Ottawa within the last eighteen months.

They are scattered through the townships of Alice, Wilberforce, Bromley, Admaston, North and South Algona, and along the free grants of the Opeongo-road, besides some 30 families have made payments on land in Wilberforce and Alice, who have not been able to take possession, chiefly for want of roads to reach their respective lots. About a dozen families have settled in Petawawa and Westmeath, and a great number now in service will enter on land by next spring.

There is also a further increase of some 60 families expected, who have advised their friends that they will emigrate from Germany during next spring.

Those settled along the north west shore of Indian river in Alice, and along the townline between Wilberforce and North Algona, have great trouble in getting to the mills at Pembroke and Egansville, because some old settlers have closed the shanty-roads, which at present are the only means of access, as no regular road is made as yet through that locality. They have therefore to carry the produce upon their backs to market, and as they are not able to plead these grievances in the English language, the townships' councils seem slow in granting and having the necessary conveniences constructed.

At the commencement of the Opeongo-road the land is generally poor, and the road, owing to the late heavy rains, was very much cut up; but on reaching the branch road to the Madawaska, which leaves the Opeongo at a place called the Corners, it begins to improve, and if the settler will proceed as far as lot No. 17, beyond Brudenell, he will meet with a tract of excellent land stretching towards Lake Opeongo (a few of the Germans have already penetrated into this part, and settled within eight miles of that lake), and, as the general report goes, continues to the head-waters of the River Trent, and towards Lake Nipissing; but of any of the free grants roads, which lead into this good tract, I found the Bobcaygeon by far the shortest, as by that road the land-carriage is only some 30 miles. However, for parties without means, depending upon employment, there is no part of Canada which offers them greater facilities for acquiring at once a homestead than the Ottawa district. They may secure, if they take the trouble and time to search, some scattered good lots of Crown lands among or convenient to the old settlements in the townships of Horton, Admaston, Bromley, Stafford, &c.

There is also in the vicinity of the Ottawa river picked land for sale by private owners or speculators, at from 4 to 25 dollars per acre, especially in the townships of Pembroke and Westmeath, or any other township down to Ottawa city.

The quantity of land cleared by the German settlers in Alice and Wilberforce, as appears in the statement, has not been all under crop; about one-third was cleared only during last summer, and is now sown with fall-wheat and rye, which presented an early appearance of three or four inches in close and luxuriant growth; and the present mild weather will forward the same, and insure its living through the winter, and, if Providence favours, further towards another bountiful harvest.

These people have already advanced so far as that it would be a loss to them to give their labour to others; they have nearly all more than sufficient provisions until another harvest, and can therefore spend their energy and strength altogether upon the improvement of their own farms; they have reached the first step where the man feels the sweetness of inde pendence! What a contrast! two years only, when they were yet the servants or nearly slaves of hard and exacting landlords in the old country.

The Prussian Poles settled on the Opeongo-road are not progressing so well. They have gone too far from employment, upon which they are yet dependent. They have no cattle themselves, so necessary for logging and preparing the land properly. The land is also of the worst description; they live in a tract of green pines, generally called "Norway Plain." Some crops grown there, on the north side of a high mountain where the sun hardly reaches, were so poor that they were not worth harvesting. It were better that those situated so would be allowed to change to a better tract, when the road is constructed further. Still, in the face of all the present hardships, they will push on also. They told me that the Roman Catholic bishop at Ottawa city had promised to build them a church, and request a priest for them from Poland.

The general expression throughout the Ottawa district is, that their harvest had been larger than usual, and the average yield of wheat might be considered at more than 30 bushels per acre. I collected a number of samples of spring and fall wheat from the settlers in different parts, which I deliver herewith to your disposal.

I have also to hand you herewith a statement signed by a number of Prussian settlers, expressing their gratitude for having been directed to a district, where they find the means of advancing themselves, in so very short a time, to the possession of a homestead and the certainty of a comparatively independent position, and which may be an assurance also of a similar prospect to those who are now intimidated from emigrating to Canada, and especially to the Ottawa district.

Yours, &c.
(signed) *W. Sinn.*

A. C. Buchanan, Esq.,
H. M. Chief Emigration Agent, Quebec.

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186. STATEMENT

STATEMENT on the Progress of PRUSSIAN EMIGRANTS settled on the *Ottawa*.

NAME of the SETTLER.	HIS PLACE of NATIVITY.	THE TOWNSHIP.	GOVERNMENT DISTRICT.	When Entered.	Number of Acres cleared since.	Number of Lot.	Concession.	THE TOWNSHIP in COUNTY RENFREW.	Crop raised this Season, in Bushels.						Cows.	Oxen.	Steers and Calves.	Sheep.	Pigs.	Fowls.	
									Wheat.	Rye and Peas.	Oat.	Barley & Buckwheat.	Turnips & Potatoes.	Flax and Tobacco in Pounds.							
Carl Krüger	Reicherskreutz	Lübben	Frankfurt a/o	Sprg. 1859	10	45	S. R.	Bonnechère Bromley	70	34	–	–	72	–	1	–	–	–	2	6	
John Witzel	Cassel	Hesse	Hesse Cassel	Fall 1859	8	31	19	Wilberforce	20	10	6	4	50	–	–	–	–	–	–	–	
Ludwig Puls	Arentsee	Prenzlow	Potsdam	Sprg. 1860	2	40	S. R.	Bonnechère Admaston	–	–	–	–	60	–	1	–	–	–	–	–	
John Kröger	Oberhoff	Grevesmühlen	Mecklemburg	,,	3	S. H. 15	4	Bromley	–	–	–	–	70	–	1	–	–	–	–	–	
Carl Lenz	,,	,,	,,	,,	11	28	Free	,,	–	–	–	–	50	–	1	–	–	–	–	–	
M. R. Gudde	Rotterdam	Rotterdam	Holland	,,	2	N. H. 15	4	Grand Opeongo	15	–	–	–	120	10	1	–	–	–	2	10	
John Griese	Greifswalde	Greifswalde	Frankfurt a/o	Fall 1860	3	E. H. 16	5	Bromley	–	–	–	–	–	–	1	–	–	–	2	–	
Carl Lomers	,,	,,	,,	,,	3	17	5	,,	–	–	–	–	–	–	1	–	–	–	1	–	
Carl Kleinholz	Ruchow	Mecklemburg Schlw.	Mecklemburg	,,	2	18	5	,,	–	–	–	–	–	–	1	–	–	–	–	–	
Gottlieb Kuss	,,	,,	,,	,,	3	41	S. R.	Bonnechère Bromley	–	–	–	–	–	–	1	–	–	–	1	–	
M. Marks	Ragazin	Woberneck	Posen	Sprg. 1860	4	39	–	,,	24	2	9	–	50	–	1	–	–	–	3	14	
A. Kockorowsky	,,	,,	,,	,,	7	6	20	Wilberforce	36	3	6	–	100	–	1	–	–	2	3	6	
Ludwig Ringe	Hesse Cassel	Cassel	Elector Hesse	,,	3	23	N. R.	Bonnechère Admaston	18	–	11	–	40	–	1	–	–	–	1	–	
J. G. Weber	Krahnziehn	Arnswalde	New Mark	,,	–	–	–	Renfrew Village	Have a lot with small garden attached, with vegetables, &c.; enter next spring					–	1	–	–	–	1	14	
Carl Bussow	Gr. Vosshagen	Grevesmühlen	Mecklemburg	,,	–	–	–	,,						–	1	–	–	–	4	30	
Jochem Grund	Jarnewitz	,,	,,	,,	–	–	–	,,						–	1	–	–	–	3	10	
Wm. Schroeder	Bretenstein	Friedeberg	Frankfurt a/o	Sprg. 1859	11	4	8	S. Algona	50	–	27	–	150	–	1	–	2	4	3	12	
Fried. Sell	Breitenstein	,,	,,	Fall 1860	They arrived only last August, *viâ* New York; they are friends of Wm. Schroeder, and were searching for good lots, and would enter at once upon land in the 21 and 22 Concession of Wilberforce. They resided on lot 36 in 18 Concession of Wilberforce; there is no other road further open.																
John Bohn	,,	,,	,,	,,																	
Gottl. Möller	,,	,,	,,	,,																	
Gottl. Quast	,,	,,	,,	,,																	
August Schroeder	,,	,,	,,	,,																	
Chr. Quast	,,	,,	,,	,,																	
Nicolaus Kranz	Breitenbach	Herzberg	Elector Hesse	Fall 1859	7	1	1	N. Algona	20	Four tons hay			100	–	1	–	–	–	3	–	
Carl Rühs	Wacherow	Greifswalde	Vor Pommern	Sprg. 1859	20	34	17	Wilberforce	150	16	40	–	145	60	2	2	–	4	2	17	
Fried. Schutt	Greifswalde	,,	,,	,,	8	30, 31	17	,,	90	4	16	–	120	60	2	2	–	2	1	10	
Wm. Thur	Toltz	Marsow	Stargardt	,,	7	34	18	,,	55	–	10	–	80	20	1	–	–	2	1	9	
Chr. Wassmund	Kleinschönwalde	Greifswalde	Vor Pommern	,,	10	32	18	,,	80	21	26	6	140	50	2	2	–	6	3	16	
J. Buchard	Hesse Cassel	Cassel	Elector Hesse	Sprg. 1860	6	5	21	,,	30	4	7	–	100	–	1	–	–	–	2	–	
Theodor Wassmund	Kleinschönwalde	Greifswalde	Vor Pommern	Sprg. 1859	3	36	18	,,	–	–	–	–	50	–	1	–	–	–	–	–	
M. Budarick	Drachhausen	Cotbus	Frankfurt a/o	Fall 1858	36	14	25	,,	90	26	75	7	136	45	2	2	4	5	4	*30	*10 tons hay each.
M. Budarick, jun.	,,	,,	,,	,,	4	13	24	,,	10	–	10	–	60	–	1	–	–	–	1	–	
Fried. Kulasser	,,	,,	,,	,,	16	13	22	,,	60	21	55	5	82	32	1	–	–	3	2	*13	
M. Rinza	,,	,,	,,	,,	14	13	25	,,	55	20	60	9	58	33	1	–	–	2	2	* 8	
M. Liesk	,,	,,	,,	Sprg. 1860	5	9	6	Alice	–	–	–	–	40	–	1	–	–	–	1	–	
Mw. Liesk	,,	,,	,,	,,	4	8	6	,,	–	–	–	–	40	–	1	–	–	–	1	–	
Ferd. Kaatz	Rohrbeck	Arnswalde	,,	Sprg. 1859	6	27	6	,,	25	14	4	–	65	–	1	–	–	–	3	13	
Julius Ringel	Steffershütte	Berent	Danzig	July 1859	3	28	6	,,	10	18	–	–	70	–	1	–	–	–	1	–	
Carl Ringel	,,	,,	,,	,,	5	29	6	,,	15	27	10	–	86	20	2	2	2	3	2	12	
G. Volgeringer	Piscorcinick	Winzig	Schlesien	Sprg. 1860	2	25	6	,,	–	No crop yet			–	–	–	No cattle			–	–	
Edw. Weber	Marienflies	Stargardt	Pommern	July 1859	3	26	6	,,	5	5	8	–	53	–	1	–	–	–	1	3	
H. Diehl	Cassel	Cassel	Elector Hesse	Sprg. 1859	2	30	6	,,	3	–	10	–	20	–	–	–	–	–	–	–	
John Boldt	Nehsebandt	Bergen	Insel Rügen	July 1859	9	14	B.	,,	50	25	25	–	100	–	2	–	2	3	2	12	
J. Biesenthal	Marienhof	Arnswalde	Frankfurt a/o	Sprg. 1859	8	15	B.	,,	40	27	30	–	100	1	2	–	2	2	3	16	
Fried. Witt	Schönfelde	,,	,,	,,	10	16	B.	,,	50	28	50	–	120	–	1	–	1	3	3	15	
Ludw. Brosck	,,	,,	,,	Sprg. 1860	3	17	B.	,,	–	No crop			–	–	1	–	–	–	1	–	
John Wienholz	Lubow	Wismar	Mecklemburg	July 1859	8	23	1	,,	36	3	6	–	40	–	1	–	–	–	1	–	

Carl Ringel, jun.	Steffershütte	Berent	Danzig	July 1859	4	8	A.	Alice	No crop ; lives with his father	–	–	–	–	–	–
John Wiencke	Roebel	Roebel	Mecklemburg	,,	4	19	A.	,,	10	–	6	–	40	–	1	–	–	–	2	–
Jos. Rohloff	,,	,,	,,	,,	8	14	A.	,,	30	19	20	–	75	–	1	–	–	2	3	9
J. Christen	Poserin	Goldberg	,,	Sprg. 1859	10	9-10	B.	,,	35	30	25	–	45	–	1	–	–	1	4	12
M. Mau	Liebanan	Arnswalde	Frankfurt	a/o ,,	6	27	7	,,	25	7	4	2	45	–	1	–	–	–	1	4
G. Weissenberg	Radwitz	Buntzen	Tosen	July 1859	5	28	7	,,	15	9	10	2	50	–	1	–	–	–	3	–
Wm. Sückow	Zachan	Saazig	Stettin	Sprg. 1859	8	30	7	,,	60	3	20	2	85	–	1	–	–	1	2	19
J. Sückow	,,	,,	,,	,,	–	29	7	,,	–	No crop ; lives in service										
Aug. Freiwald	Kleinlatzkan	Soldin	Frankfurt	a/o July 1860	2	18	B.	,,	–	–	–	2	–	–	1	–	–	–	–	–
Wm. Lüloff	,,	,,	,,	Fall 1859	12	24	17	Wilberforce	50	20	40	–	90	–	2	2	2	–	3	–
J. Scherer	Berlin	Berlin	Upper Canada	,,	4	C.	North	66-67 Opeongo, F. G.	10	4	16	–	44	–	1	–	–	–	1	–
Heinr. Scherer	,,	,,	,,	,,	3	–	South	60-61 - ditto	12	–	–	–	40	–	–	–	–	–	–	–
Gottl. Stahn	Baden Baden	Baden Baden	Duchy Baden	,,	3	C.	–													
Alb. Flies	Korne	Berent	Danzig	Sprg. 1860	2	B.S.	190-1													
A. Homernick	,,	,,	,,	,,	–	B.N.	232-3													
John Flies	,,	,,	,,	,,	–	B.S.	192-3													
Alb. Zblewsky	Kalisch	,,	,,	,,	–	B.N.	229-30													
Jos. Lorbietsky	,,	,,	,,	,,	–	–	227-28													
Jos. Zezarsky	Staviska	,,	,,	,,	–	–	225-26													
Andrew Krockinsky	Philippa	,,	,,	,,	–	–	223-24													
Thos. Schulist	Kalisch	,,	,,	,,	–	–	221-22													
Jos. Lozick	,,	,,	,,	,,	–	–	217-18													
M. Stepior	Stanzick	,,	,,	,,	–	–	213-14													
Chr. Jereczeck	Graban	Karthausen	,,	,,	–	–	211-12													
J. Luzick	Kalisch	Berent	,,	,,	–	–	215-16													
P. Zblowsky	Gornitz	Marienwerder	,,	,,	–	–	208-9													
A. Janta	Trehbohn	Berent	,,	,,	–	–	206-7													
J. Kulasser	Tuska	,,	,,	,,	–	–	198-9													
Jac. Kulasser	,,	,,	,,	,,	–	–	196-7													
C. Riza	Lipusch	,,	,,	,,	–	–	194-5													
Jos. Sczalla	Kassin	Gornitz	Marienwerder	,,	–	–	191-2	F. G. Opeongo												
P. Sczalla	,,	,,	,,	,,	–	–	189-90													
J. Liza	,,	,,	,,	,,	–	–	249-50													
A. Zewerth	Selzena	Berent	Danzig	,,	–	–	232-33													
Franz Prinz	Kalisch	,,	,,	Fall 1859	–	–	230-1													
Michel Prinz	,,	,,	,,	,,	–	–	228-9													
Anton Prinz	,,	,,	,,	,,	–	–	226-7													
Jos. Atminsky	,,	,,	,,	,,	–	–	222-3													
Jos. Hinza	Klintz	,,	,,	,,	–	–	220-1													
P. Trebinsky	Stulzna	Karthans	,,	,,	–	–	216-17													
Albt. Kulasser	Quarni	Berent	,,	,,	–	–	214-15													
Mich. Stipior	Ostrawa	Karthans	,,	,,	–	–	212-13													
Aug. Flies	Korne	Berent	,,	,,	–	R.S.	210-11													
Jos. Zblowsky	Kalisch	,,	,,	,,	–	–	208-9													
Jos. Jaxa	,,	,,	,,	,,	–	–	206-7													
Maths. Zadowsky	Puskwe	,,	,,	,,	–	–	198-9													
Ms. Peculczky	,,	,,	,,	,,	–	–	196-7													
P. Kaldusky	,,	,,	,,	,,	–	–	194-5													

Those settled upon the free grants along the Opeongo since the fall of 1859, have raised some wheat, potatoes, rye, Indian corn, turnips, tobacco, &c. &c. &c., but by far not sufficient for their support until another harvest. With some I found the crop very fair, but with others it was not worth harvesting, partly in consequence of the land not having been sufficiently cleared or tilled, and partly of the rocky and sandy soil along the north side of a mountain, where the free grants are altogether worthless, and where the sun could not reach the small clearings among the heavy green pines.

Those who went in this spring, or during this summer and fall, have only erected their blockhouses, but will clear a few acres for spring crops.

This whole settlement possesses only five cows and some pigs; and as they cannot find employment nearer than Egansville, about 25 miles distant, it would be a great boon and assistance if these people were allowed to make a part of the Opeongo road, and for which they would receive a fair allowance or pay; I fear they will else suffer during next winter, although it is their own fault; they were warned not to go so far into the forest without sufficient means of support; and as they are situated they will not be able to do much upon their own lots; and as they are averse to hire out by the month, as in many cases they received no wages, they must lose the most of their time in searching and reaching a week's employment. But in the face of all this, they express themselves quite content; the hope of better progress gives them courage.

Note.—Forty of the 95 settlers mentioned in the above statement entered eighteen months ago, and during that time have progressed in the cultivation and settlement of their wild farms, so far as to furnish a fair criterion of what any industrious and persevering family, possessed of only 75 dollars, may accomplish; viz.:—

	Dolls.	*c.*	*Dolls.*	*c.*
Payment of first instalment on 4,000 acres, or 100 acres each	–	–	700	–
– 40 blockhouses, barns, and stables, at	40	–	1,600	–
– 48 cows	25	–	1,200	–
– 6 yoke oxen	80	–	480	–
– 15 steers	15	–	225	–
– 45 sheep	2	–	90	–
– 72 pigs	10	–	720	–
– 260 fowl	–	15	37	–
– 1,400 bushels wheat	1	20	1,680	–
– 422 bushels peas, rye, and barley	–	60	265	–

	Dolls.	*c.*	*Dolls.*	*c.*
Payment of 642 bushels oats	–	40	256	–
– 3,060 bushels potatoes and turnips	–	30	918	–
– 330 lbs. flax and tobacco	–	10	33	–
– 40 tons hay	7	–	280	–
– 334 acres cleared, at	10	–	3,340	–
Total			*Dolls.*	11,824	–
Capital of 40 settlers, brought in with them 75 dollars each				3,000	–
Balance in favour of the settlement, to each 220 dolls. 60 c.			*Dolls.*	8,824	–

Government Emigration Office, Quebec, 20 October 1860.

(signed) *W. Sinn.*

CANADA.

TRANSLATION of the original Statement by the German Settlers.

WE, the undersigned German immigrants now settled in the county Renfrew, Canada West, by the advice of Mr. Sinn, who accompanied us into the wild forest, have settled here some eighteen months ago. We are now in possession of a homestead, which secures to us and our families the means of a comparatively independent livelihood. We are all satisfied with the land bought from Government; it produces abundant crops; and as we possess but little means, we find also remunerative employment among the old settlers, which enables us to procure the necessaries which we may require, until we have made a sufficient clearance on our own lots.

We can therefore, upon our own experience, recommend Canada to our friends and acquaintances in the old country who are desirous to emigrate.

Signed and given in our domiciles, in the townships of Alice and Wilberforce, in the month of October 1860.

Wilhelm Thur.	Gottl. Quast.	Wilh. Sückow.
Joachim Grund.	Theodor Wassmund.	Albert Sückow.
Johann Witzel.	Johann Weber.	Herm. Sückow.
Johann Boldt.	Carl Bussow.	A. Lange.
Fried. Schütt.	Edw. Weber.	Johann Wienholz.
Carl Wassmund.	Carl Ringel.	Fried. Kulasser.
Carl Rühs.	Julius Ringel.	Martin Liesk.
Johann Biesenthal.	Gottl. Volgeringer.	M. Budarick.
Fried. Witt.	Gottl. Weissenberg.	Aug. Freiwald.
Johann Christen.	Michel Mau.	M. Budarick, jr.
Nicolaus Kranz.	Ferd. Kaatz.	M. Rinza.
Gottl. Müller.	Jacob Ringel.	Wilh. Schroeder.
Aug. Schroeder.	Fried. Aitenburg.	
Johann Bohn.	Fried. Weissenberg.	

The above is a faithful translation from the original.

Government Emigration Department,
Quebec, 20 October 1860.

(signed) *W. Sinn.*

No. 6.

Government Emigration Office, Quebec,
10 September 1860.

Sir,

IN accordance with the approval of the Honourable the Commissioner of Crown Lands, as also from your communication of August the 14th, I proceeded to accompany the party of Norwegian emigrants, who arrived here by the brig "Brödrene," from Drontheim, to make the first Norwegian settlement in Gaspé, and herewith respectfully beg to report my success.

On the 6th of August I left in the steamer "Lady Head" with seven families, or 34 persons, and on our arrival at Gaspé Basin we were met by those Norwegians, whom I had sent down some three weeks previous with the same object, awaiting my arrival to assist them in the selection of a locality to commence to settle on.

They expressed much satisfaction with the appearance of the country, and also had every confidence with respect to future success for any industrious family to work out a respectable living. Having thus expressed themselves, an increased encouragement was felt by those whom I accompanied.

An arrangement was consequently at once entered into by all the Norwegians, that from amongst them four of their number should accompany me into the interior to examine the Crown lands, with a view of selecting a desirable locality for settlement.

The remainder I secured houses and obtained employment for, until a final conclusion could be arrived at for the future.

Having thus arranged, I proceeded to accompany the four Norwegians into the country, viz., through the townships of York, Douglas, and Mal Bay. In all the unsettled part of these townships I found a great deal of good land fit for agricultural purposes, but the absence of any kind of passable road caused some discouragement, and particularly so when it was found that not a single lot of land could be obtained from the Crown having a frontage on the sea coast; and after having thus spent some 12 or 14 days in various parts of the country, we returned to the township of Mal Bay (for reconsideration), and finally concluded to file their applications in the office of the Crown land agent (which I did on their behalf) for all the unsettled and unsold land in the township of Mal Bay, to which applications the agent, Mr. Eden, acknowledged the same having been filed in his office.

And having so far succeeded, an arrangement was again entered into, by which all the male adults, 17 in number, should at once proceed to Mal Bay, to commence the necessary erection of log-houses on their respective lots; after which, then to remove the remainder of their families for permanent occupation.

I trust

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I trust that the Government will be pleased to take that interest in this first settlement in Gaspé of Norwegian emigrants as shown to other new settlements; for it must be observed that these people have gone there solely at their own expense, and some of them were obliged to remain in Quebec a week before they could obtain passage down, and also a great deal of time and money has necessarily been spent before they could locate themselves, and before the long winter is over, and during which time it is impossible to expect to obtain employment by which to make any money for the support of their families. The necessity of a passable road from the main road into where the Norwegians have made a commencement to settle is indispensable; and if it be desired to secure a successful settlement of a class of emigrants who by their former habits are so peculiarly adapted to the character of that part of Canada, which has hitherto been almost rejected by all other European emigrants, however much I may feel confident of its practicability for Norwegians to make a successful settlement, whether as agriculturists or fishermen, it must be remembered that the unsuccessful settlement of Norwegians in Bury (E. T.) has been made known in Norway, and has been made use of to show that the cause of the unsuccessful settlement there is because of the unequal character of Canada to that of the Western States, and which will be, if not properly checked, long considered as such by the Norwegian population.

Referring again to the actual position of the Norwegians now at Gaspé, I am happy to be able to state, that I left them perfectly reconciled to their new home; and although the most of them are possessed of some means, I fear that before the long winter is past some of them may become short, and, without some indirect assistance from the Government, they may have to encounter a great deal of hardships, which may cause discouragement amongst them, and particularly when subjected to the very high charges made on all kinds of the necessaries of life, such as groceries and provisions, on which they will have to pay at least 50 per cent. on Quebec prices. I was also informed that it was a general thing, after the 1st of January, to charge the flour as much as from 12 to 15 dollars per barrel, and all other articles in proportion.

In conclusion, permit me respectfully to solicit your favourable co-operation in recommending to the Honourable the Commissioner of Crown Lands the utility of opening a communication from the main road into the new Norwegian settlement, and along the Concession on which they have settled, as also the assistance of the Government for the erection of a school-house, which would also be occupied as a meeting-house, and which would be of great encouragement to them for the first few years.

The estimated expenditure in carrying out the above, I took pains to inform myself of the cost whilst I was there; and I feel confident, if carried out, it will be met with the most favourable results; and I venture to say that if these, the first, could be thus assisted, they would then feel perfectly at home in their choice of locality, and by their influence during the winter will, in all probability, induce a large number of their countrymen to come and join them next season.

The Norwegians at present in Gaspé are 17 male and 11 female adults, 8 male and 14 female children; making a total number of 50 souls.

I have, &c.

A. C. Buchanan, Esq.
H. M. Chief Emigration Agent, Quebec.

(signed) *C. O. Closter.*

Government Emigration Office, Toronto,
28 November 1860.

Sir,

I HEREWITH furnish you with my Annual Return of Expenditure on account of Emigration for the year 1860, at the Toronto and Kingston Agencies.

STATEMENT of the Arrival of Emigrants at Toronto, Cobourg, Port Hope and Whitby, during the year 1860.

From England, *viâ* St. Lawrence	568
„ Ireland „ „	343
„ Scotland „ „	240
„ Germany „ „	218
„ Norway „ „	1,756
Estimated number who passed the Suspension Bridge by night trains, and not included in Mr. Dixon's Return	350
Estimated number entered Canada, *viâ* Rochester, as per Return from Captain Schofield	486
Estimated number, *viâ* Ogdensburg, Oswego, and Cape Vincent	525
	4,486
Mr. Kersten reports that the number who proceeded to the United States was	2,102
Number of actual Settlers	2,384

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To these must be added the number returned by Mr. Macpherson, Kingston, and Mr. Dixon, Hamilton, in their reports to your office, in order to ascertain the total number of settlers added to the population of Upper Canada during the year 1860 to this date.

Of those who remained in Canada, there were assisted with transport and provisions 917, at an average cost of 93 cents each. They were forwarded to the nearest point to their destination on the line of railroad and steamboat travel within the Province. A large number were proceeding to their friends. In addition to the above, a number received assistance in bread, and temporary shelter in the emigrant shed.

The expenditure incurred at the Toronto and Kingston Agencies during the year has been as follows:—

	$. c.
Transport - - - - - - - - - - - - -	850 52
Provisions - - - - - - - - - - - - -	84 80
Salary of A. B. Hawke, chief agent - - - - - - -	1,600 –
„ W. J. M'Kay, clerk - - - - - - - -	800 –
„ Edward Kersten, German agent - - - - - -	425 –
„ Mrs. E. Huber (by Authority) - - - - - -	150 –
„ James Macpherson, agent Kingston - - - - -	400 –
„ Office messenger (Toronto) - - - - - -	242 –
Office expenses, including office rent, shed rent, fuel, stationery, printing, taxes, travelling expenses, and other items, including estimate for quarter ending 31st December - - - - - - - - -	786 32
TOTAL - - - $.	5,338 64

The condition of the emigrants who visited Toronto Agency was decidedly good; with scarcely an exception they appeared healthy, able-bodied persons. I am not aware of a single death among them during the past season.

Our prospects have greatly improved; and as it is known that there are large quantities of grain, pork, beef, butter, &c., yet to be brought to market, and in demand at fair prices, business is expanding, and consequently the demand for skilled as well as unskilled labour is much greater than it has been since 1857.

Real estate, which has been almost unsaleable for years past, at almost any price, begins to be inquired after, and sales are effected at what I consider fair prices. I hope the expansion of our Bank issues may not lead to speculation, as many anticipate; so far there is no disposition in that direction.

Although the cloud that has so long overshadowed this section of the Province has not entirely passed, it is evidently disappearing, and another such harvest as the last will set all to rights. The quantity of fall-wheat sown is very large. The sowing was early, and the seed, I am told, selected with unusual care; the tillage excellent, and the young wheat looks strong and healthy; but our farmers no longer rely, as in former times, almost exclusively on their fall-wheat crop. Unusually extensive preparations have been made for our usual spring crops; and for these preparations our farmers have been much favoured by the mildness of the weather.

I am, however, opposed to giving any "invitation" to any class of settlers, except farmers, with means sufficient to enable them to buy or stock rented farms. There are plenty of such to be had on favourable terms; and the parties are sure of doing well, if they and their families have a reasonable amount of prudence and industry.

I am, &c.
(signed) *A. B. Hawke*,
Chief Agent for Upper Canada.

A. C. Buchanan, Esq.
Chief Emigration Agent, Quebec.

MONTREAL EMIGRATION AGENCY ANNUAL REPORT for 1860.

To *A. C. Buchanan*, Esq., Her Majesty's Chief Emigration Agent, Quebec.

Sir,

I HAVE the honour to lay before you the following facts relative to the emigration of the past season at the port of Montreal, together with such observations and suggestions as have occurred to me as likely to be useful to the emigrant himself, as well as to those whose duty it is to advise and assist him, either on his first great journey across the Atlantic, or, subsequently, on his oftentimes long and expensive inland transportation to the place of his selection on this continent.

My experience as emigration agent at this port, as you are aware, extends only over the last two years. I have therefore only the advantage of comparing the observations of the year now closing with my personal experience of the one immediately preceding.

I have, however, with a view to a proper preparation for the important duties with which I have been intrusted, carefully considered the mass of valuable information contained in your

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your past reports, as well as that which is embodied in the able report of the Select Committee of the House of Assembly in its last session.

The few facts I have to record are as follows:—Though the number of emigrants applying at this office for advice exceeded in number those of the previous year by 500, the proportion of indigent and helpless families was largely diminished; and the relief afforded has been almost entirely confined to the transportation of widows, with families, joining their relations.

Diminished demand for relief.

I am happy to be able to report that a greater disposition upon the part of the comparatively well-to-do emigrant has been evinced this year to rely upon the agency for guidance as to eligible localities for settlement, prices of lands, and for cheap and direct routes of travel; and that but few (and those apparently accidental) instances of those painful misdirections, so ruinous to the purse of the emigrant of small means, noticed particularly in my last report, have occurred this year.

The comfortable, healthy appearance, and self-reliant manner of the applicants, indicated also not only the possession of means to purchase, but that correct emigration information is spreading abroad; and that, in general, the emigrating class are more on their guard against the gross and heartless impositions of their old enemy, the "Runner."

Improved quality of emigrants.

The great demand for labour at home, and the increased attention of the employer to the interests and comfort of the employed, is evidently still checking that large supply of the sturdy agricultural servant, with which, in former years, this Province was so abundantly blessed.

So great was the demand for this class during the height of our late abundant harvest, that applications reached me from farmers in Canada West, offering as high as two dollars per day for their services; but the actual supply was unequal to the demand of this city and its vicinity alone.

Great demand for servants of both sexes.

Of servant girls no less than 189 were engaged immediately on their arrival by families here; but these fell far short of the demand, and, in some instances, women, with the incumbrance of one and even two children, were readily engaged on the larger dairy farms of this neighbourhood.

In spite of the reiterated warnings furnished from the different emigration agencies in this Province, the skilled mechanic and clerk class still present themselves in great numbers. They throw themselves, inconsiderately, into a field already overstocked, injuring themselves, and, to some extent, the class with whom they compete; they become idle and dissipated, till at length, compelled to succumb, they apply for assistance from their relations at home to enable them to return.

Increase of emigration among mechanics and clerks.

Upon this subject, notwithstanding that so much has been said, I feel it my duty to add such testimony as my long experience of the social condition of this my native country enables me to do, in the hope that it may reach those persons in Great Britain for whose benefit it is more especially intended.

The great error that these people commit is in supposing that society here is still in a normal state. They cannot comprehend the fact, that society progresses infinitely faster in this young and vigorous quasi-democracy than in an old country; that we have now, at least, three generations raised on the soil; that thousands and tens of thousands of wealthy farmers are raising large families, and that the sons of those farmers have the same aspirations as the sons of farmers of other countries; some seeking the bar, some medicine, some engineering, and some mercantile pursuits; and these in far greater numbers than can succeed, without the addition of foreign competition.

It should be remembered, also, that the British Canadian has now, for many years, enjoyed the advantages of an admirable system of education; that he has been trained to a knowledge of the economy of his country and the habits of its people; that he has local habits and connexions often extending from one extremity of the Province to the other.

With all these advantages, is it to be wondered at that they are preferred to new comers, and that, in short, for the purpose in question they are infinitely superior to them.

Whatever may have been our necessities in past times for labour to clear our wild lands, there can be no question that the extraordinary competition of our agricultural societies in producing improved implements, seed, and stock, as also the thousands of acres which now present a surface unbroken by a single stump, and capable of receiving the highest order of agricultural skill, render our necessity for the best English and Scotch ploughmen quite as great in the present day as formerly.

General decrease of emigration.

The unanimity of the opinions expressed in the correspondence elicited by your circular of the 7th of February 1860, from shipowners, agents, and others in Great Britain, seems to leave no doubt that the great stream of emigration which has flowed so interruptedly to this continent, and for so many years, is at length dammed up, if not permanently, perhaps for many years to come.

This fact alone should be sufficient to direct the attention of one in my position to take every opportunity afforded by my intercourse with the newly arrived, and especially with the intelligent agricultural emigrant, to stand as much as possible in his position, to look at the question as he views it, and as those of his class view it at home; and, more particularly, to note the cause of preference evinced by those who do come to this colony.

It is, perhaps, natural that the majority should be attracted by connexion; but the shortness of the passage, the fertility of the soil, and especially the extreme healthiness of the climate, are commonly cited; and certain I am, that however capricious the tide of emigration may be at present, the advantages enumerated will, in the long run, assert for this country a lasting supremacy over every other field of emigration.

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In corroboration of this view, I need scarcely remind you of the number of persons now settled in Western Canada, who had previously tried Australia and New Zealand; and though the farm labourer of England may, as your correspondents generally assert, enjoy at home full employment and good wages, I feel a confidence that the day will yet come when the fee-simple of Canada will become the favourite investment for his savings.

In your reply to question 106 (*see* page 35 of the Select Committee's Report), I observe the following passage:—

> "But a premium of 100 acres of land in fee-simple as it is now offered, whatever the regulations connected with it, should always be a consideration with industrious men of the labouring classes at home, and deserves to be made more generally known as the engagement of the Canadian Government towards every actual settler."

In this recommendation my information enables me entirely to concur.

I have found the better educated mechanic as well as many other emigrants of various occupation, who have determined upon a life in the bush, reading everything, and eagerly inquiring all about the Government free grant, though with little apprehension of the task they are about to undertake, but relying principally upon their powers of endurance to overcome all obstacles; and it is certain that perseverance carries many of these men through.

The agricultural labourer and small farmer, on the other hand, though not less alive to the charms of the fee-simple, approach the matter more warily. Their intimate acquaintance with farming and the labour necessary to improve wild land induces the resolution to prepare themselves, by some previous earnings and experience, to grapple with the prize.

In this city we have hundreds of men employed as carmen, warehouse porters, police, and hotel servants, saving their earnings with precisely the same object.

With one or two hundred dollars they know they can readily purchase the right of those who make it a business to chop and clear a few acres, erect a log-house, and remunerate themselves by selling out to new comers.

Advantages of steam ships for steerage passengers.

The past history of emigration shows that besides those whose necessities left them no alternative, there were many others who, though possessed of pecuniary resources, preferred inferior vessels, where a passage was attainable at from 20 *s.* to 30 *s.* per head, regardless of the risk of long passages, in ships crowded like slave vessels, and often overtaken with pestilence and famine, till at length the Passenger Act of 1852 became an imperative necessity to prevent the practice of a course so suicidal to the emigrant, and so fatal to the country upon which they landed.

Upon this subject the letter of Mr. Wilcox, of Plymouth (England), and the evidence of Hugh Allan, Esq., of the Canadian Ocean Mail Line, both of which are to be found in the Parliamentary Report, are worthy the notice of emigrants.

Mr. Wilcox states, that it is quite a mystery how steerage passengers are even now conveyed by Canadian ships, as low as from 4 *l.* 10 *s.* to 5 *l.*, and by American vessels as low as 3 *l.* 5 *s.*, without serious evasions of the Passenger Act.

With regard to the New York ships sailing from Liverpool, emigrants by that route have explained the mystery to me in this way: From 20 to 30 passengers have been known to be taken on board after the ship had been inspected, and had been drawn from the wharf and anchored in the stream of the Mersey.

Mr. Allan states that his charge for adults is 7 *l.* 7 *s.* sterling. When we consider the shortness of the passage, the generous dietary, the unlimited supply of water, the protection afforded by the better description of these ships from sickness, from ill-usage, and from the want of cooking accommodation, it is almost impossible to conceive how there can be any room for competition.

I am happy, however, to observe that these advantages are telling, and that the passengers by steam are increasing. The comfortable condition and respectability of the emigrants landed here during the last season from the Anchor Line, elicited much commendation from those who witnessed it. Still I cannot but think, that should the cycle of events ever cause emigration to assume its former dimensions, a large class of steamers, inexpensively fitted up, and devoting themselves to the conveyance of steerage passengers and cargo, the former at 5 *l.* per head, would not only be a paying speculation, but would so familiarise the emigrating class of Europe with Canada, as to cause them to look upon it as more accessible than many parts of their own country.

Prospects of the coming season.

I should be guilty of a great omission were I to close this report without some allusion to the extraordinary commercial and industrial prosperity manifested not only in this city, but in Lower Canada generally, during the past year. There is no merchant or manufacturer with whom I am acquainted who does not express himself satisfied with the results of the business season just past, and the benefits it has conferred upon all classes of our population.

It is, perhaps, only natural that they should feel more than ordinarily encouraged by the extraordinary mineral discoveries which are daily developing themselves both in the Eastern townships and in the neighbourhood of Quebec; and certainly, if the success of the "Acton" mines, which, though commencing late in the season, are reported already to have produced copper to the value of 200,000 dollars, is any indication of the product of the rest, it is impossible to make any calculation of their future without great danger of exaggeration.

I am

I am this day advised that ship building at Quebec, a branch of industry long dormant, is reviving, and that there is a prospect of employment through the winter for 5,000 men, on 18 vessels, and that preparations are also in progress for a vigorous prosecution of the fisheries. Of these two latter branches of industry, you, who are residing on the spot, can form a more exact estimate than myself.

The copper discoveries are matters of public notoriety, the real value of which to the labour market time alone can test; and I shall be happy if, in my next report, I am enabled to say that the great hopes formed of them have been realised.

I have, &c.
(signed) *Jos. H. Daley,*
Government Emigration Agent, Montreal.

Note.—December 24, 1860. Upon inquiring at Messrs. Edmonstone and Allan's office this day, I am informed that the passage money from Ireland is reduced to 6 *l.* 6 *s.* sterling, but that from Liverpool it is still 7 *l.* 7 *s.* sterling.

Government Emigration Office, Ottawa,
31 December 1860.

Sir,

The arrivals of emigrants at this port, during the present season, may be estimated thus:—

From England - - - - - - -	223 souls.
„ Ireland - - - - - - -	163 „
„ Scotland - - - - - - -	69 „
„ Germany and Poland - - -	159 „
Total - - -	614 souls.

Classified as follows:—

	Men.	Women.	Children.	Infants.
From England - - - - - -	126	44	53	—
„ Ireland - - - - - -	66	57	40	—
„ Scotland - - - - - -	27	18	24	—
„ Germany and Poland - -	57	43	52	7
Total - - -	276	162	169	7

The very large majority of the emigrants included in the above statement arrived in this city, *viâ* the Ottawa and Prescott Railway, from Prescott, which place they had reached from Quebec, Montreal, Portland, Boston and New York. A sensible increase from the latter two points was perceptible during the season of 1860, as compared with former seasons. Such increase is to be accounted for from the circumstance that passage by sailing vessel to Quebec was not procurable during the greater portion of the year, and from this sole cause emigrants were obliged to patronise foreign sailing vessels, and hence it is why increased numbers were landed at American ports during 1860.

As advised you, at various periods during the year, repeated complaints were made by many of the above respecting the treatment they had experienced after landing at the port of disembarkation, by being forced or induced by false representations to adopt a circuitous and expensive inland route, involving serious outlay of money and loss of time. In numerous cases the expense attendant upon reaching this place from the sea-coast equalled the cost of Atlantic passage. The extent to which this ungenerous treatment has been carried ought to warrant some effectual remedy being applied, as will prevent (if possible) any similar recurrence for the future.

The emigrants of this season were of a mixed character, apparently respectable, but generally of the poorer classes; they were healthy, and required but very trifling aid from our hospital establishments.

During the season, relief has been afforded at this agency to the undermentioned, to enable them either to reach their friends located in distant parts of the district, or to aid them to reach points where suitable employment was procured for them:

In the aggregate 113 persons, equal to 88 adults, were assisted and forwarded to the following places:—

				$.	c.
7	adults	forwarded to	Portage du Fort, at a cost of - -	1	90
2	,,	,,	Montreal ,, - -	2	00
6	,,	,,	Fitzroy ,, - -	1	25
9	,,	,,	Gould's Landing ,, - -	1	90
23	,,	,,	Farrell's Landing, for various places in the County of Renfrew, at a cost of - - - - -	1	75
3	,,	,,	Oliver's Ferry, at a cost of - -	1	50
2	,,	,,	Ara Prior ,, - - -	1	50
2	,,	,,	Clarendon ,, - - -	1	60
3	,,	,,	Beckwith ,, - - -	3	00
31	,,	,,	Pembroke ,, - - -	3	15

Several of the arrivals to this district during the season of 1860 had been aided to emigrate to this country.

A few male labourers reached this district that had been sent out by Lord Palmerston; on their arrival here, places were immediately provided for them with our farmers, who were glad to secure their services. Although they had not been accustomed to agricultural pursuits, yet the majority were found willing hands, and soon acquired a knowledge of the work of this country.

Nine lads sent out by the Wandsworth Industrial School also reached this district during this season, and on arrival were supplied with suitable places; they were healthy and robust lads, and from what I can learn, they have acquitted themselves in a creditable manner in their respective situations.

Among the arrivals of the present season, many had likewise received aid (to reach this country) from their friends already located in the Province: a large number of families arriving here, being *en route* to join their friends, showed that more had been aided in this respect during the present season than in former years; in fact, the number who so came out in 1860 largely exceeded that of any previous year in my experience.

The expenditure of this agency during this season has been as follows:—

	$.	c.
Transport by land and water - - - - - -	197	12
Provisions, bread supplied - - - - - - -	14	60
Other relief, medical aid - - - - - - -	40	00
Agency expenses, salaries - - - - - - -	1,240	00
Contingencies, office expenses - - - - - -	397	33
,, travelling expenses - - - - - -	12	00
,, other expenses - - - - - -	20	00
	$. 1,921	05

The annexed statement of arrivals of emigrants in this locality during the season of 1860, shows a small increase over that of the preceding year.

It is consolatory to be enabled to state that the entire number who reached the Ottawa Valley this season may now be numbered as permanent settlers thereof; such portion as required employment were at once provided with suitable places, and the residue either located lands for their own account, or else proceeded to join their relations or friends previously located in various parts of the country.

As stated in my last Annual Report, this section of the province, in an agricultural point of view, is rapidly increasing and extending in its proportions; and when the bountiful and greatly increased nature of the return of the crops of 1860 is taken into consideration, it will be easily understood that increased demand for labour must necessarily have followed. Applications were daily made at this office during the present season, from almost every township in the numerous adjoining counties, for labourers, averaging from 20 to 50 each, but I am sorry to add that a very small proportion indeed of the required help could be supplied by means or through the instrumentality of imported labour.

Female servants were likewise in great request; the number that reached this place this season was only 17. Great distress prevailed in every locality in this district for want of capable female servants. Only 26 mechanics reached this district during 1860; these were chiefly employed at the Government works in this city; a larger number would have found employment through the same source had they arrived here the present year.

The Germans and Poles of this year, as a general thing, followed the footsteps of their predecessors, and proceeded to the Upper Ottawa. They have now formed the nucleus of a settlement in different parts of the county of Renfrew, and doubtless will yearly augment in numbers; from all I can learn, they are progressing favourably, and in time will compose an important and highly desirable addition to the population of that section of the Province.

As respects the future, at no period were the prospects, as regards the future, of this section of the Province more propitious: the abundant harvest of the present season, with the

CANADA.

the consequent revival in every branch of trade, has caused an activity to prevail in the entire Ottawa valley, heretofore unprecedented.

The farmers are in a prosperous condition, and feel inclined to extend to their fullest extent their future operations; and to enable them to carry this intention into practical execution, they will require a large increase of labour during the next season; consequently, agricultural labourers may rest satisfied of being enabled to procure employment in this locality during 1861.

The services of farm labourers from the agricultural districts of the United Kingdom would be highly prized in this district; this class of emigrants, if they could be induced hither, would materially aid in developing the resources of the country, and at the same time their own future interests would be served by such a step. In this country, after a few years' servitude, every working man may become a landowner; that such is the case, the experience of almost every farmer at present in comfortable or affluent circumstances in the country can readily substantiate as no fiction. The future offers precisely the same encouragement to the willing and competent hard-working man as the past; and now, as then, it only needs determined energy and perseverance to become a happy and prosperous settler.

With reference to mechanics, as before repeatedly stated, it is always difficult to offer any advice to this class of intending settlers. The country already possesses a large amount of mechanical skill, but yet the new settled rural parts of the country would absorb a considerable number of artisans; they must, though, be content to abide their time, and to grow and progress with the growth and progression of the locality whither they may settle. In various country places, mechanical services can be advantageously combined with agricultural pursuits, and in this way, in the space of a few years an independence and comfortable home will most inevitably be the result. Here it may be that mechanics may find temporary employment, but such class of persons will generally find it to their ultimate advantage to seek a permanent settlement as quickly as possible after becoming acquainted with the localities, more particularly requiring their special trade, or in other respects suitable to their views with reference to the future.

It is indispensably requisite that some decided course of action should be taken to induce a sufficient number of female servants to emigrate to this country to meet its requirements. The subject has been so often brought under your consideration that I doubt not already you have taken the initiation in the matter; suffice it therefore to say at this time that the inhabitants of the Ottawa country generally will hail with unspeakable delight any steps that may be taken by you to supply them next year with a suitable class and sufficient number of female servants.

The judicious extension of the settlement of the country is always an important subject for consideration, and it especially behoves every one interested in its welfare to aid in developing and increasing its resources and capabilities: heretofore, a number of emigrants have located the waste lands of the Crown in various parts of the Ottawa country; of course it takes some considerable time before any decided opinion can be formed as to the result of such settlement.

At this period I consider that the experience of the past justifies my reporting that, under all the circumstances, the result of the settlement by emigrants during the three past years must be considered as imminently successful. Although in many instances the various persons locating the lands in question were not exactly the class of men who are best calculated to succeed in the like undertaking, and as it must be admitted that they were not agriculturists, and in many instances had never been accustomed even to undertake (much less endure) manual labour; still, under all these disadvantageous circumstances, they are now in a prosperous condition: their crops of this year will enable them to become exporters to a considerable extent, after providing a sufficiency for the maintenance of themselves and families for the entire year. All this being accomplished within the short space of three years, under all the afore-mentioned disadvantageous circumstances, I consider the proof self-convincing that the Ottawa valley does offer inducements to parties desirous of engaging in the cultivation of land for settlement purposes.

It may be said that the great proportion of the past three years' settlers had but very trifling means at their disposal, after reaching this district, on an average not more certainly than equal to sustain their families for the space of one year, and in some instances, doubtless, they fell short of such necessary capital; in some few cases, the reverse was the exception: a trifling number did possess a considerable amount of capital, and which has been expended in the erection of mills and other substantial improvements, all tending to promote the prosperity of the locality. With such evidence as the foregoing in my possession, it occurs to me that any recommendation that could be made in favour of inducing intending settlers to locate the waste lands of the Crown in the Ottawa country would not be unwarranted.

In my preceding Annual Reports it has been my custom to allude to the advantages that would be likely to ensue to a suitable class of setlers locating land belonging to the Government in various sections of this district; but at this time I consider my previous arguments greatly fortified, judging from the experience of those who have been the emigrant pioneer settlers of that section of the country.

It would be conferring an act of the greatest benefit on numbers of the agricultural classes of the United Kingdom if they could be made aware that such a field exists for the employment of their labour and energies as presents itself by the tillage of the soil of the Ottawa valley. It is with this desire that I now allude so pressingly to the subject, and

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trust that in your hands it may receive that attention which its importance in a variety of ways so urgently calls forth.

It is of course highly necessary that none but competent and a working class of people should be encouraged to settle upon lands of this Province; they should also possess some capital, for without adequate means it would be worse than folly to undertake the cultivation of land, even though the soil should be granted them as a free gift. Great discrimination is necessary in the selection of persons who should be urged or even advised to emigrate with the view of settling upon lands at the outset.

Among the agricultural tenants and small freeholders of the United Kingdom there are many who would be greatly benefited by taking up lands of this country for farming purposes, and to such class the foregoing remarks are peculiarly applicable. The foregoing must be viewed as merely applicable to parties desirous of locating the waste lands of the Crown to other classes desirous of embarking a larger amount of capital, and undertaking at once extensive agricultural pursuits; there are suitable sites in numerous localities in this district always procurable for such purpose at reasonable prices.

The markets, as you are aware, throughout the entire Ottawa country generally rule the highest of any in the Province, caused by the great local demand which invariably exists for all farm products required for consumption in the lumber trade. In every point of view I can strongly recommend intending settlers to this section of the Province when they contemplate and are desirous of becoming permanent residents of Canada.

All of which is respectfully submitted.

Francis Clemow,
Agent for Ottawa and the surrounding Country.

A. C. Buchanan, Esq.,
Government Chief Emigrant Agent, Quebec.

Government Emigration Office, Hamilton,
12 January 1861.

Dear Sir,

I HAVE the honour to submit, for your information, the following Report for the year 1860, and in doing so I cannot but express my regret, that out of the many thousands of emigrants who have left Europe for the purpose of improving their material condition in the blessings of life, so few have fixed their attention upon Canada as a field for their future enterprise. That there is some reason for this apparent neglect of a fine country must be evident to all those who think seriously upon the subject, and the necessity for a constant stream of emigration to build up the permanent prosperity of the country. What that reason is may be a matter of difference with those whose business it is to control the springs of action in the business of emigration, and to enlighten the public mind of Europe with respect to the substantial blessings which Canada offers to the capital and industry of the emigration classes. After the pamphlets which have been written, and the information which has been given in them, it would appear that they are either not properly circulated, or that no attention is paid to such means for imparting that judicious information about Canada which in Europe is so much required. The emigration to Canada does not increase, but, on the contrary, it has been decreasing in an inverse ratio to those efforts which have been made to increase it.

The number of emigrants arriving here and settling in Canada has for the year just closed shown a great falling off in the number, as compared with 1859, and still more when compared with 1857 and 1858. Yet it will be seen that the proportion of those who have settled in the Province to those who have arrived for the four years past has been nearly the same.

In 1857 the number arriving were 35,069; settled in Canada, 9,630, or over one-fourth. In 1858 the numbers were 27,325; settled in Canada, 4,895, or over one-fifth. In 1859 the numbers were 13,888; settled in Canada, 3,141, or nearly one-fourth. In 1860 the numbers were 7,622; settled in Canada 2,175, or over one-fourth; and which proportion, again, shows the motives that operate upon the masses in Europe before they leave their fatherland.

A striking feature also of that emigration which has flowed into the Province by way of the Suspension Bridge for the year 1860 is, that it has been of a straggling character, consisting almost chiefly of fragments of families repairing to their friends, and principally in very necessitous circumstances, on reaching Hamilton. Nevertheless, the emigrants who have arrived in 1860 have, so far as I know, found their friends generally prosperous, and in a position to offer to them a comfortable home, besides a much larger field for individual enterprise than they could enjoy in the older countries they have left.

Their appearance and health have been good, with very few exceptions, and these have had all the care and assistance it was in my power to bestow.

The number of emigrants who have arrived here and settled in Canada during 1860 have been landed almost altogether at New York, and their route has consequently been by way of the Suspension Bridge to Canada; the exceptions by the St. Lawrence, as shown in Schedule No. 1, amount only to 32. This fact is, as far as the poor emigrants are concerned, truly lamentable, for it seldom occurs that the simple and uninformed amongst them are allowed to enter the Province with any means in their possession, and very often have to leave their luggage, in order to proceed on their journey. For this state of things the cure has to be wrought in Europe.

The

The expenses for the year will be seen in the General Statement of Disbursements and Receipts, No. 3, amounting in the gross to £. 2,789. 80 *c.*

The amount of relief afforded to the indigent emigrants in transport is detailed in Schedule No. 2, and the amount expended in provisions is shown in the Statement fo General Disbursements, amounting together to £. 682. 49 *c.* The average cost for the relief of the necessitous will, therefore, be a little over 76 cents each. In the awarding of such assistance, I have exercised the strictest economy consistent with the distress of the recipients.

The present prospect for the agricultural class of emigrants is highly encouraging, and especially those who have means sufficient to purchase farms and stock them. And while there is no apparent distress among the class of general labourers, there does not appear to be any particular demand. The present political aspect of the United States will probably produce a more particular inquiry in Europe respecting the capabilities and advantages to be secured in Canada by the industrious emigrant. Such a result, I gladly hope, may be extensively realised by the well-wishers of Canada.

All of which is respectfully submitted.

I have, &c.
(signed) *Thos. C. Dixon,*
Emigration Agent.

A. C. Buchanan, Esq.,
Chief Government Emigrant Agent, Quebec.

Emigrant Agent's Office, Kingston,
5 December 1860.

Dear Sir,

I HAVE yours of the 30th ultimo, requesting me to furnish you with a statement of the probable number of emigrants who have reached this district from or by the route of the United States during the past season, with their probable destination.

It will be impossible for me to give you a correct statement of the number of emigrants from or by the United States, or their destination, as most of the boats arriving here from the United States reached this port at night, and unless the parties were in actual want, or desired information as to how they would reach their destination, I had no means of knowing how many arrived to remain as actual settlers.

I, however, will give you a statement from my journal of all that reported themselves at my office.

January 28.—One Englishman and family by way of the United States; directed him to the township of Loborough; he purchased and settled on lot No. 17 in 12 Concession of that township.

May 4.—A. M'Gill and family from Greenock, Scotland, *viâ* New York; directed him to the township of Olden, where he has taken up 500 acres of land, and has written to several of his friends and relatives at home to come out and join him.

May 6.—Two English emigrants arrived by way of United States; directed them to the free grant lands on the Frontenac road, but cannot say whether they settled there or not.

May 15.—An English emigrant came by way of United States; gave him a list of lands in the rear of Kingston; he did not return to purchase, but may have squatted on some of the lots or free grants.

May 26.—An English emigrant, who came by way of New York, destined for Montreal; was sent by way of Hamilton instead of being sent direct to Montreal, and when he reached here he was entirely destitute, and no employment could be found for him at his trade (engine-driver); gave him a ticket by Great Trunk Railway to Montreal, where he expected to get employment.

June 23.—Twenty German emigrants and families arrived *viâ* New York and Oswego, and remained over Sunday and Monday, and proceeded on Tuesday to Eganville, in county of Renfrew, *viâ* Ottawa, by Rideau Canal steamer.

June 25.—R. Busket, an English emigrant, and by way of New York proceeded to free grant lands on Frontenac road.

July 16.—Two emigrants by way of New York arrived, and proceeded at once to Peterborough, Canada West.

July 30.—Godfrey Fatch, wife, and five children, Germans, arrived by way of New York, where they had been swindled out of all their money. I gave them a ticket per Grand Trunk to Naponee, from whence they were to proceed on the Addington road to the township of Barrie, where they had friends, and where they intended to settle.

November 1.—R. Galloway, a bricklayer from London, arrived by way of New York; was sent to Buffalo to reach Belleville; was robbed in the States of all the money he had; when he arrived at Belleville he found his friends had gone to Montreal, and as I could get no employment for him here, I gave him a passage on Grand Trunk to Montreal.

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These are all that I am personally aware of arriving and remaining in the country; but I find, on applying at the Custom-house, that there have been 138 entries made under the head of "Settlers' Entries," but cannot say where the parties were from, or where they proceeded to, but would suppose that the greater part of them were Americans; and I suppose on an average each entry might be accompanied with at least two individuals of a family, but of this I can get no reliable information.

Trusting that the above will prove satisfactory,

I am, &c.
(signed) *James Macpherson*, Agent.

A. C. Buchanan, Esq.,
Chief Emigrant Agent, Quebec.

NEW BRUNSWICK.

— No. 2. —

NEW BRUNSWICK.

(No. 18.)

COPY of a DESPATCH from Lieut. Governor the Honourable *J. H. T. Manners Sutton* to the Duke of *Newcastle*, K.G.

Government House, Fredericton,
New Brunswick, 22 May 1860.

My Lord Duke, (Received, 11 June 1860.)

I HAVE the honour to forward for your Grace's information, copies herein enclosed, of two letters of the 18th and 21st inst. respectively, from the Emigration Officer at St. John, in which are contained two ship returns, reporting the arrival at the Port of St. John, with passengers, of the ship "Hiawatha" from Galway, and of the ship "Argentinus" from Londonderry.

I have, &c.
(signed) *J. H. T. Manners Sutton.*

Enclosure 1, in No. 2.

Government Emigration Office, St. John,
18 May 1860.

Sir,

I BEG to enclose, for the information of his Excellency the Lieutenant Governor, a return of the passengers by the ship "Hiawatha," from Galway, Ireland. The number allowed by law has been exceeded by the master of the ship, and he explains this by stating, that four or five had secreted themselves on board, previous to the ship's leaving port. The ship, however, was clean, and all the emigrants landed in good health.

By the brig "Joseph Hinsley," likewise from Galway, there were 12 or 14 passengers. This ship, however, does not come under the provisions of the Imperial Passengers Act.

All who had embarked for New Brunswick, are now in the province, and have already found employment at the different kinds of labour suited to their capacities.

I have, &c.
(signed) *Robert Shives.*

G. M. Campbell, Esq., Private Secretary,
Fredericton.

SHIP RETURN.

REPORT on the Immigrants by the barque "Hiawatha," McDonogh, master, which arrived at St. John, New Brunswick, from Galway (Ireland), on the 9th of May 1860.

Name of vessel, "Hiawatha."
Tonnage, 270, old.
Place of departure, Galway, Ireland.
Date of sailing, 6th April.
Place of arrival, St. John, New Brunswick.
Date of arrival, 9th May.
Number of days on the voyage, 33.
Superficies of compartments for the use of passengers, 2,000 feet.
Number of adults admissible computed according to the Passengers Act, 135.
Number of such adults actually on board, 138.
Port at which the vessel touched, none.
Date of touching.
Days there.
If placed in quarantine, for what cause.

	Adults.	Children between 14 and 7.	Children under 7.	Adults.	Children between 14 and 1 Year.	Children under 1 Year.	Totals.
Numbers embarked - -	- -	- -	- -	133	4	1	138
Deaths on the voyage - -	- -	none.	—				
Deaths in quarantine - -	- -	none.	—				
Number of births on the voyage - - - - - - - -				- -	none.		
				Total landed in the Colony - -			138

Number of Agricultural Labourers.	Number of Domestic Servants. M.	F.	Number of Mechanics and Tradespeople.	Number for whom Cost of Passage defrayed. By Parish.	By Private Funds.	Number Engaged for Government Works.	Number assisted on Arrival out of Public Fund.	Total Amount Paid.	Remarks.
About 20	5	10	none.	none.		none.	none.	—	*N. B.*—Under this Head it is desirable to describe the Vessel, the quality of Food and Water, and the general condition of the Emigrants. Quality of provisions good; supply plentiful; and all landed in good health.

Robert Shives,
Government Emigration Officer.

Enclosure 2, in No. 2.

Government Emigration Office, St. John,
21 May 1860.

Sir,

May I request that you will lay the enclosed ship return of passengers by the "Argentinus," which vessel arrived at St. John on the 18th instant, before his Excellency for his information.

I have, &c.
(signed) *Robert Shives,*
Government Emigration Officer.

G. M. Campbell, Esq., Private Secretary,
Fredericton.

Ship Return.

Report on the Immigrants by the ship "Argentinus," McDaid, master, which arrived at St. John, New Brunswick, from Londonderry (Ireland), on the 18th of May 1860.

Name of vessel, "Argentinus."
Tonnage, 542.
Place of departure, Londonderry.
Date of sailing, 12 April.
Place of arrival, St. John, New Brunswick.
Date of arrival, 18 May 1860.
Number of days on the voyage, 36.
Superficies of deck for the use of Passengers.
Number of adults admissible, computed according to the Passengers Act, 270.
Number of such adults actually on board, 45.
Port at which the vessel touched.
Date of touching.
Days there.
If placed in quarantine, for what cause.

NEW BRUNSWICK.

	Adults.	Children between 14 and 7.	Children under 7.	Adults. M.	Adults. F.	Children between 14 and 1 Year.	Children under 1 Year.	Totals.
Numbers embarked - -	- -	- -	- -	24	21	5	1	51
Deaths on the voyage - -	- -	none.	—					
Deaths in quarantine - -	—							
Number of births on the voyage - - - - - - - -				–	none.			
Total landed in the colony - - -				24	21	5	1	51

Number of Agricultural Labourers.	Number of Domestic Servants. M.	Number of Domestic Servants. F.	Number of Mechanics and Tradespeople.	Number for whom Cost of Passage defrayed. By Parish.	Number for whom Cost of Passage defrayed. By Private Funds.	Number Engaged for Government Works.	Number Assisted on Arrival out of Public Fund.	Total Amount Paid.	Remarks.
20	–	10	2	none		none	none.	—	Provisions and water good and plentiful. Passengers well treated by officers of the ship, and all in good health.

The passengers by the "Argentinus" are all in the province. I know of but one who intends going to the United States.

Robert Shives,
Government Emigration Officer.

— No. 3. —

(No. 33.)

Copy of a DESPATCH from Lieut. Governor the Honourable *J. H. T. Manners Sutton* to the Duke of *Newcastle*, K.G.

Government House, Fredericton,
New Brunswick, 14 September 1860.

Sir, (Received, 11 June 1860.)

10 Sept. 1860.

I have the honour to forward to you for your information a copy herein enclosed, of a letter from the Emigration Officer at St. John, together with two ship returns, reporting the arrival with passengers at the port of St. John of the "Hiawatha" from Galway, and the "Elizabeth" from Londonderry.

I have, &c.
(signed) *J. H. T. Manners Sutton.*

Enclosure in No. 3.

Government Emigration Office, St. John, N.B.,
10 September 1860.

Sir,

I BEG to enclose for the information of his Excellency the Lieutenant Governor a return of the passengers by the "Hiawatha" from Galway, and the "Elizabeth" from Londonderry. Of the passengers by the "Hiawatha," 14 had paid their passage to Boston before embarking at Galway, and were forwarded to their destination by the master. Those left have chiefly found employment in the country districts. The passengers by the "Elizabeth" had been sent for and their passages paid by friends already settled in the province. The people in both vessels were young and healthy, and of a better class than we have had in former years from the same districts in Ireland.

I have, &c.
(signed) *Robert Shives.*

The Honourable the Provincial Secretary,
Fredericton.

SHIP RETURN.

REPORT on the Immigrants by the ship "Elizabeth," Gillespie, master, which arrived at St. John, New Brunswick, from Londonderry, on the 7th of September 1860.

Name of vessel, "Elizabeth."
Tonnage, 707.
Place of departure, Londonderry.
Date of sailing, August 15.
Place of arrival, St. John, New Brunswick.
Date of arrival, September 7.
Number of days on the voyage, 24.
Superficies of deck for the use of passengers.
Number of adults admissible, computed according to the Passengers Act.
Number of such adults actually on board, nine.
Port at which the vessel touched.
Date of touching.
Days there.
If placed in quarantine, for what cause.

	Adults.	Children between 14 and 7.	Children under 7.	Adults.	Children between 14 and 1 Year.	Children under 1 year.	TOTALS.
Numbers embarked - - -	-	- -	- -	9	4	1	14
Deaths on the voyage - -	-	none.	—				
Deaths in quarantine - -	-	none.	—				
Number of births on the voyage - - - - - - -				none.			
				Total landed in the Colony - -			14

Number of Agricultural Labourers.	Number of Domestic Servants.	Number of Mechanics and Tradespeople.	Number for whom Cost of Passage defrayed. By Parish.	Number for whom Cost of Passage defrayed. By Private Funds.	Number Engaged for Government Works.	Number assisted on Arrival out of Public Fund.	Total Amount Paid.	REMARKS.
—	9	—	—		—	—	—	Vessel in good order; food and water good and abundant, and passengers healthy.

N. B.—Under this Head it is desirable to describe the Vessel, the quality of Food and Water, and the general condition of the Emigrants.

Robert Shives,
Emigration Officer.

NEW BRUNSWICK.

SHIP RETURN.

REPORT on the Immigrants by the barque "Hiawatha," McDonough, master, which arrived at St. John, New Brunswick, from Galway, on the 3d of September 1860.

Name of vessel, "Hiawatha."
Tonnage, 271.
Place of departure, Galway.
Date of sailing, 26 July.
Place of arrival, St. John, New Brunswick.
Date of arrival, 3 September.
Number of days on the voyage, 39.
Superficies of deck for the use of passengers, 983.
Number of adults admissible, computed according to the Passengers Act, 65.
Number of such adults actually on board, 40.
Port at which the vessel touched, none.
Date of touching.
Days there.
If placed in quarantine, for what cause.

	Adults.	Children between 14 and 7.	Children under 7.	Adults.		Children between 14 and 1 Year	Children under 1 Year.	TOTALS.
				M.	F.			
Numbers embarked				8	32	1	1	42
Deaths on the voyage		none.	—					
Deaths in quarantine	—							
Number of births on the voyage				—	none.			
Total landed in the colony				—	—			42

Number of Agricultural Labourers.	Number of Domestic Servants.		Number of Mechanics and Tradespeople.	Number for whom Cost of Passage defrayed.		Number Engaged for Government Works.	Number Assisted on Arrival out of Public Fund.	Total Amount Paid.	REMARKS.
				By Parish.	By Private Funds.				*N. B.*—Under this Head it is desirable to describe the Vessel, the Quality of Food and Water, and the general condition of the Emigrants.
	M.	F.							
8	—	30	—	—	—	—	—	—	Vessel clean. Food good and abundant. Passengers healthy.

Robert Shives,
Emigration Officer.

EMIGRATION (NORTH AMERICAN COLONIES).

COPIES or EXTRACTS of DESPATCHES relative to EMIGRATION to the NORTH AMERICAN COLONIES (in continuation of Parliamentary Paper, No. 606 of Session 1860).

(*Mr. Chichester Fortescue.*)

Ordered, by The House of Commons, *to be Printed,*
23 *April* 1861.

186.

Under 8 *oz.*

NOVA SCOTIA (GOLD DISCOVERIES).

RETURN to an Address of the Honourable The House of Commons, dated 5 June 1861;—*for*,

A "COPY of DESPATCH from the Governor of *Nova Scotia*, relative to GOLD DISCOVERIES there."

Colonial Office, 13 June 1861.

C. FORTESCUE.

(No. 32.)

COPY of a DESPATCH from the Earl of *Mulgrave* to his Grace the Duke of *Newcastle*, K.G.

Government House, Halifax, Nova Scotia,
18 April 1861.

My Lord Duke,

I HAVE the honour to report to your Lordship, that some months ago I was informed that a discovery of gold quartz had been made in the eastern district of the county of Halifax, but on sending to the spot for the purpose of investigating the truth of the report, it appeared that, although some minute particles of gold had undoubtedly been found, yet that the quantity was so small as to be scarcely worthy of consideration.

Within the last week, however, it has been reported to me that a fresh discovery, which appears to be of much greater importance, has been made not very far from the same spot.

The place where gold has now been discovered is situated close to Tangier Harbour, about 40 or 50 miles to the eastward of Halifax.

I am informed that already between 20 *l.* and 30 *l.* worth of gold has been obtained, and I herewith forward to your Grace a specimen, both of the gold and the quartz rock.

As soon as the information was received, orders were sent by my Government to the Deputy Surveyor of the district, to proceed at once to the spot, with directions as to the course which he was to pursue, a copy of which I enclose.

Should it appear from further investigation that this discovery is likely to prove of importance, I shall myself visit the place, in order that I may ascertain what arrangements may be necessary to maintain order and regularity among those who will soon be induced to resort to the locality for the purpose of searching for gold.

The country about Tangier is rocky and barren, and the population in that district is very small, but being close to the sea-shore, there would be little difficulty in furnishing supplies to any numbers should the amount of gold discovered be such as to induce a large influx of persons.

The thing most to be feared is, that the hopes of large gain will induce many to neglect their ordinary avocations, which, in a country like this, where the population is thin, cannot fail to act injuriously on the colony, especially at this season of the year, when every one engaged in agricultural pursuits ought to be occupied upon his farm.

Whether this discovery may ultimately prove of importance or not it is impossible as yet to say, but sufficient gold has been found already to direct considerable attention to the district, and I doubt not that, before long, many

 persons

persons will be induced to proceed there; and as it may be necessary to make further regulations with regard to the workings, I should feel much obliged to your Grace if you would furnish me with copies of such rules and regulations as may have been found most beneficial in Australia or British Columbia.

I have, &c.
(signed) *Mulgrave.*

(Enclosure.)

Provincial Secretary's Office, Halifax,
Sir, 9 April 1861.

Referring to your verbal report on the exhibition of gold on the sea-coast to the eastward of Tangier, I am commanded to instruct you to proceed to the spot, and lay off, for the occupants of the soil, a space, 20 feet by 50, to be selected by themselves. They will be permitted to work within this space free of charge. You will then lay off other lots of the same proportions, and intersecting the quartz vein, and execute leases of these lots for one year, on the payment of forty dollars for each lot, it being understood that four dollars will be reserved out of the rent of each lot, to be paid to the occupants of the soil.

I am, &c.
(signed) *Joseph Howe.*

(No. 39.)

Copy of a DESPATCH from the Earl of *Mulgrave* to his Grace the Duke of *Newcastle*, K.G.

Government House, Halifax, Nova Scotia,
My Lord Duke, 15 May 1861.

I have the honour to inform your Grace, that on Monday the 6th instant, I sailed in the revenue schooner "Daring," for Tangier, in order that I might myself inspect the gold diggings at that place.

The harbour of Tangier is safe and commodious, and though the entrance is rather narrow in one place, there is nothing to impede any ship, not drawing more than 18 feet, from making the harbour.

The neighbouring country is very rough and uncultivated, and only inhabited by a few fishermen. The spot where the gold has been found is about half a mile from the shore.

At present, nine different lodes of quartz have been discovered, running about east and west, and I have every reason for believing that they extend for a very considerable distance.

The lodes are narrow, varying from about three inches to three feet; the smaller lodes however being the richest, the gold being generally found on the outsides of the lode.

As yet, only the most primitive mode of searching for gold has been adopted, the quartz being taken out and broken up with a hammer, and the gold picked out by hand. Notwithstanding this, a considerable quantity has been found. As an instance of this, I may mention that two men working in one claim, secured about 30*l.* worth in one week from first breaking ground.

This however was the best yield that I heard of, and I doubt whether, on an average, the parties were doing more than making good wages, even if they were doing that.

Considerable excitement is beginning to be felt on the subject of the diggings, and persons are coming in from all parts of the province, but as yet no great amount of work has been done, many only coming for the purpose of prospecting and taking up a claim with the intention of working it later on in the year after their crops have been sown.

Whether it will eventually pay individuals to work these quartz, is, I think, extremely doubtful; but from what I saw, I have little doubt that the discovery is one of considerable importance, and that these lodes if worked by companies

on

on scientific principles, with all the appliances of machinery, will prove remunerative.

I took Mr. Howe, the Provincial Secretary, with me, and went carefully over the claims which had already been opened, and before leaving, we decided to reduce the price of the claims from 10*l.* to 5*l.* I, at the same time, authorized the immediate construction of a road to the harbour, to facilitate the carrying up of supplies to the diggings, as I fully anticipate that before many weeks, a very large number of persons will be attracted to the spot.

I am also taking steps to have the land in the neighbourhood surveyed, and also, as far as possible, to trace out the different lodes. This however is a matter of some difficulty, as the ground is extremely rough, and the quartz in many instances is covered by some feet of soil and boulder-stones. I propose returning there in about a month, when I shall hope to be able to speak more positively as to the probable extent of the deposit.

I impressed upon the miners the necessity, even for their own comfort, of maintaining law and order; and assured them of the determination of my Government to act fairly by them. So far I am happy to say, their conduct has been irreproachable, and a very good feeling seemed to prevail among them. There were, at the time of my leaving, over 100 men upon the ground; but many who had been there, after securing their claim, had returned home for the purpose of getting in their crops.

I have to acknowledge, with thanks, the receipt of two Blue Books on the subject of the Gold Mines in Australia and British Columbia.

I have, &c.
(signed) *Mulgrave.*

NOVA SCOTIA (GOLD DISCOVERIES).

COPIES of DESPATCHES from the Governor of *Nova Scotia*, relative to GOLD DISCOVERIES there.

(*Mr. Caird.*)

Ordered, by The House of Commons, *to be Printed,*
14 *June* 1861.

344. *Under* 1 *oz.*

TRANSATLANTIC STEAMERS.

RETURN to Two Orders of the Honourable The House of Commons, dated 25 February and 3 March 1862;—*for*,

(Order, 25 February 1862.)

RETURN, "in Tabular Form, of all Transatlantic Steamers which, during the Year 1861, left any Port or Ports in the United Kingdom for any Port or Ports in North America, arranged in Chronological Order, according to the Dates of their Departures respectively; specifying, as far as may be, the Name of each Steamer; the Name or Title of the Firm or Company to which it belonged; the Port of its first Departure in the United Kingdom; the intermediate Port or Ports of Call (if any), and the final Port of Arrival in North America; with the Days and Hours of Departure, Demurrage, and Arrival respectively; also its registered Tonnage and Steam Power; the Number of its Passengers for the particular Voyage; and the several Amounts received or earned for Ship Letters, and for any Imperial or Colonial Subsidies, respectively:"

"And, similar Return as to all Transatlantic Steamers which, during the same Year 1861, left any Port or Ports in North America for any Port or Ports in the United Kingdom."

(Order, 3 March 1862.)

"That there be added to the Return relative to Transatlantic Steamers, ordered on the 25th day of February last,

"A Return of the Duration of Passage of each Steamer between its Ports of Departure and Arrival; also of the Days and Hours of Despatch and Arrival of Mails by any Steamer from and at London and New York respectively."

(*Mr. Scully.*)

Ordered, by The House of Commons, *to be Printed*,
20 *May* 1862.

RETURN, in Tabular Form, of all TRANSATLANTIC STEAMERS which, during the Year 1861, left any Port Order, according to the Dates of their Departures respectively; specifying, as far as may be, the Name of Departure in the United Kingdom; the intermediate Port or Ports of Call (if any), and the final Port of also, its Registered Tonnage and Steam Power; the Number of its Passengers for the particular Voyage; respectively:—And, similar RETURN as to all TRANSATLANTIC STEAMERS which, during the same Year

VESSELS cleared from PORTS in the UNITED

NAME of STEAMER.	OWNERS' NAMES.	Port of Departure from the United Kingdom.	Ports of Call (if any).	Port of Arrival in North America.
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Canadian	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Asia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
North Briton	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Niagara	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	Halifax
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	New York
Bohemian	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Arabia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
United Kingdom	The Anchor Line of American Steam Packet Ships.	Glasgow	Portland	ditto
Kedar	The British and North American Royal Mail Steam Ship Company.	Liverpool	-	ditto
Vigo	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	ditto
Anglo-Saxon	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
City of Baltimore	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
North American	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Africa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
Jura	ditto ditto	ditto	-	ditto
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	ditto
Nova Scotian	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
America	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown and Halifax.	Boston
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
Canadian	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
United States	The Anchor Line of American Steam Packet Ships.	Glasgow	-	ditto
City of Manchester	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
North Briton	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Niagara	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown and Halifax.	Boston
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
Prince Albert	The Atlantic Royal Mail Steam Navigation Company.	ditto	Galway	St. John's, Newfoundland.
Palestine	The British and North American Royal Mail Steam Ship Company, chartered by the Montreal Ocean Steam Ship Company.	ditto	Moville	Portland
Cleator	Alfred Holt, Liverpool	ditto	-	New York
Arabia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	ditto
John Bell	The Anchor Line of American Steam Packet Ships.	Glasgow	-	Portland
Europa	The British and North American Royal Mail Steam Ship Company.	Liverpool	Queenstown	New York
Vigo	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
Bohemian	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
City of Baltimore	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
North American	The Montreal Ocean Steam Ship Company	Liverpool	Moville	Portland
Africa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York

or Ports in the UNITED KINGDOM for any Port or Ports in NORTH AMERICA, arranged in Chronological each Steamer; the Name or Title of the Firm or Company to which it belonged; the Port of its first Arrival in North America; with the Days and Hours of Departure, Demurrage and Arrival respectively; and the several Amounts received or earned for Ship Letters, and for any Imperial or Colonial Subsidies 1861, left any Port or Ports in NORTH AMERICA for any Port or Ports in the UNITED KINGDOM.

KINGDOM to PORTS in NORTH AMERICA.

Day and Hour of Departure from the United Kingdom.	Demurrage.	Day and Hour of Arrival in North America.	Registered Tonnage.	Horses-Power.	Number of Passengers for the Voyage.	Amounts Received or Earned for Ship Letters, or for any Imperial or Colonial Subsidies.
1861:		1861:				£. s. d.
2 Jan. 1 30 p.m.	- - -	17 Jan. 7 45 p.m.	1,494	450	110	—
3 „ 4 55 „	5 hours - - -	17 „ 3 15 „	1,310	400	53	818 - -
5 „ 1 30 „	- - -	19 „ 8 0 a.m.	1,214	316	58	1,666 14 7
9 „ 10 30 a.m.	- - -	23 „ 10 0 p.m.	1,618	460	150	—
10 „ 11 0 „	6 hours - - -	23 „ 4 20 „	1,488	400	59	818 - -
12 „ 11 38 „	- - -	24 „ 12 noon -	1,008	680	51	1,666 14 7
16 „ 1 0 p.m.	- - -	28 „ 3 0 p.m.	1,494	450	146	—
17 „ 3 15 „	6 hours - - -	30 „ 9 12 a.m.	1,488	400	66	818 - -
19 „ 11 55 a.m.	- - -	1 Feb. 8 40 p.m.	1,359	900	61	1,666 14 7
20 „ 3 0 „	- - -	4 „ (at Portland) noon.	1,067	300	21	—
22 „ 3 15 p.m.	- - -	4 „ 11 50 p.m.	1,213	250	- -	- 7 10
23 „ 5 0 „	- - -	8 „ 5 0 „	1,103	400	127	—
24 „ 5 30 „	4 hours - - -	6 „ 9 40 „	1,165	250	107	818 -
30 „ 1 30 „	- - -	15 „ 8 30 „	1,224	500	173	—
31 „ 3 45 „	7½ hours - -	17 „ 1 0 a.m.	1,137	250	102	818 - -
2 Feb. 11 40 a.m.	- - -	17 „ 8 37 „	1,216	650	58	1,666 14 7
6 „ 7 45 „	- - -	19 „ 9 30 „	791	400	- -	- 9 6
6 „ 5 0 p.m.	- - -	21 „ 7 0 „	1,169	300	111	—
7 „ 10 16 a.m.	11 hours, for mails	21 „ 4 40 „	1,488	400	62	818 - -
9 „ 10 35 „	- - -	24 „ 8 45 „	984	600	43	1,666 14 7
13 „ 1 15 p.m.	- - -	1 March 6 45 p.m.	1,494	450	135	—
14 „ 3 10 „	5 hours - - -	28 Feb. 7 0 a.m.	1,310	400	113	818 - -
16 „ 3 0 „	- - -	9 March 3 0 „	975	300	20	—
20 „ 3 15 „	- - -	11 „ 2 30 „	1,296	250	156	—
21 „ 6 20 „	2 hours - - -	8 „ 5 17 p.m.	1,488	400	110	818 - -
23 „ 10 21 a.m.	- - -	11 „ 5 10 „	1,008	680	61	1,666 14 7
27 „ 12 30 p.m.	- - -	14 „ 7 0 a.m.	1,494	450	242	—
26 „ 6 0 „	- - -	15 „ (at New York) 10 0 a.m.	1,463	400	653	—
28 „ 1 10 „	8 hours - - -	17 „ 7 45 „	936	260	44	818 - -
19 „ not given -	- - -	21 „ not given -	268	50	- not given.	
2 March 11 45 a.m.	- - -	16 „ 6 0 p.m.	1,359	900	61	1,666 14 7
2 „ 3 0 p.m.	- - -	4 April (at Portland) 3 0 p.m.	981	250	36	—
6 „ 4 10 a.m.	- - -	23 March 2 14 „	1,208	650	- -	1,666 14 7
6 „ 4 30 p.m.	- - -	27 „ 5 0 „	1,103	400	267	—
8 „ 9 15 a.m.	- - -	24 „ 11 50 „	1,488	400	169	818 - -
13 „ 1 0 p.m.	- - -	18 „ 4 30 a.m.	1,224	500	303	—
14 „ 12 45 „	8½ hours - -	1 April 3 15 „	1,137	250	96	818 - -
16 „ 10 30 a.m.	- - -	31 Mar. 6 0 „	1,216	650	45	1,666 14 7

VESSELS CLEARED FROM THE UNITED KINGDOM—*continued.*

NAME of STEAMER.	OWNERS' NAMES.	Port of Departure from the United Kingdom.	Ports of Call (if any).	Port of Arrival in North America.
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Nova Scotian	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
America	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown and Halifax.	Boston
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
Canadian	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Persia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
Glasgow	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
North Briton	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Niagara	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown and Halifax.	Boston
Kedar	ditto ditto	ditto		Halifax
Columbia	The Atlantic Royal Mail Steam Navigation Company.	Galway		Boston
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Jura	The British and North American Royal Mail Steam Ship Company, chartered by the Montreal Ocean Steam Ship Company.	ditto	Moville	Quebec
Asia	ditto ditto	ditto	Queenstown	New York
United States	The Anchor Line of American Steam Packet Ships.	Glasgow		Quebec
City of Manchester	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Bohemian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Arabia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	Halifax
United Kingdom	The Anchor Line of American Steam Packet Ships.	Glasgow	Portland	New York
Adriatic	The Atlantic Royal Mail Steam Navigation Company.	Galway		ditto
City of Baltimore	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	ditto
North American	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Africa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
Great Eastern	The Great Ship Company	Milford		ditto
Nova Scotian	The Montreal Ocean Steam Ship Company	Liverpool	Moville	Quebec
Europa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	Halifax
Parana	The Royal Mail Steam Packet Company, chartered by the Atlantic Royal Mail Steam Navigation Company.	Galway		Boston
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Canadian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Persia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
Economist	Richard G. Bushby, Liverpool	Glasgow		ditto
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	ditto
America	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown and Halifax.	Boston
North Briton	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Prince Albert	The Atlantic Royal Mail Steam Navigation Company.	Galway		New York
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	ditto
Hibernian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Australasian	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
United Kingdom	The Anchor Line of American Steam Packet Ships.	Glasgow		Montreal
Glasgow	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Bohemian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Arabia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	Halifax
Adriatic	The Atlantic Royal Mail Steam Navigation Company.	Galway		New York
City of Baltimore	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	ditto

Vessels Cleared from the United Kingdom—*continued.*

Day and Hour of Departure from the United Kingdom.	Demurrage.	Day and Hour of Arrival in North America.	Registered Tonnage.	Horses-Power.	Number of Passengers for the Voyage.	Amounts Received or Earned for Ship Letters, or for any Imperial or Colonial Subsidies.
1861:		1861:				£. s. d.
20 March 2 30 p.m.	- - -	3 April 11 30 p.m.	1,169	300	301	—
21 „ 3 0 „	- - -	3 „ 3 0 „	1,488	400	96	818 - -
23 „ 8 20 a.m.	- - -	5 „ 6 20 a.m.	984	600	73	1,666 14 7
27 „ 12 0 noon	- - -	8 „ 3 30 p.m.	1,494	450	341	—
28 „ 12 15 p.m.	2 hours - - -	8 „ 5 50 a.m.	1,310	400	141	818 - -
30 „ 12 0 noon	- - -	9 „ 8 10 „	2,079	900	115	1,666 14 7
3 April 2 0 p.m.	- - -	17 „ 3 0 p.m.	1,153	400	617	—
4 „ 3 40 „	8½ hours - -	16 „ 3 0 a.m.	1,488	400	288	818 - -
4 „ 9 7 a.m.	- - -	20 „ 9 7 p.m.	1,008	680	82	1,666 14 7
7 „ 9 0 „	- - -	18 „ 11 0 a.m.	1,213	250	- not given.	
9 „ 1 0 p.m.	- - -	27 „ 7 30 „	1,591	1,000	433	1,330 - -
10 „ 12 15 „	- - -	23 „ 8 0 „	1,618	460	839	—
11 „ 11 30 a.m.	2 days 14 hours; by fog.	24 „ 8 20 „	791	400	324	818 - -
13 „ 10 40 „	- - -	25 „ 8 0 „	1,214	316	58	1,666 14 7
13 „ 11 0 p.m.	Wrecked in the Gulf of St. Lawrence, 25/4/61.	- - -	975	300	87	—
17 „ 12 30 „	- - -	2 May 5 0 a.m.	1,296	250	611	—
18 „ 1 30 „	2 days 10 hours; ice and fog.	1 „ 10 20 p.m.	1,488	400	390	818 - -
20 „ 3 30 „	- - -	29 April 2 30 „	1,359	900	104	1,666 14 7
22 March 3 0 „	- - -	5 „ 6 0 „ (at Portland).	1,067	300	67	—
23 April 1 10 „	- - -	3 May 10 0 p.m.	1,737	1,400	576	1,500 - -
24 „ 11 20 „	- - -	5 „ 12 0 midnight.	1,224	500	705	—
25 „ 12 0 noon	10 hours; fog -	8 „ 9 50 p.m.	1,137	250	361	818 - -
27 „ 10 42 a.m.	- - -	9 „ 1 50 „	1,216	650	52	1,666 14 7
1 May 12 0 noon	- - -	14 „ 5 30 „	1,169	300	505	—
1 „ 9 0 p.m.	- - -	11 „ 11 30 a.m.	13,343	2,600	86	—
2 „ 1 30 „	9 hours; fog and ice	15 „ 7 15 p.m.	1,488	400	293	818 - -
4 „ 3 30 „	- - -	14 „ 11 10 a.m.	1,208	650	54	1,666 14 7
7 „ 3 30 „	- - -	18 „ 4 0 „	1,720	800	485	—
8 „ 11 30 a.m.	- - -	21 „ 2 30 p.m.	1,494	450	437	—
9 „ 11 30 „	14 hours - -	20 „ 7 35 „	1,310	400	361	818 - -
11 „ 10 52 „	- - -	21 „ 7 35 „	2,079	900	157	1,666 14 7
15 „ - - -	- - -	- not given -	389	100	- not given.	
15 „ 11 30 a.m.	- - -	27 „ 1 45 p.m.	1,494	450	294	—
18 „ 1 34 p.m.	- - -	31 „ 8 55 „	984	600	114	1,666 14 7
18 „ 4 0 „	6 hours; ice - -	3 June 5 0 a.m.	1,488	400	232	818 - -
21 „ 6 0 „	- - -	4 „ 7 0 p.m.	1,463	400	266	—
22 „ 5 30 „	- - -	5 „ 12 30 „	1,618	460	232	—
23 „ 6 0 „	2½ hours; ice -	5 „ 5 30 a.m.	1,888	500	257	818 - -
25 „ 10 42 a.m.	- - -	5 „ 5 30 p.m.	1,512	700	33	1,666 14 7
25 „ 4 0 p.m.	- - -	12 „ 8 0 „	1,067	300	325	—
29 „ 12 0 noon	- - -	12 „ 4 45 a.m.	1,153	400	155	—
30 „ 4 30 p.m.	6 hours; ice - -	12 „ 12 30 p.m.	1,488	400	206	818 - -
1 June 1 20 „	- - -	10 „ 2 30 „	1,359	900	112	1,666 14 7
5 „ 8 0 a.m.	- - -	13 „ 11 10 „	1,737	1,400	224	—
5 „ 5 0 p.m.	- - -	17 „ 5 0 a.m.	1,224	500	277	—

VESSELS CLEARED FROM THE UNITED KINGDOM—*continued.*

NAME of STEAMER.	OWNERS' NAMES.	Port of Departure from the United Kingdom.	Ports of Call (if any).	Port of Arrival in North America.
Jura	The British and North American Royal Mail Steam Ship Company, chartered by the Montreal Ocean Steam Ship Company.	Liverpool	Moville	Quebec
Africa	ditto ditto	ditto	Queenstown	New York
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
Anglo-Saxon	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Europa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	Halifax
Royal Bride	Philip Miles & Co., Bristol	London	Cardiff	New York
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	ditto
Nova Scotian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Persia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
John Bell	The Anchor Line of American Steam Packet Ships.	Glasgow		Montreal
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Great Eastern	The Great Ship Company	ditto		Quebec
North Briton	The Montreal Ocean Steam Ship Company	ditto	Moville	ditto
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
Hibernian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Glasgow	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
North American	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Arabia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	Halifax
City of Baltimore	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	New York
Norwegian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Africa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
United Kingdom	The Anchor Line of American Steam Packet Ships.	Glasgow		Montreal
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Anglo-Saxon	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Europa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown and Halifax.	Boston
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
Nova Scotian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Persia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
Bohemian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
Hibernian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Asia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
John Bell	The Anchor Line of American Steam Packet Ships.	Glasgow		Montreal
Glasgow	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
North American	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Arabia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown and Halifax.	Boston
City of Manchester	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
North Briton	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Africa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
Anglo-Saxon	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Europa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown and Halifax.	Boston

- - - - VESSELS CLEARED FROM THE UNITED KINGDOM—*continued.*

Day and Hour of Departure from the United Kingdom.	Demurrage.	Day and Hour of Arrival in North America.	Registered Tonnage.	Horses-Power.	Number of Passengers for the Voyage.	Amounts Received or Earned for Ship Letters, or for any Imperial or Colonial Subsidies.
1861:		1861:				£. s. d.
6 June 5 20 p.m.	2 days 5½ hours; ice	17 June 11 15 a.m.	791	400	205	818 - -
8 „ 10 19 a.m.	- - -	20 „ 7 10 „	1,216	650	78	1,666 14 7
12 „ 12 30 p.m.	- - -	25 „ 11 55 p.m.	1,169	300	194	—
13 „ 2 0 „	8 hours; ice and fog	26 „ 5 50 a.m.	1,165	250	193	818 - -
15 „ 12 0 noon	- - -	25 „ 6 15 „	1,208	650	94	1,666 14 7
18 „ 7 0 p.m.	- - -	11 July 4 0 „	838	75	- - not given.	
19 „ 5 0 „	- - -	1 „ 11 55 „	1,494	450	183	—
20 „ 4 45 „	8 days; fog - -	4 „ 11 15 p.m.	1,488	400	198	818 - -
22 „ 10 30 a.m.	- - -	3 „ 5 55 a.m.	2,079	900	102	1,666 14 7
22 „ 6 0 p.m.	- - -	6 „ 11 0 p.m.	981	250	189	—
26 „ 12 0 noon	- - -	10 „ 2 0 „	1,494	450	150	—
27 „ 11 30 a.m.	- - -	6 „ 7 0 „	13,343	2,600	34 passengers and 2,583 troops.	—
27 „ 2 45 p.m.	5 days 9 hours; fog and ice.	10 „ 9 15 a.m.	1,488	400	147	818 - -
3 July 3 0 „	- - -	16 „ 4 0 p.m.	1,418	460	241	—
4 „ 7 10 „	5 days 10 hours; fog and ice.	16 „ 3 12 „	1,888	500	168	818 - -
10 „ 12 0 noon	- - -	25 „ 3 45 a.m.	1,153	300	152	—
11 „ 1 45 p.m.	2 days 9 hours; fog and ice.	22 „ 11 10 p.m.	1,137	250	170	818 - -
13 „ 10 10 „	- - -	23 „ 4 0 „	1,359	900	87	1,666 14 7
17 „ 3 20 „	- - -	29 „ 3 10 „	1,224	500	213	—
18 „ 4 45 „	9 days 5 hours; fog and ice.	4 Aug. 9 45 a.m.	1,888	900	183	818 - -
20 „ 8 55 a.m.	- - -	1 „ 10 0 „	1,216	650	48	1,666 14 7
20 „ 3 0 p.m.	- - -	5 „ 7 0 p.m.	1,067	300	107	—
24 „ 12 50 „	- - -	9 „ 1 40 „	1,169	300	185	—
25 „ 1 30 „	10 hours; fog and ice	4 „ 2 35 „	1,165	250	172	818 - -
27 „ 11 36 a.m.	- - -	9 „ 5 0 a.m.	1,208	650	76	1,666 14 7
31 „ 4 0 „	- - -	- not given -	1,494	450	194	—
1 Aug. 4 45 p.m.	7½ hours - - -	13 Aug. 7 45 a.m.	1,488	400	181	818 - -
3 „ 6 13 „	- - -	14 „ 2 25 p.m.	2,079	900	131	1,666 14 7
7 „ 12 0 noon	- - -	21 „ 11 55 a.m.	1,494	450	164	—
8 „ 1 0 p.m.	2 days 9 hours; fog and ice.	19 „ 5 50 „	1,488	400	212	818 - -
14 „ 2 30 „	- - -	27 „ 4 0 p.m.	1,618	460	254	—
15 „ 4 45 „	2 days 5 hours; fog	27 „ 7 0 a.m.	1,888	500	200	818 - -
17 „ 8 40 a.m.	- - -	29 „ 9 0 „	1,214	316	103	1,666 14 7
17 „ 3 0 p.m.	- - -	2 Sept. 4 0 p.m.	981	250	95	—
21 „ 1 45 „	- - -	5 „ 12 34 a.m.	1,153	400	168	—
22 „ 12 45 „	7½ hours - -	2 „ 5 15 p.m.	1,137	250	190	818 - -
24 „ 11 5 a.m.	- - -	5 „ 3 50 a.m.	1,359	900	147	1,666 14 7
28 „ 12 50 p.m.	- - -	16 „ 7 0 „	1,296	250	240	—
29 „ 4 45 „	5 hours - - -	10 „ 7 50 p.m.	1,488	400	258	818 - -
31 „ 3 36 „	- - -	12 „ 9 10 „	1,216	650	104	1,666 14 7
4 Sept. 11 50 a.m.	- - -	18 „ 7 30 „	1,169	300	205	—
5 „ 11 30 „	11½ hours - -	17 „ 7 15 a.m.	1,165	250	176	818 - -
7 „ 11 0 „	- - -	19 „ 9 15 p.m.	1,208	650	97	1,666 14 7

VESSELS CLEARED FROM THE UNITED KINGDOM—*continued.*

NAME of STEAMER.	OWNERS' NAMES.	Port of Departure from the United Kingdom.	Ports of Call (if any).	Port of Arrival in North America.
City of New York	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Jura	The British and North American Royal Mail Steam Ship Company (purchased by the Montreal Ocean Steam Ship Company).	ditto	Moville	Quebec
Persia	ditto ditto	ditto	Queenstown	New York
United Kingdom	The Anchor Line of American Steam Packet Ships.	Glasgow	-	Quebec
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Bohemian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Niagara	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown and Halifax.	Boston
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
Norwegian	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Asia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
Glasgow	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
North American	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Arabia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	Halifax
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	New York
North Briton	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Africa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
John Bell	The Anchor Line of American Steam Packet Ships.	Glasgow	-	Montreal
City of Baltimore	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Anglo-Saxon	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Europa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown and Halifax.	Boston
St. Andrew	The Montreal Ocean Steam Ship Company	Glasgow	-	Quebec
City of New York	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	New York
Jura	The British and North American Royal Mail Steam Ship Company, purchased by the Montreal Ocean Steam Ship Company.	ditto	Moville	Quebec
St. George	The Montreal Ocean Steam Ship Company	Glasgow	-	ditto
Persia	The British and North American Royal Mail Steam Ship Company.	Liverpool	Queenstown	New York
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
Nova Scotia	The Montreal Ocean Steam Ship Company	ditto	Moville	Quebec
Niagara	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown and Halifax.	Boston
City of Manchester	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
Norwegian	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Asia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
United Kingdom	The Anchor Line of American Steam Packet Ships.	Glasgow	Portland	ditto
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	ditto
Bohemian	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Royal Bride	Philip Miles & Co., Bristol	Cardiff	Bermuda, 8 Jan. 1862	New York
City of Baltimore	The Liverpool, New York and Philadelphia Steam Ship Company.	Liverpool	Queenstown	ditto
North American	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Africa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	New York
Glasgow	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
Anglo-Saxon	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Europa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	Halifax
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	New York

- - - - VESSELS CLEARED FROM THE UNITED KINGDOM—*continued.*

Day and Hour of Departure from the United Kingdom.	Demurrage.	Day and Hour of Arrival in North America.	Registered Tonnage.	Horses-Power.	Number of Passengers for the Voyage.	Amounts Received or Earned for Ship Letters, or for any Imperial or Colonial Subsidies.
1861:		1861:				£. s. d.
11 Sept. 2 0 p.m.	- - -	24 Sept. 1 0 p.m.	1,679	550	156	—
12 „ 4 20 „	8 hours - - -	24 „ 5 50 „	791	400	187	818 - -
14 „ 4 40 „	- - -	25 „ 9 20 a.m.	2,079	900	57	1,666 14 7
14 „ 5 0 „	- - -	2 Oct. 3 0 p.m.	1,067	300	90	—
18 „ 11 30 a.m.	- - -	6 „ 12 40 „	1,494	450	144	—
19 „ 11 50 „	12 hours; fog -	2 „ 8 40 a.m.	1,488	400	175	818 - -
21 „ 11 35 „	- - -	6 „ 5 40 p.m.	1,008	680	124 (inclusive of 30 from the Great Eastern).	1,666 14 7
25 „ 1 30 p.m.	- - -	9 „ 7 30 a.m.	1,618	460	279	—
26 „ 2 45 „	10 hours; ice.	8 „ 7 0 p.m.	1,888	900	232	818 - -
28 „ 1 30 „	- - -	11 „ 11 15 a.m.	1,214	316	122	1,666 14 7
2 Oct. 5 40 „	- - -	16 „ 5 35 p.m.	1,153	300	199	—
3 „ 10 45 a.m.	12 hours - -	16 „ 6 30 a.m.	1,137	250	175	818 - -
5 „ 11 0 „	- - -	16 „ 5 0 „	1,359	900	131	1,666 14 7
9 „ 2 0 p.m.	- - -	22 „ 3 0 p.m.	1,494	450	248	—
10 „ 3 45 „	7 hours - -	23 „ 7 20 a.m.	1,488	400	212	818 - -
12 „ 2 37 „	- - -	25 „ 7 0 p.m.	1,216	650	91	1,666 14 7
12 „ 3 0 „	- - -	30 „ 3 0 „	981	250	78	—
16 „ 11 15 a.m.	- - -	29 „ 5 0 „	1,224	500	152	—
17 „ 11 0 „	13 hours - -	1 Nov. 9 20 a.m.	1,137	250	153	818 - -
19 „ 10 28 „	- - -	1 „ 7 50 „	1,208	650	109	1,666 14 7
28 Sept. 4 0 p.m.	48 hours - - -	14 Oct. 6 0 p.m.	1,432	150	55	—
23 Oct. 1 45 „	- - -	3 Nov. 8 30 a.m.	1,679	550	221	—
24 „ 3 20 „	3 days 10 hours; fog.	4 „ 5 20 p.m.	791	400	92	818 - -
25 „ 8 0 a.m.	- - -	10 „ 1 0 „	1,141	150	5	—
24 „ 1 0 p.m.	- - -	5 „ 10 55 a.m.	2,079	900	115	1,666 14 7
30 „ 4 15 „	- - -	15 „ 7 10 „	1,494	450	316	—
31 „ 4 45 „	3½ hours - -	13 „ 1 0 p.m.	1,488	400	147	818 - -
2 Nov. 10 30 a.m.	- - -	16 „ 3 30 a.m.	1,008	680	68	1,666 14 7
6 „ 1 15 p.m.	- - -	21 „ 1 0 p.m.	1,296	250	158	—
7 „ 2 35 „	5½ hours - - -	18 „ 9 15 „	1,888	900	88	818 - -
9 „ 11 45 a.m.	- - -	21 „ 7 0 „	1,214	316	59	1,666 14 7
9 „ 2 0 p.m.	- - -	22 „ (at Portland) 6 0 a.m.	1,067	300	33	—
13 „ 4 45 „	- - -	24 „ 6 30 p.m.	1,494	450	200	—
14 „ 4 45 „	3¼ hours - - -	26 „ 2 30 a.m.	1,488	400	73	818 - -
18 „ 7 0 a.m.	- - -	10 Feb. 1862 3 0 a.m.	838	75	- - not given.	
20 „ 12 10 p.m.	- - -	1861: 4 Dec. 8 15 p.m.	1,224	500	128	—
21 „ 1 40 „	½ hour - - -	6 „ 9 0 „	1,137	250	52	818 - -
23 „ 11 40 a.m.	- - -	8 „ 9 0 a.m.	1,216	650	53	1,666 14 7
27 „ 2 15 p.m.	- - -	17 „ 11 30 „	1,153	400	94	—
28 „ 4 15 „	Detained at Moville by hurricane; sailed 1 Dec. 1861, 11 a.m.	16 „ 10 30 „	1,165	250	48	818 - -
30 „ 9 20 a.m.	- - -	15 „ 12 43 p.m.	1,208	650	76	1,666 14 7
4 Dec. 12 45 p.m.	- - -	19 „ 11 40 „	1,618	460	124	—

VESSELS CLEARED FROM THE UNITED KINGDOM—*continued.*

NAME of STEAMER.	OWNERS' NAMES.	Port of Departure from the United Kingdom.	Ports of Call (if any).	Port of Arrival in North America.
Melbourne	W. H. Furlonge, 75, Mark-lane, London	London	Sydney, Cape Breton.	Halifax
Jura	The British and North American Royal Mail Steam Ship Company, purchased by the Montreal Ocean Steam Ship Company.	Liverpool	Moville	Portland
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
Nova Scotian	The Montreal Ocean Steam Ship Company	ditto	Moville	Portland
Parana	The Royal Mail Steam Packet Company	Southampton		Halifax
Australasian	The British and North American Royal Mail Steam Ship Company.	Liverpool		ditto
Niagara	ditto ditto	ditto	Queenstown and Halifax.	Boston
Persia	ditto ditto	ditto		Halifax
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
Norwegian	The Montreal Ocean Steam Ship Company	ditto		Portland
Adriatic	The Atlantic Royal Mail Steam Navigation Company.	Southampton		Halifax
Asia	The British and North American Royal Mail Steam Ship Company.	Liverpool	Queenstown and Halifax.	New York
Victoria	C. R. Stock, Clifford's Inn, London	London		Port not given
Adelaide	ditto ditto	ditto		Halifax
Bohemian	The Montreal Ocean Steam Ship Company	Liverpool	Moville	Portland
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	New York
Cleopatra	The African Steam Ship Company	ditto	ditto	Halifax

VESSELS Entered at PORTS in the UNITED

NAME of VESSEL.	OWNERS' NAMES.	Port of Departure from North America.	Ports of Call (if any).	Port of Arrival in the United Kingdom.
Asia	The British and North American Royal Mail Steam Ship Company.	New York	Queenstown	Liverpool
Kedar	ditto ditto	ditto		ditto
North Briton	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Europa	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	ditto
Bohemian	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
United Kingdom	The Anchor Line of American Steam Packet Ships.	ditto		Glasgow
Persia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	Liverpool
Jura	ditto ditto	ditto		ditto
Anglo-Saxon	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
City of Manchester	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
North American	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Australasian	The British and North American Royal Mail Steam Ship Company.	ditto	ditto	ditto
United States	The Anchor Line of American Steam Packet Ships.	ditto		Glasgow
Palestine	The British and North American Royal Mail Steam Ship Company.	ditto		Liverpool
Nova Scotian	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Glasgow	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto

- - - - VESSELS CLEARED FROM THE UNITED KINGDOM—*continued.*

Day and Hour of Departure from the United Kingdom.	Demurrage.	Day and Hour of Arrival in North America.	Registered Tonnage.	Horses-Power.	Number of Passengers for the Voyage.	Amounts Received or Earned for Ship Letters, or for any Imperial or Colonial Subsidies.
1861:		1862:				£. s. d.
5 Dec. - -	- - -	5 Jan. - -	817	260	22 officers, 246 men.	—
		1861:				
5 „ 2 0 p.m.	8 hours - - -	18 Dec. 6 30 a.m.	791	400	80	818 - -
11 „ 3 0 „	- - -	27 „ 2 30 p.m.	1,494	450	208	—
12 „ 4 20 „	4 ½ hours - -	27 „ 10 30 a.m.	1,488	400	74	818 - -
12 „ - -	- - -	- „ - -	1,720	800	- -	Government transport.
13 „ 6 30 p.m.	- - -	26 „ 1 0 p.m.	1,512	700	- troops.	—
14 „ 5 23 „	- - -	28 „ 4 10 „	1,008	680	61	1,666 14 7
15 „ 7 15 „	- - -	26 „ 2 30 „ (at Bic.)	2,079	900	- troops.	—
18 „ 12 45 „	- - -	31 „ 7 35 p.m.	1,494	450	110	—
		1862:				
19 „ 12 20 „	11 ½ hours -	1 Jan. 1 20 a.m.	1,888	900	64	818 - -
20 „ 6 0 a.m.	- - -	- not given -	1,737	1,400	1,350	Government transport.
21 „ 11 35 „	- - -	3 Jan. 11 55 a.m.	1,214	316	29	1,666 14 7
21 „ - -	- -	- „ not given -	1,130	450	- not given.	
23 „ - -	- - -	- „ not given -	1,324	448	- not given.	
26 „ 3 50 p.m.	5 ¼ hours - -	7 „ 10 30 p.m.	1,488	400	38	818 - -
25 „ 12 15 „	- - -	9 „ 2 15 „	1,169	300	48	—
28 „ 4 0 „	- - -	8 „ 11 0 „	870	300	543	Hire of ship on transport service, at 30 *s.* per ton on 1,280 tons per month, say 1,920 *l.*; employed 3 months.

- - - - - - - KINGDOM from PORTS in NORTH AMERICA.

Day and Hour of Departure from North America.	Demurrage.	Day and Hour of Arrival in the United Kingdom.	Registered Tonnage.	Horses-Power.	Number of Passengers for the Voyage.	Amounts Received or Earned for Ship Letters, or for any Imperial or Colonial Subsidies.
1860:		1861:				£. s. d.
19 Dec. 12 0 noon	- - -	1 Jan. 6 6 a.m.	1,216	316	50	1,666 14 7
21 „ 1 58 p.m.	- - -	6 „ 3 55 p.m.	1,213	250	—	—
22 „ 4 25 „	- - -	7 „ 5 55 a.m.	1,488	400	27	818 - -
26 „ 10 23 a.m.	- - -	7 „ 1 0 p.m.	1,208	650	53	1,666 14 7
29 „ 3 50 p.m.	- - -	10 „ 9 30 a.m.	1,488	400	41	818 - -
- „ not given -	- - -	10 „ - -	1,494	450	—	—
25 „ 3 0 p.m.	- - -	12 „ 12 0 noon	1,067	300	14	—
1861:						
2 Jan. 11 8 a.m.	- - -	13 „ 1 5 a.m.	2,079	900	38	1,666 14 7
3 „ 1 0 p.m.	- - -	16 „ 1 25 „	791	400	—	—
5 „ 4 0 „	6 ½ hours - -	19 „ 3 0 „	1,165	250	43	818 - -
5 „ 12 15 „	- - -	21 „ 7 15 p.m.	1,296	250	120	—
12 „ 6 0 „	- - -	24 „ 9 15 a.m.	1,137	250	93	818 - -
12 „ 12 30 „	- - -	25 „ 3 45 p.m.	1,169	300	147	—
16 „ 10 32 a.m.	- - -	27 „ 1 45 „	1,512	700	21	1,666 14 7
15 „ 3 0 p.m.	- - -	30 „ 3 0 a.m.	975	300	13	—
18 „ 12 15 „	- - -	31 „ 6 0 „	936	260	—	—
20 „ 4 30 a.m.	- - -	1 Feb. 7 20 „	1,488	400	62	818 - -
29 „ 12 15 p.m.	- - -	2 „ 3 0 „	1,153	400	81	—

VESSELS ENTERED FROM NORTH AMERICA—*continued.*

NAME of VESSEL.	OWNERS' NAMES.	Port of Departure from North America.	Ports of Call (if any).	Port of Arrival in the United Kingdom.
America	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	Liverpool
Canadian	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Asia	The British and North American Royal Mail Steam Ship Company.	ditto	ditto	ditto
North Briton	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Niagara	The British and North American Royal Mail Steam Ship Company.	Halifax	ditto	ditto
John Bell	The Anchor Line of American Steam Packet Ships.	New York	-	Glasgow
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	Liverpool
Bohemian	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Arabia	The British and North American Royal Mail Steam Ship Company.	New York	Queenstown	ditto
Kedar	ditto ditto	ditto	-	ditto
Anglo-Saxon	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Vigo	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
United Kingdom	The Anchor Line of American Steam Packet Ships.	ditto	-	Glasgow
City of Baltimore	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	Liverpool
North American	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Africa	The British and North American Royal Mail Steam Ship Company.	New York	Queenstown	ditto
Jura	ditto ditto	ditto	-	ditto
Nova Scotian	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
America	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	ditto
Canadian	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
North Briton	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
City of Manchester	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Niagara	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	ditto
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Palestine	The British and North American Royal Mail Steam Ship Company, chartered by the Montreal Ocean Steam Ship Company.	Portland	Moville	ditto
United States	The Anchor Line of American Steam Packet Ships.	ditto	-	Glasgow
Prince Albert	The Atlantic Royal Mail Steam Navigation Company.	New York	-	Galway
Arabia	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	Liverpool
Bohemian	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Europa	The British and North American Royal Mail Steam Ship Company.	New York	-	ditto
Vigo	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	ditto
City of Baltimore	ditto ditto	ditto	ditto	ditto
North American	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Africa	The British and North American Royal Mail Steam Ship Company.	New York	Queenstown	ditto
Nova Scotian	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
America	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	ditto
Canadian	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
John Bell	The Anchor Line of American Steam Packet Ships.	New York	-	Glasgow
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	Liverpool
Persia	The British and North American Royal Mail Steam Ship Company.	ditto	ditto	ditto
North Briton	The Montreal Ocean Steam Ship Company	Portland	Moville	ditto
United Kingdom	The Anchor Line of American Steam Packet Ships.	New York	-	Glasgow

- - - - - VESSELS ENTERED FROM NORTH AMERICA—*continued.*

Day and Hour of Departure from North America.	Demurrage.	Day and Hour of Arrival in the United Kingdom.	Registered Tonnage.	Horses-Power.	Number of Passengers for the Voyage.	Amounts Received or Earned for Ship Letters, or for any Imperial or Colonial Subsidies.
1861:		1861:				£. s. d.
23 Jan. 10 15 a.m.	- - -	5 Feb. 12 25 p.m.	984	600	45	1,666 14 7
27 „ 10 0 „	5 hours, by tide -	7 „ 8 20 a.m.	1,310	400	43	818 - -
26 „ 12 15 p.m.	- - -	7 „ 8 0 p.m.	1,494	450	96	—
30 „ 10 30 a.m.	- - -	11 „ 10 5 a.m.	1,216	316	36	1,666 14 7
3 Feb. 4 0 „	1 hour - - -	15 „ 2 25 p.m.	1,488	400	43	818 - -
3 „ 7 0 „	- - -	16 „ 10 0 „	1,618	460	98	—
7 „ 11 0 p.m.	- - -	18 „ 8 33 a.m.	1,008	680	72	1,666 14 7
1 „ 8 0 a.m.	- - -	19 „ 2 0 „	981	250	5	—
9 „ 12 15 p.m.	- - -	20 „ 9 0 „	1,494	450	106	—
12 „ 6 40 a.m.	1¼ hours - -	23 „ 2 0 p.m.	1,488	400	26	818 - -
13 „ 10 17 „	- - -	24 „ 2 35 „	1,359	900	19	1,666 14 7
14 „ 12 9 p.m.	- - -	26 „ 10 0 „	1,213	250	—	—
17 „ 4 0 p.m.	- - -	28 „ 11 50 a.m.	1,165	250	41	818 - -
16 „ 12 15 p.m.	- - -	1 March 6 0 „	1,103	400	123	—
19 „ 5 0 „	- - -	5 „ 11 0 „	1,067	300	17	—
23 „ 12 30 „	- - -	6 „ 5 0 p.m.	1,224	500	102	—
24 „ 11 15 a.m.	- - -	7 „ 12 15 „	1,137	250	30	818 - -
27 „ 10 10 „	- - -	11 „ 1 15 a.m.	1,216	650	35	1,666 14 7
28 „ 10 55 „	- - -	12 „ 10 45 „	791	400	—	—
2 March 4 40 p.m.	- - -	13 „ 11 0 „	1,488	400	39	818 - -
2 „ 12 30 „	- - -	14 „ 8 0 „	1,169	300	112	—
6 „ 9 10 a.m.	- - -	18 „ 12 10 „	984	600	37	1,666 14 7
9 „ 4 5 p.m.	- - -	20 „ 10 0 „	1,310	400	35	818 - -
9 „ 12 15 „	- - -	21 „ 3 0 p.m.	1,494	450	128	—
16 „ 5 0 „	- - -	28 „ 7 0 a.m.	1,488	400	29	818 - -
16 „ 12 15 „	- - -	30 „ 11 45 „	1,296	250	64	—
20 „ 1 0 „	- - -	3 April 3 10 p.m.	1,008	680	26	1,666 14 7
23 „ 12 15 „	- - -	4 „ 10 25 a.m.	1,494	450	116	—
23 „ 3 35 „	2 days; fog - -	5 „ 1 40 p.m.	936	260	23	818 - -
21 „ 10 0 a.m.	- - -	6 „ 1 0 „	975	300	8	—
26 „ 2 0 p.m.	- - -	8 „ 8 0 a.m.	1,463	400	72	—
27 „ 9 0 a.m.	- - -	8 „ 7 30 p.m.	1,359	900	44	1,666 14 7
31 „ 1 0 „	- - -	13 „ 10 40 a.m.	1,488	400	29	818 - -
30 „ 10 19 „	- - -	13 „ 10 55 p.m.	1,208	650	10	1,666 14 7
30 „ 1 0 p.m.	- - -	16 „ 1 20 a.m.	1,103	400	102	—
6 April 12 15 „	- - -	18 „ 10 0 p.m.	1,224	500	263	—
6 „ 8 0 „	- - -	19 „ 5 30 a.m.	1,137	250	48	818 - -
10 „ 4 30 „	- - -	22 „ 5 45 „	1,216	650	97	1,666 14 7
13 „ 3 30 „	3 days; fog - -	25 „ 2 0 p m.	1,488	400	68	818 - -
14 „ 7 0 a.m.	- - -	27 „ 12 15 „	1,169	300	134	—
17 „ 11 35 „	- - -	29 „ 11 35 „	984	600	72	1,666 14 7
20 „ 5 5 p.m.	- - -	2 May 4 30 a.m.	1,310	400	63	818 - -
14 „ 5 0 a.m.	- - -	2 „ 4 0 p.m.	981	250	17	—
20 „ 12 30 p.m	- - -	4 „ 4 0 a.m.	1,494	450	228	—
25 „ 7 0 a.m.	- - -	5 „ 5 45 „	2,079	900	178	1,666 14 7
27 „ 4 45 p.m.	4 days; fog - -	9 „ 10 10 p.m.	1,488	400	55	818 - -
23 „ 6 0 „	- - -	10 „ 5 0 „	1,067	300	67	—

VESSELS ENTERED FROM NORTH AMERICA—*continued.*

NAME of VESSEL.	OWNERS' NAMES.	Port of Departure from North America.	Ports of Call (if any).	Port of Arrival in the United Kingdom.
Glasgow	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	Liverpool
Niagara	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	ditto
Columbia	The Atlantic Royal Mail Steam Navigation Company.	ditto	-	ditto
Jura	The British and North American Royal Mail Steam Ship Company, chartered by the Montreal Ocean Steam Ship Company.	Quebec	Moville	ditto
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Asia	The British and North American Royal Mail Steam Ship Company.	ditto	ditto	ditto
Bohemian	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
Adriatic	The Atlantic Royal Mail Steam Navigation Company.	New York	-	Galway
Arabia	The British and North American Royal Mail Steam Ship Company.	Halifax	Queenstown	Liverpool
City of Manchester	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	ditto	ditto
City of Baltimore	ditto	ditto	-	ditto
Africa	The British and North American Royal Mail Steam Ship Company.	ditto	-	ditto
Great Eastern	The Great Ship Company	ditto	ditto	ditto
Kedar	The British and North American Royal Mail Steam Ship Company.	ditto	ditto	ditto
North American	The Montreal Ocean Steam Ship Company	Quebec	Moville, towed from Queenstown to Liverpool.	ditto
Nova Scotian	ditto	ditto	ditto	ditto
Parana	The Royal Mail Steam Packet Company, chartered by the Atlantic Royal Mail Steam Navigation Company.	Boston	-	Galway
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	Liverpool
Europa	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	ditto
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Persia	The British and North American Royal Mail Steam Ship Company.	ditto	ditto	ditto
North Briton	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Prince Albert	The Atlantic Royal Mail Steam Navigation Company.	ditto	-	Galway
America	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	Liverpool
Hibernian	The Montreal Ocean Steam Ship Company	Quebec	St. John's, Newfoundland, and Moville.	ditto
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Australasian	The British and North American Royal Mail Steam Ship Company.	ditto	ditto	ditto
Bohemian	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
Adriatic	The Atlantic Royal Mail Steam Navigation Company.	New York	-	Galway
Glasgow	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	Liverpool
Arabia	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	ditto
United Kingdom	The Anchor Line of American Steam Packet Ships.	Montreal	-	Glasgow
Jura	The British and North American Royal Mail Steam Ship Company, chartered by the Montreal Ocean Steam Ship Company.	Quebec	Moville	Liverpool
City of Baltimore	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Africa	The British and North American Royal Mail Steam Ship Company.	ditto	ditto	ditto
Anglo-Saxon	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Europa	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	ditto
Nova Scotian	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
Etna	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Persia	The British and North American Royal Mail Steam Ship Company.	ditto	ditto	ditto

- - - - - - VESSELS ENTERED FROM NORTH AMERICA—*continued.*

Day and Hour of Departure from North America.	Demurrage.	Day and Hour of Arrival in the United Kingdom.	Registered Tonnage.	Horses-Power.	Number of Passengers for the Voyage.	Amounts Received or Earned for Ship Letters, or for any Imperial or Colonial Subsidies.
1861:		1861:				£. s. d.
27 April 12 15 p.m.	- - -	10 May 10 0 p.m.	1,153	400	318	—
1 May 12 28 „	- - -	13 „ 10 50 a.m.	1,008	680	95	1,666 14 7
30 April 3 0 „	- - -	14 „ 3 30 „ (at Galway.)	1,591	1,000	108	1,330 - -
4 May 11 15 a.m.	- - -	14 „ 11 15 p.m.	791	400	96	818 - -
4 „ 12 40 p.m.	- - -	16 „ 11 0 „	1,618	460	343	—
8 „ 1 0 „	- - -	20 „ 10 5 „	1,214	316	148	1,666 14 7
11 „ 10 0 a.m.	- - -	23 „ 10 50 a.m.	1,488	400	142	818 - -
14 „ 9 50 „	- - -	24 „ 4 20 „	1,737	1,400	363	1,500 - -
17 „ 7 15 p.m.	- - -	25 „ 11 30 p.m.	1,359	900	115	1,666 14 7
11 „ 12 15 „	- - -	26 „ 6 0 „	1,296	250	166	—
18 „ 12 30 „	- - -	29 „ 12 25 „	1,224	500	386	—
22 „ 3 35 „	- - -	3 June 5 0 a.m.	1,216	650	88	1,666 14 7
25 „ 8 30 a.m.	- - -	3 „ 8 10 p.m.	13,343	2,600	204	24 - 5
23 „ 3 12 p.m.	- - -	5 „ 11 25 a.m.	1,213	250	—	—
18 „ 10 0 a.m.	Lost propeller in the ice; came home under canvas.	5 „ 2 0 „ (at Queenstown.)	1,137	250	126	818 - -
25 „ 10 20 „	5 days; fog - -	6 „ 2 0 „	1,488	400	116	818 - -
28 „ 12 30 p.m.	- - -	7 „ 10 0 p.m.	1,720	800	145	3 1 5 for ship letters.
25 „ 12 15 „	- - -	7 „ 11 10 „	1,169	300	264	—
29 „ 11 15 a.m.	- - -	9 „ 11 40 a.m.	1,208	650	74	1,666 14 7
1 June 12 30 p.m.	- - -	12 „ 11 15 „	1,494	450	269	—
5 „ 4 40 „	- - -	16 „ 7 20 „	2,079	900	196	1,666 14 7
8 „ 10 10 a.m.	6 days; ice and fog	22 „ 8 55 „	1,488	400	339	818 - -
8 „ 12 30 p.m.	- - -	22 „ 2 0 „	1,494	450	261	—
11 „ 12 20 „	- - -	23 „ 12 0 noon	1,463	400	120	5 16 - ship letters.
12 „ 10 45 a.m.	- - -	24 „ 10 0 a.m.	984	600	89	1,666 14 7
15 „ 9 50 „	2 days; fog - -	26 „ 1 30 p.m.	1,888	500	248	818 - -
15 „ 12 30 p.m.	- - -	27 „ 11 30 a.m.	1,618	460	402	—
19 „ 2 55 „	- - -	29 „ 1 45 p.m.	1,512	700	82	1,666 14 7
22 „ 9 25 a.m.	4 days; ice and fog	4 July 5 30 a.m.	1,488	400	142	818 - -
25 „ 10 15 „	- - -	4 „ 10 0 „	1,737	1,400	297	1 9 11 ship letters.
22 „ 12 15 p.m.	- - -	5 „ 6 30 „	1,153	400	193	—
26 „ 11 45 a.m.	- - -	7 „ 9 0 „	1,359	900	77	1,666 14 7
25 „ 10 0 „	- - -	8 „ 2 0 „	1,067	300	64	—
29 „ 9 40 „	- - -	10 „ 10 20 „	791	400	82	818 - -
29 „ 12 15 p.m.	- - -	11 „ 11 30 p.m.	1,224	500	347	—
3 July 12 22 „	- - -	15 „ 3 40 a.m.	1,216	650	102	1,666 14 7
6 „ 9 30 a.m.	5 days; fog - -	17 „ 5 0 p.m.	1,165	250	146	818 - -
6 „ 12 15 p.m.	- - -	19 „ 6 0 „	1,169	300	340	—
10 „ 10 7 a.m.	- - -	22 „ 11 38 „	1,208	650	106	1,666 14 7
13 „ 11 0 „	2 days; fog - -	25 „ 11 0 a.m.	1,488	400	113	818 - -
13 „ 12 40 p.m.	- - -	25 „ 12 0 noon	1,494	450	373	—
17 „ 2 10 „	- - -	27 „ 1 8 p.m.	2,079	900	209	1,666 14 7

VESSELS ENTERED FROM NORTH AMERICA—*continued.*

NAME of VESSEL.	OWNERS' NAMES.	Port of Departure from North America.	Ports of Call (if any).	Port of Arrival in the United Kingdom.
North Briton	The Montreal Ocean Steam Ship Company	Quebec	Moville	Liverpool
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
John Bell	The Anchor Line of American Steam Packet Ships.	Montreal	-	Glasgow
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	Liverpool
Hibernian	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
North American	ditto ditto	ditto	ditto	ditto
Glasgow	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Great Eastern	The Great Ship Company	Quebec	-	ditto
Arabia	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	ditto
Anglo-Saxon	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
City of Baltimore	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Etna	ditto ditto	ditto	-	ditto
Africa	The British and North American Royal Mail Steam Ship Company.	ditto	Queenstown	ditto
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
Norwegian	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
Economist	R. G. Bushby, Liverpool	New York	-	Glasgow
Europa	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	Liverpool
United Kingdom	The Anchor Line of American Steam Packet Ships.	Montreal	-	Glasgow
Nova Scotian	The Montreal Ocean Steam Ship Company	Quebec	Moville	Liverpool
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Persia	The British and North American Royal Mail Steam Ship Company.	ditto	ditto	ditto
Bohemian	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
Royal Bride	Philip Miles & Co., Bristol	New York	-	ditto
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	Queenstown	ditto
Hibernian	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
Glasgow	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Europa	The British and North American Royal Mail Steam Ship Company.	Boston	-	ditto
Asia	ditto ditto	New York	Queenstown	ditto
North American	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
Arabia	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	ditto
John Bell	The Anchor Line of American Steam Packet Ships.	Quebec	-	Glasgow
Khersonese	Z. C. Pearson, Great St. Helen's, London	New York	-	London
North Briton	The Montreal Ocean Steam Ship Company	Quebec	Moville	Liverpool
Africa	The British and North American Royal Mail Steam Ship Company.	New York	Queenstown	ditto
City of Manchester	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
Anglo-Saxon	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
Kangaroo	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Jura	The British and North American Royal Mail Steam Ship Company, purchased by the Montreal Ocean Steam Ship Company.	Quebec	Moville	ditto
City of New York	The Liverpool, New York and Philadelphia Steam Ship Company.	New York	Queenstown	ditto
Persia	The British and North American Royal Mail Steam Ship Company.	ditto	ditto	ditto
Edinburgh	The Liverpool, New York and Philadelphia Steam Ship Company.	ditto	ditto	ditto
Bohemian	The Montreal Ocean Steam Ship Company	Quebec	Moville	ditto
Niagara	The British and North American Royal Mail Steam Ship Company.	Boston	Halifax and Queenstown.	ditto
United Kingdom	The Anchor Line of American Steam Packet Ships.	Montreal	-	Glasgow
Norwegian	The Montreal Ocean Steam Ship Company	Quebec	Moville	Liverpool

- - - - - - VESSELS ENTERED FROM NORTH AMERICA—*continued.*

Day and Hour of Departure from North America.	Demurrage.	Day and Hour of Arrival in the United Kingdom.	Registered Tonnage.	Horses-Power.	Number of Passengers for the Voyage.	Amounts Received or Earned for Ship Letters, or for any Imperial or Colonial Subsidies.
1861:		1861:				£. s. d.
20 July 1 0 p.m.	- - -	1 Aug. 6 33 p.m.	1,488	400	111	818 - -
20 „ 12 noon -	- - -	3 „ 12 10 „	1,494	450	414	—
23 „ 10 0 a.m.	- - -	4 „ 11 0 „	981	250	38	—
27 „ 12 noon -	- - -	8 „ 3 40 a.m.	1,618	460	381	—
27 „ 9 30 a.m.	5 days; fog - -	8 „ 9 15 „	1,888	500	88	818 - -
3 Aug. 9 35 „	3 days; fog - -	14 „ 7 30 „	1,137	250	50	818 - -
3 „ 12 noon -	- - -	16 „ 11 0 „	1,153	400	317	—
6 „ 4 45 a.m.	- - -	16 „ 6 30 p.m.	13,343	2,600	365	—
7 „ 10 15 „	- - -	17 „ 9 0 „	1,359	900	103	1,666 14 7
10 „ 9 20 „	3 days; fog - -	20 „ 1 0 „	1,165	250	62	818 - -
10 „ 12 10 p.m.	- - -	22 „ 4 30 a.m.	1,224	500	429	—
- not given -	- - -	24 „ - -	1,494	450	—	—
14 „ 12 noon -	- - -	25 „ 2 5 p.m.	1,216	650	56	1,666 14 7
17 „ 12 30 p.m.	- - -	30 „ 5 0 a.m.	1,169	300	394	—
17 „ 9 30 a.m.	- - -	27 „ 2 30 p.m.	1,888	900	69	818 - -
- not given -	- - -	31 „ - -	389	100	—	—
21 „ 10 15 a.m.	- - -	1 Sept. 11 20 a.m.	1,208	650	74	1,666 14 7
20 „ 10 0 „	- - -	1 „ 6 0 p.m.	1,067	300	70	—
24 „ 11 20 „	- - -	5 „ 12 noon -	1,488	400	80	818 - -
24 „ 12 15 p.m.	- - -	7 „ 10 0 a.m.	1,494	450	346	—
28 „ 11 48 a.m.	- - -	8 „ 4 45 „	2,079	900	124	1,666 14 7
31 „ 9 30 „	- - -	10 „ 6 10 p.m.	1,488	400	80	818 - -
19 „ 6 0 p.m.	- - -	12 „ 6 0 „	838	75	—	—
31 „ 12 noon -	- - -	12 „ 6 37 „	1,618	460	384	—
7 Sept. 9 50 a.m.	2 days; fog - -	17 „ 9 35 a.m.	1,888	500	111	818 - -
7 „ 12 15 p.m.	- - -	21 „ 9 33 „	1,153	400	305	—
- not given -	- - -	21 „ - -	1,208	650	—	—
11 „ 12 noon -	- - -	22 „ 9 55 p.m.	1,214	316	65	1,666 14 7
14 „ 9 30 a.m.	- - -	24 „ 11 50 a.m.	1,137	250	130	818 - -
18 „ 10 0 „	- - -	29 „ 10 35 „	1,359	900	79	1,666 14 7
17 „ 10 0 „	- - -	30 „ 3 30 „	981	250	43	—
- not given -	- - -	21 „ - -	1,273	200	—	—
21 „ 9 30 a.m.	11 hours - -	2 Oct. 8 20 a.m.	1,488	400	71	818 - -
25 „ 11 7 „	- - -	6 „ 11 30 p.m.	1,216	650	32	1,666 14 7
21 „ 12 15 p.m.	- - -	6 „ 11 45 „	1,296	250	401	—
28 „ 9 50 a.m.	- - -	8 „ 2 0 „	1,165	250	140	818 - -
28 „ 12 10 p.m.	- - -	12 „ 2 30 „	1,169	300	306	—
5 Oct. 10 0 a.m.	- - -	16 „ 1 50 a.m.	791	400	106	818 - -
5 „ 12 15 p.m.	- - -	16 „ 9 45 „	1,679	550	528	—
9 „ 11 0 a.m.	- - -	20 „ 10 5 „	2,079	900	159	1,666 14 7
12 „ 12 15 p.m.	- - -	24 „ 12 noon -	1,494	450	362	—
12 „ 10 20 a.m.	15 hours at anchor; 2 days; fog.	24 „ 1 20 a.m.	1,488	400	96	818 - -
16 „ 9 20 „	- - -	28 „ 2 52 p.m.	1,008	680	70	1,666 14 7
15 „ 10 0 „	- - -	29 „ 10 0 a.m.	1,067	300	49	—
19 „ 9 45 „	10 hours at anchor; 2 days; fog.	29 „ 3 25 p.m.	1,888	900	99	818 - -

VESSELS ENTERED FROM NORTH AMERICA—*continued* - - - - - -

NAME of VESSEL.	OWNERS' NAMES,	Port of Departure from North America.	Ports of Call (if any).	Port of Arrival in the United Kingdom.
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	New York -	Queenstown - -	Liverpool - -
Asia - - -	The British and North American Royal Mail Steam Ship Company.	- ditto -	- ditto - - -	- ditto - - -
North American -	The Montreal Ocean Steam Ship Company -	Quebec -	Moville - - -	- ditto - - -
Etna - - -	The Liverpool, New York and Philadelphia Steam Ship Company.	New York -	Queenstown - -	- ditto - - -
Arabia - - -	The British and North American Royal Mail Steam Ship Company.	Boston -	Halifax and Queenstown.	- ditto - - -
St. Andrew - -	The Montreal Ocean Steam Ship Company -	Quebec -	- - -	Glasgow - -
City of Baltimore -	The Liverpool, New York and Philadelphia Steam Ship Company.	New York -	Queenstown - -	Liverpool - -
Africa - - -	The British and North American Royal Mail Steam Ship Company.	- ditto -	- ditto - - -	- ditto - - -
Anglo-Saxon -	The Montreal Ocean Steam Ship Company -	Quebec -	Moville - - -	- ditto - - -
Europa - -	The British and North American Royal Mail Steam Ship Company.	Boston -	Halifax and Queenstown.	- ditto - - -
John Bell - -	The Anchor Line of American Steam Packet Ships.	Montreal -	- - -	Glasgow - -
Glasgow - -	The Liverpool, New York and Philadelphia Steam Ship Company.	New York -	Queenstown - -	Liverpool - -
Saladin - -	George Holt, Liverpool - - - - - -	- ditto -	- - -	- ditto - - -
Jura - - - -	The Montreal Ocean Steam Ship Company -	Quebec -	Moville - - -	- ditto - - -
City of New York	The Liverpool, New York and Philadelphia Steam Ship Company.	New York -	Queenstown - -	- ditto - - -
Persia - - -	The British and North American Royal Mail Steam Ship Company.	- ditto -	- ditto - - -	- ditto - - -
Edinburgh - -	The Liverpool, New York and Philadelphia Steam Ship Company.	- ditto -	- ditto - - -	- ditto - - -
Nova Scotian -	The Montreal Ocean Steam Ship Company -	Quebec -	Moville - - -	- ditto - - -
Niagara - -	The British and North American Royal Mail Steam Ship Company.	Boston -	Halifax and Queenstown.	- ditto - - -
St. George - -	The Montreal Ocean Steam Ship Company -	Quebec -	- - -	Glasgow - -
Norwegian - -	- ditto - - ditto - - - - -	Portland -	Moville - - -	Liverpool - -
Etna - - -	The Liverpool, New York and Philadelphia Steam Ship Company.	New York -	Queenstown - -	- ditto - - -
Asia - - -	The British and North American Royal Mail Steam Ship Company.	- ditto -	- ditto - - -	- ditto - - -
Bohemian - -	The Montreal Ocean Steam Ship Company -	Portland -	Moville - - -	- ditto - - -
City of Manchester	The Liverpool, New York and Philadelphia Steam Ship Company.	New York -	Queenstown - -	- ditto - - -
North American -	The Montreal Ocean Steam Ship Company -	Portland -	Moville - - -	- ditto - - -
City of Baltimore	The Liverpool, New York and Philadelphia Steam Ship Company.	New York -	Queenstown - -	- ditto - - -
United Kingdom -	The Anchor Line of American Steam Packet Ships.	- ditto -	- ditto - - -	Glasgow - -
Anglo-Saxon -	The Montreal Ocean Steam Ship Company -	Portland -	Moville - - -	Liverpool - -
Jura - - -	- ditto - - ditto - - - - -	- ditto -	- ditto - - -	- ditto - - -
City of Washington	The Liverpool, New York and Philadelphia Steam Ship Company.	New York -	Queenstown - -	- ditto - - -

General Register and Record Office of Seamen and Shipping,
London, 19 May 1862.

- - - - - - VESSELS ENTERED FROM NORTH AMERICA—*continued.*

Day and Hour of Departure from North America.	Demurrage.	Day and Hour of Arrival in the United Kingdom.	Registered Tonnage.	Horses-Power.	Number of Passengers for the Voyage.	Amounts Received or Earned for Ship Letters, or for any Imperial or Colonial Subsidies.
1861:		1861:				£. s. d.
19 Oct. 12 0 noon	- - -	1 Nov. 8 0 a.m.	1,618	460	246	—
23 „ 10 55 a.m.	- - -	3 „ 10 0 p.m.	1,214	316	81	1,666 14 7
26 „ 9 40 „	2 days; fog - -	6 „ 1 0 „	1,137	250	130	818 - -
26 „ 12 0 noon	- - -	7 „ 6 30 a.m.	1,494	450	266	—
30 „ 8 45 a.m.	- - -	10 „ 8 0 „	1,359	900	92	1,666 14 7
30 „ 8 45 „	- - -	19 „ 7 0 „	1,432	150	33	—
3 Nov. 8 20 „	- - -	16 „ 12 30 p.m.	1,224	500	171	—
6 „ 11 12 „	- - -	18 „ 10 45 „	1,216	650	49	1,666 14 7
9 „ 9 40 „	17 hours at anchor; 3 days; fog.	23 „ 12 0 noon	1,165	250	222	818 - -
13 „ 9 5 „	- - -	24 „ 11 55 a.m.	1,208	650	85	1,666 14 7
12 „ 10 0 „	- - -	26 „ 6 0 p.m.	981	250	32	—
9 „ 2 0 p.m.	- - -	23 Nov. 4 40 a.m.	1,153	400	172	—
7 „ - - -	- - -	25 „ - - -	346	60	—	—
16 „ 10 0 a.m.	- - -	29 „ 8 10 a.m.	791	400	108	818 - -
16 „ 4 0 p.m.	- - -	29 „ 12 30 p.m.	1,679	550	276	—
20 „ 9 50 a.m.	- - -	2 Dec. 8 7 a.m.	2,079	900	86	1,666 14 7
23 „ 8 0 „	- - -	7 „ 3 50 „	1,494	450	197	—
23 „ 10 0 „	5 hours; tide -	7 „ 12 25 p.m.	1,488	400	57	818 - -
27 „ 2 30 p.m.	- - -	9 „ 8 10 a.m.	1,008	680	131	1,666 14 7
20 „ 9 40 a.m.	- - -	9 „ 1 0 p.m.	1,141	150	21	—
30 „ 3 55 p.m.	3 hours - - -	11 „ 10 30 a.m.	1,888	900	50	818 - -
30 „ 2 30 „	- - -	11 „ 6 50 p.m.	1,494	450	168	—
4 Dec. 9 50 a.m.	- - -	16 „ 8 15 a.m.	1,214	316	66	1,666 14 7
7 „ 3 30 p.m.	- - -	18 „ 12 50 p.m.	1,488	400	36	818 - -
8 „ 9 0 a.m.	- - -	26 „ 7 10 a.m.	1,296	250	256	—
14 „ 4 15 p.m.	- - -	26 „ 2 0 p.m.	1,137	250	35	818 - -
14 „ 12 17 „	- - -	26 „ 3 25 „	1,224	500	166	—
11 „ 6 0 a.m.	- - -	27 „ 10 0 „	1,067	300	24	—
		1862:				
21 „ 5 0 p.m.	6 hours by a wreck; 5 hours stopped.	3 Jan. 10 30 p.m.	1,165	250	44	818 - -
28 „ 9 30 „	- - -	9 „ 6 15 „	791	400	55	818 - -
28 „ 2 0 „	- - -	- - - -	1,618	460	112	—

J. H. Brown,
Registrar General of Seamen and Shipping.

SYNOPSIS.

COMPANIES AND OWNERS.	Voyages from the United Kingdom to North America.				
	Total Number of Voyages.	Total Number of Passengers.	Amount Received or Earned for any Imperial or Colonial Subsidies per Voyage.	Total Amount Received or Earned for Ship Letters, or for any Imperial or Colonial Subsidies.	REMARKS.
			£. s. d.	£. s. d.	
The British and North American Royal Mail Steam Ship Company.	49	3,554	1,666 14 7	73,336 19 –	44 voyages upon subsidy; two voyages for which 17 *s.* 4 *d.* was received for ship letters, and three without subsidy or ship letters.
The Liverpool, New York and Philadelphia Steam Ship Company.	52	12,562	Declined to give information.	Declined to give information.	- - - - -
The Montreal Ocean Steam Ship Company.	54	8,533	818 - -	42,536 - -	52 voyages upon subsidy, and two voyages chartered by Government.
The Atlantic Royal Mail Steam Navigation Company.	7	2,637	1,330 *l.* & 1,500 *l.*	2,830 - -	Two voyages upon subsidy; one voyage chartered by Government; four voyages without subsidy or ship letters.
The Anchor Line of American Steam Packet Ships.	12	1,148	- Nil -	- Nil -	- - - - - - -
The Great Ship Company - -	2	120	- Nil -	- Nil -	- - - - - - -
The African Royal Mail Steam Ship Company.	1	- Troops.	—	—	—
William Holland Furlonge, Esq. -	1	- Troops.	—	—	—
Philip Miles & Co. - - -	2	- Nil -	- Nil -	- Nil -	- - - - - - -
Peter Denny, Shipbuilder, Dumbarton.	1	- -	- - -	- - -	Information not received -
Z. C. Pearson & Co., Shipowners, London.	- -	- -	- - -	- - -	- - - - - - -
George Holt, Shipowner, Liverpool.	- -	- -	- - -	- - -	- - - - - - -
Alfred Holt, Shipowner, Liverpool.	1	- -	- - -	- - -	Information not received.
C. R. Stock, Esq., Clifford's Inn, London.	2	- -	- - -	- - -	- - ditto.
The Royal Mail Steam Packet Company.	1	- -	- - -	- - -	- - ditto.

General Register and Record Office of Seamen and Shipping,
London, 19 May 1862.

- - - - - - - - SYNOPSIS.

COMPANIES AND OWNERS.	Voyages from North America to the United Kingdom.				
	Total Number of Voyages.	Total Number of Passengers.	Amount Received or Earned for any Imperial or Colonial Subsidies per Voyage.	Total Amount Received or Earned, for Ship Letters, or for any Imperial or Colonial Subsidies.	REMARKS.
			£. s. d.	£. s. d.	
The British and North American Royal Mail Steam Ship Company.	51	3,566	1,666 14 7	73,336 1 8	44 voyages upon subsidy, and seven voyages without subsidy or ship letters.
The Liverpool, New York and Philadelphia Steam Ship Company.	52	12,279	Declined to give information.	Declined to give information.	
The Montreal Ocean Steam Ship Company.	54	4,473	818 - -	42,536 - -	52 voyages upon subsidy, and two voyages chartered by Government.
The Atlantic Royal Mail Steam Navigation Company.	6	1,105	1,330 *l.* & 1,500 *l.*	2,340 7 4	Two voyages upon subsidy; 10 *l.* 7 *s.* 4 *d.* received for ship letters on three voyages, and one without subsidy or ship letters.
The Anchor Line of American Steam Packet Ships.	14	461	- Nil -	- Nil.	
The Great Ship Company - -	2	569	- Nil -	24 - 5	£. 24. 0 *s.* 5 *d.* for ship letters on one voyage.
The African Royal Mail Steam Ship Company.	—	—	—	—	
William Holland Furlonge, Esq.	—	—	—	—	
Philip Miles & Co. - - -	1	- Nil -	- Nil -	- Nil.	
Peter Denny, Shipbuilder, Dumbarton.	1	- -	- - -	- - -	Information not received.
Z. C. Pearson & Co., Shipowners, London.	1	- -	- - -	- - -	- - ditto.
George Holt, Shipowner, Liverpool.	1	- -	- - -	- - -	- - ditto.
Alfred Holt, Shipowner, Liverpool.	—	—	—	—	
C. R. Stock, Esq., Clifford's Inn, London.	—	—	—	—	
The Royal Mail Steam Packet Company.	—	—	—	—	

J. H. Brown,
Registrar General of Seamen and Shipping.

RETURN of all STEAMERS carrying MAILS between the UNITED KINGDOM and NORTH AMERICA, with their by each Steamer from and at LONDON and NEW YORK respectively, with the Time occupied in Transmission; belonged, and whether Subsidized, or carrying Mails for Postage, from the 1st day of January to the 31st day

Note.—This Return relates only to such Steamers as were Mail Packets. The Post Office possesses no means of furnishing the

OUTWARD MAILS.

1. Despatch of Packet.		2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
Day.	Hour.						
1861:							
Jan. 2	1 30 p.m.	Edinburgh -	Liverpool, New York and Philadelphia.	United States -	Liverpool -	Queenstown - -	New York -
„ 3	4 0 „	Canadian - -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 5	1 30 „	Asia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 9	2 0 „	Arago - -	New York and Havre	United States -	Southampton -	- - - - -	- ditto - -
„ 10	11 0 a.m.	North Briton -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 12	11 38 „	Niagara - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 16	1 20 p.m.	Etna - -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 17	3 0 „	Bohemian -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 19	11 55 a.m.	Arabia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 23	5 0 p.m.	Vigo - -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	- ditto - -	- ditto - -
„ 24	4 15 „	Anglo-Saxon -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 26	10 45 a.m.	Canada - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 29	2 0 p.m.	New York -	North German Lloyd	United States -	Southampton -	- - - - -	New York -
„ 30	1 15 „	City of Baltimore	Liverpool, New York and Philadelphia.	ditto - -	Liverpool -	Queenstown - -	- ditto - -
„ 31	1 30 „	North American	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
Feb. 2	11 40 a.m.	Africa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 6	2 0 p.m.	Fulton - -	New York and Havre	United States -	Southampton -	- - - - -	- ditto - -
„ 7	10 10 a.m.	Nova Scotian -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 9	10 35 „	America - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 13	0 50 p.m.	Edinburgh -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 14	2 30 „	Canadian - -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 16	11 50 a.m.	Australasian -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	Broke down, and returned to Queenstown.
„ 20	2 0 p.m.	Bremen - -	North German Lloyd	United States -	Southampton -	- - - - -	New York -
„ 21	6 15 „	North Briton -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 23	10 21 a.m.	Niagara - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 27	0 35 p.m.	Etna - -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 28	1 0 -	Palestine - -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
March 2	11 45 a.m.	Arabia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 6	2 0 p.m.	Arago - -	New York and Havre	United States -	Southampton -	- - - - -	- ditto - -
„ 8	8 40 a.m.	Bohemian -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 9	9 40 „	Canada - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 13	0 50 p.m.	City of Baltimore	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 14	11 30 a.m.	North American	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 16	10 30 „	Africa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 20	2 0 p.m.	New York -	North German Lloyd	United States -	Southampton -	- - - - -	- ditto - -
„ 21	3 0 „	Nova Scotian -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 23	8 25 a.m.	America - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 27	11 30 „	Edinburgh -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -
„ 28	Noon -	Canadian - -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Portland - -
„ 30	Noon -	Persia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
April 3	2 0 p.m.	Fulton - -	New York and Havre	United States -	Southampton -	- - - - -	- ditto - -
„ 4	3 50 „	North Briton -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Portland - -
„ 6	9 7 a.m.	Niagara - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 9	1 10 p.m.	Columbia -	Atlantic Royal Mail -	ditto - -	Galway - -	St. John's - - -	- ditto - -
„ 10	0 5 „	City of Washington.	Liverpool, New York and Philadelphia.	United States -	Liverpool -	Queenstown - -	New York -
„ 11	2 0 „	Jura - -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 13	10 50 a.m.	Asia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 17	2 0 p.m.	Bremen - -	North German Lloyd	United States -	Southampton -	- - - - -	- ditto - -
„ 18	1 15 „	Bohemian -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Quebec - -
„ 20	3 30 „	Arabia - -	Cunard - - -	ditto - -	- ditto - -	Halifax and Queenstown	Boston - -
„ 23	1 15 „	Adriatic - -	Atlantic Royal Mail -	ditto - -	Galway - -	St. John's - - -	New York -
„ 24	10 55 „	City of Baltimore	Liverpool, New York and Philadelphia.	United States -	Liverpool -	Queenstown - -	- ditto - -
„ 25	11 0 a.m.	North American	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 27	10 42 „	Africa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
May 1	2 0 p.m.	Arago - -	New York and Havre	United States -	Southampton -	- - - - -	- ditto - -
„ 2	1 30 „	Nova Scotian -	Montreal Ocean -	British - -	Liverpool -	Londonderry - -	Quebec - -
„ 4	3 30 „	Europa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 8	11 10 a.m.	Edinburgh -	Liverpool, New York and Philadelphia.	United States -	- ditto - -	Queenstown - -	New York -

Ports of Departure, Call and Arrival, and Duration of Passage; showing the Despatch and Arrival of the Mails distinguishing between the BRITISH and UNITED STATES' PACKETS, and showing to which Companies they of December 1861.

information called for in respect to any Steamer which sailed during the period of the Return, but was not a Mail Packet.

OUTWARD MAILS.

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatced from London.		11. Mails arrived at New York.		12. Time occupied in Transmission of Mails.	13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.		
1861:		D. H.	1861:		1861:		D. H.	
Jan. - 17	10 25 p.m.	15 9	Jan. - 2	8 0 p.m.	Jan. - 17	10 25 p.m.	15 2½	For postage.
„ - 17	4 0 „	14 0	„ - 3	8 0 „	„ - 18	11 55 „	15 4	Subsidized.
„ - 19	8 0 a.m.	13 18½	„ - 5	8 0 „	„ - 19	8 0 a.m.	13 12	- ditto.
„ - 23	9 0 „	13 19	„ - 9	9 45 a.m.	„ - 23	9 0 „	13 23¼	For postage.
„ - 23	4 30 p.m.	13 5½	„ - 10	8 0 p.m.	„ - 25	1 15 p.m.	14 17¼	Subsidized.
„ - 20	5 20 a.m.	13 17¾	„ - 12	8 0 „	- - No return - -		- -	- ditto.
„ - 28	5 30 p.m.	12 4¼	„ - 16	8 0 „	Jan. - 28	5 30 p.m.	11 21½	For postage.
„ - 30	10 0 a.m.	12 19	„ - 17	8 0 „	„ - 31	7 35 „	13 23½	Subsidized.
Feb. - 1	8 40 p.m.	13 8¾	„ - 19	8 0 „	Feb. - 1	8 40 „	13 0¾	- ditto.
„ - 8	5 25 „	16 0½	„ - 23	8 0 „	„ - 8	5 25 „	15 21½	For postage.
„ - 6	10 0 „	13 5¾	„ - 24	8 0 „	„ - 8	0 50 a.m.	14 4¾	Subsidized.
„ - 10	0 28 „	15 1¾	„ - 26	8 0 „	- - No return - -		- -	- ditto.
„ - 14	8 40 a.m.	15 18¾	„ - 28	8 0 „	Feb. - 14	8 40 a.m.	16 12¾	For postage.
„ - 16	2 10 „	16 6¼	„ - 30	8 0 „	„ - 16	2 10 „	16 6¼	- ditto.
„ - 17	1 0 „	16 11½	„ - 31	8 0 „	„ - 19	0 10 „	18 4¼	Subsidized.
„ - 17	8 45 „	14 21	Feb. - 2	8 0 „	„ - 17	8 45 „	14 12¾	- ditto.
„ - 19	5 40 p.m.	13 3¾	„ - 6	9 45 a.m.	„ - 19	5 40 p.m.	13 8	For postage.
„ - 20	Midnight	13 13¾	„ - 7	8 0 p.m.	„ - 22	0 20 „	14 16¼	Subsidized.
„ - 24	8 45 a.m.	14 22¼	„ - 9	8 0 „	„ - 25	5 0 a.m.	15 9	- ditto.
Mar. - 1	7 55 p.m.	16 7	„ - 13	8 0 „	Mar. - 1	7 55 p.m.	16 0	For postage.
Feb. - 28	7 0 a.m.	13 16½	„ - 14	8 0 „	„ - 1	0 5 a.m.	14 4	Subsidized.
Mails transferred to Arabia	-	- -	„ - 16	8 0 „	- -	- - -	- -	- ditto.
Mar. - 7	10 0 p.m.	15 8	„ - 20	9 45 a.m.	Mar. - 7	10 0 p.m.	15 12¼	For postage.
„ - 7	5 0 „	13 22¾	„ - 21	8 0 p.m.	„ - 9	11 50 „	16 3¾	Subsidized.
„ - 11	5 38 „	16 7¼	„ - 23	8 0 „	„ - 12	6 10 a.m.	16 10¼	- ditto.
„ - 14	8 20 a.m.	14 19¾	„ - 27	8 0 „	„ - 14	8 20 „	14 12¼	For postage.
„ - 17	8 0 „	16 19	„ - 28	8 0 „	„ - 18	11 50 p.m.	18 3¾	Subsidized.
„ - 16	8 0 p.m.	14 8¼	Mar. - 2	8 0 „	„ - 16	8 0 „	14 0	- ditto.
„ - 22	0 40 „	15 22¾	„ - 6	9 45 a.m.	„ - 22	0 40 p.m.	16 3	For postage.
„ - 24	11 30 „	16 14¾	„ - 7	8 0 p.m.	„ - 25	11 50 „	18 3¾	Subsidized.
„ - 25	0 30 a.m.	15 14¾	„ - 9	8 0 „	„ - 25	5 50 „	15 21¾	- ditto.
„ - 28	8 30 „	14 19¾	„ - 13	8 0 „	„ - 28	8 30 a.m.	14 12½	For postage.
April - 1	4 0 „	17 16½	„ - 14	8 0 „	April - 1	Midnight	18 4	Subsidized.
Mar. - 31	5 45 „	14 19¼	„ - 16	8 0 „	Mar. - 31	5 45 a.m.	14 9¾	- ditto.
April - 2	7 55 „	12 18	„ - 20	9 45 a.m.	April - 2	7 55 „	12 22¼	For postage.
„ - 3	3 0 p.m.	13 0	„ - 21	8 0 p.m.	„ - 4	Midnight	14 4	Subsidized.
„ - 5	6 20 a.m.	12 22	„ - 23	8 0 „	„ - 5	5 50 p.m.	12 21¾	- ditto.
„ - 8	4 20 p.m.	12 4¾	„ - 27	8 0 „	„ - 8	4 20 „	11 20¼	For postage.
„ - 8	6 0 a.m.	10 18	„ - 28	8 0 „	„ - 8	11 50 „	11 3¾	Subsidized.
„ - 9	8 10 „	9 20¼	„ - 30	8 0 „	„ - 9	8 10 a.m.	9 12¼	- ditto.
„ - 15	4 16 „	11 14¼	April - 3	9 45 a.m.	„ - 15	4 16 „	11 18½	For postage.
„ - 16	2 0 „	11 10¼	„ - 4	8 0 p.m.	„ - 16	11 55 p.m.	12 4	Subsidized.
„ - 20	8 58 p.m.	14 11¾	„ - 6	8 0 „	„ - 22	5 25 a.m.	15 9½	- ditto.
„ - 27	7 30 a.m.	17 18¼	„ - 8	8 0 „	- - No return - -		- -	- ditto.
„ - 23	10 40 p.m.	13 10½	„ - 10	8 0 „	April - 23	10 40 p.m.	13 2¾	For postage.
„ - 24	9 0 a.m.	12 19	„ - 11	8 0 „	„ - 26	8 30 „	15 0½	Subsidized.
„ - 25	8 0 „	11 21¼	„ - 13	8 0 „	„ - 25	8 0 a.m.	11 12	- ditto.
„ - 29	4 55 p.m.	12 3	„ - 17	9 45 a.m.	„ - 29	4 55 p.m.	12 7¼	For postage.
May - 1	10 0 „	13 8¾	„ - 18	8 0 p.m.	May - 4	11 10 a.m.	15 15¼	Subsidized.
„ - 1	4 45 a.m.	10 13¼	„ - 20	8 0 „	„ - 1	5 15 p.m.	10 21¼	- ditto.
„ - 2	10 0 p.m.	9 8¾	„ - 22	8 0 „	„ - 2	10 0 „	10 2	- ditto.
„ - 6	6 0 a.m.	11 7	„ - 24	8 0 „	„ - 6	6 0 a.m.	11 10	For postage.
„ - 8	10 0 p.m.	13 11	„ - 25	8 0 „	„ - 11	9 30 „	15 13½	Subsidized.
„ - 9	1 46 „	12 3	„ - 27	8 0 „	„ - 9	1 46 p.m.	11 17¾	- ditto.
„ - 14	6 45 „	13 4¾	May - 1	9 45 a.m.	„ - 14	6 45 „	13 9	For postage.
„ - 15	7 20 „	13 5¾	„ - 2	8 0 p.m.	„ - 16	10 40 „	14 2¾	Subsidized.
„ - 15	11 55 „	11 8½	„ - 4	8 0 „	„ - 16	5 28 a.m.	11 9½	- ditto.
„ - 21	4 17 „	13 5	„ - 8	8 0 „	„ - 21	4 17 p.m.	12 20¼	For postage.

OUTWARD MAILS—*continued.* - - - - - - - - -

1. Despatch of Packet. Day.	Hour.	2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
1861:							
May 9	11 0 a.m.	Canadian - -	Montreal Ocean -	British - -	Liverpool - -	Londonderry - -	Quebec - -
„ 11	10 52 „	Persia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 15	2 0 p.m.	New York -	North German Lloyd	United States -	Southampton -	- - - - - -	- ditto - -
„ 18	4 15 „	North Briton -	Montreal Ocean -	British - -	Liverpool - -	Londonderry - -	Quebec - -
„ 18	1 34 „	America - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 22	2 0 „	Borussia - -	Hamburgh American	United States -	Southampton -	- - - - - -	New York -
„ 22	5 5 „	City of Washington.	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 23	6 15 „	Hibernian -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 25	10 42 a.m.	Australasian -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 29	2 0 p.m.	Fulton - -	New York and Havre	United States -	Southampton -	- - - - - -	- ditto - -
„ 30	4 20 „	Bohemian -	Montreal Ocean -	British - -	Liverpool - -	Londonderry - -	Quebec - -
June 1	1 30 „	Arabia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 5	2 0 „	Bavaria - -	Hamburgh American	United States -	Southampton -	- - - - - -	New York -
„ 5	4 40 „	City of Baltimore	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 6	3 25 „	Jura - -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 8	10 19 a.m.	Africa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 12	2 0 p.m.	Bremen - -	North German Lloyd	United States -	Southampton -	- - - - - -	- ditto - -
„ 12	Noon -	Kangaroo - -	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 13	2 20 p.m.	Anglo-Saxon -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 15	Noon -	Europa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 19	2 0 p.m.	Hammonia -	Hamburgh American	United States -	Southampton -	- - - - - -	New York -
„ 19	4 30 „	Etna - -	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 20	4 45 „	Nova Scotia -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 22	10 30 a.m.	Persia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 26	3 0 p.m.	Arago - -	New York and Havre	United States -	Southampton -	- - - - - -	- ditto - -
„ 27	2 45 „	North Briton -	Montreal Ocean -	British - -	Liverpool - -	Londonderry - -	Quebec - -
„ 29	11 30 a.m.	Canada - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
July 3	1 45 p.m.	Saxonia - -	Hamburgh American	United States -	Southampton -	- - - - - -	New York -
„ 3	3 45 „	City of Washington.	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 4	7 0 „	Hibernian -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 6	9 55 a.m.	Asia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 10	1 45 p.m.	New York -	North German Lloyd	United States -	Southampton -	- - - - - -	- ditto - -
„ 10	11 45 a.m.	Glasgow - -	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 11	2 0 p.m.	North American	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 13	0 10 „	Arabia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 17	2 0 „	Borussia - -	Hamburgh American	United States -	Southampton -	- - - - - -	New York -
„ 17	3 0 „	City of Baltimore	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 18	3 30 „	Norwegian -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 20	9 5 a.m.	Africa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 24	2 0 p.m.	Fulton - -	New York and Havre	United States -	Southampton -	- - - - - -	- ditto - -
„ 24	0 35 „	Kangaroo - -	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 25	1 45 p.m.	Anglo-Saxon -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 27	11 36 a.m.	Europa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 31	2 0 p.m.	Bavaria - -	Hamburgh American	United States -	Southampton -	- - - - - -	New York -
„ 31	3 45 „	Etna - -	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	Broke down -
Aug. 1	4 30 „	Nova Scotian -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 3	6 13 „	Persia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 7	2 0 „	Bremen - -	North German Lloyd	United States -	Southampton -	- - - - - -	- ditto - -
„ 7	11 40 a.m.	Edinburgh -	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 8	0 30 p.m.	Bohemian -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 10	11 46 a.m.	Canada - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston -
„ 14	2 0 p.m.	Teutonia - -	Hamburgh American	United States -	Southampton -	- - - - - -	New York -
„ 14	2 45 „	City of Washington.	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 15	4 20 „	Hibernian -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 17	8 55 a.m.	Asia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
„ 21	2 0 p.m.	Arago - -	New York and Havre	United States -	Southampton -	- - - - - -	- ditto - -
„ 22	0 55 „	North American	Montreal Ocean -	British - -	Liverpool - -	Londonderry - -	Quebec - -
„ 24	11 5 a.m.	Arabia - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 28	2 0 p.m.	Hammonia -	Hamburgh American	United States -	Southampton -	- - - - - -	New York -
„ 28	0 45 „	City of Manchester.	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 29	3 30 „	North Briton -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 31	3 36 „	Africa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown - -	New York -
Sept. 4	2 0 „	New York -	North German Lloyd	United States -	Southampton -	- - - - - -	- ditto - -
„ 4	11 50 a.m.	Kangaroo - -	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -
„ 5	0 15 p.m.	Anglo-Saxon -	Montreal Ocean -	British - -	- ditto - -	Londonderry - -	Quebec - -
„ 7	11 0 a.m.	Europa - -	Cunard - - -	ditto - -	- ditto - -	Queenstown and Halifax	Boston - -
„ 11	3 0 p.m.	Saxonia - -	Hamburgh American	United States -	Southampton -	- - - - - -	New York -
„ 11	1 45 „	City of New York	Liverpool, New York and Philadelphia.	ditto - -	Liverpool - -	Queenstown - -	- ditto - -

* The Mails forwarded by the "North Briton" on this occasion were made up for transmission

- - - - - - - - - OUTWARD MAILS—*continued.*

8. Date of Arrival of Packet. Day.	8. Hour.	9. Duration of Passage.	10. Mails despatched from London. Day.	10. Hour.	11. Mails arrived at New York. Day.	11. Hour.	12. Time occupied in Transmission of Mails.	13. Whether Packet Subsidized, or carrying Mails for Postage.
1861:		D. H.	1861:		1861:		D. H.	
May - 20	7 30 p.m. -	11 8¼	May - 9	8 0 p.m. -	May - 21	10 50 p.m. -	12 2¾	Subsidized.
„ - 21	7 35 „ -	10 8¾	„ - 11	8 0 „ -	„ - 21	7 35 „ -	9 23½	- ditto.
„ - 28	6 30 a.m. -	12 16½	„ - 15	9 45 a.m. -	„ - 28	6 30 a.m. -	12 20¾	For postage.
- - No return	- -	- -	„ - 16	8 0 p.m.* -	- - No return	- -	- -	Subsidized.
May - 31	9 0 p.m. -	13 7½	„ - 18	8 0 „ -	June - 1	5 25 p.m. -	13 21½	- ditto.
June - 4	3 55 „ -	13 2	„ - 22	10 30 a.m. -	„ - 4	3 55 „ -	13 5½	For postage.
„ - 5	1 20 „ -	13 8¼	„ - 22	8 0 p.m. -	„ - 5	1 20 „ -	13 17¼	- ditto.
„ - 5	6 0 a.m. -	12 11¾	„ - 23	8 0 „ -	„ - 6	10 35 „ -	14 2½	Subsidized.
„ - 5	5 5 p.m. -	11 6½	„ - 25	8 0 „ -	„ - 5	5 5 „ -	10 21	- ditto.
„ - 10	4 30 a.m. -	11 14½	„ - 29	9 45 a.m. -	„ - 10	4 30 a.m. -	11 18¾	For postage.
„ - 13	0 20 „ -	13 8	„ - 30	8 0 p.m. -	„ - 13	10 45 p.m. -	14 2¾	Subsidized.
„ - 12	8 15 „ -	10 18¾	June - 1	8 0 „ -	„ - 12	11 50 „ -	11 3¾	- ditto.
„ - 18	7 15 „ -	12 17¼	„ - 5	9 45 a.m. -	„ - 18	7 15 a.m. -	12 21½	For postage.
„ - 17	7 0 „ -	11 14¼	„ - 5	8 0 p.m. -	„ - 17	7 0 „ -	11 11	- ditto.
„ - 17	11 30 „ -	10 20	„ - 6	8 0 „ -	„ - 18	10 35 p.m. -	12 2½	Subsidized.
„ - 20	7 11 „ -	11 20¾	„ - 8	8 0 „ -	„ - 20	7 11 a.m. -	11 11¼	- ditto.
„ - 23	6 25 p.m. -	11 4½	„ - 12	9 45 a.m. -	„ - 23	6 25 p.m. -	11 8¾	For postage.
„ - 26	7 35 a.m. -	13 19½	„ - 12	8 0 p.m. -	„ - 26	7 35 a.m. -	13 11½	- ditto.
„ - 26	6 0 „ -	12 15¾	„ - 13	8 0 „ -	„ - 28	1 0 „ -	14 5	Subsidized.
„ - 26	6 30 p.m. -	11 6½	„ - 15	8 0 „ -	„ - 27	5 40 „ -	11 9¾	- ditto.
July - 1	11 15 „ -	12 9¼	„ - 19	9 45 a.m. -	July - 1	11 15 p.m. -	12 13½	For postage.
„ - 1	0 45 a.m. -	11 8¾	„ - 19	8 0 p.m. -	„ - 1	0 45 a.m. -	11 4¾	- ditto.
- - No return	- -	- -	„ - 20	8 0 „ -	„ - 6	10 10 „ -	15 14¼	Subsidized.
July - 3	5 55 a.m. -	10 19½	„ - 22	8 0 „ -	„ - 3	5 55 „ -	10 10	- ditto.
„ - 8	8 30 p.m. -	12 5½	„ - 26	9 45 a.m. -	„ - 8	8 30 p.m. -	12 10¾	For postage.
„ - 10	8 0 a.m. -	12 17¼	„ - 27	8 0 p.m. -	„ - 12	1 25 a.m. -	14 5½	Subsidized.
„ - 12	5 53 p.m. -	13 6½	„ - 29	8 0 „ -	„ - 13	5 40 „ -	13 9¾	- ditto.
„ - 15	5 10 „ -	12 3½	July - 3	9 45 a.m. -	„ - 15	5 10 p.m. -	12 7½	For postage.
„ - 16	5 30 „ -	13 1¾	„ - 3	8 0 p.m. -	„ - 16	5 30 p.m. -	12 21½	- ditto.
„ - 16	3 0 „ -	11 20	„ - 4	8 0 „ -	„ - 18	10 35 „ -	14 2½	Subsidized.
„ - 18	2 10 a.m. -	11 16¼	„ - 6	8 0 „ -	„ - 18	2 10 a.m. -	11 6¼	- ditto.
„ - 24	2 35 p.m. -	14 0¾	„ - 10	9 45 a.m. -	„ - 24	2 35 p.m. -	14 4¾	For postage.
„ - 25	5 55 a.m. -	14 18¼	„ - 10	8 0 p.m. -	„ - 25	5 55 a.m. -	14 10	- ditto.
„ - 22	11 30 p.m. -	11 9½	„ - 11	8 0 „ -	„ - 24	10 35 p.m. -	13 2½	Subsidized.
„ - 25	1 45 a.m. -	11 13½	„ - 13	8 0 „ -	„ - 25	5 25 a.m. -	11 9½	- ditto.
„ - 30	4 30 p.m. -	13 2½	„ - 17	9 45 a.m. -	„ - 30	4 30 p.m. -	13 6¾	For postage.
„ - 29	4 10 „ -	12 1¼	„ - 17	8 0 p.m. -	„ - 29	4 10 „ -	11 20¼	- ditto.
Aug. - 5	7 0 „ -	18 3½	„ - 18	8 0 „ -	Aug. - 7	9 25 „ -	20 1½	Subsidized.
„ - 1	10 0 a.m. -	12 1	„ - 20	8 0 „ -	„ - 1	10 0 a.m. -	11 14	- ditto.
„ - 5	10 40 p.m. -	12 8¾	„ - 24	9 45 a.m. -	„ - 5	10 40 p.m. -	12 13	For postage.
„ - 9	3 15 „ -	16 2¾	„ - 24	8 0 p.m. -	„ - 9	3 15 „ -	15 19¼	- ditto.
„ - 5	2 40 p.m. -	11 1	„ - 25	8 0 „ -	„ - 7	9 25 a.m. -	12 13½	Subsidized.
„ - 9	5 0 a.m. -	12 17½	„ - 27	8 0 „ -	„ - 9	5 27 p.m. -	12 21½	- ditto.
„ - 14	7 5 „ -	13 17	„ - 31	9 45 a.m. -	„ - 14	7 5 a.m. -	13 21¼	For postage.
Mails transferred to "North American"	-		„ - 31	8 0 p.m. -	- -	- - -	- -	- ditto.
Aug. - 13	8 0 a.m. -	11 15½	Aug. - 1	8 0 „ -	„ - 14	10 35 p.m. -	13 2½	Subsidized.
„ - 14	2 25 p.m. -	10 20¼	„ - 3	8 0 „ -	„ - 14	2 25 „ -	10 18½	- ditto.
„ - 19	10 15 „ -	12 8½	„ - 7	9 45 a.m. -	„ - 19	10 15 „ -	12 12½	For postage.
„ - 21	0 10 „ -	14 0½	„ - 7	8 0 p.m. -	„ - 21	0 10 „ -	13 16¼	- ditto.
„ - 19	5 50 a.m. -	10 17¼	„ - 8	8 0 „ -	„ - 20	10 35 „ -	12 2½	Subsidized.
„ - 23	0 48 „ -	12 13	„ - 10	8 0 „ -	„ - 23	5 20 „ -	12 21¼	- ditto.
„ - 28	5 12 p.m. -	14 2¼	„ - 14	9 45 a.m. -	„ - 28	5 12 „ -	14 7½	For postage.
„ - 27	4 45 „ -	13 2	„ - 14	8 0 p.m. -	„ - 27	4 45 „ -	12 20¾	- ditto.
„ - 27	7 0 a.m. -	11 14¾	„ - 15	8 0 „ -	„ - 28	10 35 „ -	13 2½	Subsidized.
„ - 29	8 30 „ -	11 23½	„ - 17	8 0 „ -	„ - 29	8 30 a.m. -	11 12½	- ditto.
Sept. - 3	4 45 p.m. -	13 2¾	„ - 21	9 45 a.m. -	Sept. - 3	4 45 p.m. -	13 7	For postage.
„ - 2	5 15 „ -	11 4¼	„ - 22	8 0 p.m. -	„ - 3	10 35 „ -	12 2½	Subsidized.
„ - 5	3 50 a.m. -	11 16¾	„ - 24	8 0 „ -	„ - 5	5 50 „ -	11 21¾	- ditto.
„ - 10	6 45 p.m. -	13 4¾	„ - 28	9 45 a.m. -	„ - 10	6 45 „ -	13 9	For postage.
„ - 16	7 55 a.m. -	18 19¼	„ - 28	8 0 p.m. -	„ - 16	7 55 a.m. -	18 12	- ditto.
„ - 10	8 0 p.m. -	12 4½	„ - 29	8 0 „ -	„ - 12	6 55 p.m. -	13 23	Subsidized.
„ - 12	9 10 „ -	12 5½	„ - 31	8 0 „ -	„ - 12	9 10 „ -	12 1¼	- ditto.
„ - 18	7 35 „ -	14 5½	Sept. - 4	9 45 a.m. -	„ - 18	7 35 „ -	14 9¾	For postage.
„ - 18	9 55 „ -	14 10	„ - 4	8 0 p.m. -	„ - 18	9 55 „ -	14 2	- ditto.
„ - 17	7 30 a.m. -	11 19¼	„ - 5	8 0 „ -	„ - 18	10 35 „ -	13 2½	Subsidized.
„ - 19	9 15 p.m. -	12 10¼	„ - 7	8 0 „ -	„ - 20	5 25 „ -	12 21½	- ditto.
„ - 28	7 50 a.m. -	16 16¾	„ - 11	9 45 a.m. -	„ - 28	7 50 a.m. -	16 22	For postage.
„ - 24	1 30 p.m. -	12 23¾	„ - 11	8 0 p.m. -	„ - 24	1 30 p.m. -	12 17½	- ditto.

by the "Hibernian," which broke down between Liverpool and Londonderry.

OUTWARD MAILS—*continued.*

1. Despatch of Packet. Day.	1. Despatch of Packet. Hour.	2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
1861:							
Sept. 12	4 0 p.m.	Jura	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 14	4 40 „	Persia	Cunard	ditto	ditto	Queenstown	New York
„ 18	1 20 „	Fulton	New York and Havre	United States	Southampton	—	ditto
„ 19	11 50 a.m.	Bohemian	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 21	11 35 „	Niagara	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 25	2 0 p.m.	Bavaria	Hamburgh American	United States	Southampton	—	New York
„ 25	1 40 „	City of Washington.	Liverpool, New York and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 26	2 45 „	Norwegian	Montreal Ocean	British	ditto	Londonderry	Quebec
„ 28	1 45 „	Asia	Cunard	ditto	ditto	Queenstown	New York
Oct. 2	2 0 „	Bremen	North German Lloyd	United States	Southampton	—	ditto
„ 2	5 30 „	Glasgow	Liverpool, New York and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 3	10 0 a.m.	North American	Montreal Ocean	British	ditto	Londonderry	Quebec
„ 5	11 0 „	Arabia	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 9	2 0 p.m.	Teutonia	Hamburgh American	United States	Southampton	—	New York
„ 9	1 45 „	Etna	Liverpool, New York and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 10	3 15 „	North Briton	Montreal Ocean	British	ditto	Londonderry	Quebec
„ 12	2 37 „	Africa	Cunard	ditto	ditto	Queenstown	New York
„ 16	2 0 „	Arago	New York and Havre	United States	Southampton	—	ditto
„ 17	10 30 a.m.	Anglo-Saxon	Montreal Ocean	British	Liverpool	Londonderry	Quebec
„ 19	10 28 „	Europa	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 23	2 0 p.m.	Hammonia	Hamburgh American	United States	Southampton	—	New York
„ 23	1 15 „	City of New York	Liverpool, New York and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 24	3 20 „	Jura	Montreal Ocean	British	ditto	Londonderry	Quebec
„ 26	1 0 „	Persia	Cunard	ditto	ditto	Queenstown	New York
„ 30	4 15 „	Edinburgh	Liverpool, New York and Philadelphia.	United States	Liverpool	ditto	ditto
„ 31	4 15 „	Nova Scotian	Montreal Ocean	British	ditto	Londonderry	ditto
Nov. 2	10 30 a.m.	Niagara	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 6	2 0 p.m.	Saxonia	Hamburgh American	United States	Southampton	—	New York
„ 6	1 0 „	City of Manchester.	Liverpool, New York and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 7	2 35 „	Norwegian	Montreal Ocean	British	ditto	Londonderry	Portland
„ 9	0 15 „	Asia	Cunard	ditto	ditto	Queenstown	New York
„ 13	2 0 „	Fulton	New York and Havre	United States	Southampton	—	ditto
„ 13	5 0 „	Etna	Liverpool, New York and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 14	4 45 „	Bohemian	Montreal Ocean	British	ditto	Londonderry	Portland
„ 16	9 47 a.m.	Canada	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 20	2 0 p.m.	Bavaria	Hamburgh American	United States	Southampton	—	New York
„ 20	Noon	City of Baltimore	Liverpool, New York and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 21	1 30 p.m.	North American	Montreal Ocean	British	ditto	Londonderry	Portland
„ 23	11 40 a.m.	Africa	Cunard	ditto	ditto	Queenstown	New York
„ 27	4 0 p.m.	Hansa	North German Lloyd	United States	Southampton	—	ditto
„ 27	2 15 „	Glasgow	Liverpool, New York and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 28	4 0 „	Anglo-Saxon	Montreal Ocean	British	ditto	Londonderry	Portland
„ 30	9 45 a.m.	Europa	Cunard	ditto	ditto	Queenstown and Halifax	Boston
Dec. 4	2 0 p.m.	Teutonia	Hamburgh American	United States	Southampton	—	New York
„ 4	0 45 „	City of Washington.	Liverpool, New York and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 5	2 0 „	Jura	Montreal Ocean	British	ditto	Londonderry	Portland
„ 7	0 17 „	America	Cunard	ditto	ditto	Queenstown and Halifax	New York
„ 11	2 45 „	Edinburgh	Liverpool, New York and Philadelphia.	United States	ditto	Queenstown	ditto
„ 12	4 30 „	Nova Scotia	Montreal Ocean	British	ditto	Londonderry	Portland
„ 14	5 23 „	Niagara	Cunard	ditto	ditto	Queenstown and Halifax	Boston
„ 18	2 0 „	Borussia	Hamburgh American	United States	Southampton	—	New York
„ 18	0 50 „	Etna	Liverpool, New York and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 19	11 15 a.m.	Norwegian	Montreal Ocean	British	ditto	Londonderry	Portland
„ 21	11 55 „	Asia	Cunard	ditto	ditto	Queenstown and Halifax	New York
„ 25	2 0 p.m.	Bremen	North German Lloyd	United States	Southampton	—	ditto
„ 25	1 0 „	Kangaroo	Liverpool, New York and Philadelphia.	ditto	Liverpool	Queenstown	ditto
„ 26	3 50 „	Bohemian	Montreal Ocean	British	ditto	Londonderry	Portland
„ 28	3 40 „	Canada	Cunard	ditto	ditto	Queenstown and Halifax	Boston

In the case of all Mail Packets proceeding to New York, the time given in Column 11 is the time at which the packet arrived at New York. In all

- - - - - - - - - OUTWARD MAILS—*continued.*

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from London.		11. Mails arrived at New York.		12. Time occupied in Transmission of Mails.	13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.		
1861:		D. H.	1861:		1861:		D. H.	
Sept. - 24	6 0 p.m. -	12 2	Sept. - 12	8 0 p.m. -	Sept. - 25	10 35 p.m. -	13 2½	Subsidized.
„ - 25	9 20 a.m. -	10 16¾	„ - 14	8 0 „ -	„ - 25	9 20 a.m. -	10 13¼	- ditto.
Oct. - 3	8 55 „ -	14 19½	„ - 18	9 45 a.m. -	Oct. - 3	8 55 „ -	14 23½	For postage.
- - No return	- -	- -	„ - 19	8 0 p.m. -	„ - 3	10 35 p.m. -	14 2½	Subsidized.
„ - 6	5 40 p.m. -	15 6	„ - 21	8 0 „ -	„ - 7	4 15 a.m. -	15 8¼	- ditto.
„ - 10	7 0 a.m. -	14 17	„ - 25	9 45 a.m. -	„ - 10	7 0 „ -	14 21¼	For postage.
„ - 9	8 20 „ -	13 18¾	„ - 25	8 0 p.m. -	„ - 9	8 20 „ -	13 12¼	- ditto.
„ - 7	7 0 p.m. -	11 4¼	„ - 26	8 0 „ -	„ - 9	10 35 p.m. -	13 2½	Subsidized.
„ - 11	11 30 a.m. -	12 21¾	„ - 28	8 0 „ -	„ - 11	11 30 a.m. -	12 15½	- ditto.
„ - 15	7 0 p.m. -	13 5	Oct. - 2	9 45 a.m. -	„ - 15	7 0 p.m. -	13 9¼	For postage.
„ - 16	6 30 „ -	14 1	„ - 2	8 0 p.m. -	„ - 16	6 30 „ -	13 22½	- ditto.
„ - 16	6 0 a.m. -	12 20	„ - 3	8 0 „ -	„ - 17	10 40 „ -	14 2¾	Subsidized.
„ - 17	8 20 p.m. -	12 9¼	„ - 5	8 0 „ -	„ - 18	5 30 „ -	12 21½	- ditto.
„ - 25	9 0 a.m. -	15 19	„ - 9	9 45 a.m. -	„ - 25	9 0 a.m. -	15 23¼	For postage.
„ - 22	4 15 p.m. -	13 2½	„ - 9	8 0 p.m. -	„ - 22	4 15 p.m. -	12 20¼	- ditto.
„ - 23	8 0 a.m. -	12 16¾	„ - 10	8 0 „ -	„ - 24	10 30 „ -	14 2½	Subsidized.
„ - 25	7 6 p.m. -	13 4½	„ - 12	8 0 „ -	„ - 25	7 6 „ -	12 23	- ditto.
„ - 31	8 55 a.m. -	14 19	„ - 16	9 45 a.m. -	„ - 31	8 55 a.m. -	14 23½	For postage.
Nov. - 1	9 20 „ -	14 22¾	„ - 17	8 0 p.m. -	Nov. - 2	10 35 p.m. -	16 2½	Subsidized.
„ - 1	7 50 „ -	12 21¼	„ - 19	8 0 „ -	„ - 1	5 30 „ -	12 21½	- ditto.
„ - 5	1 8 p.m. -	12 23¼	„ - 23	9 45 a.m. -	„ - 5	1 8 „ -	13 3½	For postage.
„ - 3	11 55 a.m. -	10 22¾	„ - 23	8 0 p.m. -	„ - 3	11 55 a.m. -	10 16	- ditto.
„ - 4	5 30 p.m. -	11 2¼	„ - 24	8 0 „ -	„ - 5	10 55 p.m. -	12 3	Subsidized.
„ - 5	10 55 a.m. -	9 22	„ - 26	8 0 „ -	„ - 5	10 55 a.m. -	9 15	- ditto.
„ - 15	8 10 „ -	15 16	„ - 30	8 0 „ -	„ - 15	8 10 „ -	15 12¼	For postage.
„ - 13	1 30 p.m. -	12 21¼	„ - 31	8 0 „ -	„ - 14	10 45 p.m. -	14 2¾	Subsidized.
„ - 16	3 13 a.m. -	13 16¾	Nov. - 2	8 0 „ -	„ - 16	5 30 „ -	13 21½	- ditto.
„ - 20	9 0 „ -	13 19	„ - 6	9 45 a.m. -	„ - 20	9 0 a.m. -	13 23¼	For postage.
„ - 21	1 40 p.m. -	15 0¾	„ - 6	8 0 p.m. -	„ - 21	1 40 p.m. -	14 17¾	- ditto.
„ - 18	9 15 „ -	11 6¾	„ - 7	8 0 „ -	„ - 20	5 30 a.m. -	12 9½	Subsidized.
„ - 21	7 0 „ -	12 6¾	„ - 9	8 0 „ -	„ - 21	7 0 p.m. -	11 23	- ditto.
„ - 26	1 35 „ -	12 23½	„ - 13	9 45 a.m. -	„ - 26	1 35 „ -	13 3¾	For postage.
„ - 24	7 25 „ -	11 2½	„ - 13	8 0 p.m. -	„ - 24	7 25 „ -	10 23½	- ditto.
„ - 26	3 0 a.m. -	11 10¼	„ - 14	8 0 „ -	„ - 27	6 35 „ -	12 22½	Subsidized.
„ - 28	9 0 p.m. -	12 11¼	„ - 16	8 0 „ -	„ - 29	5 35 „ -	12 21½	- ditto.
Dec. - 6	7 45 a.m. -	15 17¾	„ - 20	9 45 a.m. -	Dec. - 6	7 45 a.m. -	15 22	For postage.
„ - 4	9 25 p.m. -	14 9½	„ - 20	8 0 p.m. -	„ - 4	9 25 p.m. -	14 1½	- ditto.
„ - 6	8 0 „ -	15 6½	„ - 21	8 0 „ -	„ - 8	5 45 „ -	16 21¾	Subsidized.
„ - 8	9 20 a.m. -	14 21¾	„ - 23	8 0 „ -	„ - 8	9 20 a.m. -	14 13¼	- ditto.
„ - 12	2 40 p.m. -	14 22¾	„ - 27	9 45 a.m. -	„ - 12	2 40 p.m. -	15 5¼	For postage.
„ - 16	7 40 „ -	19 5½	„ - 27	8 0 p.m. -	„ - 16	7 40 „ -	18 23¾	- ditto.
„ - 16	10 30 a.m. -	17 18½	„ - 28	8 0 „ -	„ - 17	5 45 a.m. -	18 9¾	Subsidized.
„ - 17	3 50 p.m. -	17 6	„ - 30	8 0 „ -	„ - 18	7 55 „ -	17 12	- ditto.
„ - 23	8 20 a.m. -	18 18¼	Dec. - 4	9 45 a.m. -	„ - 23	8 20 „ -	18 22½	For postage.
„ - 20	0 55 „ -	15 12¼	„ - 4	8 0 p.m. -	„ - 20	0 55 „ -	15 5	- ditto.
„ - 18	6 30 „ -	12 16½	„ - 5	8 0 „ -	„ - 19	5 35 „ -	13 9½	Subsidized.
„ - 24	11 20 „ -	16 23	„ - 7	8 0 „ -	„ - 24	11 20 „ -	17 15¼	- ditto.
„ - 27	3 40 p.m. -	16 1	„ - 11	8 0 „ -	„ - 27	3 40 p.m. -	15 19¾	For postage.
„ - 27	10 30 a.m. -	14 18	„ - 12	8 0 „ -	„ - 28	9 30 a.m. -	15 13½	Subsidized.
„ - 28	4 19 p.m. -	13 23	„ - 14	8 0 „ -	„ - 29	5 50 „ -	14 9¾	- ditto.
1862:					1862:			
Jan. - 1	6 50 a.m. -	13 16¾	„ - 18	9 45 a.m. -	Jan. - 1	6 50 „ -	13 21	For postage.
1861:					1861:			
Dec. - 31	9 45 „ -	12 21	„ - 18	8 0 p.m. -	Dec. - 31	9 45 „ -	12 13¾	- ditto.
1862:								
Jan. - 1	2 15 „ -	12 15	„ - 19	8 0 „ -	- - No return	- -	- -	Subsidized.
					1862:			
„ - 3	Noon - -	13 0	„ - 21	8 0 „ -	Jan. - 3	Noon - -	12 16	- ditto.
„ - 8	6 50 p.m. -	14 4¾	„ - 25	9 45 a.m. -	„ - 8	6 50 p.m. -	14 9	For postage.
„ - 9	4 15 „ -	15 3¼	„ - 25	8 0 p.m. -	„ - 9	4 15 „ -	14 20¼	- ditto.
„ - 7	10 30 „ -	12 6¾	„ - 26	8 0 „ -	„ - 9	6 30 a.m. -	13 10½	Subsidized.
„ - 10	0 15 a.m. -	12 8½	„ - 28	8 0 „ -	„ - 10	5 20 p.m. -	12 21¼	- ditto.

other cases the time given in this column is that at which the mails reached the New York Post Office, including the time occupied in the transit overland.

HOMEWARD MAILS.

1. Despatch of Packet. Day.	Hour.	2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
1861:							
Jan. 2	11 8 a.m.	Persia	Cunard	British	New York	Queenstown	Liverpool
„ 5	Noon	Fulton	New York and Havre	United States	ditto		Southampton
„ 5	4 30 p.m.	Anglo-Saxon	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 9	10 0 a.m.	Canada	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 12	Noon	Kangaroo	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 12	6 0 p.m.	North American	Montreal Ocean	British	Portland	St. John's and Londonderry.	ditto
„ 16	10 37 a.m.	Australasian	Cunard	ditto	New York	Queenstown	ditto
„ 19	Noon	Bremen	North German Lloyd	United States	ditto		Southampton
„ 20	4 0 a.m.	Nova Scotian	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 23	10 15 p.m.	America	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 26	Noon	Edinburgh	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 27	10 0 a.m.	Canadian	Montreal Ocean	British	Portland	Londonderry	ditto
„ 30	10 30 „	Asia	Cunard	ditto	New York	Queenstown	ditto
Feb. 2	Noon	Arago	New York and Havre	United States	ditto		Southampton
„ 3	4 0 a.m.	North Briton	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 6	9 30 „	Niagara	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 9	Noon	Etna	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 12	6 0 a.m.	Bohemian	Montreal Ocean	British	Portland	Londonderry	ditto
„ 13	10 17 „	Arabia	Cunard	ditto	New York	Queenstown	ditto
„ 16	Noon	Vigo	Liverpool, New York, and Philadelphia.	United States	ditto	Queenstown	ditto
„ 17	4 0 p.m.	Anglo-Saxon	Montreal Ocean	British	Portland	Londonderry	ditto
„ 20	10 40 a.m.	Canada	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 23	Noon	City of Baltimore	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 24	11 0 a.m.	North American	Montreal Ocean	British	Portland	Londonderry	ditto
„ 27	10 10 „	Africa	Cunard	ditto	New York	Queenstown	ditto
March 2	Noon	Fulton	New York and Havre	United States	ditto		Southampton
„ 2	4 0 p.m.	Nova Scotian	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 6	9 10 a.m.	America	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 9	Noon	Edinburgh	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 9	4 0 p.m.	Canadian	Montreal Ocean	British	Portland	Londonderry	ditto
„ 13	4 0 „	Adriatic	Chartered for single voyage by Cunard Company.	ditto	New York		Queenstown
„ 16	Noon	Bremen	North German Lloyd	United States	ditto		Southampton
„ 16	5 0 p.m.	North Briton	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 20	1 0 „	Niagara	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 23	Noon	Etna	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 23	7 0 p.m.	Palestine	Montreal Ocean	British	Portland	Londonderry	ditto
„ 27	9 0 a.m.	Arabia	Cunard	ditto	New York	Queenstown	ditto
„ 30	Noon	Arago	New York and Havre	United States	ditto		Southampton
„ 31	0 30 a.m.	Bohemian	Montreal Ocean	British	Portland	Londonderry	Liverpool
April 3	10 40 a.m.	Canada	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 6	Noon	City of Baltimore	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 6	8 30 p.m.	North American	Montreal Ocean	British	Portland	Londonderry	ditto
„ 10	4 30 „	Africa	Cunard	ditto	New York	Queenstown	ditto
„ 13	Noon	New York	North German Lloyd	United States	ditto		Southampton
„ 13	4 30 p.m.	Nova Scotian	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 17	11 35 a.m.	America	Cunard	ditto	Boston	Halifax and Queenstown	ditto
„ 20	Noon	Edinburgh	Liverpool, New York, and Philadelphia.	United States	New York	Queenstown	ditto
„ 20	5 30 p.m.	Canadian	Montreal Ocean	British	Portland	Londonderry	ditto
„ 25	7 0 a.m.	Persia	Cunard	ditto	New York	Queenstown	ditto
„ 27	Noon	Fulton	New York and Havre	United States	ditto		Southampton
„ 27	5 0 p.m.	North Briton	Montreal Ocean	British	Portland	Londonderry	Liverpool
„ 30	3 0 „	Columbia	Atlantic Royal Mail	ditto	Boston	St. John's	Galway
May 1	0 28 p.m.	Niagara	Cunard	ditto	ditto	Halifax and Queenstown	Liverpool
„ 4	Noon	Bavaria	Hamburgh American	United States	New York		Southampton
„ 4	Noon	City of Washington.	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
„ 4	11 0 a.m.	Jura	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 8	1 0 p.m.	Asia	Cunard	ditto	New York	Queenstown	ditto
„ 11	Noon	Bremen	North German Lloyd	United States	ditto		Southampton
„ 11	9 55 a.m.	Bohemian	Montreal Ocean	British	Quebec	Londonderry	Liverpool
„ 14	10 0 „	Adriatic	Atlantic Royal Mail	ditto	New York	St. John's	Galway
„ 15	11 50 „	Arabia	Cunard	ditto	Boston	Halifax and Queenstown	Liverpool
„ 18	Noon	City of Baltimore	Liverpool, New York, and Philadelphia.	United States	New York		Queenstown
18	Noon	Hammonia	Hamburgh American	ditto	ditto		Southampton

HOMEWARD MAILS.

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from New York.		11. Mails arrived in London.		12. Time occupied in Transmission of Mails.	13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.		
1861:		D. H.	1861:		1861:		D. H.	
Jan. - 13	1 5 a.m. -	10 14	Jan. - 2	11 8 a.m. -	Jan. - 13	8 5 a.m. -	10 21	Subsidized.
„ - 18	3 0 p.m. -	13 3	„ - 5	Noon - -	„ - 18	7 30 p.m. -	13 7½	For postage.
„ - 19	3 0 a.m. -	13 10½	- -	No return - -	„ - 19	7 55 a.m. -	- -	Subsidized.
„ - 21	3 30 p.m. -	12 5½	Jan. - 8	- - - -	„ - 21	7 23 p.m. -	- -	- ditto.
„ - 25	3 45 „ -	13 3¾	„ - 12	Noon - -	„ - 26	6 7 a.m. -	13 18	For postage.
„ - 23	9 15 a.m. -	10 15¼	- -	No return - -	„ - 24	7 40 p.m. -	- -	Subsidized.
„ - 27	1 45 p.m. -	11 3¼	Jan. - 16	10 37 a.m. -	„ - 27	6 0 a.m. -	10 19½	- ditto.
„ - 30	6 0 „ -	11 6	„ - 19	Noon - -	„ - 30	10 50 p.m. -	11 10¾	For postage.
Feb. - 1	8 0 a.m. -	12 4	- -	No return - -	Feb. - 1	8 5 a.m. -	- -	Subsidized.
„ - 5	0 25 p.m. -	12 14¼	Jan. - 22	- - - -	„ - 5	7 30 p.m. -	- -	- ditto.
„ - 7	8 0 „ -	12 8	„ - 26	Noon - -	„ - 8	5 45 a.m. -	12 17¾	For postage.
„ - 7	9 0 a.m. -	10 23	- -	No return - -	„ - 7	7 10 p.m. -	- -	Subsidized.
„ - 11	10 5 „ -	11 23½	Jan. - 30	10 30 a.m. -	„ - 11	7 20 a.m. -	11 20¾	- ditto.
„ - 17	4 0 „ -	14 16	Feb. - 2	Noon - -	„ - 17	1 20 „ -	14 13¼	For postage.
„ - 15	2 30 p.m. -	12 10½	- -	No return - -	„ - 15	6 52 p.m. -	- -	Subsidized.
„ - 18	8 33 a.m. -	11 23	Feb. - 5	- - - -	„ - 18	7 25 a.m. -	- -	- ditto.
„ - 20	9 0 „ -	10 21	„ - 9	Noon - -	„ - 20	10 10 p.m. -	11 10¼	For postage.
„ - 23	2 0 p.m. -	11 8	- -	No return - -	„ - 23	6 50 „ -	- -	Subsidized.
„ - 24	2 35 „ -	11 4¼	Feb. - 13	10 17 a.m. -	„ - 25	5 15 a.m. -	11 19	- ditto.
Mar. - 1	6 0 a.m. -	11 18	„ - 16	Noon - -	Mar. - 1	3 40 p.m. -	13 3¾	For postage.
Feb. - 28	Noon - -	10 20	- -	No return - -	Feb. - 28	6 55 „ -	- -	Subsidized.
Mar. - 3	4 44 a.m. -	10 18	Feb. - 19	- - - -	Mar. - 3	7 27 a.m. -	- -	- ditto.
„ - 6	5 0 p.m. -	11 5	„ - 23	Noon - -	„ - 7	5 10 „ -	11 17¼	For postage.
„ - 7	11 0 a.m. -	11 0	- -	No return - -	„ - 7	6 54 p.m. -	- -	Subsidized.
„ - 11	1 15 „ -	11 15	Feb. - 27	10 10 a.m. -	„ - 11	7 13 a.m. -	11 21	- ditto.
„ - 13	1 30 „ -	10 13½	Mar. - 2	Noon - -	„ - 14	5 15 „ -	11 17¼	For postage.
„ - 14	10 0 „ -	11 18	- -	No return - -	„ - 14	6 50 p.m. -	- -	Subsidized.
„ - 18	0 10 „ -	11 15	Mar. - 5	- - - -	„ - 18	7 15 a.m. -	- -	- ditto.
„ - 21	3 0 p.m. -	12 3	„ - 9	Noon - -	„ - 21	11 25 p.m. -	12 11½	For postage.
„ - 20	10 0 a.m. -	10 18	- -	No return - -	„ - 20	7 6 „ -	- -	Subsidized.
„ - 23	4 45 „ -	9 12¾	Mar. - 13	4 0 p.m. -	„ - 24	7 5 a.m. -	10 15	- ditto.
„ - 28	5 0 „ -	11 17	„ - 16	Noon - -	„ - 28	10 24 „ -	11 22½	For postage.
„ - 28	5 0 „ -	11 12	- -	No return - -	„ - 28	3 14 p.m. -	- -	Subsidized.
April - 3	3 10 p.m. -	14 2¼	Mar. - 19	- - - -	April - 3	6 50 „ -	- -	- ditto.
„ - 4	10 30 a.m. -	11 22¾	„ - 23	Noon - -	„ - 4	10 15 „ -	12 10¼	For postage.
„ - 5	2 0 p.m. -	12 19	- -	No return - -	„ - 5	6 52 „ -	- -	Subsidized.
„ - 8	7 30 „ -	12 10½	Mar. - 27	9 0 a.m. -	„ - 8	6 55 „ -	12 10	- ditto.
„ - 14	8 0 „ -	15 8	„ - 30	Noon - -	„ - 14	11 0 „ -	15 11	For postage.
„ - 13	10 45 a.m. -	13 10¼	- -	No return - -	„ - 13	6 50 „ -	- -	Subsidized.
„ - 16	2 10 „ -	12 15½	April - 2	- - - -	„ - 16	7 52 a.m. -	- -	- ditto.
„ - 18	10 0 p.m. -	12 10	„ - 6	Noon - -	„ - 19	11 28 „ -	12 23½	For postage.
„ - 19	5 20 a.m. -	12 8¾	- -	No return - -	„ - 19	7 21 „ -	- -	Subsidized.
„ - 22	5 45 „ -	11 13¼	April - 10	4 30 p.m. -	„ - 22	3 35 p.m. -	11 23	- ditto.
„ - 26	1 0 „ -	12 13	„ - 13	Noon - -	„ - 26	5 0 a.m. -	12 17	For postage.
„ - 26	11 0 „ -	12 18½	- -	No return - -	„ - 26	7 0 p.m. -	- -	Subsidized.
„ - 29	11 35 p.m. -	12 12	April - 16	- - - -	„ - 30	7 12 a.m. -	- -	- ditto.
May - 4	4 0 a.m. -	13 16	„ - 20	Noon - -	May - 4	3 20 p.m. -	14 3¼	For postage.
„ - 2	4 0 „ -	11 10½	- -	No return - -	„ - 2	3 20 „ -	- -	Subsidized.
„ - 5	5 45 „ -	9 22¾	April - 24	- - - -	„ - 5	7 30 a.m. -	- -	- ditto.
„ - 9	8 0 p.m. -	12 8	„ - 27	Noon - -	„ - 9	11 10 p.m. -	- -	For postage.
„ - 9	10 30 „ -	12 5½	- -	No return - -	„ - 10	7 10 a.m. -	- -	Subsidized.
„ - 14	3 30 a.m. -	13 12½	April - 29	- - - -	„ - 15	10 26 „ -	- -	- ditto.
„ - 13	10 50 „ -	11 22¼	„ - 30	- - - -	„ - 13	6 45 p.m. -	- -	- ditto.
„ - 17	8 40 „ -	12 20¾	May - 4	Noon - -	„ - 17	Noon - -	13 0	For postage.
„ - 15	11 0 p.m. -	11 11	„ - 4	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 14	10 0 „ -	10 11	- -	No return - -	May - 15	10 26 a.m. -	- -	Subsidized.
„ - 20	10 5 „ -	12 9	May - 8	1 0 p.m. -	„ - 21	7 20 „ -	12 18¼	- ditto.
„ - 23	8 40 a.m. -	11 20¾	„ - 11	Noon - -	„ - 23	11 30 „ -	11 23½	For postage.
„ - 23	10 45 „ -	12 0¼	- -	No return - -	„ - 23	6 50 p.m. -	- -	Subsidized.
„ - 24	6 0 „ -	9 20	May - 14	10 0 a.m. -	„ - 25	7 22 a.m. -	10 21¼	- ditto.
„ - 25	11 30 p.m. -	10 11¾	„ - 14	- - - -	„ - 26	7 23 „ -	- -	- ditto.
„ - 28	3 30 „ -	10 3½	„ - 18	Noon - -	Brought mails for Ireland only		- -	For postage.
„ - 30	4 30 „ -	12 4½	„ - 18	Noon - -	May - 30	8 0 p.m. -	12 8	- ditto.

HOMEWARD MAILS—*continued.*

1. Despatch of Packet. Day.	Hour.	2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
1861:							
May 18	9 45 a.m.	North American	Montreal Ocean	British	Quebec		Broke down; landed mails at Queenstown.
„ 22	3 35 p.m.	Africa	Cunard	ditto	New York	Queenstown	Liverpool
„ 24		Nova Scotian	Montreal Ocean	ditto	Portland	Londonderry	ditto
„ 25	Noon	Arago	New York and Havre	United States	New York		Southampton
„ 29	11 15 a.m.	Europa	Cunard	British	Boston	Halifax and Queenstown	Liverpool
June 1	10 0 „	Canadian	Montreal Ocean	ditto	Quebec		Wrecked; mails brought to Galway by Prince Albert.
„ 1	Noon	Saxonia	Hamburgh American	United States	New York		Southampton
„ 1	Noon	Etna	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
„ 5	4 10 p.m.	Persia	Cunard	British	ditto	Queenstown	Liverpool
„ 8	10 30 a.m.	North Britain	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 8	Noon	New York	North German Lloyd	United States	New York		Southampton
„ 8	Noon	Edinburgh	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
„ 12	10 45 a.m.	America	Cunard	British	Boston	Halifax and Queenstown	Liverpool
„ 15	10 0 „	Hibernian	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 15	Noon	Borussia	Hamburgh American	United States	New York		Southampton
„ 15	Noon	City of Washington.	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
„ 19	3 0 p.m.	Australasian	Cunard	British	ditto	Queenstown	Liverpool
„ 22	10 0 a.m.	Bohemian	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 22	Noon	Fulton	New York and Havre	United States	New York		Southampton
„ 26	11 45 a.m.	Arabia	Cunard	British	Boston	Halifax and Queenstown	Liverpool
„ 29	10 0 „	Jura	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 29	Noon	Bavaria	Hamburgh American	United States	New York		Southampton
„ 29	Noon	City of Baltimore	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
July 3	0 22 p.m.	Africa	Cunard	British	ditto	Queenstown	Liverpool
„ 6	9 10 a.m.	Anglo Saxon	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 6	Noon	Bremen	North German Lloyd	United States	New York		Southampton
„ 6	Noon	Kangaroo	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
„ 10	10 7 a.m.	Europa	Cunard	British	Boston	Halifax and Queenstown	Liverpool
„ 13	10 30 „	Nova Scotian	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 13	Noon	Hammonia	Hamburgh American	United States	New York		Southampton
„ 13	Noon	Etna	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
„ 17	2 10 p.m.	Persia	Cunard	British	ditto	Queenstown	Liverpool
„ 20	1 0 „	North Britain	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 20	Noon	Arago	New York and Havre	United States	New York		Southampton
„ 24	10 10 a.m.	Canada	Cunard	British	Boston	Halifax and Queenstown	Liverpool
„ 27	9 30 „	Hibernian	Montreal Ocean	ditto	Quebec	Riviere du Loup and Londonderry.	ditto
„ 27	Noon	Saxonia	Hamburgh American	United States	New York		Southampton
„ 27	Noon	City of Washington.	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
„ 31	Noon	Asia	Cunard	British	ditto	Queenstown	Liverpool
August 3	10 0 a.m.	North American	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 3	Noon	New York	North German Lloyd	United States	New York		Southampton
„ 3	Noon	Glasgow	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
„ 7	10 5 a.m.	Arabia	Cunard	British	Boston	Halifax and Queenstown	Liverpool
„ 10	9 30 „	Anglo Saxon	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 10	Noon	Bouissia	Hamburgh American	United States	New York		Southampton
„ 10	Noon	City of Baltimore	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
„ 14	Noon	Africa	Cunard	British	ditto	Queenstown	Liverpool
„ 17	10 0 a.m.	Norwegian	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 17	Noon	Fulton	New York and Havre	United States	New York		Southampton
„ 21	10 15 a.m.	Europa	Cunard	British	Boston	Halifax and Queenstown	Liverpool
„ 24	11 30 „	Nova Scotian	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 24	Noon	Bavaria	Hamburgh American	United States	New York		Southampton
„ 24	Noon	Edinburgh	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
„ 28	11 48 a.m.	Persia	Cunard	British	ditto	Queenstown	Liverpool
„ 31	9 30 „	Bohemian	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 31	Noon	Bremen	North German Lloyd	United States	New York		Southampton
„ 31	Noon	City of Washington.	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
Sept 4	10 5 a.m.	Canada	Cunard	British	Boston	Halifax and Queenstown	Liverpool
„ 7	9 45 „	Hibernian	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 7	Noon	Teutonia	Hamburgh American	United States	New York		Southampton
„ 7	Noon	Glasgow	Liverpool, New York, and Philadelphia.	ditto	ditto		Queenstown
„ 11	Noon	Asia	Cunard	British	ditto	Queenstown	Liverpool
„ 14	9 30 a.m.	North American	Montreal Ocean	ditto	Quebec	Londonderry	ditto
„ 14	Noon	Arago	New York and Havre	United States	New York		Southampton

- - - - - - - - - HOMEWARD MAILS—*continued.*

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from New York.		11. Mails arrived in London.		12. Time occupied in Transmission of Mails.	13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.		
1861:		D. H.	1861:		1861:		D. H.	
June - 2	11 30 p.m. -	15 13¾	- -	No return - -	June - 3	5 25 a.m. -	- -	Subsidized.
„ - 3	5 0 a.m. -	11 13½	May - 22	3 35 p.m. -	„ - 3	7 15 „ -	11 15¾	- ditto.
„ - 6	8 30 „ -	- -	- -	No return - -	„ - 6	7 38 „ -	- -	- ditto.
„ - 7	10 0 p.m. -	13 10	May - 25	Noon - -	„ - 8	2 40 „ -	13 14¾	For postage.
„ - 9	11 40 a.m. -	11 0½	„ - 28	- - -	„ - 10	5 15 „ -	- -	Subsidized.
- -	- - -	- -	- -	No return - -	„ - 24	6 50 „ -	- -	- ditto.
June - 12	8 40 a.m. -	10 20¾	June - 1	Noon - -	„ - 12	11 45 „ -	10 23¾	For postage.
„ - 11	9 15 „ -	9 21¼	„ - 1	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 16	7 20 „ -	10 15¼	„ - 5	4 10 p.m. -	June - 17	5 15 a.m. -	11 13	Subsidized.
„ - 22	9 20 „ -	13 22¾	- -	No return - -	„ - 22	7 40 p.m. -	- -	- ditto.
„ - 22	11 30 „ -	13 23½	June - 8	Noon - -	„ - 22	2 30 „ -	14 2½	For postage.
„ - 20	10 30 p.m. -	12 10½	„ - 8	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 24	10 0 a.m. -	11 23¼	„ - 11	- - -	June - 24	6 50 p.m. -	- -	Subsidized.
„ - 26	1 30 p.m. -	11 3½	- -	No return - -	„ - 26	6 48 „ -	- -	- ditto.
„ - 27	11 45 a.m. -	11 23¾	June - 15	Noon - -	„ - 27	3 40 „ -	12 3¾	For postage.
„ - 26	10 30 „ -	10 22½	„ - 15	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 29	1 40 p.m. -	9 22¾	„ - 19	3 0 p.m. -	June - 29	6 50 p.m. -	10 3¾	Subsidized.
July - 4	5 30 a.m. -	11 19½	- -	No return - -	July - 4	7 15 a.m. -	- -	- ditto.
„ - 3	8 40 p.m. -	11 8¾	June - 22	Noon - -	„ - 3	11 45 p.m. -	11 11¾	For postage.
„ - 7	9 0 a.m. -	10 21¼	„ - 25	- - -	„ - 8	5 15 a.m. -	- -	Subsidized.
„ - 10	10 20 „ -	11 0¼	- -	No return - -	„ - 10	10 0 p.m. -	- -	- ditto.
„ - 12	7 30 „ -	12 19½	June - 29	Noon - -	„ - 12	11 40 a.m. -	12 23¾	For postage.
„ - 11	Midnight - -	12 12	„ - 29	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 15	3 40 a.m. -	11 15¼	July - 3	0 22 p.m. -	July - 15	7 15 a.m. -	11 19	Subsidized.
„ - 17	5 0 p.m. -	11 7¾	- -	No return - -	„ - 18	5 15 „ -	- -	- ditto.
„ - 18	7 0 a.m. -	11 19	July - 6	Noon - -	„ - 18	11 40 „ -	11 23¾	For postage.
„ - 17	3 0 p.m. -	11 3	„ - 6	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 22	Midnight - -	12 14	„ - 9	- - -	July - 23	7 47 a.m. -	- -	Subsidized.
„ - 25	11 0 a.m. -	12 0½	- -	No return - -	„ - 25	10 0 p.m. -	- -	- ditto.
„ - 26	7 45 „ -	12 19¾	July - 13	Noon - -	„ - 26	11 28 a.m. -	12 23½	For postage.
„ - 24	10 0 „ -	10 22	„ - 13	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 27	1 8 p.m. -	9 23	„ - 17	2 10 p.m. -	July - 27	6 50 p.m. „	10 4¾	Subsidized.
Aug. - 1	7 0 a.m. -	11 18	- -	No return - -	Aug. - 1	7 40 a.m. -	- -	- ditto.
„ - 2	1 15 p.m. -	13 1¼	July - 20	Noon - -	„ - 2	4 22 p.m. -	13 4¼	For postage.
„ - 4	6 36 „ -	11 8½	„ - 23	- - -	„ - 5	5 18 a.m. -	- -	Subsidized.
„ - 8	9 15 a.m. -	11 23¾	- -	No return - -	„ - 8	7 39 „ -	- -	- ditto.
„ - 8	6 55 p.m. -	12 7	July - 27	Noon - -	„ - 8	11 20 p.m. -	12 11¼	For postage.
„ - 7	4 30 a.m. -	10 16½	„ - 27	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 12	3 45 „ -	11 15¾	„ - 31	Noon - -	Aug. - 12	5 15 a.m. -	11 17¼	Subsidized.
„ - 14	7 0 „ -	10 21	- -	No return - -	„ - 14	6 51 p.m. -	- -	- ditto.
„ - 16	4 0 „ -	12 16	Aug. - 3	Noon - -	„ - 16	10 15 a.m. -	12 22¼	For postage.
„ - 15	10 30 „ -	11 22½	„ - 3	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 17	9 10 p.m. -	10 11	„ - 6	- - -	Aug. - 18	7 40 a.m. -	- -	Subsidized.
„ - 20	1 5 „ -	10 3½	- -	No return - -	„ - 21	7 18 „ -	- -	- ditto.
„ - 23	3 0 a.m. -	12 15	Aug. - 10	Noon - -	„ - 23	6 40 „ -	12 18¾	For postage.
„ - 21	5 0 „ -	10 17	„ - 10	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 25	2 5 p.m. -	11 2	„ - 14	Noon - -	Aug. - 26	5 20 a.m. -	11 17¼	Subsidized.
„ - 27	3 25 „ -	10 5½	- -	No return - -	„ - 27	6 51 p.m. -	- -	- ditto.
„ - 28	11 0 „ -	11 11	Aug. - 17	Noon - -	„ - 29	2 15 a.m. -	11 14¼	For postage.
Sept. - 1	11 20 a.m. -	11 1	„ - 20	- - -	Sept. - 2	5 25 „ -	- -	Subsidized.
„ - 5	Noon - -	12 0½	- -	No return - -	„ - 5	6 52 p.m. -	- -	- ditto.
„ - 6	10 30 a.m. -	12 22½	Aug. - 24	Noon - -	„ - 6	1 35 „ -	13 1½	For postage.
„ - 6	9 30 „ -	12 21½	„ - 24	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 8	4 45 a.m. -	10 17	„ - 28	11 48 a.m. -	Sept. - 8	7 10 a.m. -	10 19¼	Subsidized.
„ - 10	6 45 p.m. -	10 9¼	- -	No return - -	„ - 11	7 15 „ -	- -	- ditto.
„ - 12	4 0 a.m. -	11 16	Aug. - 31	Noon - -	„ - 12	10 15 „ -	11 22¼	For postage.
„ - 11	6 30 p.m. -	11 6½	„ - 31	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 15	8 25 a.m. -	10 22¼	Sept. - 3	- - -	Sept. - 15	7 30 a.m. -	- -	Subsidized.
„ - 17	9 30 „ -	9 23¾	- -	No return - -	„ - 17	6 55 p.m. -	- -	- ditto.
„ - 21	8 45 „ -	13 20¾	Sept. - 7	Noon - -	„ - 21	0 15 „ -	14 0¼	For postage.
„ - 20	7 30 „ -	12 19½	„ - 7	Noon - -	Brought mails for Ireland only		- -	- ditto.
„ - 22	9 55 p.m. -	11 10	„ - 11	Noon - -	Sept. - 23	7 30 a.m. -	11 19½	Subsidized.
„ - 24	0 10 „ -	10 2¾	- -	No return - -	„ - 24	7 10 p.m. -	- -	- ditto.
„ - 27	4 0 a.m. -	12 16	Sept. - 14	Noon - -	„ - 27	10 20 a.m. -	12 22¼	For postage.

HOMEWARD MAILS—*continued.* - - - - - - - - -

1. Despatch of Packet. Day.	Hour.	2. NAME of PACKET.	3. To what Company Packet belonged.	4. Whether British or United States.	5. Port of Departure.	6. Ports of Call.	7. Port of Arrival.
1861:							
Sept. 18	10 0 a.m.	Arabia - -	Cunard - - -	British - -	Boston - -	Halifax and Queenstown	Liverpool - -
„ 21	10 0 „	North Briton -	Montreal Ocean -	ditto - -	Quebec - -	Londonderry - -	- ditto - -
„ 21	Noon -	Hammonia -	Hamburgh American	United States -	New York -	- - - - -	Southampton -
„ 21	Noon -	City of Manchester.	Liverpool, New York, and Philadelphia.	ditto - -	- ditto - -	- - - - -	Queenstown -
„ 25	11 7 a.m.	Africa - -	Cunard - - -	British - -	- ditto - -	Queenstown - -	Liverpool - -
„ 28	9 15 „	Anglo Saxon -	Montreal Ocean -	ditto - -	Quebec - -	Londonderry - -	- ditto - -
„ 28	Noon -	New York -	North German Lloyd	United States -	New York -	- - - - -	Southampton -
„ 28	Noon -	Kangaroo -	Liverpool, New York, and Philadelphia.	ditto - -	- ditto - -	- - - - -	Queenstown -
Oct. 2	10 15 a.m.	Europa - -	Cunard - - -	British - -	Boston - -	Halifax and Queenstown	Liverpool - -
„ 5	10 0 „	Jura - -	Montreal Ocean -	ditto - -	Quebec - -	Londonderry - -	- ditto - -
„ 5	Noon -	Saxonia - -	Hamburgh American	United States -	New York -	- - - - -	Southampton -
„ 5	Noon -	City of New York	Liverpool, New York, and Philadelphia.	ditto - -	- ditto - -	- - - - -	Queenstown -
„ 9	11 0 a.m.	Persia - -	Cunard - - -	British - -	- ditto - -	Queenstown - -	Liverpool - -
„ 12	10 20 „	Bohemian -	Montreal Ocean -	ditto - -	Quebec - -	Londonderry - -	- ditto - -
„ 12	Noon -	Fulton - -	New York and Havre	United States -	New York -	- - - - -	Southampton -
„ 16	9 20 a.m.	Niagara - -	Cunard - - -	British - -	Boston - -	Halifax and Queenstown	Liverpool - -
„ 19	10 0 „	Norwegian -	Montreal Ocean -	ditto - -	Quebec - -	Londonderry - -	- ditto - -
„ 19	Noon -	Bavaria - -	Hamburgh American	United States -	New York -	- - - - -	Southampton -
„ 19	Noon -	City of Washington.	Liverpool, New York, and Philadelphia.	ditto - -	- ditto - -	- - - - -	Queenstown -
„ 23	10 50 a.m.	Asia - -	Cunard - - -	British - -	- ditto - -	Queenstown - -	Liverpool - -
„ 26	9 40 „	North American	Montreal Ocean -	ditto - -	Quebec - -	Londonderry - -	- ditto - -
„ 26	Noon -	Bremen - -	North German Lloyd	United States -	New York -	- - - - -	Southampton -
„ 26	Noon -	Etna - -	Liverpool, New York, and Philadelphia.	ditto - -	- ditto - -	- - - - -	Queenstown -
„ 30	8 45 a.m.	Arabia - -	Cunard - - -	British - -	Boston - -	Halifax and Queenstown	Liverpool - -
Nov. 2	- -	North Briton -	Montreal Ocean -	ditto - -	Quebec - -	- - - - -	Wrecked; mails brought to Liverpool by Anglo-Saxon.
„ 2	Noon -	Teutonia - -	Hamburgh American	United States -	New York -	- - - - -	Southampton -
„ 2	Noon -	City of Baltimore.	Liverpool, New York, and Philadelphia.	ditto - -	- ditto - -	- - - - -	Queenstown -
„ 6	11 12 a.m.	Africa - -	Cunard - - -	British - -	- ditto - -	Queenstown - -	Liverpool - -
„ 9	10 0 „	Anglo-Saxon -	Montreal Ocean -	ditto - -	Quebec - -	Londonderry - -	- ditto - -
„ 9	Noon -	Arago - -	New York and Havre	United States -	New York -	- - - - -	Southampton -
„ 13	9 5 a.m.	Europa - -	Cunard - - -	British - -	Boston - -	Halifax and Queenstown	Liverpool - -
„ 16	10 0 „	Jura - -	Montreal Ocean -	ditto - -	Quebec - -	Londonderry - -	- ditto - -
„ 16	Noon -	Borussia - -	Hamburgh American	United States -	New York -	- - - - -	Southampton -
„ 16	Noon -	City of New York	Liverpool, New York, and Philadelphia.	ditto - -	- ditto - -	- - - - -	Queenstown -
„ 20	9 50 a.m.	Persia - -	Cunard - - -	British - -	- ditto - -	Queenstown - -	Liverpool - -
„ 23	10 0 „	Nova Scotian -	Montreal Ocean -	ditto - -	Quebec - -	Londonderry - -	- ditto - -
„ 23	Noon -	Edinburgh -	Liverpool, New York, and Philadelphia.	United States -	New York -	Queenstown - -	- ditto - -
„ 27	2 30 p.m.	Niagara - -	Cunard - - -	British - -	Boston - -	Halifax and Queenstown	- ditto - -
„ 30	3 0 „	Norwegian -	Montreal Ocean -	ditto - -	Portland - -	Londonderry - -	- ditto - -
„ 30	Noon -	Saxonia - -	Hamburgh American	United States -	New York -	- - - - -	Southampton -
„ 30	Noon -	Etna - -	Liverpool, New York, and Philadelphia.	ditto - -	- ditto - -	- - - - -	Queenstown -
Dec. 4	9 50 a.m.	Asia - -	Cunard - - -	British - -	- ditto - -	Queenstown - -	Liverpool - -
„ 7	3 30 p.m.	Bohemian -	Montreal Ocean -	ditto - -	Portland - -	Londonderry - -	- ditto - -
„ 7	Noon -	City of Manchester.	Liverpool, New York, and Philadelphia.	United States -	New York -	Queenstown - -	- ditto - -
„ 11	2 0 p.m.	Canada - -	Cunard - - -	British - -	Boston - -	Halifax and Queenstown	- ditto - -
„ 14	4 0 „	North American	Montreal Ocean -	ditto - -	Portland - -	Londonderry - -	- ditto - -
„ 14	Noon -	Bavaria - -	Hamburgh American	United States -	New York -	- - - - -	Southampton -
„ 14	Noon -	City of Baltimore.	Liverpool, New York, and Philadelphia.	ditto - -	- ditto - -	- - - - -	Queenstown -
„ 20	6 45 a.m.	Africa - -	Cunard - - -	British - -	- ditto - -	Queenstown - -	Liverpool - -
„ 21	4 30 p.m.	Anglo-Saxon -	Montreal Ocean -	ditto - -	Portland - -	Londonderry - -	- ditto - -
„ 21	Noon -	Hansa - -	North German Lloyd	United States -	New York -	- - - - -	Southampton -
„ 21	Noon -	Glasgow - -	Liverpool, New York, and Philadelphia.	ditto - -	- ditto - -	- - - - -	Queenstown -
„ 25	0 40 p.m.	Europa - -	Cunard - - -	British - -	Boston - -	Halifax and Queenstown	Liverpool - -
„ 28	9 30 „	Jura - -	Montreal Ocean -	ditto - -	Portland - -	Londonderry - -	- ditto - -
„ 28	Noon -	Teutonia - -	Hamburgh American	United States -	New York -	- - - - -	Southampton -
„ 28	Noon -	City of Washington.	Liverpool, New York, and Philadelphia.	ditto - -	- ditto - -	- - - - -	Queenstown -

In the case of all Mail Packets sailing from New York, the day and hour given in Column 10 are those on which the

General Post Office,
April 1862.

- - - - - - - - - - HOMEWARD MAILS—*continued.*

8. Date of Arrival of Packet.		9. Duration of Passage.	10. Mails despatched from New York.		11. Mails arrived in London.		12. Time occupied in Transmission of Mails.	13. Whether Packet Subsidized, or carrying Mails for Postage.
Day.	Hour.		Day.	Hour.	Day.	Hour.		
1861:		D. H.	1861:		1861:		D. H.	
Sept. - 29	10 35 a.m. -	11 0½	Sept. - 17	- - -	Sept. - 30	5 34 a.m. -	- -	Subsidized.
Oct. - 2	8 45 „ -	10 22¾	- - No return - -		Oct. - 2	6 55 p.m. -	- -	- ditto.
„ - 3	1 0 p.m. -	12 1	Sept. - 21	Noon - -	„ - 3	4 45 „ -	12 4¾	For postage.
„ - 5	1 45 „ -	14 1¾	„ - 21	Noon - -	- - Brought mails for Ireland only - -			- ditto.
„ - 6	10 30 „ -	11 11½	„ - 25	11 7 a.m. -	Oct. - 7	5 20 a.m. -	11 18½	Subsidized.
„ - 8	2 30 „ -	10 5¼	- - No return - -		„ - 8	6 55 p.m. -	- -	- ditto.
„ - 10	6 0 „ -	12 6	Sept. - 28	Noon - -	„ - 10	11 0 „ -	12 11	For postage.
„ - 11	9 15 a.m. -	12 21¼	„ - 28	Noon - -	- - Brought mails for Ireland only - -			- ditto.
„ - 13	11 25 „ -	11 1¼	Oct. - 1	- - -	Oct. - 14	5 27 a.m. -	- -	Subsidized.
„ - 16	0 30 „ -	10 14½	- - No return - -		„ - 16	6 55 p.m. -	- -	- ditto.
„ - 17	7 30 p.m. -	12 7½	Oct. - 5	Noon - -	„ - 17	11 15 „ -	12 11¼	For postage.
„ - 15	11 30 a.m. -	9 23½	„ - 5	Noon - -	- - Brought mails for Ireland only - -			- ditto.
„ - 20	10 5 „ -	10 23	„ - 9	11 0 a.m. -	Oct. - 21	5 25 a.m. -	11 18½	Subsidized.
„ - 24	0 30 „ -	11 14¼	- - No return - -		„ - 24	11 28 „ -	- -	- ditto.
„ - 24	5 0 p.m. -	12 5	Oct. - 12	Noon - -	„ - 24	10 40 p.m. -	12 10¾	For postage.
„ - 28	2 52 „ -	12 5½	„ - 14	- - -	„ - 28	7 2 „ -	- -	Subsidized.
„ - 29	4 0 „ -	10 6	- - No return - -		„ - 30	5 25 a.m. -	- -	- ditto.
Nov. - 1	9 0 „ -	13 9	Oct. - 19	Noon - -	Nov. - 2	1 30 „ -	13 13½	For postage.
Oct. - 30	0 45 „ -	11 0¾	„ - 19	Noon - -	- - Brought mails for Ireland only - -			- ditto.
Nov. - 3	10 0 „ -	11 11¼	„ - 23	10 50 a.m. -	Nov. - 4	7 28 a.m. -	11 20¾	Subsidized.
„ - 6	1 0 „ -	11 3¼	- - No return - -		„ - 6	6 52 p.m. -	- -	- ditto.
„ - 9	5 0 a.m. -	13 17	Oct. - 26	Noon - -	„ - 9	10 30 a.m. -	13 22½	For postage.
„ - 6	8 0 „ -	10 20	„ - 26	Noon - -	- - Brought mails for Ireland only - -			- ditto.
„ - 10	8 0 „ -	10 23¼	„ - 29	- - -	Nov. - 10	8 0 a.m. -	- -	Subsidized.
- -	- - -	- -	- - No return - -		„ - 23	10 5 p.m. -	- -	- ditto.
Nov. - 19	2 0 a.m. -	16 14	Nov. - 2	Noon - -	„ - 19	5 35 a.m. -	16 17½	For postage.
„ - 15	0 5 p.m. -	13 0	„ - 2	Noon - -	- - Brought mails for Ireland only - -			- ditto.
„ - 18	10 45 „ -	12 11½	„ - 6	11 12 a.m. -	Nov. - 19	7 40 a.m. -	12 20½	Subsidized.
„ - 23	Noon -	14 2	- - No return - -		„ - 23	6 53 p.m. -	- -	- ditto.
„ - 23	9 45 a.m. -	13 21¾	Nov. - 9	Noon - -	„ - 23	1 10 „ -	14 1¼	For postage.
„ - 24	11 55 „ -	11 2¾	„ - 12	- - -	„ - 25	5 15 a.m. -	- -	Subsidized.
„ - 29	8 0 „ -	12 22	- - No return - -		„ - 29	6 57 p.m. -	- -	- ditto.
Dec. - 1	1 0 „ -	14 13	Nov. - 16	Noon - -	Dec. - 1	5 15 a.m. -	14 17¼	For postage.
Nov. - 28	11 15 „ -	11 23¼	„ - 16	Noon - -	- - Brought mails for Ireland only - -			- ditto.
Dec. - 2	8 7 „ -	11 22¼	„ - 20	9 50 a.m. -	Dec. - 2	7 0 p.m. -	12 9¼	Subsidized.
„ - 7	0 30 p.m. -	14 2¼	- - No return - -		„ - 7	7 15 a.m. -	- -	- ditto.
„ - 7	6 50 a.m. -	13 18¾	Nov. - 23	Noon - -	„ - 7	3 25 p.m. -	14 3¼	For postage.
„ - 9	8 10 „ -	11 17¾	„ - 26	- - -	„ - 9	7 15 a.m. -	- -	Subsidized.
„ - 11	10 30 „ -	10 19½	- - No return - -		„ - 11	6 51 p.m. -	- -	- ditto.
„ - 12	8 45 „ -	11 20¾	Nov. - 30	Noon - -	„ - 12	11 58 a.m. -	12 0	For postage.
„ - 10	10 0 p.m. -	10 10	„ - 30	Noon - -	- - Brought mails for Ireland only - -			- ditto.
„ - 16	2 40 a.m. -	11 16¾	Dec. - 4	9 50 a.m. -	Dec. - 16	7 15 a.m. -	11 21½	Subsidized.
„ - 18	1 10 p.m. -	10 21¾	- - No return - -		„ - 18	6 50 p.m. -	- -	- ditto.
„ - 26	8 50 a.m. -	18 20¾	Dec. - 7	Noon - -	„ - 26	5 45 „ -	19 5¾	For postage.
„ - 23	0 23 „ -	11 10½	„ - 10	- - -	„ - 23	7 30 a.m. -	- -	Subsidized.
„ - 26	2 15 p.m. -	11 22¼	- - No return - -		„ - 26	6 42 p.m. -	- -	- ditto.
„ - 29	10 0 a.m. -	14 22	Dec. - 14	Noon - -	„ - 29	1 0 „ -	15 1	For postage.
„ - 25	3 0 p.m. -	11 3	„ - 14	Noon - -	- - Brought mails for Ireland only - -			- ditto.
1862:					1862:			
Jan. - 2	0 10 a.m. -	12 17½	„ - 20	6 45 a.m. -	Jan. - 1	9 15 p.m. -	12 14½	Subsidized.
„ - 4	0 30 „ -	13 8	- - No return - -		„ - 4	7 15 a.m. -	- -	- ditto.
„ - 3	10 0 „ -	12 22	Dec. - 21	Noon - -	„ - 3	1 35 p.m. -	13 1½	For postage.
„ - 3	7 35 p.m. -	13 7½	„ - 21	Noon - -	- - Brought mails for Ireland only - -			- ditto.
„ - 7	4 47 „ -	13 4	„ - 24	- - -	Jan. - 7	1 34 p.m. -	- -	Subsidized.
„ - 9	6 30 „ -	11 21	- - No return - -		„ - 10	5 10 a.m. -	- -	- ditto.
„ - 12	9 30 a.m. -	14 21½	Dec. - 28	Noon - -	„ - 12	1 20 p.m. -	15 1¼	For postage.
„ - 8	1 30 p.m. -	11 1½	„ - 28	Noon - -	- - Brought mails for Ireland only - -			- ditto.

Packet sailed from New York. In no other case can the hour at which the Mails were despatched from New York be given.

William James Page,
Principal Clerk for Foreign and Colonial Business.

ROWLAND HILL,
Secretary.

TRANSATLANTIC STEAMERS.

RETURN of all TRANSATLANTIC STEAMERS which, during the Year 1861, left any Port in the UNITED KINGDOM for any Port in NORTH AMERICA, arranged in Chronological Order, according to the Dates of their Departures respectively; and of all TRANSATLANTIC STEAMERS which have left any Port in NORTH AMERICA for any Port in the UNITED KINGDOM, during the same Year; also, a RETURN of the Duration of Passage of each STEAMER between its Ports of Departure and Arrival; &c.

(*Mr. Scully.*)

Ordered, by The House of Commons, *to be Printed*,
20 *May* 1862.

257.

Under 8 *oz.*

EMIGRATION (NORTH AMERICAN COLONIES).

RETURN to an Address of the Honourable The House of Commons, dated 23 June 1862;—*for*,

"COPIES or EXTRACTS of DESPATCHES relative to EMIGRATION to the NORTH AMERICAN COLONIES (in continuation of Parliamentary Paper, No. 186, of Session 1861)."

Colonial Office, 24 June 1862.

C. FORTESCUE.

(*Mr. Chichester Fortescue.*)

Ordered, by The House of Commons, *to be Printed*, 25 *June* 1862.

SCHEDULE.

CANADA.

No. in Series.	From whom.	Number and Date.	SUBJECT.	Page.
1	Governor General Viscount Monck to the Duke of Newcastle, K.G.	28 February 1862 (No. 38.)	Annual Report of the Chief Emigration Agent for the Year 1861, enclosed with the usual Returns.	3

NEW BRUNSWICK.

2	Lieutenant Governor the Hon. J. H. T. Manners Sutton to the Duke of Newcastle, K.G.	27 May 1861 (No. 21.)	Arrival of the ship "Argentinus" reported, and the usual Ship Returns enclosed.	20
3	Lieutenant Governor the Hon. Arthur H. Gordon, to the Duke of Newcastle, K.G.	29 November 1861 (No. 8.)	Arrival of the ship "Elizabeth" reported, and the Ship Returns enclosed.	21

COPIES or EXTRACTS of DESPATCHES relative to EMIGRATION to the NORTH AMERICAN COLONIES (in continuation of Parliamentary Paper, No. 186, of Session 1861).

CANADA.

— No. 1. —

(No. 38.)

No. 1.
Viscount Monck to His Grace the Duke of Newcastle, K.G.
28 Feb. 1862.

COPY of a DESPATCH from Viscount *Monck* to His Grace the Duke of *Newcastle*, K.G.

My Lord Duke, Quebec, 28 February 1862.

I HAVE the honour to enclose the Chief Emigrant Agent's Annual Report on the Immigration to Canada, in the year 1861.

I have, &c.
(signed) *Monck*.

Enclosure in No. 1.

ANNUAL REPORT of the CHIEF EMIGRATION AGENT, for 1861.

To His Excellency Viscount *Monck*, Governor General of Canada.

Office of Her Majesty's Chief Agent
for the Superintendence of Emigration to Canada,
Quebec, 12 February 1862.

My Lord,

I HAVE the honour to submit to your Excellency, for the information of Her Majesty's Government, my Annual Report on the Emigration to this Province, during the year 1861, accompanied by the usual statistical tables.

On a reference to Table No. 1 in the Appendix, which furnishes the return of the season's emigration, it will be seen, that the number of persons landed at this port, during the season, was 19,923, of whom 1,664 were cabin, and 18,259 steerage passengers; showing an increase, when compared with that of 1860, of 9,773 persons. They were classed as follows:—

	CABIN.	STEERAGE.
Male Adults - - - - - - -	964	7,440
Female ditto - - - - - - -	476	5,350
Children—Males - - - - - -	96	2,293
„ Females - - - - - -	93	2,263
„ Infants - - - - - -	35	913
	1,664	18,259

9,305 of whom embarked from ports in the United Kingdom, and 10,618 from the Continent of Europe.

On further reference to this Table it will be seen, that the number of vessels engaged in the conveyance of these emigrants, was 147; 40 of which were steamers, and 107 sailing vessels. The former had an average passage of 12½ days

days from Liverpool, and the latter of 38¾ days from ports in the United Kingdom, and 50 from the Continent.

Distinguishing the cabin passengers from the steerage, the following is the comparison :—

	No. of Vessels.	Cabin Passengers.	Steerage.	Total.
Liverpool and Londonderry Steamers -	31	1,492	5,006	6,498
Glasgow ditto - - - - - -	9	96	941	1,037
United Kingdom Sailing Ships - -	58	29	1,741	1,770
Continent of Europe - - - -	49	47	10,571	10,618
	147	1,664	18,259	19,923

Of the whole number from the United Kingdom (9,305), 7,535 came out by steamers, and embarked at the following ports :—

	Cabin.	Steerage.	Total.
Liverpool - - - - - - -	1,316	2,562	3,878
Londonderry - - - - - -	176	2,444	2,620
Glasgow - - - - - - -	96	941	1,037
	1,588	5,947	7,535

From which, it will appear, that nearly one-half of the steerage passengers, brought out by the Montreal Ocean Steamship Company's vessels, embarked at Londonderry. Of the 58 sailing vessels from the United Kingdom but eight came within the regulations of the Passenger Act, four of which sailed from English, three from Irish, and one from Scottish ports, bringing out 1,173 passengers ; and 50 vessels, having on board 597 passengers, were exempt from the operations of the law.

The foreign emigration was conveyed in 49 ships, nine of which sailed from German ports, and 40 from Norway.

The nationalities of the emigrants, brought out from the several countries, are as follows :—

	English.	Irish.	Scotch.	Colonial.	Foreign.	Total.
Ocean Mail Steamers - - -	2,864	2,064	1,048	346	176	6,498
Anchor Line (Glasgow) - - -	75	142	815	4	1	1,037
Sailing Ships—England - -	635	561	77	5	4	1,282
Ditto - Ireland - - -	- -	413	- -	- -	- -	413
Ditto - Scotland - -	- -	- -	75	- -	- -	75
Ditto - Germany - -	- -	- -	- -	- -	1,951	1,951
Ditto - Norway - - -	- -	- -	- -	- -	8,667	8,667
	3,574	3,180	2,015	355	10,799	19,923

The emigration from the United Kingdom has been very healthy, but four deaths having occurred during the passage : one female adult and three children, two of whom were infants.

The mortality among the foreign emigrants has been much greater, as out of 2,004 Germans who embarked, 39 deaths occurred during the passage, and 14 in the Quarantine Hospital. Total 53, or equal to 2¼ per cent.

Among 8,853 persons embarked from Norway, 175 deaths occurred at sea, and 11 in hospital. Total 186, or equal to a little over two per cent. ; and from all the information I have been able to obtain, it would appear, that the diseases which caused this mortality (small pox and measles), prevailed amongst the emigrants previous to embarkation. The emigrant ships from foreign ports are

are not subject to medical inspection, as is the case with vessels from the United Kingdom, otherwise much of the mortality referred to might have been no doubt prevented, and a vast amount of suffering, as well as the expense, which the medical care and treatment of these emigrants entailed upon the province, would have been avoided. It may not be considered unreasonable, therefore, that the Legislature should be called upon to amend the law, and protect the country, from the introduction of disease, by making the master of the ship responsible for the consequences. I have reported the over-crowded state in which many of the Norwegian ships arrived, in direct contravention to the law, and also the mortality which took place, to the Norwegian Consul at this port, and requested him to bring the facts under the notice of his government.

The following is a comparative statement of the arrivals from Europe in 1860 and 1861 :—

	1860.		1861.		INCREASE.
	CABIN.	STEERAGE.	CABIN.	STEERAGE.	
From England - - -	1,382	5,099	1,511	6,269	1,170
„ Ireland - - -	1	375	1	412	37
„ Scotland - - -	128	851	105	1,007	256
„ Germany - - -	- -	533	- -	1,951	1,318
„ Norway - - -	40	1,741	47	8,620	6,879
	1,551	8,599	1,664	18,259	9,660
GRAND TOTAL - - -	10,150		19,923		

Showing an increase in the emigration of 1861 of 113 in the number of cabin, and of 9,660 in the number of steerage passengers.

Distinguishing the origin or nationality of the emigrants of the two seasons, they will appear as follows :—

	1860.	1861.
English - - - - - - - -	2,491	3,574
Irish - - - - - - - -	2,831	3,180
Scotch - - - - - - - -	1,850	2,015
Germans - - - - - - - -	725	2,040
Norwegians - - - - - - - -	1,809	8,668
Danes - - - - - - - -	74	54
French - - - - - - - -	- -	10
Americans - - - - - - - -	4	27
Colonists - - - - - - - -	366	355
TOTAL - - -	10,150	19,923

The increase appears chiefly in the foreign emigrants, which amounts to 8,154, or equal to over 360 per cent. Those from the United Kingdom number 1,597, or equal to 21·54 per cent.

Of the emigrants from the United Kingdom, a large proportion were persons possessing means, who came out with the intention of occupying the free grant lots offered by the Government; and I find from the returns received from the resident agents, that 114 families have taken up free grant lots; others have either purchased improved farms or Crown lands, and it is estimated that four-fifths have remained in Canada.

Of the Germans over one-half settled chiefly in the Ottawa country.

Of the Norwegians the proportion is much smaller; out of the whole number, 8,722, about 800 have settled within the Province, about 400 of whom have been

been located at Gaspé; 250 have gone to the Ottawa district, and the rest to the Eastern townships.

Table No. 2 presents the usual comparison of the number of passengers from each port and country during the season of 1860 and 1861, from which it will be seen that the emigration from England is confined to the ports of Liverpool; and Plymouth, from Ireland to New Ross and Limerick; and from Scotland to Glasgow.

The German emigration is confined to the ports of Hamburgh and Bremen, while, from Norway, it is much more general, and distributed among 11 different ports.

Table No. 3 furnishes a return of the adult steerage male emigration, distinguishing the trades and callings.

The number embarked was 7,464, who were classed as follows:—

	TOTAL.	BRITISH.	FOREIGN.
Farmers - - - -	3,865	993	2,872
Labourers - - - -	2,227	1,737	496
Mechanics - - - -	846	651	189
Professional men - - -	39	35	4
Servants (male) - - -	31	30	1
Clerks and traders - -	300	300	—
Miscellaneous and unenumerated.	156	94	62
TOTAL - - -	7,464	3,840	3,624

The number of persons who were aided in their emigration during the past season, was 210, viz., 92 males, 76 females, and 42 children; 167 were from England; 32 females from Ireland; and two families (seven persons) from Scotland.

Those from England consisted of 66 boys and 24 girls from the reformatory and industrial schools in different parts of the country; and 16 families, and seven single men, number altogether 77 souls, were sent out from Bedworth, Warwickshire. They were provided with a free passage, and a small sum was allowed each family on landing here, to furnish them with necessaries until they could find employment. The first party, numbering 50 souls, were sent up the Ottawa, and the agent reported that they all found immediate employment on their arrival, having been engaged by the farmers. The second party, consisting of six families (27 souls) were forwarded to Western Canada, where they were equally successful in procuring immediate employment.

The 66 boys from the industrial schools, were all at once satisfactorily disposed of; a number in the Eastern Townships, others in Ottawa and Western Canada. As these lads had all been carefully trained and brought up to make themselves useful, their services were eagerly sought for by the farmers, many of them were engaged at wages from 12 *l.* 10 *s.* to 15 *l.* per annum, with board and washing; and I have from time to time received very favourable accounts from their employers.

The 24 females were sent out under the charge of a matron, who accompanied them up the country, and placed them all in situations, some in Montreal, others about Kingston and neighbourhood, and a few in Toronto.

Those from Ireland consisted of 32 females, 24 of whom were sent out by the Clonmel Union, and eight by private parties; they each received 1 *l.* sterling upon landing, and were all engaged as domestic servants in this city, a few hours after. Those from Scotland consisted of two families from the island of Harris, sent out by the proprietor of the estate, who provided them with every necessary for the voyage; and also made provision for establishing them in this country; they proceeded to Western Canada, where some of their countrymen were already settled; and it is the intention of this benevolent person to extend assistance to an additional number of industrious families this season.

Table No. 4 contains a comparative statement of the number of emigrants landed at this port from the year 1829 to the present time, a period of 33 years,

years, numbering in the aggregate 952,668 souls, yielding an average of 28,868 per annum.

The general treatment experienced by the emigrants during their passage to this port for the past season, has been satisfactory, and no complaints have been made which required the intervention of this office. The great bulk of the emigration from the United Kingdom having arrived by steamers, has very much reduced the causes of complaint, and I must at the same time bear witness to the general kindness which has of late years been shown by the masters of sailing vessels to the passengers entrusted to their care.

The following is an approximate statement of the arrivals, and distribution of emigrants within the Province during the past year :—

Landed at Quebec - - - - - - - - - - - - - -		19,923
Arrived in Canada *via* the Route of the United States :—		
By steamer to Portland, from January to April - - - -	330	
Ditto - - ditto - - November to 31 December - -	242	
By route of Suspension Bridge to Hamilton, as per Return of Mr. Gillespy, 11,132, of whom there remained in Canada -	3,263	
By steamer on Lake Ontario, from Rochester, Oswego, as per Return of Mr. Hawke - - - - - - - - - -	353	
By steamer from Oswego and Cape St. Vincent to Kingston, as per estimate of Mr. McPherson - - - - - - -	350	
By route of Lake Champlain, to Montreal, as per Return of Mr. Daly - - - - - - - - - - - - - -	126	
		4,664
		24,587
Of the arrivals at Quebec, there proceeded to the United States - - -		10,700
Remaining in Canada - -		13,887

Of this number there appear to have settled in—

Western Canada - - - - - - - - - -	9,500
Ottawa District - - - - - - - - - -	1,544
Eastern Canada - - - - - - - - - -	1,500
Gaspé - - - - - - - - - - - -	400
Unknown, but presumed to have remained in Canada -	943
	13,887

The amount of emigrant tax realised in the course of the past season was $19,112, of which sum $19,066 was collected at Quebec, and $46 at Montreal.

The expenditure incurred under the superintendence of this department during the year 1861, amounted to—

	$. c.
For the Quarantine Establishment at Grosse Isle - - -	4,700 25
For emigration in the direct relief and assistance to destitute emigrants - - - - - - - - - - - -	8,920 19
Agency charges, salaries, rents, office and travelling expenses	15,152 58
TOTAL - - $.	28,773 02

being an increase of $2,259. 19, when compared with that of 1860.

The several heads of expenditure on account of the Quarantine Establishment were as follows :—

	$. c.
Pay of wintering party - - - - - - - -	526 00
,, officer and staff - - - - - - - -	2,807 30
Hospital supplies - - - - - - - - -	540 67
Cartage - - - - - - - - - -	31 00
Printing, stationery, and sundries - - - - -	46 23
Steamboat service - - - - - - - - -	749 05
TOTAL - - $.	4,700 25

This shows a decrease, when compared with that of 1860, of $3,964. 23, which

which has chiefly been effected by the reduction of the staff and in the steamboat service.

The expenditure incurred on account of emigration, at the several agencies throughout the Province, for the year ending 31st December, has been as follows, viz.:—

		$ c.	$ c.
Quebec	Transport	5,610 02	
	Provisions	149 05	
	Medical Aid	58 —	
	Agency charges	1,746 54	
	Salaries	3,298 35	
			10,861 96
Montreal	Transport	748 42	
	Provisions	19 87	
	Agency charges	311 79	
	Salaries	1,545 —	
			2,625 08
Ottawa	Transport	696 42	
	Provisions	31 95	
	Medical aid	73 —	
	Agency charges	397 35	
	Salaries	1,471 66	
			2,670 38
Hamilton	Transport	572 05	
	Provisions	59 01	
	Agency charges	258 24	
	Salaries	1,415 40	
			2,304 70
Toronto and Kingston	Transport	814 28	
	Provisions	88 12	
	Agency charges	796 25	
	Salaries	3,912 —	
			5,610 65
	TOTAL $.		24,072 77

The number of persons assisted at the Quebec Agency was 2,091, equal to 1,621 adults, viz.:—Males, 575; females, 753; children under 12 years, 586; under 3 years, 177. Of this number there were—

English	228
Irish	470
Scotch	57
German	312
Norwegian	1,024
	2,091

They were forwarded to—

The Eastern Townships	105
Montreal	212½
Ottawa	287
Kingston and places east of Toronto	84
Toronto	366½
West of Toronto	134
Windsor	323
Western States	64
Gaspé Basin	45
	1,621 adults.

at an average cost of $3. 46 each adult.

At Montreal there were assisted 420 persons, equal to 326 adults, chiefly to Western Canada and the Ottawa district, at an average cost of $2. 35 each adult.

At

CANADA.

At Ottawa 582 souls were relieved, equal to 452 adults. They were all forwarded to places within the district, at an average cost of $1. 61.

At Toronto the number assisted was 989, at an average cost of 91¼ cents. each; male adults, 320; females, 410; and children, 259.

The number assisted at Hamilton was 410, equal to 321 adults, at an average cost of $1. 96. Of this number only 93 arrived by the route of the St. Lawrence, and 317 *viâ* the Suspension Bridge; thus showing that a large proportion those assisted reached the Province by way of the United States.

I here beg leave to submit a summary of the reports of the sub-agents as the results of the season's emigration to the sections of the Province under their charge, viz.—Mr. Hawke, the chief agent at Toronto; Mr. Gillespy, at Hamilton; Mr. Clemow, the late agent, and Mr. Wills, his successor, at Ottawa; Mr. Macpherson, at Kingston; and Mr. Daly, at Montreal. The reports, in full, together with a duplicate copy of this report, have been transmitted to the Honourable the Provincial Secretary.

Mr. Hawke states the number of European emigrants arrived at Toronto last year to have been 10,657, viz.—from England, 1,311; Ireland, 926; Scotland, 797; Germany, 1,386; Norway, 6,237. Of these, 7,866 went to the States, and the remaining 2,791 settled in Upper Canada, scattering themselves over the Counties of Waterloo, Perth, Huron, Bruce, Simcoe, and Victoria. In addition to this number, 353 came *viâ* Oswego and Rochester; so that the total number of emigrants arrived at Toronto last season may be computed at 11,010. Of the emigrants who remained in Canada, 989 proceeding to join their friends and relations, were forwarded to their destinations by steamboat and rail, the remainder were sent to places where immediate employment was found for them. No sickness prevailed, neither did any death occur amongst them. Doubtless a considerable amount of capital has been brought to Upper Canada by the emigrants of 1861, for they were of a much better class than usual; many of them possessed sufficient means to purchase small improved farms, and but few required assistance from the agency. The demand for common labourers and mechanics has increased considerably during the last quarter; so that the emigrants of the ensuing season will find no lack of employment.

Mr. Gillespy, the Hamilton agent, reports, that 13,994 emigrants arrived at Hamilton in 1861; 3,338 remained in Canada, and 10,656 departed to the States. The proportion of those settling in the Province is in a less ratio than during the previous year, and Mr. Gillespy thinks that this may be owing to the large number of emigrants arriving by way of the United States, and passing on, *viâ* the Great Western Railway, as the shortest route to the west. The number by this route for the year is 11,132, against 2,862 by way of the St. Lawrence; yet, notwithstanding that 2,762 Norwegians came by the latter route, and passed on to the Western States, the emigrants who settled in Canada in 1861 exceed the number of arrivals by way of the St. Lawrence; and that shows that the emigration to Canada from the States is gradually improving. Nearly all the emigrants were of the better class, as the small amount expended in relieving the indigent will prove. There has not been a single case of sickness among them, and there is reason to believe that the coming spring will witness a marked change for the better, in favour of emigration to this Province, and remove the disproportion between the number of emigrants destined for the United States and those settling in Canada.

From the reports of Mr. Clemow, the late Ottawa agent, and of Mr. Wills, his successor, the following facts are gathered:—Number of arrivals during the last year, 1,544—being 271 English, 47 Scotch, 171 Irish, 763 Germans and Poles, and 292 Norwegians. Of this number, 582, equal to 452 adults, were assisted, at an average cost of $1. 78 per adult. The arrivals of the year were almost entirely of the poorer classes, but, with rare exceptions, healthy in condition and industrious—stalwart, hard-working people. They required very little relief from the hospital establishment, and although smallpox broke out amongst the Polish emigrants in the village of Renfrew, immediate precautions were taken to prevent it from spreading, and the disease was soon checked. Many of the labouring classes had been induced to come to Canada, and been aided to do so by their friends and relations, already settled here. The demand for labour in the Ottawa district during the past season has been very great, and still continues unabated. Female servants are in universal request; mechanics do well in the rising towns and villages; in fact, an augmentation of

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assistance is annually required, and ample employment can be found for all comers.

Mr. Clemow offers several suggestions with reference to affording greater help and facilities to the emigrant desirous of settling upon the lands belonging to the Crown, which are worthy of consideration. One of his suggestions, respecting the employment of guides, was adopted by me in three instances during the past season, in locating a number of German and Norwegian families, and I found it answer admirably. If the system he proposes were well organized, and only had recourse to when the means and importance of the party of settlers warranted it, I think it would be attended with favourable results. I fully concur in Mr. Clemow's remarks with regard to requiring the Crown land agent to afford the emigrant better assistance than he is at present called upon to give him. In my opinion, each Crown land agent might be instructed to act as the colonization agent for his district; he should, if necessary, be directed to accompany the emigrant into the interior, and help him in the selection of his lot. Monthly reports should be sent in by him during the summer season, showing the progress in settlement, adaptability of his district for colonization, and the demand for, and quality of, labour that exists there. By pursuing this course, a mass of reliable and valuable information would be periodically placed at the disposal of this department, which would be of infinite service to the emigrant upon his arrival at Quebec. The additional trouble these duties would impose upon the Crown land agents could scarcely be expected to be borne by these gentlemen gratuitously, and I would propose, therefore, to compensate and encourage them, by allowing a certain sum of money for each family they locate during the year.

The Kingston agent, Mr. Macpherson, reports that 550 emigrants landed at Kingston since the 1st of January, nearly two-thirds of that number having come from the United States. Five families purchased 1,050 acres of land; besides this, 600 acres were sold to an emigrant of 1860. Mr. Macpherson estimates the capital brought in by emigrants, who consulted him, at $ 10,000. He found employment for 50 emigrants, and could have got work for 200 more; very few of the emigrants of the season applied to him for relief.

The Montreal agent, Mr. Daly, reports, that the gross number of emigrants relieved by him in 1861, was 420, equal to 326 adults forwarded as follows:— to Canada West 220, equal to 166 adults; to the Ottawa districts 114, equal to 91 adults; and to the eastern townships 78, equal to 64 adults; to Quebec 8, equal to 5 adults, at a cost altogether of $ 768. 29. The condition of the emigrants, as to health and appearance, fully compares with those of 1860; but out of the 420 he assisted, not less than 100 were absolute paupers. This is a state of things much to be deplored, and in order to prevent poor helpless emigrants of this description from being sent to Canada, Mr. Daly suggests that a law should be passed exacting from the owners of vessels conveying such passengers to our shores, a penalty or fine equal to the probable expenses likely to be incurred by the Government on their account. Mr. Daly further says: " I have been credibly informed by a gentleman. recently from Europe, and who had been travelling on the Continent, that he knew for a fact, that the class of paupers referred to are sent out to Canada by means subscribed in the cities or towns where they reside, and upon which they have claims." The demand this year for servants of all kinds far exceeded that of last year, and although places were found by the office for 265 male and female servants, yet before the close of navigation no less than 1,284 applications had been received. The mining districts, in the neighbourhood of Montreal, are already affording employment to many hundreds of men, and there is room for plenty more.

From the report of Mr. Sinn, the German interpreter, attached to this department, it appears that the German emigration is considerably in excess of last year's. 2,054 emigrants, chiefly natives of Prussia, landed here during the season, most of them having emigrated for the purpose of joining their relations already in the country; they were distributed as follows: — 127 stayed in Lower Canada; 755 went to the Ottawa district; 190 to Upper Canada, and 982 to the Western States. In August last, the " nucleus " of a new settlement was formed in the township of Bowman, between the Rivers Gatineau and Liévre; there are already from 200 to 300 persons there, and a large addition may be expected from this year's emigration. Many of the settlers are in easy circumstances, having $ 5,000. or $ 6,000 in money amongst them.

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them. In the vicinity more than 15,000 acres of very good land can be purchased 40 per cent. cheaper than the land on the Upper Canada side. The settlements in Alice, Wilberforce, Algona, and the other townships in the county of Renfrew, are making steady progress. Three congregations of the Canada Evangelical Lutheran Synod have been established. The larger commune, near Pembroke, has received a free grant of 15 acres as a site for a church, school, and burial-ground; the other two congregations have also made application to Government for a like grant.

Mr. Closter, the Norwegian interpreter, states the number of Norwegian emigrants who remained in the Province to have been about 700, 400 of whom settled in the district of Gaspé, besides a party of 15 Swedish emigrants, and the remainder settled in the Ottawa, and the eastern townships; a few mechanics found employment in Quebec and Montreal. The greater part of those settled in Gaspé have taken up Crown lands in the townships of Malbaie, Douglas, and Gaspé Bay South; many of them have purchased improved farms.

From the information which he has received from Norway, Mr. Closter is led to believe that a considerable body of Norwegian emigrants may be expected this season.

In alluding to the results of the past season's emigration, which, on the whole, have been satisfactory, I may remark, that nearly all the emigrants who arrived here readily found employment at fair wages; and in the early part of the season great inconvenience was felt, in many sections of the Province, from the scarcity of hands and the difficulty of obtaining labour. Female servants have been, and are still, very much sought after in all directions, and from the daily applications received at the inland agencies, I should think that several thousands of this class might have been provided for. The registered applications at this office alone were upwards of 600, very few of which could be supplied, and the agents at Montreal, and throughout Western Canada, experienced a similar difficulty. As a general rule, the year's emigrants have been of the better class, and chiefly in good bodily condition; most of them came out to join their friends and relations already settled in the country, many to purchase and settle upon land, consequently the labour market has not been afforded much relief; this, however, applies exclusively to the agricultural class.

Your Excellency will observe that the Norwegians, numerically, amounted to nearly one half of the whole steerage emigration for the year, and that the destination of the major part of them has been, as in former years, the Western States.

It would appear that a strong prejudice exists in Norway against this country, a prejudice which is perhaps nurtured and encouraged by her own countrymen, and other interested parties settled in the States of Illinois and Wisconsin. In these states the Norwegians form a very important and influential portion of the population; they have several newspapers published in their native language, having a wide circulation, in the parent land, which are engaged in advocating the eligibility of the Western States as a field for emigration; this, coupled with the effect produced by constant intercommunication between friends and relatives, cannot but exercise great sway over the mind of the intending emigrant. The means adopted by the Provincial Government, last season, in sending an accredited agent to Norway to disseminate practical and authentic information as to the advantages and capabilities which this colony offers as a home to the foreigner, may perhaps, in some measure, have served to counteract the influences I allude to. The result of the agent's mission, to a small extent, proved successful, for between 500 and 600 Norwegians emigrated last year with the intention of making Canada their home. A few of these were afterwards persuaded to proceed to the west, and a number, probably of about 200, who had no means of paying their inland passage to the States, have also been retained in the Province, and satisfactorily employed; but the great bulk of the well to do, and intelligent emigrants, migrated westward.

Very many of those who settled in the Gaspé and Ottawa districts arrived here in poor circumstances, and owing to the difficulties, which all new comers are more or less exposed to, and which, with them, were increased by their nescience of our language, some little distress has occurred amongst them. The party which settled in the township of Bowman, in August last, consisting of 70 persons, have all taken up Crown lands: they have paid one instalment

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of the purchase money, have cleared a few acres of land, and built themselves comfortable houses. At the approach of winter, a few German and Norwegian families, whose slender means were exhausted, applied for relief, and provisions enough were advanced to last them until the spring, the cost of which they will repay in labour on the public roads to be made through their settlement. A number of the men also found work in the lumbering shanties in the neighbourhood.

As to the prospects for the present year they assume, upon the whole, a favourable aspect. Judging from the reports received from foreign sources, a large influx of emigrants may be expected this season from Germany and Norway. Ireland is now being canvassed by the agents of the Provincial Government; maps, pamphlets, &c., containing the fullest information, have been circulated throughout the length and breadth of Great Britain, and active means have been taken by this department, wherever it has been possible, to bring Canada, and her attractions, prominently before the public. The country continues to rise steadily in the social scale, and increase in wealth and population; the farmer receives a fair return for his labour; the prices he realises are remunerative ones, and each year finds him requiring additional help; there is, therefore, every likelihood that ample demand will exist for such emigrants as may reach us, in search of employment, during the ensuing season. I am more than confirmed in this belief, from the information recently elicited by the Bureau of Agriculture, in reply to questions addressed by them to the municipal authorities throughout the Province; and from which, it appears, that the following number and classes of emigrants are required in various parts of the country.

Farm labourers - - - - - - -	4,916
Female servants - - - - - - -	3,342
Boys over 13 years - - - - - -	2,486
Girls over ditto - - - - - - -	2,259
Mechanics - - - - - - - -	2,610
	15,613

With the object of procuring the most recent data relative to the progress of settlement on the free grant roads, a circular was sent from the Bureau of Agriculture, in December, to the principal Crown land agents. The substance of their replies, together with other useful information at my command, I have had printed, in pamphlet form, for general distribution at home and abroad, a copy of which I annex (No. 6, in Appendix).*

This pamphlet has not been reprinted.

The continuance of hostilities in the United States has been the occasion of directing the attention of many persons in that country to the advantages which Canada offers; and I have received numerous enquiries from residents there respecting the Crown lands, open for sale, in this Province.

A large number of French Canadians have returned from the States during the last year; some to their native places, and others to settle on the Crown lands in the Ottawa, where they had every prospect of doing well.

Having received instructions to proceed to England, in my official capacity, in January 1861, with a view to promote emigration, I proceeded thither, and beg leave to submit a copy of the report made by me to the Government on my return (Paper No. 5, in Appendix).

In conclusion, I have endeavoured to bring under notice the leading points of interest connected with the department entrusted to my superintendence. All of which is respectfully submitted to your Excellency's favourable consideration.

I have, &c.
(signed) *A. C. Buchanan*, Chief Agent.

CANADA.

No. 1.

RETURN of the Number of Emigrants Embarked, with the Number of Births and Deaths during the Voyage, and in Quarantine, the Total Number landed at *Quebec*, distinguishing Males from Females, and Adults from Children, with the Number of Souls from each Country; also the Number of Vessels, Tonnage, and Seamen Employed, and the Average Length of Passage, during the Season of 1861.

WHENCE.	Number of Vessels.	Average Days on Passage.	Tonnage.	Number of Seamen.	NUMBER EMBARKED.							BIRTHS.		Total Souls on Board.	DEATHS ON THE PASSAGE.					
					Cabin Passengers.	Adults.		Children 1 to 12 years.		Infants.	Total Steerage.				Adults.		Children, 1 to 12 years.		Infants.	Total.
						M.	F.	M.	F.			M.	F.		M.	F.	M.	F.		
England - - - - Steamers -	31	12½	54,840	2,908	1,492	2,670	1,360	400	382	195	5,007	–	–	6,499	–	1	–	–	–	1
England - - - - Sailing Ships -	38	38¾	32,458	647	19	526	375	161	135	68	1,265	–	1	1,285	–	–	–	1	2	3
Ireland - - - - - - - -	14	38	7,272	221	1	183	184	22	17	6	412	–	–	413	–	–	–	–	–	–
Scotland - - - - Steamers -	9	15½	9,167	516	96	397	323	90	105	26	941	–	–	1,037	–	–	–	–	–	–
Scotland - - - - Sailing Ships -	6	35½	3,941	114	9	39	14	6	4	3	66	–	–	75	–	–	–	–	–	–
Germany - - - - - - - -	9	50	5,815	171	–	760	532	277	304	127	2,000	2	2	2,004	2	1	15	10	11	39
Norway - - - - - - - -	40	50½	18,162	584	47	2,889	2,584	1,392	1,370	558	8,793	8	5	8,853	18	17	32	37	71	175
Total - - -	147	–	131,655	5,161	1,664	7,464	5,372	2,348	2,317	983	18,484	10	8	20,166	20	19	47	48	84	218

WHENCE.	DEATHS IN QUARANTINE.						TOTAL DEATHS.	TOTAL LANDED IN THE COLONY.									GRAND TOTAL Landed in the Colony.
	Adults.		Children, 1 to 12 years.		Infants.	Total.		Adults.		Children, 1 to 12 Years.		Total.		Infants.	Total Steerage.	Cabin Passengers.	
	M.	F.	M.	F.				M.	F.	M.	F.	M.	F.				
England - - - - Steamers -	–	–	–	–	–	–	1	2,670	1,359	400	382	3,070	1,741	195	5,006	1,492	6,498
England - - - - Sailing Ships -	–	–	–	–	–	–	3	526	375	161	134	687	509	67	1,263	19	1,282
Ireland - - - - - - - -	–	–	–	–	–	–	–	183	184	22	17	205	201	6	412	1	413
Scotland - - - - Steamers -	–	–	–	–	–	–	–	397	323	90	105	487	428	26	941	96	1,037
Scotland - - - - Sailing Ships -	–	–	–	–	–	–	–	39	14	6	4	45	18	3	66	9	75
Germany - - - - - - - -	2	2	3	3	4	14	53	756	529	259	291	1,015	820	116	1,951	- -	1,951
Norway - - - - - - - -	2	1	5	3	–	11	186	2,869	2,566	1,355	1,330	4,224	3,896	500	8,020	47	8,667
Total - - -	4	3	8	6	4	25	243	7,440	5,350	2,293	2,263	9,733	7,613	913	18,759	1,664	19,923

Classification of Cabin Passengers:

Adults -	Males - - - - - - - -	964
	Females - - - - - - - -	476
Children, under 12 years - - - - - - -		224
		1,664

Emigration Department, Quebec,
December 1861.

A. C. Buchanan,
Chief Agent.

No. 2.

ABSTRACT STATEMENT of the Number of Emigrants landed in the Province, distinguishing the Countries and Ports whence they Sailed, during the Seasons of 1860 and 1861.

	1860.	1861.
ENGLAND:		
Bristol	9	5
Cardiff	-	3
Exmouth	-	1
Fowey	-	10
Fleetwood	-	3
Hull	-	—
Hawes	-	10
Liverpool	6,359	7,603
London	-	7
Maryport	-	3
Plymouth	110	131
Padstow	-	4
Sunderland	3	—
TOTAL	6,481	7,780
IRELAND:		
Belfast	1	18
Cork	-	4
Londonderry	-	14
Limerick	140	168
New Ross	228	195
Youghal	7	14
TOTAL	376	413
SCOTLAND:		
Aberdeen	-	38
Dumfries	-	6
Glasgow	974	1,068
Montrose	5	—
TOTAL	979	1,112
GERMANY:		
Bremen	-	200
Hamburgh	533	1,751
TOTAL	533	1,951
NORWAY and SWEDEN:		
Arendal	6	425
Bergen	578	2,167
Christiana	247	1,636
Drammen	257	1,617
Christiansand	-	291
Drontheim or Trondhjem	155	156
Gorthenburg	-	261
Grimstad	1	17
Kragerö	17	76
Lauzvig	-	5
Lofoten	-	67
Porsgrund	363	1,494
Riisöer	-	12
Sandefjord	-	8
Stavanger	157	434
Tonsberg	-	1
TOTAL	1,781	8,667

RECAPITULATION.

England	6,481	7,780
Ireland	376	413
Scotland	979	1,112
Germany	533	1,951
Norway	1,781	8,667
GRAND TOTAL	10,150	19,923

Government Emigration Office, Quebec,
31 December 1861.

A. C. Buchanan,
Chief Agent.

No. 3.

RETURN of the Trades and Callings of the Emigrants of 1861.

	British.	Foreign.		British.	Foreign.
Bakers	7	4	Moulders and Foundrymen	3	—
Bookbinders	25	1	Painters	44	2
Bricklayers	32	9	Plumbers and Tinsmiths	14	—
Brickmakers	3	8	Professional Men	35	4
Butchers	20	1	Ropemakers	1	—
Cabinet-makers	6	3	Sawyer	-	1
Carpenters	105	48	Male Servants	30	1
Carvers and Gilders	1	—	Shipwrights	2	—
Coachmakers	2	—	Shoemakers	23	18
Coopers	6	3	Smiths	57	39
Clerks and Traders	300	—	Stonecutters	4	—
Engravers	7	3	Tailors	56	21
Engineers	33	—	Watchmakers	4	4
Farmers	993	2,872	Wheelwrights	2	6
Hatters	13	—	Weavers	26	8
Labourers	1,731	496	Miscellaneous	194	62
Millers and Millwrights	8	7			
Miners	53	3	TOTAL	3,840	3,624

RECAPITULATION.

British	3,840
Foreign	3,624
TOTAL	7,464

Government Emigration Office, Quebec, 31 December 1861.

A. C. Buchanan, Chief Agent.

No. 4.

COMPARATIVE STATEMENT of the Number of Emigrants arrived at the Port of *Quebec* since the Year 1829 to 1861 inclusive.

COUNTRY.	1829 to 1833.	1834 to 1838.	1839 to 1843.	1844 to 1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.
England	43,386	28,561	30,791	60,458	8,980	9,887	9,677	9,276	9,585	18,175	6,754	10,353	15,471	6,441	4,846	6,481	7,780
Ireland	102,266	54,904	74,981	112,192	23,126	17,976	22,381	15,983	14,417	16,165	4,106	1,688	2,016	1,153	417	376	413
Scotland	20,143	11,061	16,311	12,767	4,984	2,879	7,042	5,477	4,745	6,446	4,859	2,794	3,218	1,424	793	979	1,112
Continent of Europe	15	485	-	9,728	436	849	870	7,256	7,456	11,537	4,864	7,343	11,368	3,578	2,722	2,314	10,618
Lower Ports	1889	1,346	1,777	1,219	968	701	1,106	1,184	496	857	691	261	24	214	—	—	—
	167,699	96,357	123,860	196,364	38,494	32,292	41,076	39,176	36,699	53,180	21,274	22,439	32,097	12,810	8,778	10,150	19,923

TOTAL - - - 952,668.

Government Emigration Office, Quebec, 31 December 1861.

A. C. Buchanan, Chief Agent.

No. 5.

Government Emigration Office,
Sir, Quebec, 30 October 1861.

In obedience to the instructions given in your letter of the 16th January last, that I should proceed forthwith to Liverpool, to open an office for the purpose of giving correct information about Canada to persons contemplating emigration, and of bringing prominently before this class of persons, the advantages which Canada offers for remunerative industry, I beg leave to report to you shortly the result of my mission.

Your instructions required me to consider:—

1. The best means of establishing and conducting agencies in the United Kingdom.

2. To engage such assistance and expend such monies as, with a due regard to economy, I might deem necessary.

3. To take charge of the maps and pamphlets published by the Government for circulation.

4. To visit and report upon the condition of the Canadian Chamber of Exhibition in the Crystal Palace, and to suggest such alterations and additions, as I might consider desirable.

Upon my arrival in Liverpool on the 1st of February, I after some difficulty secured an office in Weaver's Buildings, Brunswick street, which though not very suitable, was the best that I could find, unless at an extravagant rent, the opening of which was announced in the leading newspapers of Great Britain, stating my readiness to answer personally as the "Canadian Government information office" or by letter, all enquiries concerning Canada, and to transmit to any parties applying for them, the Government pamphlet and map.

These announcements led immediately to a very extensive correspondence and to many personal applications, reports of which were transmitted from time to time to the Secretary of the Bureau, Mr. Hutton.

Under the authority given to me to obtain assistance, I engaged the services of Mr. Henry Hope who had been employed for some months in London, distributing the official information in English and French taken by him for that purpose in June 1860. Upon my arrival in England the office opened by Mr. Hope in London, was closed.

The services of Mr. Hope proved most valuable from his intimate knowledge of the wants and resources of this country, and from his extensive acquaintance with the leading members of the press and numerous other influential persons in the United Kingdom, especially among the laity and clergy in the rural districts.

The pamphlets and the municipal returns showing where the demand for labour existed here, were extensively circulated and sent to all the Poor Law Unions, to the Government Emigration offices, and to all the leading passenger brokers and shipping agents, as also to the agricultural and commercial institutions, as well as to the industrial and reformatory schools in the United Kingdom.

Many enquiries personally and by letter were made by parties living in France, Switzerland, Belgium and Brittany, and all the French editions of the pamphlet in my possession amounting to 1,000 copies, were sent to these countries, being placed in the hands of Messrs. Gustave Bossange & Co., of Paris, for distribution.

Everywhere the pamphlets and maps were eagerly sought for, and I consider that the circulation of the map has done a vast amount of good, conveying as it does at one view, the exact position of the whole province in a way no other map had previously done; the extensive distribution of the pamphlets and other documents has also done much to remove many of the erroneous impressions which existed regarding this country. A box of pamphlets with 50 of the large maps was sent to Mr. Wilcocks of Plymouth, whose extended acquaintance with all the south and west of England afforded very great facilities for bringing them under the notice of the agricultural classes; 500 copies were also placed in the hands of Messrs. Smith & Son, 186, Strand, who have the sole privilege of exhibiting advertisements at all the principal railway stations, ten of the best of which were selected.

Much pains were taken by me to select as mediums for advertising the objects of my office, such journals in the north and south of Ireland, in England and in Scotland, as circulated among the agricultural classes. The articles and notices written by the editors of these papers were able and useful (copies of them were from time to time forwarded to Mr. Hutton), and every advertisement brought several applications from the district in which these papers appeared. A liberal, yet judicious outlay in advertising hereafter would be attended with valuable results.

I deemed it expedient to visit the south and north of Ireland and Scotland, as well as some of the rural districts in the midland counties of England.

Mr. Hope visited Cheshire, Shropshire, Worcestershire, Derbyshire and Wales. He found among the country gentlemen, clergy, and farmers, a great desire to know more of Canada, and expresses his opinion that these districts would, from the lowness of wages which prevail, supply many farm labourers and domestic servants, as well as the sons of well to do farmers.

The

The views I entertained about the Canadian department in the Crystal Palace, have already formed the subject of a special report transmitted to your Bureau on the 23d of March last, and need not be repeated here.

The result of the temporary opening of the agency has, in my opinion, been satisfactory, and if followed up cannot but result in material benefit to the best interests of the province. A large proportion of the persons who were in communication with the agency, were possessed of capital ranging from 100*l.* to 1,000*l.*, and 1,500*l.* and all appeared anxious to settle on land. Numbers have come out and purchased in various parts of the country, and have all expressed themselves satisfied with the country and their future prospects; many others stated their intention of emigrating next spring, their arrangements not having been fully complete; and the unexpected outbreak of hostilities in the United States has induced others to defer their departure, until they see how this unhappy contest may affect Canadian interests.

From the information and experience I have obtained, I am of opinion that London in preference to Liverpool is the place for the head and permanent office, and that sub-agents might be employed in Ireland and Scotland, in visiting the agricultural districts, and distributing information during the season of emigration, say from the month of February to June; they should be placed entirely under the London office, from which alone any printed or public information should issue. This I consider a most important point, in order to prevent any erroneous or exaggerated statements being made.

The efforts and exertions now being made by other colonies, would appear to render it the more necessary for Canada to re-enter the field, and take advantage of the favourable impressions already produced.

The head office in London should be established on a liberal scale, and contain specimens and samples of the agricultural and mineral wealth of the province, as suggested in the annexed memorandum, submitted to you last December.

I returned to Quebec on the 16th July, after an absence of six months; the expense of my mission will not exceed 600*l.* The office in Liverpool, furniture, printing, advertising, &c., with Mr. Hope's salary, amounted to 350*l.*; my expenses, including sea passages, travelling, and hotel charges, will be covered by the balance.

I have endeavoured to make this report of my proceedings as concise as possible, and have therefore omitted many little details which otherwise might have been introduced, but which may be referred to hereafter, all of which is nevertheless respectfully submitted.

I have, &c.
(signed) *A. C. Buchanan,*
Chief Agent.

The Hon. P. M. Vankoughnet,
Acting Minister of Agriculture,
&c. &c.

SCHEME for the Establishment and Regulation of the Canadian Government Reference Office, for the dissemination of correct knowledge regarding the Province as a place of resort for Emigrants from Europe.

THE writings on Canada which are circulated in Europe, very generally contain true statements regarding the Province; the advantages it offers to settlers are sometimes exaggerated, very seldom directly denied. But although sufficiently numerous, these publications do not comprehend everything that may be said on the subject they treat of; and they fail in presenting those pictures of the country from all the several points of view, which are suitable to the capacity of the several classes of emigrants who are interested in examining them.

Oral communication, it will be readily admitted, has a value with the majority of the agricultural ranks such as cannot be ascribed to writings of the plainest character; and direct answers to a very few questions, put in his own way, are more satisfactory to the merely practical man than printed statements, whether in the most concise form, or elaborated to the nicest point.

Liverpool has become the chief port of shipment, as well for the emigrants of Scotland and Ireland, as for those of England, and this place would seem accordingly to be the most suitable for the position of the office first to be established. Should it be thought proper to set others on foot, that at Liverpool might properly be constituted the central office, and be charged with the maintenance of a systematic management throughout.

The duties of an agent of the Province established in the United Kingdom for the purpose of communicating with emigrants prior to embarkation, and of pointing out to them the openings which Canada affords as a place for their settlement, should be clearly defined; full instructions should be given to him, so that a proper check might be ensured in his intercourse with applicants.

It is certain if an agent officially recognised by the Government were permitted to enter into the consideration of the individual cases of applicants, and to offer them direct advice or persuasion to make Canada their destination, every failure on their part in effecting a prosperous settlement would be attended by a claim on the Government, based on the pretension of a quasi guarantee.

CANADA.

The information furnished should be confined very strictly to matters of fact, and should be drawn only from the communications officially furnished from the Department of the Executive Government corresponding with the agency.

The maps and books supplied from Canada would furnish this information so long as it is practical to write it. At the same time, samples of the agricultural products of the Province would form an interesting reference at the office. Every kind of grain and pulse should be shown, and it might be found expedient to supply the agency periodically, even with fruit and roots. The minerals of the country, particularly those of general economical value, and all our valuable kinds of timber, might also be exhibited with the object of rendering the reference interesting even to persons not contemplating an immediate emigration.

The maps supplied to the agency should be of all descriptions. The geographical relations of the several districts of the Province should be plainly shown, so that emigrants disposed to do so might compare them with each other, and with the several States of the American Union. The best topographical maps which the Crown Lands Department can produce should be furnished; these should show all the lines of access to the public lands, and give a clear idea of relative distances. Plans of the townships open for free settlement ought to be forwarded from time to time, and correct lists of the Crown Lands open for sale should always be on hand.

It would be advisable to exhibit at the reference office all such engraved or other well executed views of the cities and towns of the Province, together with sketches of interesting places and characteristic scenery as can be obtained. Books of description, guide books, directions and periodical publications should also be supplied. Some of the leading Canadian newspapers should be kept on file, particularly for reference to their advertisements; and, in addition, there should be kept duly posted registers of properties of all kinds, estates, houses, mills, manufactories, farms, and unimproved lands, as well as notes of all the descriptions of employment and labour that are from time to time open in the Province.

The samples of agricultural products to be exhibited, might be collected from all the different parts of the Province. They should consist of parcels of fine grain and pulse well cleaned, together with a portion of the same unthrashed and in the straw; and, if possible, comprehending the entire plant, so as to show its length, sicutness and form of growth. With every parcel should be given the particulars connected with it; the place of growth, character of soil, mode of cultivation, dates of sowing and reaping, and the yield per acre; or in relation to the quality of seed sown; and particular attention should be paid to the obtaining of known-named varieties of seed, so that any British sorts grown in Canada might be compared with the same grown in other places.

The parcels of grain should contain not less than a bushel each. They should be exhibited in clear glass cylindrical jars, having on them the information connected with their contents.

The expense of supplying roots, such as potatoes, turnips, mangolds, and carrots, would not be large, and all these might be on exhibition at the season of the largest emigration, if preserved with ordinary care.

The following list comprises most of the important agricultural products of Canada; experience would tell how far it must be reduced in the case treated of.

Wheat (Autumn and Spring).	Parsnips.
Barley.	Flax and flax seed.
Oats.	Hemp and hemp seed.
Rye.	Potatoes.
Indian corn.	Turnips.
Peas.	Mangold wurzel.
Beans.	Carrots.

Apples and pears might be exhibited, with the object of showing the fitness of the climate of some districts for growing fine fruit.

The natural productions of some of our timber trees might be added, such as hickory and butter nuts, acorns, and beech nuts.

Sugar from the maple, and pot and pearl ash, with the crude products; black salts, all directly proceeding from the natural forest, should be shown in a suitable form, and accompanied by full information respecting their manufacture in all the rural settlements of the country.

The office that it is here contemplated to establish in Liverpool is not required to be in the most expensive commercial quarter of the town.

Accessibility by the classes that are most likely to resort to it will form the chief point to be considered in selecting its situation. A first floor would probably be found suitable, and would be less expensive in rent than a ground floor office.

The accommodation should include at least a general office, in which ordinary applications might be met. A private room, and a spacious and handsome apartment, where the maps and plans might be conveniently consulted, and the productions of the country studied through the specimens exhibited in their best forms.

In the course of the consideration in the matter of a reference office in Liverpool, there arises a question connected with the regulation of the free grants of land made by the Government

Government to actual settlers. Should not the agent at Liverpool be authorised to issue to applicants some description of acknowledgment of their right to free grants on reaching the Province?

There is no doubt that the value of a free grant of 100 acres, as now made to actual settlers, appears on the other side of the Atlantic a larger premium than it passes for here. To the resident of Canada the free grant is at least equivalent to $80 or $100; in the eyes of the European labourer it is an estate.

The conditions upon which the free grants are made deserve to be very extensively published in Europe. Hitherto this has not been done actively, and few of the emigrants passing through the Province appear to have heard of them prior to embarkation. After arrival here, the emigrants have not the time to inquire into the subject of this advantage, and many are hurried through the Province to the far West, who admit their regret at the loss of an opportunity for settlement well suited to their circumstances.

If the issue of such scrip titles were authorised, they might be made conditional as at present, and application in the Province within a limited time might be required.

In carrying out this arrangement a strict selection of recipients should be made. The rejection of some of the applications on account of unfitness in the physical or moral characters of the individuals, would probably tend to enhance the value of the gift in the eyes of those fortunate enough to obtain it.

If it were generally known that the Canadian Government would issue to a suitable applicant, prior to his embarkation in Europe, a scrip title to 50 or 100 acres of land, such a premium would lead to extended inquiry before he started, and during the voyage it might be anticipared that many persons would defer their arrangements for through tickets, in order to have the means before quitting the Province for the far West of ascertaining how far a free grant would be likely to meet their views.

In connexion with the matter of an emigration agency of the Canadian Government at Liverpool, the present condition of the Court in the Palace at Sydenham, fitted up some years since with articles from this country for exhibition to the public, may very properly be brought into review. At present the care of the articles contained in this Court involves some annual expense, while there is no provision whatever for furnishing the information to inquirers, which alone can render such an exhibition valuable to persons brought to contemplate an emigration to Canada. Some of the manufactured articles have been acquired at considerable expense, and after having been on show for some considerable time, no longer possess any interest. Others, such as implements and machinery, have been superseded by later inventions, while many of the agricultural samples, being of a perishable nature, are no longer fit for exhibition. It is questionable whether, under such circumstances, there is a prospect of utility in the continuance of the arrangements at the Crystal Palace.

It has been suggested that, in the event of an agency being founded at Liverpool, the charge of the contents of the Court should be assigned to the agent whose duty it would be either at some further expense to re-establish its completeness by replacing all such of the articles as may have now lost their interest and value, or to embody in the agency exhibition all the useful portions, after disposing of the remainder in the way promising to be the most advantageous to reimburse the original outlay.

By the latter arrangement, the salary of the custodian of the court would be saved; and some expense in connexion with the agency would also be avoided, inasmuch as it would be supplied with minerals, woods, and some other articles, without further outlay. At the same time, a considerable portion of the most expensive things now on exhibition, such as carriages, &c., not being required would, on being sold, produce funds to some extent available for the agency expenses.

I have, &c.
(signed) *A. C. Buchanan*,
Chief Emigration Agent.

Government Emigration Office,
Quebec, December 1860.

NEW BRUNSWICK.

NEW BRUNSWICK.

No. 2.
Lieut. Governor the Hon. J. H. T. Manners Sutton, to His Grace the Duke of Newcastle, K.G.
27 May 1862.

— No. 2. —

(No. 21.)

COPY of a DESPATCH from Lieut. Governor the Honourable *J. H. T. Manners Sutton*, to His Grace the Duke of *Newcastle*, K.G.

Government House, Fredericton, New Brunswick,
27 May 1861.

My Lord Duke,

I HAVE the honour to forward, for your Grace's information, a copy of a letter, addressed to the Provincial Secretary, by the Emigration Officer at St. John, in which is enclosed a Ship Return of the barque "Argentinus," which arrived at the port of St. John, from Londonderry, with passengers on the 14th instant.

I have, &c.
(signed) *J. H. T. Manners Sutton.*

Enclosure in No. 2.

Government Emigration Office, Custom House Buildings,
City of St. John, Province of New Brunswick,
22 May 1861.

Sir,

I BEG to forward a return of the passengers by ship "Argentinus," from Londonderry, and to state, for the information of His Excellency, that all were landed in good health.

Of the whole number 111, only six, viz. two women, three girls, and a boy, have left the Province, and they proceeded to friends in the United States; the remainder, 105 in number, have all been furnished with employment. Five families proceeded to the eastern end of King's County, to friends already settled there.

By the American boats from Boston considerable numbers continue to arrive, as well of passengers who come out in emigrant ships to the ports of Boston and New York, as the most expeditious route to reach New Brunswick, and others who have for years resided in the United States, who come to this Province to find employment.

I have, &c.
(signed) *Robert Shives.*

The Honourable S. L. Tilley,
Fredericton.

SHIP RETURN.

REPORT on the Immigrants (111) by the barque "Argentinus," McDaid, master, which arrived at St. John, New Brunswick, from Londonderry, on the 14th of May 1861.

Name of vessel, "Argentinus."
Tonnage, 503, old measurement.
Place of departure, Londonderry.
Date of sailing, 11 April.
Place of arrival, St. John, New Brunswick.
Date of arrival, 14 May.
Number of days on the voyage, 32.

	Adults.	Children between 14 and 7.	Children under 7.	Adults.		Children between 14 and 1 Year.		Children under 1 Year.		Totals.	
				M.	F.	M.	F.	M.	F.	M.	F.
Numbers embarked - -	- -	- -	- -	37	42	14	18	–	–	51	60
Deaths on the voyage - -	none.		—								
Deaths in quarantine - -	none.		—								
Number of births on the voyage	- - - -		- -	- - none.							
Total landed in the Colony - -				37	42	14	18	–	–	51	60

Number of Agricultural Labourers.	Number of Domestic Servants. M.	Number of Domestic Servants. F.	Number of Mechanics and Tradespeople.	Number for whom Cost of Passage defrayed. By Parish.	Number for whom Cost of Passage defrayed. By Private Funds.	Number Engaged for Government Works.	Number assisted on Arrival out of Public Fund.	Total Amount Paid.	Remarks.
30	–	30	1 shoemaker	- -		- - -	none.	- -	Vessel not over clean; food good; Passengers in excellent health.

Robert Shives,
Emigration Officer.

— No. 3. —

(No. 8.)

No. 3.
Lieut.-Governor the Hon. Arthur H. Gordon, to His Grace the Duke of Newcastle, K.G.
29 Nov. 1861.

COPY of a DESPATCH from Lieut. Governor the Honourable *Arthur H. Gordon* to His Grace the Duke of *Newcastle*, K.G.

Government House, Fredericton,
29 November 1861.

My Lord Duke,

I HAVE the honour to forward, for your Grace's information, a ship return (herein enclosed), reporting the arrival at the port of St. John of the ship "Elizabeth," from the port of Londonderry, with passengers.

I have, &c.
(signed) *Arthur Hamilton Gordon.*

Enclosure in No. 3.

SHIP RETURN.

REPORT on the Immigrants by the ship "Elizabeth," Gillespie, master, which arrived at St. John, New Brunswick, from Londonderry, on the 10th of September 1861.

Name of vessel, "Elizabeth."
Tonnage, 770; old measurement.
Place of departure, Londonderry.
Date of sailing, 10 August 1861.
Place of arrival, St. John, New Brunswick.
Date of arrival, 10 September.
Number of days on the voyage, 30.
Number of adults actually on board, 45.

NEW BRUNSWICK.

——	Adults.		Children between 14 and 7.		Children under 7.		Adults.		Children between 14 and 1 Year.		Children under 1 year.		Totals.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Numbers embarked - - -	13	21	–	–	–	–	–	–	7	10	1	1	21	32
Deaths on the voyage - -	none.													
Deaths in quarantine - -	none.													
Number of births on the voyage - - - - - -	none.													
Total landed in the Colony - -													53	

Number of Agricultural Labourers.	Number of Domestic Servants.		Number of Mechanics and Tradespeople.	Number for whom Cost of Passage defrayed.		Number engaged for Government Works.	Number assisted on arrival out of Public Fund.	Total Amount Paid.	Remarks.
				By Parish.	By private Funds.				
	M.	F.							
									Plenty of good and wholesome food; people healthy; and vessel cleanly.

☞ Most of these people came out to friends already settled in the Province; they are chiefly young persons; and, with the exception of four, three who came out for Canada, and one for Nova Scotia, have settled in the Province.

Robert Shives,
Immigration Officer.

EMIGRATION (NORTH AMERICAN COLONIES).

COPIES or EXTRACTS of DESPATCHES relative to EMIGRATION to the NORTH AMERICAN COLONIES (in continuation of Parliamentary Paper, No. 186 of Session 1861).

(*Mr. Chichester Fortescue.*)

Ordered, by The House of Commons, *to be Printed*,
25 *June* 1862.

355.

Under 4 *oz.*

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BRITISH COLUMBIA.

FURTHER PAPERS

RELATIVE TO THE

AFFAIRS OF BRITISH COLUMBIA.

PART IV.

Copies of Despatches from the Governor of British Columbia to the Secretary of State for the Colonies, and from the Secretary of State to the Governor.

Presented to both Houses of Parliament by Command of Her Majesty,
March 1862.



LONDON:
PRINTED BY GEORGE EDWARD EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

2794. 1862.

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PART IV.

Despatches from the Governor.

No. 1.

Copy of DESPATCH from Governor Douglas, C.B., to his Grace the Duke of Newcastle.

(No. 24.) Victoria, Vancouver Island, February 17, 1860.

(Received April 12, 1860.)

(Answered, No. 26, May 19, 1860, page 66.)

My Lord Duke,

In my Despatch, No. 224,* of the 18th October last, reporting to your Grace on the state of British Columbia, I took occasion, while adverting to the existing means of moral and religious instruction in the Colony, to inform your Grace that Divine Service was regularly held in the several towns of Lower British Columbia by resident clergymen, and that the almost total absence of crime went far to show how usefully and extensively the influence of their teaching is felt.

* Vide Papers presented in 1860, Part III., page 65.

2. It did not, however, occur to me to inform your Grace at the same time that I had, on the part of this Government, done everything in my power to promote the good cause, by encouraging the residence of an ordained and educated clergy in British Columbia.

3. Having no authority to apply any part of the public revenue to the aid and support of churches, there was little in my power to bestow beyond the sincerest sympathy and advice in aid of the zealous clergy of the Church of England and the Methodist Episcopal Church, who first entered the field of missionary labour in British Columbia.

4. I did not, however, hesitate to assign to the clergy of those persuasions respectively, on their application, a church, school, and dwelling-house site, forming a block of four building lots, or about one acre of land in extent, in all towns where they resided. Thus free grants to that extent, viz., one acre, have been made for the use and benefit of the Church of England and of the Methodist Episcopal Church respectively in the towns of Yule, Hope, Derby, Douglas, and New Westminster, as a small return for the valuable services rendered to the country by the clergy of those churches, who have hitherto received no other compensation from the Government.

5. I have to request your Grace's sanction for those grants, and authority to continue the same practice in all other towns of British Columbia where ordained Ministers of the Gospel may think proper to take up their residence; and further, seeing that one of the duties most deserving the attention of Government is to provide means for the moral and religious training of the people, I would take the liberty of recommending to Her Majesty's Government that free grants of 100 acres of rural land should be made in aid of every cure formed in British Columbia, provided they be not otherwise supported at the public expense, and there be a resident clergyman, and a place of Christian worship erected.

6. A grant of land to that extent would not be burdensome to the Colony, and would nevertheless form an attractive inducement for Christian churches to devote their

British Columbia.

attention to the country until population increases, and other provision is made for the maintenance of a Christian clergy and the erection of places of Christian worship.

7. It is not my intention to advocate the establishment of a dominant and endowed church, as that object could not be accomplished without injustice in a country to which persons of all religious persuasions are invited to resort, but I conceive it would be advisable to extend, in the manner before indicated, the protection and support of Government to the four grand denominations of Christians, viz., the Church of England, the Presbyterian, Methodist, and Roman Catholic Churches, which are all represented by classes of the population in this Colony.

8. I shall be glad to receive the instructions of Her Majesty's Government on this subject.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

No. 2.

No. 2.

Copy of DESPATCH from Governor Douglas, C.B.*, to his Grace the Duke of Newcastle.

(No. 25.) Victoria, Vancouver Island, February 18, 1860.

(Received April 12, 1860.)

My Lord Duke, (Answered, No. 27, May 25, 1860, page 66.)

The desire manifested on the part of Her Majesty's Government for the improvement and well-being of the aboriginal races of British Columbia induces me to lay before your Grace the enclosed interesting correspondence between the Reverend Edward Cridge, district minister of Victoria, and Mr. William Duncan, an exemplary and truly worthy gentleman, who has, for some years past, been devotedly labouring with a wonderful degree of energy and perseverance as a Christian missionary among the Indian population at and about Fort Simpson

2. The facility with which Mr. Duncan has acquired the native language, and succeeded in winning the confidence and attachment of the natives, is a proof of the good sense, kindness of heart, and talent which he has brought to the task; while the very marked success of his efforts as a religious teacher gives rise to the gratifying hope that the natives will yet, through God's blessing, be rescued from ignorance, and assume a respectable position in British Columbia.

3. Mr. Duncan proposes to found a missionary settlement for Indian converts in an eligible situation, about 20 miles south of Fort Simpson (probably Port Essington), a plan which meets with my entire approval.

4. I therefore, with your Grace's sanction, intend to reserve several hundred acres of land in that neighbourhood to enable Mr. Duncan to carry this useful and benevolent plan into effect.

5. I would submit, with respect to all land reserved for Indians, the advisability of withholding from them the power to sell or otherwise alienate the title, as they are yet so ignorant and improvident that they cannot safely be trusted with the management or control of landed estate, which, if fully conveyed to them, would soon pass into other hands.

6. I would, therefore, recommend, as a safe and preferable course, that such reserves of land should be conveyed to the Governor of the Colony for the time being in trust for the use and benefit of the Indians, leaving no power whatever in them to sell or alienate the estate.

7. Should those measures meet with your Grace's approval, I have to request the sanction of Her Majesty's Government for carrying them into effect.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

Encl. 1 in No. 2.

Enclosure 1 in No. 2.

To his Excellency James Douglas, C.B., Governor of British Columbia, &c. &c. &c.

The Parsonage, Victoria, V. I., February 18, 1860.

My Dear Sir,

I beg to lay before you a letter which I have just received from Mr. W. Duncan, Church of England Missionary at Fort Simpson, in reply to one which, in conformity with your Excellency's

instructions a short time ago, I wrote to him expressive of the interest you felt in his mission, and of your desire to aid him in his work. A copy of which I subjoin. BRITISH COLUMBIA.

I remain, &c.
(Signed) EDWD. CRIDGE.

(Copy.)

The Parsonage, Victoria,
January, 1860.

DEAR MR. DUNCAN,

I AM requested by his Excellency the Governor to express to you the great gratification he has received from conversing with several of the Indians who have been under your instruction at Fort Simpson, and who are now at Victoria, and his pleasure at witnessing the great improvement in manners, learning, and religion which you have succeeded in effecting in their condition.

His Excellency trusts you will continue to show the same energy and perseverance which he is sure you must already have applied to the work, and that your labour will be rewarded by a still larger measure of success.

His Excellency also wishes me to say that he will feel obliged by your reporting to him from time to time on the progress of your mission. Any suggestions you may make with regard to measures which may occur to you as likely to prove beneficial to the Indians under your care, such as settling them in any particular locality, or setting apart a reserve of land for their use, will receive his Excellency's best attention, who will also, if necessary, represent such measures with his favourable recommendation to Her Majesty's Government.

Praying that the Divine blessing may rest abundantly on your mission,

Believe me, &c.
(Signed) EDWD. CRIDGE,
District Minister of Victoria and Colonial Chaplain.

Enclosure 2 in No. 2. Encl. 2 in No. 2

Mr. DUNCAN to Rev. E. CRIDGE.

REV. AND DEAR SIR, Fort Simpson, British Columbia, February 7, 1860.

I DULY received, by the favour of Captain Dodd of the Honourable Hudson's Bay Company, your kind letter of the 11th ult., tendering me the sympathy and good wishes of his Excellency the Governor of British Columbia in reference to my work as a Missionary among the Chimsyan Indians of this place. Also expressing his Excellency's desire that I would report to him from time to time the progress of the mission, and make suggestions of any measures which I deem would be likely to prove beneficial to the Indians under my care, such as settling them in any particular locality, or setting apart a reserve of land for their use.

I feel indeed truly thankful to his Excellency for the very kind interest he manifests in the mission, and I shall rejoicingly avail myself of the privilege he extends to me, in making such communications to him from time to time as circumstances may suggest and opportunities afford.

For his Excellency's information I would now mention that I began a school here in November 1858, which I still continue to carry on. My pupils number about 200, of whom only about 30 are adults. The daily attendance varies from 80 to 130 souls, excepting the times when they go away in great numbers to procure fish, which occupies about four months in the year, and at such times our daily attendance is from 40 to 80 souls.

The instruction I give them is in reading, writing, counting, singing, and religious knowledge. The latter I teach in their own tongue, but everything else in English.

Another prominent part of my daily work is visiting the Indians in their own houses; the visits I make are mostly in answer to calls for help and medicine in sickness; but I have thereby many opportunities of speaking to all the inmates of a house. I usually address them on the evil of their doings, and point out the inevitable consequences of sin, both in time and in eternity. I then tell them of the sinner's friend, and set the blessed Gospel of our Lord Jesus Christ before them, illustrating from their own customs our need of such a Saviour.

As to the result of my labours among them, speaking generally, I may say that many remain infatuated, utterly regardless of the future, while others, caring not for themselves, yet seem anxious for their children to learn and walk in the good way; the remainder are those who are anxious for themselves as well as their children to learn and practise what is good.

It is to the case of this latter class that I would wish his Excellency's attention was drawn; and, in reference to their case, permit me humbly to suggest the propriety of a place being founded in which such Indians may find a home, and where there may be no lack of remunerative labour put into their hands. I confess my only hope of seeing the Indian races of this coast diverted from the destructive courses to which they are now so strongly tempted lies in the carrying out of some such plan as the above for their benefit.

However small and insignificant at first such a place might be, I have no doubt of its ultimate growth and prosperity. Some time ago I hinted to a few of the better disposed Indians here the idea of their separating from the rest, and thus avoiding the ruin which threatened them all, and they embraced the subject heartily.

One old chief urged me much to write to the people at home about the matter. He very properly told me that he saw no chance of benefiting even the rising generation unless they were removed from the evil influence around them at this place.

And I now see from instances which have already occurred, that the children I am teaching will be drifted from me as they grow up and become victims to the same vices which enslave their parents.

This makes me feel a growing anxiety for a safe retreat.

British Columbia.

There is no lack, I am happy to state, of suitable spots of land. One place the Indians frequently speak of as offering many advantages for a future home. It is about 30 miles south of this place, so far as I can ascertain. They have often wanted me to go and see it, but I never went, for I was not anxious to raise up hopes among the Indians which I might afterwards disappoint.

However, as his Excellency the Governor has kindly alluded to the matter of settlement, I shall now make it my duty in my addresses to the Indians to bring the subject prominently before them.

By the time that another opportunity occurs of communicating with Victoria, I hope to be able to speak more definitely regarding the subject as the Indian views it.

Thanking you for your kind letter, and praying that the Governor may ever be moved and guided in his efforts for the public good by that wisdom which is from above,

I remain, &c.
(Signed) W. Duncan.

To the Rev. E. Cridge,
District Minister of Victoria,
&c. &c.

No. 3.

No. 3.

Copy of DESPATCH from Governor Douglas, C.B., to his Grace the Duke of Newcastle.

(No. 42.) Victoria, Vancouver Island, April 23, 1860.

(Received June 11, 1860.)

(Answered, No. 36, June 26, 1860, page 67.)

My Lord Duke,

I have the honour to inform your Grace that the winter has passed away without the occurrence of any extraordinary event in British Columbia.

2. The season has been comparatively mild, and the miners residing in the various inland districts have been abundantly provided with food and with home-grown vegetables in small quantities, which have had the effect of checking the ravages of scurvy, by which the health of many of those laborious men was seriously impaired in the winter of 1858.

3. Very satisfactory reports have been lately received from all the mining districts of the country; on these, however, strict reliance cannot always be placed, though in the present instance they are corroborated by heavy arrivals of gold dust, both in the hands of miners and of the exporting companies.

4. The roads leading into the country from Hope and Yale have, in consequence of the great depth of snow in the mountain passes, been impassable since the beginning of winter to any other mode of transport than by Indian packers, who, with singular force and power of endurance, toil through the mountain trails at that trying season with loads of 100 lbs. each; but that mode of transport is not even attempted in winter by the Hope trail, which is hermetically sealed to travel from the interior, between the months of October and June; yet these two trails may, I believe, be made available for winter travel, by evading the precipitous hills over which they pass, and carrying the line of road by easy grades through the deep valleys. The transport might then be carried on during the winter by means of sleighs drawn by horses, as it is evident that the depth of snow would not form in itself an insuperable obstacle, provided the precipitous ascents, which constitute the real difficulty of the road, could be avoided.

5. Much attention has been directed to the exploration of those difficult routes, and we have ascertained the feasibility of running an easy graded line of road from Yale to Lytton; and I am daily expecting a report from a surveying party employed at Hope, in examining, with a similar object in view, the passes leading from that place to the "Shimilkomeen" Valley. These routes may, without exaggeration, be severally compared to the passage of the Alps. It is, however, a great satisfaction to know that the country beyond the mountains is generally level and of easy access.

6. The great outlet of British Columbia continues to be by the Harrison River trail, and that fortunately has been uninterruptedly open during the whole winter, and large stocks of food have been accumulated at its further terminus near Cayoosh, in anticipation of the influx of miners for the Upper Fraser. The price of food is in consequence of that abundance comparatively low, the last quotations being 8*d.* per lb. for flour and beans at Lytton, and 11*d.* at Cayoosh, and at both places bacon is quoted at 14*d.* per lb. The improvement in the condition of the miner is very great, as he can live substantially for 1½ dollars per diem, instead of 3 or 4 dollars; and many claims are now workable at a profit which could not afford the miner any support last year.

7. A detachment of 80 Royal Engineers, under the command of Captain Grant, has been employed since the beginning of March embanking the shoals near the mouth of the Harrison River, for the purpose of deepening the channel, which is now impassable in

winter for the lightest steamer, and there is every reason to believe that the work will be brought to a successful termination.

8. The same detachment of Royal Engineers will shortly proceed to resume work on the waggon road from Douglas, which it is expected they will complete in a few weeks as far as the 10-mile house; from that point a party of civilian labourers have undertaken a section of six miles of the road, for which they are to receive the sum of 550*l.* per mile. This will carry the road to the 16-mile house, where the Royal Engineers will recommence operations, and probably complete the next 12 miles, that is, to the 28-mile house, situated on the smaller Lilloett Lake, before the end of summer.

9. We propose to use that and the larger Lilloett Lake as a water communication, connecting them by means of a good waggon road 1¼ miles in length, which is already made and in use. The application of some enterprising settlers to run a steamer, without any special privilege, on the larger Lilloett Lake has been granted, which will greatly facilitate transport. An excellent mule trail, 30 miles in length, with substantial bridges over all the rivers, connects the larger Lilloett Lake with Lake Anderson, beyond which the route to Cayoosh offers no very serious difficulties to engineering enterprise.

10. Two stern-wheel steamers, intended to ply on Lakes Anderson and Seaton, are nearly completed by an association of settlers, who at much labour and expense packed the engines and boilers from Douglas over the Harrison road. To give an idea of the difficulty of the undertaking, I may mention that the boilers, being too heavy to carry on mules, were rolled over the trail, as far as the 28-mile house, in five sections. Serious difficulties of that kind will not be felt when the waggon road is made, and the facility of communication will, I have no doubt, give a prodigious impulse to industry and to the rapid development of the resources of the country, as all kinds of machinery required to assist the operations of the gold miner may then be imported.

11. I have received advices from Lytton up to the 6th of this month (April). Commissioner Ball reports that the mining season had commenced, and that the miners who had migrated to the lower country for the winter were fast returning to their old claims on the benches of Fraser River, but the great majority of those hardy wanderers were making their way towards Quesnel River, where it is confidently expected rich hill diggings will be found.

12. A great number of Chinese miners were also arriving and taking up mining claims on the River Bars, in the Lytton district, who are reputed to be remarkably quiet and orderly. Mr. Ball's report refers to no other subject of general interest.

13. The prevailing impression respecting the great auriferous wealth of the district about Alexandria and the Quesnel River will have the effect of attracting a large population to that distant quarter, and I shall consequently be under the necessity of appointing a magistrate and a small body of police to remain there for the purpose of maintaining the peace of the country, and preventing conflicts among the miners and with the Indian tribes.

14. The last intelligence from the Shimilkomeen River is not so favourable as before reported. I perceive by the Oregon papers that many persons who had gone there for the purpose of mining had been unsuccessful. It is stated in those papers that 20 or 30 miners only were making from 8 to 10 dollars per day, while the others engaged in the same occupation were not paying expenses. That is, I conceive, but the usual and silly outcry of the idler and the visionary, and does not in the least shake my opinion in regard to the auriferous nature of the country, founded on its geological character, and further strengthened by the report of Lieut. Park, a highly scientific member of the American Boundary Commission, who entertains a similar belief in the auriferous character of that district, and in the existence of extensive placer diggings. Should a large population assemble there, the attention of Government will have to be directed towards it, and a police force employed to maintain the peace. I shall use every exertion to connect the Shimilkomeen with Fort Hope by means of a convenient road, with the important object in view of making Fraser River, instead of the Columbia, the outlet of its trade.

15. British Columbia is becoming highly attractive to the Chinese, who are arriving in great numbers, about 2,000 having entered Fraser River since the beginning of the year, and many more are expected from California and China. They are certainly not a desirable class of people, as a permanent population, but are for the present useful as labourers, and, as consumers, of a revenue-paying character. I have therefore protected them from the payment of differential duties not equally borne by other classes of the population.

British Columbia.

16. I have received advices from Commissioner Sanders of Yale district up to the 14th instant (April). He describes the migration of miners for the upper country as being very general, and expresses a fear that the feeling in favour of Quesnel River may lead to the depopulation of the Yale district.

17. In a previous passage of this report I stated that we had ascertained the feasibility of running a line of road by easy grades the whole way from Yale to Lytton, which would avoid the lofty passes, and be accessible in winter for pack mules, and not like the present trail, rendered valueless for five months in the year by an impassable depth of snow.

With reference to that enterprise which I proposed to undertake, Mr. Sanders complains of the character of the population. His remarks on the subject are as follows:—

"There is very little probability of any person in Yale or its neighbourhood tendering "for the construction of the projected mule trail; the proposed part payment in land is "very far from being an inducement; in fact, it is generally objected to; an arrange- "ment of that nature might possibly be acceptable to British subjects, but would naturally "be objectionable to aliens, and unfortunately the population of this Colony is almost "without exception foreign."

We shall, nevertheless, commence that undertaking as soon as a small body of the Royal Engineers can be spared without detriment to other important work.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

No. 4.

No. 4.

Copy of DESPATCH from Governor Douglas, C.B., to his Grace the Duke of Newcastle.

(Separate.)

New Westminster, British Columbia, May 23, 1860.

(Received July 14, 1860.)

My Lord Duke,

I have the honour to inform your Grace that I left Victoria on the 15th instant on a visit to British Columbia, and arrived at this place on the evening of the same day, and I have since been engaged with business of great public importance.

2. I was glad to observe that this city had greatly improved in appearance since my last visit, and that many new buildings have been erected, and the surface in many parts cleared of the gigantic stumps and fallen trees that obstructed the thoroughfares and incumbered the ground.

The erection of a court house and buildings for the Assay offices have also greatly added to the appearance of the place and increased the bustle and activity which pervades the town. Trade is also on the increase. Two steamers, of from 200 to 300 tons burthen, are plying with goods and passengers between Victoria and New Westminster, where their cargoes are discharged, and the inland transport is carried on from thence to Douglas and Yale by four stern-wheel river steamboats, varying in burthen from 50 to 200 tons, which now make two trips a week to those places.

3. The Custom house receipts having for the last two weeks somewhat exceeded the sum of 1,000*l.* of weekly return, corroborate the opinion I have expressed with respect to the state of trade, and indicate the spirited manner in which supplies are being sent into the mining districts, and the confidence entertained by business men in the auriferous resources of the country.

4. The effect of the pre-emption law is already observable in the forest clearings made by settlers in the densely wooded land on the banks of Fraser River. The cost of clearing such land by means of hired labour ranges from 15*l.* to 30*l.* an acre, and it will consequently never prove an attractive investment for capital; such land cannot be cleared to advantage otherwise than by the actual settler investing his own labour in the formation of a permanent home and property for himself and family.

5. I have given much anxious thought to the subject of settling British Columbia, and the conclusion is more than ever forced upon me that it cannot be successfully accomplished without adopting a very liberal land system. I am strongly induced to view the public land simply as a source of revenue, and, provided an income of equal or greater value can be realized by other means, it does not appear wise or expedient to lock up the public land under a system which practically places it beyond the reach of purchase by ordinary settlers. It is evident that without population a revenue for the support of government

is unattainable, and unproductive land is next to valueless both to the country and to the Crown. The sale of land affords a temporary revenue, but the settler indirectly, by the payment of duties on the foreign articles he consumes, and by means of a small direct tax which could be levied on the land he occupies, will become a permanent contributor to the revenue, and, therefore, although the land may have been acquired for nothing, and brought no revenue in the first instance, yet, in such case, the Crown in the end would become the gainer by his presence. If the public land could be sold at a high upset price, and the country at the same time filled with people, there would be an advantage in continuing the present sale price of land; but if one or other of those objects must be sacrificed, it is evidently preferable to have the population, and to grant the land without purchase or at a much lower price than at present.

6. These observations are thrown out merely for the purpose of acquainting your Grace with the impressions made upon me by the present circumstances of this country, as I propose to bring the subject under the consideration of Her Majesty's Government in a more formal manner when I have arrived at clearer and better-supported conclusions.

7. The inhabitants of New Westminster having expressed a great desire for the incorporation of their town and the appointment of municipal officers to manage its revenues, I consulted their select committee as to their views, and as to the best means of carrying out their wishes. Their propositions are extremely moderate, embracing chiefly two points, viz., the right of taxing themselves, and of applying the proceeds of such taxes to grading the streets and to the general improvement of the town. After several interviews, and obtaining the sense of the people at a public meeting with respect to the amount of taxes they wished to raise, and as to whether such taxes should be levied on an arbitrary valuation or on an actual assessment of property, the draft of an Act was made containing the following provisions:—

(1st.) That all persons subject to the payment of rates according to the Act shall be entitled to vote at elections for members of the town council.

(2nd.) That the town council shall consist of seven members, who are to hold office without remuneration, and for one year only.

(3rd.) That none but British subjects or foreigners who have become naturalized British subjects shall be eligible for councillors, and, in addition, they must be possessed of property valued at not less than 50*l.* sterling, and shall have resided at least six months in New Westminster.

(4th.) That the town of New Westminster shall be divided into four wards, each returning a certain number of councillors.

(5th.) That the council shall be empowered to levy rates on property within the town, as may be determined and authorized by the majority of the rate-payers, and to cause the proceeds of such rates to be expended under the direction of the Chief Commissioner of Lands and Works.

(6th.) That the council shall be authorized to levy a tax not exceeding two per cent. on the assessed value of all town lots and property within the town for the year 1860 and 1861, and to enforce payment thereof.

(7th.) That the said council shall be empowered to levy a further rate over and above the said two per cent. for the said two years, provided the majority of the rate-payers deem it necessary and require them so to do.

(8th.) That the said council shall be further authorized to compel town lot holders to cut down all trees on their respective town lots, except such as may be reserved for ornament, and in default to cause the trees to be cut down, and the cost thereof, not exceeding 7*l.* sterling on each town lot, to be levied on the property.

Such is the substance of the proposed Act, which will be immediately put into the hands of the Attorney General for proper drafting.

8. Your Grace will observe that the powers of the council are so limited by the supervision of the Commissioner of Lands and Works on the one hand, and the rate-payers on the other, as almost to remove the danger of abuse, and I am of opinion that the city will be greatly benefited by its exertions and by the expenditures on substantial and much-needed improvements.

Trusting that this measure may meet with your Grace's approval,

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

BRITISH COLUMBIA.

No. 5.

No. 5.

Copy of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE.

(Separate.) Camp, Fraser River, Chilwayhook District, May 31, 1860.

MY LORD DUKE, (Received August 6, 1860.)

IN continuation of my last report, marked Separate, and dated New Westminster, 23rd May, I have to communicate for your Grace's information, that the 24th of May was spent not unprofitably in making a tour in one of the river steamers to Pitt Lake, distant about 40 miles from New Westminster, accompanied by the colonel in command, the civil and military colonial officers, the local magistrates, the Lord Bishop of British Columbia, his chaplain, and many of the citizens of New Westminster, who were invited to celebrate with me the auspicious natal day of our most Gracious Queen, amidst the wild romantic scenery of that mountain lake, and never, I believe, has any part of Her Majesty's dominions resounded to more hearty acclamations of loyalty and attachment than were heard on that occasion.

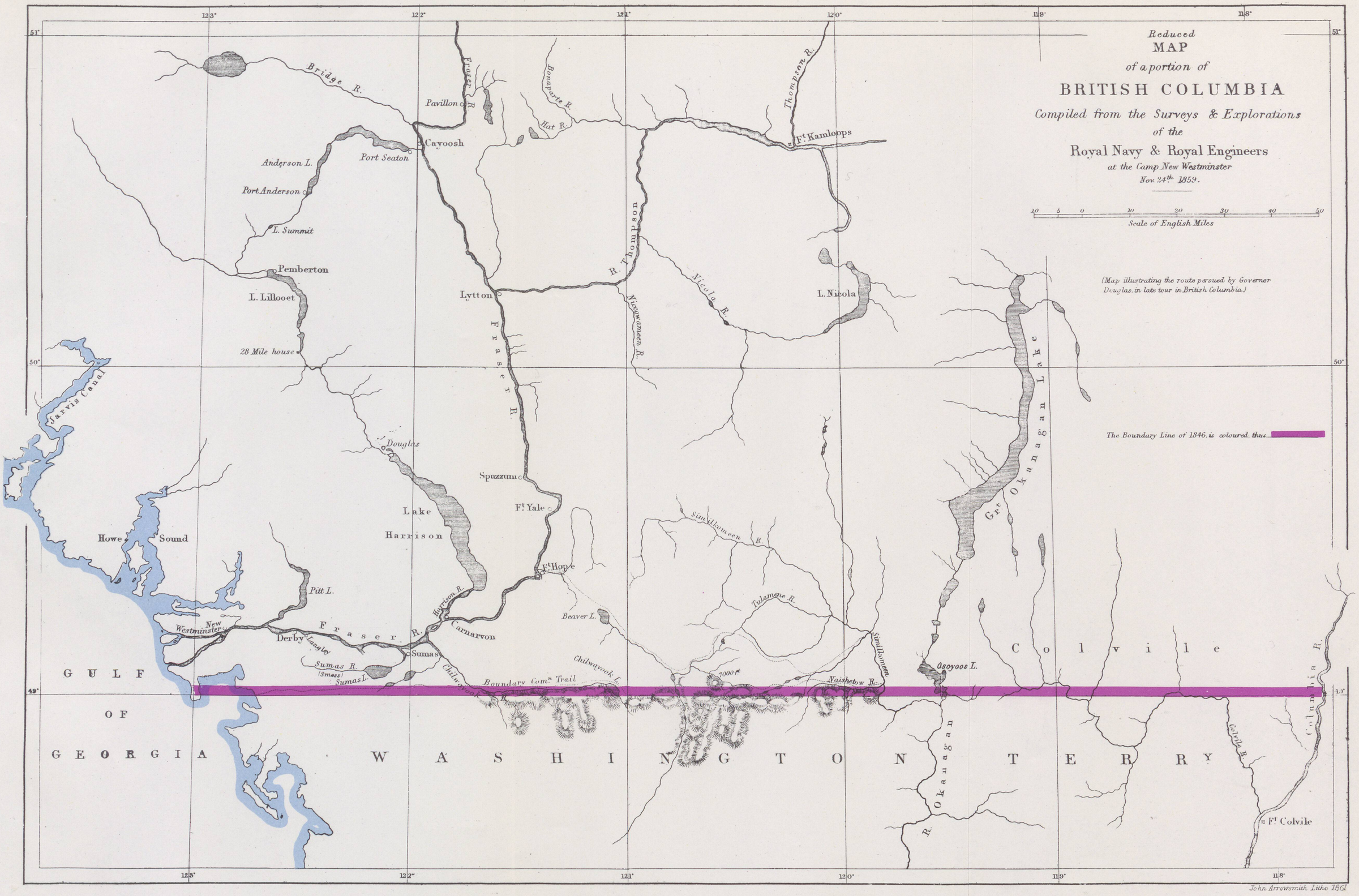
2. The other towns in British Columbia vied in loyal demonstrations with the inhabitants of New Westminster, a fact which I record with pleasure as a proof of the growing attachment of the alien population of the Colony to our Sovereign, and to the institutions of our country.

3. On the 25th of May I proceeded from New Westminster, with my party, in one of the revenue boats towards Derby; in our progress up the Fraser we passed a number of tributary streams flowing into it from the north. The "Pitt" is the most considerable of these tributaries, being navigable for vessels of 300 or 400 tons to its source in Pitt Lake, a distance of 35 miles, including the lake, beyond which it is accessible for Indian canoes a few miles further, but not for any larger craft.

4. The banks of Pitt River are exceedingly beautiful; extensive meadows sweep gracefully from the very edge of the river towards the distant line of forest and mountain. The rich alluvial soil produces a thick growth of grass interspersed with the Michaelmas daisy, the wild rose, and scattered groups of willows. This fine district contains an area of 20,000 acres of good arable land, requiring no clearing from timber, and ready for the immediate operations of the plough. Many parts of it are however exposed to overflow, through the periodical inundations of the Fraser, which commence about the first week in June, and generally subside before the middle of July. Owing to this circumstance the Pitt River meadows are not adapted for raising wheat and other cereals which require the entire season to mature, but may be turned to good account in growing hay and every kind of root crop, and may also be used extensively for pasturing cattle, and for the purposes of the dairy.

5. The Brunette, Coquitlum, and Whytus, the latter opposite the site of Derby, are streams accessible by boat or canoe for some distance from their debouche into Fraser River; their importance to the district, as an easy and inexpensive means of communication, is very great, seeing that they form a series of natural canals, intersecting the country in all directions, and admirably adapted for the transport of goods and produce to and from the navigable waters of the Fraser.

6. The banks of Fraser River are almost everywhere covered with woods. Varieties of pine and firs of prodigious size, and large poplar trees, predominate. The vine and soft maple, the wild apple tree, the white and black thorn, and deciduous bushes in great variety, form the massive undergrowth. The vegetation is luxuriant almost beyond conception, and at this season of the year presents a peculiarly beautiful appearance. The eye never tires of ranging over the varied shades of the fresh green foliage, mingling with the clustering white flowers of the wild apple tree, now in full blossom, and filling the air with delicious fragrance. As our boat, gliding swiftly over the surface of the smooth waters, occasionally swept beneath the overhanging boughs which form a canopy of leaves, impervious to the sun's scorching rays, the effect was enchanting; yet amidst all this wealth and luxuriance of nature, I could not repress the wish that those gorgeous forests might soon be swept away by the efforts of human industry, and give place to cultivated fields and the other accessaries of civilization. This, however, will be a work of time, though there is no doubt that the facilities and inducements now held out to settlers in this Colony by the pre-emptive law and other enactments, might enable thousands of the destitute poor of Britain, by a few years of steady industry, to secure for themselves happy homes and a comfortable independence for life.


Reduced
MAP
of a portion of
BRITISH COLUMBIA
Compiled from the Surveys & Explorations
of the
Royal Navy & Royal Engineers
at the Camp New Westminster
Nov. 24th 1859.
Scale of English Miles
(Map illustrating the route persued by Governor Douglas, in late tour in British Columbia.)
The Boundary Line of 1846, is coloured, thus
Bridge R.
Fraser R.
Pavillon
Bonaparte R.
Hat R.
Thompson R.
Ft Kamloops
Cayoosh
Port Seaton
Anderson L.
Port Anderson
L. Summit
Pemberton
L. Lillooet
28 Mile house
Lytton
R. Thompson
Nicola R.
L. Nicola
Nicowameen R.
Fraser R.
Douglas
Spuzzum
Ft Yale
Lake Harrison
Ft Hope
Jarvis Canal
Howe Sound
Pitt L.
New Westminster
Derby
Langley
Fraser R.
Harrison R.
Carnarvon
Sumas
Sumas R. (Smess)
Sumas L.
Chilwayook R.
Boundary Comn Trail
Chilwayook L.
Beaver L.
Similkameen R.
Tulameen R.
Similkameen
Naishetow R.
Osoyoos L.
Grt Okanagan Lake
Colvile
Columbia R.
Colvile R.
Ft Colvile
R. Okanagan
GULF OF GEORGIA
WASHINGTON TERRY
John Arrowsmith Litho 1861

7. Leaving the boat at Derby we travelled two miles by the bridlepath which skirts the Fraser to Langley. In my Despatch No. 224,* of the 18th October last, I communicated to your Grace the intention I then entertained of opening up leading roads in the districts bordering on Fraser River from Derby to Hope, to connect those places, and for the relief of settlers exploring the country; as they cannot otherwise make their way through the woods, which are blocked up in every direction by thick brush and immense quantities of fallen timber.

* Vide Papers presented in 1860, Part III., page 65.

8. A portion of that road from Langley to Smess, which completes the line of communication between Derby and Hope, having been lately finished, I proceeded on horseback from Langley with the intention of riding the whole way to Hope; that intention could not however be fully carried into effect, as Fraser River had overflowed its banks, and inundated the low plains through which the road has been injudiciously led. After a ride of 13 miles our progress was arrested by a flooded plain, impassable in its present state for horses, and we were therefore compelled to seek the river and to proceed by canoe.

9. The tract through which we rode is well adapted for settlement, the soil being a deep rich loam, and the woods which once evidently covered the whole face of the country, having been in parts so completely destroyed by fire as to leave large patches of ground almost clear of timber. The tract alluded to and that extending to Smess River contains about 150,000 acres of land, easily cleared and generally well adapted for tillage; its advantageous position on the banks of a navigable river further recommend it as an eligible place of settlement.

10. Captain Parsons with a party of Royal Engineers is now engaged in a reconnaissance of the country on the Smess and Chilwayhook Rivers. I will therefore defer the notice of that district until I receive that officer's report on its capabilities.

I will now close this communication, as a steamer is in sight, and I will proceed by her from this point towards Douglas or Hope, with the intention of continuing this sketch.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

No. 6.

No. 6.

Copy of DESPATCH from Governor Douglas, C.B., to his Grace the Duke of Newcastle.

(Separate.)

Hope, British Columbia, June 5, 1860.

(Received August 6, 1860.)

My Lord Duke,

My last communication to your Grace was dated "Camp, Chilwayhook District, 31st May."

2. During the few hours I remained at Douglas, whither the river steamer which conveyed my party from Chilwayhook was bound, I had merely time to observe the increasing size of the town, the improved style of the newer buildings, and the evident attention paid to comfort and stability in their arrangement and construction, indicating the growing wealth of the inhabitants, and their confidence in the progress of the town.

Its business facilities have lately been much improved by the construction of two substantial wharves which afford ample accommodation for all shipping which visit the port.

3. I met Captain Grant, R.E., at Douglas, who reports very favourably of the progress of the detachment of Royal Engineers and civilian labourers employed under his command in forming the waggon road from Douglas to the lesser Lilooett Lake, which he expects to finish before the close of summer.

4. Our steamer having a full cargo on board was detained at Douglas in landing goods from the hour of her arrival at six o'clock in the evening, till four the following morning, when she was again under weigh steaming full power in the direction of Hope, and arrived there at nine o'clock the same evening, the distance being 90 miles, during 40 miles of which she had to stem the current of Fraser River, now almost at its greatest force and height.

5. At a public meeting of the inhabitants of Hope, held soon after my arrival there, I entered into an exposition of the state and prospects of the country, and more particularly directed the attention of the meeting to the importance of opening lines of road without delay, into various parts of the country, but especially a line leading into the valley of the Shimilkomeen, and showing that the immediate and direct effect to the

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country would be a vast reduction in the cost of transport, and a great accession of trade to the town and district of Hope.

6. The valley of the Shimilkomeen has many attractive features, no part of British Columbia being more beautiful as a country, or offering greater inducements to settlers.

The whole of that district is watered by running streams, possesses a great deal of arable land, and is diversified by woodland and meadow.

The climate is pleasant and healthy, the winters mild, and the capabilities of the district for raising and pasturing stock are very great.

There is, moreover, satisfactory evidence that the rivers and soil are auriferous, and that gold will become a chief article of export and source of wealth.

The settlement of that fine district has been retarded by want of roads, and there is no doubt that people will flock thither as soon as it is accessible to travel.

7. A cutting of 60 miles through the mountains will connect it with the town of Hope. I entreated the meeting to give the subject their earnest attention, and to recommend such financial measures as might raise the funds requisite for carrying that great work into effect.

The people cordially agreed with the views expressed, and promised their hearty aid and support in providing money for the occasion.

8. The day following I called a meeting of the miners in the Hope district, and in the course of a long interview ascertained that they had no grievances to lay before me, and that they were satisfied with the existing "Gold Fields Act." I spoke to them about the probable existence of gold in Shimilkomeen, and recommended that they should at once form a party, selected by themselves, and composed of experienced miners, and of men on whose energy and judgment they could rely, to prospect the Shimilkomeen country, and I agreed on the part of the Government to furnish the party with food, and to allow a bonus of 4*l.* sterling in money to each of the men employed in prospecting, provided they succeeded in finding gold.

The proposal was received with evident marks of satisfaction by the whole company of miners, and they proceeded at once to select a party of nine men, out of a large number of those present who volunteered for the service; and this choice band will start in a few days time, or as soon as the freshets, which now fill the rivers to overflowing, have somewhat abated, and travelling becomes a less dangerous undertaking.

9. The despatch of a party to reopen and improve the road leading direct from Hope to Quayome, or Boston Bar, was at once undertaken and carried into effect, but the improvement of the other routes is left for the present and cannot be undertaken until my return from Yale, when I will report further.

10. I annex a return exhibiting the average number of miners employed on the several bars of the Hope District, together with the average earnings of each man per diem, which I have no doubt will be interesting to your Grace.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

Encl. in No. 6.

Enclosure in No. 6.

AVERAGE NUMBER of MINERS employed on the several Bars in the Fort Hope District, viz., from Victoria to Hudson Bar.

Names of Bars.	Average No. of Miner's employed.	Average per diem earnings of each Man.
Victoria Bar - - -	40	3 to 5 dollars.
Puget Sound Bar - - -	50	3 to 5 „
French „ - -	15	10 to 12 „
Trafalgar „ - - -	9	5 to 7 „
Maria Ville „ - -	10	4 „
Union „ - - -	20	4 to 5 „
Cornish „ - -	15	3 to 4 „
Prospect „ - - -	6	4 „
Blue Nose „ - -	8	4 „
Hudson „ - - -	30	8 to 10 „
Total - -	203	

(Signed) P. O. REILLY,
Acting Gold Commissioner.

Fort Hope, June 9, 1860.

No. 7.

Copy of DESPATCH from Governor Douglas, C.B., to his Grace the Duke of Newcastle.

(Separate.) Victoria, Vancouver Island, July 6, 1860.

My Lord Duke, (Received August 22, 1860.)

Continuing our progress from Hope, from whence I last addressed your Grace, on the morning of the 6th June, we arrived at Yale in the afternoon of the same day.

2. A deputation of the inhabitants, bearing a congratulatory Address, waited upon me almost immediately after my arrival, and I took that opportunity of stating that I had been induced to visit Yale on that occasion chiefly by the desire of conferring with them on the highly important subject of improving, and, wherever necessary, altering the line of the present trail leading from Yale to Lytton, with the view of reducing the expense of transport, and rendering the country beyond the mountains accessible to intending settlers.

3. I drew their attention to the fact that the cost of transport by the existing mountain trail between Yale and Lytton, a distance of 80 miles, exceeded 76*l.* sterling a ton, a charge which the gold miner, by reason of his large earnings and limited wants, might possibly contrive to meet, but it was evident that until the cost of transport be greatly reduced, settlers, with their multiform wants, would be involved in ruinous expenses, and in fact virtually excluded from the interior of the country, which might, for want of such facilities of communication as I proposed to form, remain a desert for years to come.

I also remarked how nearly impossible it was, by any conveyance practicable on those trails, for the settler to transport the implements indispensable for bringing the land into cultivation.

4. I therefore recommended that the inhabitants of the town should forthwith hold a meeting for the purpose of choosing a temporary council of five members to concert measures with me for raising the funds requisite for carrying on that important enterprise, which must necessarily confer the most signal benefits on the country at large, and so greatly promote the individual interests of the people of Yale.

5. I then suggested that the money required for that service should be raised by means of an inland duty of one farthing a pound, to be charged after the completion of the road on the weight of all goods leaving Yale for any inland part above and beyond that place, and that in the meantime the outlay should be met by an issue of Colonial Bonds, bearing interest at six per cent. per annum, to be repaid at fixed periods from the revenues so created.

6. In continuation of that subject I may remark for your Grace's information, that a Town Council of five members was subsequently chosen by the inhabitants of Yale, who, on behalf of their fellow citizens, presented a petition recommending that the proposed duty of one farthing a pound should be charged on all goods carried inland from Yale, and that the revenues derived from that source should be applied to the redemption of the bonds issued in payment of the work done on the roads, and also praying that a uniform rate of duty should be levied on all goods carried inland from Hope and Douglas, in order that no one route should have any preference or decided advantage over the others.

7. The inland exports from Yale are estimated at 50 tons a week, or 2,600 tons per annum; the proposed duty, equivalent to 2*l.* 4*s.* 9*d.* a ton, should therefore yield an annual revenue of 6,500*l.* sterling, without taking into account the progressive increase of trade and population; that sum will thus, at the most moderate computation, form an ample fund for the redemption of the bonds, and payment of the interest accruing thereon; and the country will be largely repaid for the immediate outlay by a direct saving of fivepence a pound weight, or 46*l.* 13*s.* 4*d.* sterling a ton, which it is estimated will be effected in the cost of transport from Yale to Lytton by opening the new line of road, as well as from many other sources of prosperity and wealth that the improvement of roads will bring into play.

8. Having thus provided the means of executing our plans, the Chief Commissioner of Lands and Works was authorized to proceed immediately in carrying them into effect.

Two portions of the new line of road from Yale to Spuzzem are now in progress, and a third portion between Chapman's and Boston Bar is about being surveyed in hopes of discovering some line which may avoid the circuitous direction and the mountainous

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district through which the mule trail now passes, whereby the actual distance is greatly increased, while the route is in winter rendered altogether impassable by the great depth of snow.

9. I beg herewith to forward for your Grace's information the substance of a short address,* which, previous to my departure, I delivered to the people of Yale, complimenting them for their public spirit, and thanking them for the cordial manner in which they had responded to my proposals for promoting the improvement of the country.

10. The inhabitants of Hope, to which place I returned on the 15th June, were equally liberal in their views, and also drew up a petition in favour of an inland duty equivalent to that to be levied at Yale, on all goods carried overland from Hope, which will provide funds for improving the road to "Quayome," or Boston Bar, and opening a new route by the "Callomme" River into the "Shimilkomeen" valley, a distance of 60 miles, the expense of which on the scale proposed will not exceed four thousand pounds sterling.

11. I herewith transmit for your Grace's information a sketch map* of part of British Columbia, showing the proposed lines of road mentioned in this report, together with the roads before completed, and others strongly recommended by the Commissioner of Lands and Works, and which will no doubt greatly facilitate and promote the settlement of the country.

12. I am happy to inform your Grace that the reports from all the mining districts continue to be of the most favourable character. Mining is no longer a speculation; it is becoming a business yielding an appreciable and certain return, and every day is extending our knowledge of the gold deposits.

13. Our latest accounts represent that 600 white miners were successfully employed on Quesnelle river, earning from 10 to 25 dollars a day. The spring freshets had driven them away from their claims in the beds of the rivers, and they had commenced operations on the hills and ravines, which have turned out to be highly auriferous. Several pieces of gold, varying from six to eight ounces, have been found in those new diggings, and the gold produced has a rougher surface and is in larger pieces than that found in the country west of Lytton.

14. About 1,000 white miners are working on Fraser river, between Alexandria and Lytton, and about 4,000 Chinese miners are employed in the various districts of the colony.

15. In my next excursion to British Columbia I propose to devote my attention to the Harrison River district, where the land communications are being rapidly improved, and two small steamers, soon to be increased by a third, are in full operation on the lakes.

16. I trust Her Majesty's Government will approve of the measures herein detailed for removing the impediments of access to the country, and the issue of bonds as a means of raising money for carrying on the work. The whole expense of those works will be defrayed out of the revenues of the country, derived, as I have before stated, from the duty on inland transport.

I feel assured that I have not overrated the resources of the country, and that they are equal to the emergency, and I believe that those resources will be more or less largely developed just in proportion to the degree in which those difficulties of access are removed.

I have, &c.
(Signed) JAMES DOUGLAS.

His Grace the Duke of Newcastle,
&c. &c. &c.

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* Not printed.

No. 8.

Copy of DESPATCH from Governor Douglas, C.B., to his Grace the Duke of Newcastle.

(No. 70.)

Victoria, Vancouver Island, August 3, 1860.

My Lord Duke, (Received September 27, 1860.)

I have the honour of transmitting herewith, for your Grace's information, copy of a letter from Mr. O'Reilly, the magistrate at Hope, with enclosure, being the first report received from the party of gold miners sent out from that place, as stated to your Grace in paragraph 8 of my Despatch of the 5th June, marked "Separate."* * Page 9.

2. This report, though not conclusive as to the general character of the country, yet speaks very favourably of those parts examined.

3. The quality and value of the specimens of gold alluded to in the above report have been estimated by a practical assayer here, as follows:—

No. 1.	Weight	about 5 grains.
	Quality	860 thousandths fine.
	Value	9 pence.
No. 2.	Quality	860 thousandths fine.
	Value	22 pence.
	Weight	about 12 grains.

from which an inference may be drawn greatly in favour of the Shimilkameen as a mining district.

4. A new gold district is also said to have been discovered in the southern part of British Columbia, at York Creek, a tributary falling into the Kettle-fall River near the 49 parallel, and 400 miners, chiefly from Oregon, were reported to be engaged in working that field, and making wages from 15 or 20 up to as high as 100 dollars a day. It is anticipated that there will be a great rush of miners to that part of the country, and, if so, food will be required in large quantities, which will lead to a great increase of trade, and to the formation of new settlements in that part of the Colony by reason of this additional attraction.

5. The importance of directing the supply of provisions for this region by way of Hope is thus greatly increased, and an additional motive supplied for opening the road between Hope and Shimilkameen, which is being at the present moment vigorously carried on, and thus preventing the trade from taking the course of the Columbia River to Oregon.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c. (Signed) JAMES DOUGLAS.

Enclosure in No. 8.

Encl. in No. 8.

Sir, Fort Hope, July 31, 1860.

I have the honour to enclose, for His Excellency's information, a letter just received from Mr. Allison, one of the party selected to proceed to the Shimilkomeen, for the purpose of exploring that district.

I shall endeavour to send them to-day a small quantity of provisions, to enable them to prosecute further their exploration.

As the steamer is about to start, I have not time to write at greater length.

I have, &c.

W. A. G. Young, Esq. (Signed) P. O'Reilly, J. P.

Sub-Enclosure.

Sub-Enclosure.

Sir, Shimilkomeen River, July 27, 1860.

I send in the two Indians to-day, they have worked for us nineteen days, at one dollar per day. I suppose they will expect to be paid for the time they are returning; my agreement with them was to pay them one dollar per day or $30 per month. We have prospected the country in this locality to the best of our ability for the time we have been out, and have found diggings that will pay five or six dollars a day with a rocker. I think as the river falls, much richer deposits will be found. I have not the least doubt but we could find good bench diggings (if we had time), that would pay well for sluicing; we have prospected twelve miles up the south fork, which I think is the main source of the gold in this locality. The little package No. 1† was the result of the washing of two pans‡ of dirt taken from a point of bed rock that just projected above the water. I also found dirt on the bank near the same locality that prospected three or four cents to the pan.

† About 5 grains.

‡ The pan contains about 2 quarts of earth.

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* Weight, about 12 grains.

Package No. 2* was the result of the washing of a few buckets of dirt in a rocker we have made for prospecting (rather a rough machine, made with an axe, and this the first washing); this was taken out a little below the junction of the south forks on the main river. All the surface of the country in this locality is a gravel deposit, and I have got very good prospects in banks of from 50 to 75 feet high. I think some of them will pay to work with a hydraulic.

It is singular that in all my prospecting I have not yet seen a quartz vein, although gold is distributed all over the country; this is one reason why I should like to penetrate further into the mountains. I think there must be quartz veins at the head of the streams, and that coarser gold will be found: the Indians report coarse gold high in the mountains, but I do not place any dependence in their reports.

I think this fall, at low water, rich deposits will be found in the bed of the streams; the rivers are rapidly falling, and the chances of striking good deposits improving every day. We shall be obliged to break up our company in a few days if we do not receive supplies from Hope. If I can purchase a horse at a reasonable price I shall return to Hope immediately, and make fuller reports of our prospecting, if not, I shall probably go down the Shimilkomeen.

Your obedient servant,

P. O'Reilly, Esq. (Signed) J. F. ALLISON.

No. 9.

No. 9.

COPY of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE.

(No. 72.) Victoria, Vancouver Island, August 4, 1860.

(Received September 27, 1860.)

(Answered, No. 56, October 26, 1860, page 67.)

MY LORD DUKE,

† Page 66.

I HAVE the honour to acknowledge the receipt of your Grace's Despatch, No. 26,† of the 19th of May 1860, on the subject of the grants of endowments in land to the clergy of the principal Christian communities established in British Columbia; and I learn with satisfaction that your Grace has been pleased to sanction the grants already made of about one acre each, and also to approve of a similar grant under similar circumstances in all towns in British Columbia; and I will take care that your Grace's suggestion as to the precautions necessary in the appropriation and conveyance of the land is not disregarded.

I observe and admit the force of the reasons which have induced your Grace to withhold the sanction of Her Majesty's Government to my further proposal that free grants of 100 acres of rural land should be made in aid of every cure established in British Columbia, and not otherwise supported at the public expense.

Your Grace will perhaps permit me to remark with reference to my recommendation of that measure, that I was desirous by it of holding out inducements to educated and respectable clergymen to take up their residence in the Colony, and of contributing in a small degree towards their decent maintenance and support; I, in fact, regarded it as an easy and inexpensive means of providing a fund which would materially and increasingly tend to the advancement and support of religion, without putting the Colony to any serious expense.

I did not view the proposed endowment as a sufficient or exclusive means of support; it was considered in my scheme only as an attractive inducement and important aid for religious bodies and clergymen, who perhaps, having a certain amount of private means or of funds drawn from other sources at their disposal, might by the prospect of that additional aid be induced to assume pastoral charge, and to found cures. When the good work was well begun, I trusted to the effect of voluntary contributions to complete the fund necessary for the support of the incumbent and for church extension throughout the Colony.

The circumstances of British Columbia, as your Grace is aware, are very peculiar: had the Colony been settled by a population drawn from the mother country, holding the same religious views, and appreciating Christian privileges and instruction, there would have been less cause for anxiety about the support of religion.

Bodies of Christian settlers, however poor, might reasonably be expected to unite in contributing, according to their means, to secure the advantage of having a Christian pastor resident among them.

But unfortunately the state of British Columbia is such as precludes the probability of such a desideratum; its population is made up of drafts from many nations, dissimilar in language, and totally disagreeing in their religious views; and it will, I fear, be many years before Christian congregations of any denomination will be found capable of supporting their own pastors.

It is for that reason that the Colony so urgently needs the fostering care of Government, for without its aid the country may remain unprovided with churches and destitute of Christian teachers for an indefinite period of time.

I hope it will not be supposed from anything herein stated that I am pressing this matter with an earnestness beyond its merits. I have merely addressed your Grace under a profound sense of one of the wants felt by the Colony, and for which I have no other means of providing.

* * * * * * * * *

I feel, in fact, that this is a subject demanding my closest attention, and to which I am particularly directed by Her Majesty's instructions, which enjoin that I should take especial care that Almighty God be devoutly served, and that orthodox churches be built, and well and orderly kept.

Should it still appear to Her Majesty's Government that the peculiar circumstances of the Colony do not warrant a reconsideration of your decision in respect to the proposed endowment, I trust your Grace will authorize me to substitute a money equivalent out of the Colonial Revenues, or to make some other provision calculated to advance and support the cause of religion.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

No. 10.

COPY of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE.

(No. 74.)

Victoria, Vancouver Island, August 4, 1860.

MY LORD DUKE, (Received September 27, 1860.)

I HAVE the honour of transmitting herewith, for Her Majesty's approval, the copy of a Proclamation entitled "The New Westminster Municipal Council Act, 1860."

2. This is the Act which I had the honour of reporting to your Grace in my Despatch marked "separate," and dated New Westminster, the 23rd of May 1860.* * Page 6.

3. It provides for the election of a Municipal Council invested with power to raise money by assessment on all town lots, and erections thereon, situated within the limits of New Westminster, and authorizes them to expend that money in the formation of streets, and in providing for the health, comfort, and security of the inhabitants.

4. The Municipal Council is to consist of seven members, being British subjects, and each being possessed of a property qualification of fifty pounds; and all ratepayers are entitled to vote in the election of Councillors.

5. The Council can levy such rates only as are approved of by the majority of all the ratepayers and by the Governor for the time being. In the same manner all bye-laws passed by the Council must be confirmed by the Governor for the time being, before they have the force of law.

6. The compulsory clause requiring lot-holders to cut down the standing trees, except such as may be reserved on any lot for ornament, was introduced into the Act at the request of the people themselves, who represented that there was no security for their property, which was in perpetual danger of being destroyed either by the falling of trees or by their conflagration, as long as any part of the forest within the inhabited portion of the town remains.

7. The clause has also merits of another kind; it will have the effect of inducing holders of lots, whether resident or not, to improve their property, and thereby benefit the town.

8. The Act has been prepared with much care and consideration by the Attorney-General, and will, I trust, be productive of much good.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

BRITISH COLUMBIA.

Encl. in No. 10.

Enclosure in No. 10.

(No. 20.)

British Columbia.

PROCLAMATION.

By his Excellency JAMES DOUGLAS, Companion of the most Honourable Order of the Bath, Governor and Commander-in-Chief of Her Majesty's Colony of British Columbia and its dependencies, Vice-Admiral of the same.

PROCLAMATION having the force of Law in Her Majesty's Colony of British Columbia.

WHEREAS, by virtue of an Act of Parliament made and passed in the 21st and 22nd years of the reign of Her most Gracious Majesty the Queen, and by a Commission under the Great Seal of the United Kingdom of Great Britain and Ireland, in conformity therewith, I, James Douglas, Governor of the Colony of British Columbia, have been authorized by proclamation issued under the Public Seal of the said Colony, to make laws, institutions, and ordinances for the peace and good government of the same; and

Whereas it is expedient to establish a Municipal Council in the city of New Westminster:

Now, therefore, I, James Douglas, Governor of British Columbia, by virtue of the authority aforesaid, do proclaim, order, and enact,

1. That from and after the date of this proclamation the tract of land specified in the first part of the Schedule hereto shall be deemed for the purposes of this proclamation the city of New Westminster.

2. The said city shall be divided into four wards, called respectively: Number One Ward, Number Two Ward, Number Three Ward, and Number Four Ward.

The Number One Ward shall include the tract of land specified in the second part of the said Schedule. The Number Two Ward shall include the tract of land specified in the third part of the said Schedule. The Number Three Ward shall include the tract of land specified in the fourth part of the said Schedule, and the Number Four Ward shall include the tract of land specified in the fifth part of the said Schedule.

The Municipal Council.

3. The Municipal Council shall consist of seven councillors possessed of the qualifications and subject to none of the disqualifications herein-after specified.

Qualifications.

4. Being a male British subject of full age.

Having resided in the city of New Westminster for a space of three calendar months previous to election.

Being seised or possessed in his own right in fee simple of a town lot or part of a town lot in the city of New Westminster of the market value of not less than fifty pounds sterling.

Disqualifications.

5. Being a minister of any religious denomination.

Being a sheriff or sheriff's officer, or returning officer under this proclamation.

Being a bankrupt, insolvent debtor, or outlaw, or having been convicted of any felony.

Having taken the oath of allegiance to or having become the subject or citizen of any foreign state or nation, or having forsworn or declared his intention of forswearing his allegiance to Her Majesty or Her successors, unless he shall have taken the oath of allegiance to Her Majesty and Her successors before the Judge of the Supreme Court of Civil Justice of British Columbia three months at least before the time of election.

Having directly or indirectly any contract with the Municipal Council.

Election of Councillors.

6. The persons possessed of the qualifications and under none of the disqualifications herein-after mentioned concerning electors of the said Municipal Council shall have one vote a-piece in the election of a councillor or councillors for the ward wherein he has a property qualification; but he shall only vote once in the same ward, and may either split his vote between the candidates if more than one, or vote for one only; and if he shall vote for one only, his vote shall only count one.

7. There shall be elected in Number One Ward one councillor, in Number Two Ward three councillors, in Number Three Ward two councillors, and in Number Four Ward one councillor respectively.

8. The candidate or candidates, as the case may be, in each ward (duly qualified) who shall obtain the greatest number of votes in the ward for which he or they may stand shall be councillors.

Open Voting.

9. The voting for councillors shall be open, and no person shall vote by proxy.

Duration of Office of Councillors.

10. The councillors shall be elected for one year only. Provided always, that if any of the councillors, or any person on his or their behalf, or any person in partnership with him or them, shall enter into or obtain any interest directly or indirectly in any contract entered into by or with the

Municipal Council, such councillor shall immediately resign his councillorship. Provided always, that if any councillor shall vote at any meeting of the Council, or shall not resign his office as aforesaid within the space of one calendar month from the time when he shall have entered into or obtained any interest in any such contract as aforesaid, such councillor shall forfeit to the Municipal Council a sum of 50*l.*, which said sum may be recovered by action to be brought in the name of the "Municipal Council of the city of New Westminster."

Time of Election of Councillors.

11. The nomination shall be on the 6th day of August in each year, and the election day on the 7th day of August in each year; and if either of the said days shall fall on a Sunday, the nomination or poll, as the case may be, shall be holden on the next day.

Place of Voting.

12. The voting shall take place in such place in the city of New Westminster as the Chief Inspector of Police for the time being of British Columbia shall appoint, and such person, or in his absence, such person as the Governor shall appoint, shall for the purpose of this proclamation be the returning officer.

13. The returning officer shall, on the 25th day of July in each year, make out a list of qualified voters, and such list shall be final and conclusive.

The returning officer shall give at least seven days' public notice of the place of voting.

Qualification of Voters.

14. Being a male of full age.

Being, at the time of tendering his vote aforesaid, placed on the list of voters. Provided always, that at the first election of councillors, which shall be holden at New Westminster, the voters shall be such male persons of full age as shall, being owners or lessees of a town lot or part of a town lot in New Westminster aforesaid, be placed upon the list of voters for that purpose by the Chief Inspector of Police of British Columbia aforesaid, who is hereby authorized to make up such list of voters and to take such measures for that purpose as he may think proper.

Disqualification of Voters.

15. Being a sheriff, or a sheriff's officer, or returning officer.

Being a bankrupt, insolvent debtor, or outlaw, or having been convicted for felony.

16. Every person tendering his vote at any election of a councillor shall, before voting, take such of the following oaths as he may be required by some other duly qualified voter.

I.—I, *A. B.*, do hereby swear that I am the same *A. B.* who is mentioned on the list of voters, and that I am now in my own right possessed of or tenant of (statement of qualification), in respect of which I have been entered on the (list of voters or assessment roll, as the case may be).

II.—I, *A. B.*, do hereby solemnly swear that I have not received or been promised, or to my knowledge has any other person on my behalf or for my benefit received or been promised, any money, gift, advantage, place, or consideration for or for the purpose of influencing the vote which I now tender.

Nomination and Poll.

17. The returning officer shall, on the day of nomination, nominate such persons as shall present themselves before him, or who shall be put in nomination in their behalf by some duly qualified voter, as candidates for the office of councillor. A show of hands shall then take place, and the returning officer shall thereupon declare which of the candidates has or have been elected by the show of hands.

Any candidate may demand a poll, which shall be taken on the day of election, and the returning officer shall immediately after the close of the poll declare who has or have been elected by the greatest number of votes.

18. The poll shall be kept open between the hours of eleven o'clock a.m. and four o'clock p.m.

President of the Council.

19. The councillor who shall be elected by the majority of the Council shall preside at each meeting of the Council, and in case of the death, bankruptcy, insolvency, resignation, or permanent absence of such president, another councillor shall be elected the president.

Vacancies in the Council.

20. In case of the death, bankruptcy, insolvency, resignation, or permanent absence from the city of New Westminster, for the space of three calendar months, of any councillor, the president of the Council shall, by writing, call upon the returning officer to cause some duly qualified person to be elected in the stead of the vacating councillor, by some day not sooner than 21 days from the date of the said notice, and such election shall take place accordingly, and such councillor shall act for the residue of the term for which such councillor so dead, bankrupt, insolvent, absent, or resigned would have held the same.

Custody of Poll Books.

21. The returning officer shall, within forty-eight hours after the declaration of the poll, deliver over the poll books to the stipendiary magistrate of New Westminster.

22. Any person may obtain a certified copy of the poll books from the stipendiary magistrate aforesaid upon payment of one shilling per folio.

Validity of Elections.

23. The validity of all elections shall be tried by the returning officer aforesaid for the time being, and his decisions thereon shall be final.

Proceedings of the Council.

24. All acts whatsoever authorized or required by virtue of this proclamation to be done by the Council, and all questions of adjournment, or others, that may come before the Council, may (save as herein-after excepted), be done and decided by the majority of the members of the Council who shall be present at any meeting held in pursuance of this proclamation, the whole number of members present at such meeting not being less than four; and at such meeting the president of the Council, if present, shall preside, and the president, or, in the absence of the president, such councillor as the members of Council then assembled shall choose to be the chairman of that meeting, shall have a second or casting vote in all cases of equality of voters; and minutes of the proceedings of all such meetings shall be drawn up and fairly entered into a book to be kept for that purpose, and shall be signed by the president or councillor presiding at such meeting; and the said minutes shall be open to the inspection of any person, who may also make copies thereof and extracts therefrom, at all reasonable times, on payment of a fee of one shilling.

25. Previous to any meeting of the Council, a notice of the time and place of such intended meeting shall be given three clear days at least before such meeting, by fixing a copy of the said notice on the door of the place of meeting, on the door of the magistrates' court, and on the door of the Post Office, and such notice shall be signed by the president of the Council, who shall have power to call a meeting of the Council as often as he shall think proper; and in case the president shall refuse to call any such meeting after a requisition for that purpose, signed by three members of the Council at the least, shall have been presented to him, it shall be lawful for the said three members to call a meeting of the Council, by giving such notice as is herein-after declared in that behalf, such notice to be signed by the said members, instead of the president, and stating therein the business proposed to be transacted at such meeting; and in every case a summons to attend the Council, specifying the business proposed to be transacted at such meeting, signed by the president or members, as the case may be, shall be left at the usual place of abode of every member of the Council, or at the premises in respect of which he is placed on the municipal assessment roll, three clear days at least before such meeting, and no business shall be transacted at that meeting other than the business which is specified in the notice. Provided, however, that there shall be four quarterly meetings in every year, at which the Council shall meet for the transaction of general business, and no notice shall be required of the business on such quarterly days; and the said quarterly meetings shall be holden at noon, on the 15th day of August, or, if the 15th day of August shall fall on a Sunday, then on the 16th day of August, and upon such other three days as the Council at the quarterly meeting on the 15th day of August shall decide.

26. The Council may, out of their own body, from time to time appoint such and so many Committees, either of a general or special nature, and consisting of such members as they may think fit, for any purpose which, in the discretion of the Council, would be better regulated and managed by means of such Committee. Provided always, that the acts of every such Committee shall be submitted to the Council for their approval.

27. The Council shall determine their own place of meeting.

Powers of the Council.

28. The Council shall have power to pass bye-laws for any of the following purposes:—

I. To regulate the sanitary condition of the said city.

II. To regulate the markets situate within the said city.

III. To provide means for the preservation of the said city from fire, and to regulate all matters affecting the liability of the said city to fire.

IV. To provide for the prevention and removal of nuisances.

V. To regulate the introduction of diseased and unhealthy meat, and to provide for the inspection of the same.

29. The Council shall also have power, by a resolution passed as herein-after mentioned, to devote any portion of the monies raised by the assessments herein-after mentioned to any of the following purposes:—

A. The construction, erection, maintenance, and repair of the streets, ways, footpaths, and bridges situate within the said city.

B. The drainage and sewerage of the said city.

C. The improvement of the sanitary condition of the said city.

D. The clearing of the lots situate within the said city.

30. Every bye-law shall be passed by the vote of at least four members of the Council, and at a meeting where at least five members of the Council shall be present. The bye-law passed by the said

Council shall, when confirmed by the Governor for the time being of British Columbia, have the force of law.

31. The penalty by which any bye-law may be sought to be enforced may be stated in the bye-law, and if no penalty is therein mentioned, the breach of any bye-law shall be punished in a summary way by a fine not exceeding 10*l.*, or by imprisonment for any time not exceeding three months, at the discretion of the magistrate before whom the offender may be brought. The magistrate before whom any offender may be brought, may, in case of a fine, adjudge that such offender shall pay the same either immediately or within such period, or by such instalments as the said magistrate shall think fit; and in case such sum of money shall not be paid at the time so appointed, the same shall be levied by distress or sale of the goods and chattels of the offender, and for want of a sufficient distress, such offender may be imprisoned, with or without hard labour, in the common gaol, for any term not exceeding three months, or for the period mentioned in the bye-law, as the case may be. The imprisonment to cease, if for default, upon payment of the fine and costs.

32. The Council may, by a resolution passed in manner provided for the passage of a bye-law, devote any portion of the municipal funds, not exceeding in the whole for any one year one-third of the municipal revenue, towards defraying the ordinary expenditure of the Council, in the conduct of its general business, and to any of the purposes in respect whereof the Council is empowered to pass bye-laws.

33. Provided always, that the Council shall have no power to incur any personal liability other than a liability for the misapplication of the municipal revenue, or any liability against the municipality, or the revenue thereof, beyond the municipal revenue of the city for the current year.

34. The Council may, by a bye-law passed and confirmed as aforesaid, direct that a tax be levied on all town lots within the said city, and all erections thereon, other than the property of the Government, not to exceed 2*l.* in the 100*l.* on the value of such town lots and erections as aforesaid. Such value to be assessed as herein-after mentioned.

Provided always, that such tax shall not extend over or be levied for a longer time than the financial year in which the same is authorized to be levied by any bye-law aforesaid.

35. The Council may, if called on so to do as herein-after mentioned by a bye-law passed and confirmed as aforesaid, direct the levy of a further rate, not exceeding 5*l.* in the 100*l.* on the value aforesaid, in addition to the rate lastly herein-before mentioned, and to continue for the same period; provided always, that such further rate shall not be levied until a requisition to that effect shall have been made in writing by a majority of the ratepayers on the assessment roll. Such further rate to be of the amount specified in such requisition.

Assessment Roll.

36. An assessment roll shall on such day in each year as the Council shall appoint be prepared by or on behalf of the Council, and the freehold and leasehold property situate within the said city shall be therein specified, together with the names of the persons occupying the same and the names of the persons owning the same.

An assessor shall be appointed for the purpose of making such assessment by the Council, and the said assessor shall make such assessment according to the actual value of the property at the time of such assessment, and lay the same before the Council within fourteen days from the said day of assessment. The assessment shall be made as well on the leasehold interest of every lessee of any portion of a lot as upon the freehold interest of the same lot. Any person so assessed may, if he feels himself aggrieved by the assessment, appeal to the Council, who shall summarily decide thereon.

The decision of the Council shall be final. The Council may, in addition to the bye-laws which they are authorized to make as aforesaid, make bye-laws providing for the manner in which such appeal may be conducted. Such bye-law to be passed and confirmed, and to have the force aforesaid.

In the event of nonpayment by any person of any rate or tax duly imposed by the Council, the same may be levied by the magistrate of the said city, by distress on the goods and chattels of the person liable to pay the same, and in default of a sufficient distress by sale of the lot, or portion of a lot, together with the erections aforesaid, in respect of which such rates or tax shall have been imposed, within 30 days from the day on which such payment ought to have been made, and such sale shall be made in manner provided for the sale of lots in clause 37, and such sale shall have exactly the same effect as if made under such clause.

Clearing of Lots.

37. The Council may give notice to any persons, owners of town lots within the said city, by advertisement in the *Government Gazette* and local newspapers, to cut down, within any time to be mentioned in such notice, not being less than 30 days from the date of the insertion of such notice, all timber and other trees standing thereon, except such as may be reserved with the consent of the Council for ornament; and in case such notice be not complied with, the Council shall have power to cause the said timber and other trees to be cut down at the expense of the person or persons on whose lot the same may be, and if such person or persons do not, within 60 days after the timber or other trees shall have been cut down as aforesaid, defray such expense, the magistrate may adjudge that such person or persons shall pay the same, either immediately or within such period as the said magistrate shall think fit; and in case such sum of money shall not be paid at the time so appointed,

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the same shall be levied by sale of the lot upon which such timber or other trees shall have been so cut down as aforesaid, in manner herein-after mentioned.

Any sale so adjudged to be made as aforesaid shall be made upon the simple order of the magistrate in writing, upon such day and in such manner as the said magistrate may specify in such order, and the magistrate shall convey such lot to the purchaser at such sale, and the title of such purchaser shall be an absolute fee simple, notwithstanding any irregularity or informality in such sale, or in the proceedings prior thereto or subsequent thereon.

The magistrate aforesaid shall defray the expenses of and attendant upon the said sale, and such expenses for cutting down as aforesaid, out of the purchase monies arising from such sale, and shall pay the residue of such purchase monies into the Treasury of British Columbia, in trust for the person or persons to whom as real estate it may belong.

Provided always, that in no case shall the expense of clearing any lot so to be cleared as aforesaid exceed the sum of seven pounds sterling.

Provided, that unless the Council shall completely cut down the trees on any lot, no demand shall be made on the owner, nor shall any sale of any such lot be made under the provisions of this Proclamation.

38. This Proclamation may on all occasions be cited as the "New Westminster Municipal Council Act, 1860."

(L.S Issued under the Public Seal of the said Colony, at Victoria, Vancouver Island, this Sixteenth day of July, in the year of our Lord One thousand eight hundred and sixty, and in the Twenty-fourth year of Her Majesty's reign, by me,

(Signed) JAMES DOUGLAS.

By his Excellency's command.
WILLIAM A. G. YOUNG,
Acting Colonial Secretary.

SCHEDULE.

First Part.

All that tract of land now marked and laid out on the Official Map as the city of New Westminster.

Second Part.

All that tract of land which includes the pieces of ground described on the Official Map of the said city as Blocks 1, 2, 8, 9, 10, 11, 22, 23, and 28.

Third Part.

All that tract of land which includes the pieces of ground described on the Official Map of the said city as Blocks 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, and 17.

Fourth Part.

All that tract of land which includes the pieces of ground described on the Official Map of the said city as Blocks 24, 25, 26, 29, 30, and 31.

Fifth Part.

All that tract of land which includes the pieces of ground described on the Official Map of the said city as Blocks 18, 19, 20, 21, 27, 32, and 33.

No. 11.

No. 11.

COPY of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE.

(No. 76.)

Victoria, Vancouver Island, August 16, 1860.

MY LORD DUKE, (Received October 8, 1860.)

THE intelligence I had the honour to communicate to your Grace in my Despatch, No. 70,* of the 3rd instant, respecting the discovery of rich and paying gold fields at Rock Creek and in the Shimilkomeen country, have been confirmed by the arrival of different persons with samples which they themselves have dug in those parts.

* Page 13.

The gold is nuggety and of fine quality, being readily separated from the soil without the use of quicksilver, and is found away from the watercourses as well as in the river beds, and the miners are said to be realizing from six to 50 dollars a day to the man.

2. One instance of remarkable success is mentioned in the report of Mr. O'Reilly, the Gold Commissioner at Fort Hope, it being of two miners, who realized in six weeks by mining the sum of 1,300 dollars, and their confidence in the productiveness of the country was so great that they soon after invested the whole sum in the purchase of another claim.

3. In consequence of those reports there has been a great rush of people to the new diggings, and all articles of consumption are scarce and selling there at a high price.

4. The same report mentions the very important discovery of a silver lead at Union Bar near Fort Hope.

5. The specimens of the ore sent here appear rich and valuable, but it is impossible to predict without a severer test the actual value of the discovery, and whether the lead will be rich enough to pay the working expenses or not.

6. The discoverers, and upwards of 70 other persons who have recorded claims on the lead appear, however, to be much elated, and fully satisfied of its value; and they are said to be importing blasting tools and materials in large quantities, with the intention of turning the discovery to immediate account.

7. Several tons of the ore having already been sent to New Westminster for assay, and we will no doubt receive further reports of its value in the course of a few days.

8. Specimens of silver ore have also been found at the mouth of Harrison's River. One of these yielded on assay, at the rate of 20*l.* worth of silver to the ton of ore.

9. I propose to despatch a party to investigate the mineral resources of that part of the country, in hopes of making some valuable discovery, which may attract and afford employment to a population, as the whole country about Harrison Lake is otherwise valueless, being mountainous, rocky, and utterly unfit for tillage.

10. The tidings from Yale, Cayoosh, and Lytton are generally satisfactory.

11. The new roads are progressing apace, and the cost of transport is being gradually reduced with the increasing facilities of communication.

12. The number of miners collected about Alexandria and Quesnel River rendered it necessary for the maintenance of peace and order to form a police station at the former place; and I have to announce to your Grace that I have lately appointed Mr. Philip H. Nind, as Magistrate and Assistant Gold Commissioner for that district.

There being nothing further of an unusual nature to communicate,

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

No. 12. No. 12.

Copy of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE.

(No. 86.)

Victoria, Vancouver Island, October 8, 1860.

MY LORD DUKE, (Received November 30, 1860.)

HAVING very recently completed a rather protracted journey, exceeding five weeks of almost constant travelling, in British Columbia, I regret that there is not time to communicate to your Grace, by the mail of this day, now about leaving for San Francisco, the result of my observations on the character and prospects of that Colony.

2. On leaving Vancouver Island I proceeded by the northern, or Harrison River road to Douglas, and from thence successively visited Cayoosh, Lytton, Shimilkomeen, and Rock Creek. On my return I followed the mountain road to Hope, and afterwards paid a hasty visit to Yale and New Westminster.

3. The lately discovered gold district in Shimilkomeen is, for the time being, attached to the Hope district, a course which I was compelled to adopt for want of an efficient officer at that time to conduct the public business of the new district.

4. The fame of the rich diggings discovered at Rock Creek have drawn to that place, chiefly from the State of Oregon, upwards of 500 miners, and persons engaged in other pursuits. I therefore found it necessary to lose no time in making arrangements to maintain the peace and to protect the public revenue by the appointment of a Magistrate and Gold Commissioner for that district, together with other officers to enforce the Customs laws of the Colony, and that object was, I am happy to say, effected without creating any dissatisfaction among the foreign population there present.

British Columbia.

5. I am further glad to report that peace and good order exist everywhere within the Colony, and that a general and marked feeling of confidence is exhibited by the resident population in the resources of the country.

6. I shall endeavour to prepare a report of my late proceedings for your Grace's information, before the departure of the next mail.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

No. 13.

No. 13.

Copy of DESPATCH from Governor Douglas, C.B., to his Grace the Duke of Newcastle.

(Separate.)

Victoria, Vancouver Island, October 9, 1860.
(Received, December 18, 1860.)
(Answered, No. 66, February 1, 1861, page 68.)

My Lord Duke,

I have the honour to submit for your Grace's information the following particulars relative to a recent journey in British Columbia, from whence I have just returned.

2. I left Victoria by the regular steam packet on the evening of 28th of August, and early next day landed at New Westminster.

3. I heard with much concern on my arrival there, that the capital was suffering from one of those fluctuations in commerce common to all countries, and that there was much depression in business circles, and a marked decrease of trade, a fact which was indeed corroborated by the Customs returns, it appearing from them that the imports for the four previous weeks had fallen off about 25 per cent. as compared with the increasing ratio of the preceding month; a casualty generally attributed by business men to the growing overland trade with the possessions of the United States in Oregon and Washington territory, which now supply, by the southern frontiers of the Colony, a large proportion of the bulky articles, such as provisions and bread stuffs, consumed in the eastern districts of British Columbia; and those imports, it was supposed, had this year been for the most part fraudulently introduced, to the great loss and detriment of the home merchant and the fair trader.

4. It is, however, not easy to conceive how so extensive a contraband trade as this would imply, could be carried on without the knowledge of the vigilant officer stationed on the frontier for the protection of the revenue, whose official reports give no room for such impressions. I am therefore led to believe that the present depression is traceable to another cause, and may with more probability be regarded as the simple result of over-importation, and I have no doubt a revival will take place, and trade resume its accustomed tone as soon as the stocks of goods in the Colony have been reduced.

The officers of the Colony residing permanently at New Westminster, and employed in the management of the several departments of the public administration, are as follows:—

Military - -	Colonel R. C. Moody, R.E., commanding.
Lands and Works -	Colonel R. C. Moody, R.E., Chief Commissioner.
Judiciary - -	Matthew B. Begbie, Judge.
Police - - -	Chartres Brew, Chief Inspector.
Treasury - -	Captain W. D. Gosset, R.E., Treasurer.
,, Assay Office -	F. G. Claudet, Assayer.
,, ,,	C. A. Bacon, Melter.
Customs - -	Wymond Hamley, Collector.
Post Office - -	W. R. Spalding, Postmaster.

6. The Treasury was lately transferred from Victoria to New Westminster, where all the financial business of the Colony is now transacted.

The Assay Office has been in operation since the beginning of the month of August, and the last accounts of the 28th of that month give a return of 1,600 ounces of gold dust which had been smelted and run into bars of various weights.

Those and the other departments are in a state of efficient organization.

The public offices are plain substantial buildings, devoid of ornament, and constructed on a scale adapted to our limited means; they are nevertheless roomy and commodious, and on the whole not unsuitable to the present business of the Colony.

7. There has not been much activity in building since my report transmitted to your Grace in the month of May last, but town property nevertheless sustains its former price,

and the inhabitants of New Westminster appear to have unlimited confidence in the ultimate progress of the place.

8. The run from New Westminster to Douglas was effected by one of the river steamers in 16 hours, including brief stoppages at Langley and Carnarvon, and the whole distance from Victoria to Douglas in 24 running hours, being little over half the time occupied by the same journey last year. The charges on the transport of goods have also proportionately decreased, freights being now generally taken at 3*l.* 8*s.* a ton, or 25 per cent. less than the former rates.

9. While at Douglas I despatched an exploring party under the command of Dr. Forbes, of Her Majesty's ship "Topaze," for whose assistance I am indebted to the kindness of Rear Admiral Sir Robert L. Baynes, to examine the country bordering on Harrison Lake and River, where many fragments of silver and copper ore have been found. A specimen of the former, which was carefully assayed, gave a return of 50*l.* worth of silver to the ton. The copper ore appears also to contain a large proportion of that metal.

10. I am in hopes that Dr. Forbes's scientific researches will be productive of much good to the Colony, as the district subjected to his examination has all the characteristics of a mineral country, is almost destitute of arable land, and, except timber, possesses no ascertained natural products capable of contributing to the support or giving remunerative employment for labour. It is, therefore, especially desirable that no effort should be wanting for the early development of the minerals supposed to be contained in the soil, otherwise the district may, for years to come, remain a wilderness without inhabitants.

11. Douglas is still an inconsiderable town, much improved, however, since my former visit in June last. A Stipendiary Magistrate is stationed here, Mr. J. B. Gaggin, who also performs the duties of Gold Commissioner within the district, which extends from Carnarvon to Port Anderson. A brisk trade is carried on from Douglas with the mining districts of the interior, and the constant arrival and departure of trains of pack-mules give to the place a lively and bustling appearance.

12. We pursued our journey by the newly formed waggon road, then nearly finished, as far as the Lesser Lillooet Lake, 28 miles from Douglas, a work of magnitude and of the utmost public utility, which, I think it only right to inform your Grace, has been laid out and executed by Captain Grant and a detachment of Royal Engineers under his command with a degree of care and professional ability reflecting the highest credit on that active and indefatigable officer.

13. A number of waggons, imported by the enterprising merchants of Douglas, have commenced running on the new road, and the cost of transport has already been greatly reduced. I look forward with confidence to further important reductions in the rates of transport, as the most experienced carriers are of opinion that goods of all kinds may and will be carried the whole distance (100 miles) from Douglas to Cayoosh for 20*l.* a ton, which would be a reduction of 250 per cent. on former rates. The effect of so large a saving on the carriage of goods will be of vast importance to the country, and no doubt give a prodigious impulse to trade and the settlement of the public lands.

14. A row-boat is still the only means of conveyance over the Lesser Lillooet Lake, which is nearly five miles long, and one mile and a half distant from Lillooet Lake, with which it is, however, connected by a narrow river, full of shoals and dangerous rapids, perilous in their present state for any larger craft than Indian canoes. This circumstance renders a transhipment and a resort to land carriage for a mile and a half on an excellent road necessary before reaching Lillooet Lake. Various plans have been proposed for rendering the river between those lakes navigable, but, important as would be the improvement, the cost is altogether beyond our present means, and the work must be left for a future time.

15. A very fine piece of gold-bearing quartz, which I received at this point of my journey, determined me to instruct the District Gold Commissioner to cause the mountains west of Harrison River, where the quartz was found, to be carefully examined, as there is a possibility of discovering and turning to advantage the lead from whence it came.

16. There are many extensive quartz veins in the valley of the Harrison, but none of those which have been inspected contain visible traces of gold. The bed of the river, however, yields gold almost everywhere in small quantities; and at one place, 12 miles from Douglas, a party of French miners have brought in sluices, and are now working to great advantage, making as much as 10 dollars a day to the man. The only drawback is the shortness of the working season, which they represent as limited on the one hand by the flooded state of the river in summer, and on the other by the severe cold in winter, which is found to have the effect of preventing the amalgamation of the fine

particles of gold, and much is therefore lost in the process of washing. Their statements are, no doubt, in part true, but I think it may, notwithstanding, be safely concluded that all these difficulties will be overcome, and this part of the country be profitably worked, whenever men of greater skill and application turn their attention to the subject.

17. Some of the tributaries of the Harrison also yield a fair return of gold, varying from five to 10 dollars a day; but that will not satisfy men whose excited imaginations indulge in extravagant visions of wealth and fortune to be realized in remoter diggings. These all with one accord rush off to the Quesnel and Caribœuf countries, and neglect the less productive districts.

18. A number of fine specimens of coarse gold have lately been brought by Indians from the Lillooet River beyond the lake, and I shall not fail to have its course carefully searched, at the public expense, should no private adventurers in the meantime anticipate that intention.

19. The paddle-wheel 25 horse-power steamer "Martzell," a small boat of 50 tons burden, built by Mr. Decker, an enterprising American, conveyed my party in four hours to Port Pemberton, at the further extremity of Lillooet Lake. There is nothing to prevent vessels of a much larger class than the "Martzell" from running on this lake, as it is deep enough to float a 500 ton ship, and there are no rocks or concealed dangers whatever. It is, in fact, a highland lake, surrounded by lofty mountains rising abruptly from the water's edge. Port Pemberton is five miles distant from the Meadows, a fine tract of several thousand acres of rich alluvial land, situated at the mouth of the Lillooet River. A settlement is already formed at that attractive spot, and the soil is most productive, the settlers having raised this year excellent crops of oats, Indian corn, potatoes, and hay; the barley, however, was indifferent, in consequence it was supposed of imperfect tillage, but I never saw better garden-stuffs of all kinds, especially tomatoes and cucumbers, which were exceedingly fine. Mr. Jones, the oldest and principal settler, raised last year, as he assured me, a very fine crop of potatoes, for which he found a ready sale at 5*d.* a pound, and thereby realized the large return of upwards of 240*l.* an acre. Having this year a much larger crop, he expects to do better, though the price of vegetables is now comparatively moderate, being 50 per cent. lower than last year.

20. Near the settlement is an Indian reserve of several hundred acres of land which is retained for the benefit of and occupied by about 30 native families, who live on the most amicable terms with their white neighbours, and look healthy, clean, and altogether in very comfortable circumstances. They live by fishing, and on the produce of the chase, and of the land, which they cultivate, to some extent, with care and skill. They appear happy and contented, and had no complaint whatever to make.

21. The Horse-way, formed in the year 1858, is still the only road from Port Pemberton to Anderson Lake, the distance being about 34 miles. It is a fair and passable road of the kind, but must be improved into a cart-road without delay. The line of road runs between parallel ranges of mountains, rising on both sides with the unbroken regularity of a wall, into dark, rugged, and gloomy masses, thousands of feet above the mountain stream that traverses the valley beneath, which is in places a mere defile, and nowhere exceeds two miles in breadth.

The summit or half-way house is prettily situated on the mountain side overlooking a rich expanse of arable land covered with a profusion of potatoes, beets, carrots, tomatoes, cucumbers, and other vegetables; a certain proof of the great capabilities of the soil and climate. A large stock of hay was also carefully put up by the provident owner for winter use.

22. The country from that point presents a more cheerful aspect. The river winds along the mountain side towards Lake Anderson, affording lovely views of the exceedingly beautiful valley beneath, with its gay covering of bright green woods.

23. We arrived at Port Anderson just in time to participate in the trial trip of the "Lady of the Lake" steamer, and a most successful one it proved to be: the machinery working well, and no casualty whatever occurring to cause delay. We had to boat over Lake Seaton, as the steamer usually plying there was under repair. A walk of five miles from Port Seaton brought us to the banks of Fraser River, and to the mining town of Cayoosh.

24. The country between Douglas and Cayoosh probably contains a smaller proportion of agricultural land than any other district in British Columbia. The whole district may be truly described as a succession of valleys and mountains covered with woods almost to their rocky summits, and abounding in rivers and streams of every size. Forests of magnificent trees and great water-power constitute its natural advantages; its metalliferous resources, though probably vast, having yet to be explored.

25. Houses and fields begin, here and there, to break the cheerless solitude of the valleys; and in no instance that has come under my notice, has the husbandman been disappointed of his reward. Its genial climate may be inferred from the fact that tomatoes ripen in the open air, and had come to full maturity at the end of August; when melons raised in the same manner, were nearly fit for use.

26. The settlers, though few in number, were full of hope and confidence; pleased with the country, and satisfied from experience that the climate is one of the healthiest in the world. The winters are moderate, the minimum temperature being Zero, Fahrenheit; but the cold is seldom so severe. The lakes have never been known to freeze, nor the snow to lie so deep as to interrupt the ordinary traffic of the road.

27. The district is, in short, not wanting in any of those conditions which contribute to the comfort and happiness of man; and should the explorations now in progress add the precious metals to its known elements of wealth, there will be no want of inducements to attract and retain an industrious population.

28. As the road advances from Port Seaton towards Fraser River, a marked change is observed in the character of the country; the mountains are left behind, the massive forests gradually disappear and are succeeded by green hills and open plains, dotted with fine old trees of the species "Pinus Ponderosa." The change is grateful, the contrast bringing into bolder relief the charming scenery of Cayoosh, which is situated about half a mile from Fraser River.

29. This being the centre of a flourishing trade, where all goods brought from Douglas are necessarily deposited in their transit to the interior, and the chief town of a valuable mining district, a Stipendiary Magistrate, Mr. Thomas Elwyn, who also acts as Gold Commissioner, is stationed here. Successful attempts at cultivation have been made on a small scale near the town, and streams of water from the neighbouring hills have been skilfully diverted from their natural course and applied to the important purposes of mining, and of irrigating the soil, which thereby acquires a degree of fertility and productiveness otherwise unattainable in a climate seldom visited by summer showers. Cayoosh is thus a place of much real and prospective importance.

30. I found nothing defective in the state of the public administration. The people are satisfied with the laws. The district accounts appear to be kept with order and regularity, and returns of the local revenue have been duly made at proper intervals to the Colonial Treasurer. The regular establishment consists of a magistrate and one constable, who attend to all duties connected with the public service; the former being however, fully authorized to employ casual aid whenever emergencies arise.

31. An address which I received from the principal inhabitants of Cayoosh makes no allusion to any local grievance affecting the interests of the town or district, nor suggests any change in the mining or general laws of the country. The object of the address, of which a copy is transmitted, was to urge the early sale of town lots at Cayoosh, protection for the Chinese miners, and the removal of stake nets and all obstructions having the effect of preventing the ascent of salmon from the sea to the inland rivers.

32. I gave immediate attention to those matters, and addressed a communication to the Commissioner of Lands and Works, expressing regret that early measures had not been taken to meet the public demand for town land, as delay in such cases discourages settlement, checks improvement, and is ruinous to the country.

33. I encouraged the inhabitants to build, and improve their lots, with the assurance that the value of such improvements would be added to the upset price, and reserved for the benefit of the holder when the lots are sold. They will, in that way be fully protected from loss.

34. The assizes were opened by the Judge of British Columbia during my stay at Cayoosh, for the trial of two Indians charged with having murdered two Chinese miners. The facts were established on the admission of the accused themselves; but, it appearing from the evidence that the deceased were the aggressors, and had been slain without malice prepense, in a casual affray, arising out of an indecent assault committed on the wife of one of the Indians, the jury returned a verdict of "manslaughter" against one of the prisoners, and found the other "not guilty."

35. I had an opportunity of communicating personally with the native Indian tribes, who assembled in great numbers at Cayoosh during my stay. I made them clearly understand that Her Majesty's Government felt deeply interested in their welfare, and had sent instructions that they should be treated in all respects as Her Majesty's other subjects; and that the local magistrates would attend to their complaints, and guard them from wrong, provided they abandoned their own barbarous modes of retaliation, and appealed in all cases to the laws for relief and protection. I also forcibly impressed

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upon their minds that the same laws would not fail to punish offences committed by them against the persons or property of others.

I also explained to them that the magistrates had instructions to stake out, and reserve for their use and benefit, all their occupied village sites and cultivated fields and as much land in the vicinity of each as they could till, or was required for their support; and that they might freely exercise and enjoy the rights of fishing the lakes and rivers, and of hunting over all unoccupied Crown lands in the colony; and that on their becoming registered free miners they might dig and search for gold, and hold mining claims on the same terms precisely as other miners: in short, I strove to make them conscious that they were recognized members of the commonwealth, and that by good conduct they would acquire a certain status, and become respectable members of society. They were delighted with the idea, and expressed their gratitude in the warmest terms, assuring me of their boundless devotion and attachment to Her Majesty's person and crown, and their readiness to take up arms at any moment in defence of Her Majesty's dominion and rights.

36. Three exploratory parties were dispatched, during my stay, from Cayoosh: the first, under the charge of Sapper Duffie, had orders to examine a route by the Cayoosh River from Port Seaton to Lilloet Lake, reported by the natives to be more direct, and in many other respects more convenient than the present route by Anderson Lake; the second, under Sapper Breckenridge, who is directed to examine the character and capabilities of the country between Cayoosh and Bridge River; and the third, composed of Mr. Martin, an intelligent English miner, and two natives, was dispatched to the mountains east of Port Anderson to inspect certain quartz veins, said to be auriferous.

37. Lytton was the next stage in my progress. There is a good horse-way from Cayoosh, but travelling by the river being more expeditious, I chose that alternative, and made the run of 70 miles in five and a half hours. The stream is swift, and a number of dangerous rapids render it in that part impracticable in high water and unsafe at all seasons.

38. The mining bars were, with few exceptions, deserted, or occupied by Chinese and Indians, who appear to form the great body of miners on this part of the river.

39. Mr. H. M. Ball is Stipendiary Magistrate and Gold Commissioner for the Lytton district; and, with the exception of one regular constable, there is no other person on the establishment; whenever circumstances render a larger force indispensable, it is made up by means of casual assistants and special constables called out for the occasion.

40. I granted a sum of 100*l.*, at the petition of the inhabitants, in aid of a horse-way to facilitate the transport of goods to Alexandria and Quesnel River. Other small sums were also granted for bridges, and to improve the communications with Quayome. A party was also dispatched to examine the country between Van Winkle Bar on Fraser River and Lilloet Lake, with the view of opening a horse-way between those places.

41. Proposals were lately made by a private company to throw a bridge, at their own expense, over the Thompson at Lytton, to be repaid by a system of tolls; and the negotiation will probably be concluded in a short time, as I am desirous of promoting so useful a scheme.

42. The gardens about this town are highly productive, and furnish a profusion and variety of vegetables; but, considering there is no want of good soil and clear land, I was surprised to find that not a single farm had been opened in the district. The want of roads and the enormous cost of transport may in some measure account for that circumstance, but it also strongly marks the character of a population devoted to other pursuits, and who probably look to other countries for a permanent home.

43. Complaints were made here, as at Cayoosh, of the non-sale of town lands; and I again addressed the Commissioner of Lands and Works on the subject, directing an early sale on the spot, through the agency of the district magistrate.

44. The Indians mustered in great force during my stay at Lytton. My communications with them were to the same effect as to the native tribes who assembled at Cayoosh, and their gratitude, loyalty, and devotion were expressed in terms equally warm and earnest.

45. The further report of my journey to Shimilkomeen and Rock Creek I will take the liberty of communicating to your Grace hereafter, as this Despatch has been drawn out to a greater length than I had proposed.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

Enclosure in No. 13.

ADDRESS of the GRAND JURY at CAYOOSH to Governor DOUGLAS.

THE Grand Jury beg to welcome your Excellency to Cayoosh, and to offer you their congratulations on the daily increasing prosperity of the Colony of British Columbia, and on the steady advance of trade, mining operations, and settlement in and near Cayoosh.

The Grand Jury desire to call your Excellency's attention more particularly to the great number of Chinamen now residing in and flocking to this Colony; that from our experience of them we find that they are a steady source of profit to the trader and materially increase the revenue of the Colony, and in addition greatly benefit the country by the extreme development of its mineral resources; they are also a well-behaved and easily-governed class of population, and the Grand Jury desire that your Excellency will afford them every due protection to prevent their being driven away, either by attacks from Indians or otherwise.

The Grand Jury representing the general feeling of the inhabitants of this town request that the town and suburban lots be speedily offered for sale by public auction, as no security is felt in improving property until it is bonâ fide purchased.

The Indian population of the Upper Fraser have been making great complaints of the scarcity of salmon, which constitutes their winter food. They represent this scarcity to be owing to stake-nets being fixed at Langley, which bar the ascent of the fish, and the Grand Jury therefore trust that your Excellency will take measures to stop these proceedings, if really found to exist.

The Grand Jury would, in conclusion, draw your Excellency's attention to the inefficient state of the law as relates to the collection of small debts, and request that measures may be instituted to prevent, by a summary process, parties who have contracted debts from leaving the Colony with their property.

(Signed) ALLAN MCDONALD,
Foreman.

No. 14.

No. 14.

Copy of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE.

(Separate.) Victoria, Vancouver Island, October 25, 1860.

(Received January 2, 1861.)

(Answered, No. 66, February 1, 1861, page 68.)

MY LORD DUKE,

RESUMING the subject of my report on British Columbia, marked Separate, of the 9th of the present month, I proceed to inform your Grace that on leaving Lytton, accompanied by Mr. Good, Private Secretary, and four mounted attendants, my course was directed towards Shimilkomeen and Rock Creek, the latter being about 228 miles from Lytton.

2. It is not my intention, neither does it appear necessary, that I should occupy your Grace's time with a narrative of the incidents of the journey. I will, therefore, in continuing this report, dwell on subjects only which serve to elucidate the present state of the country, its natural capabilities as a Colony, and the effect of its institutions on the development of its resources.

3. With the exception of the miners assembled on Thompson River at Rock Creek and Shimilkomeen, the part of British Columbia through which my route lay, is still exclusively occupied by the native Indian tribes, a race of bold and active hunters, forming, when mustered in force on their hardy native horses, an imposing array. I fell in with detachments at different points of the route, where they had assembled to offer a rude but cordial welcome.

4. I received them with every mark of respect and kindness, entered freely into conversation with the chiefs, assuring them of the warm regard of Her Majesty's Government, and leading them into the discussion of their own affairs in order to discover if they entertained any real or fancied grievance which might lead to disaffection, or induce them to make reprisals on the white settlers.

5. There was one subject which especially pre-occupied their minds, as I discovered by the frequent allusions they made to it, namely, the abject condition to which the cognate native tribes of Oregon have been reduced by the American system of removing whole tribes from their native homes into distant reserves, where they are compelled to stay, and denied the enjoyment of that natural freedom and liberty of action without which existence becomes intolerable. They evidently looked forward with dread to their own future condition, fearing lest the same wretched fate awaited the natives of British Columbia.

I succeeded in disabusing their minds of those false impressions by fully explaining the views of Her Majesty's Government, and repeating in substance what I have in a former part of this report informed your Grace was said on the same subject to the assembled tribes at Cayoosh and Lytton.

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6. Those communications had the effect of reassuring their minds and eliciting assurances of their fidelity and attachment.

7. An appalling Indian outrage committed in the neighbouring State of Oregon, as related with its attendant horrors in a slip enclosed herewith from the "Vancouver Chronicle," will show better than comment the impolicy of the American system, and how careful we should be in guarding against the contagion of evil example, by treating the natives with justice, and removing when necessary, every cause of distrust as to the ultimate views and policy of Her Majesty's Government with respect to them.

8. The country situated between Lytton and Rock Creek is highly attractive, and no other part of British Columbia, nor of the United States territory north of Columbia River, offers so many inducements in point of soil and climate to the enterprising emigrant.

Its distance from the coast, and difficulties of access have hitherto almost excluded it from intercourse; but as those impediments are removed by the formation of roads, now in rapid progress, from the navigable points of Fraser River, it will no doubt become a centre of population and the seat of flourishing settlements.

9. I will not attempt to describe its physical aspect; but to give a general idea in few words, I will observe that it forms an elevated table land of great extent, sometimes rising into hills, and is traversed by many noble valleys, and watered by numberless streams flowing into its great arteries the Thompson, Shimilkomeen, and Okanagon Rivers. There are many varieties of soils, much arable land, and a great deal that is fit only for pasture; but as a remark generally applicable, I may observe that the valleys contain a large extent of good open land; while the steeply swelling hills are mostly covered with trees formed into groups, or growing with park-like regularity, widely apart and free from brush or underwood; but the peculiar feature of the country is the profusion of grass that covers both woodland and meadow, affording rich pastures for domestic animals, a circumstance which gives to this district an extraordinary value, as every part of the surface, whether hill or valley, may be turned to account and made available either for tillage or stock farming.

10. The climate, like that of all other parts of the Colony, is perfectly healthy; and there is much less humidity at all seasons than in the districts bordering on Fraser River. Vegetation was nevertheless fresh and green to a degree that was hardly to be expected at that time of the year. The seasons exhibit no extremes of temperature, the summers being warm and the winters sharp but not severe.

The lakes, except the Okanagon, and all the rivers, freeze in winter; and there are occasional falls of snow, but it seldom lies in the valleys more than a few weeks at a time. The fact that horses and domestic cattle are left out all winter to shift for themselves, and generally thrive without any care on the range of the country, is probably, however, a better criterion of the temperature than any other circumstance that can be adduced. It is in short, a very pleasant and desirable part of the Colony, possesses a healthy climate and many other advantages, pastures being already formed where thousands of cattle may find food; and the industrious colonist will find it much better and easier to raise crops than in the woodland districts, where it takes much labour and expense to clear a small space.

11. After five days' travel in a fine open country we reached the main branch of the Shimilkomeen River, a few miles below the lately discovered gold diggings, where 80 or 100 miners were at work, all seemingly in high spirits, pleased with the country, and elated with their prospects and earnings. Many of them were engaged in putting up log huts, and making other preparations, as they intend to winter there if they succeed in having supplies of flour and other necessaries brought from Hope before the mountains become impassable from snow. As that was clearly impossible without greater facilities of communication, it was evident they would have no alternative but to desert their claims and leave the country, at a serious loss to themselves and to the Colony.

12. That circumstance brought the vital subject of roads again forcibly to mind. A road party working out from Hope, had, I knew, nearly got the length of the summit ridge, about 36 miles distant from our camp, and could means be found of cutting through to that point, and connecting Hope with Shimilkomeen by a practicable trail before the advent of winter, I felt assurred that an important object for the country would be gained, and I resolved to make the attempt. Some Indian hunters were soon found who undertook to conduct a party to the desired point, by a better and less circuitous line than the present almost impassable trail; and the subject was immediately brought before the miners, who, seeing the object of the measure, at once volunteered in force sufficient for the work, and early the following morning a party properly equipped

with tools, provisions, and means of transport, was dispatched with instructions to open a path which would connect with the horse-way from Hope.

13. Leaving Mr. Good and one of my attendants at this point to urge on the work, and to inquire into the condition of the miners, I pushed on without further delay with my three other attendants in light marching order, towards Rock Creek. On the way I fell in with Mr. Cox, the Revenue Officer of the southern frontier, who joined my party, and after three days travel we arrived at the town known as Rock Creek, situated at the junction of that stream and Colvile River.

14. The town contains 15 houses, and several more in progress, chiefly shops and buildings intended for the supply and entertainment of miners.

15. Nearly 500 miners are congregated about Rock Creek and another tributary of the Colvile, about 10 miles below that point.

16. The Rock Creek diggings were discovered last October by Mr. Adam Beam, a native of Canada, as he was travelling from Colvile to Shimilkomeen; he again visited the spot in December, but did not begin to work till the 7th of May: the following is a statement of his daily earnings with the cradle for the first few days afterwards:—

First day's	work	produced	20	dollars,
Second	„	„	43	„
Third	„	„	33	„
Fourth	„	„	27	„
Fifth	„	„	32	„
Sixth	„	„	17	„
Seventh	„	„	99	„

The subsequent record of his daily earnings could not be found, but on the 20th of June, that is, six weeks from the day of commencement, he had made 977 dollars in gold, valuing it at 16 dollars to the ounce.

17. Hugh McKay, another Canadian miner, said that on his claim, the bed-earth of the stream yielded nothing, but a drift into the bank produced 20 dollars a day. I moreover ascertained from the testimony of the miners generally, that none of those who had succeeded in opening gold claims, were making anything less than 10 dollars a day.

18. Rock Creek is supposed to indicate the course of the gold lead, and to be everywhere auriferous; it is also believed that all the benches near the river will pay well; and many of the miners propose running in tunnels without delay. There is much uncertainty however, as to the real extent and value of the lead, nor can it be ascertained until the country comes to be more extensively prospected.

19. I met the assembled population of the place the day after my arrival, and addressed them on various subjects. I did not attempt to conceal that the object of my visit to Rock Creek was to inquire into their conduct, and to suppress the disorders which were reported to be prevalent in that part of the country; and I assured them that I was agreeably surprised to find that those reports were unfounded. After that merited compliment, I proceeded to explain the views of Her Majesty's Government, the general mining regulations of the Colony, especially directing their attention to that section of the Act which provides for the establishment of mining boards, with powers to frame byelaws adapted to the circumstances of each district; or in other words, investing the miners themselves with full powers to amend their own laws. I further pointed out the nature and object of the Pre-emption Law, passed expressly for the encouragement of settlers; and demonstrated the fact that the whole policy of Her Majesty's Government was considerate and liberal in the extreme. I then announced the appointment of Mr. Cox as Justice of the Peace and Assistant Gold Commissioner for the district of Rock Creek; and that he was duly authorized to punish offences, to attend to the maintenance of civil order, to the registration of mining claims, and to receive all dues payable to Her Majesty's Government. I concluded by exhorting them, one and all, as they valued and looked to the laws of the land for protection, to aid and assist him on all occasions, not only as a duty incumbent on good subjects, but as being also their manifest interest; for, I continued, if the laws are not enforced there can be no security, and without security there can be no prosperity; therefore, I went on to say, as you hope for redress yourselves when individually suffering wrong, you must be prepared to rally round the magistrate charged with the execution of the laws.

The meeting ended pleasantly, and the measures announced appeared to give general satisfaction.

20. Mr. Cox then proceeded to the less pleasant task of levying the regular customs charge on all goods found at Rock Creek which had not been entered for importation; such goods being really contraband and legally forfeited, might have been seized for the

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benefit of the Crown, had it not been considered inexpedient in the circumstances to inflict the extreme penalty of the law.

21. I left soon afterwards on my return to Fraser River, and have since then added another officer to the revenue establishment at Rock Creek, and authorized the employment of any amount of force when necessary for restraining the illicit importation of goods into British Columbia; and the cost of such extra establishment is to be superadded as a Treasury fine to the import duties. It is, however, impossible, I conceive, altogether to prevent smuggling at places situated so immediately on the frontier as Rock Creek, which is within two miles of the boundary. The simple and only certain means of effecting the object is to under-sell the foreign merchant by supplying goods at the cheapest rate, and much may be done towards that object by improving the communications and lessening the cost of transport from Hope.

22. The total distance from that place to Rock Creek is about 160 miles. By improving the channel of the Shimilkomeen River and rendering it navigable in boats, we may substitute 60 miles of water for land carriage at a great reduction of cost. The improvement of the Shimilkomeen would not involve an outlay of more than 1,000*l.*, while it would reduce the land carriage to 100 miles, by substituting a cheap water conveyance for the remaining 60 miles. With that advantage the whole trade will flow towards Fraser River.

23. The following mining statistics were collected by Mr. Good at Shimilkomeen:—

Mr. Alison's claim produces 10 dollars a day for each man employed.

M'Dowell's claim, 12 dollars a day per man.

Merril and Eddy worked three days, and made from 10 dollars to 12 dollars daily per man.

M'Dougal took out 26 dollars in the cradle the first day; in prospecting his claim he found 1 dollar and upwards to the pan; anticipates earning 50 dollars per man; when sluicing operations commence in about a week's time they will all begin to work.

On examining the country, prospects were so good that they all immediately commenced preparations for sluicing, wing-damming, and other costly works for mining on a large scale.

24. The road party were far advanced with their task on my return to Shimilkomeen, and I took that road to the summit or punch-bowl, where I fell upon the new road from Hope, which is carried over an elevation of 4,000 feet without a single gradient exceeding 1 foot in 12, a fact very creditable to Serjeant M'Call and the detachment of Royal Engineers employed in marking out the line; it moreover suggests the possibility of converting it hereafter into a cart-way. It is even now a great boon to the country, yet it will lose much of its value unless it be kept open for traffic in winter, by sending out parties of men on snow-shoes to beat the roads after every fall of snow, a course which I strongly recommended to the merchants at Hope.

25. The persons who hold the Union and Emory Bar silver leads near Hope are making great exertions to open the works, with, I believe, every probability of a most profitable result.

26. Masses of nearly pure virgin copper have been found in the excavations made for mining purposes above Yale, and valuable outcrops of coal occur on the Shimilkomeen River, but the present value of those minerals is not sufficient to induce the investment of capital.

27. The new horse-way from Yale to Spuzzem is now open for traffic. Unlike the mountain trail which it supersedes, the new road is carried over the mountain side along the course of Fraser River at a moderate elevation, and will be open for travel both in summer and winter. In riding over the face of those frowning cliffs, which a twelvemonth ago seemed to defy all efforts at improvement, it was impossible to repress a feeling of thankfulness and intense gratification at the successful issue of our labours, and their probable influence on trade and the developement of the country. The arduous part of this undertaking—excavating the mountain near Yale—was executed entirely by a detachment of Royal Engineers, under Serjeant-major George Cann, and it has been completed in a manner highly creditable to themselves and to the officers who directed the operation.

28. The most favourable accounts continue to arrive from the Quesnel River and Caribœuf diggings, confirming all the former reports of the vast auriferous wealth of those districts.

29. An opinion is gaining ground among persons who have closely inspected and studied the phenomena of the gold fields, that there exists a zone or belt of country 50 or 60 miles in breadth, which is the matrix or depository of the gold found in British Columbia. Its course has been partially traced from the neighbourhood of Fort George,

at the forks of Fraser River, for nearly 60 miles in a south-south-east direction; and the theory derives a measure of support from the fact that the rich diggings at Caribœuf, Quesnel River, and Rock Creek,—the latter unknown when the theory was started,—come within the limits which it prescribes. Mr. Nind, the Assistant Gold Commissioner for Quesnel River district, may probably be able to throw light upon the subject, and I await his report with much anxiety, especially as I have had no official communication from him since his appointment. I learn from other sources that the miners in that quarter are making large profits, and that good order and tranquillity reign throughout the district. The want of roads is, however, seriously felt, and has become a general subject of complaint. As soon as those more important communications now in progress are completed, we shall not fail to turn our attention to the remoter districts.

No. 1. Caribœuf diggings.
No. 2. Rock Creek diggings.
No. 3. Shimilkameen River.
No. 4. Lilloett River.
No. 5. Gold quartz.—Lilloett Lake.
No. 6. Gold, with quartz.—Queen Charlotte's Island.

30. Some specimens exhibiting the varieties of gold found in British Columbia are forwarded with this report.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

Enclosure 1 in No. 14.

Encl. 1 in No. 14.

Massacre of an Immigrant Train by the Snake Indians—45 Persons Butchered.

Yreka, October 9, 1860.

The following is an "extra" from the Vancouver Chronicle:—

Vancouver, October 3,—9 P.M.

Forty-five Immigrants murdered.

H. Schreiber has just arrived at the Dalles with news of the massacre by the Snake Indians of an entire immigrant train, consisting of 46 persons, 19 of whom were men, the balance women and children. The party were first attacked about 50 miles this side of Salmon Falls, on the 9th of September. This attack lasted about one hour. The Indians then withdrew and allowed the train to proceed five miles, when they again attacked them. The fight lasted two days and one night.

On the afternoon of the 10th the Indians had possession of the whole train, with the exception of six men, who, being mounted escaped. After travelling through the woods for nine days these six were again attacked, and five of the party killed. Schreiber alone escaping by hiding in the bushes. After travelling seven days, without food, he was found in an exhausted condition by some persons who took him to the Dalles.

Of the 19 males in the party, six were discharged soldiers from Fort Hall. Mr. Schreiber is the only one who escaped. He says that the six men who left on horseback did not leave until the Indians had complete possession of the train; and from the screams of the women and children he was led to believe that the whole party were butchered.

Enclosure 2 in No. 14.

Encl. 2 in No. 14.

To his Excellency Governor Douglas, C.B., &c. &c. &c.

Your Excellency, Hope, October 3, 1860.

We the undersigned inhabitants of Hope beg to congratulate you on the approaching termination of the new trail to the Shimilkameen, an object in which you expressed lively interest at the commencement of the year, and on which you were pleased to express your views in a very satisfactory manner on the occasion of your visit to Hope during the summer.

We trust that the plans originated by your Excellency for the formation of the Shimilkameen and other routes of Colonial importance and advantage, may be fully realized by the traffic passing over such routes, and by the continued prosperity of the country as evinced by the late Customs returns.

Large as such quarterly revenue appears, it is not unknown to your Excellency that the amount has been considerably reduced by the absence of Customs duties on the frontier adjacent to the Shimilkameen country. Your personal observation has we doubt not confirmed the reports which are unanimously made of the large amount of supplies introduced from America, the eager eyes turned by all the inhabitants of Washington and Oregon to a gold field so near them, their determination to compete with British Columbia for the supply of her own territories, and the plans in contemplation for establishing a town or towns as near the line as possible.

The inhabitants of British Columbia are not wanting in enterprise and energy, but the different circumstances under which they compete with foreign traders (backed by the sympathy of their nation), both as to capital at command, the aggregate number of competitors, and the motives influencing each, are not we think to be overlooked. We beg to state to your Excellency, that, as a community, we hope not to be behindhand in taking advantage of the Shimilkameen trade, but also to convey our unanimous opinion that the interests of the Colony, as well as our own, demand such arrangements for the collection of revenue on goods entering British Columbia, otherwise than through its present port of entry, as will ensure protection to British trade, and the augmentation of its revenue by means and rates of import at present existing.

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We beg to tender your Excellency our thanks for your liberal aid to the Boston Bar trail. Without noticing many interested motives to decry the trail, we can assert that your compliance with our wishes in this respect has fully realized our expectations of benefit to Hope.

Your Excellency's first outlay was the means of our town obtaining a share of the traffic to the upper country, to which we considered ourselves entitled, and your more recent grant will greatly improve the road in placing it in a permanently efficient state, in a portion on which the nature of the ground had made locomotion very difficult.

But the chief argument which will weigh with your Excellency in taking a colonial view of the expenditure is the circumstance of packing having been much reduced through the access afforded to Lytton by this trail.

We have now availed ourselves of the occasion of your Excellency's visit to return you our thanks for your attention to the wants and welfare of the Colony in the matter of the trails above alluded to; we trust it will not be deemed out of place if we conclude our remarks with the hope that the original intention of your Excellency respecting the Shimilkameen trail may soon be carried out, in forming the present trail, or any route considered best, into a waggon road ; we do not ask this as a local matter only.

We do not consider that scope will be given to that commercial energy and enterprise which your Excellency is so desirous of encouraging locally unless your intention should be carried out as soon as possible, and your Excellency has repeatedly, publicly and privately, expressed your opinion that the route to the new gold fields and agricultural district of the Shimilkameen is through Hope. A waggon road to this important country will not be looked upon otherwise than a colonial measure, and one which has already received the sanction of public opinion at large.

We have, &c.
(Signed) A. D. PRINGLE, M.A.
W. H. SUTTON, and 50 others.

No. 15.

No. 15.

COPY of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE.

(No. 95.) Victoria, Vancouver's Island, November 9, 1860.
(Received January 2, 1861.)

MY LORD DUKE, (Answered, No. 66, February 1, 1861, page 68.)

* Page 22.

IN my report on British Columbia of the 9th of October last, marked "Separate,"* I had the honour to inform your Grace of the dispatch of an exploratory party from Douglas, under the charge of Dr. Forbes of Her Majesty's ship "Topaze," to examine, especially with reference to its mineral character, the country bordering on Harrison Lake and River.

I have now the honour of forwarding the valuable and highly interesting report of that gentleman, who lately returned to this place with his party, in good health.

His researches, carried on under many difficulties inseparable from the country, were prosecuted with a very creditable degree of activity and vigour, and have been eminently successful in elucidating the true mineral value of the district, the whole of which he believes to be metalliferous, and the greater portion of it argentiferous.

He found and examined many argentiferous veins, and he observes that he has not the least doubt that there is abundance of silver in those formations, but it can only be reached by an outlay of capital and steady persevering mining operations.

He has also, from various indications, been led to believe that in many of the metalliferous veins described in his report, deep mining will develope gold.

Dr. Forbes recommends that encouragement should be given to companies for the purpose of working silver mines, and thinks they cannot be worked advantageously by individual enterprise or exertion, a suggestion which meets with my warmest approval.

I trust that Dr. Forbes's able report may have the effect of attracting public attention in England to the mineral wealth of British Columbia, and to the facilities it presents for the profitable investment of capital.

I have, &c.
His Grace the Duke of Newcastle, (Signed) JAMES DOUGLAS.
&c. &c. &c.

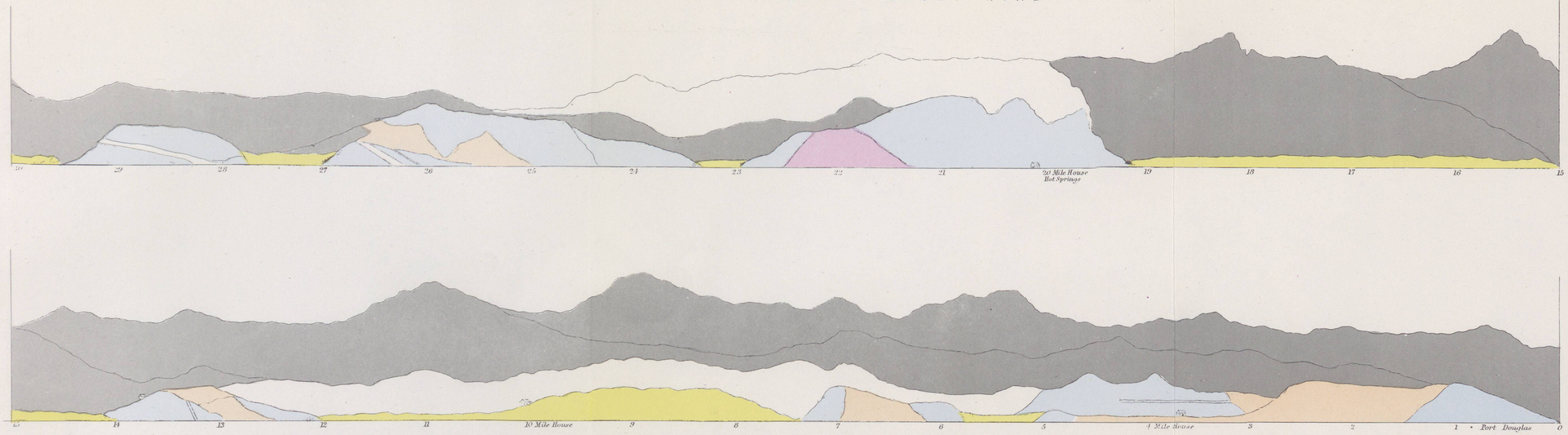
Encl. in No. 15.

Enclosure in No. 15.

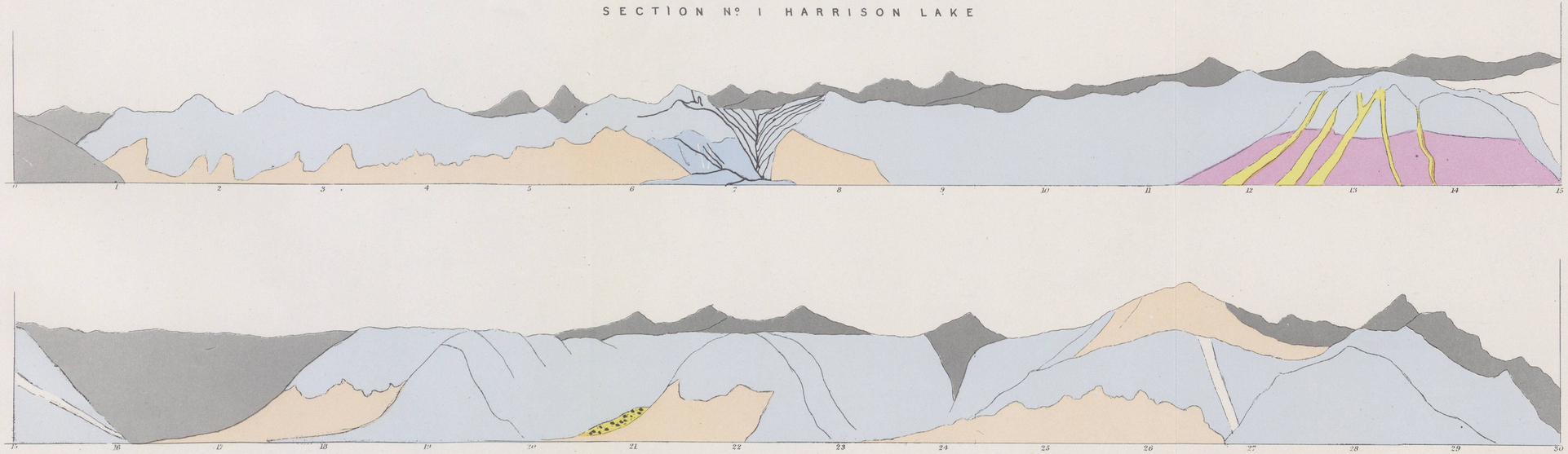
SIR, H.M.S. "Topaze," Esquimalt, Vancouver Island, Oct. 22, 1860.

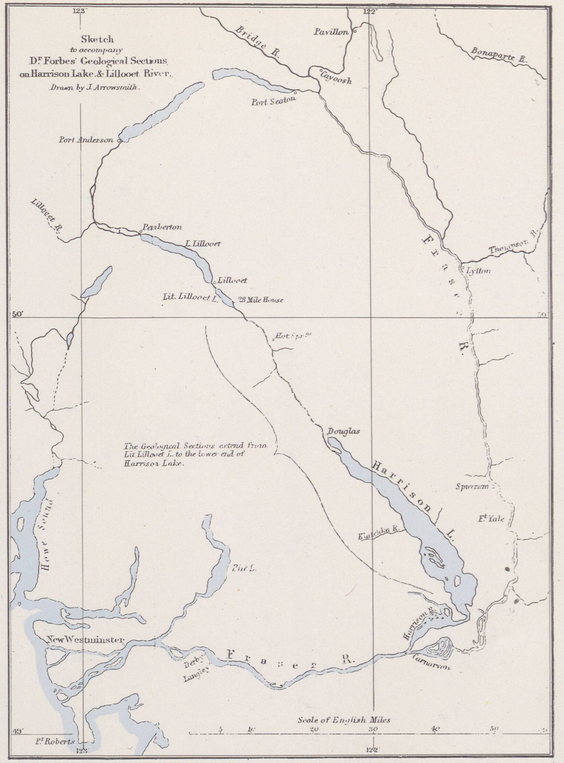
BY letter dated 8th October, I had the honour to apprise your Excellency of my return to Victoria on the 6th, with the exploring party under my command. It now becomes my duty to lay before your Excellency a general summary of my proceedings, with a detailed account of such explorations as time and circumstances enabled me to make.

SECTION Nº 2 HARRISON LILLOOET ROAD



SECTION Nº 1 HARRISON LAKE





Trap Rock

Trachyte

Boulder or Northern Drift

Red Metamorphic Rock

Ferruginous Rock

Plutonic Rock of Granitic character

Metamorphic Clay Slate

Auriferous Gravel

Silver Veins

1. In compliance with your Excellency's instructions contained in letter dated 29th August, I took charge of the exploring party at New Westminster, and there received from the Treasury and the Commissariat such supplies of money and provisions as appeared necessary for carrying on the exploration of the district specified, viz., from the mouth of the Harrison River to the 28-mile house on the Lilloet trail.

2. Unable to procure a canoe at the mouth of the Harrison River, as directed by my instructions, I proceeded in the steamer "Colonel Moody" to Port Douglas, and at that place on the afternoon of the 30th, succeeded, after some difficulty, in procuring a canoe and Indians to take me down the Harrison Lake. Finding on starting that my canoe was too heavily laden, I engaged another and smaller canoe, and with a party consisting of three Spaniards, four Indians, self and servant, proceeded at 5 p.m. to make the best of my way to the mouth of the Harrison River.

At 8½ p.m., having come by computation about eight miles, I camped on a sandy spit, near a mountain stream, known as the Douglas River, on the eastern side of the lake, opposite to a remarkable double-peaked mountain, having on its northern and eastern aspect a glacier between the peaks.

Friday, 31st August.—At daylight, weather was much overcast and threatening. Nevertheless, I struck camp and got ready, being anxious to commence work at the place indicated in my instructions. A thunder-storm, however, passed to the southward, followed by heavy rain, and a fresh breeze from the S.W. causing a heavy swell on the lake and rendering it impossible to proceed. I therefore pitched my camp again, and proceeded to prospect the neighbouring ravine and to examine the geological formation around.

At the mouth of the stream, and extending on both sides along the shore of the lake, were water-worn boulders of granitic and quartzose rocks, gneiss with garnets, mica schist with ditto, pieces of good roofing slate, together with masses of a pure white quartz containing excellent indications of metal. The mountain, the top of which is somewhat rounded in its outline, having a flat surface to the westward, and a remarkable pinnacle or finger-like rock at its immediate base, is composed of trap, having resting upon it and tilted at a high angle, micaceous, talcose, and hornblendic schists, all highly charged with iron, the oxidation of which has produced disintegration of these rocks.

At a point about 500 yards from the mouth of the stream on its proper right bank, a mass of trachytic rock has been erupted, shattering the surrounding rocks, itself much shaken and shattered; great masses dislodged by weathering and other causes having slipped and rolled to the bottom of the ravine.

In this rock, of volcanic origin, was found a mass of quartz, of a beautiful white colour, containing good indications of silver and copper, which indications proved true, for on assaying a specimen, by the reducing process, a globule of each of these metals showed itself. This mass or vein of quartz dips northerly beneath the overlying trachytic rock. It is wedge-shaped, the thickness increasing with the depth. From it, in all directions, radiate veins of quartz, which, guarded on each side by a fissile rock of a French grey colour, permeate the mass of trachyte in all directions. Those only, however, which run north and south are metalliferous, the east and west veins or cross courses are barren.

Deeming it necessary to explore this formation thoroughly before proceeding farther, I determined to blast the rock in order to see if the indications improved with the depth; but finding one of the blasting tools in a very inefficient state, I was obliged to send it to Port Douglas for repair, and in the meantime proceeded to examine the veins, seriatim, as they radiated from the great central mass. Rising in a north-westerly direction is a quartz vein running through or along with the fissile rock above alluded to containing ores of silver; and to the right, having the same N.W. and S.E. direction, about 200 yards above the "mother vein," a quartz vein shows itself in the broken precipitous face of the containing trachytic rock.

It runs between two great bands of the fissile French grey-coloured rock, separated from it by masses of a partially decomposed pyrites, which besides, in a band of about three inches in thickness, accompanies the quartz vein throughout its course.

Besides these masses and bands of iron pyrites, masses of a dark green chlorite rock occur, and nodules containing the sulphuret of silver are clearly discernible both in the vein itself and in the rock through which it passes.

Following the ravine, and at the same time ascending, I found, at an elevation of about 600 or 700 feet, another quartz vein of the same character, dipping in the same direction, and belonging to the same system; and from the numerous angular fragments of quartz and quartzose rocks everywhere scattered about, I believe that there are numerous other veins, which I had not time to look for or explore.

I worked into the quartz matrix and its ramifying veins, and satisfied myself of the existence of silver at this spot, which, however, will require somewhat extensive mining operations to procure in paying quantities.

The geological character of this locality affords a good type of the general formation of the whole eastern side of the lake, and may here be briefly described as a region of primary, metamorphic, and volcanic rocks, crossed and recrossed by trappean dykes and veins and seams of metalliferous quartz and quartzose rock. The primary or igneous rocks, which form the central axis of the mountain range, have on their flanks transverse ridges and spurs of trappean rock, bedded and jointed, resting on which, and tilted at various angles, lie the metamorphic schistose rocks, which, again broken through, disturbed, and shattered by successive intrusions of volcanic rock, have in many instances undergone a second metamorphosis, and show an amorphous crystalline structure, accompanied by segregation of metal into the permeating veins.

Thursday, 6th September.—I began here to have trouble with my Indians; though well cared for in every way, they were becoming impatient, and I had to discharge one yesterday and another to-day.

Heavy rain during the night, but the morning promising well, I started with the three Spaniards and one old Indian to examine the landslips.

Found that the great mass of the debris in all the slips was composed of plutonic, trappean, and quartz rocks, all of them full of beautiful groups and strings of crystals of iron pyrites, both massive and in cubes, and all possessing good indications of the proximity of valuable mineral.

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I ascended the landslips to the broken craggy summits, and found the walking most tiresome and laborious, the rocks at every step giving way and slipping from beneath my feet, the inclination of the mountain side being at a very high angle. The rock forming the broken crags at the summit is a dense, highly crystalline blue trap, bedded and jointed, ringing to the hammer, its weathered surface coated and coloured by the oxide of iron, which metal in the form of pyrites abounds in the neighbouring rocks and veins.

The central mass on which this great mass of trappean rock reposes is a plutonic or igneous rock of a granitic character, very dense, highly crystalline, crossed and permeated by bands and veins of quartz, one of which, about half way up the slip, passing in a direct line from one remarkably red rock to another some 500 yards off, on the same level, is metalliferous. It continues in a southerly direction along the face of the range, and if not continuous with, belongs to the same system as the argentiferous vein I described yesterday as running close past my camp, inside of Point Spencer.

Saturday, September 1st.—Heavy rain all day, impossible to do anything further than prospect the shores of the lake right and left. The rocks everywhere indicating that they belonged to a metalliferous region.

Sunday, September 2d.—Morning hazy, but quiet, light breeze from the eastward. The man I had sent to Douglas to get crowbar repaired not having returned, I took advantage of the steamer passing to go up and look after him. On the way passed him in a canoe going down, and I returned to camp in the steamer.

Monday, September 3d.—The weather being favourable, commenced work at daylight and made the geological examination of the locality as above detailed.

Tuesday, September 4th.—Prospected the ravine, and found that the same formation extends on the southern side for about a mile and a half along the lake, terminating where the red ferruginous rock meets a dense-bedded trap, with a white weathered surface, which rock continues without interruption, broken only by watercourses, until the great landslips are reached.

Wednesday, 5th September.—At daylight roused all hands, packed up, and started, examining the rocks in passing down the lake.

At 10.30 a.m. came to and examined landslips, opposite to a point on the western shore known as "Shay Point"—where "Shay," the native god of the weather, has an effigy cut out of the solid rock. The indications, as shown by the fragments of rocks, at the foot of the different landslips, were so good that I pushed on to the first available camping-place, pitched tents, had breakfast, and proceeded to examine further.

Found a metalliferous quartz vein close to the camp, and followed it in a north-west direction up a ravine. The time thus occupied prevented me from reaching the landslips, which were three or four miles off. In the evening I went out on the lake and sketched the general features of the landscape and the mountain range where the landslips occur.

Friday, 7th September.—Heavy rain all night; 6 a.m. cleared up. Roused all hands and went across lake in canoe to see the run of the range, and ravines under which I am camped.

The quartz vein described yesterday as running up a ravine in a N.W. direction close to my tent, ascends and crosses the face of the hill, at angle of 45°; after running a short distance along the shore it dips beneath the lake. It passes along with a fissile grey-coloured rock, which guards it on both sides, through the trap, and rests apparently on the igneous rocks of the great landslip mass, or Ganges Peaks.

From its indications I was induced to examine this vein fully, and blasted a portion of it near to the camp, and found silver ore in strings throughout the mass.

At 11 a.m., light breeze from west by north, left camp, prospecting along shore; metamorphic slates and schists, with quartz veins, one of which I examined just before coming to some small rocky islets, outliers of an erupted mass of trap, in which this part of the lake formation terminates. The vein was non-metalliferous, but possessed the best indications of there being metal in the neighbourhood.

On passing the rocky islets of trap, came to a slaty rock, with, in many places, a very perfect cleavage, and crossed in a N.W. and S.E. direction by a quartz vein, which at the point of contact has destroyed the slaty or fissile character of the rock, and altered it into a dense, semi-crystalline fawn-colored trap. The quartz vein runs in the same direction as the other metalliferous veins, but I could find no trace of metal in the cursory examination I was able to afford it; yet I believe on a fuller exploration it would lead to silver ore; all the necessary geological conditions being present, the same band of decomposed pyrites accompanying the vein as in those others found to be argentiferous.

Onwards, towards the point known as 20-mile Point, the trap begins to show itself in cliffs, and outliers in the form of islands of a moderate height. The slaty rock rests on this trap, and the formation terminates at a low spur, near the mouth of the Klatchka River.

Saturday morning, 8th September.—Up before daylight. A planet, either Venus or Jupiter, shining like a moon. Sunrise magnificent, sun's rays tingeing lower surfaces of the scattered cumuli a rosy red, and lighting up the snowy walls of Mount Baker (plainly visible in the distance), till it shone like one great ruby; wind light from N.W., everything promising fine weather; struck tents, got under weigh, and sounding the shoals and bars off the mouth of the Klatchka (or Courtenay River, as I named it, being uncertain of its native name), entered that stream, having 4 feet outside and inside of the bar. The mouth of the river is about 100 yards wide, 4 feet deep, with low banks of sand and gravel, thickly and somewhat heavily timbered. This river had been prospected, and gold found on its banks by Messrs. Humphreys and Hare, of Port Douglas, and I was in this case much indebted to the former for much information and advice, besides great assistance which he kindly afforded me in my dealings with the Indians, in the hiring of canoes, &c. &c. At 9 30 a.m., after ascending with difficulty two rapids, came to, and pitched camp about 2 miles from the mouth of stream. The pools between the rapids had from 3 to 4 feet of water, abounding in salmon and trout of various species. Hired two small canoes and ascended the river, prospecting as I went, but evening closed in upon me before I could reach the falls, which I was anxious, if possible, to examine that day, but it being dangerous, impossible in fact, to shoot the rapids after dark, I was obliged to return to camp.

The pebbles on the beach at the mouth of this river are chiefly of igneous rock, with numerous specimens of beautiful clay-stone porphyry. The trap rock I passed yesterday, here forms the right bank, ascending in precipitous bluffs, tolerably thickly timbered. The left bank is formed by a series of terraces of different elevations, made up of the rounded boulders and gravel of the great northern drift, which here, as in all the valleys of this region, may be seen to perfection, rolled and water-worn boulders of every igneous and crystalline rock that would bear attrition are to be found, while the sedimentary and softer rocks, ground and pounded, form the land, the clay, and the gravel of the formation. The river issuing from a narrow gorge, about six miles from its entrance into the lake, sweeps through this boulder drift, which fills up and covers the whole valley, formed by the divarication of two spurs or ranges of trap, which here running east and west meet the shores of the lake at right angles. The whole forms a fine sweep of level land, well timbered, and having a good surface of alluvial and vegetable soil; but lying as it does on this great gravel bed, were the timber to be removed, I fear that the summer heats would convert the soil into a very fine dust, which the autumn winds and winter rains and floods would eventually sweep away, leaving nothing but naked terraces of boulder stones and gravel. During my prospecting to-day, I found a rock, in situ, possessing good indications of silver, but could not trace the vein, it being overlaid by the drift.

From where my camp is pitched, about two miles from the mouth of the river, up to within a mile of the falls, I carefully prospected for gold, and in a ferruginous gravel on the river bank, found first minute specks, in technical language, "the colour," and as I ascended, coarse grains of gold, sufficient to pay from 2 to 5 dollars per man per diem, if worked by a rocker or by sluices.

Sunday, 9th September.—Gave the men a day of rest; being fine, were enabled to dry our clothes, &c. &c., which were thoroughly saturated with moisture. In the afternoon assayed specimens of argentiferous quartz and other rock, from the veins at the landslips and neighbourhood, and found silver in all but one, the vein running near the rocky islets on the lake approaching 20-mile Point.

Monday, 10th September.—Up at daylight, packed one tent and provisions for two days. Left camp at 7 a.m. to explore river up to, and if possible, past the falls, in order to ascertain the geological formation, and if possible, trace the origin of the gold, which, from its rough crisp-looking surface, evidently has been transported no great distance. With two small canoes and three Indians, pushed up the stream, tracking up the rapids, and reached the falls at 9 a.m., where I camped. Coming up I had passed a considerable deposit of gravel and ferruginous sand, extending on both sides of the river, and from this I believed the gold had come; I left it however to be examined on my return. Just as my tent was pitched, heavy rain set in; it cleared up somewhat in about an hour, and I was enabled to examine the falls and the neighbouring rocks. Found the country beyond the falls so much broken up, so difficult to pass over, that in such weather it would have taken more time than I could afford to explore it thoroughly; I was therefore obliged reluctantly to give it up, having ascertained that the walls of the gorge or ravine, through which the river flows, are composed of massive plutonic and trappean rocks, the latter having a slaty fracture. These masses rise in perpendicular cliffs, cut up by numerous deep cracks or ravines, covered by almost impervious clumps of trees and shrubs, the ground encumbered with fallen timber, rendering travelling very difficult, almost impossible.

The rock over which the water rushes at the falls, which are not more than 6 or 8 feet at this time of the year, is an igneous rock, of a granitic character, crossed by numerous bands of quartz, and having the general appearance and character of the rock described as underlying the trap at the landslips on the lake. Although the quartz veins which here cross the igneous and trappean rocks, show no indications of metal, yet many transported blocks in the bed of the river do so, and indicate the existence of metalliferous veins higher up the valley, which ought to be fully explored.

No trace of gold could be detected in the sand or alluvium at the falls. Heavy rain had again set in, I therefore struck my tent and returned to examine the gravel and red sand deposit passed in the morning.

At 2 p.m., examined and found this deposit to consist of boulders (water-worn), sand, and gravel, with *angular* boulders. The boulders are of igneous rocks of various kinds, granitic, porphyritic (felspar), and hornblende rocks; the sand of two kinds, a fine white quartzose sand, and a coarser ferruginous sand or gravel, the whole mass running in a N.W. and S.E. direction, cut across by the river. On the right bank of the river, this gravel rests on a trap rock, which has a slaty fracture, and extends inland about 500 yards, forming terraces along the river bank for about half a mile.

On the left, it rises into a conical shaped hill, some 200 to 300 feet in height, and runs on as above stated in a S.E. direction. The upper portion has about 3 in. in thickness of rolled and rounded boulders of igneous and trappean rock, then 3 to 5 feet of fine gravel, next, several feet of a fine quartzose sand; and below, to a depth which I could not distinctly ascertain, is the ferruginous gravel, containing *angular* fragments of quartzose rocks, masses of metalliferous-looking quartz, and numerous blocks of a dense black ironstone, the product of intense volcanic action. I tried the sand and gravel from every part of this deposit, but could not find a trace of gold; from the surface to the river side, from 6 to 8 feet, to which depth I dug beneath the surface, all fruitless, not a speck to be seen, which surprised me much, as immediately below, on the river banks, in this same ferruginous sand, I could wash out rough gold, in small quantities certainly, with a common prospecting pan.

Much of this gravel is becoming consolidated into a conglomerate or pudding-stone, by the oxidation of the volcanic ironstone alluded to above, which, with granitic, quartzose, and other hypogenic rocks, forms the lithological character of the mass.

That gold exists in this locality is a fact, and that its origin is to be referred to this gravel deposit I fully believe. At the same time, I cannot explain why, on prospecting, it did not yield gold, unless that my examination was too cursory and superficial. This ferruginous auriferous gravel, on the left bank, rests on the boulders and gravel of the great northern drift, with which, however, it has no geological connexion, further than that of accidental relation. It extends, I believe, across the whole valley beneath the vegetable and alluvial soil, which affords holding ground, and gives nourishment to the trees and shrubs covering the plain; and under this soil will gold be found, I feel sure; what is washed on the river side must only be regarded as indications.

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As to this origin of this auriferous gravel, it appears to me that an extensive range of quartz rock has undergone degradation, consequent on disruption by volcanic forces, and oxidation of its auriferous pyrites, which has coloured its component particles red, and set free its contained gold. Heavy rain continuing and night closing in, I came down the river, shooting the rapids, and arrived at camp at sunset.

On my way down met four miners going up to prospect the gold reported to exist. I gave them all the information on the matter that I could.

Tuesday, 11th September.—Morning fine, but all our gear soaked with yesterday's rain. Struck tents and loaded canoe, found her too deep from the weight of the wet tents, &c., &c.; emptied and left pork cask behind; endeavoured to procure another canoe, but did not succeed, all away employed on the salmon fishery, which the Indians are carrying on vigorously.

Started at 8 a.m. and proceeded down the lake, prospecting and examining the various formations as I went. A few miles beyond the valley of the Klatchka came to schistose rocks resting on trap, with metalliferous quartzose veins passing through.

Pushed on to a camping place at the mouth of a small river or mountain torrent, which enters the lake opposite to the north or Long Island.

Camped, and that afternoon prospected the river bed; found it containing numerous water-worn boulders of hypogenic and metamorphic rocks, masses of quartz with chlorite schist, having good indications of silver; other rocks having the same of copper. About two miles up found traces of gold in the black sand of river bank. It had been raining heavily all the afternoon, and darkness now setting in, I returned to camp.

Wednesday, 12th September.—At daylight, weather having cleared up, and the day promising well, roused all hands, and started to examine the metalliferous quartz veins found yesterday.

The formation is of the same character as prevails generally, so far as I have yet seen, and on further examination I found the metamorphic schistose rock resting on and tilted by intruded masses of trap, which is here regularly bedded and jointed. Trap dykes, containing veins and masses of quartz run right and left, and at points where these masses of trap intrude, and where the quartzose veins enter and permeate the schists, they become metalliferous. An argentiferous vein, 16 to 18 feet wide runs along the side of the lake and rises on the hill at an angle of 45° or thereabout, passing beneath the mountain in its strike.

The silver, in the form of sulphuret, is contained in a crystalline blueish-grey rock, having masses and veins of quartz permeating it, and running along its centre a band of unctuous-feeling blue-black rock, an excellent indication of good silver ore.

The character of the vein alters as it passes through the different strata of the containing rock, becoming in places highly crystalline and very hard.

I was obliged to blast in two places to ascertain the character of the vein, and was glad to find all the indications improve with the depth.

On the beach a prismatic trap which makes excellent sharpening stones, and good specimens of roofing slate, were picked up. Having examined the coast line, and finding it coming on to blow, made the best of my way to camp, found a heavy surf on the beach, and got capsized close to tent.

Thursday, 13th September.—5.30 a.m., all off, morning overcast, slight drizzle, weather looks threatening, light breeze from S.E. right up the lake, nasty jabble of a sea on. 7.30 a.m.—Passing metamorphic and trappean rocks, overtopped by a rounded red-coloured mountain, which from the form of its ravines and general aspect looks promising.

The wind now freshened so much, and the water became so rough, that it was dangerous to proceed, and I therefore pitched camp on a sandy spit near a rocky ravine, opposite south end of Long Island at 8.30 a.m. After breakfast prospected ravine, through which a mountain stream flows, found igneous and metamorphic with trappean rocks abounding. Some of them with good indications, in mining language, excellent shoad stones. Examined ravine by this same process of shoading, and found on the right bank numerous angular fragments of rock assuming a prismatic structure, coated with the red oxide of iron, and containing vestiges of silver ore. The specimens appeared to belong to a metamorphic rock, semi-crystallized by intruded volcanic agencies, in the form of erupted trap and intruded quartzose masses.

Heavy rain and a gale of wind prevented an extended examination of the locality at this time.

Friday, September 14th. — Very anxious to get on, but cannot; heavy rain during the night; morning overcast, drizzly and squally. Can neither get on, nor go back. Half my time gone, and I have still the Lilloet district before me.

Unable to prospect, I proceeded to examine the specimens of yesterday, and found the rock full of metallic sulphurets, chiefly of silver and antimony. At 4 p.m. the rain ceased, and I was enabled to follow up and discover the metalliferous rock, to which the specimens found yesterday and examined to-day belong. The lode is 22 feet wide, close to the water in the ravine, and passes north-westerly right in along a broken ravine, covered by a mass of angular fragments of the same rock, and a quantity of red earth which marks its course along the face of the mountain. I was obliged to blast twice to ascertain its true character, and found it to be a very hard crystalline mass of a bluish-black and black-grey colour, enclosing masses of quartz and groups and strings of metalliferous ores.

The formation both north and south of this vein is trappean, a dense crystalline rock, bedded and jointed, rising into mountain peaks.

Saturday, 15th September.—The weather having been for some days so very bad, and looking altogether broken, being unable to procure more than one canoe, which was in consequence much too heavily laden, I was completely cramped in my movements, for, unless when perfectly calm, it was dangerous to attempt navigating the lake. Fearing that if I delayed waiting for fine weather to complete the exploration of the Harrison I might possibly altogether lose the Lilloet country, I resolved to make the best of my way to Port Douglas, and if I should have time and a favourable opportunity complete the Harrison Lake and River on my return.

Accordingly at 4 a.m., finding the weather moderate, and promising well, I roused all hands, and after a cup of coffee got under weigh, crossed the lake to Long Island, skirting it and proceeding by the western shore to Port Douglas.

The northern or Long Island I found to be composed chiefly of trap, with occasional patches of metamorphic rock, but no indications of metal were observable from the lake. On the western shore, at a point opposite to north end of Long Island, a fine tract of level land commences, and runs north for about 8 miles, having an average width of 1 mile, a stream flowing through it, and abundance of fine timber upon it. Like all the other flats and terraces in this district, the substratum is boulder drift and gravel, the alluvium and vegetable mould of no great thickness, but should the silver leads on the other side be worked this flat will be of the greatest use to the miners.

Where this terrace terminates and the bold precipitous bluffs again abut upon the lake, the formation of the mountain ranges at the back can be well seen.

Rising from the water are rounded masses of a dense black trap rock, sparsely covered by stunted pine trees, alternating with beautiful little coves, fringed by shingle beaches in which the vegetation is more varied and growth more perfect.

At and near the point known as Whiskey Point the formation changes, and metamorphic argillaceous schistose rocks resting on the trap begin to show themselves, and this, alternating with an erupted trachytic rock, continues all the way to "Shay Point," where an image of that deity who presides over the Indian meteorological department stands out, cut from the solid rock. From this point to Port Douglas, the whole western shore appears to be a mass of dead trap, no indications of mineral to be seen. Nearly swamped crossing the lake, though only a light breeze from the S.E. Arrived at Port Douglas at 6 p.m.

Sunday, 16th September.—Rested at Port Douglas. Men employed drying clothes, bedding, &c.

Monday, 17th September.—Making preparations for prospecting Lilloet district. All our blasting tools required repair, had to be fresh steeled. Twelve days' provisions to be packed, arrangements made for conveyances; Indians to be paid for work and hire of canoes, &c., &c.

Tuesday, 18th September.—Made an agreement to have my baggage packed as far as 20-mile house, at the rate of 2 cents per lb. Suffering from sprain and rheumatic affection of right knee, I was obliged to hire a riding mule. At 2 p.m., having seen everything off, left Douglas for the Lilloet, and camped that night at the 10-mile house.

Wednesday, 19th September.—Prospecting as I went, pushed on and camped at 20-mile house, anxious to get on to commence work from 28-mile house downwards.

Thursday, 20th September.—Obliged to rest this day, suffering from rheumatism.

Friday, 21st September.—Tried to ride, but found myself unable, started on foot, pushed on, and reached Creek Camp, 27½-mile from Douglas, where I pitched my tents close to the Royal Engineers' camp.

Saturday, 22nd September.—Employed prospecting round camp, found good indications both on river side and up the mountain.

Sunday, 23rd September.—A day of rest.

Monday, 24th September.—Left camp at 8 a.m. to examine and explore the indications on the river side. At a point 28 miles from Douglas, struck down upon the river, and close to a native lodge found a vein of argentiferous rock, running N. by W. along the river bank and rising at an angle of about 30° to the termination of the bluff at 29½-mile house. On the level beneath, a vein with excellent indications runs along by and passes the 29½-mile house, to terminate at the summit of a round-topped mountain, about 6 or 8 miles to the northward, and which has on its side a remarkable cleft and ravine full of debris.

Time did not permit me to follow up the veins of this formation to this point, but from reliable information I received, and from the geological formation of the country there, I believe they terminate and are possibly more fully developed, and to that point further exploration should be directed. Although limited by my instructions to the 28, or more correctly speaking, to the 29½-mile house, as the limit of my exploration, I yet considered that a radius from that point was permissible, and being anxious to see the formation of country through which the above-mentioned metalliferous veins ran, I hired Indians, and setting the men to work to clear away the rocks and blast the vein on the river side, I proceeded in a boat, kindly lent to me, to prospect the shores of the Little Lilloet Lake. The whole formation presents the very best indications of being rich in mineral wealth, and requires a prolonged exploration. I was very anxious to examine a remarkable mountain known as the "Split Crag," but when at its foot, to my mortification, it became enveloped in clouds, and I had no time to wait till it should clear up and I could make the ascent. It owes its remarkable form, whence its name, to the passage of a metalliferous dyke or vein through its summit, to the degradation of which, by the oxidation of the metals, is due the cleft or "Split Crag."

Four p.m.—Returned to the vein where the men have been at work, found that they had exposed the argentiferous vein, and prepared to blast; but the drills proved defective, and require repair.

This argentiferous rock is of a pale blue colour, with masses and strings of quartz running through it. Sulphuret of silver, argentiferous pyrites, and some specks of gold were to be seen along with iron pyrites in cubes and masses. The vein runs through trap, which, where in contact with the vein, is of a trachytic character. Great volcanic disturbances have here taken place, numerous faults existing in the trappean range which runs in parallel ridges north and south, slips and slides having taken place in the planes of bedding; and this bluff, in which this metalliferous rock is found, appears to be the result of a great slip from the boundary range of the valley on its eastern side.

Tuesday, 25th September.—Through the kindness of Lieut. Palmer of the Royal Engineers, I was enabled to get the drills and other tools put into good working order, and sent the men off at an early hour to complete the blasting operations. I myself proceeded along the trail, to examine the formation at a point where a great body of trap had been recently removed by blasting by the Royal Engineers. At a precipitous bluff, about 27 miles from Douglas, round which the trail runs, and which was not more than 2 feet wide a few days before, I found an open road 6 feet wide, and the angular promontory removed. A mass of trap, dense, highly crystalline, of a dark blue colour, bedded and jointed, had been cut through, and in the operation an argentiferous vein permeating the rock on which metamorphic clay slate

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rested, had been opened up. The argentiferous mass, or lode, is divisible into three distinct portions, the whole 20 feet in width, rising at a high angle, and running in a direction N. by W. The rock is of a pale blue colour, dense and highly crystalline, with masses and strings of quartz, argentiferous pyrites, and other excellent indications pervading it. The trap of this formation was the most highly crystalline rock of the kind that I had yet seen, when broken, assuming a pentagonal prismatic form, each fragment having a pyramidal shape. I had on a previous occasion obtained specimens of an argentiferous rock from the hill above, and was now enabled to identify them with this lode, which rising, crosses the side of the mountain in the direction named, to terminate, I believe, in the round-topped mountain described as being on the eastern side of the smaller Lilloet Lake, a member in fact of the same argentiferous formation.

Having obtained specimens, though but outcrops, of this and of the 28-mile vein, which on blasting, fully bore out its indications, I submitted them to a hurried process of assay, and obtained a fair proportion of silver from all.

Wednesday, 26th September.—At an early hour sent on, by pack mules, all the baggage, with orders to camp at 20-mile house and wait my arrival, and retaining one hand, with pick-axe, &c. &c., one mule, and an Indian boy, I followed slowly, prospecting as I went.

Shortly after leaving camp, where I had received the greatest assistance and experienced much kindness from Lieut. Palmer, R.E., and all his party, I came upon a metalliferous vein crossing the road, rising from the river, at 26¼ miles from Douglas. It passes through the same formation as the one last described, and which I named Royal Engineers' Mine, they having in that instance, as in the present, been the means of opening it up.

Four p.m.—Passed the junction of the Amaqua River with the Lilloet; the valley through which the former flows is said to possess the very best indications of mineral wealth and rich metalliferous deposits. Rocks containing gold, silver, platina, and copper being found in abundance at its mouth, and in its bed. These I have not myself seen, but I believe my information to be reliable, although it must always be carefully borne in mind, that in this district of the Lilloet, where the transported rocks and boulders of the great northern drift are so widely spread, mistakes are very apt to occur, metalliferous, along with other rocks, being often carried many hundred miles. From its geological formation and mineralogical relations, I am inclined, however, to believe that up the valley these metalliferous rocks will be found in situ, and the whole should be carefully explored.

The whole geological formation of this day's march to the Hot Springs, where I camped at 6 p.m., is shown by the accompanying section to be trap of various characters, in reference to its crystallization and bedding; in some cases both these characteristics very perfect, in others less so. Metamorphic rock resting on the trap, altered and disturbed by its intrusion, permeating quartzose veins, in some cases metalliferous, in others not so, run through the whole formation. Near to the Hot Springs, an erupted granitic rock, having a highly crystalline trap on both flanks, occurs, which extending eastward, has relation to the granitic rock developed in the argentiferous formation of Fort Hope, if indeed it be not the same.

Trap rises in lofty precipices on the western side of the river, and continues on the east, resting on a rocky range of white-coloured stone, which on examination proved to be a siliceous rock, containing a few indications of copper.

Passing the granitic mass above alluded to, the trail runs over the northern drift, which continues to and beyond the hot springs at the 20-mile house.

The hot springs which give their name to the locality, bubble out from three openings in the rock, under a mass of concrete or conglomerate rock, and an angular block of trap which has slipped from the rock above.

The water has a temperature of about 120° Fah., and at 62° Fah. a specific gravity of 1002·5, being thus simply distilled water. Existing below and permeating fissures in the crust of the earth in the form of watery vapour or steam, it loses its caloric as it approaches the surface, and becoming condensed, issues in the form of hot distilled water.

Around the spot where the water flows from the rock, the surface of the pebbles in the stream is coated with a mass of reddish-brown confervæ, which, as the water flows and cools, becomes of a beautiful bright green colour. Where the stream crosses the road, it has cooled down to the temperature of the surrounding atmosphere, and forms a favourite drinking-place for all animals on the trail. Horses and mules, when free and having the opportunity, have been known to come back a couple of miles to drink of the limpid refreshing water.

Thursday, 27th September.—The weather has been and continues very fine. Endeavoured to-day to get a canoe, in which to cross the river, as excellent indications exist on the western side, which I was very anxious to examine. No canoe to be had, all down at Port Douglas. While prospecting, one did come up, and the Indians would have taken me across, but they would not wait till next day to bring me back, and I could not risk detention. From information received to-day, I am led to believe that active volcanic forces exist up the valley of the Zoalchleen River. An Indian states that at the second lake, half a day's journey from the mouth of river, a fire issues from the earth, which burns night and day; this with the hot springs in the same neighbourhood, indicates volcanic action, existing at present in a semi-quiescent state. The Indian also stated that the rocks in the neighbourhood abounded in a yellow metal, and as from this locality the auriferous quartz was brought, which, by your Excellency's order, Mr. Humphreys went to explore, the probability is, that valuable metalliferous deposits do exist, especially since the best indications exist at the mouth of the Zoalchleen River, which flows from and is fed by the two lakes at the head of the valley. This with the other valleys of the district should be fully explored at an early date.

Friday, 28th September.—After an early breakfast, struck camp and sent on tents and baggage to 10-mile house. Followed, prospecting as I went, with Mr. Lopez, Indian, and mule. At 11 a.m., having passed the junctions of the Zoalchleen River with the Lilloet, came to a metalliferous vein rising through the great bank of gravel from the bed of the river, and about 160 yards farther on, another and more promising vein rising in the same way, and running north by west across the level formed by boulder drift towards a remarkable cleft in the mountain range, which bounds the valley on its eastern

side. The formation on the western side of the river indicates that these veins pass along a ravine which dips to the river bed, under which they pass, to rise again as above described. The latter and most promising vein above mentioned, is a quartzose mass, six feet in thickness, bedded in and running along with a siliceous rock, having masses and fragments of talcose schist in the immediate vicinity. The quartz contained strings of sulphuret of silver, and is I believe the outcrop of a valuable mine. I very much regret that time did not permit me to follow it to the mountain range and explore it fully.

Passing over the flats and gravel beds on both sides of the 16-mile house, at 2 p.m. arrived at the red earth hill near the 14-mile house, and proceeded to examine the locality. Found the prevailing rock to be bedded trap, traversed by injected veins or dykes of trap containing masses of quartz, and having good indications of metal. The cause of the red earth is the presence of a great quantity of oxide of iron, which wells out from a chalybeate spring in a constant flow, at a slight dip in the hill, on the old mule trail about 500 yards above the present road. At the top of the hill there is a cutting through a mass of rounded pebbles of trappean rocks, concreted into a dense mass of solid rock by the injection of carbonate of lime. The region is one in close proximity to extinct volcanic agencies, and to these are no doubt due the presence of the ferruginous and calcareous matters which abound. Dipping the crown of the hill, a mass of dense highly crystalline trap, regularly bedded and jointed, full of iron pyrites and of argentiferous pyrites, occurs, rising in precipitous bluffs, and having resting upon it and tilted at a high angle a metamorphic clay slate, highly charged with oxide of iron.

At the foot of the hill, where the rock has been blasted and cut away to form the trail, an argentiferous vein rises at a high angle in a N.W. direction, of the same general character as the others already described, as are two other veins which about 500 yards farther on show themselves on the sides of the cliff. Circumstances prevented me from fully determining the character of these veins, but I am certain of their indications, and feel sure of their value on mining.

At 5 p.m. camped at the 10 mile house.

Saturday, September 29th.—8 a.m., struck camp and sent on baggage to Port Douglas. Passed over a level and undulating road, the only rock visible being a trap on the side of St. Helen's Lake. Ascending Sebastopol Hill, at Jerry's well, came to a metamorphic clay slate resting on trap; and at Spring Hill camp, about seven miles from Douglas, found a vein of good promise, running N.W., having a beautiful quartz vein running at right angles to it; its intrusion has converted the clay slate into a semi-crystalline, fissile blue rock, crossing about two miles of level, and at the 5-mile tree ascending a gentle rise to a bluff cut away by blasting, an argentiferous vein crosses the dense-bedded trap of which the bluff is composed. Its direction and character agrees with all the others already described.

From this point, the bluff above the 5-mile tree, a good view of the remarkable flat-topped mountain known as Mount Richards may be obtained; it is an extinct volcano, the basaltiform trap which now forms the summit is the consolidated lava of the old volcanic fires, the scoriaceous walls having crumbled down to form the now sloping sides of the mountain. This, I have no doubt, was the centre of the volcanic agencies developed in this quarter.

At 2 p.m. arrived at the 4-mile house, and was there shown by the discoverer, Mr. Hancock, a specimen of quartz, containing such indications as induced me to examine the locality whence it had been brought. Found the vein of quartz running northerly through a mass of trap, much shattered and disjointed; followed it in a southerly direction; traced it to where metamorphic rock joined the trap, but found no indications of metal, although I feel convinced that on a more extended survey it will yet be found in this formation.

Anxious to get into Port Douglas to take advantage of a fine day or two, should they offer, to enable me to complete the Harrison Lake and River, I pushed on; and passing trappean and metamorphic rocks at Gibraltar Hill, which continued on to the trappean mass above Port Douglas, at the foot having a great bed of the northern drift, I arrived at that place at 6 p.m. and camped on plain above the town.

Sunday, 30th September.—6 p.m., heavy rain set in last night, and continues; no steamer arrived, and no certainty when she may arrive. If the weather clears shall endeavour to hire canoes and go on to New Westminster.

Monday, 1st October.—Heavy rain all morning; cleared off about 2 p.m. No sign of steamer; endeavoured to hire canoes and Indians to take me down the Harrison and on to New Westminster, but could get neither the one nor the other, every Indian able to travel having gone up the Lilloet to a "blanket feast." At length, through the kind assistance of Mr. Humphreys, I obtained the promise of a canoe on the following day; and Mr. Oliver Hare most kindly placed his boat at my disposal, and offered to accompany me himself to afford me aid, an offer which I most gladly accepted. I was thus enabled to start at 6 p.m., the canoe to follow me in the morning. About 10 p.m., when off 12-mile Point, the steamer "Caledonia" hove in sight. I boarded her, and arranged that she should pick me up on her return next day, and sent orders to stop canoe. Rounding Shay Point, I camped under a red craggy hill opposite the landslips, which I was anxious to examine, as it showed good indications, but which I had not time to test on my way up.

In the morning of Tuesday, the 2nd October, proceeded to examine the formation, and found trap alternating with metamorphic rock, altered in places to a semi-crystalline structure by the intrusion of the trap; and at a place known as Smugglers' Caves, about 100 yards from the beach, discovered two metalliferous veins, each 8 feet thick, separated by about the same thickness of the above-mentioned altered rock, running N. and S., full of iron pyrites, argentiferous pyrites, and other indications of silver. The veins run from a point known as Whisky Point in a northerly direction to Shay Point, a locality already described. I blasted the rock, and found the indications improve. At 5 p.m. went on board steamer, and arrived at New Westminster at noon of the 3rd October.

On the 6th of October I arrived at Victoria, and by letter dated the 8th of that month, had the honour to report to your Excellency the return of the exploring party under my charge.

A period of 40 days was thus occupied in this exploration. I did all I could to accomplish it in the prescribed time, "of about 30 days," but broken weather and unforeseen difficulties, having reference to the hiring of canoes, &c., &c., prevented me.

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In the foregoing report the particular features of the Lilloet and Harrison Lake districts have been briefly described, and a section of the country from the 29½-mile house on the Lilloet, to near the termination of the Harrison Lake, has been prepared and accompanies this.

The section is on a scale of three inches to the mile, horizontal; the vertical section is merely approximate, or hypothetical, and the whole is intended merely as an illustration of the description given in the report. I may mention, however, that the distances in miles given on the Lilloet trail are correct, those on the Harrison Lake merely approximate.

The elevation of all these ranges is due to the action of volcanic forces, causing, in the first place, in this N.W. and S.E. line, a slow and gradual upheaval of the primary and igneous rocks composing the crust of the earth. Then, as these forces increased at intervals in intensity, upheavals and disturbances of the mountain masses occurred, both generally and locally, until the geographical features of the country assumed their present aspect, viz., great mountain chains running N.W. and S.E., having, at right angles to their axis of elevation, trappean rocks running E. and W. in transverse spurs and ridges. Resting on these spurs, tilted by them at various angles, are detached and broken masses of metamorphic rock of various kinds, such as clay slate, micaceous, hornblendic, talcose, and chlorite schists, all permeated by dykes and veins of erupted rock, which in many instances have changed the metamorphic rocks, at the points of contact, into amorphous semi-crystalline masses.

I fully believe that the whole district is metalliferous; and I am happy in having been able to prove that the greater portion of it is argentiferous.

With regard to the argentiferous veins which I have been fortunate enough to discover, I would beg your Excellency to bear in mind that limited as I was to time, it was impossible for me to work into the rock so as to determine their true and relative values; having found, examined, traced, and proved their argentiferous nature, I was obliged to leave each in succession, its value undetermined, to explore the formation and the district further. That there is abundance of silver in these formations I have not the least doubt, but it can only be reached by an outlay of capital and steady persevering mining operations. From various indications, I am led to believe that in many of the metalliferous veins described, deep mining will develop gold.

The gold in the Klatchka River on the Harrison Lake will enable any steady hard-working man, who will work it with a rocker and be content with moderate gains, to live well all the year through, and save money, as also would workings on the bars of the Lilloet at the 20-mile house; but in neither locality need any man, in mining language, expect to make "a pile."

To work these argentiferous veins, I would beg respectfully to represent to your Excellency, that encouragement should be given to a company or companies formed for the purpose of working mines.

I do not think that they can be advantageously worked by individual enterprize or exertion.

I do not think that the existing laws having reference to leases and claims on gold diggings are applicable to the working of silver mines in the district which I have explored, and would most respectfully urge that some special rules and regulations be framed and put in force at an early date.

It affords me the greatest pleasure to inform your Excellency of the great kindness and assistance I everywhere met with during my exploration, more especially from Colonel Moody, the officers and men of the Royal Engineers; from Mr. J. B. Gaggin, J.P. of Port Douglas; Messrs. Humphrey and Hare, of ditto; and from Captain Frein of the steamer "Caledonia," who finding that I was about to return in a canoe, gave a free passage to New Westminster to all the party.

Entreating your Excellency's indulgence for the imperfections of the above report,

I have, &c.

To his Excellency
James Douglas, Esq., C.B., &c. &c.

(Signed) Charles Forbes, M.D.,
Surgeon, Royal Navy.

No. 16.

No. 16.

Copy of DESPATCH from Governor Douglas, C.B., to his Grace the Duke of Newcastle.

(No. 100.)

Victoria, Vancouver Island, November 28, 1860.

My Lord Duke,

(Received January 31, 1861.)

I have the honour to inform your Grace that nothing of much importance, beyond the usual course of events, has transpired in British Columbia since the date of my last report.

2. The miners of Alexandria and Quesnel River, dreading the severity of the inland winter, have for some weeks past been arriving in great numbers from those districts, and settling themselves for the winter in the towns on the Lower Fraser, being attracted thither by the genial climate and cheaper rate of living. Their labours have, I understand, not been unrewarded, many of them having been eminently successful, while, contrary to the general experience of mining countries, few or none have been entirely disappointed. So much indeed is this the case that, as I am informed, they almost without exception propose returning to Alexandria as soon as the snow disappears in spring, and surface claims become accessible to the miner. The population of those remote districts will probably for this winter be confined to persons who have invested their means in the construction of sluices, and especially such miners as are employed in tunnelling, whose operations are little effected by the external temperature, and may be carried on during the severest weather.

3. I have lately received a communication, dated Alexandria, 17th of October, from Mr. Philip H. Nind, Magistrate and Gold Commissioner for Alexandria, from which it appears that he had, from various causes, encountered much detention on his route to Alexandria. His arrival in the district was hailed with a general feeling of satisfaction, and his services were immediately called into requisition by the complaints of the inhabitants against a few notorious evil-doers who had taken refuge there, and become the terror of the place. The most vigorous measures were at once set on foot to bring them to justice, and one of the number was soon afterwards apprehended and committed for trial; but the others could nowhere be found, and are supposed to have fled over the frontier into Oregon. Mr. Nind had temporarily established his head-quarters at William's Lake, on account of its central position, from whence diverge, as from a common focus, all the routes leading to the upper and lower country.

4. The extract from Mr. Nind's valuable report, which I here subjoin, contains some interesting statistical facts in addition to his own views of the auriferous and physical character of parts of the Alexandria district which he has lately visited.

"The rate of wages to hired labourers is five and six dollars a day, and of provisions and other necessaries about the same as at Alexandria, in some instances a little lower from the greater amount of competition.

"I have the honour to enclose a list of the prices of various articles at Alexandria.

"Ferguson's or Rich Bar when first discovered proved highly auriferous, as much as 60 dollars a day to the hand having been made; but after the pay-streak near the river became exhausted, the flat in the rear had to be pierced, and the gravel wheeled over plank roads for some hundreds of yards to be rocked out at the river; the profits, consequently, of the day's labour considerably decreased, so that when I was there the average receipts were from seven to ten dollars a day to the hand. As soon, however, as water can be brought on for sluicing there is no doubt but that high wages will be made. Unlike the bars on the Lower Fraser, the ground is here unobstructed by heavy timber or roots, and the miner finds that not only does the pay-streak yield gold, but also the sand overlying it in sufficient quantities to pay for the washing. It is the general opinion that there will be employment on this bar for more than a hundred men, and that it will not be exhausted in less than two or three years. The introduction of water is an operation requiring considerable capital and engineering skill. The ditch is cut from a lake situated between four and five miles to the north-east, and has to be brought on by means of a long tunnel; the expense of completing it is calculated at 12,000 dollars.

"Three miles below Ferguson's Bar is British Bar, where a company of six Cornishmen are bringing in a ditch about five miles in length for their own use. The bar is but of small size. I did not notice any miners between here and Alexandria, though there were signs of work done in the spring. The Fraser between Alexandria and Quesnel River is a swift but not turbulent river, averaging from 200 to 300 yards across; it has a few small ripples, but none of the dangerous whirlpools so common in its lower course; the navigation does not appear difficult; Ferguson's Bar being supplied with necessaries by boats from Alexandria, which make the trip of 60 miles in about two days and a half.

"Between Alexandria and Fort George I hear but of two impediments to steamboat navigation which it would be difficult to surmount, viz., two passes or cañons where the river narrows and rushes violently through precipitous rocks. The physical features on the Upper Fraser, that attract the attention of the miner, are three:—

"1st. Its benches, bars, and flats.

"2nd. Its earth-slides, and high banks displaying several strata of wash gravel.

"3rd. The water in its vicinity that can be made available for mining.

"The first are very extensive, and some have been worked with rockers; but rockers are really only an advanced kind of prospecting apparatus, and stand in the same relation to sluicing and the hydraulic pipe as the Chilian arastra does to the California quartz mill; in both cases the deposit of gold must be very large to yield remuneration to the employers of so limited and primitive a method of obtaining it.

"Respecting the second feature, the earth-slides and high banks yield the "colour" to prospectors, and in many cases, two or three cents to the pan; were the hydraulic pipe brought to bear upon them, ground that is now unemployed would be highly remunerative.

"Respecting water, this great essential to extensive mining operations can be procured without much difficulty, though not without labour and expense; for if streams are less frequently met with descending from these wooded hills than flow from the snow-topped mountains of the Lower Fraser, yet the great number of lakes situated within accessible

British Columbia.

distances of either bank, would afford a supply entirely independent of rain-fall or melting snow. At present the country is struggling against the high rate of provisions and necessaries; the class of men that arrive in the spring have but enough money to purchase a few weeks provisions, they cannot afford to work for the future, but must make money immediately or return, so that a thorough testing or development of the auriferous resources of this particular section of country, till very considerable reduction takes place in the price of things, is not to be looked for. I have conversed with many men who have been prospecting from Alexandria to the furthest point hitherto reached, and I find even amongst the unsuccessful no disbelief in the richness of the mines, but a general impression to return next year and try their luck again. Amongst the geological phenomena of this portion of Fraser River there is much to attract attention, more particularly a dark brown substance which the people call coal; on Ferguson's Bar and the adjacent banks many detached pieces lie scattered about, and I was informed by a person on that bar that he had used it for blacksmithing purposes and found it to answer. Some eight or nine miles above Alexandria, where the river, from a north and south course, makes an almost rectangular bend to the east, a high bank displays a complete stratum of this singular formation. I collected some specimens of it, and found on examination that its specific gravity was much lighter than that of coal, that it did not soil the fingers, and that the grain of the wood was distinctly visible. I apprehended it to be lignite in a transition state, but whether it could be utilized for commercial purposes I am unable to judge. The banks of the river here are of considerable altitude, and are composed of a kind of indurated clay, called by the miners "soap-stone;" they have been worn by the action of the water into cylindrical forms and assume the appearance of buttresses and columns. The trail between Alexandria and Ferguson's Bar passes through some exceedingly rich open land consisting of heavy black loam with a subsoil of clay, apparently well adapted to the growth of wheat. The land that Mr. Davidson has pre-empted has produced excellent crops, a small patch of less than half an acre has returned 20 bushels of wheat, and the turnips and cabbages would be considered fine in any country. Mr. Davidson owns several head of cattle, a yoke of oxen, waggon, and other agricultural implements. Finding his experiments so succeessful, he is preparing to farm next year more extensively, and is anxious to purchase land in addition to his pre-emption claim; several white men and Indians are at present in his employ. A substantial and commodious log house has been built, and farm buildings are in process of erection. The price of vegetables on the ground has ranged from 20 cents a lb. to 12½, onions excepted, which have never been sold for less than 50 cents a lb. Several of the hills that enclose the valley of William's Lake are covered with pasture of the finest description, and in the valley and on the slopes are hundreds of acres of prairie that would repay the labor of the agriculturist. The timber on these hills principally consists of Douglas pine, larch, fir, and balsam; the larger trees make useful lumber, free from knots. Since I have resided in this district, the weather, during the early part of September was unsettled, but from the middle of the month till the present time it has been exceedingly fine; latterly the frosts have been sharp at night, but the thermometer in my tent ranges between 60° and 70° during the middle of the day. I have been enabled from the central position of this spot to transact a good deal of business with miners and traders returning from the upper country. The Indians around here seem well disposed; some work well and readily, and are very intelligent, and would be, I think, susceptible of the influences of civilization; others, on the contrary, are extremely indolent, and neglect providing against the wants of to-morrow if supplied with food for to-day. As there has been a dearth of salmon this summer, I very much fear they will suffer severely this winter; the greater number talk of wintering on the Thomson River and at Cayoosh."

5. I have received intelligence from Hope and Yale up to the 29th of November. The Gold Commissioners report that the weather had been so far most favourable for mining operations, and that nearly all the miners in those districts had built comfortable houses, where they intend to remain for the winter. Some miners from the Caribœuf country had lately arrived at Hope with very fine specimens of lump gold worth from 1*l.* to 8*l.* a piece; their object being to remain at Hope until the winter is over, when they propose returning to their distant mining claims.

6. The miners at Shimilkomeen were making fair wages, varying from 30*s.* to 60*s.* a day to the man; and there was a sufficient stock of food in that part of the country to last till spring.

7. In consequence of the number of new steamboats which have been lately built here and commenced running on Fraser River, the charge for frieghts from this place to

Hope has fallen to 20*s.* a ton, being a reduction of 300 per cent. on the former rates of transport.

The reports from British Columbia contain nothing further deserving of special notice.

I have, &c.

His Grace the Duke of Newcastle, &c. &c. &c.

(Signed) JAMES DOUGLAS.

Enclosure in No. 16.

Encl. in No. 16.

LIST OF PRICES at ALEXANDRIA, 18th September 1860.

		£	s.	d.
Flour	per lb.	0	1	2
Beans	„	0	1	3
Bacon	„	0	3	1
Sugar	„	0	3	1½
Rice	„	0	1	3
Tea	„	0	6	0
Coffee	„	0	3	1½
Lard	„	0	3	1½
Candles	„	0	5	0
Soap	„	0	2	0
Salt	„	0	2	0
Pepper (ground)	„	0	4	0
Yeast Powder	per tin	0	4	0
Butter	per lb.	0	6	0
Rope	„	0	3	1¼
Tobacco	„	0	8	0
Potatoes	„	0	1	0

		£	s.	d.
Steel shovels	each	1	4	0
Picks	„	1	0	0
Sluice Forks	„	1	8	0
Axes (Collins)	„	1	4	0
Nails	per lb.	0	2	0
Quicksilver	„	0	12	0
Overshirts	each	0	10	0
Undershirts	„	0	9	0
Canvass trousers	„	0	10	0
Kentucky tweed do.	„	0	12	0
Corduroy (common)	„	1	0	0
Boots	per pair	1	12	0 to 2 8 0
Shoes (common)	per pair	0	14	0
Drilling	per yard	0	1	3
Duck	„	0	3	4
Oregon blankets	pair	2	0	0

No syrup or dried apples in the market.

No. 17.

No. 17.

COPY of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE, K.G.

(No. 7.) Victoria, Vancouver Island, January 26, 1861.

(Received March 25, 1861.)

(Answered, No. 74, April 13, 1861, page 68.)

MY LORD DUKE,

I HAVE much pleasure in transmitting herewith a synopsis of the revenue and expenditure of the Colony of British Columbia for the year ending on the 31st day of December 1860, which I have caused to be compiled in the Audit Office from the public accounts, for the purpose of laying approximately before your Grace at the earliest moment such information as may be desirable, in anticipation of the formal estimates which are in course of preparation, and will be forwarded by the next mail. Encl. No. 1.

Although the December returns and some of the back accounts of the distant out-stations have not been received, and are merely estimated in this account, yet it exhibits very closely the actual revenue and expenditure, and may, for all practical purposes, be assumed as a true statement of the financial position of the Colony.

The principal item of revenue in that account will be found under the head of Customs, classified as follows, viz., duties on imports, 29,702*l.*; harbour and tonnage dues, head money, the roads tolls at Yale and Douglas for the month of November, and other minor receipts, collectively 5,817*l.*; making in all the sum of 35,519*l.*

The increase of revenue from duties on imports is about 70 per cent., as compared with the revenue derived from the same source in 1859; and it may be fairly assumed, considering the increase of population and the progressive state of the Colony, that the Customs returns of 1861 will be in excess of those of 1860.

The amount of land sales for the year 1860 is 10,962*l.*, which is less by 7,915*l.* than the sales of 1859; a difference explained by the large sums received for building lots at New Westminster and other towns where land was required for commercial purposes and sold at high prices. A larger quantity of country land has been sold in 1860, but from the comparatively low price did not yield a proportionate revenue.

There is no prospect of a material increase in land sales for 1861, except through the effect of emigration from Canada and Great Britain, as there is a very small farming

BRITISH COLUMBIA.

population in the Colony, the working classes being chiefly miners, accustomed to excitement, fond of adventure, and entertaining generally a thorough contempt for the quiet pursuits of life.

The minor items of revenue in tne synopsis will probably not vary much in 1861 from the sums in the present return, and cannot in any case be expected greatly to affect the amount of the general revenue.

On the other side of the account is the sum of 16,736*l.* expended for "establishments." The most rigid economy having been exercised in this department, the amount is not susceptible of reduction, but might with advantage to the public service be increased by some very necessary additions to the emoluments of the principal executive officers of the Colony, their present salaries being not only inadequate to the relative importance and responsibility of the offices they hold, but literally insufficient to maintain them in a respectable position; a subject which I will take the liberty of bringing before your Grace in a separate Despatch.

The outlay on works and buildings amounts to the sum of 3,513*l.*, and in the formation of roads and bridges there has been expended the sum of 18,935*l.*; a profitable investment for the Colony, as is apparent from its increasing revenue, which will no doubt keep pace with the improvement of its internal communications and the facilities afforded to trade and commerce. A detail of those works is given in Statement No. 2, and the outlay on each is approximately shown. The other items of disbursement, being separately of small amount, need no comment. The entire expenditure, amounting to 44,124*l.*, has been defrayed out of the current revenue, and there remains a balance of 8,886*l.* in the treasury, which will be sufficient to meet the outstanding liabilities of the Colony for the unfinished contracts of the roads in progress.

Encl. No. 2.

The works we propose to execute this year are as follows:—

A cart-road from Pemberton to Cayoosh, length about	36 miles.
Ditto from Hope to Shimilkomeen	74 „
Improvement of navigation of Shimilkomeen River	60 „
Horse-road from Boston Bar to Lytton	30 „
Ditto from Lytton to Alexandria	150 „
Ditto from Cayoosh to junction with Lytton Road	30 „

In progress.

Road from New Westminster to Langley	15 „
Ditto from New Westminster to Burrard's Inlet	9 „
Ditto to boundary line at Semiahmoo Bay	14 „
Ditto from Spuzzem to Boston Bar (nearly finished)	20 „

For the execution of these highly necessary works, we may, I believe, safely estimate that the sum of 25,000*l.* can be provided out of the revenue of the Colony, without at all impairing its capacity to defray the whole civil expenses of the Government. Much more than that sum is, however, required to complete such extensive public works; and I therefore addressed your Grace on the subject of a loan of 50,000*l.* in my Despatch, No. 84, of the 28th of August last.

If that project can be carried out, we shall enter the field with larger means, and the Colony will sooner experience the impulse thereby given to trade and industry; if, on the contrary, the loan is not procurable, the extent of those undertakings will be regulated by the means actually at my disposal.

I see no probability, short of an almost absolute abandonment of all the essential public works upon which we are engaged, of our being able this year to maintain out of the Colonial Revenue the detachment of Royal Engineers stationed here; and I rely with confidence upon the mother country again affording her assistance in our difficulties, by providing for them, as heretofore, out of Imperial funds, so that I may be free to apply the whole surplus revenue of the Colony, after paying all its own Governmental expenses, to the opening of roads and other public works indispensable to its development.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) JAMES DOUGLAS.
&c. &c. &c.

Enclosure 1 in No. 17.

Encl. 1 in No. 17.

APPROXIMATE STATEMENT of the REVENUE and EXPENDITURE of BRITISH COLUMBIA for the year ending 31st December 1860.

HEADS OF RECEIPT.	£ s. d.	£ s. d.	£ s. d.
Customs.			
Duties	29,702 8 6		
Harbour dues	610 7 7		
Head money	1,054 0 0		
Tonnage dues	3,669 5 3		
Inland Navigation licences	98 10 0		
Warehouse fees	12 8 0		
Seizures	112 17 0		
Tolls at Yale and Douglas for Nov.	259 14 6		
		35,519 10 10	
Land sales		10,962 15 1	
Licences, spirit and trading		2,284 12 10	
Free Miners' certificates		1,594 6 0	
Mining receipts, general		805 12 0	
Ferries and tolls		376 19 0	
Rent		379 4 4	
Fines, fees, and forfeitures		572 8 6	
Postage		89 3 9	
Miscellaneous		274 8 5	
Assay fees		140 8 0	
Interest		11 12 10	
Refund		0 8 6	
			53,011 10 1
			£53,011 10 1

HEADS OF EXPENDITURE.	£ s. d.	£ s. d.	£ s. d.
Establishments.			
Salaries, fixed	5,138 18 9		
Salaries, provisional and temporary	9,699 14 2		
Office contingencies	982 16 3		
Allowances	915 8 4		
		16,736 17 6	
Works and buildings		3,513 19 6	
Roads, streets, and bridges		18,935 0 9	
Transport		1,413 19 0	
Administration of justice, exclusive of establishments		199 16 0	
Revenue services, ditto		176 2 8	
Police and gaols, ditto		710 13 0	
General expenditure, ditto		360 17 6	
Surveys and explorations, ditto		1,296 5 2	
Charitable allowances		200 0 0	
Conveyance of mails		57 15 0	
Miscellaneous		340 4 2	
Rent		48 0 0	
Refund		135 0 0	
			44,124 10 3
Balance			8,886 19 10
			£53,011 10 1

The above account, although only approximate in consequence of the whole of the returns not having yet been received, is still not far from the actual receipts and expenditure, the principal items being compiled from the actual accounts.

(Signed) WILLIAM A. G. YOUNG,
Acting Colonial Secretary,
Acting as Auditor.

Audit Office, 15th January 1861.

Enclosure 2 in No. 17.

Encl. 2 in No. 17.

APPROXIMATE STATEMENT of EXPENDITURE during 1860.

On Roads, Streets, and Bridges.	£ s. d.	£ s. d.
Harrison Lillooet Road	5,237 18 9	
Yale and Spuzzem Road	4,426 13 7	
Chapmans Bar and Boston Bar Trail	3,446 10 10	
Hope and Shimilkameen Road	4,304 3 0	
Langley and Sumas Trail	210 0 0	
Bridges at New Westminster, &c.	376 4 2	
Clearing Streets, &c., New Westminster	692 6 8	
Sundry small works at Out-stations	241 3 9	
		18,935 0 9

On Works and Buildings.	£ s. d.	£ s. d.
Harrison River Navigation Improvement	689 19 2	
Assay Office and Officers' Quarters, New Westminster	1,072 7 8	
Gaol at New Westminster	584 14 0	
Painting, &c Treasury, ditto	222 2 0	
Court House, New Westminster	232 10 0	
Replacing Bouys, Fraser River	236 4 2	
Sundry works at Out-stations	476 2 6	
		3,513 19 6

(Signed) WILLIAM A. G. YOUNG,
Acting Colonial Secretary,
Acting as Auditor.

Audit Office, 15th January 1861.

No. 18.

No. 18.

COPY of a DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE, K.G.

(Separate.)

New Westminster, February 28, 1861.
(Received May 13, 1861.)

MY LORD DUKE,

SINCE I last had the honour of reporting on the state of affairs in this Colony, I have received various communications from the district Gold Commissioners, the substance of which I will now lay before your Grace.

A report from the Gold Commissioner at Hope, dated 31st January, represents that district as being in a perfectly tranquil state; that about 300 miners were then employed in that vicinity, a large proportion of whom were Chinese; and that it was probable there would be a considerable emigration of that class towards Rock Creek and Shimilkomeen in the course of the spring. The river communication from New Westminster had been closed by ice for 11 days, but was then open, and the steamer "Hope"

British Columbia.

Encl. No. 1.

had arrived on the preceding day with some freight, which was carried at the reasonable charge of 20*s.* a ton. Food was abundant in the district and prices moderate, as will be observed from the enclosed statement.

The miners at Shimilkomeen had not been able to do much work on their mining claims in consequence of the coldness of the weather, and the river being covered with drift ice. Bench diggings had however been discovered by several mining companies, which were expected to yield from 20*s.* to 30*s.* a day to each man employed in washing. Many new houses were being erected, and deals and other material prepared for the

Encl. No. 2.

operations of the coming season. Bread stuffs and other articles of food were not abundant, and the price of those articles much higher than at Hope. Great exertions were being made to forward supplies by the mountain road opened last summer, which is practicable even in winter notwithstanding the depth of snow. It is not therefore apprehended that the miners in that district will suffer from want of food.

Mr. Commissioner Sanders reports that the Yale district continues in a satisfactory state. Mining is carried on to an equal extent, but he is of opinion with less remunerative results than last year. The mining claims are with few exceptions in the hands of the Chinese, there being about 2,000 of this people within the district. As a rule they have been successful and many have returned to their homes the possessors of from 2,000 to 4,000 dollars. There are but few white miners, and the major part of the small number still in this district intend to leave for Rock Creek or the Caribœuf country in spring. The total number of miners wintering in the district is about 3,000. There are

Encl. No. 3.

about 2,000 Chinese in Yale and its environs alone. The cold weather had put a stop to all mining operations. The enclosed extract from Mr. Sanders' report contains some interesting information respecting the state of trade, and the public works in progress, especially the road leading from Yale to Lytton.

Encl. No. 4.

* * * * * * *

The enclosed extract from Mr. Cox's report of the 16th January to the Colonial Secretary will convey in his own words the latest information from the mines on Rock Creek.

The last report from Mr. Elwyn, the Gold Commissioner of Cayoosh district, is dated on the 16th of February. The melancholy fate of Mr. Price, a respectable tradesman, who was barbarously murdered in his own house at Cayoosh, on the evening of the 1st of February, has excited an intense sensation. The authors and object of the crime are unknown, it is supposed however to have been committed by Indians, and three of those people have been taken into custody on suspicion, and duly committed for trial at the next assizes. The weather was already warm and pleasant at Cayoosh, and the exodus had commenced of miners and mule trains with supplies for the upper country; their departure being probably hastened by the arrival of several miners from Alexandria with reports of some wonderfully rich discoveries on Bear River, a stream which discharges into the south branch of Fraser River above Fort George. These men assured the Gold Commissioner that 25*s.* worth of gold had been washed out of a single bucket of the auriferous earth; and though he freely admits that there may be some exaggeration in these statements, yet he seems to entertain no doubt of their general accuracy, nor of the fact that very valuable discoveries have actually been made during the present winter in that quarter. Mr. Elwyn also states that the bridge over Fraser River, which was in course of erection by a private company near Cayoosh, was accidentally destroyed when more than half the work was finished, and the enterprise is therefore abandoned for the present, a circumstance which I much regret, not only on account of the travelling public who will be put to much inconvenience through the want of a bridge at that point; but also of the spirited adventurers, who have sustained a heavy pecuniary loss, and whose enterprise merits a better fate.

There is no further intelligence of much importance from the mining districts.

The reduction from 10*s.* to 4*s.* 2*d.* per acre in the upset price of country land, will no doubt give an impulse to the settlement of the country, but the change has been so recently made that we are not yet able to judge of its practical effects; we are however at present engaged in opening roads through the forests, into the more fertile districts around New Westminster, in order to render them accessible and to remove every serious impediment to their early settlement, which by that means will be greatly promoted.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) JAMES DOUGLAS.

&c. &c. &c.

Enclosure 1 in No. 18. Encl. 1 in No. 18.

PRICE of PROVISIONS at HOPE, January 31, 1861.

		£	s.	d.		£	s.	d.
Flour	per barrel	1	8	0	to	1	12	0
Bacon	per lb.	0	0	10	„	0	0	11½
Beans	„	0	0	2½	„	0	0	4
Sugar	„	0	0	5	„	0	1	0½
Coffee	„	0	1	0	„	0	1	2
Tea	„	0	2	0	„	0	4	0
Butter	„	0	1	2½	„	0	2	7
Lard	„	0	0	10	„	0	1	3
Rice	„	0	0	4	„	0	0	4½
Candles	„	0	1	8	„	0	2	1

(Signed) P. O'REILLY, J.P.

Hope, January 31, 1861.

Enclosure 2 in No. 18. Encl. 2 in No. 18.

PRICE of PROVISIONS, SHIMILKOMEEN DISTRICT, January 1861.

		s.	d.
Flour	per lb.	1	4½
Bacon	„	1	10
Lard	„	2	0
Sugar	„	1	3
Tea	„	5	0
Coffee	„	2	0

Enclosure 3 in No. 18. Encl. 3 in No. 18.

Mr. SANDERS to the COLONIAL SECRETARY.

(Extract.)

Yale, December 27, 1860.

Trade is dull, the staples principally in demand are flour, bacon, and sugar. The ruling prices are as follows:—

		Wholesale.				Retail.		
		£	s.	d.		£	s.	d.
Rice	per lb.	0	0	5	-	0	0	6
Flour	per 100 lb.	0	18	0	-	1	0	0
Bacon	per lb.	0	0	10	-	0	0	11½
Butter	„	0	2	6	-	0	3	0
Beans	„	0	0	3½	-	0	0	4½
Sugar	„	0	0	9	-	0	0	10
Tea	„	0	3	0	-	0	4	0
Coffee	„	0	1	8	-	0	2	0
Potatoes	„	0	0	1½	-		—	
Fresh meat	„	0	1	0	-		—	

		£	s.	d.
In 1859—Flour was	per 100 lbs.	1	8	0
Butter	per lb. -	0	5	0
Beans	„ -	0	0	6

The rates of freight in consequence of excessive competition are remarkably low at present, being only 3*l.* a ton from Victoria to Yale; in the spring of this year as much as 10*l.* was charged.

The miner and labouring man can live comfortably on 3*s.* a day.

The charge made at the restaurants for board and lodging is 2*l.* a week.

The rates of wages is 10*l.* a month and keep.

The population of the town of Yale, according to a recent census, is 105 whites, 260 Chinese, and 200 natives, living in 110 dwelling houses.

The roads of the district have borne the severe test of the recent very heavy rains remarkably well; I went over the Yale and Spuzzem portion subsequent to the rains; with the exception of being furrowed here and there by small mountain streams seeking an outlet, it had not suffered in the least.

Messrs. M'Roberts and Power have completed the second section of their contract. The "Colonel's Retreat" has ceased to be an obstacle in the way. A mile of rough boulders beyond the "Retreat" has been reduced to the evenness of a billiard table. The bridge over the ravine before reaching Nicaragua Bluff is completed, so also that portion of the road known as the "Zig-zag."

On the Boston Bar end too, three miles of road are finished, and the timbers for the bridge over the river Anderson have been hauled from a considerable distance on to the ground; finally a party of eight men are constantly employed on the bluff, a bench of 80 yards in length being already accomplished.

The ferry at Spuzzem has been leased to Mr. Yorke at a rental of 305*l.* per annum. The rates of toll have been reduced from 6*s.* to 2*s.*

British Columbia.

For the better collection of the "roads tolls" a toll house and gate have been erected at a cost of 70*l.* I estimate the probable yield of the road toll during the ensuing year at 5,300*l.*

	£
5,000 mules, 300 lbs. each, or 1,500 tons - -	3,000
400 tons carried by boats - - - -	800
750 tons carried by Indians - - - -	1,500
	5,300

According to lists kept by me during the past season, 2,723 mules packed from this town, viz., in June 271, in July 603, in August 779, in September 742, in October 328.

The revenue of the district has experienced a slight reduction as compared with the revenue collected in 1859.

	£	*s.*	*d.*
Mining licences - - - -	267	0	0
Mining receipts (general) - - -	201	6	2
Tolls and ferries - - - -	238	17	5
Sales of lands - - - - -	272	0	0
Fines and fees - - - - -	96	14	0
Spirit licences - - - - -	320	0	0
Tracking licences - - - -	141	0	0
	1,536	17	7

The expenditure of 1860 amounts to 1,366*l.* 2*s.* 4*d.*

I am, &c.
(Signed) E. H. Sanders,
Assistant Gold Commissioner.

Encl. 4 in No. 18.

Enclosure 4 in No. 18.

Mr. Cox to the Colonial Secretary.

(Extract.)

Rock Creek, January 16, 1861.

I beg leave to enclose for the information of his Excellency the Governor a rude sketch of the respective British and American towns, Boundary Creek.

Mining was carried on here as late as the 28th December by sluicing and rocking; 28*s.* per day to the hand being the average pay.

The weather still continues extremely mild; a continued frost, but not severe, and undisturbed by either storm or rain.

A ditch that will cost time and money is being constructed by Messrs. Curry and Co., it will take its course along the S.W. side of the creek, and terminate immediately opposite the town; its length one mile and a half; it is for the purpose of washing those benches which have been tunnelled about 20 feet into the gravel and 30 feet above the level of the creek, with fair results, viz., four colours to the pan.

A bridge is also being erected over Colville River facing the town, which will be a great improvement; although I cannot at present see where the receipts are to come from, the river being fordable during fully nine months of the year.

I purpose accompanying some miners to the gold fields reported to exist near the "Mission" on the Okanagan Lake, or rather on one of its tributary streams, as soon as I can procure a horse; and shall report to his Excellency what is to be seen there.

Active preparations for building are going on, and I, together, I may say, with all others, anxiously wait for his Excellency's instructions respecting the survey of the town, which I think should be proceeded with as soon as possible in order to meet the expected excitement.

The town now contains 23 good houses, some of which have been erected at a large outlay.

I shall feel obliged by being provided with the necessary authority for disposing of agricultural land to aliens, as at present I have nothing to guide me in the matter. I require also to know the conditions on which a saw mill privilege is to be granted.

Farms have been taken and houses built a few miles south of the line, which I dare say will be used as storehouses for spirits, &c., &c. until a favourable opportunity may present itself for smuggling such goods in here, so will require to be well watched. The creek affords every facility along both its banks for such manœuvres unfortunately.

Labour now averages 12*s.* per day without board.

Price of Provisions.—January 1861.

		£	*s.*	*d.*			£	*s.*	*d.*
Flour - - -	per lb.	0	0	10	Beans - - -	per lb.	0	1	3
Bacon - - -	„	0	2	0	Rice - - -	„	0	1	8
Lard - - -	„	0	2	0	Candles (scarce) -	„	0	6	0
Sugar - - -	„	0	1	8	Dried apples - -	„	0	1	8
Tea - - -	„	0	5	0	Molasses - -	per gallon	1	0	0
Coffee - - -	„	0	2	0					

(Signed) William Cox, J.P.

Rock Creek, January 16, 1861.

No. 19.

No. 19.

COPY of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE, K.G.

(No. 33.) Victoria, Vancouver Island, May 2, 1861.

MY LORD DUKE, (Received June 17, 1861.)

IN my Despatch marked Separate,* of the 28th of February last, allusion was made in Mr. Cox's letter of the 16th of January, forming enclosure No. 4, to some reported Gold Fields at Lake Okanagan, and the intention of the Gold Commissioner to accompany a body of miners to inspect that part of the country. The miners proceeded on their proposed excursion, and returned to Rock Creek in the beginning of March, when they communicated the very satisfactory intelligence that they had found grain and scale gold of fine quality, in remunerative quantities, in all the streams flowing into the western shore of Lake Okanagan, which is over 70 miles in length. This important discovery had not been made public at Rock Creek, for the reasons stated in Mr. Cox's interesting report on the subject, which I herewith transmit, unabridged, for your Grace's information.

* Page 45.

2. I have also just received a very satisfactory report from Mr. Commissioner Nind, of Alexandria district, mentioning the great discoveries which have been made during the winter at Antler Creek, a tributary of Bear River, which flows from the mountains east of Quesnelle Lake into the south branch of Fraser River.

3. On the occasion of Mr. Nind's visit to Antler Creek, the whole face of the country was still deeply covered with snow; but a great number of miners were nevertheless on the ground anxiously awaiting the advent of spring to commence operations.

4. These discoveries were alluded to in my Despatch of the 28th of February last, and are now satisfactorily confirmed by the present report from Mr. Nind, who, however, refrains from giving currency to the perhaps exaggerated statements received from miners, that as much as 70 dollars worth of gold has been extracted from a single pan full (containing about one gallon) of earth.

5. The confirmed impression, however, is, that a gold field of extraordinary richness has been now discovered, and I sincerely trust that those impressions may be fully realized.

6. It is matter of sincere congratulation that the tranquillity of the country has been in nowise disturbed by the excitements arising from those discoveries; and that, as a body, the miners are well conducted and submissive to the laws.

7. A copy of Mr. Nind's report, and sketch of the new gold field, is also transmitted for your Grace's information.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) JAMES DOUGLAS.
&c. &c. &c.

Enclosure 1 in No. 19.

Encl. 1 in No. 19.

SIR, Rock Creek, March 1, 1861.

I HAVE the honour to report, for the information of his Excellency the Governor, the result of Messrs. Beam and Company's prospecting tour to the Okanagan Lake, and at the same time enclose for his Excellency's inspection some unchosen gold taken out of the river Sand Cove, "Anse de Sable."

I shall now repeat as nearly as possible what was expressed by the above party.

"We prospected nine streams, all tributaries of the lake, and found gold in each, averaging from three to 90 cents to the pan; the ground was much frozen and impeded our work. We are quite satisfied of the richness of these mines, and shall as soon as feasible dispose of our claims on Rock Creek and leave for that section of the country, where a miner can grow his potatoes and other vegetables, besides keep his cow. We hand you some gold taken from William Pion's claim; he makes $4 per day with a rocker, and we as old and practical miners could realize much more by sluicing and other methods.

"The Indians treated us most hospitably, lending us canoes and horses free of charge; the soil, especially in the valleys, is well adapted for farming and stock raising. The snow, which did not exceed one foot in depth, is fast disappearing. We only prospected the flats, the frost preventing our proceeding up the creeks, where it is naturally to be believed the principal portion of the gold is deposited."

I have been particular in quoting the above, as Mr. Beam, the discoverer of "Rock Creek" gold fields is universally acknowledged to be a good and sure prospector.

BRITISH COLUMBIA.

I have not made the above statement public, as it would only lead to bad results just at present. The miners in this neighbourhood would be easily coaxed off, and the mines now in a preparatory condition for being properly worked, abandoned; improvements going forward on buildings and farms would be checked; town lots would almost be unsaleable; in fact, the expected revenue receipt would be seriously interfered with.

I have, &c.
(Signed) WILLIAM GEORGE COX.

The Colonial Secretary.

Encl. 2 in No. 19.

Enclosure 2 in No. 19.

SIR, Williams Lake, March 27, 1861.

I HAVE the honour to inform you that during the winter great excitement has prevailed respecting the discovery of rich diggings on Antler Creek. The secrecy observed by its discoverers, the large prospects they were reputed to have found, together with the subsequent announcement of the situation of the creek, tended so to inflame the minds of all, that a rush of people took place in the dead of winter to this new El Dorado.

Many claims were recorded, and in several instances the same ground was taken up by different parties. This led to contention, and almost to open violence, at one time deadly weapons being drawn, but happily with no evil result.

Shortly afterwards, an appeal having been made for my interference, I determined to proceed to the forks of Quesnelle, and if necessary to Antler Creek. Accordingly on the 27th February I left Williams Lake accompanied by a constable and two Indians carrying necessaries for the journey. In consequence of the difficulty of travelling we did not reach the forks of Quesnelle until the 3rd March: here I learnt that the majority of miners was on Keithley's and Antler Creek expecting my arrival; I resolved therefore to visit these places. The route, which was a different one to that travelled by me last autumn, led up the left bank of the north fork of Quesnelle River for about seven miles; it then crossed the river at Mitchell's Bridge, and continued on the right bank to the Lesser Caribou Lake, the entire distance from the Forks of Quesnelle being about 20 miles.

I can speak favourably of the enterprize and ingenuity displayed by Mr. Mitchell, who without assistance has built the piers of this bridge, and has made blocks and a windlass from the materials around him. I should judge that by this time the bridge must be nearly completed and fit for the passage of foot travellers and animals.

On the north fork of Quesnelle mining is carried on with much spirit by some few companies which have been engaged nearly all the winter in constructing wing dams and water-wheels for working the channel at a low-water stage. Success has attended the labour of most, and a large quantity of gold has been extracted. I visited Messrs. Keithley's and Diller's claim, which is on the hill side, about 60 feet above the level of the water; it was discovered late last autumn, and at first proved of almost unprecedented richness; a tunnel was bored into the bank, but owing to natural causes was obliged to be abandoned; subsequently the hill was pierced in two other places, but the lode seemed to have been lost, for no prospects were found. Mr. Diller has persevered in attempting to recover the lode, and has informed me that he thinks he has at length succeeded.

Good prospects have been obtained on benches 100 and 200 feet above the present river level, and it is anticipated that paying diggings exist for a numerous body of miners at a future period, when some of the preliminary difficulties attached to the development of the country are removed.

That the river has once been a much larger stream, or has occupied a different channel, is apparent from the still perceptible traces of an old channel, and the alluvial flats deposited by its action on either bank.

Above what is called the Falls, which are some five miles from Caribou Lake, scarcely any gold has been found. Crossing the Lower Caribou Lake the trail leads to two houses intended for stores, at the mouth of Keithley's Creek; it then passes up the creek to Mr. Davis' store, a distance of five or six miles.

I observed here great preparations for fluming, and many thousands of feet of lumber that had been sawn out during the winter.

The snow, which hitherto had averaged about two feet and a half, here commenced to be much deeper, and everything wore the aspect of unbroken winter. I was prevented at Keithley's Creek by stress of weather from prosecuting my journey immediately, and during my detention there I heard of many proceedings on Antler Creek that render the presence of some officer on the ground extremely desirable. The trail to Antler Creek ascends a ravine and then passes along a branch of Snow-shoe Creek for six or seven miles until the summit of the watershed is reached, which divides the streams running into the Caribou Lake, and generally in a southern direction, and those running northward and eastward into Bear and Swamp River. From the top of these mountains a fine view is obtained of the surrounding country, which northward and eastward is bounded by rugged and lofty mountains; towards the west and north-west the prospect is more level, and immediately below the peak on which I was standing, lay rolling timbered hills intersected by valleys and ravines. Where the snow had been swept off by the wind I noticed masses of quartz rock and two species of grass, said to be very common on these mountains, one a kind of red top, the other very fine and feathery in appearance. After traversing the summit for some miles the descent into the valley of Antler Creek commences. I should imagine that from Mr. Davis' store to Messrs. Rose and M'Donald's claims, which are the first that were taken possession of on Antler Creek, the distance is about 20 miles N.N.E.

The streams that I passed on the journey were numerous, and where it was possible from the falling in of the ice and snow, to observe their beds, I noticed the same characteristics of large quartz boulders,

Reduced Sketch of part of

British Columbia

by P.H. Hind.

To accompany Despatch N.o 33.

2.d May 1861.

This River flows into the S. branch of Fraser River

Very Flat

Streams

Bear River

Cañon Creek

This River flows into Fraser River

Mc.Donell Pass

Bear River Mts

Swift River

Antler Creek Falls

Falls 75 feet high

Cañon

Butte Creek

Cunningham Mtn

Fall 25 ft high

Swift River Mts

Longitude 122.d West

Swan Lake

Cunningham Creek

Snow Shoe R.

Snow Shoe Mounts

Harvey Peak

Trail

Davis Store

Keithley River

Harvey Creek

Swamp River

High Snowy Peaks

Falls

Caribou Lake

Landing

Lower Lake

Caribou Strait

Goose Creek

Little River

North fork of Quesnelle R.

Goose Creek Mts

Little River Mt.s

1 2 3 4 5

Scale of English Ms

Latitude 53.o North

John Arrowsmith. Lith.r 1861

and a kind of slate rock covered with red gravel, said to bear a close resemblance to the rich auriferous beds of the streams of the southern mines of California. I found one log cabin on Antler Creek built by the discoverers Rose and M'Donald; the rest of the miners were living in holes dug out of the snow, which was between six and seven feet deep. I remained here fully occupied for nearly six days in settling mining disputes, and transacting other business. Matters passed off without any disturbance, and if all were not satisfied the unsuccessful parties submitted quietly on finding their claims were not supported by the law.

Although I do not wish to disparage the motives that actuated such extremely creditable and decorous conduct as was displayed on Antler Creek, yet I am of opinion that the following reasons materially tended to bring about such a desirable result. Every miner had an interest in the country, the value of which in these new gold fields no one could truly estimate; but the prospect was more dazzling than had ever been presented before: it was patent to all who were old residents that English law, if transgressed, was not to be evaded with the same impunity as California law; no one therefore cared to risk the loss of what might be a fortune to him: besides this, there was an absence of every kind of intoxicating liquor. Prospecting was done during my stay, and in some cases proved most successful; but the labour of shovelling away the snow and sinking holes at that season of the year was excessive.

The creek winds through the centre of a narrow valley, and is surmounted by hills sloping down to flats and benches of alluvial deposit; the bed rock on which the gold is found lies but a short distance under the surface, and in many places crops out: there are several tributaries of the same general appearance as the main stream which offer facilities for the introduction of water; in addition, the absence of high precipitous banks, and the abundance of good timber form some of the favourable features that will render the working of mines on this creek more easy and comparatively less expensive than has been the case on the other known creeks of the Caribou country. Setting the workable ground at a low estimate, there is room here for at least 1,000 miners. Cunningham's Creek, discovered last autumn, but not prospected until after the Antler Creek excitement, has lately obtained a high reputation, a number of claims have been taken up and recorded upon it since the middle of last month, and it bids fair to rival Antler Creek in popularity. I believe it is about the same size, and will accommodate the same number of men.

I have the honour to enclose a map drawn for me by Mr. J. Martin, an enterprizing prospector, and a most intelligent person; it embraces a section of country known to but very few, and may, I think, be relied upon. The question of a mining Board, as laid down by the Gold Fields Act, being mooted, I encouraged the idea, as I believe that such an organization would be beneficial to the miner and the Colony. A new description of mines has been discovered which promises a more lasting employment of labour than has hitherto existed, and the features of the country being different to those of any other gold country, and unknown at the passing of the Gold Fields' Act, or the subsequent rules and regulations, I respectfully submit that its peculiarities are best met and turned to account by those who are most conversant with them. It is true that amongst individuals, and mining cliques which play into one another's hands, there are frequent attempts at monopoly and overreaching; yet the mining community at large, in the discussion of a question that affects its common interest, is just and impartial in matters of fact, and clear-headed in abstract questions.

Respecting the gold resources of the Caribou country, a perfect unanimity exists; but it is probable that many of those now so sanguine, particularly the new comers, who are unacquainted with the numerous difficulties that must be overcome, will meet with reverses and disapointment: those, however, who are fortunate in placer mining will turn their attention to the discovery of hill diggings and quartz lodes; hitherto, no one has prospected on the hills, exploration having followed up the course of the streams, from the necessity of obtaining immediate returns. One statistical proof of the general sentiment lies in the number of mining certificates that have been issued, and which I can safely assert embraces nine-tenths of the population, and would exceed that proportion amongst the whites; but the Chinamen, who are daily arriving, show no disposition to avail themselves of these documents, saying, when pressed to take out mining certificates, that they have only come up to prospect, and have no money. I returned on the 23rd March to Williams Lake, having been absent 25 days, and travelled a distance of about 230 miles. I found the snow had almost entirely disappeared from this valley, and Mr. Davidson had commenced ploughing about a fortnight previously. One train of packed horses arrived at Williams Lake before the end of February, but were compelled to wait some time before being able to proceed to Beaver Lake. Since this, 30 or 40 head of cattle have been driven into the forks of Quesnelle, and many trains have got as far as Beaver Lake, from which place the loads are conveyed into the forks of Quesnelle by Indians, who received 10 dollars per 100 lbs.; and as many of them, even amongst the women, are capable of carrying from 150 to 180 lbs., they are earning at the rate of from seven to nine dollars a day. Indians have been very highly paid for their labour all though the winter, and the Antler Creek excitement has given them plenty of employment; their manufactures too, have rated proportionately high; ordinary mocassins fetching from three to 10 dollars per pair, and snow shoes from 10 dollars to 25. Provisions rose during the winter, although the supply was quite equal to the demand. Flour has been selling here at 37 cents. per lb.; beans and rice about the same; and bacon at from 65 to 90; beef, 30 to 37½.

At the forks of Quesnelle, prices have been higher. At Keithley's Creek, flour was at 75; and on Antler Creek, provisions were one dollar a lb. all round. Pack-trains are arriving daily, and afford a contrast to the proceedings of last year: the miners then came in before the provisions, but now the provisions are coming before the miners: this is reducing prices, and will, no doubt, have a good effect on this part of the country.

It will be some time before animals can travel into the forks of Quesnelle; it is with much difficulty that they make the journey from here to Beaver Lake, and they are obliged to carry provender with them. A new trail has been opened from the Little Lake into the forks of Quesnelle, it is better graded than the old one, but I think is rather longer. I found Mr. Adler's new bridge over the south fork of Quesnelle completed on my return, and can speak in terms of high commendation of its workmanlike and substantial appearance. I was informed that its cost had been above 5,000 dollars, and from the high rate of wages, and the labour expended upon it, I do not imagine that a similar structure

British Columbia.

could be raised for a less sum. Mr. Adler has shown much enterprise in endeavouring to secure the traffic of the ensuing year to the forks of Quesnelle, as it is by no means certain that travellers will adopt this route to the northern mines.

I have, &c.
(Signed) Philip Henry Nind.

The Colonial Secretary.

No. 20.

No. 20.

Copy of DESPATCH from Governor Douglas, C.B., to his Grace the Duke of Newcastle, K.G.

(Separate.) Lytton, June 4, 1861.

My Lord Duke, (Received July 29, 1861.)

Since my departure from Victoria, on the 10th May I have visited in succession the towns of New Westminster, Hope, Yale, and Lytton, from whence I have now the honour of addressing your Grace.

2. It is not necessary to trouble your Grace with remarks on the condition of those towns, which all exhibit a satisfactory degree of progress, yet nothing more than was anticipated from the quiet and prosperous state of the Colony.

3. The most interesting feature about New Westminster is the newly formed lines of road through the densely wooded country north of that town, which has induced settlers to turn their attention that way, and will probably lead to the rapid extension of settlement in the direction of Burrards Inlet. A similar result in promoting early settlement is anticipated from another new line of road which is being formed on the left bank of the Fraser, commencing a little below New Westminster, and running in a southerly direction towards the frontier. The forests opposite the town are beginning to yield to the woodman's efforts; and one enterprising proprietor, Mr. Brown, has discovered on his ground a large tract of excellent land, which certainly cannot be surpassed in point of fertility or quality of soil.

4. Many land claims have been taken by settlers along the Fraser, yet in my progress from New Westminster to Hope there was scarcely a trace of improvement or any observable inroad on the forest. The Pre-emption Act is, however, beginning to work its effect, and will, as I confidently believe, ere long make a decided change on the face of the country.

5. Several industrious settlers, probably about eighty in number, have taken land around Hope and Yale, and are toiling assiduously in clearing and preparing the soil for crops. The carriage road from Hope towards Shimilkomeen, of which about 12 miles are now open to travel, is a great accommodation to settlers, who eagerly grasp at every improvable piece of land to which it gives access.

6. Captain Grant, with a detachment of 80 Royal Engineers under his command, and about 80 civilian labourers, is employed in the formation of that road, which we hope to complete before the return of winter, providing always that the public revenue continues in a prosperous state, and our funds do not in the meantime fall short.

7. I am especially anxious for the completion of that highly important work, so valuable as a military road, leading towards the frontier, and as an outlet for the trade of the most fertile agricultural districts of the Colony, and, from discoveries which are being continually made, probably the most auriferous. Every successive discovery indeed tends to confirm the impression that the gold fields which have been struck at Rock Creek and Quesnel River or Caribou, are but two points in a range of auriferous mountains containing incalculable wealth, which, commencing at Rock Creek 49° N. lat., 118° 30′ W. long., run almost due north between Great Okanagan Lake and the Columbia River to lat. 51°, and from thence along the North River in a north by west direction, through the Quesnel and Caribou country to the banks of Fraser River, at 54° N. lat., 123° W. long., a total distance of nearly 330 miles, a theory, which, if correct, opens a magnificent vista of future greatness for the Colony.

8. We saw very little mining between Hope and Yale, the miners having been generally driven from their claims by the high state of the river.

9. Entering the passes of the Fraser beyond Yale we pursued our route over the new road amidst scenery of the grandest description. Mountains rising to the skies on both sides of the narrow pass, and immediately beneath the Fraser frantically tearing its way

in foaming whirls convey a faint idea of the scene. Neither are softer features wanting, every spot of the earth being prolific of vegetation, and the mountains' sides covered with the most beautiful flowers.

10. Settlers, true to their instincts, have followed the new road even into the passes, and are bringing every spot of tillable land into cultivation. At the Great Falls two adventurous Frenchmen have built a kiosk and laid out a pretty little garden for the entertainment of visitors. The traveller has no reason to dread a journey through this part of British Columbia, as at every few miles is to be found a wayside inn, with refreshments of every kind.

11. The new road on Fraser River from "Spuzzem" to "Quayome" runs along the face of frightful precipices, but is, nevertheless, perfectly safe for horse and mule travel.

12. These is a great deal of good mining ground between Yale and Lytton, and the miners of the district have displayed an unusual degree of skill and enterprise in conducting water to their claims, by means of canals and viaducts, from the distant mountains.

13. One of these works, called the "Poor Man's Ditch," the property of Mr. Melodey and three other natives of Ireland, who came to this Colony in the year 1858, entirely without capital, and commenced their career as simple miners, is seven miles long, and has cost them about 15,000 dollars. These persons have another expensive work of the same kind on Van Winkle Flat, which now yields them a very handsome income. This is not a solitary instance of successful enterprise, as almost all their contemporaries who have remained in the Colony since the year 1858 are now possessed of wealth and position, and considering the advantages offered to emigrants one only regrets that a greater number of Her Majesty's subjects have not made British Columbia their home.

14. Much remains to be done for the improvement of this part of the Colony. A carriage road from Quayome to Lytton, is the work that demands our more immediate attention. Its importance is evident, and the people of Lytton have, almost to a man, come forward with a petition praying that it be made without delay, and a further tax levied on goods carried inland to defray its cost, which will probably not fall short o 10,000*l.*

15. I propose leaving this place to day for Cayoosh by the Buonaparte River, the great stock range of the Colony, where I expect to meet with many settlers.

16. I would also inform your Grace, that we are daily receiving the most extraordinary accounts of the almost fabulous wealth of the Antler Creek and Caribou diggings. Mr. Palmer, a respectable merchant, who arrived the other day from that part of the country with nearly 50 pounds weight of gold, which he kindly allowed me to examine, assured me that these accounts are by no means exaggerated. As an example of the extraordinary wealth of the country, he mentioned that four of his friends who are associated in a mining company, were making regularly from 16 ozs. to 37 ozs. of gold a day, being 4 ozs. to 9¼ ozs. each; by "fluming" another company of four men washed out with cradles, in his presence, 36 ozs. of gold in one day; and the yield of ordinary mining claims is from 20 to 50 dollars a day for each man employed.

17. The gold in Caribou is not confined to the rivers. It is found in the gulches and table land 300 and 400 yards from the rivers, and much beyond their highest levels. About a foot of gravel overlies the bed rock of light coloured shale extremely soft, or in mining phrase "rotten," where the gold is found in the rents of the shale. He says, there are mountains of quartz, and he is of opinion, that some of the richest quartz leads in the world will be found there.

18. Mr. Barnston, another respectable traveller from Caribou, corroborates Mr. Palmer's testimony, and adds that he never before saw a class of men more elated with their prospects than the miners of Quesnel; they look to a successful season, and expect to leave the country in the autumn with their fortunes made. He feels assured of the almost fabulous wealth of the country; ordinary claims pay 50 dollars a day to the hand, and he knows one company of four men working on Antler Creek, who each receive 1,000 dollars a week from their mining claim.

19. The testimony of other persons is confirmatory of these extraordinary statements; a private note dated 28th May 1861, from Mr. Nind, the Assistant Gold Commissioner for Quesnel River Districts, has the following remarks:—"The news is still good from above.* "We have the right thing at Caribou." So that all things considered, I see no reason for

* Caribou.

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doubting the correctness of the current reports, and I am sorry, indeed, that so small a portion of that wealth should at present be reaped by Her Majesty's subjects.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) JAMES DOUGLAS.
&c &c. &c.

No. 21.

No. 21.

COPY of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE, K.G.

(Separate.) Victoria, Vancouver Island, July 16, 1861.

MY LORD DUKE, (Received September 30, 1861.)

WHEN addressing your Grace from Lytton in my Separate Despatch of the 4th of June last,* I communicated the information and impressions of the state of the country which I had received on my previous journey; I will now in this Despatch continue the subject subsequently to my departure from Lytton.

* Page 52.

2. Leaving that place I travelled for 35 miles along the banks of Thompson's River by a good horse road lately made at a trifling cost, and successively visited the Buonaparte and Hat Rivers, and the Pavilion, where we fell upon the Fraser, and followed it downwards to Cayoosh. The district comprehended within those limits is exceedingly beautiful and picturesque, being composed of a succession of hills and valleys, lakes and rivers, exhibiting to the traveller accustomed to the endless forests of the coast districts, the unusual and grateful spectacle of miles of green hills, curving slopes, and level meadows, almost without a bush or tree to obstruct the view, and even to the very hill tops producing an abundant growth of grass. It is of great value as a grazing district, a circumstance which appears to be thoroughly understood and appreciated by the country packers, who are in the habit of leaving their mules and horses here when the regular work of packing goods to the mines is suspended for the winter.

The animals, even at that season, are said to improve in condition, though left to seek their own food, and to roam at large over the country, a fact which speaks volumes in favour of the climate and of the natural pastures. It has certainly never been my good fortune to visit a country more pleasing to the eye, or possessing a more healthy and agreeable climate, or a greater extent of fine pasture land; and there is no doubt that with a smaller amount of labour and outlay than in almost any other colony, the energetic settler may soon surround himself with all the elements of affluence and comfort.

3. Notwithstanding these advantages, such have hitherto been the difficulties of access, that the course of regular settlement has hardly yet commenced.

4. A good deal of running stock has been brought in for sale; but with the exception of eight or ten persons, there are no farmers in the district. One of those, Mr. McLean, a native of Scotland, and lately of the Hudson's Bay Company's service, has recently settled on a beautiful spot, near the debouch of Hat River, and is rapidly bringing his land into cultivation. He has a great number of horses and cattle of the finest American breeds; and from the appearance of the crops there is every prospect that his labour and outlay will be well rewarded. He is full of courage, and as confident as deserving of success. He entertains no doubt whatever of the capabilities of the soil, which he thinks will, under proper management, produce any kind of grain or root crops. The only evil he seriously apprehends is the want of rain and the consequent droughts of summer, which has induced him to bring a supply of water from a neighbouring stream, by which he can at pleasure irrigate the whole of his fields.

5. I received an equally favourable report from Mr. Reynolds, who commenced a farm at the Pavilion in the year 1859, and he has consequently had the advantage of two years' experience. His last crop, besides a profusion of garden vegetables, consisted of oats, barley, turnips, and potatoes, and the produce was most abundant. The land under potatoes yielded 375 bushels to the acre. The turnip crop was no less prolific; one of the roots weighed 26 lbs.; and swedes of 15 lbs. and 16 lbs. were commonly met with. He could not give the yield of oats and barley, the greater part having been sold in the sheaf for the use of the mule trains passing to and from the mines; but the crop, as was

BRITISH COLUMBIA,

Reduced Copy of the Map referred to in

the Despatch of Govr Douglas ;

dated 16th July, 1861

Reference

- Gold found (recently)
- Proposed Roads
- Existing Roads
- Proposed Route for Steam Navigation
- Supposed auriferous Ridge or Watershed

Scale of English Miles.

10 0 10 20 30 40 50

123 122 121 120 119 118

54 53 52 51 50 49

Salmon R. Stuart or Fraser R. (N. Branch) Fr George Sch-e-yas R. & L. McDonell Pass Carion Cr. Bear R. & L. Fraser R. (S. Branch) Antler Cr. Falls Cunningham Cr. Davis' Store Keithley Cr. Harvey Cr. Swamp R. Butte Cr. Lizards or Longwood R. Cariboo L. Lower L. Little R. Goose Cr. Supposed auriferous Ridge Jasper Ho. Athabasca, Elk or Red Deer R. Quesnelle R. N. Fork Quesnelle Town S. Fork Quesnelle L. Cranberry L. Buffalo or Cow Dung L. Henry Ho. Beaver L. Fr Alexandria Canoe R. Jose R. Mud L. Boat Encampment Columbia R. Barrier Indians report coarse gold Fourch l'eau Claire Chilcoaten R. Bowers Farm Alkali L. Axe L. Horse L. Fountain R. Tranquille L. L. de Roche Dalls de Morts Mary Cr. Trading Post Canoe Cr. Mort L. L. Vert Traverse Dalls Dig Bar Cr. Joli Prairie Watson's Bar Trading Post Gold found 1861 North R. Express Bar L. Loon Buonaparte R. Supposed auriferous Ridge Portillion R. Bridge R. Trading Post Shouswap Lake Hat R. Knife R. Copper R. Tranquille R. Lillooet (Cayoosh) Proposed Town Site Ft Kamloops L. Anderson L. Season La Fontaine Cr. Coulé L. Kamloops Thompson R. Sanpoil R. R. Bouleau Salmon R. Spellumcheen Columbia River Chewhach R. Stump L. R. Lisquesis Forks Lytton L. Nicola Shouswap R. Bich R. Governors R. Bear R. Jacques R. Trepanese R. Trout R. Beaver R. Gt Okanagan L. Marron R. L. du Chien L. Vaseux L. Chutes Tea R. Lillooet R. Douglas Harrison L. Yale Fr Hope Quaquaella R. Munson Mt Beaver L. Tulameene R. Otter R. Similkameen R. Ashnolaou R. Rock Cr. Mc Gillivray R. Fraser River New Westminster Fr Langley Pacific Ocean Fr Roberts Semiaahmoo Bay Sumass R. Chilwayook R. Council's Punch Bowl

John Arrowsmith. Litho. 1861.

manifest from the weight and length of the straw, which attained a height of fully four feet, was remarkably good. He generally allows his cattle to run at large, and they seldom require to be housed or fed in winter.

6. The cold is never severe; the greatest depth of snow in 1859 was 12 inches, and the following winter it did not exceed six inches. Ploughing commences about the middle of March. The summers are generally dry, and Mr. Reynolds is of opinion that irrigation will be found an indispensable application in the process of husbandry in this district. In the dry summer of 1859 he kept water almost constantly running through his fields; but applied it only twice during the summer of 1860, when the moisture of the atmosphere proved otherwise sufficient for the crops.

7. The numerous streams which permeate the valleys of this district afford admirable facilities for inexpensive irrigation; so bountiful indeed has nature been in this respect, that it is hardly an exaggeration to say that there is a watercourse or rivulet for every moderate sized farm that will be opened in the district.

8. A few successful experiments in husbandry will give confidence, and add to the number of the farming class, which continues to be in a lamentable minority in every part of the Colony, even in districts where one would suppose mining to be a less profitable pursuit than the cultivation of the soil.

9. The mining districts of Thompson's River, and of the Fraser below the Pavilion, have been almost abandoned by the white miners of the Colony, who have been generally carried away by the prevailing excitement to the Caribou and Antler Creek mines; and their claims are now occupied by Chinamen and native Indians, the latter especially exhibiting an unwonted degree of activity in mining. Their daily earnings sometimes reach the large sum of two pounds sterling, and never, as they assured me, fall short of eight shillings, so that they are becoming exceedingly valuable to the Colony, both as producers and as a tax-paying population. I, in fact, ascertained from the official returns of Yale, that 30 per cent. of the amount of roads' tolls was levied directly on the goods of Indians leaving that place; and from their numbers and habits it may be fairly assumed that 40 per cent. of the whole revenue collectively accruing from tolls and customs falls on them.

10. The mines on Tranquille River have lately attracted much attention, in consequence of quantities of coarse gold having been found in pieces weighing as much as three quarters of an ounce; and the discovery of a stratum of auriferous earth, in mining phrase "pay dirt," from three to four feet in thickness, at a much higher level than the present bed of the river, which until then was suppposed to be the exclusive depository of gold. This circumstance has given a new direction to the industry of the place, the miners having less faith in surface diggings, and being generally impressed with the advantage of deeper sinkings, which may probably reveal, as was the case in the gold fields of Victoria, greater wealth than has yet been found; and this in my opinion is simply a question of time.

11. There are extensive flats or holmes in the valley of the Thompson that give a large return of gold; but being above the river, they cannot be worked to much advantage until water from a higher level that can be applied to sluicing is brought into play. Several smooth water-worn nuggets, weighing as much as two ounces, have been found on the Thompson below Lake Kamloops; and diggings have been lately discovered on three of the affluents of North River (north branch of the Thompson). The streams flowing from the eastward into Okanagan Lake are also reported to be highly productive of gold—facts, which all tend to support the theory alluded to in my Despatch of the 4th of June last, regarding the existence of a vast auriferous ridge or water-shed, extending from Rock Creek to Fort George, and dividing the Columbia from the waters of Fraser River.

12. I feel a deep interest in the exploration and development of that valuable and important division of the Colony, which is now so difficult of access as to be practically closed to the ordinary settler; and there is, moreover, no convenient place where the miner can replenish his exhausted stores. With the view of removing these drawbacks, I propose to lay out a town site, as a mining depôt and centre of trade on Thompson's River, about 10 miles below Lake Kamloops, from whence the navigation is said to be practicable for stern-wheel boats through Lake Kamloops to the distance of 100 miles up North River; and also by the south branch of the Thompson to the further extremity of Shouswap Lake. As another part of the plan I propose that steam boats of the same class should be employed on Okanagan Lake, connecting with the caravans arriving by the way of Hope and Shimilkomeen from Fraser River; and finally, a good road

BRITISH COLUMBIA.

between the two lakes Shouswap and Okanagan, and from the latter lake continued in a southerly direction to the Columbia River, will complete a line of communication connecting the eastern districts with Fraser River, and affording facilities for transport that will render Hope the channel of trade, and prevent it from seeking an outlet by the Columbia River, and which in other respects will be of inestimable advantage to the Colony.

13. The latest accounts from Caribou confirm the former reports of its vast auriferous wealth. About 1,500 men are supposed to be congregated in those mines, and the number is continually augmented by the arrival of fresh bodies of miners. It will be a work of difficulty to keep them supplied with food, a service which now gives employment to about 1,200 transport horses and mules; and I am in hopes that the large profits made in that business will lead to its extension.

14. To facilitate the transport to those mines I authorized a grant of 400*l.* to improve the river trail from Cayoosh to Williams Lake; and 400*l.* to open a trail from Quesnel to Caribou Lake, the charge, in both cases, to be defrayed out of the district revenues.

15. The remoteness of the Caribou mines, and the large assemblage of people there, have rendered it necessary to establish a gold escort for the conveyance of treasure from Quesnel to New Westminster; and more especially with the view of strengthening the hands of the magistrates in those distant localities by the periodical exhibition of a small military force. This will put the colony to much expense, but I conceive it is an indispensable precaution that may prevent much future evil.

16. There is nothing of much importance to communicate respecting the towns of Cayoosh and Douglas, except that they are both progressively improving. I authorised the grant of allotments of land to the Bishop of British Columbia, at those places, as sites for churches, and 200*l.* at each, in aid of private contributions for the erection thereof. The latter measure was adopted at the instance of the inhabitants generally, who represented that they had no building where Divine service could be properly held; that they had contributed liberally towards the fund; and that their own means alone were not adequate to the erection of Churches. In those circumstances, and as no other denomination of Christians were in the field in that part of the colony, I most cordially responded to the wishes of the public.

17. I returned to New Westminster on the 20th of June; and in conclusion it only remains for me to add the gratifying intelligence that peace and good order prevail throughout the Colony.

I have, &c.

His Grace the Duke of Newcastle, K.G., &c. &c. &c.

(Signed) JAMES DOUGLAS.

P.S.—An explanatory map is transmitted with this Despatch.

J.D.

No. 22.

No. 22.

COPY of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE, K.G.

(No. 55.) Victoria, Vancouver's Island, September 11, 1861.

MY LORD DUKE, (Received Nov. 2, 1861.)

ADVERTING to my Despatch, No. 50, of the 22nd ultimo, and to previous correspondence upon the subject of returns and accounts required from this Government, I have the honour to forward herewith the return for the year 1860, as described on the other side hereof, and I trust that the same may be found satisfactory.

I have, &c.

His Grace the Duke of Newcastle, K.G., &c. &c. &c.

(Signed) JAMES DOUGLAS.

ABSTRACT of the actual REVENUE and EXPENDITURE during the Year 1860, divided under the different established heads of service.

ABSTRACT of the REVENUE received during the Year 1860.

	£	s.	d.	£	s.	d.
CIVIL.						
Customs	30,416	7	0			
Port and Harbour dues	5,435	18	8			
Land sales	11,075	12	1			
Land revenue	283	3	6			
Free Miners' certificates	1,436	0	0			
Mining receipts, general	807	5	4			
Licences, spirit and trading	2,174	12	10			
Rents, exclusive of land	430	0	3			
Postage	121	7	5			
Fines, forfeiture, and fees of court	562	9	4			
Fees of Assay office	226	17	6			
Interest	11	12	10			
Refund	0	8	6			
Miscellaneous receipts	274	14	5			
Special deposits	40	1	9			
Mule tax	30	0	0			
TOTAL COLONIAL REVENUE				53,326	11	5
Creation of bonds in aid of revenue				5,200	0	0
Loan to Vancouver island colony repaid				1,000	0	0
Advances to heads of departments, accounted for (Civil)				19,633	6	1
MILITARY.						
Her Majesty's Government	20,706	0	0			
Do. on regimental pay account	3,810	0	0			
				24,516	0	0
Advances to heads of departments, accounted for				5,950	0	0
Miscellaneous receipts				0	5	0
Refund (Transport)				2	0	6
Total				£109,628	3	0

ABSTRACTS of the PAYMENTS made during the Year 1860.

	£	s.	d.	£	s.	d.	£	s.	d.
CIVIL.									
Establishments.									
Salaries, fixed	5,190	7	11						
Salaries, provisional and temporary	9,179	19	2						
Office contingencies	1,043	19	9						
Allowances	1,018	9	4						
				16,432	16	2			
Revenue services, exclusive of establishments				179	1	7			
Administration of justice, exclusive of establishments				194	1	3			
Charitable allowances				200	0	0			
Police and gaols, exclusive of establishments				792	14	0			
Rent				38	0	0			
Transport				1,263	9	4			
Conveyance of mails				41	3	0			
General expenses, exclusive of establishments				359	4	7			
Miscellaneous services				317	0	10			
Surveys and explorations				1,635	15	8			
Refund				135	0	0			
Roads, streets, and bridges				21,076	16	10			
Works and buildings				3,725	19	0			
Redemption of bonds				780	0	0			
TOTAL COLONIAL CIVIL EXPENDITURE							47,171	2	3
Loan to Vancouver island colony							1,000	0	0
Advances to heads of departments (Civil)							20,133	6	1
MILITARY.									
Colonial pay				11,929	8	2			
Exchange cashing drafts on Paymaster-General				383	2	0			
Provisions and fuel				6,780	12	1			
Works and buildings				1,493	2	5			
Roads, streets, and bridges				22	7	8			
Stores and materials				160	0	10			
Transport				197	5	5			
Office contingencies				2	19	0			
TOTAL COLONIAL MILITARY EXPENDITURE							20,968	17	7
Advances to heads of departments (Military)							5,950	0	0
Colonel Moody, R.E., on regimental pay account				3,519	10	3			
Exchange on cashing drafts, on regimental pay account				56	1	7			
							3,575	11	10
Paid on account of Home Government							143	17	10
Balance in hands of treasurer, 31st December 1860							10,685	7	5
Total							£109,628	3	0

Audit Office of British Columbia,
4th September 1861.

(Signed) WILLIAM A. G. YOUNG,
Acting Auditor-General.

No. 23.

No. 23.

COPY of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE, K.G.

(Separate.) Victoria, Vancouver Island, September 16, 1861.

MY LORD DUKE, (Received November 2, 1861.)

I HAVE much satisfaction in reporting to your Grace that the Colony of British Columbia continues in a tranquil and progressive state.

2. The Gold Commissioners, in their last monthly reports, represent the continued exodus of the mining population from their respective districts towards the "Cariboo" country; in speaking of which I have adopted the popular and more convenient orthography of the word, though properly it should be written "Caribœuf" or Rein Deer, the country having been so named from its being a favourite haunt of that species of the deer kind.

3. The most extraordinary accounts of the wealth of that gold field are received by every succeeding steamer from British Columbia; and those accounts are confirmed by letters from the merchants and traders of the district, and by fortunate adventurers who have realized, by a few weeks labour, their thousands of dollars. It would in fact appear that Cariboo is at least equal, in point of auriferous wealth, to the best parts of California; and, I believe, the gold deposits of British Columbia will be found to be distributed over a far more extensive space.

4. I am unable to arrive at any satisfactory conclusion as to the average daily earnings of miners in the Cariboo country, but some idea may be formed of the large sums realized, from the fact that 195 ounces of gold were taken in one day out of a single mining claim; while ordinary claims yield as much as forty and fifty dollars a-day to the man: but perhaps the most telling circumstance is the high price of labour, which has attained to the extraordinary sum of ten dollars a-day; and any number of men may find employment at that rate of pay.

IV.

BRITISH COLUMBIA.

5. The Cariboo gold district was discovered by a fine athletic young man of the name of McDonnell, a native of the island of Cape Breton, of mixed French and Scotch descent, combining in his personal appearance and character the courage, activity, and remarkable powers of endurance of both races. His health has suffered from three years constant exposure and privation, which induced him to repair, with his well-earned wealth, to this Colony for medical assistance.

6. His verbal report to me is interesting, and conveys the idea of an almost exhaustless gold field, extending through the quartz and slate formations, in a northerly direction from Cariboo Lake.

7. The following well attested instances of successful mining at Cariboo may prove interesting, and will probably convey to Her Majesty's Government a more precise idea of the value and real character of this gold field than any mere generalizations, and with that object in view, I will lay the details, as received from the persons themselves, before your Grace.

8. John McArthur and Thomas Phillips arrived here from Cariboo on the 17th of August last, with nine thousand ($9,000) dollars worth of gold dust in their possession, being the fruits of three months residence at the mines. They arrived there on the 1st day of May, and left again on the 1st day of August, having previously sold their mining claim at a high price to other persons. Their largest earnings for one day amounted to five hundred and twenty-five dollars ($525); and no single day's work yielded less than twenty-five dollars ($25). Both those persons have been mining in California, and are acquainted with its resources, yet they give it as their opinion that Cariboo, as a "generally paying" country, surpasses the best days of California.

Mr. Patterson and brother arrived at New Westminster by the steamer of the 14th instant, with ten thousand dollars worth of gold dust, the produce of five weeks work at Cariboo. I personally inspected their treasure, of which they are justly proud, being the well-earned reward of their skill and enterprise. Mr. Patterson's mining claim was on the Lowhee, a tributary of Swift River, and about 16 miles distant from Antler Creek. The ground was composed of gravel and many quartz boulders, and the depth to the bed-rock was from 4 to 6 feet, beyond which he did not attempt to penetrate, though the richest deposit of gold was immediately over the bed-rock. The largest day's return from the claim was 73 ounces of gold, worth about twelve hundred dollars ($1,200); on another occasion he received 70 ounces at the close of a day's work. The gold is in rough jagged pieces, the largest found by Mr. Patterson was over six ounces; but on the next claim to his, a piece of ten ounces was picked up by the lucky proprietor. Mr. Patterson sold his mining claim before his departure from Cariboo, and is now returning to his native country, the United States, with the wealth he has so rapidly acquired in British Columbia, this being one of the evils to which the Colony is exposed through the want of a fixed population.

10. The firm of Messrs. Levi and Boas, of New Westminster, have kindly permitted me to communicate the following extract from a letter, dated 27th August 1861, which they very lately received from Mr. Levi, the managing partner of the firm at Cariboo.

"Hamburger went to Abbott, who used to be at Langley, and borrowed $2,000. I must let you know that Abbott and Jordon have one of the richest claims in the country. The least they take out a-day, three of them, is 120 ounces. They have a flour sack of gold 14 inches high. They will make, till fall, 100,000 dollars a piece. Out of one little crevice, while Hamburger was up there, he, Abbott, took 60 ounces out of it, and gold makes your eyes water, and you will never see a greater excitement as there will be next season.

* * * * * *

"If you can send up such goods as we want, do so: as I will explain to you it is only 5 or 6 weeks more that pack trains can come in here, and then we can get any price for them; besides which, spring, when there is a lot of people rushing in, and we the only ones which have goods. You bet I would soak into them. The country is all right, there is more gold in it as there was in California; don't say nothing to nobody."

11. I will not multiply these details, having said enough to show your Grace the opinion entertained by the public of the newly discovered gold fields, and of the probable influx of population from California and other countries which may be attracted by those discoveries. I need not assure your Grace that every precaution will, in that event, be taken to maintain the peace, order, and good government of the country, and to increase its permanent population: but it is impossible to repress a feeling of profound regret that so few of Her Majesty's British subjects have yet participated in the rich harvests reaped in British Columbia, though there is certainly no country in the world that offers greater inducements to the labouring classes, or for the employment of capital. The settler enjoys the peculiar advantage in British Columbia of an unfettered choice of the public domain; and may, without expense, or official delay, select any part of the Colony he

pleases, as his future home; the ultimate price of country land being in no case over fou shillings and twopence an acre, payable by instalments, spread over several years. In fact the system of no country can offer greater inducements to the settler and miner than the land regulations and mining laws of British Columbia.

12. The miners at Cariboo have, I am glad to inform your Grace, suffered no privation whatever from the want of food. Besides the large importations of bread-stuffs and salt meat packed in from Lillooet and Lytton, large droves of cattle have been sent to Antler Creek, where the native grasses are nutritious and abundant; and fresh beef is now selling by retail at 1*s.* 8*d.* a pound. A mining town of some note has sprung into existence at Antler's Creek, and supplies of all kinds can be readily purchased.

The traveller who is prepared to encounter famine in its gauntest forms on his arrival at Cariboo, is not a little astonished to find himself in the midst of luxury, sitting down every morning to fresh milk and eggs for breakfast, and to as good a dinner as can be seen in Victoria.

13. The great commercial thoroughfares, leading into the interior of the country, from Hope, Yale and Douglas, are in rapid progress, and now exercise a most beneficial effect on the internal commerce of the Colony. I have many other productive public works, indispensable for the development of the Colony, in view, but I cannot undertake their execution until I am made acquainted with your Grace's decision about the proposed loan of money for British Columbia.

14. There is nothing in the condition of the other districts of the Colony with which I need trouble your Grace at present; though it may be necessary soon to draw your Grace's attention to a reported discovery of gold on Stickeen River, latitude 57° within Her Majesty's territories, north of British Columbia, to which some adventurers, trusting to the faith of the native Indians, who brought the tidings, have inconsiderately repaired.

15. Should the report prove correct, it will be necessary to take steps for the government of the country, and to prevent the many disorders that will naturally arise from the absence of any duly constituted authority.

16. I will not fail to exercise that power, should circumstances require it, until your Grace's instructions are received.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) JAMES DOUGLAS.
&c. &c. &c.

No. 24.

Copy of DESPATCH from Governor Douglas, C.B., to his Grace the Duke of Newcastle, K.G.

(Separate.) Victoria, Vancouver's Island, October 24, 1861
(Received December 9, 1861.)

My Lord Duke,

In my Despatch of the 16th of September last, marked "Separate," * it was mentioned that a report had reached this place of deposits of gold having been found on the banks and flats of the Stikeen River, north latitude 57°, to the eastward of the Russian possessions, and within the limits of Her Majesty's territories on this coast; I, therefore deem it proper on this occasion to inform your Grace, that we have had no confirmation of those reports, nor any arrivals from that quarter.

* Page 57.

2. I have also to communicate to your Grace that the accounts from Cariboo are more than ever satisfactory; and the numbers of returning miners with their rapidly acquired stores of gold, and the extraordinary fact, unusual, I believe, in gold countries, that they have all been eminently successful, offer the strongest confirmation of the almost fabulous wealth of that gold-field. I have not, indeed, up to the present time, met with a single unfortunate miner from that quarter. Of those whom I had occasion to interrogate during my recent visit to British Columbia, I ascertained that none who held mining claims had less than 2,000, and that others had cleared as much as 10,000 dollars during their summer's sojourn at the mines. It may, therefore, be fairly assumed, that their individual earnings range at some point between those figures. I should, however, apprise your Grace, that the large strikes of the season, such as the Jourdan and Abbott claim on Lowhee Creek, and Ned Campbell's claim on Lightning Creek, the latter said to have produced 900 ounces of gold in one day, are not included in this category, as I have had no opportunity of seeing the owners of these claims, who are still in the upper country; but I will inquire into and report upon these special cases hereafter.

3. The following extracts from my travelling note book may not be considered irrelevant at this time, when everything connected with the gold-fields, or tending to illustrate the true character of the colony, possesses an absorbing interest.

British Columbia.

"Laurent Bijou, a native of France, left Cariboo on the 1st day of August. He resided about one month at the mines, and has acquired 4,500 dollars worth of gold dust;—says, he has not been so fortunate as many others, who are making as much as 1,000 dollars a day. He has mined in California, but never saw a gold-field so rich as Cariboo."

"Joseph Patterson and brother, natives of Maine, United States of America, have been mining on Keithley's Creek, and left it about the 10th of September. They have cleared the sum of 6,000 dollars between them, or 3,000 dollars each, in gold dust, which they carry about with them on their persons. They report that as a general thing the miners are making from two to three ounces a day. They are well acquainted with Jourdan and Abbott's claim, and have often seen them weighing out, at the close of their day's work; the yield on one occasion was within a few grains of 195 ounces, the number of working hands being at the time four in all. That was their largest day's return; but 80, 90, and 100 ounces a day were ordinary returns."

"Richard Willoughby, a native of England, discovered a mining claim on Lowhee Creek, and began to work it on the 27th of July last; he continued mining with from four to seven hired men till the 8th of September, when he sold the claim to another person, and returned safely to Yale, where he now resides, with the sum of 12,000 dollars in gold dust. His largest day's return was 84 ounces, and the entire amount of gold taken, during his tenure, from the claim, amounted to 3,037 ounces, valued at 48,600 dollars, and his own share to the sum of 12,000 dollars. His last week's work netted 2,032 dollars, and for two weeks previously he cleared 1,000 dollars a week for each working hand on the claim; and what is extraordinary, is the fact that all this wealth was found immediately at or within four feet of the surface, the extreme of Mr. Willoughby's sinkings. At that depth he encountered the Bed Rock, composed of soft blue slate yielding readily to the pick. He also mentions the discovery of a highly auriferous quartz reef; and he gave me a specimen of galena, containing, as per assay, 67 per cent. of lead, and 37 ounces of silver to the ton. He also mentioned several rich veins of silver ore, which he saw at Cariboo; but the inferior metals attract scarcely any attention in countries where gold is easily acquired."

"Mr. Hodge, an American, settled near Yale, held a mining claim on Lowhee Creek for about six weeks, and lately returned to Yale with a sum exceeding 2,100 dollars. His reports corroborate and confirm in all respects the statements of Richard Willoughby."

"Thomas Brown, an American citizen, claims the honour of having discovered and taken up the first mining claim on Williams' Creek, just one claim below the Jourdan and Abbott claim. Mr. Brown has been fortunate, and has a heavy pouch of gold, but I did not ascertain its money value. He says, that "Ned Campbell," a friend of his, with a company of ten other miners, selected and recorded a claim on a newly discovered stream, called Lightning Creek, a tributary of Swift River, which yielded about two ounces of gold to the panful of earth; and that a report had reached Quesnelle previous to his departure, that the company, almost as soon as they began to work, had realized 1,100 ounces in one day; and he places the greatest confidence in that report. Mr. Brown's statement on all other points respecting Cariboo corroborates the statements of Mr. Willoughby.

4. I am permitted to use the following letter from Major Downie, an old and successful Californian miner, several of whose reports on mining subjects I have had the honour of forwarding to your Grace; it is addressed to — Macdonald, Esquire, banker and assayer, Victoria, and is dated Antler Creek, 25th September 1861.

"I have just been talking to H. M. Steele; he says, he will do all he can for you with his boys; they are taking it out by the mule-load, so you may depend upon getting lots of dust when the boys come down.

"Your friend Mr. Norris is well, and I am writing this in his house. I am prospecting round to get claims for next season for Alex. and Jim Hood.

"California is nowhere in comparison to Williams Creek.

"Keep good courage, and order a mint for next year."

5. I will now quote a few passages from a private communication of the judge, Mr. Begbie, dated Forks of Quesnelle, 25th September 1861, to the Colonial Secretary. In allusion to the amount of gold dust in the hands of the miners at Cariboo, and the quiet, orderly state of the population, he observes:—"I have no doubt that there is little short "of a ton lying at the different Creeks. I hear that Abbott's and Steele's claims are "working better than ever—30 to 40 pounds a day each (they reckon rich claims as "often by pounds as ounces now; it must be a poor claim that is measured by dollars."

* * * * * *

"On many claims the gold is a perfect nuisance, as they have to carry it from their cabins to their claims every morning, and watch it while they work, and carry it back again (sometimes as much as two men can lift) to their cabins at night, and watch it

while they sleep. There is no mistake about the gold. Steele is here; he says, they took out 370 ounces one day.

"I was very glad to see the men so quiet and orderly; old Downie looked really almost aghast. He said, 'they told me it was like California in '49; why, you would 'have seen all these fellows roaring drunk, and pistols and bare knives in every hand. 'I never saw a mining town anything like this.' There were some hundreds in Antler, all sober and quiet. It was Sunday afternoon, only a few of the claims were worked that day. It was as quiet as Victoria."

6. I will lastly submit for your Grace's information the monthly report of Mr. Ball, assistant gold commissioner for the Lytton district, to the Colonial Secretary, dated 1st October 1861, which also bears upon the subject of gold mining, and is otherwise illustrative of the industrial condition of the country:—

"I have the honour to forward for the information of his Excellency the Governor a collectorate account of the revenue of the Lytton district for the month of September.

"The approach of the fall and the little mining going on at present has caused a stagnation of business.

"There are many, however, who are only awaiting the commencement of the proposed waggon roads to locate pre-emption claims, and to make permanent improvements on those already located, with a view of making British Columbia their future home. The rich discoveries made in the Cariboo district, and the proposed line of roads, have established a confidence in the future prospects of the property holders of the Lower Fraser; and all are well pleased with the prospect of the forthcoming season.

"It may be interesting to his Excellency to hear of the almost fabulous amount of gold which was taken out of a claim on Lightning Creek, belonging to a man named 'Ned Campbell.'

"1st day - - - 900 ounces
2nd day - - - 500 „
3rd day - - - 300 „

and other days proportionally rich."

7. The Gold Commissioner for the Hope district states in his last monthly report, that there was a great deal of activity in the southern mining districts about Kamloops, and that the miners there are doing remarkably well. He also mentions the great want of mining supplies, especially flour, of which article not a single pound could, at the time, be purchased; a circumstance which he much regrets on account of its baneful effects on the country.

8. The reports of the other Gold Commissioners contain nothing of unusual interest.

9. The information which I have thus laid before your Grace leaves no room for doubt as to the vast auriferous wealth, and extraordinary productive capabilities of British Columbia; and with scarcely less probability it may be assumed as a natural consequence resulting from the marvellous discoveries at Cariboo, that there will be a rush thither and an enormous increase of population in spring.

10. To provide for the wants of that population becomes one of the paramount duties of Government. I, therefore, propose to push on rapidly with the formation of roads during the coming winter, in order to have the great thoroughfares leading to the remotest mines, now upwards of 500 miles from the sea coast, so improved as to render travel easy, and to reduce the cost of transport, thereby securing the whole trade of the colony for Fraser's River, and defeating all attempts at competition from Oregon.

11. The only insuperable difficulty which I experience is the want of funds:—The revenues of the colony will doubtless, in course of the year, furnish the means, but cannot supply the funds that are immediately wanted to carry on these works.

12. I propose, as soon as those roads are finished, and the cost of transport reduced, to impose an additional road tax as a further means of revenue, a generally popular measure and strongly recommended in the several petitions forwarded with my Despatch "Separate" of the 8th of October instant. I, indeed, acknowledge with gratitude the warm support which I have lately received from the people at large in carrying out measures of development; a significant fact, showing that their feelings and interests are becoming every day more identified with the progress of the colony.

13. I have in these circumstances come to the resolution of meeting the contingency, and raising the necessary funds, by effecting a loan of 15,000*l.* or 20,000*l.* in this country, which will probably be a sufficient sum to meet the demands upon the Treasury on account of these works, until I receive the loan which your Grace gave me hopes of effecting for the colony in England.

14. In taking this decided step, I feel that I am assuming an unusual degree of responsibility; but I trust the urgency of the case will justify the means, and plead my apology with Her Majesty's Government, especially as it is so clearly for the honour and advantage of Her Majesty's service; and the neglect of the measures, which by a stern

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necessity are thus forced upon me, might prove in the highest degree disastrous to the best interests of the colony.

15. Accustomed to exact obedience within my own official sphere, I know the importance of the rule; but this is one of those exceptional cases which can hardly serve as a precedent,—and as I have always paid implicit attention to instructions, and in no case involved Her Majesty's Government in any dilemma, I trust your Grace will continue to place that degree of confidence in my prudence and discretion which heretofore it has always been my good fortune to experience.

16. I beg to enclose a rough sketch of the Cariboo country, showing its relative position with reference to Arrowsmith's map of North America.*

His Grace the Duke of Newcastle, K.G., &c. &c. &c.

I have, &c.
(Signed) JAMES DOUGLAS.

No. 25.

No. 25. COPY of DESPATCH from Governor DOUGLAS, C.B., to his Grace the Duke of NEWCASTLE, K.G.

(No. 67.) Victoria, Vancouver Island, November 14, 1861.

MY LORD DUKE, (Received January 13, 1862.)

MUCH inconvenience and loss have, ever since the formation of these Colonies, been occasioned by the want of a circulating medium of fixed and recognized value, equal to the business demands of the country. The scarcity of coin has been so great, and gold dust not being received for duties, that importers of goods have found it difficult at all times to make their Custom House payments, and, as is well known, are frequently compelled to borrow money for that purpose at exorbitant rates of interest, varying from two per cent. per month and upwards. Almost all the business of the country is transacted in gold dust of uncertain value, and it is easy to conceive the difficulty and inconvenience of adjusting payments by such means, when the holder and receiver are both alike subject to loss, and fearful of imposition.

2. The effects of an over restricted monetary circulation are now, however, operating so fatally in both Colonies that it is indispensable to devise a remedy for an evil that is sapping the very foundations of our prosperity. To illustrate this fact, I would inform your Grace that at this moment there is an amount of gold dust in the hands of miners from Cariboo, residing at Victoria, exceeding one quarter of a million sterling; and so great is the present dearth of coin that it brings a premium of five per cent. and over when procurable, which is not generally the case, as men may be seen hawking bars of gold about the streets of Victoria, who cannot raise coin enough, even at the high rates of discount just mentioned, to defray their current expenses. The miners and other holders of gold dust are naturally incensed and refuse to submit to this depreciation on the value of their property, when they know it can be converted into coin for the moderate charge of one-half of one per cent. at the United States Branch Mint in San Francisco; making an important saving to them of 4½ per cent. They are consequently leaving Victoria by every opportunity; and it is most painful to witness a state of things which is rapidly driving population and capital from the country.

3. It has been suggested that an issue of notes of varying values, guaranteed by the Government and payable on demand at the public Treasury would, by providing a cheap and simple medium of exchange, meet the evil; but independently of the general objections to a paper currency, its effect in banishing the precious metals, in producing unhealthy inflation and rash speculation, and the fluctuation in the value of the circulating medium, it appears to me that the ramifications of business are not extensive enough to retain the notes in circulation; they would therefore simply return to the Treasury, and soon exceed our means of payment.

4. This I conceive would be the inevitable result of an issue of paper in the present condition of the Colony, unless the notes were made a legal tender, a measure which I am not prepared to recommend.

5. As a safer remedy and one more suitable to the actual circumstances of the Colonies, I propose to take immediate steps for the manufacture of gold pieces, equal in value to the 10 and 20 dollar American coins, and to bring them into general use as a circulating medium in both Colonies.

This plan does not contemplate refining the gold, as the expense would be greatly increased by that process: it is merely proposed to bring it to a uniform standard of fineness, without separating the natural alloy of silver which to some extent exists in all the gold of British Columbia.

The pieces will be prepared at the Government Assay Office, and will bear the stamp

* The additional information contained in this sketch has been incorporated in the map at page 54.

of unquestionable character; and I am of opinion that by making the gold contained in them of the full current value of the piece, without taking the silver into account, which I propose should go as a bonus, they will not only answer as a cheap and convenient currency within the Colonies, but also have the same exchange value when exported to other countries.

6. It appears from experiments made by Mr. Davidson, a gentleman of large business experience, and agent for the Rothschilds at San Francisco, that the average fineness of Californian gold in its natural state ranges between 880 and 885, that is to say, in valuing the samples brought to him for sale, his calculations have been always based on those figures, and have never proved defective. This shows that some simple process for roughly determining the value of Fraser River gold may also be arrived at; and that knowledge will facilitate its reduction, within 10 or 20 thousandths, to a uniform degree of fineness, in order that the pieces representing the same value may not vary in weight.

7. All the machinery required for this purpose may be procured at San Francisco for the moderate sum of five hundred pounds, and without materially adding to the expense of the present Assay Establishment. Mr. Claudet thinks it will be in his power to manufacture all the pieces wanted for the circulation of the country.

8. I have submitted this plan for the consideration of the principal banking and commercial houses of Victoria, with the object of obtaining their views as to the probable effects of the proposed currency on the general business of the country, and more especially as to its exchange value when exported to pay for supplies: the single point which I think admits of any question, for in that case it would probably be treated as simple bullion.

9. It was clearly proved by the statements of those gentlemen, that the actual cost of importing coin from other countries is rather over 5 per cent., which they believe to be the actual cost of our present metallic currency. Not having had sufficient time for consideration they were not, however, prepared to give a decided opinion on the general measure, but they admitted that it would establish the value of the gold produced in British Columbia in the cheapest manner, and provide a metallic currency for the country at a cost of 4 per cent. less than is paid for imported coin, and offered no objections either to the plan or the basis of the proposed currency.

10. If the principal banking and mercantile houses agree among themselves to receive this currency as a legal tender, no difficulty will be experienced in carrying the measure into effect; and no reason exists why it should not receive their hearty support, as it will surely tend to their advantage, not only by the saving, as before shown, of 4 per cent. on the cost of importing coin, and the complete removal of the cause which is draining the country of wealth and population, but also in the numberless other ways by which the investment of capital serves to promote the general prosperity.

11. I will only further remark that considering the great importance of the object in view, and the advantages expected from the operation of this simple and inexpensive plan of providing a metallic currency of character unsuspected and intrinsically equivalent to its stamped value, and therefore not subject to depreciation nor open to the objections which may be urged against a paper currency, I can hardly doubt that Her Majesty's Government will in these circumstances withhold their approval, or object to my declaring it a legal tender, and causing it to be received at all the public offices within the Colonies in payment of duties and taxes; especially as there is no prospect of this currency being replaced by any preferable circulating medium until the produce of gold, by its abundance, renders the establishment of a branch of the Royal Mint in British Columbia a public necessity.

I have, &c.

His Grace the Duke of Newcastle, K.G., &c. &c. &c.

(Signed) JAMES DOUGLAS.

No. 26.

Copy of DESPATCH from Governor Douglas, C.B., to his Grace the Duke of Newcastle, K.G.

(No. 74.) Victoria, Vancouver Island, November 30, 1861.

My Lord Duke, (Received February 3, 1862.)

I have the honour to forward herewith the estimates of the civil expenditure of the Colony of British Columbia for the year ending 31st December 1862, framed as closely in accordance with rule as is practicable under the existing circumstances of the Colony.

2. I have so fully placed before your Grace in other Despatches the exact present condition of the Colony, the recent discoveries of immense auriferous wealth in the newly opened district of Cariboo, the almost certain large increase to the population in

BRITISH COLUMBIA.

consequence, and the general confidence established in the richness and future of the country, that it is not necessary I should revert to the subject here, further than to remark that I trust these circumstances will have their weight with your Grace in leaving me free, as heretofore, to devote the whole revenue of the Colony, after deducting the ordinary expenditure, to the important object of opening up the communications with the distant gold fields, so as to cheapen the transport of provisions—a matter which just now demands all our energies, and absorbs all my attention.

3. The large tract of country embraced in these new gold fields will cause a heavy increase in the civil expenditure in providing for adequate magisterial supervision. Such, however, is indispensable to the order and good government of the country, and I have consequently made provision for the same in the estimates.

* Page 54.

4. In my Despatch of the 16th July last, "Separate," * I mentioned that I had found it necessary to establish a gold escort. In the accompanying estimates provision is consequently made for its maintenance during the year 1862; but as, from the great distance it has to travel, and the nature of the country, it has proved very costly, I propose to abandon the scheme for the present, if I can carry out one part of it, viz., that of periodically strengthening the hands of the magistrates in distant localities, in some equally efficient but less expensive manner.

5. I have also, at the earnest solicitation of some of the subordinate officers in the different departments, made a slight increase to their salaries. The additional charge upon the revenue caused thereby will be comparatively insignificant, some 600*l.* only, and in the end will, I believe, be fully repaid; for the consideration thus shown may, I trust, render the present incumbents contented with their position amidst the many instances before them of suddenly acquired wealth, and will consequently secure to the Government the continuance of their services now that they have, as it were, become remunerative by possessing a knowledge of their particular duties. With scarce an exception, none had any previous experience of public business, and all had to be carefully trained; and here we have no field to select from to fill vacancies with qualified men.

6. With the foregoing exceptions the estimates do not differ materially from those submitted for the present year, and I trust that they may meet with your Grace's concurrence and approval.

I have, &c.

His Grace the Duke of Newcastle, K.G., &c. &c. &c.

(Signed) JAMES DOUGLAS.

COLONIAL ESTIMATES, BRITISH COLUMBIA.

ABSTRACT of the probable REVENUE of the COLONIAL GOVERNMENT of BRITISH COLUMBIA for the Year 1862; showing also the REVENUE (Approximate) for 1861.

Heads of Revenue.	Estimated Revenue from 1st January to 31st December 1862.	Revenue (Approximate) for the year 1861.
	£ s. d.	£ s. d.
1. Customs.		
Duties	50,000 0 0	
Tonnage dues	6,000 0 0	
Harbour dues	750 0 0	
Head money	2,000 0 0	41,177 0 0
Inland navigation licences	100 0 0	
Warehouse fees, &c.	30 0 0	
Seizures	100 0 0	
Roads tolls	10,000 0 0	6,676 0 0
Excise duties	300 0 0	—
2. Land sales	7,000 0 0	6,966 0 0
3. Land Revenue	500 0 0	801 0 0
4. Free miners' certificates	5,000 0 0	2,339 0 0
5. Mining receipts, general	1,500 0 0	729 0 0
6. Licences, wine and spirit	1,800 0 0	2,748 0 0
7. Ditto, trading	1,300 0 0	
8. Postal	150 0 0	128 0 0
9. Fines, forfeitures, and fees	500 0 0	506 0 0
10. Assay fees	500 0 0	285 0 0
11. Rents, exclusive of land	1,000 0 0	748 0 0
12. Miscellaneous receipts	100 0 0	155 0 0
13. Gold escort	1,000 0 0	60 0 0
14. Registration of deeds	400 0 0	50 0 0
Creation of bonds	- - -	3,000 0 0
Balance from 1860	- - -	10,685 0 0
Probable deficit	- - -	2,316 0 0
	£90,030 0 0	£79,369 0 0

WILLIAM A. G. YOUNG,
Acting Auditor.

Audit Office of British Columbia,
28th November 1861.

ABSTRACT of the probable EXPENDITURE of the COLONIAL GOVERNMENT of BRITISH COLUMBIA, for the Year 1862; showing also the EXPENDITURE (Approximate) for 1861.

Heads of Expenditure.	Estimates for the year 1862.	Expenditure (Approximate) for the year 1861.
	£ s. d.	£ s. d.
1. Establishments.		
Salaries, fixed	14,476 0 0	7,250 0 0
Salaries, unfixed	13,454 0 0	15,300 0 0
Allowances	1,000 10 0	550 0 0
Office contingencies	2,510 0 0	2,000 0 0
2. Revenue services, exclusive of establishments	200 0 0	100 0 0
3. Administration of Justice, exclusive of establishments	1,300 0 0	100 0 0
4. Charitable allowances	700 0 0	426 0 0
5. Police and gaols, exclusive of establishments	4,930 0 0	3,000 0 0
6. Rent	216 0 0	200 0 0
7. Transport	7,315 0 0	5,000 0 0
8. Conveyance of mails	1,500 0 0	
9. Works and buildings	7,500 0 0	3,500 0 0
10. Roads, streets, and bridges	31,749 19 9	34,600 0 0
11. Miscellaneous services	600 0 0	2,029 0 0
12. Redemption of bonds	1,650 0 0	3,852 0 0
13. Interest	128 10 3	112 0 0
14. Lighthouses	800 0 0	1,350 0 0
	£90,030 0 0	£79,369 0 0

JAMES DOUGLAS.

COLONIAL ESTIMATES, BRITISH COLUMBIA.

SUMMARY of the DETAILED ESTIMATES, showing the charge by DEPARTMENTS of the COLONIAL GOVERNMENT for the Year 1862.

Departments.	ESTABLISHMENTS. Salaries. Fixed.	Salaries. Unfixed.	Allowances.	Office Contingencies.	Total of Establishments.	EXCLUSIVE OF ESTABLISHMENTS. Revenue Services.	Administration of Justice.	Charitable Allowances.	Police and Gaols.	Rent.	Transport.	Conveyance of Mails.	Works and Buildings.	Roads, Streets, and Bridges.	Miscellaneous Services.	Redemption of Bonds.	Interest.	Lighthouses.	TOTAL.
	£	£	£ s. d.	£	£ s. d.	£	£	£	£	£	£	£	£	£ s. d.	£	£	£ s. d.	£	£ s. d.
1. Governor	1,550	- -	- -	- -	1,550 0 0	- -	- -	- -	- -	120	1,000	- -	3,000	- -	400	- -	- -	- -	6,070 0 0
2. Colonial Secretary	1,700	150	- -	450	2,300 0 0	- -	- -	- -	- -	-	50	- -	- -	- -	100	- -	- -	- -	2,450 0 0
3. Treasurer	1,870	150	- -	100	2,120 0 0	- -	- -	- -	- -	- -	100	- -	150	- -	80	- -	- -	- -	2,450 0 0
4. Auditor General	500	150	- -	30	680 0 0	- -	- -	- -	- -	- -	30	- -	- -	- -	- -	- -	- -	- -	710 0 0
5. Assay and Refinery Office	1,650	- -	- -	420	2,070 0 0	- -	- -	- -	- -	- -	50	- -	50	- -	- -	- -	- -	- -	2,170 0 0
6. Lands and Works	- -	- -	- -	200	200 0 0	- -	- -	- -	- -	- -	- -	- -	- -	31,749 19 9	- -	- -	- -	- -	31,949 19 9
7. Customs and Revenue.																			
Customs branch	1,534	1,492	- -	110	3,136 0 0	- -	- -	- -	- -	- -	100	- -	50	- -	- -	- -	- -	- -	3,286 0 0
Revenue branch	250	626	328 10 0	- -	1,204 10 0	200	- -	- -	- -	- -	- -	- -	50	- -	- -	- -	- -	- -	1,454 10 0
8. Gold Escort	- -	1,110	300 0 0	50	1,460 0 0	- -	- -	- -	- -	- -	5,000	- -	- -	- -	- -	- -	- -	- -	6,460 0 0
9. Registrar General	- -	850	- -	100	900 0 0	- -	- -	- -	- -	- -	100	- -	50	- -	- -	- -	- -	- -	1,050 0 0
10. Post Office	422	- -	- -	100	522 0 0	- -	- -	- -	- -	- -	- -	1,500	- -	- -	- -	- -	- -	- -	2,022 0 0
11. Harbour Master	400	132	- -	20	552 0 0	- -	- -	- -	- -	- -	75	- -	700	- -	- -	- -	- -	- -	1,327 0 0
Administration of Justice.																			
12. Supreme Court	1,100	- -	- -	50	1,150 0 0	- -	1,100	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	2,250 0 0
13. Attorney General	700	- -	- -	50	750 0 0	- -	200	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	950 0 0
Police and Gaols.																			
14. At New Westminster	650	782	- -	50	1,482 0 0	- -	- -	- -	1,080	- -	- -	- -	200	- -	- -	- -	- -	- -	2,762 0 0
15. Douglas	300	384	- -	40	724 0 0	- -	- -	- -	350	- -	20	- -	50	- -	- -	- -	- -	- -	1,144 0 0
16. Hope	300	432	72 0 0	40	844 0 0	- -	- -	- -	250	- -	20	- -	50	- -	- -	- -	- -	- -	1,164 0 0
17. Rock Creek	400	1,008	- -	100	1,508 0 0	- -	- -	- -	250	- -	50	- -	50	- -	- -	- -	- -	- -	1,858 0 0
18. Yale	350	634	- -	100	1,084 0 0	- -	- -	- -	350	- -	50	- -	50	- -	20	- -	- -	- -	1,554 0 0
19. Lytton	400	432	- -	150	982 0 0	- -	- -	- -	800	- -	50	- -	50	- -	- -	- -	- -	- -	1,882 0 0
20. Lillooet	400	432	- -	50	882 0 0	- -	- -	- -	550	96	20	- -	500	- -	- -	- -	- -	- -	2,048 0 0
21. Cariboo	- -	4,740	300 0 0	300	5,340 0 0	- -	- -	- -	1,300	- -	200	- -	2,500	- -	- -	- -	- -	- -	9,340 0 0
22. Inspector of Steam Vessels	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	400	- -	- -	- -	- -	- -	- -	- -	400 0 0
23. Redemption of Bonds	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1,650	- -	- -	1,650 0 0
24. Interest	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	128 10 3	- -	128 10 3
25. Char table Allowances	- -	- -	- -	- -	- -	- -	- -	700	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	700 0 0
26. Lighthouses	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	800	800 0 0
	14,476	13,454	1,000 10 0	2,510	31,440 10 0	200	1,300	700	4,930	216	7,315	1,500	7,500	31,749 19 9	600	1,650	128 10 3	800	90,030 0 0

Audit Office of British Columbia, 28th November 1861.
WILLIAM A. G. YOUNG, Acting Auditor.

JAMES DOUGLAS.

British Columbia.

Despatches from the Secretary of State.

No. 1.

No. 1.

Copy of DESPATCH from his Grace the Duke of Newcastle to Governor Douglas, C.B.

(No. 26.)

Sir, Downing Street, May 19, 1860.

* Page 1. I have to acknowledge the receipt of your Despatch, No. 24,* of the 17th of February last, on the subject of the grant of endowments in land to the clergymen of the principal Christian communities established in British Columbia.

I approve of the grants of about one acre each which you have already made to the clergy of the Church of England and the Methodist Episcopal Church as sites for a church, school, and dwelling-house, and you will also be at liberty to make similar grants in all towns in the Colony where ordained ministers of the Gospel may take up their residence, and where congregations may be established and require their assistance; but care should be taken that the land shall be appropriated to the purposes for which it was intended, and that it shall be so conveyed as to be secure against the possibility of misapplication in future years.

Your further proposal, that free grants of 100 acres of rural land should be made in aid of every cure established in British Columbia, and not otherwise supported at the public expense, I consider to be open to serious objections.

The experience afforded by other Colonies tends to show that where a clergyman in a new Colony has to depend on his land for his principal means of subsistence, he must, to make it answer, devote to it so much of his time as seriously to interfere with his usefulness; unless he does this, the endowment becomes only an apparent, not a real provision for him. He cannot let it, because land in a new settlement is never, except under very peculiar circumstances, taken on lease, and to employ hired labour would generally be beyond the means of a clergyman so situated.

For these reasons I am unable to sanction the measure which you propose. The practice of making grants of land as endowments to livings in the Colonies has been generally discontinued for many years, and I much doubt whether it is not better for a clergyman to depend entirely on the liberality of his congregation than to be provided with an endowment which, though no substantial assistance to him, may be an excuse to such of his congregation as are disposed to withhold their aid.

I am, &c.

Governor Douglas, C.B. (Signed) NEWCASTLE.
&c. &c.

No. 2.

No. 2.

Copy of DESPATCH from his Grace the Duke of Newcastle to Governor Douglas, C.B.

(No. 27.)

Sir, Downing Street, May 25, 1860.

† Page 2. I have to acknowledge the receipt of your Despatch, No. 25,† of the 18th of February last, enclosing copies of a correspondence between Mr. Cridge, the District Minister of Victoria, and Mr. Duncan, relative to the formation of a settlement for Indian converts to Christianity, and in order to carry this plan into effect you propose to reserve several hundred acres of land in the neighbourhood of Fort Simpson.

Subject to the stipulations which you suggest, namely, that the land should be conveyed to the Governor of the Colony for the time being, in trust for the use and benefit of the Indians, leaving them no power to alienate or dispose of it, I have to authorize you to take the necessary steps for the conveyance of the lands in question.

I have, &c.

Governor Douglas, C.B, (Signed) NEWCASTLE.
&c. &c.

No. 3.

BRITISH COLUMBIA.

No. 3.

COPY of DESPATCH from his Grace the Duke of NEWCASTLE to Governor DOUGLAS, C.B.

(No. 36.)

SIR, Downing Street, June 26, 1860.

I HAVE received and read with interest your Despatch, No. 42,* of the 23rd of April, containing a general report on the Colony of British Columbia, and on the progress which has been made in opening up the country. * Page 4.

I do not doubt that you cannot apply your attention to an object more important to the Colony than the improvement of its internal communications.

I have, &c.

Governor Douglas, C.B. (Signed) NEWCASTLE.
&c. &c.

No. 4.

o. 4.

COPY of DESPATCH from the SECRETARY OF STATE to Governor DOUGLAS, C.B.

(No. 42.)

SIR, Downing Street, July 19, 1860.

I HAVE received, and have perused with much interest, your Despatch of the 23rd May,† reporting the result of your observations during a late visit to British Columbia. † Page 6.
There is no subject of greater importance to a new Colony than the establishment of well considered regulations for the disposal of the public lands. I trust, therefore, that with the aid of your personal examination of the country, and of the extensive correspondence in which you have been engaged with Her Majesty's Government, you will soon be enabled to communicate to me those full and matured views on this subject which your Despatch encourages me to expect.

The sketch you have sent of the municipal institutions proposed for New Westminster seem very promising, and I am glad to infer that the town is ready to accept them, which is not always the case in a young Colony.

I have, &c.

Governor Douglas, C.B. (Signed) G. C. LEWIS.
&c. &c.

No. 5.

No. 5.

COPY of DESPATCH from C. FORTESCUE, Esq., M.P., to Governor DOUGLAS, C.B.

(No. 56.)

SIR, Downing Street, October 26, 1860.

I AM directed by the Secretary of State to acknowledge your Despatch, No. 72,‡ of the 4th August last, respecting certain grants of land which you were desirous of making to the clergy of the four principal denominations of Christians in British Columbia, *i.e.*, of the English, Roman, Presbyterian, and Methodist Churches. ‡ Page 14.

For the reasons already communicated to you, the Secretary of State cannot sanction the grants of rural land which you still apparently advocate, but he sees no objection to your affording a temporary pecuniary assistance to Ministers of Religion in British Columbia from Colonial funds, if those funds are adequate for the purpose, and if you have sufficient reason for believing that such an appropriation of public money will not be unacceptable to the colonists.

Charged as you are with the task of expending, on your own responsibility, the produce of the taxes, it is peculiarly necessary for you to avoid the appearance of individual preference or partiality. I think therefore that the public aid given to Ministers of Religion should not be confined to any specified denominations, but should, if possible, be determined by a generally intelligible rule, which, while furnishing some security against useless or improper appropriations, will not suggest any distinction between ministers of different persuasions, who may be exerting themselves with equal earnestness for the good of the community. It might be required, for example, as a condition to any grant of money, that a memorial should be presented to the Governor, signed by a certain number or proportion of persons resident within a certain district, and either offering to meet the Government grant by certain immediate or annual contributions of their own, or stating that from some source or other such contributions had been made. This, however, is merely suggested by the Secretary of State as an illustration. He is fully aware that your own knowledge of the exigencies of the Colony, of the temper and wishes of the population, and of the assistance to be derived there from religious

BRITISH COLUMBIA.

persons or societies, will enable you to choose your own course in a matter of detail more appropriately than he can do.

But in any case you will take care to make it clearly understood that any assistance of this kind is temporary, and that if given in the form of an annual payment, all those who receive it must not calculate on retaining it after it has ceased to be sanctioned by the public opinion of the Colony, and consistent with other demands on the revenue.

I have, &c.

Governor Douglas, C.B. (Signed) C. FORTESCUE.
&c. &c.

No. 6.

No. 6.

COPY of DESPATCH from his Grace the Duke of NEWCASTLE, K.G., to Governor DOUGLAS, C.B.

(No. 66.)

SIR, Downing Street, February 1, 1861.

I HAVE to acknowledge the receipt of your Despatches, marked "Separate," of the 9th* and the 25th* of October last, giving an account of your recent journey through British Columbia. I have also received your Despatch, No. 95,† of the 9th of November, inclosing a report by Dr. Forbes, of H.M. ship "Topaze," of the proceedings of the exploring party under his charge.

*Pages 22 & 27.

† Page 32.

I have perused these reports with much satisfaction, as containing interesting information on the advance the Colony has made, and as showing, so far as can at present be ascertained, the agricultural and mineral resources of the country.

I have, &c.

Governor Douglas, C.B. (Signed) NEWCASTLE.
&c. &c.

No. 7.

No. 7.

COPY of DESPATCH from his Grace the Duke of NEWCASTLE, K.G , to Governor DOUGLAS, C.B.

(No. 74.)

SIR, Downing Street, April 13, 1861.

I HAVE the honour to acknowledge the receipt of your Despatch, No. 7,‡ of the 26th of January, transmitting an approximate statement of the revenue and expenditure of British Columbia. I am glad to receive so favourable an account of the progress of the revenue of the Colony.

‡ Page 43.

I have, &c.

Governor Douglas, C.B. (Signed) NEWCASTLE.
&c. &c.

No. 8.

No. 8.

COPY of DESPATCH from his Grace the Duke of NEWCASTLE, K.G., to Governor DOUGLAS, C.B.

(No. 77.)

SIR, Downing Street, May 9, 1861.

I HAVE the honour to transmit to you, herewith, the copy of a Memorandum on the subject of the protection of the Salmon Fisheries of British Columbia, which has been submitted to me by Mr. Ffennell, a member of a late Fishery Commission in this country. I also enclose copies of a subsequent correspondence with that gentleman, and I have to invite your attention to a subject which will probably, ere long, become one of some importance to the Colony. I have requested the Governor of Canada to forward to you the official documents bearing upon the matter mentioned in Mr. Ffennell's letter of the 19th April, and in the meantime I enclose a report of the British Commissioners, which may probably afford you information that will be useful to you in legislating on the Fisheries of British Columbia.

I have, &c.

Governor Douglas, C.B. (Signed) NEWCASTLE.
&c. &c.

Enclosure 1 in No. 8. BRITISH COLUMBIA.

MEMORANDUM ON SALMON FISHERY, BRITISH COLUMBIA.

Encl. 1 in No. 8.

IT is suggested that the Salmon Fisheries should be placed under supervision as well as the land to give security to private enterprise, and to prevent confusion of rights and waste, and that an area of water producing salmon is likely, as civilization progresses and commerce extends, to become more valuable by one hundred fold and more, than the same area of land.

That the first step towards promoting the objects referred to should be the employment of a person of practical knowledge to review the rivers to an extent sufficient to enable him to report upon their capabilities, and to point out the steps which should be taken to prevent abuses before they have set in, and to suggest the modes by which a system of healthy enterprise may be promoted in the Colony.

By adopting this course many persons from this country might soon be induced to embark in the salmon fishery of British Columbia, by receiving information which they would rely upon, if communicated on the authority of a person of practical knowledge, while at present they can only obtain fragments of information derived from persons in the Colony, whose attention has been attracted to the question by the immense quantities of fish which they see exist, and which a few have communicated, but are unable to offer any opinion upon the practicability of embarking in such an enterprise. The quantity of salmon which at present exist in British Columbia, and the extent of rivers producing them, is so far beyond anything which the waters of Great Britain and Ireland ever produced or could produce, that no idea can be formed at present of their relative value.

The salmon fisheries of that Colony appear to be one of the resources of the country, which might be most readily brought into commercial development if measures were taken to promote it.

Those fisheries are in their present state natural and unimpaired, but as population increases, abuses are certain to follow, as in Canada for instance, where the Government are now obliged to take up the question, and appoint officers to check the evil; whereas if timely measures be taken to prevent encroachments and destruction, much ultimate loss to the country may be prevented.

The Government now possess those fisheries; no real or assumed vested rights by individuals have been established, and it is suggested that now is the proper time to place them under the protection of the State, and that they may be soon profitably disposed of under judicious regulations to enterprising individuals, and thus bring a large revenue into the country, affording increased capital for further and more general operations of industry.

(By W. J. FFENNELL, Esq., Fishery Commissioner, Ireland.)

Enclosure 2 in No. 8.

Encl. 2 in No. 8.

SIR, Downing Street, March 27, 1861.

THE Duke of Newcastle desires me to thank you for the Memorandum which you have been good enough to furnish him on the subject of the protection of the salmon fisheries in the rivers of British Columbia.

His Grace is fully aware of the importance of the object which you propose, and he is prepared to instruct the Governor to take steps for the proper preservation of these fisheries, but before doing so he would be glad to be furnished with the titles of any public documents with which it might be desirable to supply him for his assistance in carrying out the object in view.

I am, &c.

W. J. Ffennell, Esq. (Signed) C. FORTESCUE.

Enclosure 3 in No. 8.

Encl. 3 in No. 8.

SIR, 2, Craven Street, Strand, London, April 19, 1861.

YOUR letter of the 27th of March addressed to me here, with reference to the Fisheries of British Columbia, was not duly forwarded, I have been back and forward to Ireland, and thus the delay in replying to it has occurred.

I would beg to refer to the following documents for the information of his Grace the Duke of Newcastle:—

Fishery Acts, Upper and Lower Canada, printed in Quebec by Queen's Printer.
Report of Commissioners of Crown Lands of Canada for 1857.
Report of Commissioners of Crown Lands of Canada for 1858.
Report of Commissioners of Crown Lands of Canada for 1859.
[I have not yet seen Report, 1860.]

These reports contain much valuable information with respect to the laws enacted for the protection of the fisheries of Canada, the state the fisheries had fallen into, and the means now in operation for their regulation.

I believe the salmon fisheries of British Columbia far exceed in extent and capabilities those of Canada, and that it would be highly expedient to place them under a system of State regulation before abuses creep in, with the view of inducing private enterprise embarking in their commercial development, and at the same time guarding against the establishment of abuses and improvident practices, which must tend ultimately to diminish materially if not totally to destroy a great natural source of wealth.

The state of the Canadian salmon fisheries appears to furnish an example fully supporting this view of the question.

I am, &c.

C. Fortescue, Esq., M.P. (Signed) WILLIAM J. FFENNELL.
&c. &c.

APPENDIX.

PROCLAMATIONS HAVING THE FORCE OF LAW.

App. No. 1.

Appendix No. 1.

BRITISH COLUMBIA.—No. 23.

Proclamation by his Excellency James Douglas, Companion of the most Honourable Order of the Bath, Governor and Commander-in-Chief of British Columbia, Vice-Admiral of the same.

Whereas, under and by virtue of an Act of Parliament, made and passed in the session of Parliament held in the 21st and 22nd years of the reign of Her Majesty Queen Victoria, intituled "An Act to provide for the Government of British Columbia," and by a commission under the Great Seal of the United Kingdom of Great Britain and Ireland, I, James Douglas, have been appointed Governor of the said colony, and have been authorized by proclamation under the public seal of the said Colony, to make laws, institutions, and ordinances for the peace, order, and good government of the same.

And whereas it is expedient in some respects to alter the rates of duties of customs now leviable upon goods and other articles and things imported into British Columbia, and to make further provision for the levying thereof.

Now, therefore, I do hereby declare, proclaim, and enact as follows, viz.:—

1st. That so much of the proclamation dated the 2nd of June one thousand eight hundred and fifty-nine as imposes a duty upon the several articles specified in the schedule hereto, shall as to the duty thereby imposed be repealed from the 15th day of October next.

2nd. That the duties specified in the said schedule shall be paid on the articles thereon specified from the said 15th day of October next.

3rd. This proclamation may on all occasions be cited as the "Customs Amendment Act, 1860."

Issued under the public seal of the said Colony, at Victoria, Vancouver Island, this (L.S.) twentieth day of August, one thousand eight hundred and sixty, in the twenty-fourth year of Her Majesty's reign, by me,

JAMES DOUGLAS.

By his Excellency's command,
William A. G. Young,
Acting Colonial Secretary.

Schedule.

		£	s.	d.			£	s.	d.
Flour - -	per barrel	0	3	1½	Ale and Porter in Wood -	per gallon	0	0	7
Bacon, Salt and Dried Pork -	per lb.	0	0	1	Wine in Wood an Bottle -	per gallon	0	2	1
Beans - -	per 100 lb.	0	1	3	Bitters - -	per gallon	0	2	1
Barley - -	per 100 lb.	0	1	3	Blankets -	per pair	0	2	1
Butter - -	per lb.	0	0	2½	Cheese -	per lb.	0	0	2½
Candles -	per lb.	0	0	2½	Opium - -	per lb.	0	2	1
Lard - -	per lb.	0	0	1	Dried Fish -	per lb.	0	0	1
Rice - -	per 100 lb.	0	3	1½	Salt Fish -	per lb.	0	0	0½
Tea - -	per lb.	0	0	2½	Chinese Medicated Wine -	per gallon	0	3	1½
Coffee - -	per lb.	0	0	1½	Dried Vegetables (Chinese) -	per lb.	0	0	1
Sugar - -	per lb.	0	0	1	Salt Vegetables (do.)	per lb.	0	0	0½
Ale and Porter in Bottle -	per dozen	0	1	8					

God save the Queen.

App. No. 2.

Appendix No. 2.

BRITISH COLUMBIA.—No. 29.

Proclamation by his Excellency James Douglas, Companion of the most Honourable Order of the Bath, Governor and Commander-in-Chief of Her Majesty's Colony of British Columbia and its Dependencies.

Whereas, under and by virtue of an Act of Parliament, made and passed in the session of Parliament held in the 21st and 22nd years of the reign of Her Majesty Queen Victoria, entitled "An Act to provide for the Government of British Columbia," and by a commission under the Great

Seal of the United Kingdom of Great Britain and Ireland, I, James Douglas, have been appointed Governor of the said Colony, and have been authorized by proclamation, under the public seal of the said Colony, to make laws, institutions, and ordinances for the peace, order, and good government of the same:

And whereas the port of New Westminster is the only port of entry for goods in British Columbia—

And whereas many persons have imported goods into British Columbia across the southern boundary thereof, contrary to law:

And whereas it is expedient that all persons importing goods into British Columbia across the said boundary should be notified that such importation is contrary to law, and can be permitted only pending the completion of the communications in British Columbia:

And whereas the collection of the customs duties is rendered very expensive by the importation of goods across the southern boundary aforesaid, and it is expedient to impose a fine on such importation, to meet the additional cost of collection:

Now these are to give notice—

1. That no goods, wares, animals, or merchandize shall be imported into British Columbia which shall not have been entered at New Westminster aforesaid, unless the duties, tolls, and fines herein-after specified shall have been first paid to some duly-qualified officer of customs, and such officer shall have first granted to the importer a permit on behalf of such goods.

2. The duties and tolls aforesaid shall be as follows:—

A. The duties at present imposed by virtue of the proclamations of the second day of June, one thousand eight hundred and fifty-nine, and the twentieth day of August, one thousand eight hundred and sixty.

B. For every fifty pounds weight avoirdupois of such goods, wares, or merchandize (and so in proportion for a greater or less quantity than fifty pounds weight of goods), one shilling: miners' packs, carried by the owners and not exceeding thirty pounds weight avoirdupois, for each man's load, being exempt from such duty as aforesaid.

C. For every ton of such goods, wares, or merchandize, twelve shillings.

3. In addition to the aforesaid duties and tolls, a fine equivalent to three per cent. on the market value of such goods, wares, animals, or merchandize shall be paid to such officer of customs—such market value to be calculated upon the market value of the goods, wares, animals, or merchandize at the place of collection.

4. Any person wilfully evading or attempting to evade the payment of any of the duties, tolls, or fines, aforesaid, shall be fined treble the amount of the duties, tolls, or fines, or any sum not exceeding one hundred pounds, at the discretion of the magistrate.

5. Any penalty under this Act may be recovered and enforced before any magistrate in British Columbia in a summary way.

6. This proclamation may be cited as the "Southern Boundary Act, 1860."

Issued under the public seal of the said Colony at Victoria, Vancouver Island, this twenty-second day of December, in the year of our Lord one thousand eight hundred and sixty, and in the twenty-fourth year of Her Majesty's reign, by me,

(L.S.)

JAMES DOUGLAS.

By his Excellency's command,

WILLIAM A. G. YOUNG,
Acting Colonial Secretary.

GOD SAVE THE QUEEN.

APPENDIX No. 3.

BRITISH COLUMBIA.—No. 30.

PROCLAMATION.—No. 2, A.D. 1861. By his Excellency JAMES DOUGLAS, Companion of the most Honourable Order of the Bath, Governor and Commander-in-Chief of British Columbia.

WHEREAS, under and by virtue of an Act of Parliament made and passed in the session of Parliament, held in the 21st and 22nd years of the reign of Her Majesty Queen Victoria, intituled "An "Act to provide for the Government of British Columbia," and by a commission under the Great Seal of the United Kingdom of Great Britain and Ireland, I, James Douglas, have been appointed Governor of the said Colony, and have been authorized by Proclamation under the public seal of the said Colony to make laws, institutions, and ordinances for the peace, order, and good government of the same.

And whereas, by a Proclamation issued under the public seal of the said Colony, on the 4th day of January 1860, the price of unsurveyed land acquired by purchase or pre-emption under the provisions of the said Proclamation, was stated to be at such rate as might for the time being be fixed by the Government of British Columbia, not exceeding the sum of ten shillings per acre.

And whereas, by a Proclamation issued under the public seal of the said Colony, on the 20th day of January 1860, the price of agricultural land, surveyed by the Government surveyor, which may or shall have been offered for sale at public auction and remain unsold, was fixed at ten shillings per acre, payable one-half in cash at the time of sale, and the other half at the expiration of two years from the time of sale.

And whereas I have been empowered by Her Majesty's Government to lower the price of country lands in British Columbia, in all cases, to the sum of four shillings and twopence (4*s.* 2*d.*) per acre.

Repeal of so much of the Proclamation of the 20th January, 1860, as fixes the price of land in B. C. at 10s. per acre.

Price of unsurveyed lands to be 4s. 2d. per acre.

Upset price of surveyed lands 4s. 2d. per acre.

Short Title.

Now, therefore, I do hereby declare, proclaim, and enact as follows:—

I. So much of the said Proclamation of the 20th day of January 1860, as fixed the price of surveyed agricultural land at ten shillings per acre is hereby repealed.

II. The price of all unsurveyed country land in British Columbia, whether acquired by pre-emption or purchase under the Proclamation dated the 4th day of January 1860, shall be four shillings and twopence (4*s.* 2*d.*) per acre.

III. The upset price of all country lands in British Columbia exposed for sale at public auction, shall be four shillings and twopence (4*s.* 2*d.*) per acre.

IV. This Proclamation may be cited for all purposes as the "Country Land Act, 1861."

Issued under the public seal of the said Colony at Victoria, Vancouver Island, the nineteenth day of January, in the year of our Lord One thousand eight hundred and sixty-one, and in the twenty-fourth year of Her Majesty's reign, by me,

JAMES DOUGLAS.

By command of his Excellency,
WILLIAM A. G. YOUNG,
Acting Colonial Secretary.

GOD SAVE THE QUEEN.

App. No. 4.

APPENDIX No. 4.

BRITISH COLUMBIA.—No. 31.

No. 31.—"The Pre-emption Amendment Act, 1861."

[Repealed by subsequent Proclamation, No. 38, page 77.]

App. No. 5.

APPENDIX No. 5.

BRITISH COLUMBIA.—No. 32.

PROCLAMATION.—No. 3, A.D. 1861. By his Excellency JAMES DOUGLAS, Companion of the most Honourable Order of the Bath, Governor and Commander-in-Chief of British Columbia and its Dependencies, Vice-Admiral of the same, &c., &c.

WHEREAS, by virtue of an Act of Parliament, made and passed in the session of Parliament held in the 21st and 22nd years of the reign of Her Majesty Queen Victoria, entitled "An Act to provide for the Government of British Columbia," and by a Commission under the Great Seal of the United Kingdom of Great Britain and Ireland, I, James Douglas, have been appointed Governor of the said Colony, and have been authorized by Proclamation issued under the public seal of the said Colony, to make laws, institutions, and ordinances for the peace, order, and good government of the same:

And whereas it is expedient to afford remissions in the purchase money of country lands purchased for actual settlement to certain officers of Her Majesty's Royal Army and Navy in certain cases:

Now, therefore, I, James Douglas, Governor of British Columbia, by virtue of the authority aforesaid, do proclaim, order, and enact as follows, viz.:—

That from and after the date hereof Military and Naval officers in Her Majesty's service, of the rank herein-after specified, who shall purchase country land in British Columbia, shall, subject as herein-after mentioned, and upon production of the certificate herein-after also mentioned, be entitled in paying for such country lands to the remissions following:—

Field officers, of 25 years' service, in the whole	£600
Field officers of 20 years' service and upwards, in the whole	500
Field officers of 15 or less years in the service, in the whole	400
Captains of 20 years' service and upwards, in the whole	400
Captains of 15 years' service or less, in the whole	300
Subalterns of 20 years' service and upwards, in the whole	300
Subalterns of 7 years' service and upwards, in the whole	200

Regimental staff officers and Medical officers of the Army and Navy shall be entitled, but Military chaplains, Commissariat officers, officers of any of the civil departments of the Army, pursers, chaplains, midshipmen, warrant officers of every description, and officers of any of the civil departments of the Navy, shall not be entitled to the remissions aforesaid.

Every person desiring to take advantage of the remissions aforesaid, shall, before obtaining the same, produce to and leave with the Chief Commissioner of Lands and Works for British Columbia, a certificate from the office of the General Commanding-in-Chief in England, or from the office of the Lords Commissioners of the Admiralty showing that the setlement of the said person in a British Colony has been duly sanctioned, and showing also the rank, and length of service of such person, but nothing herein contained shall entitle any person to any of the remissions aforesaid, except such person shall at the time of purchasing, be either on half-pay or full-pay, unless the person purchasing shall have quitted the service for the purpose of settling in a British Colony, as herein-after mentioned.

Every person who shall have so quitted the service for the purpose of settling as aforesaid, shall, before obtaining such remission as aforesaid, obtain a statement by the proper authority, to be made in one of the offices aforesaid, upon his certificate aforesaid, of the date of his retirement from the army or navy, for the purpose aforesaid.

The person so having retired as aforesaid, who shall have conformed to the regulations aforesaid, shall present his certificate aforesaid, to the Governor for the time being aforesaid, within one year from the date of his retirement aforesaid, and in default thereof, shall cease to be entitled to any remission.

Provided always that every person obtaining a remission as aforesaid, shall not be entitled to a grant of the land in respect whereof such remission shall have been allowed, until he shall have obtained from the Governor for the time being of British Columbia, a certificate that he has been a *bonâ fide* settler in British Columbia for the space of two years.

Provided, that until such person shall have obtained a grant as aforesaid, he shall be entitled to a location ticket to be issued to him by the Chief Commissioner of Lands and Works in British Columbia.

Provided, that unless the person holding such location ticket shall obtain a grant of the land in respect of which such location ticket shall have been granted within twelve months from the expiration of the said term of two years, the land in respect of which such location ticket shall have been granted, shall absolutely revert to the Crown, and be capable of being sold, pre-empted or granted *de novo*.

Provided, that no location ticket shall be granted, and no remission claimed unless such remission shall be claimed in respect of some specific land within two years from the date of such certificate from the offices aforesaid.

Provided, that the land in respect of which such remission shall have been claimed, shall not be transferable until a grant thereof as aforesaid shall have been made thereof.

Provided, that the Governor for the time being of British Columbia may, in case of the death of the person entitled to the remission aforesaid, before a grant of the land aforesaid, by any writing under his hand, confer the benefit of the remission aforesaid to such child or children or other relative of the person entitled to such remission as he may think proper.

Provided, that such child, children, or other relative shall enjoy the right to such remission to the same extent, and subject to the same conditions as the person so dying would have done had he lived.

Issued under the public seal of the said Colony, at Victoria, Vancouver Island, this
(L.S.) eighteenth day of March, in the year of our Lord one thousand eight hundred and sixty-one, and in the twenty-fourth year of Her Majesty's reign, by me,

JAMES DOUGLAS.

By his Excellency's command,
William A. G. Young,
Colonial Secretary.

God save the Queen.

Appendix No. 6.

App. No. 6.

No. 35.—"The Pre-emption Purchase Act, 1861."
[Repealed by subsequent Proclamation, No. 38, page 77.]

Appendix No. 7.

App. No. 7.

BRITISH COLUMBIA.—No. 37.

Proclamation.—No. 8, A.D. 1861. By his Excellency James Douglas, Companion of the most Honourable Order of the Bath, Governor and Commander-in-Chief of British Columbia and its Dependencies, Vice-Admiral of the same, &c., &c.

Whereas, under and by virtue of an Act of Parliament made and passed in the Session of Parliament held in the 21st and 22nd years of the reign of Her Majesty Queen Victoria, entitled "An Act to provide for the Government of British Columbia," and by a commission under the Great Seal of the United Kingom of Great Britain and Ireland, I, James Douglas, have been appointed Governor of the said Colony, and have been authorized by Proclamation under the public seal of the said Colony to make laws, institutions, and ordinances for the peace, order, and good government of the same.

And whereas, for the more effectually securing the title to and facilitating the transfer of real property in the Colony of British Columbia, it is expedient to provide the means of registering matters affecting the same.

Now, therefore, I do hereby declare, proclaim, and enact as follows:

Offices in New Westminster and other districts in British Columbia.

I. There shall be established in New Westminster and in such other districts in British Columbia as may from time to time be nominated by the Governor by proclamation under his hand and the public seal of the Colony, offices for the registration of instruments, in writing, affecting real estate in the Colony, and the office at New Westminster shall be styled "The Land Registry Office," and the other offices shall be styled the "District Land Registry Offices," with the addition of the names of the districts wherein the same are established.

Appointment of Registrar General and Registrars for Districts.

2. It shall be lawful for his Excellency the Governor to appoint by Commission under the public seal of the Colony, proper persons to perform the duties of the said offices, who shall be styled the "registrars," and also upon any vacancy in the said offices to appoint from time to time in like manner other proper persons to be the registrars.

BRITISH COLUMBIA.

The registrar appointed at New Westminster shall be styled "Registrar General of British Columbia," and shall have the superintendence of all the said offices.

Magistrates may be appointed District Registrars.

3. The magistrates in British Columbia may be appointed registrars pro tempore.

Places of business. Seals of Office to be kept and impressions thereof to be taken judicial notice of.

4. There shall be provided at the public expense, houses or other places convenient for carrying on the business of the said offices, with all proper means for making and preserving the records and registers herein-after directed to be made and kept, and also seals of offices with suitable devices, whereon shall be inscribed "Land Registry Office," with the addition of the name of the district wherein the same is situate; the said seals shall be in the custody of the registrars for the time being, to be used in their official capacity only, and they shall be responsible for the safety and the use thereof, and judicial notice shall be taken in all courts of the impressions thereof without any evidence of such seal having been impressed, or any other evidence in relation thereto.

Deputy Registrar.

5. The "registrar general" shall from time to time by writing under his hand and official seal appoint a deputy who may perform the duties of the office, but all the official acts of the said deputy shall be in the name of the registrar-general, who shall be responsible for the same. The instrument under which such deputy shall be appointed shall be deposited among the records of the office for public reference. And in case of a vacancy in the office of registrar-general, the deputy shall during such vacancy perform the duties of the office as the registrar-general and until a successor be appointed.

Registrar's bonds and oaths.

6. Before entering upon the duties of their offices, the registrars and deputy-registrar shall find good and sufficient bonds conditioned for the faithful performance of their duties, and shall take the oaths of allegiance and supremacy, and shall be sworn to the faithful performance of their duties before entering thereon.

Salaries.

7. There shall be paid to the "registrar general" an annual salary not to exceed the sum of 500*l.*, to the deputy and registrars an annual salary not to exceed 300*l.*, and an adequate remuneration to each of the magistrates appointed registrars.

Date of opening office at New Westminster and in the other districts.

8. The office at New Westminster shall be opened on the 1st day of November 1861, and the other offices shall be opened on the 28th day next after the proclamations of nomination respectively, and until the opening of the district offices, the registration of all instruments affecting real estate in British Columbia shall be effected at the Land Registry Office at New Westminster.

All instruments affecting real estate in a district are to be registered in the district office when nominated.

9. From and after the nomination of a district and the opening of an office therein as aforesaid, all instruments affecting any real estate in the said district, shall be registered in the office of such district, and in none other.

Office hours.

10. The place of business of the said offices shall be kept open every day in the year, except Saturdays, Sundays, Good Friday, Christmas Day, New Year's Day, and such other public holidays and fast days as are or may by law or proclamation from time to time be declared in the Colony, from the hour of 10 o'clock in the morning to the hour of 4 o'clock p.m.

Registration of instruments affecting real estate.

11. It shall be the duty of the registrars, when requested, and upon the payment of the proper fees, to register or cause to be registered all instruments in any manner affecting real estate situate within their respective districts or the title thereto which shall be certified as hereinafter required by correctly transcribing or copying the same with the certificates endorsed thereon or attached thereto, word for word, letter for letter, figure for figure, sign for sign, and erasure for erasure, in books appropriate to the titles respectively endorsed on such instruments.

Upon the opening of a district office a transcript of registrations in that district to be sent to the district Registrar.

12. Upon the opening of a district office, a transcript of the registrations affecting real estate in such district prior to such opening shall be sent to the registrar of such district from the registrar general's office, and shall be kept in such district office as part of the records of such office.

Custody and preservation of records.

13. The registrars shall have the custody of and shall safely keep and preserve all the records, the furniture and seal of their offices, but shall not be responsible if the same are lost, or destroyed by fire or other inevitable accident.

To entitle instruments to be registered.

14. Before any instrument other than a decree, judgment, or order of a Court of Civil Jurisdiction, is registered, and to entitle the same to be registered in the said office, the execution thereof shall first have been acknowledged or proved in the manner hereinafter provided, such fact of acknowledgment or proof shall appear by a certificate under the hand and seal of the proper officer or other person authorized to take such acknowledgments endorsed upon or attached to such conveyance, deed, or other instrument.

Acknowledgments of proofs of execution to whom to be made within the Colony, and within the British dominions. If acknowledged without the British dominions.

15. The acknowledgment or proof of execution of all instruments hereby authorized to be registered, if acknowledged or proved within the Colony, may be made to any registrar or to any person commissioned in that behalf by the Judge of the Supreme Court of Civil Justice of British Columbia, and if acknowledged or proved without the Colony and within the British dominions, may be made to any judge of a court, or clerk or registrar of any court having a seal, or to any notary public, or to any magistrate of any town or district within the said dominions, and if acknowledged or proved without the British dominions may be made to any British ambassador, chargé d'affaires, or minister, consul, or consular agent appointed to reside in the country where such acknowledgment or proof is made, or to any judge of any Court of Record having a seal, or to any notary public practising in such country.

Judge of Supreme Court to appoint officers to take acknowledgments.

16. The Judge of the Supreme Court of Civil Justice for the time being may appoint by commission such and as many competent persons other than the persons before mentioned as may be necessary for the accommodation of the public, to take the acknowledgment and proof of the execution of all instruments in writing within the Colony which may by law be registered.

Party acknowledging must either be known to officer taking acknowledg-

17. No acknowledgment of the execution of any instrument affecting any real estate within this Colony shall be taken unless the party offering to make such acknowledgment shall appear before the officer taking the same, and unless such party shall either be personally known to the officer, or his identity be proven by the oath or affirmation of a competent witness, and no certificate of acknow-

ledgment shall be valid unless it recites in substance and legal effect the facts required by this section. ment or identity proven.

18. Acknowledgments and proofs of the execution of instruments entitled to be registered may for the purposes of this Act be made by— Who may make acknowledgments, what facts to be acknowledged, and forms and contents of certificates.

1. The party executing in person such instrument.
2. The attorney in fact when such instrument is executed by an attorney in fact.
3. The secretary of any corporation when such instrument is executed by such secretary.
4. A subscribing witness to such instrument.

Provided always, that no acknowledgment of any party executing in person such conveyance, deed, or other instrument shall be taken, unless in addition to what is required by Section 17 of this Act, such party acknowledge that he is the person mentioned in such instrument as the maker thereof, and whose name is subscribed thereto as a party, that he knows the contents thereof, and that he executed the same voluntarily, and no certificate of acknowledgment shall be valid unless in addition to what is required by Section 17 to be recited, it recites in substance and legal effect the facts required by this proviso. And provided also, that no acknowledgment by an attorney in fact shall be taken unless in addition to what is required by Section 17 of this Act, such attorney in fact shall acknowledge that he is the person who subscribed the name of (naming the maker) to the instrument, that said (naming the maker) is the same person mentioned in the instrument as the maker thereof, that (naming the attorney in fact) knows the contents of the instrument and subscribed the name of (naming the maker) thereto voluntarily as the free act and deed of the said (naming the maker), and no certificate of such acknowledgment shall be valid unless in addition to what is required by Section 17 to be recited, it shall recite in substance and legal effect the facts required by this proviso.

And provided also, that no acknowledgment by the secretary of any corporation shall be taken unless in addition to what is required by Section 17 of this Act, such secretary acknowledge that he is the person who subscribed his name and affixed the seal of such corporation as the secretary to such instrument, and that he was first duly authorized to subscribe and to affix the said seal to the same, and no certificate of such acknowledgment shall be valid unless in addition to what is required by Section 17 to be recited, it recites in substance and legal effect the facts required by this proviso. And provided also, that no acknowledgment by a married woman shall be taken unless in addition to what is required by Section 17, such married woman shall be first made acquainted with the contents of the instrument and the nature and effect thereof, and shall acknowledge on examination apart from and out of hearing of her husband that she knows the contents of the instrument and understands the nature and effect thereof, that she executed the same voluntarily without fear or compulsion or undue influence of her husband, that she is of full age and competent understanding, and does not wish to retract the execution of the same, and no certificate of such acknowledgment shall be valid unless in addition to what is required by Section 17 to be recited, it recites in substance and legal effect the facts required by this proviso. And provided also, that no acknowledgment or proof by a subscribing witness shall be taken unless in addition to what is required by Section 17 of this Act, such subscribing witness shall acknowledge that he is the person whose name is subscribed to the instrument as a witness, and shall prove that (naming the maker) whose name is subscribed thereto as the maker did execute the same, and no certificate of such acknowledgment or proof shall be valid unless in addition to what is required by Section 17 to be recited, it recites in substance and legal effect the facts required by this proviso.

19. That upon the application of any person taking any grant, lease, mortgage or charge, under or by virtue of any instrument entitled under this Act to be registered, or of any person claiming under such last mentioned person, verified under the oath of the applicant, that any party or witness to such instrument residing or being within twenty miles of any office refuses to appear and acknowledge or testify touching the execution thereof, and that such instrument cannot be registered without such acknowledgment or testimony, the registrar may issue a notice in writing requiring such party or witness to appear before him, and to acknowledge or testify. Registrar-General may subpœna party or witness to testify.

20. That every person who, after having been served with such notice as aforesaid, shall refuse or neglect to appear without reasonable cause assigned, or appearing shall refuse to acknowledge or answer upon oath or affirmation touching the matter aforesaid, shall be liable to a penalty not exceeding 20*l.* sterling, which may be recovered before any justice of the peace in a summary way, and for such damages as may be sustained by such party on account of such neglect or refusal; but no person shall be required to attend unless his reasonable expenses shall have been first tendered to him, together with a reasonable sum for his loss of time. Penalty for refusing to obey subpœna or to acknowledge or testify. When not bound to obey subpœna.

21. That it shall be competent for the Supreme Court of Civil Justice aforesaid to issue a commission for taking the deposition of any subscribing witness to any instrument entitled under this Act to be registered, in the same manner as for taking the testimony of any witness in a cause pending before it; and that all the costs of such commission, and all directions for executing the same, shall be at the discretion of the said Court, regard being had to the general provisions of this Act. Commission may issue to take deposition.

22. When any instrument authorized by law to be registered shall be deposited in the registrar's office for registration, the registrar, or in the case of the Registrar General, the Registrar General or his deputy shall endorse upon the same the exact time when it was so deposited, noting the year, month, day, hour and minute of its reception, which shall be considered the date of registration, and when the same shall have been registered, shall also note at the foot of the register or record thereof, the year, month, day, hour, and minute when it was deposited for registration, and shall sign the record thereof, and shall also note under his signature and seal upon each instrument registered the book and pages of the book in which, and the time when, it is registered, before it is returned to the party entitled to the same. Registrar's duty on receipt of instruments.

23. From the time any instrument affecting real estate, acknowledged and certified as required by Registration to impart notice.

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this Act, shall be delivered to a registrar, or in case of the registrar-general to him or his deputy registrar for registration, all persons shall be deemed to have notice of the contents and legal effect of such instrument.

Unregistered conveyance, &c not to impart notice to third parties.

24. No person, other than the actual parties thereto, shall be deemed to have notice of any instrument affecting real estate in the said Colony executed after the said 1st day of November 1861, unless the same be acknowledged or proved and certified, and registered pursuant to this Act, and every instrument hereafter made which shall not be acknowledged or proved, certified and registered pursuant to this Act, shall be void as against any subsequent purchaser or incumbrance of the same real estate who shall have registered the instrument under which his title as purchaser or incumbrance arises previously, provided always that nothing herein contained shall be construed to impair the power of the Court of Chancery to grant relief upon bill filed charging actual fraud or conspiracy.

Lien, &c., when released to be satisfied of record.

25. Whenever any lien or incumbrance registered as aforesaid affecting any real estate shall be released, satisfied, or discharged, it shall be the duty of the person from whom such release, satisfaction, or discharge moves, to give to the person in whose favour the same is made an instrument in writing acknowledging the same to have been made, and such instrument shall be acknowledged or proved and certified as herein-before required.

And if any person whose duty it is to give such release, satisfaction, or discharge, refuses or neglects for the space of ten days after being thereto requested by the party entitled to the same to execute and acknowledge such instrument, he shall be liable to a like penalty of £20 as aforesaid to be levied in manner aforesaid, and also for all actual damages occasioned by such neglect or refusal.

Power not to be revoked until revocation is registered.

26. No power of attorney when registered as required by this Act, shall be deemed to be revoked by any Act of the grantor thereof until the instrument containing such revocation acknowledged or proved and certified in the manner required by this Act shall be delivered for registration.

Revocation by death, insanity, &c., not to revoke until registration of an affidavit.

27. The death, insanity, bankruptcy, or insolvency of any maker of a power of attorney, or the marriage of any female maker of a power of attorney, shall not be deemed to revoke such power of attorney as far as any real estate in any district in British Columbia is concerned until an affidavit of such death, insanity, bankruptcy, or marriage shall have been served upon the Registrar-General or his deputy, and the Registrar of each district in which such real estate is situate.

Registrar to register affidavit accordingly.

28. It shall be the duty of every registrar or deputy registrar served with such affidavit, as last aforesaid, immediately to register the same in an affidavit book to be kept for that purpose, and to write on the pages of the register on which such power of attorney is registered, a note to the effect following "alleged to be revoked by" (death, insanity, &c., &c.), see registered affidavit (page affidavit book volume)

Original deed duly acknowledged may be read in evidence.

29. Every instrument which shall be acknowledged or proved and certified as in this Act prescribed may, together with the certificate of acknowledgment or proof, be read in evidence in all courts of law and equity without further proof of execution.

Certified copies of deeds to have the force of originals in certain cases.

30. Copies of all instruments duly deposited for registration or registered in a registrar's office certified by the registrar, or in case of the Registrar-General's office by him or the Registrar-General's deputy to be full, true, and correct copies, may, in the absence of the original, and if produced by a party not having the control of the original, be read in evidence in all courts of law and equity without further proof.

Certificate of acknowledgment to be primâ facie evidence.

31. The certificate of any officer authorized to take acknowledgments pursuant to this Act shall be primâ facie evidence of the facts therein recited, but shall not be conclusive.

Indices to be kept.

32. Each registrar shall form and keep indices in separate volumes, in such manner as to afford correct and easy reference to the several records of his office.

Registrar to make searches and to furnish certificates thereof.

33. It shall be the duty of registrars, upon the application of any person set forth in distinct and specific terms in writing, to make searches for all instruments deposited and registered in his office, touching or affecting the real estate specified in such application, and to furnish a certificate of every such search, stating the names of the parties to such instruments, the dates thereof, the year, month, day, hour, and minute they were deposited or registered, and the book and page where they are registered.

Fees of office.

34. For the official services rendered by the registrars they are hereby authorized and empowered to charge the following fees, viz.:—

For taking the acknowledgment or proof of any instrument which may by law be registered, for each signature of a party if more than one, four shillings, if only one signature eight shillings, including a certificate of acknowledgment of execution in both cases; for administering an oath, four shillings; for endorsing the time of depositing any instrument, and for noting the same in the record, and for endorsing the registration thereof upon every such instrument, two shillings; for registering any instrument, for every folio of one hundred words and figures therein, each and every figure to count as a word, three shillings, fractions of a folio to count as a folio; for making in the indices the several entries of instruments registered, required by law to be indiced, for every such instrument, two shillings and sixpence; for the use of the records for inspection and examination by persons desiring to inspect the same, for every such inspection and examination at one time, one shilling; for making certified copies of all instruments, matters, and things deposited, and of record in the office, the same fees as for registering instruments; for every subpœna, four shillings; for every official certificate, four shillings; for registering plans, maps, charts, surveys, diagrams, schedules, drawings, and other writings, matters, and things not herein enumerated and mentioned, and for making certified copies of any such, and for making searches, and for all other services not herein specified to be rendered by the registrars, such fees to be charged as may be agreed upon between them and the party requiring the performance of the same, and in case of difference the fees to be determined under the direction of the Judge of the Supreme Court, whose decision shall be final; for persons not connected with the office making for themselves transcripts or extracts from the records, no charge, but

the making of such transcripts and extracts to be allowed only subject to such rules as shall be established by the Registrar General as aforesaid, and which shall be suspended in the office for the information of the public.

35. It shall be lawful for the Registrar-General from time to time as he shall see fit, with the sanction of the Supreme Court of Civil Justice, to change the amount of any of the aforesaid fees, and to establish such other and reduced or additional fees as may be deemed expedient, provided that a list of all such changes and additions shall, when made and sanctioned, be laid before the Governor within a fortnight; and provided also that a similar list shall be suspended in a conspicuous place in the Registrar-General's office for one calendar month at least before the same shall come into operation, after which period it shall be lawful for the registrars to charge and recover such altered fees. Authority to alter fees under certain conditions.

36. The registrars shall not be bound to receive or register any instrument or furnish any copies, or make any search, or render any service connected with their offices until the fees for the same, as prescribed by law, are first paid or tendered. Fees to be pre-paid.

The registrars shall keep a strict account of all fees received in their offices, and shall quarterly pay over all such fees to the colonial treasurer, whose receipt in writing will be a sufficient discharge for the same.

And such fees when so received by the said treasurer shall form part of the public monies belonging to the Colony.

37. In the construction of this Act the following words used therein shall have the following meanings, unless there be something repugnant or contradictory in the context, viz.: "real estate" shall include lands, tenements, and hereditaments, whether corporeal or incorporeal. "Instrument" shall include every deed or agreement in writing, and every judgment, decree, or order of any Court of Civil Jurisdiction in British Columbia. Meaning of certain words, expressions, and terms in this Act.

38. Nothing herein-before contained shall be deemed to apply to any instrument of whatever nature made before the said 1st day of November 1861, but any instrument made prior to the said 1st of November 1861, although not acknowledged or proved and certified as provided in this Act, may be registered in the offices of the said registrars, and all such last-mentioned records shall be made and kept in a manner as nearly as may be the same as herein appointed for instruments of a like nature dated subsequently to the said first day of November 1861. Exceptions as to conveyances made.

And indices shall also be kept thereof as nearly as may be similar to those herein appointed for instruments dated subsequently to the said 1st day of November 1861, but all such records and indices shall be kept separate and distinct from the records and indices relating to instruments made subsequently to the said first day of November 1861.

And all persons shall be deemed to have notice of any instrument executed prior to the said 1st day of November 1861, which shall be registered pursuant to this section, from the time the same shall be delivered to the Registrar-General for registration.

39. This Act may be cited as the "British Columbia Land Registry Act, 1861." Short title.

Issued under the public seal of the said Colony at Victoria, Vancouver Island, the twenty-sixth day of August, in the year of our Lord one thousand eight hundred and sixty-one, and in the twenty-fifth year of Her Majesty's reign, by me,

(L.S.)

By his Excellency's command,

WILLIAM A. G. YOUNG. JAMES DOUGLAS.

GOD SAVE THE QUEEN.

APPENDIX No. 8. App. No. 8.

BRITISH COLUMBIA.—No. 38.

PROCLAMATION.—No. 9, A.D., 1861. By his Excellency JAMES DOUGLAS, Companion of the most Honourable Order of the Bath, Governor and Commander-in-Chief of British Columbia and its Dependencies, Vice-Admiral of the same, &c., &c.

WHEREAS, under and by virtue of an Act of Parliament made and passed in the Session of Parliament held in the 21st and 22nd years of the reign of Her Majesty Queen Victoria, entitled "An Act to provide for the Government of British Columbia," and by a Commission under the Great Seal of the United Kingdom of Great Britain and Ireland, I James Douglas, have been appointed Governor of the said Colony, and have been authorized by proclamation under the public seal of the said Colony to make laws, institutions, and ordinances for the peace, order, and good government of the same:

And whereas it is expedient to amend and consolidate the laws affecting the settlement of unsurveyed crown lands in British Columbia:

Now, therefore, I do hereby declare, proclaim, and enact as follows:

I. The proclamation issued by me, under the public seal of the said Colony, dated the 4th day of January 1860, and the Pre-emption Amendment Act, 1861, and the Pre-emption Purchase Act, 1861, are hereby repealed. Repeal of former Proclamations.

II. All purchasers of unsurveyed land in British Columbia, who shall have made their purchases subsequently to the 20th day of June 1861, and previously to the 27th day of August 1861, shall hold the land purchased under precisely the same terms and conditions of occupation and improvement Purchasers since the 20th June to hold on the ordinary terms of pre-emption.

BRITISH COLUMBIA.

as are mentioned in the said proclamation of the 4th day of January 1860, with regard to lands pre-empted without purchase.

British subjects, and aliens who shall take the oath of allegiance may acquire the right to hold land, and to purchase the same when surveyed, on certain conditions.

III. That from and after the date hereof, British subjects and aliens who shall take the oath of allegiance to Her Majesty and her successors, may acquire the right to hold and purchase in fee simple, unoccupied and unsurveyed and unreserved crown lands in British Columbia, not being the site of an existent or proposed town, or auriferous land available for mining purposes, or an Indian reserve or settlement, under the following conditions.

The settler shall enter into possession and record his claim to any quantity not exceeding 160 acres.

IV. The person desiring to acquire any particular plot of land of the character aforesaid, shall enter into possession thereof, and shall record his claim to any quantity not exceeding 160 acres thereof, with the magistrate residing nearest thereto; paying to the said magistrate the sum of eight shillings for recording such claim.

A holder of land may acquire additional land contiguous to the 160 acres, by paying an instalment of the purchase money.

V. Any person in possession of 160 acres of land as aforesaid may acquire the right to hold and purchase any further tract of unsurveyed and unoccupied land aforesaid, over and above the quantity of 160 acres aforesaid, and contiguous thereto, upon payment to the nearest magistrate of the sum of 2*s.* 1*d.* per acre for the same, as and by way of instalment of the purchase money to be ultimately paid to the Government upon the survey of the same land.

Proposing purchaser shall hold and record.

VI. Any person so paying such deposit shall enter into possession and record his claim to such last-mentioned tract of land, in manner herein-before prescribed.

Description of the land, how to be stated.

VII. The claimant shall in all cases give the best possible description of the land to the magistrate with whom his claim is recorded, together with a rough plan thereof, and identify the plot in question by placing at the corners of the land four posts, and by stating in his description any other land marks of a noticeable character.

Rectangular shape or as nearly as possible proportion of the lines.

VIII. Every piece of land sought to be acquired under the provisions of this proclamation, shall, save as herein-after mentioned, be of a rectangular shape, and the shortest line thereof shall be at least two-thirds the length of the longest line.

Natural boundaries may be adopted in certain cases.

IX. Where the land sought to be acquired is in whole or in part bounded by mountains, rocks, lakes, swamps, or the margin of a river, or by other natural boundaries, then such natural boundaries may be adopted as the boundaries of the land sought to be acquired, and in such case it shall be sufficient for the claimant to show to the satisfaction of the magistrate that the said form conforms as nearly as circumstances permit to the provisions of this proclamation.

Lines of adjacent claims may be adopted.

X. If the land sought to be acquired be bounded by a claim, the line of such claim may be adopted by the person so seeking to acquire, notwithstanding any irregularity in such line which may have been occasioned by the adoption of a natural boundary by the claimant of the adjacent claim.

Enclosed spaces may be adopted, notwithstanding any irregularity of shape.

XI. Where a piece of land is partially or entirely enclosed between two or more claims, the claimant may acquire such enclosed piece notwithstanding any irregularity of form, or disproportion in length of any of the sides.

Boundaries to run as nearly as possible according to the points of the compass.

XII. The boundaries shall run as nearly as possible by the cardinal points of the compass.

Purchase on survey.

XIII. When the Government survey shall extend to the land claimed, the claimant who has recorded his claim as aforesaid, or his heirs or devisees, or in the case of the grant of a certificate of improvement herein-after mentioned, the assigns of such claimant shall, if he or they shall have been in continuous occupation of the same land from the date of the record aforesaid, be entitled to purchase the land so acquired, or in respect of which such deposit shall have been paid as aforesaid, at such rate as may for the time being be fixed by the Government of British Columbia, not exceeding the sum of 4*s.* 2*d.* per acre.

Certificate of improvement to be issued when improvements have been made to the extent of 10*s.* per acre.

XIV. When the claimant, his heirs or devisees, shall prove to the nearest magistrate by the evidence of himself and of third parties, that he or they has or have continued in permanent occupation of the claim from the date of record, and has or have made permanent improvements thereon to the value of 10*s.* per acre, the said magistrate shall grant to the said claimant, his heirs or devisees, a certificate of improvement in the form marked A., in the Schedule hereto.

When certificate of improvement has been issued, the holder may sell or deal with the land.

XV. Upon the grant of the cetificate of improvement aforesaid, the person to whom the same is issued may, subject to any unpaid instalments, sell, mortgage, or lease the land in respect of which such certificate has been issued, but no interest in any plot of land acquired in either of the methods aforesaid, shall, before payment of the purchase money, be capable of passing to a purchaser, unless the vendor shall have obtained such certificate of improvement as aforesaid.

Conveyance on payment of the purchase money.

XVI. Upon payment of the purchase money a conveyance of the land purchased shall be executed in favour of the purchaser, reserving the precious minerals, with a right to enter and work the same in favour of the Crown, its assignees, and licensees.

Compensation to owner whose land may be taken or injured in certain cases.

XVII. In the event of the Crown, its assignees, or licensees availing itself or themselves of the privileges (other than the taking of land required for roads) mentioned in clauses 25 and 26, a reasonable compensation for the land taken, wasted, or damaged shall be paid to the person whose land shall be taken, wasted, or damaged as aforesaid, and in case of dispute the same shall be settled by a jury of six men, to be summoned by the nearest magistrate.

Priority of title.

XVIII. Priority of title shall be obtained by the person who, being in possession, shall first record his claim in manner aforesaid

XIX. Whenever any person shall permanently cease to occupy land acquired in either of the methods aforesaid, the magistrate resident nearest to the land in question may, in a summary way, on being satisfied of such permanent cessation, cancel the claim of the person so permanently ceasing to occupy the same, and record the claim thereto of any other person satisfying the requisition aforesaid. Cancellation of claim on permanent cessation of occupation.

XX. All deposits paid in respect of such forfeited claims, and all improvements, buildings, and erections thereon, shall, (subject to the appeal herein-after mentioned,) on such cancellation, be absolutely forfeited; and such claims, improvements, building and erections shall, subject to the appeal herein-after mentioned, be open to settlement by any other person. Deposits and improvements forfeited on cancellation.

XXI. The decision of the magistrate may be appealed by either party to the decision of the Judge of the Supreme Court of Civil Justice of British Columbia. Appeal.

XXII. Any person desirous of appealing in manner aforesaid may be required, before such appeal be heard, to find such security as may be hereafter pointed out by the rules or orders hereinafter directed to be published. Security on appeal.

XXIII. The procedure before the magistrate and judge respectively shall be according to such rules and orders as shall be published by such judge, with the appropriation of the Governor for the time being of British Columbia. Procedure.

XXIV. Whenever a person in occupation at the time of record aforesaid shall have recorded as aforesaid, and he, his heirs, or (in the case of a certificate of improvement) his assigns shall have continued in permanent occupation of the same land since the date of such record, he or they may, save as herein-before mentioned, bring ejectment, or trespass, against any intruder upon the same land, to the same extent as if he or they were seised of the legal estate in possession in the same land. Ejectment or trespass by holder.

XXV. Nothing herein contained shall be construed as giving a right to any claimant to exclude free miners from searching for any of the precious minerals or working the same, upon the conditions aforesaid. Saving of right to search and get gold in favour of free miners.

XXVI. The Government shall notwithstanding any claim, record, or conveyance aforesaid, be entitled to enter and take such portion of the land acquired in either of the methods aforesaid, as may be required for roads or other public purposes. Power to Government to re-take land for public purposes.

XXVII. Water privileges, and the right of carrying water for mining purposes, may, notwithstanding any claim recorded, be claimed and taken upon, under, or over the sa d land, so pre-empted or purchased as aforesaid, by free miners requiring the same, and obtaining a grant or licence from the Gold Commissioner, and paying a compensation for waste or damage to the person whose land may be wasted or damaged by such water privilege or carriage of water, to be ascertained in case of dispute in manner aforesaid. Water for mining purposes may be taken.

XXVIII. If any person, being already registered as a claimant, register a claim to any other land not being contiguous thereto, the land so previously claimed shall, *ipso facto*, be forfeited, and shall, with all improvements made thereon, be open to settlement by any other person. If new claim taken up the old claim is lost.

XXIX. In case any dispute shall arise between persons with regard to any land so acquired as aforesaid, any one of the parties in difference may, before ejectment or action of trespass brought, refer the question in difference to the nearest magistrate, who is hereby authorized to proceed in a summary way to restore the possession of any land in dispute to the person whom he shall deem entitled to the same, and to abate all intrusions, and award and levy such costs and damages as he may think fit. Arbitrament of Magistrate.

XXX. This proclamation may be cited as the "Pre-emption Consolidation Act, 1861." Short title.

Issued under the public seal of the said Colony, at Victoria, Vancouver Island, this
(L.S.) 27th day of August, in the year of our Lord One thousand eight hundred and sixty-one, and in the twenty-fifth year of Her Majesty's reign, by me,

JAMES DOUGLAS.

By his Excellency's command,

WILLIAM A. G. YOUNG.

GOD SAVE THE QUEEN.

SCHEDULE A.

I hereby certify that has satisfied me by evidence of (naming the witnesses, and detailing any other evidence upon which the magistrate has come to his judgment) that of has made improvements to the extent of 10*s.* an acre on acres of land, situated at

Signed,

this day of

BRITISH COLUMBIA.

App. No. 9.

APPENDIX No. 9.

BRITISH COLUMBIA.—No. 40.

PROCLAMATION.—No. 11, A.D. 1861. By his Excellency JAMES DOUGLAS, Companion of the most Honourable Order of the Bath, Governor and Commander-in-Chief of British Columbia and its Dependencies, Vice-Admiral of the same, &c., &c.

WHEREAS, under and by virtue of an Act of Parliament made and passed in the session of Parliament held in the 21st and 22nd years of the reign of Her Majesty Queen Victoria, intituled "An "Act to provide for the Government of British Columbia," and by a Commission under the Great Seal of the United Kingdom of Great Britain and Ireland, I, James Douglas, have been appointed Governor of the said Colony, and have been authorized by proclamation under the public seal of the said Colony to make laws, institutions, and ordinances for the peace, order, and good government of the same.

And whereas it is expedient to increase the limits of the municipality, and the number of councillors of New Westminster, and to extend the operation of the New Westminster Municipal Council Act, 1860, accordingly:

Now, therefore, I do hereby declare, proclaim, and enact as follows:—

From and after the date of this proclamation,

Adds block 36 to No. I. ward.

1. All that tract of land, which includes the piece of land described on the official maps of the said city as Block XXXVI. shall be included in the second part of the schedule of the said Act, and be deemed and taken for all the purposes of this Act as an integral portion of number One Ward.

Adds block 35 to No. III. ward.

2. All that tract of land, which includes the piece of land described on the official maps of the said city as Block XXXV. shall be included in the second part of the schedule of the said Act, and be deemed and taken for all the purposes of this Act as an integral portion of number Three Ward.

Adds block 34 to No. IV. ward.

3. All that tract of land which includes the piece of land described on the official maps of the said city as Block XXXIV. shall be included in the fifth part of the schedule to the said Act, and be deemed and be taken for all the purposes of this Act as an integral portion of number Four Ward.

Creates two additional councillors, one for No. I. and one, No. IV. ward.

4. In addition to the councillors already provided by the said Act, there shall be elected, in the same manner and with the same qualifications as at present, one additional councillor for number One Ward, and one additional councillor for number Four Ward.

Extends the provisions of the "New Westminster Municipal Act, 1860," to the additional limits and councillors.

5. The "New Westminster Municipal Council Act, 1860," shall be deemed and taken, and is hereby declared to extend and apply in all respects to the additional limits and councillors hereby created for the said city, as if the same had been originally included in the said Act.

Short title.

6. This Act shall be cited as the "New Westminster Municipal Council Extension Act, 1861."

Issued under the public seal of the said Colony at Victoria, Vancouver Island, this Twenty-
(L.S.) second day of October, in the year of our Lord One thousand eight hundred and sixty-one, and in the twenty-fifth year of Her Majesty's reign, by me,

JAMES DOUGLAS.

By his Excellency's command,

WILLIAM A. G. YOUNG.

GOD SAVE THE QUEEN.

LONDON:

Printed by GEORGE E. EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty.

For Her Majesty's Stationery Office.

COPIES OR EXTRACTS

OF

CORRESPONDENCE between HER MAJESTY'S GOVERNMENT and the GOVERNOR GENERAL of CANADA in reference to the MILITIA BILLS proposed and passed in the Canadian Parliament.

Presented to the House of Commons by Command of Her Majesty.



LONDON:
PRINTED BY GEORGE EDWARD EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

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Copies or Extracts of Correspondence between Her Majesty's Government and the Governor General of Canada in reference to the Militia Bills proposed and passed in the Canadian Parliament.

No. 1.

No. 1

Copy of a DESPATCH from Governor-General Viscount Monck to his Grace the Duke of Newcastle, K.G.

(No. 92.) Quebec, May 30, 1862.

(Received 12 June 1862.)

My Lord Duke, (Answered, No. 133, 25 June 1862, page 39.)

I have the honour to inform your Grace that in the Legislative Assembly, on Tuesday the 20th May, the Honourable Attorney General Cartier moved:—"That the "Bill (No. 76) respecting the militia be now read a second time;" and the question being put on the said motion, the house divided, and it was negatived by a majority of seven, the members being—yeas, 54; nays, 61.

In consequence of this vote, Mr. Cartier, on the part of himself and his colleagues, tendered his resignation on the following day.

I accepted it, and sent for the Honourable John Sandfield McDonald, member for Cornwall, to whom I entrusted the formation of a new administration.

On Friday the 23d, Mr. McDonald submitted to me the names of the gentlemen whom he proposed as members of the new Executive Council.

I approved of them, and accordingly made the following appointments, viz.:—

The Honourable John Sandfield McDonald to be Attorney-General for Upper Canada.
The Honourable Louis Victor Sicotte Attorney-General for Lower Canada.
The Honourable James Morris to be Receiver-General.
The Honourable Antoine Aimé Dorion, Provincial Secretary.
The Honourable Michael Hamilton Foley, Postmaster-General.
The Honourable Wm. McDougall, Commissioner of Crown Lands.
The Honourable Wm. Pearce Howland, Minister of Finance.
The Honourable Ulric Joseph Tessier, Commissioner of Public Works.
The Honourable Thomas D'Arcy McGee, President of the Executive Council.
The Honourable Francois Evanturel, Minister of Agriculture and Statistics.
The Honourable Adam Wilson, Solicitor-General for Upper Canada.
The Honourable John Caldwell Abbott, Solicitor-General for Lower Canada.

These gentlemen were also appointed members of the Executive Council.

Copies of the commissions will be forwarded to your Grace by the following mail.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) MONCK.
&c. &c. &c.

No. 2.

No. 2.

Extract of a DESPATCH from Governor-General Viscount Monck to His Grace the Duke of Newcastle, K.G., dated Quebec, June 10, 1862.

(No. 96.)

(Received 26 June 1862.)

I have the honour to acknowledge your Grace's Despatch, No. 119, of May 22d, covering a letter of Lord de Grey, dated May 10th, in which his Lordship

 desired

desired to be informed whether the carbines and saddlery provided for the Cavalry Militia of Canada should be forwarded to that country.

I might have answered this question by the last mail, but I preferred postponing my reply until after the termination of the session of the Provincial Parliament in order that I might, in laying before your Grace my views on the whole question of the supply or military stores to this colony, have the advantage of knowing the changes which the legislature of Canada might have made in the Militia Law of the Province.

Encl. 1. Encl. 2. I have the honour to enclose for your Grace's information a copy of the Act for that purpose, to which I yesterday signified Her Majesty's assent. I also enclose a copy of the Act, of which this Act is an amendment.

Your Grace will observe that substantially the amendments consist of provisions.

1st. For securing more correct muster rolls of the sedentary militia, (the whole male population of the Province between 18 and 60 years of age.)

2nd. For increasing the number of the active force from 5,000 to 10,000 men, and the number of days drill in the year from 6 to 12.

3rd. For enabling the Governor-General in the event of war to enlist regiments independent of the militia for the purposes of the war.

4th. Empowering the formation of drill associations amongst persons not belonging to the active force.

Encl. 3. Encl. 4. I have also the honour to enclose a copy of the report of the commission on militia affairs appointed early in last spring, and of the bill founded on that report, which was rejected on its second reading by the legislative assembly.

The requisitions which I have made to your Grace for clothing were based on the force which that bill, if it had become law, would have called into existence.

The legislature has refused to recognise the present necessity for the military organization of the people of the Province to so large an extent as was contemplated by this Bill, but it has left untouched the powers which the old Militia Law conferred on the Governor-General (clause 61.) to " call out the militia or any part thereof, when-" ever in his opinion it is advisable so to do by reason of war, invasion, or insurrection " or imminent danger of any of them."

The Militia Commission, which numbered amongst its members military officers and civilians intimately acquainted with this Province, laid it down as their opinion (par. 8.), that to provide an efficient force for the defence of the country, an active force of 50,000 men, with a reserve of the same number ought to be provided.

This statement affords an index to the number of militiamen whom it would be my duty to call out in case the Province should unhappily become the seat of war.

It is true that in consequence of the failure of the Bill referred to, the men, when called out, will not be so efficient as we might have expected them to prove if they had been organized under its provisions, but still, with the exception of the 10,000 volunteers sanctioned by the new Act, they would be the only contribution which the Province would, under the law as it now stands, have it in its power to make towards its defence.

While I do not question the right of the Provincial Parliament to act as they have done in providing, in my judgment, so scantily for the defence of their territory, and while I am ready to admit that events may prove that in taking this course the representatives of the people in this Province are acting with sounder judgment than if they adopted a different line of conduct, I am on the other hand very anxious that should their views unhappily prove erroneous, I may be in a position to make the most efficient use of the means placed at my disposal.

It is with this object that I would earnestly press upon your Grace the propriety of largely augmenting, during the present navigation season, the supply of arms and ammunition in store in Canada, and of forwarding the other articles for which I have applied, cavalry equipments included, not for immediate issue to the militia force of the Province, but to meet the demand which must arise if the necessity for calling out the militia should ever unhappily occur.

Enclosure 1 in No. 2. Encl. 1 in No. 2.

Cap. XXXV.

An Act respecting the Militia.

Her Majesty, by and with the advice and consent of the Legislative Council and Assembly of Canada, enacts as follows:

1. The Governor shall, by virtue of his office, be Commander-in-Chief of the Provincial Militia 18 Vict. c. 77. s. 2. Governor to be Commander-in-Chief of Militia.

2. The Provincial Militia shall be divided into two classes,—Sedentary and Active. *Ibid.*, s. 3. Two classes of Militia.

Sedentary Militia.

3. The Sedentary Militia shall consist of all the male inhabitants of the Province of the age of eighteen years or upwards and under sixty, not exempted or disqualified by law. *Ibid.*, s. 4. Of whom to be composed.

4. The Sedentary Militiamen shall be divided into two classes, to be called respectively Service Men and Reserve Men. The Service Men shall be those of eighteen years of age and upwards, but under forty-five years,—and the Reserve Men shall be those of forty-five years of age and upwards, but under sixty years. 22 Vict. (1859) c. 18, s. 2. Divided into service men and reserve men.

5. In time of peace, no actual service or drill shall be required of the sedentary militia, but they shall be carefully enrolled from time to time;—and the service men not exempted from muster, shall also assemble for muster annually, at such place and hour, in such manner and for such purposes, as the commanding officer of each battalion may direct with respect to each company therein; the muster day being in Lower Canada the 29th of June, or if that day fall on a Sunday, then the next day thereafter,—and in Upper Canada the Queen's birth day, or if that day fall on a Sunday, then the day next thereafter. 18 Vict. c. 77, s. 6. and 19, 20 Vict. c. 44, s. 5. In time of peace, sedentary militia to be enrolled. Service men to be mustered annually, and where.

(2.) Except that the Commander-in-Chief may, in his discretion, but on the application of the commandant of any military district in Upper Canada, direct that the annual muster day in such district be the 29th day of June. 22 Vict. (1859) c. 18, s. 18. Annual Muster day in Upper Canada may be on the 29th June.

6. The Commander-in-Chief may, by any militia general order, dispense with the annual general muster of the sedentary militia in either section of the Province, either in any particular year or until further order, and may in like manner again direct such muster to be held, if he sees fit;—and any such order shall have the force of law according to the terms thereof. 19, 20 Vict. c. 44, s. 3. Governor may dispense with annual muster and again require it.

7. The following persons only between the ages of eighteen and sixty as aforesaid, shall be exempt from enrolment and from actual service in any case: Exemptions from enrolment and service in any case.

The judges of the Superior Courts of law or equity in Upper and Lower Canada;
The judge of the Court of Vice-Admiralty;
The judges of the County Courts;
The clergy and ministers of all religious denominations;
The professors in any college or university, and all teachers in religious orders;
The warden, keepers, and guards of the provincial penitentiary.

(2.) And the following, though enrolled, shall be exempt from attending muster and from actual service at any time except in case of war, invasion, or insurrection. Exemptions except in case of war, &c.

The reserve men.
The members of the Executive and Legislative Councils.
The members of the Legislative Assembly.
The officers of the said Councils and Assembly respectively,
The attorneys and solicitors general.
The Provincial Secretary and assistant secretaries.
All civil officers appointed to any civil office in this province under the great seal.
All persons lawfully authorized to practise physic or surgery.
All advocates, barristers, solicitors, and attorneys.
Notaries in Lower Canada.
Half-pay and retired officers of Her Majesty's army or navy.
Postmasters and mail carriers.
Seafaring men actually employed in their calling.
Masters of public and common schools actually engaged in teaching.
Ferrymen.
One miller for each run of stones in every grist mill.
Keepers of public toll-gates.
Lock masters and labourers employed in attending to locks and bridges on public canals.
The engine drivers, conductors, and switchmen connected with the several railways actually in use in this province.
Members of fire companies and of hook and ladder companies, or persons having served as such regularly during seven consecutive years, and having a certificate thereof from the proper officer under the *Act to exempt firemen from certain local duties and services.*
Jailors, constables, and officers of courts of justice, not being such solely by virtue of their being non-commisioned officers of militia.

 Students

Students attending seminaries, colleges, schools, and academies, who have been attending such at least six months previous to the time at which they claim such exemption.

All persons disabled by bodily infirmity.

(3.) All persons bearing certificates from the society of Quakers, Mennonists, and Tunkers, or any inhabitant of this province, of any religious denomination, otherwise subject to military duty in time of peace, but who from the doctrines of his religion is averse to bearing arms and refuses personal military service shall be exempt therefrom.

Exceptions.

Exemption must be claimed.

(4.) But such exemption shall not prevent any person from serving or holding a commission in the militia, if he desires it and is not disabled by bodily infirmity; and no person shall have the benefit of such exemption unless he has, at least one month before he claims such benefit, filed his claim thereto with his *affidavit* (made before some magistrate) of the facts on which he rests his claim, with the commanding officer of the company within the limits whereof he resides; and whenever exemption is claimed, whether on the ground of age or otherwise the burden of proof shall always be upon the claimant. 18 Vict. c. 77, s. 7, 12 Vict. c. 36. and 4 & 5 Vict. c. 43.

Service men divided into two classes.

8. With a view to actual service in case of war, invasion, or insurrection, the service men shall be divided into two classes, to be called respectively, first-class service men and second-class service men; the first-class to consist of unmarried men and widowers without children, and the second-class of married men and widowers with children. 18 Vict. c. 77, s. 8.

Order in which they shall be taken for actual service.

9. When the sedentary militia are called out in case of war, invasion, or insurrection, those first taken for actual service shall be volunteers from the service men, then the first-class service men, then the second-class service men, and lastly the reserve men. *Ibid.*, s. 9.

Commander-in-Chief to divide U. C. & L. C. into military districts and may alter the same.

10. The commander-in-chief may, from time to time, by any militia general order, divide Upper and Lower Canada respectively into such number of military districts as he deems expedient, and to be designated as he sees fit, and may from time to time, by any militia general order, alter such division of the province into military districts, and increase or diminish the number thereof. *Ibid*, s. 10, and 19 & 20 Vict. c. 44, s. 1.

Regimental and battalion divisions.

11. The commander-in-chief may from time to time, by any militia general order, divide the military districts respectively into regimental divisions, and the regimental divisions into battalion divisions, and may designate such divisions by such names or numbers as he sees fit. 18 Vict. c. 77. s. 11.

What men shall form the regiments and battalions.

12. The militiamen resident in each battalion division shall form a battalion of the regiment of the regimental division in which it lies, and all the battalions in any regimental division shall form the regiment thereof. *Ibid.*, s. 12.

Officers of regiments and battalions.

13. To each military district a colonel shall be appointed who shall command the militia in such district, and to each battalion a lieutenant-colonel, and such number of majors and regimental staff officers as may be deemed necessary. *Ibid.*, s. 13.

Company divisions to be formed.

14. Each lieutenant-colonel may, by any order made with the approval of the colonel of the military district, from time to time, divide his battalion division into company divisions, each containing as nearly as may be conveniently practicable, not less than fifty nor more than seventy-five resident service men; and the militiamen resident within each company division shall form a company of the battalion. *Ibid.*, s. 14.

Existing divisions to remain until altered.

15. All militia divisions existing before the passing of the Act 18 Vict. c. 77, shall remain in force until altered as aforesaid, and such of them as are allowed to remain unaltered shall be held to have been made by the proper authority under this Act, and for the purposes thereof. *Ibid.*, s. 15.

Officers and non-commissioned officers of companies.

16. To each company of militia there shall be appointed of commissioned officers, a captain, a lieutenant and an ensign; and of non-commissioned officers, three serjeants and three corporals. *Ibid*, s. 16.

Surgeons, &c., may be appointed to militia.

17 The commander-in-chief may appoint to all militia regiments, companies or corps, the proper number of surgeons,, assistant surgeons, and veterinary surgeons. 19 & 20 Vict. c. 44. s. 4.

Enrolment, how to be made by officers.

18. The enrolment of the sedentary militiamen shall be made in each company division by the captain thereof, with the assistance of the officers and non-commissioned officers of the company; and it shall be the duty of the captain, and, under his orders, of the other officers and non-commissioned officers of the company, by actual inquiry at each house in the company division, and by every other means in their power, to make and keep at all times a correct roll of the company in such form as may be directed by the adjutant general. 18 Vict. c. 77. s. 17.

Militiamen bound to give in their names.

19. Each man liable under this Act to be enrolled in any company, and not so enrolled, shall give in his name, age, and place of residence, in writing, to the captain or officer commanding such company, within twenty days after he becomes so liable, whether by the alteration of any militia division, change of residence, or otherwise howsoever. *Ibid.*, s. 18.

Rolls of companies to be made annually; also, returns of battalions.

20. The officer commanding a sedentary company of the militia shall, within twenty days after the annual muster day for such company, make out a corrected roll thereof, and transmit a certified copy thereof to the officer commanding the battalion, who, within forty days after such muster, shall forward a correct return of the battalion under his command to the assistant adjutant general of the military district, to be laid before the colonel commanding the same: and the said return shall then be transmitted by the assistant adjutant general, under the orders of the said colonel, to the adjutant-general at head quarters. *Ibid.*, s. 19.

Company rolls to be corrected

21. Each company roll shall be corrected from time to time as changes occur which affect it; and every householder and resident in the company division, and every assessor, town clerk, or other municipal

municipal officer, shall be at all times bound to give to the commanding officer or any officer or non-commissioned officer of the company, such information as may be required to make such corrections, and to answer all such questions as any of them may pertinently put to him for the purpose of obtaining such information; and every militiaman shall be bound to inform the officer commanding the company, in writing, of any change of residence or other circumstances affecting such militiaman, by which the roll of any company is affected, whether such militiaman comes into or leaves the company division for which the roll is made. *Ibid.*, s. 20.

from time to time.
Duty of householders, &c., to give all informations requisite.
And of militiamen.

Active or Volunteer Militia Companies.

22. The active militia of the province in time of peace shall consist of volunteer troops of cavalry, field batteries, foot companies of artillery, and companies of infantry armed as riflemen, to be formed at places to be designated by the commander-in-chief;

Volunteer companies to be formed; of what to consist.

(2.) Except as herein-after provided, the total of such volunteer corps shall not exceed five thousand officers and men;

Total limited.

(3.) The whole number of troops of cavalry, in class A herein-after mentioned, shall not at any time exceed sixteen, and the whole number of field batteries of artillery, in the said class A, shall not exceed seven; and from and after the thirty-first day of December 1859, the companies of foot artillery and rifle companies, in class A, shall not together exceed fifty in number, of which there shall not be a greater number of companies of foot artillery than five; and it shall be in the discretion of the commander-in-chief to determine what number (not exceeding five as aforesaid), of companies of foot artillery shall from time to time form portion of the said number of fifty;

Number of companies of foot artillery and rifles, limited after end of 1859.

(4.) But until the day last aforesaid there may be in class A not exceeding five companies of artillery, and not exceeding fifty companies of riflemen; 18 Vict. c. 77, ss. 19, 21; 20 Vict. c. 44, s. 2; 22 Vict. (1859) c. 18, s. 3.

23. Notwithstanding any limitation in the next preceding section of the number of volunteer companies or corps, or of the number of men therein, the commander-in chief may accept the services of any greater number of volunteers, and may form them into companies or corps; provided that no greater number of volunteer companies, corps, or men than that limited by the said section, shall receive pay or allowances except on actual service in time of war or insurrection.

Unpaid volunteer corps may be formed.

(2.) And the volunteer companies and corps receiving pay shall be known as Class A, and those receiving no pay as Class B. And whenever the number of companies or corps, or men, in Class A falls short of that limited by the said section, the deficiency may be supplied by removing the proper number from Class B into Class A; but in all respects, except as to pay and allowances, the provisions of this Act shall apply in like manner to the volunteer companies, corps, and men, in both classes. 19 & 20 Vict. c. 44, s. 2.

Unpaid volunteer may become paid corps, as vacancies occur.
Proviso.

24. Each volunteer troop of cavalry, company of foot artillery, or company of riflemen, shall consist of a captain, a lieutenant, a cornet, second lieutenant or ensign, three serjeants, three corporals, a trumpeter or bugler, and not exceeding forty-three privates, except in companies of riflemen wherein the number of privates may be any number from forty-three to seventy-five.

Force of volunteer companies respectively.

(2.) And each field battery of artillery shall consist of a captain, two first lieutenants, a second lieutenant, a serjeant major, three serjeants, three corporals, three bombardiers, a trumpeter, a farrier, fifty-nine gunners and drivers, including wheelers, collarmaker and shoeing-smith, fifty-six horses exclusive of officers' horses, and of four spare horses when the battery is called into actual service. 18 Vict. c. 77, s. 22.

The same.

25. The commander-in-chief shall have full power to appoint staff officers of the active militia with such rank as he shall from time to time think requisite or necessary for the efficiency of the militia service, and all such appointments as have been made by him are hereby confirmed; and any such staff officers shall have such rank and authority in the militia as are held relatively in Her Majesty's service, and their duties shall be the same for the militia as prescribed for the army by the Queen's Regulations aforesaid. 22 Vict. (1859) c. 18, s. 16.

Appointment of staff officers and their rank.

26. The commander-in-chief shall have full power to constitute any number of rifle companies of the active militia at ony one locality, or within any one district, not being less than six or more than ten companies, into a regiment or battalion, and to assign or appoint thereto by commission a lieutenant-colonel, two majors, one adjutant, one paymaster, one quartermaster, one surgeon, and one assistant-surgeon, whose rank and authority therein shall be the same as in the relative positions in Her Majesty's service; and such regiment or battalion shall be subject, in so far as the same are not inconsistent with the provisions of the militia laws of this province, to the Queen's Regulations for the Army published by authority, and any such lieutenant-colonel shall have authority to appoint staff serjeants for any battalion. 22 Vict. (1859) c. 18, s. 15.

Any number of rifle corps in any locality may be constituted into a regiment or battalion, &c

27. A volunteer marine company may be formed at each of the following places:—Kingston, Cobourg, Toronto, Hamilton, Port Stanley, Dunnville, and Oakville. Each company to consist of a captain, a lieutenant, and fifty men; and a commodore of provincial marine may be appointed to command the whole and to rank as a lieutenant-colonel of militia. Captains in the provincial marine shall rank as majors in the militia, and lieutenants as captains in the same. 18 Vict. c. 77. s. 23.

Volunteer marine companies may be formed at certain places.

28. The said marine companies shall be armed in such manner as the commander-in-chief directs, and shall be trained and drilled as well to the use of small arms as in the management of gun-boats and vessels, and the working of great guns on board vessels. 18 Vict. c. 77. s. 24.

How to be armed and drilled.

29. In

Volunteer company of engineers.

29. In each militia district there may be formed a volunteer company of engineers, to consist of a captain, a lieutenant, a second lieutenant, and such number of men not exceeding seventy-five, as the Governor may direct, but such companies shall not be subject to drill or to service in time of peace. 18 Vict. c. 77, s. 25.

On what authority companies may be formed and disbanded.

30. All volunteer companies shall be formed and may be disbanded by authority of the commander-in-chief, as may in his opinion best tend to further the purposes of this Act and the public good. *Ibid.*, s. 26.

Uniforms of volunteer corps.

31. The uniform of the several field batteries, of the several troops of cavalry, and of the several rifle companies, continued under this Act, or organized after the fourth day of May 1859, shall be of such one and similar colour, pattern, and design as may be ordered by the commander-in-chief.

Further condition.

(2.) Provided that but one, and that a similar colour, pattern, and design, shall be approved for each of them respectively,—the field batteries, troops of cavalry, rifle companies, and companies of foot artillery, and each of such corps shall conform in all particulars to the order of the commander-in-chief in such respect. But the several corps in existence on the said day and to be continued in existence under this Act, may continue to wear their then clothing until the same requires to be replaced, and it shall be the duty of the superior officer of the said corps respectively to see that the same are, upon any such replacing of clothing, uniformed according to the order of the commander-in-chief in such respect. 22 Vict. (1859) c. 18, s. 12.

Arms, &c. of volunteer companies.

To be furnished by the province except to officers.

Security may be taken for safe keeping, &c.

32. The arms and accoutrements of the officers and men of the several volunteer companies shall be such as the commander-in-chief from time to time directs, but of the best and most serviceable kind, without unnecessary ornament. Such arms and accoutrements shall be furnished to the non-commissioned officers and privates of the said volunteer corps at the expense of the province, but shall always remain provincial property, and the parties receiving them shall be accountable for them. And the commander-in-chief may direct such security as he thinks proper to be taken for the safe keeping in good order of such arms and accoutrements, and the re-delivery thereof to such officer as may be appointed to receive them, whenever the commander-in-chief for any purpose directs such re-delivery. 18 Vict. c. 77, s. 27.

Repairing of arms, &c.

33. The said arms and accoutrements shall be renewed and kept in repair at the cost of the province, whenever such renewal or repair becomes necessary from wear in service or other cause than the fault or neglect of the person having charge thereof, in which last-named case they shall be renewed or repaired by such person, or, if renewed or repaired at the cost of the province, the cost may be recovered from such person as a debt due by him to the Crown. *Ibid.*, s. 28.

By whom and where arms, &c., shall be kept.

34. The arms and accoutrements of non-commissioned officers and men of the active militia shall be kept in public armouries wherever there are such, and where there are no such public armouries then the captain of each volunteer corps shall be personally responsible for the arms and accoutrements of the non-commissioned officers and men of his corps, and shall himself actually keep the same, and may be allowed annually a sum not exceeding twenty dollars for so doing and for taking care of the arms and accoutrements. 22 Vict. (1859) c. 18. s. 5.

Proviso: as to liabilities incurred before this Act.

(2.) Nothing herein shall be construed to relieve the officers or men of the volunteer or active force of any liability in respect to the arms and accoutrements thereof, delivered to the custody, care, or possession of any of them, or in any other respect, under the Acts 18 Vict. c. 77. and 19 & 20 Vict. c. 44; but any proceedings thereto relating shall be brought within twelve months after the discovery of any breach of the provisions thereof. 22 Vict. (1859) c. 18, s. 21.

Corps to appear armed on certain occasions only.

35. No corps of active militia and no non-commissioned officer or private thereof shall at any time appear armed or accoutred, except when *bonâ fide* at drill whether paid or unpaid, or at target practice, or at reviews or on field days or inspections, or for receiving distinguished persons or rendering funeral honours to deceased comrades, or when required to act in aid of the civil power, under due authority; nor shall the arms and accoutrements be taken out of this province. 22 Vict. c. 18. s. 6.

Officers' arms.

36. Commissioned officers of the said companies shall furnish their own arms and accoutrements. 18 Vict. c. 77, s. 30.

Exemption of arms, horses, &c., from seizure.

37. The arms and accoutrements of the officers and men of such volunteer companies, and the horses used by them as such, shall be exempt from seizure in execution and from distress and assessment; nor shall any such horse be disposed of by any officer or man without leave of the officer commanding the company. *Ibid.*, s. 31.

How volunteer companies shall be drilled and exercised.

38. The volunteer militia companies shall be drilled and exercised at such time in each year and at such places as the commander-in-chief may from time to time appoint, the volunteer field batteries being so drilled and exercised during twelve days in each year, of which at least six days shall be consecutive, and the other volunteer corps once in each year during six consecutive days (Sundays not reckoned in either case), and the companies under drill being encamped during the whole or any part of the period for drill, if the commander-in-chief sees fit:

Pay list and affidavit.

(2.) Provided that, inclusive of the pay for the year 1859, and annually thereafter, the moneys to be paid for pay for each day on which companies are so drilled shall be paid only in the month of December in each year, and upon the pay list and affidavit thereto being duly furnished to the adjutant-general as herein-after required. 22 Vict. (1859) c. 18, s. 4.

Adjutant-general to draw up code of instructions.

39. The adjutant-general or the deputy adjutants-general shall draw up, under the direction of the commander-in-chief, a code of instruction, drill, and exercise for the said volunteer companies, based on that in use in Her Majesty's regular army, and each commissioned officer of a volunteer company shall be furnished with a copy and shall be governed by the said code in drilling and exercising the corps to which he belongs. 18 Vict. c. 77, s. 33.

40. The

Payment of active militia.

40. The active militia force shall be paid by the province, the sums and in the manner following:—

Pay for men and horses in class A when at drill, for 1859.

(1.) For the year 1859, the non-commissioned officers and men of Class A shall be paid for each day's actual and *bonâ fide* drill the sum of one dollar, and for each horse actually and necessarily present and used for such drill, and belonging to or used by such non-commissioned officers or men, the further sum of one dollar per diem.

A certain number only to be paid after 1859, and at what rate.

(2.) For each and every year, other than the year 1859, the non-commissioned officers and men of such corps of class A and of such portions thereof only as are herein-after mentioned, shall for each day's actual and *bonâ fide* drill be paid the sum of one dollar, and in so far only as regards the horses to be used in the field batteries, for each horse actually and necessarily present and used for such drill and belonging to or used by the non-commissioned officers and men of the said field batteries, the further sum of one dollar per diem.

(3.) And the said corps or portions thereof respectively so entitled to be paid are as follow:—

Artillery corps.

Field Batteries.—The non-commissioned officers and men, not exceeding seventy in number and the horses, not exceeding thirty-six in number, of each of the seven field batteries constituted under the Act 18 Vict. c. 77, before the fourth day of May 1859, and existing on the said day:

Cavalry corps.

Cavalry.—Thirty non-commissioned officers and men of each of the five troops of cavalry senior in priority of Gazette under the said Act in Upper Canada, and thirty non-commissioned officers and men of each of the five troops of cavalry senior in priority of Gazette as aforesaid in Lower Canada;

Infantry corps.

Infantry.—Thirty non-commissioned officers and men of each rifle company, and of each foot company of artillery.

Commanding officer may divide the pay among a greater number on certain conditions.

(4.) But it shall be within the option of the commanding officer of any such corps of cavalry infantry, or foot artillery, in pursuance of any contract previously made with the non-commissioned officers and men of the corps under his command, to distribute the total amount of pay to which such thirty men would be entitled for their drill as herein-before mentioned, in a less proportion than the sum of one dollar to each man, so that the surplus of men *bonâ fide* enrolled and acting in such corps, to a number not exceeding twenty additional men, may receive a proportion of such pay, it being the intent hereof that no man under any such contract shall receive less than the sum of sixty cents per diem during the drill as aforesaid.

Pay list, with affidavit attached, to be transmitted to adjutant-general.

(5.) And it shall be the duty, of every commanding officer of a corps, or in case of his absence during the annual drill, of the officer next in command and personally present, during the month of November in each year, to forward the pay list of the said corps to the adjutant-general or deputy adjutant-general of militia, having attached thereto an affidavit sworn before any justice of the peace, that the several non-commissioned officers and privates in the said pay-list named for pay, were actually and *bonâ fide* personally present at each day's drill, and were actually drilled for the number of days and in manner by law required, and were and continued severally on the roll of the said corps from the month of January in such year, and performed duty therewith when required during such year, and in addition thereto in cases of field batteries, that each horse in the said pay list charged for pay was actually and necessarily present and used for such drill. 22 Vict. (1859) c. 18, s. 7.

Volunteers may be drilled at other times according to their articles of engagement.

41. Nothing herein contained shall be construed to prevent any such company from assembling or being ordered out by the officer commanding it for drill or exercise, without receiving any pay therefor from the province, according to any articles of engagement or regulations of such company, previously approved by the commander-in-chief; and any such articles, in so far as they are not inconsistent with this Act, shall be enforced, and the penalties which may be thereby imposed shall, whenever they are incurred, be recoverable in the manner herein-after mentioned, by the person or officer designated for that purpose in such articles, to such uses as may be therein directed. 18 Vict. c. 77. s. 35.

Ammunition for practice.

42. Sufficient ammunition for practice at drill shall be supplied to the volunteer companies at the expense of the province, in such manner as the commander-in-chief may direct. 18 Vict. c. 77, s. 36.

Pay of serjeant-major of artillery companies, &c.

43. Each serjeant-major of a volunteer field battery of artillery shall, on account of the great responsibility attached to the office, be paid by the province at the rate of two hundred dollars per annum; and competent persons shall be appointed by the commander-in-chief to drill the other volunteer companies, and shall be paid by the province one dollar and fifty cents per diem, when so employed. *Ibid.*, s. 37.

Volunteers may be called out in aid of the civil power, and shall be paid in such cases by the municipality.

44. The said volunteer companies shall be liable to be called out in aid of the ordinary civil power in case of riot or other emergency requiring such services, and shall when so employed receive from the municipality in which their services are required, the rates of pay above mentioned, and a further sum of fifty cents per man per diem for additional expenses, and shall be also provided with proper lodging by such municipality; and the said sums and the value of such lodging, if not furnished by the municipality, may be recovered from it by the captain of the company, in his own name, and when received or recovered shall be paid over to the officers and men entitled thereto. *Ibid.*, s. 38.

How they may be so called out, and their duty in such cases.

45. It shall be the duty of the captain or officer commanding any such volunteer company to call out the same, or such portion thereof as is necessary, for the purpose of quelling any riot, when thereunto required in writing by the mayor, warden, or other head of the municipality in which such riot takes place, or by any two magistrates therein, and to obey such instructions as may be lawfully given him by any magistrate in regard to the mode of quelling such riot; and every officer, non-commissioned officer and man of such company shall on every such occasion obey the orders of his commanding officer, and the officers and men when so called out shall, without any further or other appointment, and without taking any oath of office, be special constables, and shall act as such so long as they remain so called out. *Ibid.*, s. 39.

To be sworn in as special constables.

Volunteers exempt from serving as jurors or constables.

46. The officers, non-commissioned officers, and men of volunteer corps, shall, while they continue such, be exempt from serving as jurors or constables; and whenever they have served as such in one or more volunteer corps during a term of seven years, such exemption shall continue after the expiration of the said term; and a certificate under the hand of the commanding officer of any such corps shall be sufficient evidence of the service in his corps of any officer, non-commissioned officer or man for the then current year. 22 Vict. (1859) c. 18. s. 8.

Evidence of service.

Notice to be given before leaving any volunteer company.

47. No non-commissioned officer or man of any volunteer company shall in any case, unless legally discharged, leave the same without giving at least two months' notice in writing to the commanding officer thereof of his intention so to do; nor shall he, at any time, leave the same contrary to the engagement contained in any articles of engagement he has signed; and the term of engagement shall not be less than five years. 18 Vict. c. 77. ss. 41. 65., and 22 Vict. (1859) c. 18. s. 9.

Term of engagement.

Inspection of volunteer corps.

48. The several volunteer corps shall be subject to inspection from time to time by such person or persons as shall be temporarily appointed by the commander-in-chief for such inspection, and who shall report fully to the Governor on the state of such corps and their arms and accoutrements and the general efficiency of such force, and shall be reimbursed his or their actual travelling expenses by the province, and paid therefor at a rate not exceeding four dollars per diem whilst so engaged:

Proviso: as to rank of inspecting officer.

(2.) Provided that such person or persons to be appointed from time to time for such inspection, shall be an officer or officers (not being under the rank of field officer) of Her Majesty's service, and actually serving in this province, or in case the services of an officer or officers as aforesaid cannot be obtained, then such other person not being under the rank of field officer of militia of this province who shall in like manner be reimbursed his actual travelling expenses and paid such remuneration. 22 Vict. (1859) c. 18. s. 10.

General Provisions.

Commissions, by whom granted.

49. All commissions of officers in the provincial militia shall be granted by the commander-in-chief and during pleasure. 18 Vict. c. 77. s. 43.

Non-commissioned officers.

50. All non-commissioned officers in the provincial militia shall be appointed by the officer commanding the battalion to which they belong, except in volunteer companies where they shall be appointed by the captain thereof, and shall in either case hold their rank during pleasure. *Ibid.*, s. 44.

Officers must be Her Majesty's subjects.

51. No person shall be an officer of militia unless he is one of Her Majesty's subjects by birth or naturalization, nor if he is such subject by naturalization only, unless he has taken the oath of allegiance. *Ibid.*, s. 45. and 19 & 20 Vict. c. 44. s. 6.

Existing commissions to remain until cancelled.

52. Commissions in the provincial militia and appointments of non-commissioned officers, existing immediately before the passing of the Act 18 Vict. c. 77. shall remain in force, such commissions being subject to be cancelled by the commander-in-chief, and such appointments by the officer commanding the battalion; but no person shall be bound to serve in the provincial militia in a lower grade than he has once held, unless he has resigned his commission or is reduced by sentence or order of some lawful court or authority; nor shall any person who has been a non-commissioned officer in Her Majesty's army be bound to serve in the militia in a lower grade than he held in the army, unless he had been reduced as aforesaid. 18 Vict. c. 77. s. 46.

No person bound to serve in a lower grade than he has held.

Battalions embodied in 1837, 1838, 1846 & 1847.

53. The next preceding section applies to and includes the battalions embodied in the years one thousand eight hundred and thirty-seven, one thousand eight hundred and thirty-eight, one thousand eight hundred and forty-six, and one thousand eight hundred and forty-seven, in the cities of Quebec and Montreal, and the said battalions are still lawfully embodied, and commissions in them are valid under the said section; and the said battalions are subject to all the provisions of this Act as sedentary militia, and may be called out as such by the commander-in-chief. 19 & 20 Vict. c. 44. s. 7.

Adjutant-general to be appointed only in cases of war or emergency.

54. No adjutant-general of militia shall be appointed except in case of war or any such emergency as may, in the opinion of the Governor-General, render it necessary or expedient that such office should be filled; and in case of war or such emergency as aforesaid, no person shall be appointed to the said office who is not, to the satisfaction of the commander-in-chief, a person educated to the military profession and thoroughly competent to discharge the duties of the said office of adjutant-general; and the duties of the office of adjutant-general during the vacancy of the office shall be performed by the deputy adjutants-general for Upper and Lower Canada respectively, under orders from time to time of the commander-in-chief, or by such person as may be appointed by the commander-in-chief on any occasion, for the special and temporary discharge of any such duties. 22 Vict. (1859) c. 18. s. 14.

Pay of adjutant-general.

55. The adjutant-general, when appointed as aforesaid, shall act as such for the whole province, and shall have the rank of colonel in the provincial militia, and shall be paid by the province at the rate of three thousand dollars per annum while discharging the duties of his office. 18 Vict. c. 77. s. 47. and 22 Vict. (1859) c. 18. s. 14.

Adjutant-general and deputies. Rank. Pay.

56. There shall be two deputy adjutants-general, one for Upper and the other for Lower Canada; and each of the deputy adjutants-general shall have the rank of lieutenant-colonel in the provincial militia, and he shall hold his office during pleasure; and each of the deputy adjutants-general shall be paid by the province at the rate of two thousand dollars per annum. 18 Vict. c. 77. s. 47.

Offices of inspecting officer and deputy adjutant-ge-

57. The commander-in-chief may in his discretion amalgamate the offices of deputy adjutant-general and inspecting field officer of militia in Upper or Lower Canada, in which case the salary of the officer performing such amalgamated offices, and who shall be known as deputy adjutant-general and

inspector of militia, shall not exceed the sum of two thousand dollars per annum. 22 Vict. (1859) c. 18. s. 11.

neral may be amalgamated; salary in such case.

58. The commander-in-chief may from time to time appoint so many assistant adjutants-general, with such duties as he thinks proper or expedient, but no pay or allowances shall be made to them in respect of such appointment. 22 Vict. (1859) c. 18, s. 13.

Any number of assistant adjutants-general may be appointed, but without pay.

59. There shall be in and for each military district an assistant quartermaster-general, whose duty it shall be to make himself thoroughly acquainted with the roads and communications and other matters appertaining to the topography of his district, and to furnish such information on the subject as may be required by the commander-in-chief, in which duty the officers of the volunteer engineer corps shall assist him with the local information they acquire. 18 Vict. c. 77, s. 50.

Assistant quartermaster-general.

60. All contraventions of this Act, and of regulations or orders lawfully made or given under it, when the militia or that portion thereof to which the offender belongs, is not called out for actual service, shall be punishable by penalties to be imposed by one or more justices of the peace, and in a summary manner as herein-after provided, and in such cases courts-martial shall not be held. *Ibid.*, s. 51.

Militia offences, how punishable, in time of peace, without courts-martial.

Calling out the Militia.

61. The commander-in-chief may call out the militia, or any part thereof, whenever it is in his opinion advisable so to do, by reason of war, invasion, or insurrection, or imminent danger of any of them. *Ibid.*, s. 52.

Commander-in-chief may call out militia in certain cases.

62. The colonel commanding any military district, or the lieutenant-colonel commanding any battalion division, may, upon any sudden emergency of invasion or insurrection, or imminent danger of either, call out the whole or any part of the militia within his command, until the pleasure of the commander-in-chief is known. *Ibid.*, s. 53.

And colonels or lieutenant-colonels in their divisions until Governor's pleasure be known.

63. The militia so called out by their colonel or lieutenant-colonel shall immediately obey all such orders as he may give and march to such place within or without the division as he may direct. *Ibid*, s. 54.

Militiamen bound to obey.

64. When the militia of any local division are called out, in case of war, insurrection, or invasion, or imminent danger thereof, all companies of volunteers in such division shall be included in the order and shall obey the officer issuing it. *Ibid.*, s. 55.

Volunteer companies be included.

65. When the whole militia of the province are called out all the volunteer companies shall be included and shall immediately obey the orders they receive. *Ibid.*, s. 56.

And so when the whole militia is called out.

66. Each sedentary militiaman called out for actual service shall attend at such time and place as may be directed by the officer commanding him, with any arms and accoutrements he has received from the province, and with such provisions as such officer may direct. *Ibid.*, s. 57.

Sedentary militiamen to attend with their arms.

67. When the commander-in-chief calls out the militia, and the emergency is not such as to require that the whole of the sedentary militia or of any class thereof, or the whole in any militia division or of any class of militiamen therein, be taken for actual service, he may from time to time direct the number of men to be furnished from the sedentary militia of the whole province or of any militia division thereof, over and above the volunteer companies therein, which shall always be the first taken for actual service. *Ibid.*, s. 58.

When the whole are not taken a certain number may be directed to be furnished.

68. The number of men to be so furnished shall in the first instance be taken from the first-class service men in the several company divisions in that part of the province to which the order applies, and in proportion as nearly as may be to the number of such men in each. Volunteers shall be first taken from each company, but if the number of volunteers be not sufficient, then such furthur number as may be required shall be drawn by lot under the superintendence of the commanding officer of the company, whose certificate that any man has been so drafted or volunteered or consented to serve as substitute for a drafted man shall be evidence of the fact. *Ibid.*, s. 59.

How such number shall be taken.

Drafting men.

69. No militiaman drafted for actual service shall be exempt from serving, unless he forthwith pays a penalty of forty dollars, which shall be given to any approved man of the same class who is not himself drafted for service, and will serve in the place of the militiaman paying such penalty, or such militiaman may provide an approved substitute of the same class and not drafted to serve in his place; and any volunteer or substitute, by his consent to serve as such, shall become liable in all respects as if drafted. *Ibid.*, s. 60.

Militiamen drafted must serve, find a substitute, or pay the fine.

70. No man drafted and unfit from bodily infirmity to perform his duty shall be taken for service. *Ibid.*, s. 61.

Infirm persons exempted.

71. If a greater number of men are required than the whole number of first-class service men, then the requisite number shall be taken from the second-class service men, in like manner. *Ibid.*, s. 62.

In what case second-class service men may be taken.

72. The sedentary militiamen so taken or drafted for actual service shall, by such officers as may be detailed for that purpose by the lieutenant-colonel of the battalion from which they are taken, be marched to such place as the commander-in-chief may appoint, and shall there be embodied into companies and battalions in such manner as the commander-in-chief may direct, and being so embodied shall be commanded by such officers as from their qualification and fitness he thinks proper to appoint. *Ibid.*, s. 63.

How men so taken shall be embodied and commanded.

73. Any volunteer companies, so called out for actual service, may be embodied into battalions if the commander-in-chief thinks fit so to order. *Ibid.*, s. 64.

Volunteer companies may be embodied.

74. The militiamen so taken or drafted for actual service from the sedentary militia, shall serve during one year unless sooner disbanded, and may then be replaced by others taken as aforesaid, and shall not be liable to be again taken until all others in the same class have been taken. But the men in volunteer militia companies shall serve for the time for which they have engaged to serve, which time shall not be less than five years, subject however to be determined on one month's

Term of service.

Proviso

notice as herein-before mentioned: Provided that no volunteer shall leave the service, either with or without notice, at any time when the militia are called out, unless he is regularly discharged or has served out the time for which he engaged. 18 Vict. c. 77, s. 65.

To what places may be marched.

75. The militia so called out may be marched to any part of the province, or to any place without the province, but conterminous therewith, where the enemy is, and from which an attack on this province is apprehended. *Ibid.*, s. 66.

Militia called out to be subject to articles of war.

76. The militia so called out, and every officer or man belonging to it, shall from the time he has been ordered, taken, or drafted for actual service, be subject to the articles of war and to the Act for punishing mutiny and desertion, and all other laws then applicable to Her Majesty's troops in this province, and not inconsistent with this Act; except that no militiaman shall be subject to any corporal punishment except death or imprisonment for any contravention of such laws; and except also that the commander-in-chief may direct that any provisions of the said laws shall not apply to the militia. *Ibid.*, s. 67.

Rank and command of officers as regards militia.

77. Any body of militia so called out shall be commanded by the officer highest in rank then present, or the senior of two or more officers of equal rank. Officers of Her Majesty's regular army shall always be reckoned senior to all militia officers of the same rank, whatever be the dates of the respective commissions. And colonels appointed by commission signed by the commander of Her Majesty's regular forces in Canada, shall command colonels of militia, whatever be the date of their respective commissions. *Ibid.*, s. 68.

For what offences only militiamen may be sentenced to death.

78. No militia officer or militiaman shall be sentenced to death by any court-martial except for mutiny, desertion to the enemy, or traitorously delivering up to the enemy any garrison, fortress, post, or guard, or traitorous correspondence with the enemy. And no sentence of any general court-martial shall be carried into effect until approved by the commander-in-chief. *Ibid.*, s. 69.

Sentence must be first approved.

79. No officer of Her Majesty's regular army on full pay shall sit on any militia court-martial. *Ibid.*, s. 70.

Officer of regular army on full pay not to sit, &c.

Armament of the Sedentary Militia.

Arms, &c., of sedentary militia to be kept in certain places.

80. The arms and armaments for the sedentary militia shall, when such militia is not called out for actual service, be kept in armouries at the following places: Quebec, Three-Rivers, Rivière-de-Loup (below), Sorel, St. John's, Montreal, the city of Ottawa, Prescott, Kingston, Peterborough, Toronto, Guelph, Hamilton, London, and Chatham. *Ibid.*, s. 71.

Buildings for armouries.

81. If there be at any such place no building adapted to be used as such armoury, the commander-in-chief may cause a proper building to be erected, at a cost not exceeding three thousand dollars for each such building; or he may cause any public building or part thereof to be altered so as to adapt it for such armoury at a cost not exceeding one half the said sum. *Ibid.*, s. 72.

Care of such armouries.

82. The commander-in-chief may employ a proper person to have charge of each such armoury and of the arms therein, and may cause such person to be paid at a rate not exceeding three hundred dollars per annum. *Ibid.*, s. 73.

Arms, how delivered to sedentary militia.

83. The arms in such armouries respectively shall be delivered out to the sedentary militia called into actual service, in such way as the commander-in-chief shall appoint. *Ibid.*, s. 74.

May be kept by Militiamen in certain cases.

84. If there be any militia division in which, from its position, it is not deemed advisable to have the arms of the sedentary militia kept in an armoury, such arms may be delivered out to the enrolled service men of the first class or of the first and second classes in such division, as the commander-in-chief may order, each man giving a receipt for those received by him and security for their safe keeping and delivery to any officer authorized to demand them. *Ibid.*, s. 75.

Billeting and cantoning Troops and Militia when on actual Service, and furnishing Carriages, Horses, &c., for their Transport and Use.

What shall be furnished by those on whom they are billeted.

85. Wen Her Majesty's regular forces or the militia are on a march within this province, and billeted as herein-after mentioned, every householder therein shall, when required, furnish them with house-room, fire and utensils for cooking, and candles; and in cases of emergency, by actual invasion or otherwise, the officer commanding the regiment, battalion, or detachment of troops or militia, may direct and empower any officer or non-commissioned officer of the same, or other person, after having first obtained a warrant for such purpose from a justice of the peace, to impress and take such horses, carriages, or oxen, as the service may require, the use of which shall be thereafter paid for at the usual rate of hire for such horses, carriages, or oxen. *Ibid.*, s. 76.

Impressing carriages, &c., on emergency.

Justice of the peace to billet on requisition of commanding officer.

86. When the said troops of Her Majesty, or the militia, or any regiment, battalion, or detachment of the same, are on a march as aforesaid, the officer or non-commissioned officer commanding them shall require a justice of the peace to billet, and such justice shall immediately thereupon so billet the said troops or militia as to facilitate their march, and in such manner as may be most commodious to the inhabitants; and every inhabitant householder shall receive the troops or militia so billeted upon him, and furnish them with the lodging and articles mentioned in the next preceding section. *Ibid.*, s. 77.

Lodging of officers not to be paid for.

Allowance for men billeted.

Proper officer to settle accounts of

87. No officer shall be obliged to pay for his lodging where he is regularly billeted; but each householder upon whom such soldiers are billeted shall receive from Government for each non-commissioned officer, drummer and private of infantry, a daily rate of ten cents, and for each cavalry soldier, whose horse shall be also provided with stabling and forage, a daily rate of twenty-five cents; and every officer or non-commissioned officer to whom it belongs to receive, or who does actually receive the pay for any officers or soldiers, shall, every four days, or before they quit their quarters if they do not remain so long as four days, settle the just demands of all householders, victuallers, or

other persons upon whom such officers and soldiers are billeted, out of their pay and subsistence money, before any part of the said pay or subsistence money shall be distributed to them respectively, provided such demands do not exceed in amount their pay and subsistence money for the time, beyond which credit is not to be granted. *Ibid.*, s. 78.

officers and soldiers out of their pay, &c.

88. When the safety of this province requires that the said troops of Her Majesty or militia, or any regiment, battalion, or detachment of the same should be cantoned in any part of this province, any justice of the peace in the places where such troops or militia are cantoned, shall, upon receiving an order from the officer commanding them, or on a requision from the officer commanding any such cantonment, quarter and billet the officers, non-commissioned officers, drummers, and privates of the said troops or militia, upon the several inhabitant householders, as near as may be to the place of cantonment, avoiding as much as possible to incommode the said inhabitants, and taking due care to accommodate the said troops or militia. *Ibid.*, s. 79.

Quartering and billeting troop &c., in cantonments.

89. If any inhabitant considers himself aggrieved by having a greater number of the said troops or militia billeted upon him then he ought to bear in proportion to his neighbours, then, on complaint being made to two or more justices of the locality where such troops or militia are cantoned, they may relieve such inhabitants, by ordering such and so many of the said troops or militia to be removed and quartered upon such other person or persons as they see cause, and such other person or persons shall receive such troops or militia accordingly. *Ibid.*, s. 80.

Complaint of persons aggrieved and how redressed.

90. No justice of the peace having any military office or commission in the said troops or militia shall directly or indirectly be concerned in the quartering or billeting of any officer, non-commissioned officer, or soldier of the regiment, corps, or detachment under the immediate command of such justice or justices. *Ibid.*, s. 81.

No justice, being an officer to billet or quarter troops.

91. Nothing in this Act contained shall be construed to authorize the quartering or billeting of any troops or militia either on a march or in cantonment, in any convent or nunnery of any religious order of females, or to oblige any such religious order to receive such troops or militia, or to furnish them with lodging or house room. *Ibid.*, s. 82.

Troops not to be billeted upon nuns, &c.

92. When any troops of Her Majesty or any militia are so cantoned as aforesaid, any justice of the peace where such cantonment is made, upon receiving an order to that effect from the officer commanding the said troops or militia, or a requisition in writing from the officer commanding that cantonment, for such and so many carriages as may be requisite and necessary for the said troops or militia, shall issue his warrant to such person or persons as are possessed of carriages, horses, or oxen, within his jurisdiction requiring him or them to furnish the same for the service aforesaid, and if any person after receiving such warrant refuses to furnish the same they may be impressed and taken for such service; but no such carriage, horse, or ox, or any carriage, horse, or ox mentioned in the previous sections of this Act shall be compelled to proceed more than thirty miles, unless in cases where other carriages, horses, or oxen cannot immediately be had to replace them; and such carriages, horses, or oxen shall be paid for at the usual rate of hire. *Ibid.*, s. 83.

Justice may require persons to furnish carriages, &c., for troops.

May be impressed on refusal to furnish.

Limitation of travel.

How paid.

93. In cases of emergency, when it is necessary to provide proper and speedy means for the conveyance by railway or by water of the troops of Her Majesty or of the militia, and also of their ammunition, stores, provisions, and baggage, any justice of the peace of and in the locality where such troops or militia are either on a march or in cantonment, upon receiving a requisition in writing from the officer commanding such troops or militia, for such railway cars and engines, boats, or other craft, as are requisite for the conveyance of the said troops or militia, and their ammunition, stores, provisions, and baggage, shall issue his warrant to such person or persons as are possessed of such railway cars and engines, boats, or other craft within his jurisdiction, requiring him or them to furnish the same for that service, at and after the rate of payment to be allowed by the said justice, not exceeding the usual rate of hire for such railway cars and engines, boats, or other craft; and if any such person neglects or refuses, after receiving such warrant, to furnish such railway cars or engines, or boats or other craft for that service, such railway cars or engines, boats or other craft may be impressed and taken for such service; but nothing herein shall impair the effect of any Act obliging any railway company to convey such troops, militia, and other articles aforesaid, in any manner or on any terms and conditions therein mentioned, or to release any such company from any obligation or penalty thereby imposed. *Ibid.*, s. 84.

In case of emergency boats, &c., may be required in like manner.

Rate of pay for for the same.

May be impressed on refusal to furnish.

As to Railway Companies.

Offences and Penalties.

94. Any officer or commissioned officer of militia of this province appointed or to be appointed to the active force or to the sedentary militia who obtains under false pretences or who retains or keeps in his own possession, with intent to apply to his own use or benefit, any of the pay or moneys belonging to any non-commissioned officer or private of any corps shall be guilty of a misdemeanor and shall be dismissed from the said militia force. 22 Vict. (1859) c. 18, s. 17.

Unlawfully retaining moneys belonging to militiamen to be a misdemeanor.

Offender to be dismissed.

95. Any person making an affidavit or declaration required in and by this Act, and swearing or declaring falsely therein, shall be guilty of perjury. 22 Vict. (1859) c. 18, s. 19.

False swearing to be perjury.

96. Any officer of militia refusing or neglecting to make or transmit, as herein prescribed, any roll or return or copy thereof, required by this Act or by any lawful authority, or wilfully making any false statement in any such roll, return, or copy, shall thereby incur a penalty of forty dollars for each offence. 18 Vict. c. 77, s. 85.

Refusal to make roll, &c.

Penalty.

97. Any officer or non-commissioned officer of militia refusing or neglecting to assist his commanding officer in making any such roll or return, or refusing or neglecting to obtain or to assist him in obtaining any information which he may require in order to make or correct any roll or return, shall thereby incur a penalty of twenty dollars for each offence. *Ibid.*, s. 86.

Refusing to assist in making rolls, &c.

98. Any militiaman or other person refusing or neglecting to give any notice or information necessary for making or correcting the roll of any company, and which he is required by this Act to

Refusing to give information for making roll, &c.

give to the commanding officer of such company or to any officer or non-commissioned officer thereof demanding the same at any seasonable hour and place, shall thereby incur a penalty of ten dollars for each offence. 18 Vict. c 77, s. 87.

Neglecting to attend muster, or misbehaving thereat, &c.

99. Any militia officer or man, not exempt from attending muster, who neglects or refuses to attend the same at the place and hour appointed therefor, or who refuses or neglects to obey any lawful order at or concerning such muster, shall thereby incur a penalty of not more than five dollars for each offence. *Ibid.*, s. 88.

Hindering militia at drill.

100. Any person who interrupts or hinders any militia at drill, or trespasses on the bounds set out by the proper officer for such drill, shall thereby incur a penalty of five dollars for each offence, and may be taken into custody and detained by any person by the order of the commanding officer, until such drill be over for the day. *Ibid.*, s. 89.

Disobeying orders, &c.

101. Any officer, non-commissioned officer, or militiaman, disobeying any lawful order of his superior officer, or guilty of any insolent or disorderly behaviour towards such officer, shall thereby incur a penalty of five dollars for each offence. *Ibid.*, s. 90.

Not keeping arms, &c., in proper order.

102. Any officer, non-commissioned officer, or militiaman, who fails to keep any arms or accoutrements delivered or entrusted to him in proper order or who appears at drill, parade, or on any other occasion, with his arms or accoutrements out of proper order, or unserviceable, or deficient in any respect, shall incur a penalty of four dollars for each such offence. *Ibid.*, s. 91.

Selling without leave any horse drilled and approved for any troop, &c.

103. Any officer, non-commissioned officer, or man of any volunteer company of cavalry or field artillery, who, without the consent of the commanding-officer of such company, sells or disposes of any horse which has been drilled for the purposes of such company, or which he has undertaken to furnish for such purposes, and which has been approved by the commanding officer of the company, shall thereby incur a penalty of twenty dollars for each offence. *Ibid.*, s. 92.

Unlawfully disposing of arms, &c.

Not to prevent indictment.

Arrest of offender about to leave the province.

104. Any person who unlawfully disposes of or removes any arms, accoutrements, or other articles belonging to the Crown, or who refuses to deliver up the same when lawfully required, or has the same in his possession, except for lawful cause, (the proof of which shall lie upon him,) shall thereby incur a penalty of twenty dollars for each offence; but this shall not prevent such offender from being indicted and punished for any greater offence if the facts amount to such, instead of being subjected to the penalty aforesaid; and any person charged with any Act subjecting him to the penalty imposed by this section may be arrested by order of the magistrate before whom the complaint is made, upon affidavit showing that there is reason to believe that such person is about to leave the province, carrying any such arms, accoutrements or articles with him. *Ibid.*, s. 93.

Volunteers refusing to turn out in aid of civil power.

105. Any officer or man of a volunteer militia company, who, when such company is lawfully called upon to act in aid of the civil power, refuses or neglects to go out with such company, or to obey any lawful order of his superior officer or of any magistrate, shall thereby incur a penalty of twenty dollars for each offence. *Ibid.*, s. 94.

Refusing to receive militia billeted.

106. Any inhabitant householder, who refuses or neglects to receive any troops or militia billeted upon him, or to furnish them with the lodging and articles which he is by this Act required to furnish, shall thereby incur a penalty of eight dollars for each offence. *Ibid.*, s. 95.

Refusing to furnish carriages, &c., when lawfully required.

Or any car, engine, boat, or craft.

107. Any person lawfully required under this Act to furnish any carriage, horse, or ox, for the conveyance or use of any troops or militia, who neglects or refuses to furnish the same, shall thereby incur a penalty of eight dollars for each such offence. *Ibid.*, s. 96.

108. Any person lawfully required under this Act to furnish any railway car or engine, boat or other craft, for the conveyance or use of any troops or militia, who neglects or refuses to furnish the same, shall thereby incur a penalty of twenty dollars for each such offence. *Ibid.*, s. 97.

Contravening this Act where no other penalty is provided.

109. Any person who wilfully contravenes any enactment of this Act, when no other penalty is imposed for such contravention, shall thereby incur a penalty of twenty dollars for each offence, but this shall not prevent his being indicted and punished for any greater offence if the facts amount to such. *Ibid.*, s. 98.

Recovery of penalties.

Summary proceedings; Acts to apply.

Militia officers, &c., may be witnesses.

110. All penalties incurred under this Act or under any regulations, orders, or articles of engagement lawfully made or entered into under it, shall be recoverable, with costs, on the evidence of one credible witness, on complaint or information before one justice of the peace if the amount do not exceed twenty dollars, and before two justices of the peace if the amount exceeds that sum; and to the recovery of such penalties all the provisions of any law then in force relative to the performance of the duties of justices of the peace out of sessions, with respect to summary convictions and orders, shall apply in so far as may not be inconsistent with this Act; and any officer, non-commissioned officer or private of any volunteer militia company shall be a competent witness in any such case, although the penalty is applicable to the purposes of such company. *Ibid*, s. 99.

On whose complaint penalties mny be sued for.

Evidence of authority to sue.

111. No prosecution against an officer of militia for any penalty under this Act shall be brought except on the complaint of the adjutant-general; and no such prosecution against any non-commissioned officer, or private of the sedentary militia, shall be brought except on the complaint of the commanding-officer or adjutant of the battalion or captain of the company to which such non-commissioned officer or private belongs; and no such prosecution against any private or non-commissioned officer of a volunteer company, shall be brought except on complaint of the captain or commanding officer thereof; but the adjutant-general may authorize any officer of militia to make such complaint in his name, and the authority of any such officer alleging himself to have been so authorized to make any complaint shall not be controverted or called in question except by the adjutant-general. *Ibid.*, s. 100.

Limitation of time for such prosecutions.

112. No such prosecution shall be commenced after the expiration of six months from the commission of the offence charged, unless it be for unlawfully buying, selling, or having in possession arms or accoutrements delivered to the militia. *Ibid.*, s. 101.

113. The penalty when recovered shall, if the offender belongs to the active or volunteer militia, be paid over to the officer commanding the company, for the purposes thereof, and shall be applied by him to such purposes and accounted for by him to the adjutant-general; and if the offender belongs to the sedentary militia, then the same shall be paid over to the assistant adjutant-general, who shall account for and pay it over to the receiver-general for the public uses of the province, and it shall make part of the consolidated revenue fund. 18 Vict. c. 77, s. 102. Application penalties

Miscellaneous Provisions.

114. It shall not be necessary that any order or notice under this Act be in writing, unless it is herein required that it shall be so, provided that it be communicated to the person who is to obey or be bound by it in person, either directly by the officer or person making or giving it, or by some other by his order. *Ibid.*, s. 103. Orders and notices need not be in writing, if given in person.

115. All general orders of militia, or other militia orders issued through or by the adjutant-general, shall be held to be sufficiently notified to all persons whom they may concern, by their insertion in the *Canada Gazette*, and a copy of the said Gazette purporting to contain them shall be *primâ facie* evidence of such orders. *Ibid.*, s. 104. General orders, how notified. Evidence.

116. All orders made by the commanding officer of a militia, regimental or battalion division, shall be held to be sufficiently notified to all persons whom it may concern, by their insertion in some newspaper published in such division, or, if there be none, then in some neighbouring division, and by posting a copy thereof on the door of the church or of some court-house, mill, or other public place, in each company division in such regimental or battalion division. *Ibid.*, s. 105. Regimental or battalion orders, how notified.

117. The production of a commission or appointment, warrant or order, in writing, purporting to be granted or made according to the provisions of this Act, shall be *primâ facie* evidence of such commission or appointment, warrant or order, without proving the signature or seal thereto, or the authority of the person granting or making such commission, appointment, warrant or order. *Ibid.*, s. 106. Evidence of commissions, warrants, &c

118 Every bond to the Crown entered into by any person under the authority of this Act, or according to any general order or regulations made under it, or for the purpose of securing the payment of any sum of money, or the performance of any duty or act hereby required or authorized, before any judge or justice of the peace, or officer therein authorized to take the same, shall be valid and may be estreated or enforced accordingly. *Ibid.*, s. 107. Bonds entered into, in pursuance of this Act, to be valid.

119. Every sum of money which any person or corporation is under this Act liable to pay or repay to the Crown, or which is equivalent to the damages done to any arms or other property of the Crown used for militia purposes, shall be a debt due to the Crown, and may be recovered in any manner in which such debts may be recovered. *Ibid.*, s. 108. Sums of money payable to the Crown under this Act, how recoverable.

120. Every action and prosecution against any officer or person for any thing done in pursuance of this Act shall be laid and tried in Lower Canada in the district, and in Upper Canada in the county, where the act complained of was done, and shall not be commenced after the end of six months from the doing of such act, nor until one month's notice in writing of the action and of the cause thereof has been given to the defendant; and in any such action the defendant may plead the general issue and give this Act and the special matter in evidence at the trial; and no plaintiff shall recover in any such action if a tender of sufficient amends was made before the action was brought, or if a sufficient sum of money has been paid into court by the defendant after the action was brought. *Ibid.*, s. 109. Protection of officers, &c., in pursuance of this Act. Limitation of action. Tender of amends.

121. If a verdict passes for the defendant in any action referred to in the next preceding section, or the plaintiff becomes non-suit or discontinues the action after issue joined, or if on demurrer or otherwise judgment is given against the plaintiff, the defendant shall recover his full costs as between attorney and client, and shall have the same remedy therefore as any defendant hath in other cases; and, though a verdict is given for the plaintiff, he shall not have costs against the defendant, unless the judge before whom the trial has been had certifies his approbation of the action and the verdict therein. *Ibid.*, s. 110. If plaintiff be non-suit, &c. No costs against defendant except with approval of judge.

122. All sums of money required to defray any expense authorized by this Act may be paid out of the consolidated revenue fund of this province, upon warrant directed by the Governor to the Receiver General; and such warrants may be made in favour of the adjutant-general of militia, to enable him to pay such expense, or in favour of the party directly entitled to the money; but no sum of money shall be so paid out of the consolidated revenue fund until first approved of by resolution of the Legislative Assembly in the annual estimates. *Ibid.*, s. 111. Payment of moneys under this Act. Proviso.

123. A detailed account of all moneys advanced or expended under this Act shall be laid before each branch of the provincial Parliament within fifteen days after the opening of the then next session thereof. *Ibid.*, s. 112. Accounting to Parliament.

124. The Interpretation Act shall apply to all regulations, orders, and articles of engagement lawfully made or entered into under this Act. *Ibid.*, s. 114. Interpretation.

125. The word "corps" shall, for the purposes of this Act, include any field battery, troop of cavalry, foot company of artillery or rifle company, or any battalion or regiment. 22 Vict. (1859) c. 18, s. 20. Interpretation clause.

126. The Acts 9 Vict. c. 28, 13 & 14 Vict. c. 11, 4 & 5 Vict. c. 2, 12 Vict. c. 88, & 12 Vict. c. 89, having been repealed by the Act 18 Vict. c. 77, all Acts and laws repealed by the said Acts or any of them shall nevertheless remain repealed; and all offences committed against them or any or them before the said Act 18 Vict. c. 77 came into force; shall be prosecuted and punished under he said Acts and laws which shall remain in force as to such offences. 18 Vict. c. 77, s. 1. Things done under Acts repealed.

Encl. 2 in No. 2.

Enclosure 2 in No. 2.

An Act to amend the Act respecting the Militia.

Whereas it is expedient to make the following provisions in amendment of chapter 35 of the Consolidated Statutes of Canada, intituled "An Act respecting the Militia," therefore Her Majesty, by and with the advice and consent of the Legislative Council and Assembly of Canada, enacts as follows:—

1. The following paragraph shall be added to the 20th section of the said Act, and shall make part thereof:—

"The commander-in-chief may, whenever he deems it necessary, order that a corrected roll of every company of the sedentary militia be made out; and it shall be the duty of every officer commanding a company, within ten days after such order has been received, to make out such corrected roll and to cause a copy thereof to be transmitted as provided by the foregoing provisions of this section."

2. The 22d section of the said Act is hereby repealed, and the following section shall be substituted for it, and bear the same number:—

"22. The active militia of the province, in time of peace, shall consist of volunteer troops of cavalry, military train, field batteries of artillery, garrison batteries of artillery, companies of engineers, and companies of infantry, and marine and naval companies, to be armed and equipped according to their respective services, and to be formed at such places and in such manner as may from time to time be designated or ordered by the commander-in-chief; but except as herein-after provided the total strength of such volunteer corps shall not exceed 10,000 officers and men in class A."

3. The following paragraph shall be added to the 31st section of the said Act, and shall make part thereof:—

"3. Each volunteer militiaman shall, in the discretion of the commander-in-chief be supplied with uniform clothing while on drill or service, or receive such sum not exceeding six dollars per annum in lieu thereof, as may be directed by the commander-in-chief; such clothing or money to be delivered to the non-commissioned officers and privates, on such conditions and upon such security as the commander-in-chief may direct; and in all cases, uniforms, arms, and accoutrements, the property of the officers of battalions or companies, issued prior or subsequently to the passing of this Act, shall be received, held, preserved, and recovered in all respects, as if the same were the property of the Crown, and shall have all the privileges incidental thereto."

4. The 32d section of the said Act is hereby repealed, and the following substituted for it:—

"All arms lent by the Imperial Government to the province, and all accoutrements furnished by the Province, and distributed to the officers and men of the active and volunteer militia shall be accounted for by those who have received them; and in those localities where there are no public armouries, the commander-in-chief may prescribe such precautionary measures as he deems expedient for the safe keeping and in good order of such arms and accoutrements, and for the re-delivery thereof to such officer as may be appointed to receive them, whenever the commander-in-chief for any purpose directs such re-delivery.

5. The commander-in-chief may appoint brigade majors not exceeding one for each military district, and may from time to time regulate and prescribe their duties.

Each of the said brigade majors shall be paid by the province at a rate not exceeding 600 dollars per annum, and travelling expenses.

6. The 40th section of the said Act is hereby repealed, and the following section shall be substituted for it and bear the same number:—

"40. The non-commissioned officers and men of the active militia (Class A) shall be paid for each day of actual and *bonâ fide* drill (not exceeding 12 in number) the sum of 50 cents per diem, and a further sum of 1 dollar per diem for each horse actually and necessarily present belonging to and used for such drill by such non-commissioned officers and men."

"2. Notwithstanding anything contained in the 38th section of this Act, such days of drill need not be consecutive, unless so ordered by the commander-in-chief, who may also determine the manner in which such number of days of drill shall be computed."

7. The 43d section of the said Act is hereby repealed, and the following section shall be substituted for it, and bear the same number:—

"43. Each serjeant-major of a volunteer field battery of artillery shall, on account of the great responsibility attached to the office, be paid by the province, at the rate of 200 dollars per annum; and the commander-in-chief may from time to time appoint musketry instructors, non-commissioned officers or other competent persons to be employed in drilling and instructing the officers, non-commissioned officers and men in the several corps of active and sedentary militia:

"Each of such musketry instructors, non-commissioned officers and other competent persons so employed, shall be paid by the province at a rate not exceeding 1 dollar and 50 cents per diem when so employed."

8. The active militia shall be paid on such proof of the performance of drill required by the said Act, at such times and in such manner as the commander-in-chief may from time to time direct.

9. In the time of active service in the field, and whenever the militia or any part thereof shall be called out by reason of invasion, insurrection, or imminent danger thereof, the officers, non-commis-

sioned officers, and men of the militia so called out for active service shall be paid at such rates of daily pay, and shall receive such allowances in every respect, as are paid and allowed to officers and men of the relative and corresponding rank or grade in Her Majesty's army.

Corps for General Service.

10. The commander-in-chief may, in the event of war, raise, in addition to the active and sedentary militia of the province, regiments of militia by voluntary enlistment for general service during such war, and for a reasonable time after its termination; such regiments to be subject to all the provisions of the said Act respecting the militia as hereby amended.

Drill Associations.

11. The commander-in-chief may sanction the organization of associations for purposes of drill, and of independent companies of infantry composed of professors, masters, or pupils of universities, schools, or other public institutions, or of persons engaged in or about the same, or of reserve men, but such associations or companies shall not be provided with any clothing or allowance therefor, nor shall they receive pay.

12. This Act shall be construed as forming one Act with the said Act respecting the militia, and all words and expressions in this Act shall have the same meaning as they have in the said Act.

Enclosure 3 in No. 2.

Encl. 3 in No. 2.

Report of the Commissioners appointed to report a Plan for the better Organization of the Department of Adjutant General of Militia, and the best means of Re-organising the Militia of this Province, and to prepare a Bill thereon.

To his Excellency the Governor General.

We, your Excellency's commissioners appointed, firstly, to report a plan for the better organization of the department of adjutant general of militia; secondly, to investigate and report upon the best means of reorganizing the militia of this province, and of providing an efficient and economical system for the defence of the province; and, thirdly, to prepare a bill or bills on the subjects hereinbefore mentioned respectively, with a view to submission of the same to Parliament at its next session, do most respectfully report to your Excellency, as follows:—

Organization of Department of Adjutant General of Militia.

1. We recommend that the department of adjutant general of militia shall consist of an adjutant general, two deputy adjutants general, a paymaster, and a sufficient staff of clerks. Adjutant General's department.

2. That the general commanding Her Majesty's troops in Canada shall from time to time, as circumstances may require, be requested to nominate officers of the regular service to inspect the active militia, and that such officers shall receive, while so employed, the allowances provided by the present law. Inspectors of militia.

Reorganization of Militia.

Preamble.

3. In framing our recommendations as to the best means of re-organizing the militia of Canada we have taken for the groundwork of our considerations the following facts, which must be self-evident to all who consider the circumstances and position of the province. Ground work of considerations.

4. Firstly, that Canada presents a frontier, upwards of 1,000 miles in extent, assailable by land or water at every point. Extent of frontier.

5. Secondly, that she possesses a population amounting to little more than 2,500,000 souls (less than the population of London), thinly but unevenly scattered throughout her full extent. Population

6. Thirdly, that the adjoining country is powerful,—contains a population vastly superior in numbers to that of Canada,—possesses great resources, and abounds with excellent means of communication, both by land and water, diverging from the heart of the nation, and leading to all the most vulnerable points on the frontier of this province. Neighbouring country.

7. Fourthly, that as the revenue of a country must depend in a very great degree upon the amount of her population, the extent of the frontier in this province to be defended must necessarily be disproportioned to her income. Revenue small.

Amount of Force required.

8. In order to provide an efficient force for the defence of the province, we are of opinion that a far greater number of trained men will be required than have hitherto been sanctioned, and recommend the organization of an active force amounting to about 50,000 men of all arms, with a reserve of the same number. A reference to the map of Canada will, we think, clearly point out that even this number of men would be insufficient without the co-operation of a strong body of regular troops and a powerful fleet of gun boats on the lakes. 50,000 men required.

Composition of Force.

Volunteer and regular militia.

9. We are of opinion that the proposed force should consist of the volunteer militia corps of the great cities, and of active battalions of regular militia to be raised in the rural districts; a proportion of artillery and cavalry being distributed throughout the force.

On the Battalion System.

Infantry to be organized in battalions.

10. For the following reasons we consider that the infantry should in all cases be organized in complete battalions.

Reasons.

11. It appears that the failures and disasters of armies composed of irregular troops have generally arisen, not from a want of courage or of drill amongst the private soldiers, but from a want of discipline throughout the entire body.

12. The discipline of an army, we consider, consists, in a downward direction, of a perfect system of circulating orders, and a complete chain of mutual responsibility by which these orders are carried out. In an upward direction it consists of the habit acquired by the individuals composing a large body of depending with confidence upon and acting implicitly under the orders of one directing mind.

13. We think that the habit of command, of circulating orders, and of carrying out the system of mutual responsibility, can only be acquired by great practice.

14. That confidence in superior command and in the system of mutual responsibility is the result of an intimate knowledge of the system, and a conviction that the machinery by which it is worked is in perfect order. This knowledge, however, is not, in our opinion, sufficient. Discipline, we consider, must be acquired by long habit, or it will not stand the test of active service, where excitement and danger so often deprive the mind of its ordinary functions.

15. Generals of disciplined troops move their armies into action with confidence and freedom, for they know by their system of discipline they can "keep them in hand," and trust to them in the hour of danger and excitement.

16. We do not think that discipline and mutual confidence, which are so essential to the organization of an army, could exist to any great extent in a body composed of independent companies.

17. Even were these independent companies formed into battalions for service, we think that captains who had been accustomed to be independent would never submit with confidence to strange lieutenant-colonels, nor would lieutenant-colonels have confidence in independent captains unused to submit to discipline. The necessary chain of mutual responsibility would be untested, the lieutenant-colonels themselves would be unpractised, and the whole organization would produce but little confidence in the mind of a general.

18. We consider, moreover, that esprit de corps is as essential to success in the organization of a militia force as discipline.

19. For these reasons we recommend that the whole force of volunteer and regular militia infantry of the province be formed in complete battalions, and that the people of each locality be encouraged by the nature of the organization to feel an interest and a pride in their own trained battalions.

Regular Militia.

Military districts.

20. We recommend that the province be divided into such "military districts" as the commander-in-chief may from time to time direct.

Regimental districts.

21. That each military district be divided into "regimental divisions."

Sedentary battalion divisions.

22. That in order to facilitate the enrolment, relief, and reinforcement of an active force, each regimental division be divided into "sedentary battalion divisions," and be subdivided into "sedentary company divisions."

Active battalions.

23. That each regimental division shall furnish one active and one reserve battalion, to be taken as nearly as practicable in equal proportions from the male population of such division, between the ages of 18 and 45.

Active company division.

24. That each company of an active battalion, together with its corresponding reserve company, be taken from within the limits of a defined territorial division, the boundary of which shall be identical with that of a sedentary battalion division, or of a distinct portion of such division.

Sedentary battalion divisions to be made to correspond with active company divisions.

25. That in order to accommodate the sedentary battalion divisions to the organization of the active battalions, the limits of the former be, where necessary, re-arranged.

Volunteer Militia.

Cities to be military districts, and furnish volunteer or regular militia.

26. We recommend that each of the principal cities of the province, namely, Quebec, Montreal, Ottawa, Kingston, Toronto, Hamilton, and London, with such portions of the surrounding country as may from time to time be added to them by the commander-in-chief, shall constitute a military district to be divided into regimental and sedentary battalion divisions, as herein-before detailed; that they be allowed to furnish volunteer militia of the three arms in the proportions herein-after detailed in lieu of active battalions of regular militia. In the event of these cities failing to furnish their full complement of volunteers, they shall in part, or altogether, fall under the general regulations of the regular militia, in such manner as the commander-in-chief shall direct.

Number of regiments.

27. That all the regiments of volunteer and regular militia shall be numbered from one upwards, the numbers to be drawn by lot.

Retired

Retired List.

28. We recommend that all officers of the active or reserve corps who have arrived at the following ages in each rank respectively, and all officers of those corps who may hereafter arrive at those ages, in each rank, may be placed on the retired list, receiving a step of honorary rank: Officers on retired list.

Field officers, under the rank of colonel, at 60.
Captains and subalterns, at 50.

29. That all men above the age of 45, not being officers, who shall claim exemption on account of age, shall be considered on the retired list, non-commissioned officers retaining their rank. Men on the retired list.

30. That officers and men of the retired list under the age of 60 may be required to serve in cases of great emergency, but above that age that they be liable to serve only in case of a *levée en masse*. Liabilities of men on retired list.

Permanent Staff.

31. We recommend that a permanent staff be allowed to each city furnishing volunteer militia, consisting of one town adjutant and one staff sergeant-major to each battalion. Permanent staff of volunteer militia.

32. That the town adjutant shall be under the orders of the colonel of the district; shall have general superintendence over the armouries and stores, and have control over the staff serjeant-majors of battalions; shall make out all returns, certificates, rolls, &c. that may be required; shall undertake the official correspondence relating both to the sedentary and active militia of the district; shall carry out the instructions of the colonel of the district with respect to the drill and instruction of the officers, non-commissioned officers, and men of the volunteer and regular militia at all times of the year, and shall act as paymaster of all the corps in the district. Duties of town adjutant.

33. That a permanent staff be allowed to each active battalion of regular militia consisting of one adjutant and one staff serjeant-major. Permanent staff of regular militia.

34. That the adjutant of an active battalion of regular militia shall have charge of all arms, clothing, ammunition, books, rolls, &c. belonging to the entire active force, within the regimental division to which his battalion belongs; shall be responsible that all vacancies in the active field batteries, troops, or companies are filled up as they occur; shall undertake the official correspondence relating both to the sedentary and active militia of his division; he shall be instructed to encourage the officers, non-commissioned officers, and privates of his corps to drill and practise with the rifle in their leisure hours throughout the year; and afford every assistance in his power to any young men who may wish to qualify themselves as officers, or to receive military instruction; and shall also act as paymaster of his regimental division. Duties of adjutants of regular militia.

35. That the staff serjeant majors under the control of the adjutant shall have the immediate charge of the arms, accoutrements, knapsacks, &c. of their battalions and of the field batteries or troops attached to them; shall be employed in drilling and instructing the officers, non-commissioned officers, and men of their respective corps, and shall act as clerks to the adjutants. Duties of staff sergeant-majors.

36. That the permanent staff be appointed by the commander-in-chief, who shall have the power of removing at pleasure any officer or non-commissioned officer of such staff. Appointment of permanent staff.

37. That the officers and non-commissioned officers of the permanent staff shall be appointed for three years only, at the termination of which period they will be eligible for re-appointment to a battalion in another district. The adjutants will be required always to reside in their respective regimental divisions. Power of dismissal.

Establishments of Volunteer and Regular Militia Corps.

38. We recommend that the establishment of a field battery shall be as follows: Establishment of field batteries.

Officers.		Non-commissioned Officers and Men.		Horses.	
Captain	1	Staff serjeants	2	Officers	4
1st Lieutenants	2	Serjeants	4	Serjeants	6
2d Lieutenant	1	Corporals	4	Trumpeter	1
		Bombardiers	4	Draught	36
		Gunners	44		
		Drivers	26		
		Trumpeter	1		
	4		85		47

On active service, a farrier, a collar maker, and a wheeler, and 16 horses, should be added to the above establishment.

39. That the establishment of a troop of cavalry shall be as follows: Establishment of a troop of cavalry.

Captain	1	Troop serjeant-major	1	Officers	3
Lieutenant	1	Serjeants	2	Non-commissioned officers and privates	50
Cornet	1	Corporals	2		
		Trumpeter	1		
		Privates	44		
	3		50		53

On active service, a farrier to be added to the above establishment.

40. That

Establishment of a battalion of garrison artillery or of infantry.

40. That the establishment of an active battalion of garrison artillery or of infantry shall be as follows:

Lieutenant-colonel	1	Sergeant-major	1
Majors	2	Quartermaster-sergeant	1
Adjutant	1	Hospital sergeant	1
Quartermaster	1	Drum major	1
Surgeon	1	Sergeants	40
Assistant surgeon	1	Corporals	40
Captains	10	Drummers	10
Lieutenants	10	Privates	710
Ensigns	10		
	37		804

Appointment and Promotion of Officers, and Regulations regarding them.

Officers to be appointed by commander-in-chief.

41. We suggest that all officers of the volunteer and regular militia be appointed by the commander-in-chief.

Efficient field officers to be selected.

42. We also recommend, with the view of ensuring the efficiency of corps of the volunteer and active regular militia, that field officers be selected who have served in the regular army, or who have acquired a sufficient knowledge of all military duties, according to the present system; their efficiency to be practically tested prior to their appointment.

Examination of gentlemen prior to appointment.

43. That all gentlemen and officers desiring to hold commissions in the active force below the rank of field officers be required to pass a practical military examination before a board consisting of three officers, one being a field officer, prior to their appointment to the militia, and that in the first formation of the militia the officers of the board shall be selected from the regular service.

Promotion by seniority, subject to examination as to efficiency.

44. We also recommend that promotion, as a general rule, shall take place by seniority; this general rule being always subject to such deviations and exceptions as the commander-in-chief may think proper to make, on account of inefficiency, misconduct, or other causes of irregularity; all officers under the rank of field officers in the active force to be required to pass a practical military examination before a board consisting of three officers, one of them being a field officer, prior to their promotion; provided also, that the commander-in-chief shall have the power to promote any officer, out of his turn, for distinguished gallantry in the field, or marked military capacity.

Existing officers eligible for re-appointment, if qualified.

45. That all officers holding commissions in the sedentary militia, not above the superannuating ages herein-before suggested, and who may please to qualify themselves, shall be eligible for appointment to the active militia; it being understood that they shall not be required to accept a lower grade or rank than that which they hold in the sedentary militia, unless at their own request.

Fees to be paid on appointment and promotion.

46. That all officers of the volunteer and regular militia shall be required to pay the following fees on appointment and promotion:—

	On appointment.	On promotion.
Ensigns or cornets	$5	
Lieutenants	6	$1
Captains	8	2
Majors	9	1
Lieutenant-colonels	10	1
Colonels of districts	20	10

Staff officers according to their relative rank.

Method of raising Volunteer and Regular Militia, and conditions.

Maintaining volunteer militia.

47. We recommend that the lieutenant-colonels of volunteer battalions, and the captains of volunteer field batteries and troops of cavalry, shall be held responsible that their corps are kept up to their full strength, and in the event of their failing to maintain their complement of men, or of their corps becoming inefficient, the commander-in-chief shall have the power of disbanding them.

Enrolment of active militia.

48. That the active force be raised either by "voluntary enlistment," by "selection," by "ballot," or by a combination of voluntary enlistment and the ballot. The following method may be adopted in raising the militia: the captain of each sedentary company having assembled all the men between the ages of 18 and 45 belonging to his company division, will call upon them to give the number required voluntarily; but if volunteers do not come forward in sufficient numbers, he will inform the men that it is his duty to fill up the number by ballot, unless a majority of two thirds prefers that he select men for the active force from amongst them, in which case it will become his duty to make his selection in such a manner as to make the pressure bear upon the families who are best able to support it. If there is not a majority of two thirds of the men in favour of the selection by the captain, he shall at once proceed with the ballot.

Active force to be taken from unmarried men, &c.

49. That in the event of the ballot being adopted the active force be taken, in the first place, from amongst the unmarried men and widowers without children.

Substitutes may be provided.

50. That men taken by ballot for the regular militia shall be allowed to provide substitutes, subject to the approval of the commanding officer of the corps, or to pay the sum of $30 for exemption from service for three years.

Service of volunteer militia.

51. That men of the volunteer militia shall be enrolled for a period of five years.

Service of regular militia in active force.

52. That men of the regular militia shall serve three years in the active force.

53. That

53. That men of the regular militia shall, at the expiration of their term of service in the active force, pass into the reserve force, and continue to be enrolled in that force, for a further period of three years. Service of regular militia in reserve force.

54. That the sergeants of the volunteer and regular militia be encouraged, at the expiration of their first terms of service in the active force, to re-engage for a further period of five years in the volunteer militia or seven years in the regular militia, receiving at the expiration of 10 years service in the active force a gratuity of $40 ; and that any sergeant who may retire at the expiration of his first term of service may be replaced by any corporal who has completed his first period of service, such promoted corporal to receive the same grant at the expiration of his 10 years service. It being always understood that the above-mentioned re-engagements, in both cases, shall be subject to the approval of the commanding officer of the corps. Sergeants may re-engage for a second period of service.

55. That any man desiring to change his residence to another regimental division shall communicate his intention to the commanding officer of his corps, and shall obtain from him a certificate of service, a duplicate of which shall be sent to the commanding officer of the regimental division to which the man is removed, and he will be called upon to complete his term of service in that division. Should he fail to present himself at the first muster in the battalion to which he is removed, he shall (unless he can satisfactorily account for his absence) be liable to be drafted for a full period of service, without reference to his former service. Volunteer or regular militiamen changing residence.

56. That any man who may require to leave the country shall also obtain from his commanding officer a certificate of service, and, should he return within a period of 10 years, he may, on production of such certificate, be allowed to complete his period of service, otherwise he shall be liable to be drafted for a full period. Volunteer or regular militiamen leaving the country.

57. That all men who shall have completed their three years service in the active force and three years in the reserve force shall be placed at the bottom of the list of men between 18 and 45 years of age in the regimental division, and shall not be liable again to be drafted until every man above them on the list shall have served. Each man at the expiration of his service shall be furnished with a certificate of service. Procedure at expiration of three years service.

58. That the volunteer and active regular militia be called out for training every year. And that the volunteer and regular militia be liable to be called out in case of war or disturbance, or any emergency that may arise, to serve either within or without the province; the volunteers and active battalions being always the first to take the field, the reserve next, and then additional active battalions to be raised from the sedentary militia. Liability to be called out for training and service.

59. That all vacancies in the active battalions be filled up as they occur. Vacancies to be filled up at once.

60. That in time of war no man shall be required to serve in the field continuously for a longer period than one year; the reliefs to be made by drafts from the regimental division, or by complete battalions, as may be found most expedient at the time ; but that any man who volunteers to serve for the war shall be compelled to fulfil his engagement. Period of active service in the field limited to one year.

61. That it shall, nevertheless, be left to the discretion of the commander-in-chief, in cases of unavoidable necessity, to call upon any volunteer or regular militiaman to continue to serve beyond his period of general service, or beyond his one year's service in the field, for any period not exceeding six months. Power of commander-in-chief to retain volunteers or militiamen after expiration of service.

Pay.

62. We recommend that the town adjutants and regular militia adjutants receive pay at the rate of $2 a day, and an allowance of 50 cents a day for travelling expenses and forage for a horse. That the staff sergeants receive pay at the rate of $300 a year. Pay of permanent staff.

63. That the officers of the volunteer and regular militia corps receives a uniform rate of pay at $1 a day, and the non-commissioned officers and privates a uniform rate of pay at 50 cents a day, during their period of training. That the officers, non-commissioned officers, and privates of the field batteries and troops of cavalry receive, in addition to their pay, an allowance of $1 a day for their horses during the period of their training. Pay of volunteer and regular militia corps during training.

64. That when called out in aid of the civil power the officers shall receive the same pay as officers in the regular service. That the non-commissioned officers and men receive pay at the rate of $1 a day, and shall also be provided with lodgings by the municipality requiring their services. Pay when in aid of civil power.

65. That on active service in the field the officers, non-commissioned officers, and men of the volunteer and active militia receive the same rates of pay and allowances in every respect as in the regular service. Pay on active service.

66. That the permanent adjutants receive a sufficient contingent allowance to cover the expenses of postage and stationery, and that one adjutant in each military district shall receive an additional allowance to cover expenses incurred in postage and stationery by the colonel commanding the district. Contingent allowance to adjutants.

Arms, Equipment, and Clothing.

67. We recommend that the volunteer and regular militia artillery be provided with field guns, harness, saddlery, &c., that both gunners and drivers be furnished with swords, and that 12 short Enfield rifles be allowed to each field battery. Arms, &c. of field batteries.

68. That the cavalry be armed with swords and carbines, and be provided with saddlery, valises, and cloaks. Arms, &c., of cavalry.

69. That the volunteer and regular militia garrison artillery and infantry be armed with rifles of the latest pattern, and be furnished with accoutrements, knapsacks, and great-coats. Arms of garrison artillery and infantry.

70. That each volunteer militiaman shall receive an allowance of $3 a year in lieu of clothing. Clothing of volunteer militia.

71. That the regular militiamen be supplied with clothing while on drill or service. Clothing of militia.

72. That

Articles to be kept in store.

72. That the arms, accoutrements, knapsacks, and great-coats of all corps be kept in store, and moreover that the clothing of the regular militia be also kept in store; these articles to be served out to the men when it is deemed expedient by order of the commanding officer.

Pioneers' tools.

73. That a complete set of pioneers' tools and implements be kept in each regimental store.

Drums and bugles.

74. That a sufficient supply of drums and bugles be obtained for the use of the militia.

Training and Muster.

Season for training.

75. That every active battalion be called out for training at the most convenient time in each year.

Number of days training.

76. That the usual period for training be 28 days; that it shall never be less than 14, with 14 days additional drill for recruits who have not been present at any former training.

Training of reserve force.

77. That it shall be in the power of the commander-in-chief to call out the reserve force for six days training in each year.

Inspection of militia.

78. That every corps of active militia be inspected, during its period of training, by such officer as the commander-in-chief may appoint.

Militia corps to be encamped during training.

79. That militia corps be encamped, when practicable, during their period of training, and that the men be encouraged to mess together and procure their provisions by contract, camp kettles being provided for their use.

Training of volunteer militia.

80. That the volunteer militia shall be required to drill for the same number of days as the regular militia, receiving the same rate of pay during their period of training. But as the composition of these corps will be different from that of the regular militia, we recommend that the period of drill may be divided, at the discretion of the commander-in-chief, to suit the convenience of the volunteers. But to ensure the corps being properly trained to battalion movements, we recommend that a certain number of days drill be always consecutive, and in the summer months.

Muster of sedentary militia.

81. That an annual muster of the sedentary militia shall take place, and that absentees shall be called upon to pay a moderate commutation in case of non-attendance.

Drill Grounds.—Armories and Stores.

Drill ground and store, &c., for volunteer.

82. That a drill ground be provided in, or in the vicinity of each city that furnishes volunteer militia, and that a suitable building be provided, containing an armory, magazine, store rooms, orderly room, gun sheds, &c., the arms and stores of each battalion being kept separately in charge of a staff sergeant major. This building to be enclosed within a wall capable of defence against sudden attack.

Drill ground and stores, &c. for militia.

83. That a suitable drill ground be provided in some advantageous central position in each regimental division, and that a stone or brick building be erected on the drill ground, containing a store, armory, magazine, orderly room, shifting room, and quarters for the serjeant major; this building to be enclosed within a stone or brick wall capable of defence against sudden attack, and that gun sheds and stores for saddlery be added where required.

Sites to be approved of by commander-in-chief.

84. That the selection of the site for these drill grounds and buildings be subject to the approval of the commander-in-chief.

Registration of Seafaring Men.

Registration of seafaring men.

85. That all seafaring men, and sailors on our inland waters, actually employed in their calling, and who shall on that account claim exemption from militia service, shall be registered; and that they shall be trained to the exercise of guns of heavy calibre during the winter months, and that for this purpose marine companies shall be formed at such places as the commander-in-chief may direct.

General Distribution of Volunteer and Regular Militia Force in Canada.

86. We propose that the volunteer and regular militia force shall be raised throughout the province in the following proportions:

VOLUNTEER MILITIA IN UPPER CANADA.

Cities and Districts.	Field Batteries, 85 strong.	Troops, Cavalry, 50 strong.	Battalion Garrison Artillery, 804 strong.	Battalion Infantry, 804 strong.	Total Strength.
Ottawa	1	—	—	½	489
Kingston	1	1	—	½	539
Toronto	1	1	1	1	1,743
Hamilton	1	—	—	1	889
London	1	—	—	½	489
Total Volunteer Force in Upper Canada	5	2	1	3½	4,149

REGULAR

REGULAR MILITIA IN UPPER CANADA.

Cities and Districts.	Field Batteries, 85 strong.	Troops, Cavalry, 50 strong.	Battalion Garrison Artillery, 804 strong.	Battalion Infantry, 804 strong.	Total Strength.
Military District :					
No. 1	—	—	—	2	1,608
No. 2	1	2	1	1	1,793
No. 3	—	1	1	2	2,462
No. 4	—	1	—	3	2,462
No. 5	—	1	—	4	3,266
No. 6	—	1	—	6	4,874
No. 7	1	3	1	2	2,647
No. 8	—	3	1	3	3,366
No. 9	—	2	—	1	904
Total Military in Upper Canada	2	14	4	24	23,382
Add Volunteers in Upper Canada	5	2	1	3½	4,149
Total Force in Upper Canada	7	16	5	27½	27,531

VOLUNTEER MILITIA IN LOWER CANADA.

Quebec	1	1	1	1	1,743
Montreal	1	2	1	3	3,401
Total Volunteer Force in Lower Canada	2	3	2	4	5,144

REGULAR MILITIA IN LOWER CANADA.

Military District :					
No. 1*	—	—	—	—	—
No. 2	—	—	—	2	1,608
No. 3	—	2	—	2	1,708
No. 4	—	—	—	1	804
No. 5	—	—	—	3	2,412
No. 6	—	2	1	2	2,512
No. 7	—	—	—	2	1,608
No. 8	—	—	—	3	2,412
No. 9	—	1	—	3	2,462
No. 10	1	3	—	2	1,843
Total Militia in Lower Canada	1	8	1	20	17,369
Add Volunteers in Lower Canada	2	3	2	4	5,144
Total Force in Lower Canada	3	11	3	24	22,513

* No. 1 Military District will furnish no men for the active force, but will be expected to register a large proportion of seafaring men.

REGULAR AND VOLUNTEER MILITIA.

Force in Upper Canada	7	16	5	27½	27,531
Do. Lower Canada	3	11	3	24	22,513
Total Force in Province	10	27	8	51½	50,044
Add Reserve	10	27	8	51½	50,044

Practice and Service Ammunition.

87. That all corps of volunteer and regular militia be furnished with a sufficient quantity of blank and ball practice ammunition, and that a supply of 10 rounds of service ammunition, per man, be deposited in each regimental magazine. Ammunition.

Privileges of Volunteer and Regular Militia.

88. That the arms and accoutrements of the officers and men of the volunteer and regular militia, and the horses used by them as such, shall be exempt from seizure in execution, and from distress and assessment. Exemption of arms, horses, &c. from seizure.

89. That the officers, non-commissioned officers, and men of the volunteer and regular milttia, shall while on drill or service, be exempt from serving as jurors or constables. Exemptions in favour of volunteers.

Offences and Penalties.

Imprisonment in case of default of payment of fine.

90. We recommend that any person who shall fail to pay any fine awarded to him as a penalty for any offence against the Militia Law shall be liable to imprisonment.

Militia subject to articles of war.

91. That the militia, when called out for training, service, or in aid of civil power, and every officer or man belonging to it, shall from the time he has been ordered, taken, or drafted for such services, be subject to the Articles of War and to the Act for punishing mutiny and desertion, and all other laws then applicable to Her Majesty's troops in this province, and not inconsistent with this Act; except that no militiaman shall be subject to any corporal punishment except death or imprisonment for any contravention of such laws, and except also that the commander-in-chief may direct that any provisions of the said laws shall not apply to the militia.

Working of the System.

Active force to assemble for active service.

92. In the event of war, the proposed system would work in the following manner: the active force consisting of volunteer and regular militia would at once be assembled and encamped on their respective drill grounds, and the deputy-assistant quartermasters general would make the necessary arrangements as to transport, &c. for the movement of their corps.

Calling out of second battalions in time of war.

93. In a militia regimental division, the active battalion being ordered to take the field, the reserve battalion would at once be assembled at the regimental drill ground; the arms, accoutrements, clothing, &c. taken from the armoury and stores by the first battalion would be replaced by equal numbers from the main arsenals and stores of the province for the use of the reserve battalion. The reserve battalions, if required to take the field, would be replaced by additional active battalions, to be raised from the sedentary militia. Under some circumstances it would only be necessary to assemble a portion of a battalion in the division as a depôt for those on service.

Quartermaster General's Department.

Deputy assistant quartermaster general.

94. That a deputy assistant quartermaster general be appointed in each district, who shall, in case of impending war, be called upon to make out tables of the resources of his district, showing also the situation of all forges, bakeries, stores, &c.; and he shall be prepared to collect any transport that may be required to move the active force of his district when required for service.

Colonels of Districts.

Colonels of districts.

95. That a colonel be appointed to command each military district, through whom all communications shall pass relating to corps under his command.

Active Service Roll.

Militiaman to sign service roll.

96. That every volunteer and regular militiaman be required to sign a service roll, in which the conditions of his service shall be stated.

Exemptions.

Exemptions to be few.

97. We recommend that the exemptions from militia service be as few as possible.

Corps for General Service.

General service corps.

98. That in addition to the volunteer and regular militia of the province, in the event of war, the commander-in-chief shall have the power to raise regiments of militia by voluntary enlistment for general service during such war, and for a reasonable time after its termination.

General System of Defence.

Strategic defence and forts not mentioned.

99. We, your Excellency's Commissioners, have abstained from offering any direct recommendations regarding the general strategic defence of the province, or the defence of certain points by permanent fortifications, as we consider the former subject comes more especially within the province of the General Commanding Her Majesty's forces. And we have been given to understand that a separate commission has been employed to investigate the latter important subject. We have, nevertheless, in arranging our proposed distribution of the three arms of the service, kept in view the nature of the defence that would be required in the different districts. We have, moreover, in our calculation of numbers, been strongly influenced by the conviction that, in the event of war with the neighbouring country, no defence could be effectual unless the lakes were held by a powerful force of gun boats.

We submit the draft of a bill in accordance with the foregoing Report, and submit the same for Your Excellency's consideration.

Geo. Et. Cartier.
John A. Macdonald.
A. T. Galt.
Allan N. Macnab.
E. P. Taché.
D. Lysons, Colonel.
T. E. Campbell.
A. Cameron.

Thos. Wily,
Secretary.

Quebec, March 15, 1862.

Enclosure 4 in No. 2. Encl. 4 in No. 2.

BILL.

An Act respecting the Militia.

Her Majesty, by and with the advice and consent of the Legislative Council and Assembly of Canada, enacts as follows:—

Cap. 35 of Consolidated Statutes Canada repealed, saving things and commissions prior.

1. The thirty-fifth chapter of the Consolidated Statutes of Canada, intituled "An Act respecting the Militia," is hereby repealed, but such repeal shall not revive any Act or parts of an Act, or any provision of law repealed by the said Act; nor shall the said repeal apply to or affect any transaction, matter, or thing, or to any commission granted or issued prior to the said repeal.

Commander-in-Chief.

Governor to be commander-in-chief of militia.

2. The Governor shall, by virtue of his office, be Commander-in-Chief of the Militia.

Description of Militia.

Of whom militia to be composed.

3. The militia shall consist of all the male inhabitants of the province of the age of eighteen years or upwards, and under sixty years, not exempted or disqualified by law.

Two classes of militia.

4. The militia shall be divided into two classes, "The Active Militia" and "The Sedentary Militia."

Active militia divided into three classes.

5. The active militia shall be subdivided into three classes, "The Volunteer Force," "The Regular Force," and "The Reserve Force."

Sedentary militia divided into two classes.

6. The sedentary militia shall be subdivided inte two classes, "The Service Sedentary Force," and "The Retired Sedentary Force."

Complete Exemptions.

Exemptions from enrolment and service in any case.

7. The following persons only, between the ages of eighteen and sixty, as aforesaid, shall be exempt from enrolment and from actual service in any case:—

The Judges of the Superior Courts of Law or Equity in Upper and Lower Canada;
The Judge of the Court of Vice-Admiralty;
The Judges of the County Courts;
The clergy and ministers of all religious denominations;
The professors in any college or university, and all teachers in religious orders;
The wardens, keepers, and guards of the provincial penitentiary, and of the reformatory prisons of Upper and Lower Canada, and of the provincial lunatic asylums.

Exemptions of persons averse from doctrines of religion to bear arms.

8. All persons bearing certificates from the society of Quakers, Mennonists, and Tunkers, or any inhabitant of this province, of any religious denomination, otherwise subject to military duty in time of peace, but who, from the doctrines of his religion, is averse to bearing arms and refuses personal military service, shall be exempt therefrom.

Partial Exemptions.

Exemptions, except in case of war, &c.

9. And the following, though enrolled, shall be exempt from attending muster and from actual service at any time except in case of war, invasion, or insurrection:—

The retired sendentary men;
The members of the Executive and Legislative Councils;
The Members of the Legislative Assembly;
The officers of the said councils and assembly respectively;
The attorneys and solicitors general;
The provincial secretary and assistant secretaries;
All civil officers appointed to any civil office in this province under the Great Seal;
All persons lawfully authorized to practice physic or surgery:
All advocates, barristers, solicitors, and attorneys;
Notaries in Lower Canada;
Half-pay and retired officers of Her Majesty's army or navy;
Postmasters and mail carriers;
Seafaring men and sailors on the inland waters actually employed in their calling;
Masters of public and common schools actually engaged in teaching;
Ferrymen;
One miller for each run of stones in every grist mill;
Keepers of public toll gates;
Lock masters and labourers employed in attending to locks and bridges on public canals;
The engine drivers, conductors and switchmen, and other servants employed on the several railways actually in use in this province;
Jailors, constables, and officers of courts of justice, not being such solely by virtue of their being non-commissioned officers of militia;
Students attending seminaries, colleges, schools and academies, who have been attending such at least six months previous to the time at which they claim such exemption;
All persons disabled by bodily infirmity.

Exceptions

Exemption must be claimed, and how proved.

10. Exemptions under the ninth clause of this Act shall not prevent any person from serving, or if an officer holding a commission in the militia, if he desires it and is not disabled by bodily infirmity; and no person shall have the benefit of such exemption unless he has, at least one month before he claims such benefit, filed his claim thereto with his affidavit (made before some magistrate) or affirmation in cases where persons are allowed by law to affirm, of the facts on which he rests his claim, with the commanding officer of the company within the limits whereof he resides; and whenever exemption is claimed, whether on the ground of age or otherwise, the burden of proof shall always be upon the claimant:

Proviso as to proof by seafaring men of exemption.

claimant: Provided that in respect to seafaring men, who may be registered in the marine militia, as required by the one hundred and thirteenth section of this Act, the production by any person therein mentioned of the certificate of registration to the commanding officer of the company, within the limits whereof he resides, shall be sufficient to exempt him for a period of twelve months from the date of such registration.

Militia Districts and Divisions.

Commander-in-chief to divide Upper Canada and Lower Canada into military districts, and may alter same.

11. The commander-in-chief may from time to time by any militia general order, divide Upper and Lower Canada respectively into such number of military districts as he deems expedient, and to be designated as he sees fit; and may from time to time by any militia general order, alter such division of the province into military districts, and increase or diminish the number thereof.

Colonel to be appointed to each military district.

12. To each military district a colonel shall be appointed, who shall command the militia in such district, and all communications shall pass through him in reference to all corps and battalions within his command.

Regimental sedentary battalion and sedentary company divisions.

13. The commander-in-chief may from time to time, by any militia general order, divide the military districts respectively into regimental divisions, and the regimental divisions into sedentary battalion divisions, and the sedentary battalion divisions into sedentary company divisions, and may designate such divisions by such names or numbers as he sees fit.

Existing divisions to remain until altered.

14. All militia districts and divisions existing before the passing of this Act shall remain in force until altered under the provisions of this Act, and such of them as are allowed to remain unaltered shall be held to have been made by the proper authority under this Act, and for the purposes thereof.

Regimental division to furnish regular and reserve battalion.

15. Each regimental division shall furnish one regular battalion and one reserve battalion of active militia from the male population of such division, between the ages of eighteen and forty-five years.

Whence companies of regular and reserve battalions to be taken.

16. Each company of a regular battalion and each company of a reserve battalion shall be taken from within the limits of a defined territorial division, the boundary of which shall be identical with that of a sedentary battalion division, or of a distinct portion of such division, such portion to be regulated by militia general order.

Numbering of volunteers, regular and reserve battalions.

17. All volunteer and regular battalions shall be numbered from one upwards, the numbers to be drawn by lot; and all reserve battalions shall have the same numbers as the regular battalions taken from the same sedentary battalion divisions as the said reserve battalions respectively.

Officers.

Commander-in-chief may place certain officers on a retired list, and may give such an honorary rank.

18. The commander-in-chief may, from time to time, place on a retired list of officers all officers who have arrived at, and whenever they may hereafter arrive at the ages in each rank as follows; that is to say, field officers under the rank of colonel, at sixty years of age, and captains and subalterns at fifty years of age; and who hold commissions in the active militia at the time of the passing of this Act, or who may hold commissions in the active militia under this Act; and the commander-in-chief may give a step of honorary rank to each such person as may be placed on the said retired list.

And may transfer retired officers to sedentary militia.

19. Nothing in the next preceding clause shall be held to prevent the commander in chief from transferring such retired officers to the sedentary militia, either with the service rank or the honorary rank, as he may think proper.

Commissions to be during pleasure.

20. All commissions of officers in the militia shall be granted by the commander-in-chief, and during pleasure.

How non-commissioned officers shall be appointed.

21. All non-commissioned officers in the militia shall be appointed by the officer commanding the corps or battalion to which they belong, and shall hold their rank during pleasure.

Officers must be subjects of Her Majesty.

22. No person shall be an officer of militia unless he is one of Her Majesty's subjects by birth or naturalization.

Existing commissions of officers to remain until cancelled; no person bound to serve in a lower grade than he has held.

23. Commissions in the militia and appointments of non-commissioned officers existing immediately before the passing of this Act shall remain in force, such commissions being subject to be cancelled by the Commander-in-chief, and such appointments by the officer commanding the battalion, or the same may be placed on the retired list as herein-before mentioned; but no person shall be bound to serve in the militia in a lower grade than he has once held, unless he has resigned his commission or is reduced by sentence or order of some lawful court or authority; nor shall any person who has been a non-commissioned officer in Her Majesty's army, be bound to serve in the militia in a lower grade than he held in the army, unless he had been reduced as aforesaid.

Battalions embodied in 1837, 1838, 1846, and 1847.

24. The next preceding section applies to and includes the battalions embodied in the years one thousand eight hundred and thirty-seven, one thousand eight hundred and thirty-eight, one thousand eight hundred and forty-six, and one thousand eight hundred and forty-seven, in the cities of Quebec and Montreal, and the said battalions are still lawfully embodied, and commissions in them are valid under the said section; and the said battalions are subject to all the provisions of this Act as sedendary militia, and may be called out as such by the Commander-in-chief.

Military examination of officers of active militia below rank of field officer.

25. No person shall be appointed or commissioned to any rank below the rank of field officer in the active militia, nor shall any officer below such rank be promoted to a higher grade or rank unless and until he shall have passed a practical military examination before, and obtained a certificate of fitness from a board to be named and appointed by the commander-in-chief, and to consist of three officers of Her Majesty's service or of the active militia, or partly of Her Majesty's service and partly of the active militia service, one of whom shall be of the rank of field officer; provided that for the period of three years after the passing of this Act, such board may consist and be composed of three officers

officers of Her Majesty's service only, of whom one shall be a field officer of the said service; and for the purpose of carrying out this section the commander-in-chief may appoint from time to time as many such boards as he may think expedient. Formation of Board of Examination.

26. Field officers of the active militia shall be selected from amongst such persons as have served in Her Majesty's army, or of such other persons as have acquired a sufficient knowledge of all military duties, such sufficiency to be ascertained in such manner as the commander-in-chief may from time to time direct. Field officers of active militia.

27. Commissioned officers shall be promoted from one grade or rank to another by seniority of date of commission, but in case of inefficiency, misconduct, inability to pass the military examination of the board herein-before mentioned, or other causes of irregularity, the commander-in-chief may deviate from such promotion by seniority; provided also, that the commander-in-chief may promote any officer out of his turn of seniority for distinguished gallantry in the field or for marked military capacity. Promotion of officers how regulated.

28. The commander-in-chief shall have full power to appoint staff officers of the active militia with such rank as he shall from time to time think requisite or necessary for the efficiency of the militia service; and any such staff officers shall have such rank and authority in the militia as are held relatively in Her Majesty's service, and their duties shall be the same for the militia as prescribed for the army by the Queen's regulations. Appointment of staff officers and their rank

29. There shall be in and for each military district, a deputy assistant quartermaster general, whose duty it shall be to make himself thoroughly acquainthd with the roads and communications and other matters appertaining to the topography of his district, and to furnish such information on the subject as may be required by the commander-in-chief, in which duty the officers of the volunteer engineer corps shall assist him with the local information they acquire. Assistant quartermaster general.

30. Any person holding or who may at any time hold a commission in the sedentary militia, and not above the age of superannuation herein-before mentioned, and not placed upon the retired list, and who shall pass the examination and obtain the certificate herein-before mentioned, may be appointed to the active militia; but no such person shall be compelled to accept a grade or rank in the active militia lower than that held by such person in the sedentary militia. Transfer of officers from sedentary to active militia.

31. For every commission in the militia of this province, issued after the passing of this Act, thr e shall be paid to the adjutant general of militia the following fees, that is to say: Fees on appointment and promotion.

	On appointment.	On promotion.
Ensigns or Cornets	$ 5	
Lieutenants	6	1
Captains	8	2
Majors	9	1
Lieutenant-Colonels	10	1
Colonels of Districts	20	10

And staff officers shall pay according to their relative rank; and all monies so received for commissions shall, by the adjudant general, be paid over to the receiver general, and become portion of the consolidated revenue of the province. To be paid to consolidated revenue.

ACTIVE MILITIA.

No. 1.—The Volunteer Force.

32. Each of the following cities—Quebec, Montreal, Ottawa, Kingston, Toronto, Hamilton and London, with such portions of the surrounding country as may from time to time be added to them by the commander-in-chief, shall constitute a military district. Cities to be military districts.

33. In each such military district, as last aforesaid, there shall be formed such number of volunteer militia batteries of artillery, troops of cavalry, battalions of garrison artillery, and battalions of infantry or such portions of each respectively, and of such strength as the commander-in-chief may from time to time order, the same being furnished from the male population of such division, between the ages of eighteen and forty-five years. To furnish volunteer militia.

34. In the event of the failure, in any one or more of the military districts herein last before mentioned, either in part or altogether, to furnish the complement of volunteer militia as required by the commander-in-chief, he the said commander-in-chief may from time to time apply the provisions of this Act relative to the furnishing of regular militia to such of the said military districts as may be so incomplete. Or in failure, then to furnish regular militia.

35. Each volunteer field battery of artillery shall consist of a captain, two first lieutenants, a second lieutenant, two staff sergeants, four seargeants, four corporals, four bombardiers, forty-four gunners, twenty-six drivers, one trumpeter, and forty-four horses; and on active service, or when authorized by the commander-in-chief, of one farrier, one collar maker, one wheeler and sixteen horses in addition thereto. Establishment of field battery.

36. Each volunteer troop of cavalry shall consist of a captain, a lieutenant, a cornet, a troop sergeant major, two sergeants, two corporals, a trumpeter, and forty-four privates; and on active service, or when authorized by the commander in chief, a farrier in addition thereto. Establishment of troop of cavalry.

37. Each battalion of volunteer garrison artillerry and of volunteer infantry shall consist of a lieutenant-colonel, two majors, one adjutant, one quarter-master, one surgeon, one assistant surgeon, ten captains, ten lieutenants, ten ensigns, one sergeant-major, one quartermaster sergeant, one hospital sergeant, one drum-major, forty sergeants, forty corporals, ten drummers, and seven hundred and ten privates. Establishment of a battalion of garrison artillery or of infantry.

38. Any volunteer corps may enter into any articles of engagement and regulation not inconsistent with this Act and previously approved by the commander-in-chief. Articles of engagement of volunteer corps.

39. The men of the volunteer force shall serve for a period of five years, and no non-commissioned officer or man shall in any case, unless legally discharged, leave the same without giving at least six months Length of service of volunteer force.

months notice in writing to the commanding officer of his desire to do so; nor shall he at any time, leave the same contrary to the engagement in any articles of engagement he may have signed.

Officers responsible for strength of corps.

40. The commanding officers of the volunteer field batteries, troops of cavalry and battalions (or portions of battalions) of volunteer garrison artillery, and of volunteer infantry shall be responsible that their corps and battalions respectively are kept up to the full strength as required for each thereof by this Act; and in the event of failure of any corps or battalion as aforesaid, to maintain the complement of men has herein-before prescribed for each respectively, or of any corps or battalion becoming inefficient, the commander-in-chief may disband any such corps so incomplete or inefficient; and the commander-in-chief may disband any corps or battalions if in his opinion necessary to the public good.

When commander-in-chief may disband them.

Permanent staff of military districts of cities.

41. To each military district, as mentioned in the thirty-second clause of this Act, a permanent staff shall be appointed, consisting of one town adjutant and one staff sergeant-major to each battalion.

Duties of town adjutant.

42. The town adjutant shall be under the orders of the colonel of the district within which he shall reside; shall have general superintendence over the armories and stores, and have control over the staff sergeant-majors of battalions; shall make out all returns, certificates, rolls, and other documents, that may be required, shall undertake the official correspondence relating both to the sedentary and active militia of the district, and shall carry out the instructions of the colonel of the district with respect to the drill and instruction of the officers, non-commissioned officers, and men of the volunteer and regular force at all times of the year; shall act as pay master of all the corps and battalion in the district, and shall perform such other services as may be from time to time ordered by the commander-in-chief.

Duties of staff serjeant-major.

43. The staff sergeant-major, under the control of the adjutant, shall have the immediate charge of the arms, accoutrements, knapsacks, and other stores of his battalion and of the field batteries or troops attached to it, and shall be employed in drilling and instructing the officers, non-commissioned officers, and men of his corps, and shall act as clerk to the adjutant, and perform such other services as may be ordered by the colonel of the district.

Length of period of appointment of permanent staff, and re-appointment.

44. The officers and non-commissioned officers of the permanent staff, mentioned in the two next preceding clauses, shall be appointed by the commander-in-chief for five years only, at the termination of which period they will be eligible for re-appointment to another military district, or to a battalion of regular militia in another district; and the commander-in-chief may remove at pleasure any officer or non-commissioned officer of such staff, and cancel the commission or appointment thereof respectively.

Volunteer corps in existence now, may continue, and commander-in-chief may authorize similar corps on similar conditions.

45. The several volunteer field batteries, companies of rifles and foot artillery, and troops of cavalry, duly organized and in existence at the time of the passing of this Act, may continue as such respectively, and similar corps may from time to time be authorized by the commander-in-chief; and all the provisions of this Act applicable to the volunteer force shall apply to them respectively, except in so far as that such only shall receive pay and allowance for clothing as may be appointed under the thirty-third section of this Act as the volunteer force of any of the military districts therein mentioned.

Volunteer company of engineers.

46. In each militia district there may may be formed a volunteer company of engineers, to consist of a captain, a lieutenant, a second lieutenant, and such number of men, not exceeding seventy-five, as the governor may direct.

Volunteer may be called out in aid of civil power, and their duty in such cases.

47. The corps composing the volunteer militia shall be liable to be called out in aid of the civil power in case of riot or other emergency requiring such services, and whether such riot or emergency shall occur within or without the municipality in which such corps may be raised or organized, and it shall be the duty of the officer commanding any such corps to call out the same or such portion thereof, as is necessary for the purpose of quelling any riot, when thereunto required in writing by the mayor, warden, or other head of the municipality in which such riot takes place, or by any two magistrates therein, and to obey such instructions as may be lawfully given him by any magistrate in regard to the mode of quelling such riot; and every officer, non-commissioned officer, and men of such corps or portion of a corps shall, on every such occasion, obey the orders of his commanding officer; and the officers and men, when so called out, shall, without any further or other appointment, and without taking any oath of office, be special constables, and shall act as such so long as they remain so called out.

And when so called to act as special constables.

No. 2.—The Regular Force.

Establishment of field batteries, troops of cavalry, and battalions of garrison artillery and infantry of regular force.

48. Each field battery, troop of cavalry, and battalion of garrison artillery and infantry of the regular force, shall respectively be of such establishment and strength as is herein-before prescribed in reference to the volunteer militia.

How regular force is to be raised.

49. The regular force shall be raised either by "voluntary enlistment," by "selection," by "ballot," or by a combination of voluntary enlistment and the ballot.

Method of raising regular force.

50. The following method shall be adopted in raising the regular force:—The captain of each sedentary company having assembled all the men between the ages of eighteen and forty-five, belonging to his company division, will call upon them to give the number required voluntarily; but if volunteers do not come forward in sufficient numbers, he will inform the men that it is his duty to fill up the number by ballot, unless a majority of two thirds prefers that he select men for the regular force from amongst them, in which case it will become his duty to make his selection in such a manner as to make the pressure bear upon the families who are best able to support it, and if there is not a majority of two thirds of the men in favour of the selection by the captain, he shall at once proceed with the ballot.

If ballot adopted, who to be first taken.

51. In the event of the ballot being adopted, the regular force shall be taken, in the first place, from amongst the unmarried men and widowers without children.

Substitutes may be provided, or an exemption fine paid.

52. Every man, taken by ballot or selection for the regular force, may provide a substitute, subject to the approval of the commanding officer of the corps or battalion, or may pay the sum of thirty dollars for exemption from service for three years, which sum shall be paid to the town or staff adjutant, and

by

by him paid to the receiver general, and become portion of the consolidated revenue of the province, and in such case another man shall be drafted in his stead.

Length of service of men of regular force.

53. Men of the regular force shall serve for a period of three years.

Permanent staff of battalions.

54. To each battalion of the regular force a permanent staff shall be appointed, consisting of one adjutant and one staff serjeant-major.

Duties of adjutant of a regular battalion.

55. The adjutant of a regular battalion shall be under the orders of the commanding officer of his battalion, shall have charge of all arms, clothing, ammunition, books, rolls, and other documents, belonging to the whole active militia within the regimental division to which his battalion belongs and within which he shall reside; he shall be responsible that all vacancies in the active field batteries, troops, or companies, are filled up as they occur; he shall undertake the official correspondence relating both to the sedentary and active militia of his division; he shall be instructed to encourage the officers, non-commissioned officers and privates of his battalion, to drill and practise with the rifle, in their leisure hours throughout the year, and afford every assistance in his power to any men who may wish to qualify themselves as officers or to receive military instruction; he shall act as paymaster of his regimental division; and perform all such other services as may be, from time to time, ordered by the commander-in-chief.

Duties of staff serjeant-major.

56. The staff serjeant-major, under the control of the adjutant, shall have the immediate charge of the arms, accoutrements, knapsacks and other stores, of his battalion and of the field batteries or troops attached to it; and shall be employed in drilling and instructing the officers, non-commissioned officers and men of his battalion; shall act as clerk to the adjutant, and perform such other services as shall be ordered by the commanding officer of his battalion.

Length of period of appointment of permanent staff, and re appointment.

57. The officers and non-commissioned officers of the permanent staff, mentioned in the two next preceding clauses, shall be appointed by the commander-in-chief for five years only, at the termination of which period they will be eligible for re-appointment to a battalion in another district, and the commander-in-chief may remove, at pleasure, any officer or non-commissioned officer of such staff, and cancel the commission or appointment thereof respectively.

No. 3.—The Reserve Force.

How reserve force constituted, and period of service.

58. Men of the regular force shall, at the expiration of their term of service, pass into the reserve force, and continue to be enrolled in that force for a farther period of three years.

Officers of reserve force.

59. Officers shall be appointed to the reserve force in the same proportions, and in the same manner and under the same provisions, as herein-before contained in reference to the volunteer and regular militia.

Provisions applicable to the Volunteer and Regular Force.

Service rolls to be signed.

60. Every volunteer and regular militiaman shall sign a service roll in which the conditions of his service shall be stated.

Gratuity to sergeants re-engaged for a second period of service.

61. A gratuity of forty dollars may be paid to any sergeant of the volunteer or regular force, who, at the expiration of his first term of service in the active militia, has re-engaged and served for a farther period of five years in the volunteer force, or seven years in the regular force.

Promotion of corporals.

62. Any serjeant who may retire at the expiration of his first term of service, may be replaced by any corporal who has completed his first period of service, such promoted corporal to receive the same grant at the expiration of his ten years service; provided always, that the above mentioned re-engagements, in both cases shall be subject to the approval of the commanding officer of the corps or battalion.

Volunteer or regular militiamen changing residence.

63. Any man desiring to change his residence to another regimental division, shall communicate his intention to the commanding officer of his corps or battalion, and shall obtain from him a certificate of service, a duplicate of which shall be sent to the commanding officer of the active battalion belonging to the regimental division to which the man is removed, and he will be called upon to complete his term of service in that division, and should he fail to present himself at the first muster in the corps or battalion to which he is removed, he shall (unless he can satisfactorily account for his absence) be liable to be drafted for a full period of service, without reference to his former service.

Volunteer or regular militiamen leaving the country.

64. Any man who may require to leave the country, shall also obtain from his commanding officer a certificate of service, and should he return within a period of ten years, he may on production of such certificate be allowed to complete his period of service, otherwise he shall be liable to be drafted for full period.

Procedure at expiration of three years' service.

65. All men who shall have completed their three years service in the regular force, and three years in the reserve force, shall be placed at the bottom of the list of men between eighteen and forty-five years of age, in the regimental division, and shall not be liable again to be drafted until every man above them on the list shall have served; and each man at the expiration of his service shall be furnished with a certificate of service.

Vacancies to be filled up at once.

66. All vacancies in the volunteer force and regular battalions of active militia shall be filled up as they occur, and in the case of regular battalions they shall be filled up according to the provisions of the fiftieth clause of this Act.

Period of active service in the field limited to one year.

67. In time of war no man shall be required to serve in the field continuously for a longer period than one year, but any man who volunteers to serve for the war or for any longer period than one year shall be compelled to fulfil his engagement; provided that the commander-in-chief may, in cases of unavoidable necessity (of which necessity he shall be the sole judge), call upon any volunteer or regular militiaman to continue to serve beyond his period of general service, or voluntary engagement, or beyond his one year's service in the field, for any period not exceeding six months.

68. In

Reliefs of men sent home from length of service in the field.

68. In time of war when men are sent home from length of service in the field, the relief shall be made by drafts or complete battalions from the reserve or service sedentary force, as may be found most expedient at the time.

Training and muster.

Number of days training, and season for same, of regular force.

69. Every battalion of the regular force or such portion thereof as the commander-in-chief may order shall be called out for training, at the most convenient time in each year, for a period of twenty-eight days; and the commander-in-chief may, in his discretion, reduce such period of training so that it be not less than fourteen, in which case such recruits as have not been present at any former training shall have fourteen days drill in addition.

Number of days training of volunteer force.

70. The volunteer force shall drill for not more than twenty-eight nor less than fourteen days in each year; but such period of drill may be divided at the discretion of the commander-in-chief.

Inspection of active militia.

71. Every corps and battalion of the active militia shall, during its period of training, be subject to inspection from time to time by such person or persons as shall be temporarily appointed by the commander-in-chief for such inspection, who shall report fully to the commander-in-chief on the state of such corps and their arms and accoutrements and the general efficiency of such force, and shall be reimbursed his or their actual travelling expenses by the province, and paid therefor at a rate not exceeding four dollars per diem whilst so engaged; provided that such person or persons, to be appointed from time to time for such inspection, shall be an officer or officers (not being under the rank of field officer) of Her Majesty's service, and actually serving in this province, or in case the services of an officer or officers as aforesaid cannot be obtained, then such other person, not being under the rank of field officer of militia of this province, who shall in like manner be reimbursed his actual travelling expenses and paid such remuneration; provided that nothing in this clause contained shall be held to prevent the commander-in-chief from continuing the services of the present inspecting field officers of Militia at their present salaries.

Present inspecting field officer of militia.

Encampment of militia when training.

72. The militia shall be encamped, when practicable, during their period of training, and in such case the camp limits shall be marked out, and the space within those limits held to be a building or barrack.

Training of reserve force.

73. The commander-in-chief may call out the reserve force for six days training in each year, and the several provisions of this Act, relative to the regular force, shall, during such period, apply to the reserve force.

Volunteer may be drilled at other times, according to their articles of engagement.

74. Nothing herein contained shall be construed to prevent any volunteer corps from assembling or being ordered out by the officer commanding it for drill or exercise according to any articles of engagement or regulations of such corps previously approved by the commander-in-chief, or to prevent any regular corps or portion of a corps from assembling for drill or exercise, without receiving any pay therefor from the province.

Commander-in-chief may dispense with muster or training of volunteer or regular force.

75. The commander-in-chief may, by any militia general order, dispense with the muster or training of any corps or battalion or part of a corps or battalion of the volunteer or regular force, either in any particular year or until further order, and may, in like manner, again direct such muster and training, or either of them, to be resumed if he sees fit, and any such order shall have the force of law according to the terms thereof.

Codes of instruction for volunteer and regular militia.

76. The adjutant general shall draw up, and from time to time alter, under the direction of the commander-in-chief, codes of instruction in drill and exercise for the volunteer and regular militia, based on that in use in Her Majesty's army, and each commissioned officer of a corps or battalion shall be furnished with a copy, and shall be governed by the same in drilling and exercising the corps to which he belongs.

Practice Ammunition.

Ammunition for practice.

77. The active militia shall, for purposes of drill, be furnished with a sufficient quantity of blank and ball practice ammunition in such manner as the commander-in-chief may direct.

Privileges of the Volunteer and Regular Force.

Exemption of arms, horses, &c. from seizure and assessment.

78. The arms and accoutrements of the officers and men of the volunteer and regular force, and the horses used by them as such, shall be exempt from seizure in execution and from distress and assessment; nor shall any such horse be disposed of by any officer or man, without leave of the officer commanding the corps or battalion.

Active militia, while on drill or on service, exempt from serving as jurors or constables; evidence of service.

79. The officers, non-commissioned officers, and men of the active militia, while at drill or on service, shall be exempt from serving as jurors or constables; and a certificate, under the hand of the commanding officer of any such corps or battalion, shall be sufficient evidence of the service in his corps or battalion of any officer, non-commissioned officer or man, during such period aforesaid.

Drill Grounds.—Arms, Armories, Clothing and Stores.

Drill grounds, armoury, and Stores, &c. for volunteers.

80. A drill ground shall be provided within, or in the vicinity of, each military district formed under the thirty-second clause of this Act, and a suitable building shall be provided containing an armory, magazine, store-rooms, orderly room, and gun sheds, and the arms and stores of each battalion shall be kept separately in charge of the staff serjeant-major; and such building shall be enclosed within a wall or fence capable of defence against sudden attack.

Drill ground, armoury, and stores for militia.

81. A suitable drill ground shall be provided in some advantageous central position in each regimental division, and a stone or brick building shall be erected or provided on the drill ground, containing a store, armory, magazine, orderly rooms, shifting room and quarters for the serjeant-major, and such building shall be enclosed within a wall or fence capable of defence againt sudden attack, and gun sheds and stores for saddlery shall be added where required.

Sites to be approved by commander-in-chief.

82. The selection of the site for these drill grounds and buildings shall be subject to the approval of the commander-in-chief.

83. Each

Clothing of volunteer militia.

83. Each volunteer militiaman shall receive an allowance of three dollars a year in lieu of clothing.

84. The regular militiamen shall be supplied with clothing while on drill or service.

Clothing of regular militia.

Articles to be kept in Store.

85. The arms, accoutrements, knapsacks, and great coats of all corps and battalions shall be kept in store, and the clothing of the regular militia shall be also kept in store; and these articles shall be served out to the men, when it is deemed expedient, by order of the commanding officer.

Pioneers' tools, and camp equipments.

86. A complete set of pioneers' tools and implements shall be kept in each store of the regimental division, and when necessary, complete camp equipments, which shall also be kept in store.

Drums and bugles.

87. Drums and bugles shall be supplied to the militia.

Officers' arms.

88. Commissioned officers shall furnish their own arms and accoutrements.

Uniforms of militia.

89. The commander-in-chief may, from time to time, prescribe the uniform of the several corps or battalions continued under this Act, or organized after the passing of this Act, or of any of them.

Those at present in use may be continued.

(2.) Provided that the several corps in existence, at the passing of this Act, may continue to wear their then clothing until the same requires to be replaced, and it shall be the duty of the commanding officer of the said corps or battalions respectively, to see that the same are, upon any such replacing of clothing, uniformed according to the order of the commander-in-chief in such respect.

Arms, &c. of active militia.

To be furnished by province, except to officers.

Security for safe keeping.

90. The arms and accoutrements of the officers and men of the active militia shall be such as the commander-in-chief, from time to time, directs, but of the best and most serviceable kind, without unnecessary ornament. Such arms and accoutrements shall be furnished to the non-commissioned officers and privates at the expense of the province, but shall always remain provincial property, and the parties receiving them shall, whilst in their possession, be accountable for them. And where there are no public armories the commander-in-chief may direct such security, as he thinks proper, to be taken for the safe keeping in good order of such arms and accoutrements, and the re-delivery thereof to such officer as may be appointed to receive them, whenever the commander-in-chief for any purpose directs such re-delivery.

Repairing of arms, &c.

91. The said arms and accoutrements shall be renewed and kept in repair at the cost of the province whenever such renewal or repair becomes necessary from wear in service or other cause than the fault or neglect of the person having charge thereof, in which last named case they shall be renewed or repaired by such person, or, if renewed or repaired at the cost of the province, the cost may be recovered from such person as a debt due by him to the crown.

By whom and where arms, &c. shall be kept.

92. The arms and accoutrements of non-commissioned officers and men of the active militia shall be kept in public armouries wherever there are such; and where there are no such public armouries then the commanding officer of each corps or battalion shall be personally responsible for the arms and accoutrements of the non-commissioned officers and men under his command, and shall himself actually keep the same, and may be allowed annually a sum not exceeding twenty dollars for so doing and for taking care of the arms and accoutrements:

Proviso—as to liabilities incurred before this Act.

(2.) Nothing herein shall be construed to relieve the officers or men of the active militia of any liability in respect to the arms and accoutrements thereof delivered to the custody, care, or possession of any of them, or in any other respect, under any Act heretofore passed, but any proceedings thereto relating shall be brought within twelve months after the discovery of any breach of the provisions thereof.

Corps to appear armed on certain occasions only.

93. No non-commissioned officer or private shall at any time appear armed or accoutred, except when *bonâ fide* at drill whether paid or unpaid, or at target practice, or at reviews or on field days or inspections, or for receiving distinguished persons, or rendering funeral honours to deceased comrades, or when required to act in aid of the civil power under due authority; nor shall the arms and accoutrements be taken out of this province without the order of the commander-in-chief.

Pay.

Pay of active militia.

94. *The active militia shall be paid by the province during the period of training in each year, as follows, that is to say:—Officers an uniform rate of pay of one dollar per day, and the non-commissioned officers and privates an uniform rate of pay of fifty cents per day, for each day's actual and* bonâ fide *drill or attendance; and officers, non-commissioned officers and men of the field batteries and troops of cavalry of the active militia shall receive, in addition to their pay aforesaid, an uniform allowance of one dollar per day for each horse, to the extent in number herein-before mentioned, during the period of the training aforesaid.*

Pay by municipality when called out in aid of civil power.

95. *When called out in aid of the civil power, the officers of the active militia shall, for and during such period, be paid by the municipality by whom their services are required, the same scale of pay respectively as the daily pay of officers of corresponding and relative rank in Her Majesty's service, and the non-commissioned officers and men so called out shall be paid by the municipality aforesaid, the sum of one dollar per day, and shall also be provided with proper lodging by such municipality; and the said sums and the value of such lodging, if not furnished by such municipality, may be recovered from it by the commanding officer of the corps or battalion in his name, and when received or recovered shall be paid over to the officers, non-commissioned officers, and men entitled thereto.*

Pay in time of active service in the field.

96. *In time of active service in the field, the officers, non-commissioned officers and men of the active militia shall be paid by the province such rates of daily pay, and shall receive such allowances in every respect as are paid and allowed to the relative or corresponding rank or grade in Her Majesty's service.*

Pay of permanent staff.

97. *The town adjutants and adjutants of battalions of regular militia shall be paid by the province at the rate of two dollars per day per annum, and an allowance of fifty cents per day per annum for travelling expenses and forage for a horse, and shall also be paid the annual sum of*
per annum, as a contingent allowance to cover the expenses of postage and stationery; and one adjutant in each military district, who shall be chosen by the Commander-in-chief, shall be paid an additional allowance of *per annum, to cover expenses incurred in postage and stationery by the colonel*

colonel commanding the district; and each of the staff sergeants of districts and battalions of regular militia shall be paid by the province the sum of three hundred dollars.

Commander-in-chief may order times and manner of payment.

98. *The active militia shall be paid at such times and in such manner as the commander-in-chief, by any militia general order, may from time to time direct.*

SEDENTARY MILITIA.

No. 1.—The Service Sedentary Force.

Of whom service sedentary force composed.

99. The service sedentary force shall be those of eighteen years of age and upwards, but under forty-five years, not being in the volunteer, or regular, or reserve force.

In time of peace, sedentary militia to be enrolled, and to be mustered annually, and where.

100. In time of peace no actual service or drill shall be required of the service sedentary force, but they shall be carefully enrolled from time to time, and shall also assemble for muster annually, at such place and hour, in such manner and for such purposes, as the commanding officer of each battalion may direct with respect to each company therein; the muster day being in Lower Canada the twenty-ninth of June, or if that day fall on a Sunday, then the next day thereafter, and in Upper Canada the Queen's birth day, or if that day fall on a Sunday, then the day next thereafter.

Annual muster day in U. C. may be 29th June.

(2.) Except that the commander-in-chief may, in his discretion, but on the application of the colonel commanding any military district in Upper Canada, direct that the annual muster day in such district be the twenty-ninth day of June.

Commander-in-chief may dispense with annual muster and again require it.

101. The commander-in-chief may, by any militia general order, dispense with the annual general muster of the service sedentary force in either section of the province, either in any particular year or until further order, and may, in like manner, again direct such muster to be held, if he sees fit; and any such order shall have the force of law according to the terms thereof.

Order in which service sedentary shall be taken for actual service.

102. When the service sedentary force are called out in case of war, invasion, or insurrection, those first taken for actual service shall be from amongst the unmarried men and the widowers without children.

Officers of companies of sedentary force.

103. To each company of the service sedentary force there shall be appointed of commissioned officers, a captain, a lieutenant, and an ensign, and of non-commissioned officers, four serjeants and four corporals; and the commander-in-chief may appoint to all militia battalions, companies or corps, the proper number of surgeons, assistant surgeons, and veterinary surgeons.

Enrolment, how to be made by officers.

104. The enrolment of the service sedentary militiamen shall be made in each company division by the captain thereof, with the assistance of the officers and non-commissioned officers of the company; and it shall be the duty of the captain, and, under his orders, of the other officers and non-commissioned officers of the company, by actual enquiry at each house in the company division, and by every other means in their power, to make and keep at all times a correct roll of the company in such form as may be directed by the adjutant general.

Militiamen bound to give in their names.

105. Each man liable under this Act to be enrolled in any company, and not so enrolled, shall give in his name, age, and place of residence in writing to the captain or officer commanding such company, within twenty days after he becomes so liable, whether by the alteration of any militia division, change of residence, or otherwise howsoever.

Rolls of companies to be made annually, also returns of battalions.

106. The officer commanding a service sedentary company of the militia shall, within twenty days after the annual muster day for such company, make out a corrected roll thereof, and transmit a certified copy thereof to the officer commanding the battalion, who, within forty days after such muster, shall forward a correct return of the battalion under his command to the colonel of the district; and the said return shall then be transmitted by the colonel to the adjutant general at head quarters.

Company rolls to be corrected from time to time.

107. Each company roll shall be corrected from time to time as changes occur which affect it; and every householder and resident in the company division, and every assessor, town clerk, or other municipal officer shall be at all times bound to give to the commanding officer, or any officer or non-commissioned officer of the company, such information as may be required to make such corrections, and to answer all such questions as any of them may pertinently put to him for the purpose of obtaining such information; and every militiaman shall be bound to inform the officer commanding the company, in writing, of any change of residence or other circumstances affecting such militiaman, by which the roll of any company is affected, whether such militiaman comes into or leaves the company division for which the roll is made.

Duty of householders, &c., to give all information requisite.

And of militiamen.

Commutation Assessment.

Duties of municipal assessors.

108. The assessor or assessors for each municipality shall, annually, commencing with the year one thousand eight hundred and sixty-three, and at the same time when they are engaged in taking the assessment or valuation of real and personal property in their respective municipalities, include in their assessment roll the names of all male persons in their respective municipalities, between the ages of eighteen and forty-five years; and they shall prepare an additional column in the said assessment roll, which shall be headed "Militia Roll," and in such column, opposite the name of each male person between the ages aforesaid, shall insert "fifty cents" as commutation assessment for militia service; and every copy required by law to be made of the said assessment roll shall contain the additions herein specified; and in addition to the oath required under the present or any future laws of this province, to be taken by such assessor or assessors in respect to the assessment roll, there shall also be made aud attached to the said roll the following certificate signed by such assessor or assessors:

To leave a column in assessment roll, for militia roll.

Certificate of assessors thereto.

"I do certify that I have truly and faithfully, and to the best of my knowledge, set down in the "above militia roll, the names of all male persons within the municipality of (*as the case may be*) between "the ages of eighteen and forty-five years, liable to be enrolled by the militia laws of this province;" and such affidavit shall be verified by him or them, upon oath before a justice of the peace.

Clerk of municipality to make copy of militia roll.

109. Upon receipt of the assessment roll by the clerk of the municipality, he shall make a copy of such militia roll as a document separate from the assessment roll, and shall cause such copy to be put up

up in some convenient and public place within the municipality, and to be maintained there until after the meeting of the Court of Revision, as provided in and by the laws of this province.

Exemption of active militia from payment of commutation assessment.

110. Every officer, non-commissioned officer, and private of any corps or battalion of the active militia shall be exempt from payment of commutation assessment, and it shall be the duty of every officer commanding a corps or battalion of the active militia, by the day of in the year 1862, and by the tenth day of May in each succeeding year, to make out and transmit to the clerk of every municipality in which any men of his corps may then reside, a correct list of all such men within the said municipality as were actually and *bonâ fide* serving in such corps on the first day of May in that year, and shall attach thereto his certificate to the following effect:

Certificate by officer commanding corps.

"I, A. B., (*captain or other officer*) commanding (*designation of corps*) do certify that the persons whose "names are hereafter set down were actually and *bonâ fide* enrolled and serving in such (*corps* or "*battalion*) on the first day May, 18 ."

And shall make a solemn declaration before a justice of the peace of the truth and correctness of such list.

How benefit of exemption to be claimed and proved.

111. All persons wholly exempt from enrollment and from actual service in any case, as provided by the seventh section of this Act, shall be exempt from payment of commutation assessment; but no person shall have the benefit of such exemption, unless he has at least fourteen days before he claims such benefit before the Court of Revision, as herein-after mentioned, filed his claim thereto with his affidavit, made before some justice of the peace, of the facts on which he rests his claim, and in verification thereof with the clerk of the municipality within which he resides; and whenever exemption is claimed, whether on the ground of age or otherwise, the burden of proof shall always be upon the claimant; and every Justice of the Peace is hereby required to administer the oath required under this section, free of charge.

Court of revision under assessment laws to determine exemptions.

112. At the sitting of the Court of Revision, as constituted by the assessment laws of this province, the said court shall then determine who are exempt under the seventh section of this Act, and in the said roll, opposite the name of each person so exempt, shall insert the word "exempt," and every person on the said militia roll not marked by such court as exempt, shall be liable to pay the sum of fifty cents set opposite to his name as aforesaid.

Collection of commutation assessment.

113. The clerk of every municipality shall, in the collector's roll, set down the name of every person so liable to pay the said sum of fifty cents under the head of "Militia Roll," and the said sum of fifty cents against every person who shall appear by the said "militia roll," liable to pay the same, shall be collected at the same time and in the same manner as taxes are collected in each municipality; and every collector shall have and pursue all and every the rights, powers, and remedies for the collection or recovery of the same, as are now and may at any time hereafter be prescribed by the assessment laws of this province in respect to the collection of taxes; and it shall be the duty of the clerk of the said municipality to forward a true copy of the "militia roll," within fourteen days after the completion of the collector's roll to the Adjutant General of Militia.

Copy of roll to be forwarded to adjutant general.

Payment over to receiver general for consolidated revenue.

114. All moneys so collected shall, by the collector, be paid over to the treasurer of the said municipality, and shall be by the said treasurer forthwith paid to the receiver general of this province, first deducting for the benefit of the municipality per centum for the expenses of assessing and collecting the same and of making the returns and performing the other duties required of the municipality and its officers, under the provisions of this Act, and such moneys shall form part of the consolidated revenue of this province for militia purposes only.

Return on oath of collector.

115. The said collector shall make such payment and return under oath, stating explicitly that such return is true and correct, and that he has truly and faithfully made active and diligent efforts to collect the commutation assessment of each person on his roll, of whom he has not collected the same, and that he has been unable to collect such assessment.

Duty of collector in case of neglect or refusal of persons to pay commutation assessment.

116. If any person shall neglect or refuse to pay the commutation assessment, as herein prescribed, and the collector of the municipality to whom the militia roll for collection thereof shall be given, shall be unable to collect the same, it shall be the duty of such collector to return the names of all such persons to the clerk of such municipality, who shall make a list of such delinquents; or (in Lower Canada) if he be himself the secretary treasurer, he shall himself make such list and deliver it to the local council, and deliver the same to the Court of Revision at their annual meeting next thereafter.

Sums in arrear and uncollected, to be added to commutation assessment of the next year.

117. Whenever it shall appear from the return of any collector or treasurer that any person has neglected or refused to pay such commutation assessment, and that the collector has been unable to collect the same, such sum shall be added to his annual commutation assessment of the next year by the Court of Revision, and collected in the same manner as herein-before provided by the hundred and thirteenth section of this Act.

Security of officers of municipality to extend to sums to be so collected.

118. The bond or security to be executed by the collector and by the treasurer of the municipality, shall apply to all moneys required to be collected for militia purposes under this Act.

List by officer commanding company of sedentary militia of those present at muster and certificate.

119. Every officer commanding a company of the sedentary militia, or in his absence the officer next in command and personally present at the annual muster, shall, within one month after the annual muster day for such company, make out a true and correct list of all such persons as attended the said muster, and shall attach thereto his certificate to the following effect:

"I, A. B., Captain (*or other officer*) commanding
do certify that I personally attended the muster of the company of sedentary militia
"under my command in the (*town, township, &c. as the case may be,*) of
"in the county of and that the above is a true and correct list of the names
"of those who actually attended the annual muster on the day of 18 ."

And shall make a solemn declaration before a justice of the peace of the truth and correctness of such list, and shall also forward the same to the clerk of the municipality within which the limits of his company's district or division are fixed, or if such limits be within two or more municipalities, a

similar list and certificate, verified by declaration as aforesaid, to the clerk of each such additional municipality, and shall also forward a copy thereof to the lieutenant colonel commanding his battalion, who shall forward the said copy so received by him to the adjutant general of militia.

Duties of clerk of municipality on receipt of list of active militia and certificate.

120. The clerk of each municipality shall, upon the receipt of the list and certificate mentioned in the one hundred and tenth section of this Act, and prior to the delivery of the collector's roll to the Collector of such municipality, (or before using such list if, being a secretary-treasurer in Lower Canada, he be himself the collector), mark on the said roll after the name of each person so appearing by such list and certificate to have attended muster for the then current year, the words "at muster," and every person shall thereby be discharged from payment of the commutation assessment for that year.

Provisions of assessment laws applicable.

121. The several sections from to inclusive, of the fifty-fifth chapter of the consolidated statutes for Upper Canada, intituled: *An Act respecting the assessment of property in Upper Canada*, and their several provisions, and the several provisions of the *Lower Canada Municipal and Road Act of* 1855, and the Acts amending it, and the provisions of every special Acts incorporating or governing any town or city in Lower Canada, relative to assessments and their collection, shall be applicable to the tax hereby imposed and to the persons employed in collecting, and their duties under this Act, and shall be read and deemed as part thereof.

Persons bound to give information of those liable to be enrolled.

122. All tavern-keepers, keepers of boarding houses, persons having boarders in their families, and every master and mistress of any dwelling house, shall, upon the application of any assessor or collector, give information of the names of all persons residing or lodging in such house, liable to be enrolled, and all other proper information concerning such persons as such assessor or collector may demand.

Penalty on persons refusing to give information or giving false information.

123. If any person of whom information is required by any assessor or collector in order to enable him to comply with the provisions of this Act shall refuse to give such information, or shall give false information, he shall forfeit and pay $ for each item of information demanded of him and falsely stated, and the like sum for each individual name that may be refused, concealed, or falsely stated, and every person who shall refuse to give his own name and proper information, when applied to as aforesaid, or shall give a false name or information, shall forfeit and pay a like sum, such penalties to be recovered summarily before a justice of the peace.

Interpretation clause.

124. In this Act, as far as regards Lower Canada, the words "assessor or assessors" shall include valuators, the word "municipality" shall mean a local municipality, and shall include every city, town and village incorporated, whether the corporation thereof be governed by the General Municipal Acts respecting municipalities or any special Act, or partly by both, the word "clerk" shall include the secretary-treasurer of any such municipality, or other person making out the collection rolls, or other documents showing the sums to be collected as taxes, the word "treasurer" shall include the secretary-treasurer or other person receiving or having the custody of the funds of the municipality, the expression "court of revision" shall include the local council, board of revisors, or other authority having the revision of assessment or valuation rolls, the expression "collector's roll" shall include every collection roll or other document showing the taxes payable by each person, and authorizing their collection, the word "collector" shall include the secretary-treasurer or other person employed to collect the taxes imposed in any municipality, and the expression "assessment laws" shall include the Lower Canada Municipal Act of 1855, the Acts amending it, and all special Acts incorporating or relating to the incorporation of any city or town or village in Lower Canada; the assessment or valuation roll, which is to serve for any year, shall be held to be that in which it is intended that the names of the persons between the ages of eighteen and forty-five shall be inserted as liable to the tax hereby imposed, although such rolls be made in the previous year, so that (for example) if in any city or town the roll for one thousand eight hundred and sixty-three is made in one thousand eight hundred and sixty-two, the said names shall be inserted in it; and in municipalities where the valuation rolls are made only once in three years the captain commanding any company of sedentary militia shall, in the month of in each year in which such roll is not made, furnish the secretary-treasurer with an amended list of the names of the persons in the local limits of such company, between the ages aforesaid, and liable to serve in the militia as service men, and such amended list shall be kept by the said secretary-treasurer at his office open to the inspection of the public during weeks, and shall be taken in consideration and revised by the local council at its first meeting after the expiration of that period; and all persons may then be heard by such council in respect to an error in the said list, and the council shall confirm it after making such amendments as they think proper, either by adding or striking out any name or names, and it shall then be held to be the revised list for the year, and shall not afterwards be called in question.

No. 2.—The Retired Sedentary Force.

Of whom retired sedentary force composed.

125. The retired sedentary force shall be composed of those men between the ages of forty-five and sixty years, not being in the volunteer or regular or reserve force, who shall claim exemption on account of being above that age; and non-commissioned officers shall retain their rank.

Retired sedentary force may, in emergency, be required to serve in militia.

126. The commander-in-chief may require the officers, non-commissioned officers and men of the retired sedentary force to serve in the militia in cases of great emergency, of which cases he shall be the sole judge, and he may, by any militia general order for that purpose, either form such retired sedentary militiamen into separate corps, under their own officers, or cause them to be drafted as if they belonged to the service sedentary force, as he may see fit.

Levée en Masse.

Who may be required to serve on *levée en masse.*

127. The commander-in-chief may require all male inhabitants of the province, above the age of sixty years, to serve in case of a *levée en masse.*

Corps for General Service.

128. The commander-in-chief may, in the event of war, raise, in addition to the volunteer and regular militia of the province, such regiments of militia by voluntary enlistment for general service during such war, and for a reasonable time after its termination.

Commander-in-chief may raise regiments of militia, during war.

Drill Associations.

129. The commander-in-chief may sanction the organization of associations for purposes of drill and of independent companies of infantry composed of professors, masters, or pupils of universities, schools, or other public institutions, or of persons engaged in or about the same, who shall provide their own arms, accoutrements, and clothing; but such associations or companies shall not be provided with any clothing or allowance therefor, nor shall they receive pay.

Commander-in-chief may authorize drill associations, &c. not to be armed, clothed or paid.

Marine Militia.

130. It shall be the duty of each seaman, or other person engaged ordinarily in the calling of a seaman or sailor, or otherwise occupied or engaged in or upon any of the steamers, schooners, or other vessels upon the lakes or waters in this province, or belonging to any of the ports thereof, during the month of December in each year, to attend personally at the office of the collector of customs, at the port at or nearest to which such person may have his ordinary place of residence, and there to register his name, age, and place of residence; and the collector of customs shall give a certificate of such registration to the persons so becoming registered, and such person shall thereupon be exempt from service in the active militia and from muster of the sedentary militia, as herein-before mentioned, for the period of one year from the date of such registration; and the collector of customs respectively, at the several ports throughout the province, shall keep a book wherein such particulars shall be registered, and shall, when so required by the commander-in-chief, supply copies of the same to the adjutant general of militia.

Seamen to register their names, &c. with collectors of customs of ports.

Collectors to keep book of registration.

131. Each captain, master, or other person in command of any such steamer, schooner, or other vessel as aforesaid, shall upon engaging any seaman, sailor, or person engaged ordinarily in the calling of a seaman or sailor or otherwise occupied or engaged, as in the preceding clause mentioned, make diligent inquiry and satify himself that such person has been duly registered as herein-before required.

Captains or persons in command of vessels to be satisfied that their seamen are registered.

132. Volunteer marine corps or companies may be formed at each or any of the ports in this province of such establishment and strength and with such officers as the commander-in-chief may from time to time order.

Volunteer marine companies may be formed at certain places.

133. Captains in the provincial marine shall rank as majors in the militia, and lieutenants as captains in the same.

Relative rank of the officers.

134. The said marine corps shall be armed and uniformed in such manner as the commander-in-chief may direct, and may be trained and drilled as well to the use of small arms as in the management of gun-boats and the working of guns of heavy calibre.

How such corps to be armed and drilled.

Department of Militia Affairs.

135. There shall be a minister of militia affairs, who shall be appointed from among the heads of the public departments, and who shall be charged with the administration of militia affairs, and of the ordnance, ammunition, arms, armories and other stores and provisions and habiliments of war belonging to the province.

Duties of minister of militia affairs.

136. There shall be a paymaster of militia attached to the said department of militia affairs, who shall hold office during pleasure, and shall be paid *at the rate of* *dollars per annum.*

A paymaster of militia to be appointed.

Department of Adjutant General.

137. There shall be an adjutant general of militia for the province, who shall hold office during pleasure, and shall have the rank of colonel in the militia, and who shall be a person educated to the military profession, and who has attained the rank of field officer in Her Majesty's service, and who shall be paid by the province *at the rate of* *dollars per annum*; he shall be charged under the orders of the commander-in-chief with the military command and discipline of the militia.

Adjutant general of militia, his rank, pay, and duties.

138. There shall be two deputies adjutant general of militia, one for Upper Canada and one for Lower Canada; and each of them shall hold office during pleasure, shall have the rank of lieutenant-colonel in the militia, and shall be paid by the province *at the rate of* *dollars per annum.*

Deputies adjutant general, their rank, pay, and duties.

Calling out the Militia.

139. The commander-in-chief may call out the militia or any part thereof for service, either within or without the province, whenever it is in his opinion advisable so to do by reason of war, invasion, disturbance, or insurrection, or imminent danger of any of them; and in any such case the volunteer and regular force shall first take the field, then the reserve force, then additional active battalions from the service sedentary force, and lastly the retired sedentary force.

Commander-in-chief may call out militia in certain cases. Order in which force shall take the field.

140. The colonel commanding any military district, or the officer commanding any volunteer or regular battalion, may, upon any sudden emergency of invasion or insurrection, or imminent danger of either, call out the whole or any part of the militia within his command, until the pleasure of the commander-in-chief is known.

Colonels or commanding officers may call out militia within their command until pleasure of commander-in-chief is known.

141. The militia so called out by their commanding officer shall immediately obey all such orders as he may give and march to such place within or without the division as he may direct.

Militiamen bound to obey.

142. When the militia of any district or division are called out, in case of war, insurrection, or invasion, or imminent danger thereof, all corps of volunteers in such district or division shall be included in the order, and shall obey the officer issuing it.

Volunteer corps to be included.

143. When

And so when the whole militia is called out.

143. When the whole militia of the province are called out all the volunteer corps shall be included and shall immediately obey the orders they receive.

Militiamen to attend with arms and provisions.

144. Each active or sedentary militiamen called out for actual service shall attend at such time and place as may be directed by the officer commanding him, with any arms and accoutrements he has received from the province, and with such provisions as such officer may direct.

Persons unfit for duty to be rejected and another drafted.

145. No man drafted and unfit from bodily infirmity to perform his duty shall be taken for service, but another man fit for service shall be drafted in his stead.

Militia, when called out, &c. to be subject to articles of war.

146. The militia so called out, for training, or in aid of the civil power, or for actual service, and every officer or man belonging to it shall from the time he has been ordered, taken, or drafted for any of such services, in addition to the penalties imposed by this Act, be subject to the articles of war and to the Act for punishing mutiny and desertion, and all other laws then applicable to Her Majesty's troops in this province, and not inconsistent with this Act; except that no militiaman shall be subject to any corporal punishment except death or imprisonment for any contravention of such laws; and except also that the commander-in-chief may direct that any provisions of the said laws shall not apply to the militia.

Rank and command of officers as regards militia

147. Any body of militia so called out shall be commanded by the officer highest in rank then present, or the senior of two or more officers of equal rank; officers of Her Majesty's regular army shall always be reckoned senior to all militia officers of the same rank, whatever be the dates of the respective commissions; and colonels appointed by commission signed by the commander of Her Majesty's regular forces in Canada shall command colonels of militia, whatever be the date of their respective commissions.

For what offences only militiamen may be sentenced to death.

148. No militia officer or militiaman shall be sentenced to death by any court martial, except for mutiny, desertion to the enemy, or traitorously delivering up to the enemy any garrison, fortress, post, or guard, or traitorous correspondence with the enemy; and no sentence of any general court martial shall be carried into effect until approved by the commander-in-chief.

Officer of regular army on full pay not to sit, &c.

149. No officer of Her Majesty's regular army on full pay shall sit on any militia court martial.

Billeting and Cantoning Troops and Militia when on Actual Service, and Furnishing Carriages, Horses, &c., for their Transport and Use.

What shall be furnished by those on whom they are billeted.

Impressing carriages, &c. on emergency.

150. When Her Majesty's regular forces or the militia are on a march within this province, and billeted as herein-after mentioned, every householder therein shall, when required, furnish them with house-room, fire and utensils for cooking, and candles; and in cases of emergency, by actual invasion or otherwise, the officer commanding the regiment, battalion, or detachment of troops or militia, may direct and empower any officer or non-commissioned officer of the same, or other person, after having first obtained a warrant for such purpose from a justice of the peace, to impress and take such horses, carriages or oxen as the service may require, the use of which shall be thereafter paid for at the usual rate of hire for such horses, carriages, or oxen.

Justice of the peace to billet on requisition of commanding officer.

151. When the said troops of Her Majesty, or the militia, or any regiment, battalion, or detachment of the same, are on a march as aforesaid, the officer or non-commissioned officer commanding them shall require a justice of the peace to billet, and such justice shall immediately thereupon so billet the said troops or militia as to facilitate their march, and in such manner as may be most commodious to the inhabitants. And every inhabitant householder shall receive the troops or militia so billeted upon him, and furnish them with the lodging and articles mentioned in the next preceding section.

Lodging of officers not to be paid for;

allowance for men billeted;

proper officers to settle accounts of officers and soldiers out of their pay, &c.

152. No officer shall be obliged to pay for his lodging where he is regularly billeted; but each householder upon whom such soldiers are billeted shall receive from Government, for each non-commissioned officer, drummer, and private of infantry, a daily rate of ten cents, and for each cavalry soldier, whose horse shall be also provided with stabling and forage, a daily rate of twenty-five cents. And every officer or non-commissioned officer to whom it belongs to receive, or who does actually receive the pay for any officers or soldiers, shall, every four days, or before they quit their quarters if they do not remain so long as four days, settle the just demands of all householders, victuallers, or other persons upon whom such officers and soldiers are billeted, out of their pay and subsistence money, before any part of the said pay or subsistence money shall be distributed to them respectively, provided such demands do not exceed in amount their pay and subsistence money for the time beyond which credit is not to be granted.

Quartering and billeting troop, &c. in cantonments.

153. When the safety of this province requires that the said troops of Her Majesty, or militia, or any regiment, battalion, or detachment of the same, should be cantoned in any part of this province, any justice of the peace in the places where such troops or militia are cantoned, shall, upon receiving an order from the officer commanding them, or on a requisition from the officer commanding any such cantonment, quarter and billet the officers, non-commissioned officers, drummers, and privates of the said troops or militia, upon the several inhabitant householders, as near as may be to the place of cantonment, avoiding as much as possible to incommode the said inhabitants, and taking due care to accommodate the said troops or militia.

Complaint of persons aggrieved, and how redressed.

154. If any inhabitant considers himself aggrieved by having a greater number of the said troops or militia billeted upon him than he ought to bear in proportion to his neighbours, then on complaint being made to two or more justices of the locality where such troops or militia are cantoned, they may relieve such inhabitant, by ordering such and so many of the said troops or militia to be removed and quartered upon such other person or persons as they see cause, and such other person or persons shall receive such troops or militia accordingly.

No justice, being an officer, to billet or quarter troops.

155. No justice of the peace having any military office or commission in the said troops or militia, shall directly or indirectly be concerned in the quartering or billeting of any officer, non-commissioned officer, or soldier of the regiment, corps, or detachment under the immediate command of such justice or justices.

156. Nothing

156. Nothing in this Act contained shall be construed to authorize the quartering or billeting of any troops or militia either on a march or in cantonment, in any convent or nunnery of any religious order of females, or to oblige any such religious order to receive such troops or militia, or to furnish them with lodging or house room. Troops not to be billeted upon nuns, &c.

157. When any troops of Her Majesty or any militia are so cantoned as aforesaid, any justice of the peace where such cantonment is made, upon receiving an order to that effect from the officer commanding the said troops or militia, or a requisition in writing from the officer commanding that cantonment, for such and so many carriages as may be requisite and necessary for the said troops or militia, shall issue his warrant to such person or persons as are possessed of carriages, horses, or oxen, within his jurisdiction, requiring him or them to furnish the same for the service aforesaid, and if any person after receiving such warrant, refuses to furnish the same, they may be impressed and taken for such service. But no such carriage, horse, or ox, or any carriage, horse, or ox mentioned in the previous sections of this Act, shall be compelled to proceed more than thirty miles, unless in cases where other carriages, horses, or oxen cannot immediately be had to replace them; and such carriages, horses, or oxen shall be paid for at the usual rate of hire. Justice may require persons to furnish carriages, &c. for troops. May be impressed on refusal to furnish Limitation of travel. How paid.

158. In cases of emergency, when it is necessary to provide proper and speedy means for the conveyance by railway or by water of the troops of Her Majesty or of the militia, and also of their ammunition, stores, provisions, and baggage, any justice of the peace of and in the locality where such troops or militia are, either on a march or in cantonment, upon receiving a requisition in writing from the officer commanding such troops or militia, for such railway cars and engines, boats or other craft as are requisite for the conveyance of the said troops or militia, and their ammunition, stores, provisions and baggage, shall issue his warrant to such person or persons as are possessed of such railway cars and engines, boats or other craft within his jurisdiction, requiring him or them to furnish the same for that service, at and after the rate of payment to be allowed by the said justice, not exceeding the usual rate of hire for such railway cars and engines, boats, or other craft. And if any such person neglects or refuses, after receiving such warrant, to furnish such railway cars or engines, or boats or other craft for that service, such railway cars or engines, boats or other craft, may be impressed and taken for such service. But nothing herein shall impair the effect of any Act obliging any railway company to convey such troops, militia, and other articles aforesaid, in any manner or on any terms and conditions therein mentioned, or to release any such company from any obligation or penalty thereby imposed. In case of emergency, boats, &c. may be required in like manner. Rate of pay. May be impressed on refusal to furnish. As to railways.

Offences and Penalties.

159. All contraventions of this Act and of regulations or orders lawfully made or given under it, when the militia, or that portion thereof to which the offender belongs, is not called out for actual service, shall be punishable as hereinafter provided, and in such cases courts martial shall not be held. Contraventions of Act or of regulations to be punished.

160. All articles of engagement entered into by volunteer corps, and previously approved by the commander-in-chief, in so far as they are not inconsistent with this Act, shall be enforced, and the penalties which may be thereby imposed shall, whenever they are incurred, be recoverable in the manner herein-after mentioned by the person or officer designated for that purpose in such articles to such uses as may be therein directed. Articles of engagement of volunteers may be enforced.

161. Any officer or non-commissioned officer of the militia who obtains under false pretences, or who retains or keeps in his own possession with intent to apply to his own use or benefit, any of the pay or moneys belonging to any officer, non-commissioned officer, or private of any corps, shall be guilty of a misdemeanor, and shall be dismissed from the said militia force. Unlawfully retaining moneys belonging to militiamen to be a misdemeanor.

162. Any person making an affidavit or declaration required in and by this Act, and swearing or declaring falsely therein, shall be guilty of perjury. False swearing to be perjury.

163. Any officer of the militia refusing or neglecting to make or transmit, as herein prescribed, any roll or return, or copy thereof, required by this Act or by any lawful authority, or wilfully making any false statement in any such roll, return, or copy, shall thereby incur a penalty of forty dollars for each offence. Refusal to make a roll, &c.

164. Any officer or non-commissioned officer of militia refusing or neglecting to assist his commanding officer in making any such roll or return, or refusing or neglecting to obtain or to assist him in obtaining any information which he may require in order to make or correct any roll or return, shall thereby incur a penalty of twenty dollars for each offence. Refusing to assist in making rolls, &c.

165. Any militiaman or other person refusing or neglecting to give any notice or information necessary for making or correcting the roll of any company, and which he is required by this Act to give to the commanding officer of such company, or to any officer or non-commissioned officer thereof, demanding the same at any seasonable hour and place, shall thereby incur a penalty of ten dollars for each offence. Refusing to give information for making roll,

166. Any militia officer, non-commissioned officer, or man, not exempt by commutation or otherwise under this Act from attending muster or training, who neglects or refuses to attend the same at the place and hour appointed therefor, or who refuses or neglects to obey any lawful order at or concerning such muster or training, shall thereby incur a penalty of not more than five dollars for each offence; and in case of training absence for each day shall be held to be a separate offence. Neglecting to attend muster or misbehaving thereat, &c.

167. Any person who interrupts or hinders any militia at drill, or trespasses on the bounds set out by the proper officer for such drill, shall thereby incur a penalty of five dollars for each offence, and may be taken into custody and detained by any person by the order of the commanding officer until such drill be over for the day. Hindering militia at drill.

168. Any officer, non-commissioned officer, or militiaman disobeying any lawful order of his superior officer, or guilty of any insolent or disorderly behaviour towards such officer, shall thereby incur a penalty of five dollars for each offence. Disobeying orders, &c.

169. Any

Not keeping arms, &c. in proper order.

169. Any officer, non-commissioned officer, or militiaman who fails to keep any arms or accoutrements delivered or entrusted to him in proper order, or who appears at drill, parade, or on any other occasion, with his arms or accoutrements out of proper order, or unserviceable, or deficient in any respect, shall incur a penalty of four dollars for each such offence.

Selling, without leave, any horse drilled and approved for any troop, &c.

170. Any officer, non-commissioned officer, or man of any troop of cavalry or battery of field artillery, who, without the consent of the commanding officer of such corps, sells or disposes of any horse which has been drilled for the purposes of such corps, or which he has undertaken to furnish for such purposes, and which has been approved by the commanding officer of the corps, shall thereby incur a penalty of twenty dollars for each offence.

Unlawfully disposing of arms, &c.

171. Any person who unlawfully disposes of or removes any arms, accoutrements, or other articles belonging to the Crown, or who refuses to deliver up the same when lawfully required, or has the same in his possession, except for lawful cause (the proof of which shall lie upon him), shall thereby incur a penalty of twenty dollars for each offence; but this shall not prevent such offender from being indicted and punished for any greater offence if the facts amount to such, instead of being subjected to the penalty aforesaid. And any person charged with any act subjecting him to the penalty imposed by this section may be arrested by order of the magistrate before whom the complaint is made, upon affidavit showing that there is reason to believe that such person is about to leave the province, carrying any such arms, accoutrements, or articles with him.

Act to prevent indictment.

Arrest of offenders about to leave the province.

Refusing to turn out in aid of civil power.

172. Any officer or man of a corps who, when such corps is lawfully called upon to act in aid of the civil power, refuses or neglects to go out with such corps, or to obey any lawful order of his superior officer or of any magistrate, shall thereby incur a penalty of twenty dollars for each offence.

Refusing to receive militia billeted.

173. Any inhabitant householder who refuses or neglects to receive any troops or militia billeted upon him or to furnish them with the lodging and articles which he is by this Act required to furnish, shall thereby incur a penalty of eight dollars for each offence.

Refusing to furnish carriages, &c.

174. Any person lawfully required under this Act to furnish any carriage, horse, or ox for the conveyance or use of any troops or militia, who neglects or refuses to furnish the same, shall thereby incur a penalty of eight dollars for each such offence.

Or any car, engine, boat, or craft.

175. Any person lawfully required under this Act to furnish any railway car or engine, boat, or other craft, for the conveyance or use of any troops or militia, who neglects or refuses to furnish the same, shall thereby incur a penalty of twenty dollars for each such offence.

Contravening Act where no penalty provided.

176. Any person who wilfully contravenes any enactment of this Act when no other penalty is imposed for such contravention, shall thereby incur a penalty of twenty dollars for each offence, but this shall not prevent his being indicted and punished for any greater offence if the facts amount to such.

Recovery of penalties by summary proceeding.

177. All penalties incurred under this Act shall be recoverable with costs by summary conviction on the evidence of one credible witness on complaint or information before one justice of the peace if the amount do not exceed twenty dollars, and before two justices of the peace if the amount exceeds that sum; and any officer, non-commissioned officer, or private shall be a competent witness in any such case.

Power of committal to gaol, on non-payment of penalty.

178. And in case of non-payment of the penalty immediately after conviction, it shall be lawful for the convicting justice or justices to commit the person so convicted and making default in payment of such penalty and costs to the common gaol of the territorial division for which the said justice or justices is or are then acting, or to some house of correction or lock-up house situate therein, for a period of not less than days nor more than days when the penalty does not exceed twenty dollars, and for a period of not less than days nor more than days when it exceeds the last-mentioned sum.

On whose complaint penalties may be sued for.

179. No prosecution against an officer of militia for any penalty under this Act shall be brought except on the complaint of the adjutant general; and no such prosecution against any non-commissioned officer or private of the militia shall be brought except on the complaint of the commanding officer or adjutant of the battalion or corps or captain of the company or corps to which such non-commissioned officer or private belongs; but the adjutant general may authorize any officer of militia to make such complaint in his name, and the authority of any such officer alleging himself to have been so authorized to make any complaint, shall not be controverted or called in question except by the adjutant general.

Evidence of authority to sue.

Limitation of time for prosecutions.

180. No such prosecution shall be commenced after the expiration of six months from the commission of the offence charged, unless it be for unlawfully buying, selling, or having in possession arms or accoutrements delivered to the militia.

To whom penalties to be paid.

181. The penalty when recovered shall be paid over to the town or staff adjutant who shall account for and pay it over to the receiver general.

Miscellaneous Provisions.

Orders and notices need not be in writing, if given in person.

182. It shall not be necessary that any order or notice under this Act be in writing, unless it is herein required that it shall be so, provided it be communicated to the person who is to obey or be bound by it in person, either directly by the officer or person making or giving it, or by some other by his order.

General orders how notified.

183. All general orders of militia, or other militia orders issued through or by the adjutant general, shall be held to be sufficiently notified to all persons whom they may concern, by their insertion in the *Canada Gazette;* and a copy of the said gazette purporting to contain them shall be *primâ facie* evidence of such orders.

Military district or battalion division orders how notified.

184. All orders made by the commanding officer of a military district or of a battalion division, shall be held to be sufficiently notified to all persons whom it may concern, by their insertion in some newspaper published in such division, or, if there be none, then in some neighbouring division, and by posting

posting a copy thereof on the door of the church or of some court-house, mill, or other public place in each company division in such district or battalion division.

185. The production of a commission or appointment, warrant or order in writing, purporting to be granted or made according to the provisions of this Act, shall be *primâ facie* evidence of such commission or appointment, warrant or order, without proving the signature or seal thereto, or the authority of the person granting or making such commission, appointment, warrant or order. Evidence of commissions, warrants, &c.

186. Every bond to the Crown entered into by any person under the authority of this Act, or according to any general order or regulations made under it, or for the purpose of securing the payment of any sum of money, or the performance of any duty or act hereby required or authorized, before any judge or justice of the peace, or officer therein authorized to take the same, shall be valid and may be estreated or enforced accordingly. Bonds entered into, in pursuance of this Act, to be valid.

187. Every sum of money which any person or corporation is under this Act liable to pay or repay to the Crown, or which is equivalent to the damages done to any arms or other property of the Crown used for militia purposes, shall be a debt due to the Crown, and may be recovered in any manner in which such debts may be recovered. Sums of money payable to Crown under this Act, how recoverable.

188. Every action and prosecution against any officer or person, for anything done in pursuance of this Act, shall be laid and tried in Lower Canada in the district, and in Upper Canada in the county, where the act complained of was done, and shall not be commenced after the end of six months from the doing of such act, nor until one month's notice in writing of the action and of the cause thereof has been given to the defendant. And in any such action the defendant may plead the general issue and give this Act and the special matter in evidence at the trial. And no plaintiff shall recover in any such action if a tender of sufficient amends was made before the action was brought, or if a sufficient sum of money has been paid into court by the defendant after the action was brought. Protection of officers, &c. in pursuance of Act; Limitation. Tender of amends.

189. If a verdict passes for the defendant in any action referred to in the next preceding section, or the plaintiff becomes non-suit or discontinues the action after issue joined, or if on demurrer or otherwise judgment is given against the plaintiff, the defendant shall recover his full costs as between attorney and client, and shall have the same remedy therefor as any defendant hath in other cases; and though a verdict is given for the plaintiff, he shall not have costs against the defendant, unless the judge before whom the trial has been had certifies his approbation of the action and the verdict therein. If plaintiff be non-suit, &c. No costs against defendant except under judge's certificate.

190. All sums of money required to defray any expense authorized by this Act may be paid out of the consolidated revenue fund of this province upon warrant directed by the governor to the receiver general; and such warrants may be made in favour of the paymaster of militia, to enable him to pay such expense, or in favour of the party directly entitled to the money; but no sum of money shall be so paid out of the consolidated revenue fund until first approved of by resolution of the legislative assembly in the annual estimates. Payment of monies under this Act. Proviso.

191. A detailed account of all moneys advanced or expended under this Act shall be laid before each branch of the provincial parliament during the then next session thereof. Accounting Parliament.

192. The interpretation Act shall apply to all regulations, orders and articles of engagement lawfully made or entered into under this Act. Interpretation Act.

193. The word "corps" shall, for the purposes of this Act, include any field battery, troop of cavalry, foot company of artillery or rifle company, or any battalion or regiment. Interpretation clause

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No. 3. No. 3.

Copy of a DESPATCH from His Grace the Duke of Newcastle, K.G., to Governor-General Viscount Monck.

(No. 133.)

My Lord, Downing Street, June 25, 1862.

I have the honour to acknowledge the receipt of your Lordship's Despatches, Nos. 92* and 94, of the 30th of May and the 5th of June last, enclosing certified copies of twenty-four commissions appointing the gentlemen therein named to seats in the Executive Council of Canada and to the offices specified in the annexed list. Page 3.

I have laid these commissions before Her Majesty, and I have received the Queen's commands to signify to you Her Majesty's approval of these appointments.

I have, &c.

Viscount Monck, &c. &c. (Signed) NEWCASTLE.

No. 4.

No. 4.

Copy of a DESPATCH from his Grace the Duke of Newcastle, K.G., to Governor-General Viscount Monck.

(No. 163.)

My Lord, Downing Street, 21st August 1862.

Now that the session of Parliament has been brought to a close, I feel it my duty to call your lordship's attention, in a more formal manner than I have hitherto done since the rejection of the Militia Bill by the Legislature of Canada, and the consequent change of your Responsible Advisers, to the want of preparation for defence of the British North American Provinces in the event of an interruption of the present amicable relations of this country with the United States, and to the anxiety which was expressed upon this subject on more than one occasion, both in the House of Lords and in the House of Commons.

I trust that the general spirit of those debates will not have been misinterpreted. I feel no less confidence that the object of the present despatch will not be mistaken, as implying either mistrust of the Canadian people or an alteration by Her Majesty's Government of the view which they have frequently expressed of the relations which ought to exist between England and the Colony.

On the one hand the promptitude with which troops and stores were despatched last winter, with much inconvenience to the soldiers, and at no inconsiderable expense to this country, shows the readiness of England to defend Canada with the whole power of the Empire, whilst, on the other hand, the reception of those troops and the loyal enthusiasm of the people of Canada give ample assurance of the fact that Canada is attached to this country, and faithful to the Queen.

It cannot be denied, however, that the rejection of the Militia Bill has produced a disadvantageous impression on the minds of the English people. The public cannot be expected to see that the adoption or rejection of a particular measure may sometimes turn, not so much on the merits of the measure itself as on other considerations, though Her Majesty's Government are aware that Parliamentary tactics in a free Representative Assembly not unfrequently make that appear the real issue, which is in fact only the occasion. They do not, therefore, infer from the rejection of this measure that either the Canadian ministry or the Canadian people are reluctant to make proper provision for their own defence, but they do regret that at such a moment both should be exposed to misconstruction of their motives and intentions, not only by the people of England, but by those of the United States. Her Majesty's Government disclaim both the right and the desire to interfere in the party politics of Canada, and they would evince no concern in the late change of your advisers, if it were not connected with an event which appears to impugn the patriotism of her people.

If I urge upon you the importance of speedily resuming measures for some better military organization of the inhabitants of Canada than that which now exists, it must not be supposed that Her Majesty's Government is influenced by any particular apprehension of an attack on the Colony at the present moment, but undoubtedly the necessity for preparation which has from time to time been urged by successive Secretaries of State is greatly increased by the presence for the first time on the American continent of a large standing army, and the unsettled condition of the neighbouring States. Moreover, the growing importance of the Colony, and its attachment to free institutions, make it every day more essential that it should possess in itself that without which no free institutions can be secure—adequate means of self defence. The adequacy of those means is materially influenced by the peculiar position of the country. Its extent of frontier is such that it can be safe only when its population, capable of bearing arms, is ready and competent to fight. That the population is ready no one will venture to doubt, that it cannot be competent is no less certain until it has received that organization and acquired that habit of discipline which constitute the difference between a trained force and an armed mob. The drill required in the regular army, or even in the best volunteer battalions, is not necessary, nor would it be possible in a country like Canada, for so large a body of men as ought to be prepared for any emergency ; but the Government should be able to avail itself of the services of the strong and healthy portion of the male adult population at short notice, if the dangers of invasion by an already organized army are to be provided against.

We have the opinions of the best military authorities, that no body of troops which England could send would be able to make Canada safe without the efficient aid of the Canadian people. Not only is it impossible to send sufficient troops, but if there were

four times the numbers which we are now maintaining in British North America, they could not secure the whole of the frontier. The main dependence of such a country must be upon its own people. The irregular forces which can be formed from the population know the passes of the woods, are well acquainted with the country, its roads, its rivers, its defiles, and for defensive warfare (for aggression they will never be wanted), would be far more available than regular soldiers.

It is not, therefore, the unwillingness or the inability of Her Majesty's Government to furnish sufficient troops, but the uselessness of such troops, without an adequate militia force, that I wish to impress upon you.

In your Despatch of the 17th May last, you informed me that there were then 14,760 volunteers enrolled, besides others who had been more or less drilled. It is far indeed from my intention to discredit either the zeal or the efficiency of these volunteers, who have, I hope, greatly increased in number since the date of your Despatch, but they constitute a force which cannot suffice for Canada in the event of war. They might form an admirable small contingent, but what would be required would be a large army; they might form a force stronger than is necessary in time of peace to secure internal tranquillity, but would be inadequate to repel external attack in time of war. Past experience shows that no reasonable amount of encouragement can raise the number of volunteers to the required extent.

It appears to me that the smallest number of men partially drilled which it would be essential to provide within a given time is 50,000. The remainder of the militia would of course be liable to be called upon in an emergency. Perhaps the best course would be to drill every year one or more companies of each battalion of Sedentary Militia. In this manner the training of a large number of men might be effected, and all companies so drilled should once at least in two years, if not in each year, be exercised in battalion drill so as to keep up their training.

I put forward these suggestions for the consideration of the Canadian Government and Parliament, but Her Majesty's Government have no desire to dictate as to details, or to interfere with the internal government of the Colony. Their only object is so to assist and guide its action in the matter of the militia as to make that force efficient at the least possible cost to the Province and to the Mother Country.

The Canadian Government will doubtless be fully alive to the important fact that a well organized system of militia will contribute much towards sustaining the high position with reference to pecuniary credit which, in spite of its large debt and its deficient revenue for the last few years, the Colony has hitherto held in the money markets of Europe. A country which, however unjustly, is suspected of inability or indisposition to provide for its own defence, does not, in the present circumstances of America, offer a tempting field for investment in public funds or the outlay of private capital. Men question the stable condition of affairs in a land which is not competent to protect itself.

It may no doubt be argued on the other hand that the increased charge of a militia would diminish rather than enlarge the credit of the Colony. I am convinced that such would not be the case if steps were taken for securing a basis of taxation sounder in itself than the almost exclusive reliance on customs' duties. It is my belief that a step in this direction would not only supply funds for the militia, but remove all apprehension which exists as to the resources of the Colony.

Whatever other steps may be taken for the improved organization of the militia, it appears to Her Majesty's Government to be of essential importance that its administration and the supply of funds for its support should be exempt from the disturbing action of ordinary politics. Unless this be done there can be no confidence that in the appointment of officers, and in other matters of a purely military character, no other object than the efficiency of the force is kept in view. Were it not that it might fairly be considered too great an interference with the privileges of the representatives of the people, I should be inclined to suggest that the charge for the militia, or a certain fixed portion of it, should be defrayed from the Consolidated Fund of Canada, or voted for a period of three or five years.

It has further occurred to me that the whole of the British Provinces on the continent of North America have in this matter of defence common interests and common duties. Is it impossible that with the free consent of each of these Colonies one uniform system of militia training and organization should be introduced into all of them? The numbers of men to be raised and trained in each would have to be fixed, and the expenses of the whole would be defrayed from a common fund contributed in fair proportion by each of the Colonies. If the Governor-General of Canada were commander-in-chief of the whole, the Lieutenant-Governors of the other Colonies would act as Generals of Division under

him, but it would be essential that an Adjutant-General of the whole force, approved by Her Majesty's Government, should move to and fro, as occasion might require, so as to give uniformity to the training of the whole and cohesion to the force itself.

As such a scheme would affect more than one Colony, it must of course emanate from the Secretary of State, but Her Majesty's Government would not entertain it unless they were convinced that it would be acceptable both to the people of Canada and to the other Colonies, and they desire to know, in the first instance, in what light any such plan would be viewed by the members of your Executive Council. I understand that the Lieutenant-Governors of Nova Scotia and New Brunswick availing themselves of the leave of absence lately accorded to them, intend to meet you in Quebec in the course of the ensuing month. This visit will afford you a good opportunity for consulting them upon this important question.

The political union of the North American Colonies has often been discussed. The merits of that measure and the difficulties in the way of its accomplishment have been well considered, but none of the objections which oppose it seem to impede a union for defence. This matter is one in which all the Colonies have interests common with each other and identical with the policy of England.

I conclude by again urging upon you the necessity for an early decision upon this most important question. I should hear with very great satisfaction that your Government had decided upon advising you to summon the Parliament of Canada to meet at an early period, so that the winter shall not pass over without obtaining from the Legislature such powers as may enable you to commence a well arranged military organization of the Provinces, and prepare for such emergencies as, though they cannot be accurately foreseen, it must be evident to everybody may possibly arise, and are at present very inadequately provided for. It is in time of peace that preliminary measures of defence should be perfected, so that in the event of war they may be found so far ready as to ensure that an enemy shall not obtain a footing in the country before aid is forthcoming from other portions of the Empire.

I have, &c.

To Governor-General Viscount Monck. (Signed) NEWCASTLE.

&c. &c. &c.

No. 5.

No. 5.

COPY of a DESPATCH from Governor-General Viscount MONCK to his Grace the Duke of NEWCASTLE, K.G.

(No. 147.) Government House, Quebec, October 30, 1862.

(Received 14 November 1862.)

MY LORD DUKE, (Answered No. 197, 20 December 1862, page 51.)

* Page 40. YOUR Grace is already aware of the receipt by me of your Despatch, (No. 163,*) of August 21st, on the subject of the Militia Organization in Canada.

2. Immediately on receiving that Despatch I referred it to my Executive Council for their consideration and report. I did not press for any immediate answer, as the subject is one of considerable present importance, and opens up questions calculated to exercise great influence on the future relations of the Empire and the Province. The recent advent to power of my present advisers rendered it therefore only a matter of fairness that full time should be allowed them to discuss and decide an issue of so much moment.

3. A short time since the ministry announced to me that it was the intention of two prominent members of the Executive Council to proceed soon to London as a delegation from the Government of this Province to Her Majesty's Government on important colonial business. As the departure of these gentlemen from Canada would necessarily adjourn the consideration of the subject of Militia Organization until their return, I requested that before the Executive Council should be deprived of their assistance, the Government would furnish me with a report on the Despatch of your Grace, and a statement of their policy in reference to the matter alluded to in it.

Encl. 1. 28 Oct. 1862. 4. I have now the honour to transmit to your Grace the accompanying Report of the Executive Council, authenticated by my signature, on the Despatch referred to it.

5. I will not enter into the discussion of any abstract theories as to the relation which should subsist between England and her Colonies in reference to colonial defence, because your Grace's Despatch is professedly only suggestive, and does not seek authoritatively to fix the degree in which the mother-country and the colony should each contribute to that object, and the admission on the part of the colonial government that anything

should be done by them in the way of defensive preparation is a proof that the difference of opinion, if any, existing between your Grace and the Executive Council of Canada is one of degree only and not of principle. I think too that it is my duty rather to apply myself to the practical proposition put forward. I will, therefore, proceed to put your Grace in possession of my opinion as to the efficiency of the plan of organization embodied in the accompanying report.

6. In order to make my remarks fully understood, I must draw your attention to the present condition of the Militia Force of the Province as regulated by the existing law.

7. Your Grace is aware that what is called the Sedentary Militia embraces the whole male population of the colony between the ages of 18 and 60. The men are divided into battalions regularly officered ; but from the circumstance that this battalion organization is territorial in its character, it is obvious that it is not available for the purpose of actual service, because if you called out for service a battalion of the Sedentary Militia, you would depopulate of its male inhabitants the district to which the battalion belonged, and would leave wholly untouched the population of the surrounding districts.

8. It is therefore evident that in the event of circumstances arising which would necessitate the calling out of the militia for defensive purposes, the regimental or battalion organization of the Sedentary Militia would afford no help towards embodying the men in battalions so as to render them useful for actual service. Some mode of performing this necessary work would have to be extemporized at a moment of comparative alarm and confusion, and the necessity for this would certainly cause great loss of time, if it would not lead to the entire failure of the attempt to raise an effective force.

9. I have entered into this explanation because I am convinced that the want of any preliminary organization pervading the whole country is the great difficulty which would have to be practically encountered if Canada should now be compelled to defend herself against foreign attack, and that any system of preparation for defence which failed fully to meet this difficulty would be comparatively worthless.

10. The plan of the government contained in the accompanying report may be stated as follows :—

1. Brigade majors are to be appointed in each district.
2. Drill associations to be formed of officers and non-commissioned officers of Sedentary Militia, who are to be superseded if they refuse to learn their drill.
3. Enrolment is to be "secured" of a fixed quota in each district of first-class service men in companies and battalions with officers.
4. Volunteers in future to be clothed, but none paid.
5. Drill rooms, armouries, and rifle ranges to be procured for the volunteers as circumstances permit.

It will be seen that the Executive Council proposes to deal with the difficulty above referred to in this manner. It proposes that the brigade majors throughout the country should "secure the enrolment" in companies and battalions within their district of such quota as should be appointed of the first-class service men (unmarried men and widowers without children between the ages of 18 and 45).

11. This enrolment appears to be entirely independent of the volunteer or Active Force organization, and instead of consolidating and systematizing the voluntary action of the people appears to me more likely to confuse their minds by the introduction of a third system of enrolment in addition to that of the Sedentary Militia and the Active Force.

12. This enrolment is meant to supply the want of any organization now in existence, by means of which, on a sudden emergency, a portion of the militia might be embodied for active service in a short space of time, but unless the men whose names are enrolled are put on the same footing with regard to their engagement for service as the active force, who bind themselves to serve for five years, there is no security that the enrolment will ever produce any practical result, as there is nothing to compel the enrolled men to serve when called on.

13. There does not appear to be any inducement held out to men to place their names on these lists or to serve when called on, in the way of supplying them with arms, clothing, or any other benefit, to excite or maintain a military spirit amongst them. It is in fact an attempt to re-introduce in a worse form Class B. of the active force, which it is proposed by this Report to abolish, on the ground of the unsatisfactory manner in which the distinction of classes in that force operated (Class B. in the active force is that portion of the volunteers which has hitherto served without pay, in contradistinction to Class A., which received a certain amount of pay each year). I therefore think the measure would prove entirely nugatory, and that without some inducement no men would give their names, and that it will, therefore, fail to provide what I feel certain is the great

desideratum of the defensive force in Canada, namely, a machinery erected in time of peace by means of which, at the approach of war, an organized and embodied force could be at short notice turned out.

14. The plan proposed does not, as regards system or organization, touch the volunteer force of the country at all, nor does it propose to give any effectual form or direction to the excellent spirit by which the people are animated.

15. On the whole, I cannot conceal from your Grace my opinion that, as regards the cardinal necessity of the time, a systematic organization of the forces of the colony for defensive purposes, the plan indicated by the government contains no principles calculated to produce effective results, and that the only attempt made to grapple with the difficulties of the subject will prove completely illusory.

16. With respect to the other proposals of the Government I do not find any fault. It is highly desirable to foster a military spirit in and to promote the acquisition of military knowledge by a people circumstanced as the Canadians are, and the measures proposed to be adopted seem to me, as far as they go, calculated to promote these ends.

17. I entirely approve of the abolition of the distinction between Class A. and Class B. in the active force, and of the proposal that in future the Government shall supply to the volunteers everything necessary for their equipment and drill. Class A. of the volunteers giving up for the future their distinctive claim for pay and being put on the same terms as Class B.

18. The question of militia organization has been argued all through this Report, as if the only choice that existed consistently with the maintenance of a moderate expenditure on the militia was between the plan indicated by the present government, and that brought forward by my late advisers and rejected by Parliament. In order that there may be no misapprehension on this point, I beg leave to place before your Grace the enclosed heads of a plan for the organization of a militia force of 50,000 men, a copy of which I gave to the head of the Government when I desired a report on your Despatch.

Encl. 2.

19. It will be seen from the estimate appended to this memorandum that, supposing the expense to be spread over a period of five years, the annual cost to the colony of this system would not be much, if at all, beyond the sum appropriated for militia purposes in the last session.

20. Although the supply of men by means of the ballot is named in this memorandum as an alternative if a sufficient number should not be produced by the plan of volunteering, it forms no essential part of the scheme; and my own confident conviction is, that so loyal is the spirit of the people, and so strong their desire to put themselves in a position effectively to defend their homes and institutions, that the number of men proposed to be raised would have been easily obtained by the voluntary action of the population.

21. Under this plan it was proposed to leave the drill to the spontaneous desire of the people for learning it, to provide them with all the means for acquiring military knowledge, and permit them to adopt the times and seasons most convenient to themselves for its acquisition.

22. I have a strong conviction that if this or some similar plan were put in operation, a very large amount of drill would be voluntarily submitted to by a considerable proportion of the inhabitants of Canada. The citizen soldiers of the Province would become personally interested in improving their discipline, and increasing their knowledge of the military art, a spirit of emulation amongst different corps would arise, the complete battalion organization would enable the different regiments to turn out for field exercise on holidays and other periods at which they might desire to do so;—and on the first outbreak of war the Province would have an army possessed not only of the will, which is common to all Canadians, but of the power "to ensure that an enemy should not "obtain a footing in the country before aid is forthcoming from other portions of the "Empire."

23. And all this would be done by merely giving systematic form to the voluntary action of the people without in any way interfering with their industrial pursuits, trenching on their personal freedom of action, or imposing additional pecuniary burdens on the Province.

24. With regard to the suggestion contained in your Grace's Despatch as to the consolidation into one force of the militias of the British North American Provinces, I did not fail to consult the Lieutenant-Governors of New Brunswick and Nova Scotia when they were here last month. The conclusion we arrived at is similar to that expressed in the Report of the Executive Council of this Province, namely, that the means of communication are not as yet sufficiently easy to enable the three Provinces beneficially to avail

themselves of the services of a common head to their militia forces, so that even if other difficulties in the way of the plan did not suggest themselves, that would in itself be a bar to the scheme for the present. I do not myself believe that the move would be acceptable either to the Canadians or to the inhabitants of the Lower Provinces.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) MONCK.
&c. &c. &c.

Enclosure 1 in No. 5. Encl. in No. 5

Copy of a Report of a Committee of the whole Council, dated 28th October 1862.

Approved by his Excellency the Governor General.

The Committee of the Executive Council respectfully recommend that a copy of the accompanying memorandum be transmitted by your Excellency to the Secretary of State for the Colonies, as containing the views of your Excellency's advisers on the question discussed in his Grace's Despatch of the 21st August 1862.

Certified, Wm. H. Lee, C.E.C.

The Committee of the Executive Council have had under their consideration the Despatch of his Grace the Duke of Newcastle, of the 21st of August last.

In this Despatch his Grace directs attention to the present state of the defences of this Province, to the anxiety which is entertained by the British Government in regard to them, and to the measures which, in his Grace's judgment, are necessary—on one hand to fulfil the expectations of Great Britain, and on the other to place Canada in a position to meet any emergency. His Grace alludes to the misapprehension produced in the minds of the English people by the rejection of the Militia Bill prepared by their predecessors, justly remarking, however, that that proceeding on the part of the Provincial Parliament does not afford evidence of an unwillingness to make proper provision for the defence of the Province.

Whilst disclaiming both the right and the desire to interfere in the politics of Canada, his Grace urges the importance of speedily resuming "measures for some better military organization of the inhabitants "of Canada than that which now exists," and he proceeds to set forth certain suggestions of Her Majesty's Government in reference to this subject. The opinions of military authorities are appealed to, to show that any troops furnished by England would be unequal to the protection of Canada, without the efficient aid of its own people; and suggestions are offered in regard to the form in which this aid may be most advantageously rendered. His Grace states that the population capable of bearing arms should receive that organization, and acquire that habit of discipline which constitute the difference between a trained force and an armed mob, and that fifty thousand is the "smallest number of men" which the Province should have in a partial state of familiarity with drill and other military duty.

It is recommended that one company of each battalion of Sedentary Militia, or more, should be drilled every year, that the training of a large number of men may thus be gradually effected. Preparations of this character and to this extent are calculated, his Grace remarks, to maintain and improve the credit of the Province in the money markets of Europe. In conformity with this view, his Grace expresses himself convinced of the desirableness of steps being taken to secure a basis of provincial taxation apart from customs' duties, and the better to secure the permanence of such an organization as his Grace proposes, he recommends "that its administration, and the supply of funds for its support, should be exempt from the disturbing action of ordinary politics." The expediency of defraying the charge for the militia, or a certain fixed portion of it, from the consolidated fund of Canada, or voting it for a period of three or five years, is further suggested as a means of removing the militia question from the arena of party politics. Another aspect of the question is presented by his Grace, namely, the desirableness of uniting the defensive measures of Canada with the defensive measures of the other British Provinces on the American continent, "that one uniform system of militia training and organization" may be introduced into all of them; such a scheme, it is added, must emanate from Her Majesty's Government, and the opinion of your Excellency's advisers is desired in relation to it, his Grace being of opinion that a union for defence may precede any political union of the North American colonies.

The Despatch of his Grace involves matters of the highest importance, and affirms a principle which, for the first time, comes in a practical shape before the people of Canada. Your Excellency's advisers have not been unmindful of the discussions upon the subject which have taken place in the Imperial Parliament, but, until now, they have not been called upon to consider the principles of a policy so gravely affecting the relations of Canada to the mother-country.

The friendly spirit in which his Grace has conceived his Despatch will be cordially reciprocated by the Canadian people. The promptitude and liberality with which Her Majesty's Government provided for the protection of the Province when, on a recent occasion, danger seemed to menace it, are fully appreciated, and it is gratifying to know that the loyalty and ardour manifested by Canada in an emergency which her people had done nothing to produce, and were wholly unable to prevent, are, in turn, duly understood and valued by the Home Government.

It is not doubted that the same mutual regard and confidence will be exhibited in any communication or negociation which may follow his Grace's Despatch. At the same time, however, it is felt that in dealing with a question, affecting so deeply the present and future welfare of the Province, care should be taken to base any arrangements that may be entered into upon something more solid than sentiment, more enduring than any proposal not recognizing the rights and interests of the Canadian people.

Before proceeding to express an opinion upon the propositions contained in his Grace's Despatch your Excellency's advisers cannot refrain from recalling the circumstances under which they assumed the responsibilities of office. Their predecessors, they cannot forget, presented to Parliament a scheme which failed to obtain the support of that body, and which, so far as can be ascertained, was extremely distasteful to the country. It failed of success not only on the ground that the method of enrolment proposed was in itself highly objectionable, but because it established a machinery cumbrous in its character, at variance with the habits and genius of the Canadian people, and entailing an expenditure far in excess of the sum which the legislature and the people have declared themselves willing to provide. The rejection of the measure by a majority of the Legislative Assembly was the result, not of party combinations, but of a deliberate conviction that its principle was unadapted to the occasion, that the more striking of its features were obnoxious to the Province, and that the financial resources available for military purposes were unequal to the outlay that would have followed the enactment of the bill.

The volunteer organization, Your Excellency's advisers were convinced, is that alone through which the military spirit of the people must find vent in a period of peace. In case of actual emergency, your Excellency's advisers are persuaded the response to an order calling out the militia would be unanimous ; but there is a decided aversion to compulsory service, except in the presence of actual danger.

With their knowledge of the unwillingness of the people to act under the compulsory system ; with the very strong and general expressions of preference for the volunteer system, which secures to them the choice of company officers, and with proofs of the growing vigour of the volunteer organization under circumstances of dubious encouragement, your Excellency's advisers first entered upon the consideration of the question which had lead to the defeat and resignation of their predecessors. The view entertained by Parliament, and, as its members believed, reflected in the disposition of the people, is that which commended itself to the judgment of the Executive Council. They addressed themselves to the subject therefore, anxious to lay the foundation of an efficient defensive organization, but convinced of the necessity of consulting the public will so far as the voluntary nature of the organization is concerned, and convinced also of the necessity of so adjusting the expenditure as not to add to the embarrassments which were then, and still are, among the chief obstacles to every new enterprise originating with the Government.

In this spirit amendments were made to the militia law previously in force, the aim of the new Government being to infuse vitality into the voluntary branch of the service, to encourage the formation of volunteer companies in rural districts, and to provide measures for the better disciplining of the force. The appropriation made by Parliament for these purposes was largely in excess of the vote for the previous year, and was fully as large as the circumstances of the Province would justify a Government in asking at the hands of the Legislature, except in the presence of emergencies which, as yet, do not exist. In 1861 the appropriation was $84,970, in 1862 $250,000.

Faithfully carrying out this line of policy, no time was lost in taking steps to ascertain the actual condition of the volunteer force, as preliminary to taking steps for its improvement. An officer of experience and ability was entrusted with the task of inspecting and reporting upon the active companies, and his enquiry is on the point of completion. In addition, drill instructors have been detailed at a considerable cost to the Province, for the better training of volunteers. To what extent these measures have been productive of benefit does not yet fully appear ; it is known, however, that the drill instruction has been turned to a good account, and that the visits of the officer alluded to (Colonel Wily), in connection with the more thorough drill, have stimulated the desire for further companies, and for the thorough effectiveness of those already recognized. Enough is known to justify the statement that immediately after the receipt of Colonel Wily's report, a considerable number of new companies will present themselves for the sanction of your Excellency.

Without entering into the minute details of plans not altogether matured, the Executive Council think proper to state, in reference to the continued improvement of the force, that the act to amend the militia law provides that " the commander in chief may appoint brigade majors, not exceeding one for each military district." It is intended, with the least possible delay, to present to your Excellency for approval a list of officers qualified to fill these important positions. The utmost care will be taken in the selection of individuals qualified by knowledge, experience, and character, for the proper discharge of the duties pertaining to the office. These duties will include the inspection and control of such volunteer companies and battalions as may be within the limits of each district, and the formation of drill associations, to be composed of the officers and non-commissioned officers of the several battalions of the Sedentary Militia, with a view of conveying to them, to borrow the language of your Excellency, " such a knowledge of and proficiency in their drill and military duties, as will enable them to impart from time to time the knowledge thus acquired to those who may be under their command."

The brigade majors will further be instructed, on assuming their duties, to secure the enrolment of such quota as may be ordered from the first class service men within the district, first into companies and, wherever practicable, into battalions, under officers qualified to command them ; and thus, in addition to the volunteers contemplated under the amended Act of last session, an organization more efficient for calling out the first class service men than any hitherto known, may be expected. A spirit of emulation will thus be produced, which will assuredly tend to the general improvement of the companies of the several battalions in discipline and drill. In no other way can this result be attained in the rural districts. It is also designed to obviate one of the principal causes of dissatisfaction amongst the larger proportion of volunteers by removing the distinction hitherto maintained between classes A and B of the volunteer force, so that without injustice to class A, class B may be placed in the possession of advantages hitherto withheld. Under the intended change, the two classes will be placed on an equality in respect of the supply of clothing, which will, in future, be furnished to all. As the clothing has been the chief difficulty in the way of the formation of volunteer companies, it is believed that the supplying of it by the Government, coupled with a payment in lieu of clothing to companies already provided with uniforms, will prove in the highest degree satisfactory. Nor are the Executive Council unmindful of the reasonable claim which, under certain circumstances, may be preferred by volunteer companies for the construction or

acquisition of armouries, rifle ranges, and drill rooms. It is considered unwise however to make any general promise upon these points, or to pledge the Province to any considerable expenditure on account of them. The need really exists only in central localities, the demand of which will be duly considered and acted upon from time to time.

The importance of battalion drill is too obvious to be denied. Its enforcement must, however, be regulated by its practicability. In the cities and larger towns it may be carried on, not only without additional cost, but without entailing upon the volunteers extra sacrifices or trouble. In the rural districts the case is different. With a sparse population, averaging less than three inhabitants to the square mile throughout Canada, engaged in agricultural pursuits, and for the most part struggling with the hardships and difficulties incident to a country in which capital is scarce, and a large portion of which remains to be reclaimed, any drill remote from the residence of the volunteers is impossible. It is not simply a question of pay. Nothing is more certain than the unwillingness of volunteers so situated to absent themselves from their immediate neighbourhoods for purposes of military instruction, not merely because of their inability to dispense with pay, but because of the extent to which the absence would interfere with pursuits that cannot be interrupted without injury to themselves and loss to the country. Their farms require their unremitting attention; the scarcity of hired labor being too serious and constant to allow of absence on the part of the settlers themselves. In the event of war, no doubt, these hindrances would not keep back the able bodied population from the service of the country; but they are averse to interference, except on occasions of grave necessity; and in the opinion of the Executive Council, it is not desirable to excite discontent amongst them by any premature attempt to exact compulsory service.

The battalions in the Province number 463, with officers and non-commissioned officers, amounting in the aggregate to 27,780, or an average of 60 to each battalion. Assuming that of these an average of three fourths obey the order for drill instruction in the manner already indicated, a total of 20,835 will be qualified for general drill instructors.

The argument against enforced drill, as applied to the rank and file of the militia, does not bear upon the officers of the Sedentary Force who now hold commissions. They at any rate may be required to qualify themselves, and it is intended very shortly to call upon them to undergo drill in the manner already indicated, that they may be prepared at any moment to enter upon the discharge of the duties attaching to their several positions. Desiring the honour of militia distinction, they must make up their minds to prove their fitness for it, and, failing to do this, the Executive Council think that there should be no hesitancy in setting them aside, and replacing them with worthier men.

Your Excellency's advisers have thus endeavoured to exhibit the policy which, in their judgment, is best suited to the circumstances of the Province, and the habits of its people. They point with confidence to what they have done, and what they are prepared to do, as evidence of their determination to fulfil their duty in regard to the defence of the Province. They have held office less than five months, and their exertions during that brief period have been neither slight nor unproductive. Whatever differences of opinion exist here or in England as to the merits of particular parts of their scheme, at least they have proved how fully they appreciate the importance of the subject of his Grace's despatch; and they look forward without any misgivings to the realization of results which will vindicate the wisdom, patriotism, and loyalty of the course they have pursued.

Unquestionably the plan proposed is in part experimental; everything of the kind must be so at the outset. Military tastes and aspirations have not been cherished by our people, and the attempt is now for the first time to be made to accustom them to labours and duties other than those of peaceful life. In entering upon this task the Government cannot too carefully consult the feelings and habits of those on whom reliance must be mainly placed in the presence of danger, the more youthful and active part of the population embraced in the Sedentary Force. The question for the Government to consider is, how best to accomplish this end; and time and experience are required, not only to test the sufficiency of measures now, or soon to be, in operation, but to remove the prejudice with which military service is regarded, and to enable those charged with the administration of affairs to ascertain the feasibility of a more extended scheme; it is possible that some further legislation may be called for to remedy defects which only experience can reveal; and your Excellency's advisers will be prepared to address themselves to the subject so soon as it shall come before them in a practicable shape, adhering faithfully to the general principles of the policy herein set forth, but widening and modifying their action in conformity with the teaching of their present trial.

The proposal of his Grace to organize and drill not less than 50,000 men is not now for the first time presented to the Province. The measure prepared by the late Government, and rejected by the legislature, contemplated the formation of a force to that extent, and your Excellency's advisers cannot disguise their opinion that the Province is averse to the maintenance of a force which would seriously derange industry and tax its resources to a degree justifiable only in periods of imminent danger or actual war.

The people of Canada doing nothing to produce a rupture with the United States, and having no knowledge of any intention on the part of Her Majesty's Government to pursue a policy from which so dire a calamity would proceed, are unwilling to impose upon themselves extraordinary burthens. They feel that should war occur, it will be produced by no act of theirs, and they have no inclination to do anything that may seem to foreshadow, perhaps to provoke, a state of things which would be disastrous to every interest of the Province. On this ground their representatives in Parliament assembled rejected the proposition to organize 50,000 men, or, indeed, to commit the Province to a much smaller force; and recent elections in various localities, embracing more than one third of the population of the Province, have shown that, in this respect, public feeling has undergone no change. So far as is known, not a single candidate has ventured to declare himself in favour of a measure so extensive as that which was prepared by the late Government, and is now again recommended by his Grace. Your Excellency's advisers therefore find themselves fortified by public opinion. Their own estimate of what is required, and of what may most advantageously be done, is confirmed by the calm judgment of the people.

His Grace recommends "a basis of taxation sounder in itself than the almost exclusive reliance on customs' duties;" the evident intention being by direct taxation to obtain an increase of income commensurate with the increase of expenditure which would follow the organization of the large force proposed. Without entering into a discussion of the relative merits of direct and indirect taxation, your Excellency's advisers feel that it would not be prudent, suddenly or to any large extent, to impose direct taxation for military purposes. This is not the occasion for adopting a principle hitherto unknown in the fiscal policy of the Province, and assuredly this is not the time for plunging into an experiment for which the people of the Province are unprepared. No more serious mistake can be committed than to conduct an argument upon the supposition that the ability of the Canadian people to sustain taxation is greater than has hitherto been acknowledged in the fiscal arrangements of the Government. The wealth of the country is in its lands. If the people are in the enjoyment of comparative wealth, it is so invested as to be not readily available for the production of a large money income. Your Excellency's advisers believe that no government could exist that would attempt to carry out the suggestion of his Grace for the purpose designed.

The maintenance of the Provincial credit abroad is undoubtedly an object which the administrators of the affairs of the Province should, at any cost, accomplish. Your Excellency's advisers submit that their various measures demonstrate the sincerity with which they are striving to preserve the public credit unimpared. They contend, however, that not the least important of the agencies to be employed to this end, is the exhibition of a due regard to the means at the command of the Province. They hold that they are more likely to retain the confidence of European capitalists by carefully adjusting expenditure to income, than by embarking in schemes, however laudable in themselves, beyond the available resources of the Canadian people. That they are not unwilling to try to the utmost to comply with the suggestions of the Imperial Government is evinced by the manner in which the projected intercolonial railway has been entertained. Their conduct in this matter should relieve them from every imputation. At the same time, they insist that they are, and must be, allowed to be the best judges of the pressure which the Provincial credit can sustain. They are prepared, subject to certain conditions, to encumber this credit with liabilities arising out of the inter-colonial Railway, but they are not prepared to enter upon a lavish expenditure to build up a military system distasteful to the Canadian people, disproportionate to Canadian resources, and not called for by any circumstance of which they at present have cognizance.

Another suggestion embraced in his Grace's Despatch is well calculated to excite surprise. Your Excellency's advisers allude to that portion of the Despatch in which his Grace purposes to remove the control of funds required for militia purposes from the domain of Parliament. His Grace is evidently aware that the proposition wears the aspect of "an interference with the privileges of the representation of the people," and it is certain that any measure liable to this construction never will be, and ought not to be, entertained by a people inheriting the freedom guaranteed by British institutions. The Imperial Parliament guards with jealous care the means of maintaining the military and naval forces of the Empire. Its appropriations are annually voted, and not the most powerful minister has dared to propose to the House of Commons the abandonment of its controlling power for a period of five years. If the disturbing action of ordinary "politics" is a reason for removing the final direction of military preparations from Parliament, it is in every sense as applicable in England as in Canada. What the House of Commons would not under any circumstances of danger entertain, is not likely to be entertained by the Legislature of Canada. Whatever evils are incident to representative institutions, the people of a British Province will not forget that they are trivial in comparison with those which are inseparable from arbitrary authority. Popular liberties are only safe when the action of the people restrains and guides the policy of those who are invested with the power of directing the affairs of the country. They are safe against military despotism, wielded by a corrupt government, only when they have in their hands the means of controlling the supplies required for the maintenance of a military organization.

"A union for defence" is proposed by his Grace the Secretary of State for the Colonies. A union of the British North American Provinces for the formation and maintenance of one uniform system of military organization and training, having a common defensive fund, and approved by Her Majesty's Government; a union whose details would "emanate from the Secretary of State," and whose management would be entirely independent of the several local legislatures. Your Excellency's advisers have no hesitation in expressing the opinion that any alliance of this character cannot at present be entertained. An inter-colonial railway seems to be the first step towards any more intimate relations between the British North American Provinces than those which now exist. The construction even of this work is by no means certain, although this Government, looking at it mainly as a measure of defence, has entertained the preliminaries in common with delegates from the Provinces of Nova Scotia and New Brunswick. It is premature just now to speculate upon the possible political consequences of an undertaking which may never be consummated; certain it is, however, that there can be no closer inter-colonial union of any kind until increased facilities for inter-communication are provided, and equally certain that the Provinces, supposing them to be hereafter united, will never contribute to an expensive system of defence, unless it be subject to their own control. Speaking for Canada, your Excellency's advisers are sure that this Province will continue to claim the exclusive right of directing the expenditure of the public monies.

Your Excellency's advisers now turn to the general principle which underlies the argument of his Grace. That the right of self-government has for a correlative duty the maintenance of provision for defence is a proposition which, in the abstract, is indisputable; but it is only indisputable in the case of governments of states which are sovereign in themselves, as between a colony and the parent state it cannot be said to exist in the same sense.

A British colony must submit to all the consequences of conflict produced by the policy which Her Majesty's Government may carry out in the interest of the Empire at large. It is not enough that a colony endowed with self-government provides for the preservation of peace and order within its own boundaries; it is not enough that a colony so situated must endure all the consequences of a line

of action which its own legislators have no voice in originating, and towards the termination of which they can do nothing; a further responsibility is held to attach to the colonial relation. The colony, although the theatre of ruinous hostilities, must furnish its quota in aid of the Imperial army, and contribute a share to the attendant expenditure.

In the case of Canada, the strongest advocates of the new theory of the colonial relation are compelled to admit that an exception to the general rule must be made; even they who demand the withdrawal of all troops from self-governing colonies are obliged to concede that some special allowance must be made in favour of Canada. Their reasons for an exceptional policy towards this Province are apparent. Situate on the border of a vast and powerful Republic with a frontier extending upwards of a thousand miles, with no deep back country to sustain it, and accessible in case of war at numerous points, it is admitted that Canada should be assisted to the full extent of the Imperial resources. The Despatch of his Grace seems in some measure to conflict with this view. His Grace, while promising liberal assistance, contends that any available supply of regular troops would be unequal to the defence of the Province, and that "the main dependance of such a country must be upon its own people for defence." Your Excellency's advisers would not be faithful to their own convictions or to the trust reposed in them, if they witheld an expression of their belief that without very large assistance any efforts or sacrifices of which the people of the Province are capable would not enable them successfully, and for any lengthened period, to repel invasion from the neighbouring Republic. They have relied for protection in some degree upon the fact that under no conceivable circumstance will they provoke war with the United States; and if, therefore, Canada should become the theatre of a war resulting from Imperial policy, while it would cheerfully put forth its strength in defence of its soil, it would nevertheless be obliged to rely for its protection mainly upon Imperial resources; and in such an event it is their opinion that they would be justified in expecting to be assisted in the work of defence with the whole strength of the Empire.

It is not necessary at this stage of their history to put forward assurances of the readiness of the Canadian people to assume whatever responsibilities belong to them as subjects of Her Majesty; their devotion has been exhibited too often to be open to doubt or depreciation. They have made sacrifices that should relieve them from suspicion, and which Her Majesty's Government should remember as a pledge of their fidelity. No portion of the Empire is exposed to sufferings and sacrifices equal to those which would inevitably fall upon this Province in the event of war with the United States. No probable combination of regular troops and militia would preserve our soil from invading armies ; and no fortune which the most sanguine dare hope for, would prevent our most flourishing districts from being the battle field of the war. Our trade would be brought to a stand still, our industry would be paralysed, our richest farming lands devastated, our towns and villages destroyed, homes, happy in peace, would be rendered miserable by war, and all as the result of events for the production of which Canada would be in no wise accountable.

Your Excellency's advisers advert to these contingencies of our position, not to justify inaction, but to shew the unfairness of demands predicated upon alleged selfishness and sloth on the part of Canada. They simply point to consequences which it is criminal to conceal, and to dangers which it is folly to deny. So far as their own policy is concerned, they are content to rely upon a fair interpretation of the measures they have adopted, and others that are in contemplation. They have reminded your Excellency that the appropriation obtained from Parliament is as large as the state of the finances will allow it to be, and they have glanced at their plans for the purpose of proving the wisdom and justice of their course. Their anxiety is to do all that ought to be done, and to do this in a manner acceptable to the Province. They have a right to claim, therefore, that their exertions shall be considered in the temper and the light in which they have been undertaken, confident that time will vindicate the sagacity of their measures, and the loyalty of the Canadian people. They will be happy to learn that their efforts receive the approval of her Majesty's Government. Whether this hope be realized or not they are satisfied that they are acting in conformity with the wishes and interests of the people whose confidence elevated them to their present responsible position, and whose will they are bound in all cases to respect.

Executive Council Chamber, Quebec,
28th October, 1862.

Enclosure 2 in No. 5.

Encl. 2 i
No. 5.

HEADS of a PLAN for the organization and increase of the ACTIVE FORCE of the MILITIA in CANADA.

1. The distinction between the Sedentary Militia and the active force to continue as at present established by law.

2. The active force (Infantry) in future to be organized in battalions of the following strength :—

Lieutenant Colonel	1
Majors	2
Adjutant	1
Quarter Master	1
Surgeon	1
Assistant Surgeon	1
Captains	10
Lieutenants	10
Ensigns	10
	37

Serjeant Major	1
Quarter Master Serjeant	1
Hospital Serjeant	1
Drum Major	1
Serjeants	40
Corporals	40
Drummers	10
Privates	750
	804

All companies of the active force now in existence to be formed into battalions where this has not been already done, either by associating them with companies already existing within their respective districts or with new companies to be hereafter formed.

3. The battalions of the active force of infantry to be numbered in consecutive numbers through the entire Province as may be ordered by the Commander-in-Chief.

4. Each battalion of the active force of infantry shall be composed of men raised from a territorial division of the country corresponding with a regimental district of the Sedentary Militia. The quota of the active force to be supplied by each sedentary regimental district, to be fixed by the Commander-in-Chief, by militia general order. When more than one battalion of the active force of infantry shall be fixed as the quota of any sedentary regimental district, such regimental district shall be subdivided so that the subdivisions shall correspond with the number of the active battalion fixed as the quota of the regimental district. And the men of each active battalion shall be taken from one of such sub-divisions. The men shall in the first instance be raised by volunteering, but should any district not have completed its quota of men within a time to be limited it shall be competent to the commander-in-chief to order that the men should be raised by ballot.

5. All officers of the active force shall, in the first instance, receive provisional appointments, to be made absolute, if they shall, within one year from the date of their provisional appointment, pass a practical military examination before a board of military officers, to be appointed by the Commander-in-Chief.

It shall be the duty of this board to report specially to the Commander-in-Chief, the names of such officers as may have distinguished themselves by proficiency in military knowledge.

6. The uniform of the active force of infantry to be scarlet with blue facings and silver lace. All uniforms now in use to be worn as long as they are serviceable.

7. A brigade-major shall be appointed in each military district to attend to the organization and discipline of the active force in conformity with such orders as may from time to time be issued by the Commander-in-Chief.

8. Drill serjeants in proportion to the number of the men enrolled will be stationed at suitable places through the Province.

9. Drill sheds, armouries, and rifle ranges will be provided for the active force.

10. Rifles, bayonets, and accoutrements of the best construction have been supplied as a loan by the Imperial Government, and will be issued to the active force.

11. The distinction between Class A. and Class B. of the active force to be abolished. The basis of the system in future to be that the officers and men shall serve without pay, and that government shall provide the non-commissioned officers and men with arms, uniforms, and all other requisites for their organization and discipline free of charge.

12. There shall be paid immediately to each member of a corps organized in Class B. since May 1, 1861, who shall have provided himself with uniform to the satisfaction of the Commander-in-Chief the sum of six dollars, and a similar sum in 1863, if Parliament shall sanction the payment; but in future no money payment will be made to members of the active force on account of uniforms. The Government will supply the clothes to the men

Individual cases of corps not coming within the above rule will be considered and dealt with according to the particular circumstances of each case.

Annual Cost.

19 Brigade Majors at $600			$11,400
124 Drill Serjeants at $400			$49,600
Appropriation for militia 1861		$84,974	
Deduct—			
Storekeepers	$2,400		
Care of arms	$5,000		
Drill of Active Force	$21,644		
Musketry Instruction	$2,000		
Additional amount for drill which would be saved by the proposed arrangement	$15,000		
		$46,044	
			38,930
Clothing* 50,000 at $14		$700,000	
Uniforms should last at least five years, one-fifth			$140,000
62 Armouries at $500		$31,000	
62 Drill sheds at $1,000		$62,000	
		$93,000	
Interest at 12 per cent			$11,160
			$251,090

* This includes tunic, trowsers, chako, great coat, fur cap, at regulation prices, with a small addition to cover cost of transport.

No. 6. No. 6.

Copy of a DESPATCH from His Grace the Duke of Newcastle, K.G., to Viscount Monck.

(No. 197.)

My Lord, Downing Street, December 20, 1862.

I have the honour to acknowledge your Despatch of the 30th October,* forwarding a Report of your Executive Council upon my Despatch of August 21st,† accompanied by observations of your own upon that Report, and especially upon the plan which it contains for the further organization of the Canadian Militia. * Page 42. †Page 40.

I greatly regret to find that that plan, while effecting some improvements in the present system, will yet, as regards the systematic organization of the force of the colony for defensive purposes, prove, as you observe, "completely illusory."

You also lay before me heads of another plan for the formation of a Militia Force of 50,000 men, which I concur with you in regarding as a measure of a more substantial character, and more worthy of the great Province of Canada than that proposed by your Executive Council. I shall not attempt to discuss the details of either of these schemes. I will only express an earnest hope that the patriotic spirit which animates the volunteers of Canada may be turned to the best account for the defence of the country, an object which, I conceive, would be most effectually attained by forming them into battalions of the Active Militia force within defined divisions of the Province, not indeed to the exclusion of other volunteer associations, but with an eye in the first place to the completion of that territorial organization, which is, as you justly term it, "the cardinal necessity of the time."

I turn for a moment to the comments made by the Executive Council in their Report upon my Despatch of 21st August last,‡ one or two of which call for some observation from me. ‡Page 40.

The Report asserts that "in the opinion of your advisers no Government could exist that would attempt to carry out my suggestions" for the raising of a force of at least 50,000 "partially trained" militia. A sufficient answer to such an opinion is contained in the document with which you have furnished me, showing how the number mentioned could be provided at a cost which, if spread over five years, would scarcely exceed in any one year the small amount voted for militia purposes in the last session. Nor can I believe that the Canadian people would condemn a Government which should effectually provide for the defence of their country, even if the necessary expense should exceed the sum of 50,000*l.* per annum.

The Report expresses great surprise at a suggestion made by me, that the charge for the militia, or for a fixed portion of it, should be voted for a period of three or five years. Such a measure, they say, "will never and ought never to be entertained by a people inheriting the freedom guaranteed by British institutions." If there are any reasons in its favour they think that they are "in every sense as applicable in England as in Canada;" and they conclude with the sentiment, that "popular liberties are safe against military despotism, wielded by a corrupt government, only when they (the people) have in their hands the means of controlling the supplies required for the maintenance of a military organization."

I beg you will point out to your ministers, in reply to these observations, some material circumstances which have escaped their notice. The terms of my Despatch show that I was well aware that the course in question, if adopted by the legislature, would be, to a certain degree, a surrender of the strict constitutional rights of the representatives of the people. It would probably, however, occur to them, that popular liberties would be in little danger from a body of citizen soldiers; while there remained within the Province, not only without exciting any such fears, but with the hearty approval of its people and government, a force of regular troops whose number would be fixed at the discretion of the Imperial Government, and whose cost would be defrayed by the Imperial Parliament. Again, if the number of Imperial troops were made to depend, by agreement with the Canadian Government, upon the number of militia maintained by the Province, there would be nothing unreasonable in such an arrangement, and the Home Government might fairly (I do not say would necessarily) require that the funds for the purpose should be somewhat more permanently secured than by an annual vote. It is far from my wish (as seems to be suggested by the Report) to diminish the controul of the Canadian Parliament over their own affairs, but on the other hand the amount of exertion which England could make with any advantage must depend very much on the manner in which that controul is exercised; that is to say, on the disposition to protect the Colony which is shown by

the Provincial Government and the people of Canada. It is difficult to see how, when my Despatch contemplates legislation on the subject of the militia by the Canadian and not the Imperial Parliament, the Executive Council can justify such grave apprehensions of an invasion of their liberties.

These considerations will show that the general doctrines referred to by the Report have little application to the present peculiar case of Canada, and little force against the suggestion of my Despatch, which, however, I have no desire to press upon the attention of your government, upon whom, and the parliament of Canada, must rest the responsibility of providing adequate means for meeting the efforts of the mother-country to secure the safety of the Province.

The Report dwells at length upon the fact, that the policy of the Empire in all its relations with Foreign Powers, upon which peace and war depend, is regulated by the Imperial Government and Parliament, over which Canada has no controul.

I agree with the Executive Council in regarding this circumstance as one of primary importance, as lying indeed at the very root of the relations between the mother-country and her colonies, with respect to military and naval defences. They cannot fail, however, to see that Canada, though liable, as they repeatedly point out, to be involved in Imperial wars in which she may have no immediate interest, has yet a manifest interest, under all circumstances, in contributing to maintain the power of the Empire of which she forms so important a part, and with which the maintenance of her own independence, and of her commanding position in the world, is so essentially connected. The main security against aggression which Canada enjoys as a portion of the British Empire, is the fact,—known to all the world,—that war with Canada means war with England, not in Canada only, but upon every sea, and upon the shores, wherever situated, of the aggressive Power itself. It does not therefore follow that this country can consent or afford to maintain an unlimited number of troops in Canada at her own cost, even in time of war, much less in time of peace. And it remains true, that the defence of Canadian territory must depend mainly upon the Canadian people itself.

I have, &c.

Governor General Viscount Monck, &c. &c. &c.

(Signed) NEWCASTLE.

COPIES OR EXTRACTS

OF

CORRESPONDENCE between HER MAJESTY'S GOVERNMENT and the GOVERNOR GENERAL of CANADA in reference to the MILITIA BILLS proposed and passed in the Canadian Parliament.

Presented to the House of Commons by Command of Her Majesty.

LONDON:
Printed by GEORGE E. EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

CANADA (HALIFAX, &c., RAILWAY).

RETURN to an Order of the Honourable The House of Commons, dated 11 April 1862;—*for*,

COPY "of MEMORIALS, with the Signatures attached, and of any other Representations recently addressed to the Lords Commissioners of Her Majesty's Treasury, with reference to a proposed Communication by RAILWAY between the Port of *Halifax* and the Provinces of *Canada* and *New Brunswick*."

Treasury Chambers, Whitehall, 5 May 1862. F. PEEL.

To the Lords Commissioners of Her Majesty's Treasury.

The Memorial of the Belfast Chamber of Commerce,

Humbly showeth,

THAT the recent discussions with the United States have naturally caused great anxiety as to the means possessed for the efficient defence, both of the territory and the commerce of the British North American Provinces, and more especially of Canada.

That in the opinion of your memorialists, it is essential to the safety not less than to the secure possession of the British North American Provinces, that they should possess within themselves an internal communication, which shall be at all times open, and secure from stoppage in winter, with Halifax, the best open harbour on the Atlantic.

That the completion of a line of Railway from Halifax to Quebec would render us perfectly independent of the United States; at present our trade and correspondence with our own Province of Canada, and the local trade and correspondence between the lower British Provinces and foreign countries is, for half the year, subject to the will and fiscal enactments of the United States.

That the formation of this line of Railway would effect a great saving in military expenditure on the one hand, and render Canada much more easy of defence on the other, as she would be accessible within ten days at all seasons; whilst at the present time she is, in a military point of view, excluded from communication with the mother country for six months of the year.

Your memorialists, therefore, respectfully pray Her Majesty's Government to co-operate with the Governments of Canada, New Brunswick, and Nova Scotia, in affording such aid and encouragement as may be necessary to secure the formation, as early as may be practicable, of a railway communication between Quebec and Halifax, which, in the opinion of your memorialists, would be a work of great national value and importance.

And your memorialists will ever pray, &c.

(signed by order) *Thos. Sinclair*, J.P., President.
Samuel Vance, Secretary.

Chamber of Commerce, Belfast,
10 February 1862.

To the Right Honorable the Lords Commissioners of Her Majesty's Treasury.

The Memorial of the undersigned Merchants, Bankers, and others of the Borough and vicinity of Belfast,

Showeth,

That for six months of the year we are dependent on the United States of America for our communication with Canada.

That in case of an interruption of our friendly relations with the United States, our intercommunication with Canada, during that period, is liable to be cut off at a moment's notice, and an important portion of the British Empire placed in great jeopardy.

That the completion of a line of Railway from Halifax to Quebec would render us perfectly independent of the United States; at present our trade and correspondence with our own Province of Canada, and the local trade and correspondence between the lower British Provinces and foreign countries is for half the year subject to the will and fiscal enactments of the United States.

That by the completion of the proposed line, direct railway communication will be established through British territory from Halifax to Lake Huron, a distance of 1,400 miles, accessible at all seasons, and thereby accelerate the delivery of the Canadian Mails and Despatches at least 36 hours in advance of the present route through the United States; and it would open up for colonisation and settlement by emigrants from the mother country, upwards of 14,000,000 acres of ungranted lands within a journey of ten days from our own shores.

That the present cost of conveying the British North American mails through the United States will be saved to the Imperial Treasury.

That the completion of this line of Railway would effect a great saving in military expenditure on the one hand, and render Canada much more easy of defence on the other, as she would be accessible within ten days at all seasons, whilst at the present time she is, in a military point of view, excluded from communication with the mother country for six months of the year.

That your memorialists believe that the immediate completion of a line of Railway from Halifax to Quebec is essential to the preservation and integrity of the British Empire in North America.

That your memorialists believe, that in addition to its aiding to the security and permanence of the British Empire in North America, accelerating the communication with the mother country, reviving that identity of interest with her which has been too long engrossed by the United States, the proposed Railway would also effect a saving to the Imperial Treasury, far exceeding any assistance that may be required for its completion.

Your memorialists therefore humbly pray that Her Majesty's Government will be pleased to grant such aid and assistance, in conjunction with the Provincial Governments of Canada, New Brunswick, and Nova Scotia, as will bring to a successful completion this great national undertaking.

And your memorialists will ever pray.

(signed)

Edward Coey, J.P.
Henry H. McNeill, J.P.
John Thomson, J.P.
Sam. Gelston.
Thos. Hamilton Jones, J.P.
R. W. Bland, J.P.
J. H. Smythe, Clerk.
Johnston & Carlisle.
John Herdman.
Charles Lanyon, J.P., Mayor of Belfast.
Geo. J. Clarke, J.P.
John Young, J.P.
Edmund McNeill, J.P.
George Gray, J.P.
Godfrey Lyle, J.P.
James Torrens.
Jas. Bristow, Director Northern Bank.
H. Montgomery, Banker, Northern Bank.
W. Sharman Crawford.
William Valentine.
Jas. T. Bristow.
T. Bushell, J.P.
John Charters.
C. B. Grimshaw.
John Sharman Crawford, J.P.
Thomas McCammon.
Henry Murney.

Gustavus Fleyn.
Thomas M. Clive, J.P.
William Carson.
Wm. Bell.
Geo. C. Pine.
Joseph Clarke.
William McCollough.
C. Duffin.
Wm. Campbell.
J. J. Weinberg.
N. D. Crommelin, jun., J.P.
James Macaulay.
Houston Rupell.
John Potts.
Henry Russell, Solicitor.
J. Greenhill.
F. D. Finlay & Son.
William Boyd.
W. Bruce.
E. Walkington & Son.
James Burns & Co.
James Holden & Co.
J. Scott Porter, Dissenting Minister.
Henry Milford.
James Carlisle.
Robert Henderson & Son.
E. H. Clarke.
Thomas Mulligan.
Francis M'Cracken.
John Davidson.
John M'Gee.
James M. Darbishire.
Wm. Langtry.
Thomas Price, Notary Public.
John Devrell, J.P.
Bernard Hughes.
William Ewart & Son.
John Savage.
Jas. Lemon.
Thos. O'Brien.
Robert Atkinson.
Sam. Andrews.
W. Bottomley.
Wm. Laird Finlay.
D. R. Brannigan.
John Charles & Co.
Gilbert Vance.
David Dunlop.
William Crawford.
R. Grimshaw, D.L., J.P.
William M'Gee, J.P.
John Alexander & Co.
A. Sharman Crawford.
Jas. W. Moncrieff & Co.
Rob. Boyd.
John Lyth.
John Boyd & Son.
Thomas Gaussen.
John Rowan.
William Home, Retired Officer, H.M. Military Service.
John K. Boyd.
Thos. Tripp.
Chas. Peyton.
E. J. Bristow & Co.
John S. Hunter, jun.
A. Bernard & Koch.
David Taylor.
Charles Gaussen.
Andrew Lyle.
Geo. Fitz Simons.
Purdon & Caughery.
Thos. S. Hamilton.
Henry Reid.
Wm. Ewart, jun., Vice President Ch. Commerce.
H. H. Boyd.
Thomas Coleman.
Henry Matier.
Philip Johnston & Son.
Alex. Clarke.
J. M. Gurr.
Arch. M. Collins.
Thomas Chemiocette.
Jonathan Carluke.
Henry Nichol.
William Gridwood.
George K. Smith.
R. Megard.
Joshua Pim.
S. Carson.
Em. Geoghegan.
R. J. M'Entire.
Thos. Turner.
John Hamill.
J. M. Pirrie, M.D.
John Oulton.
G. L. Nelson.
Robert D. Filson.
Atkinson & Johnston.
T. B. Johnson.
Robert Henderson.
Sam. M'Causland.
Jas. Hamilton.
George M'Tear.
Chas. W. Lepper.
Robert Patterson, F.R.S.
George Murney.
James Cosander.
Robert M'Bride.
Willm. Emerson.
James Guthrie.
Henry Campbell.
James H. M'Entire.
James P. Corry & Co.
Alfred Wigglesworth.
Orr & Co.
Thompson C. Robinson.
Thomas Hughes.
M'Adam Bros. & Co.
Churley & Malcolm.
Charles H. Brett.
James Tilley.
W. M. Collins.
H. J. F. M'Cance.

February 1862.

To the Right Honourable the Lords Commissioners of Her Majesty's Treasury.

The Memorial of the Sheffield Chamber of Commerce and Manufactures,

Showeth,

That for six months of the year we are dependent on the United States of America for our communications with Canada.

That in case of an interruption of our friendly relations with the United States, our intercommunication with Canada, during that period, is liable to be cut off at a moment's notice, and an important portion of the British Empire placed in great jeopardy.

That the completion of the line of Railway from Halifax to Quebec would render us perfectly independent of the United States at all seasons of the year. But that owing to its non-completion, our trade and correspondence with our own Province of Canada, and the trade and correspondence between Canada and all the lower British Provinces and foreign countries is for half the year subject to the will and fiscal enactments of the United States.

That by completing the construction of this Railway, a distance of about 350 miles, direct railway communication will be established through British territory from Halifax to Lake Huron, a distance of 1,400 miles, accessible at all seasons, and which would render prohibitory or discriminating duties on the part of the United States impracticable.

That the completion of this line of Railway would accelerate the delivery of the Canadian Mails and Despatches at least 36 hours in advance of the present route through the United States.

That the completion of this line of Railway would open up for colonisation and settlement by emigrants from the mother country upwards of 14,000,000 acres of ungranted lands within a journey of 10 days from our own shores.

That the present cost of conveying the British North American mails through the United States, will be saved to the Imperial Treasury.

That by completing this line of Railway, and making Halifax the terminus of the British North American mails, we believe the Ocean service would at once become self-sustaining.

That the military expenses for the preservation of British North America, borne by the Imperial Treasury, amount to the sum of 420,000 *l.* per annum in time of profound peace.

That the completion of this line of Railway would effect a great saving of this expenditure on the one hand, and render Canada easy of defence on the other, as she would be accessible within 10 days at all seasons, whilst at the present time she is, in a military point of view, excluded from communication with the mother country for six months of the year.

That it would link together the three Provinces of Canada, New Brunswick, and Nova Scotia, and give them access to the ocean at all seasons through the Port of Halifax, one of the finest harbours in the world, and nearer to England (and to Europe) by 400 miles than any other open port in America.

That your memorialists believe that the immediate completion of the line of Railway from Halifax to Quebec is essential to the preservation and integrity of the British Empire in North America.

That your memorialists believe, that in addition to its adding to the security and permanence of the British Empire in North America, accelerating the communication with the mother country, reviving that identity of interest with her which has been too long engrossed by the United States, the Railway would also effect a saving to the Imperial Treasury far exceeding any assistance that may be required for its completion.

Your memorialists therefore humbly pray that Her Majesty's Government will be pleased to grant such aid and assistance, in conjunction with the Provincial Governments of Canada, New Brunswick, and Nova Scotia, as will bring to a successful completion this great national undertaking.

And your memorialists will ever pray.

(signed) *John Jobson Smith*, President.

To the Right Honourable the Lords Commissioners of Her Majesty's Treasury.

The Memorial of the Belfast Harbour Commissioners, under their Common Seal,

Respectfully showeth,

That the recent aspect of affairs with the United States of America has naturally caused great anxiety as to the means possessed for the efficient defence, both of the territory and the commerce of the British North American Provinces, and more especially of Canada.

That in the opinion of your memorialists, it is essential to the safety not less than to the secure possession of the British North American Provinces, that they should possess within themselves an internal communication (which shall be at all times open, and secure from stoppage in winter) with the best open harbour on the Atlantic.

That the completion of this line of Railway would not only effect a great saving in military expenditure, and render Canada much more easy of defence, but would make the colony accessible from this country within 10 days at all seasons, whilst under present circumstances, it is, in a military point of view, almost excluded from communication for one half of the year.

That the completion of a line of Railway from Halifax to Quebec would render us perfectly independent of a foreign country; at present, our trade and correspondence with our own Province of Canada, and the local trade and correspondence between the lower British Provinces and foreign countries is, for half the year, subject to the will and fiscal enactments of the United States.

Your memorialists therefore respectfully pray Her Majesty's Government to co-operate with the Governments of Canada, New Brunswick, and Nova Scotia, in affording such aid and encouragement as may be necessary to secure the formation as early as may be practicable of a Railway communication between Quebec and Halifax, which, upon general grounds, and for the reasons amongst many others, now respectfully submitted is, in the opinion of your memorialists, a work of great national value and importance.

(signed) *John Clarke*, Chairman.

Wm. Thompson, Secretary.

Harbour Office, Belfast,
18 February 1862.

71, Old Broad Street, E. C.,
25 February 1862.

My Lords,

As the Chairman of a Committee, recently appointed at a public meeting, for the purpose of carrying on negotiations with the Imperial Government in regard to the proposed Intercolonial Railway between Halifax and Quebec, I have been desired to place in your Lordships' hands the accompanying memorial from merchants, bankers, and others, of the City of London, in favour of the object in view; and in so doing, to submit to your Lordships a brief statement of the proceedings recently taken here and in the Colonies in connexion therewith.

On the 14th June last, a deputation waited upon His Grace the Duke of Newcastle, for the purpose of laying before His Grace a memorial showing the commercial, political, and military advantages of the proposed Railway, and the views of the promoters in soliciting the sanction and assistance of Her Majesty's Government in favour of the project on that occasion. His Grace remarked, that he was most anxious to consider favourably any feasible plan by which the proposed line of communication might be secured, but that it appeared to him, that the subject had not been placed before him in a shape which would enable him to propose it formally for the consideration of the Government. His Grace suggested at the same time, that a responsible body should be constituted, with whom he could communicate, and that more definite proposals should be submitted, as to the extent to which the Colonies of Canada, Nova Scotia, and New Brunswick, would bind themselves to afford financial support to the undertaking.

In conformity with these suggestions, a convention of delegates from the three Provinces met at Quebec on the 30th September last, when a resolution was unanimously adopted to the effect, "that the three Governments of Canada, Nova Scotia, and New Brunswick, do renew the offer made to the Imperial Government on the 26th October 1858, to aid in the construction of an Intercolonial Railway, to connect Halifax with Quebec, and that a delegation from each Province shall immediately proceed to England, with the object of pressing the project upon the attention of the Home Government, giving them the assurance that the Governments of the respective Provinces will endeavour to procure the necessary Legislation at the next ensuing Sessions of their respective Parliaments." The offer made in 1858 was, in effect, that the three Provinces should grant a free right of way, with land, &c., and provide and pay each of them 20,000*l.* sterling, or collectively 60,000*l.* annually, so long as it might be wanted towards the charge of the guarantee required for the raising of the necessary capital.

Conformably with this resolution, the Honourable Messrs. Vankoughnot (of Canada), Tilley (of New Brunswick), and Howe (of Nova Scotia), were appointed to proceed to England, as delegates, for the purpose of stating the views and wishes of the Provinces, and negotiating with the Government. They arrived early in the month of November, and having delivered their credentials at the Colonial Office, had every opportunity afforded them of discussing, both verbally and by written communications, the object of their mission with His Grace the Secretary of State; but the all-absorbing events in connexion with the "Trent" affair soon afterwards occurring, they were reluctantly obliged, as their several Parliaments were on the eve of meeting, to return to their duties, without carrying with them any definite intimation of the views of the Government on the matter in question. Prior to their departure, however, it was resolved, formally, to constitute a body in this country for the purpose of communicating with the Government, and a meeting was held accordingly, at which the Committee was appointed, on whose behalf I am deputed now to address your Lordships.

The Committee, after full consideration of the whole question, are of opinion, that their first step should be to satisfy your Lordship as to the feeling of this country, as well as of the Colonies, on the general question of the imperfect nature of the existing intercolonial communications, and the necessity, on commercial and political grounds, of establishing the Railway proposed, and with that view they have invited an expression of public opinion on the subject, the result of which will have been submitted to your Lordships in memorials similar to that which I have now the honour to forward.

The numerous papers which were delivered in to the Government by the Com missioners, prior to their departure, render it unnecessary for me here to trouble your Lordships with a repetition of the arguments therein adduced in support of the necessity of the projected line, whether regarded from an Imperial or a colonial point of view. The Committee earnestly desire to press these considerations upon the serious attention of the Government, and request me to state, that if their Lordships shall feel themselves justified in meeting the wishes of the Colonies, by recommending Parliament to take part in affording such aid in the construction of the proposed Railway, as the circumstances may require, they will be prepared, on their part, either to leave the construction of the Railway entirely in the hands of the Government and the provincial authorities, or to submit proposals of their own if the Government should be of opinion that the enterprise should be placed in the hands of a public company.

As the legislative assemblies of the several Provinces are now in Session, or about to meet soon for the despatch of business, the Committee trust that the subject will receive the early attention of the Government, and that the result may be communicated to them in time to influence the proceedings of the Provinces abroad, as the circumstances may require.

To the Right Hon.
The Lords Commissioners of
Her Majesty's Treasury.

I have, &c.
(signed *R. W. Crawford.*

To the Right Honourable the Lords Commissioners of Her Majesty's Treasury.

The Memorial of the undersigned Merchants, Bankers, and others of the City of London:

Showeth,

That for six months of the year we are dependent on the United States of America for our communications with Canada:

That in case of an interruption of our friendly relations with the United States, our intercommunication with Canada, during that period, is liable to be cut off at a moment's notice, and an important portion of the British Empire placed in great jeopardy:

That the completion of a line of Railway from Halifax to Quebec would render us perfectly independent of the United States. At present our trade and correspondence with our own Province of Canada, and the local trade and correspondence between the Lower British Provinces and foreign countries, is for half the year subject to the will and fiscal enactments of the United States:

By the completion of the proposed line, direct Railway communication will be established through British territory from Halifax to Lake Huron, a distance of 1,400 miles, accessible at all seasons, and thereby accelerate the delivery of the Canadian mails and despatches at least 36 hours in advance of the present route through the United States; and it would open up for colonization and settlement by emigrants from the mother country upwards of 14,000,000 acres of ungranted lands, within a journey of 10 days from our own shores:

That the present cost of conveying the British North American mails through the United States will be saved to the Imperial Treasury:

That the completion of this line of Railway would effect a great saving in military expenditure on the one hand, and render Canada much more easy of defence on the other, as she would be accessible within 10 days at all seasons, whilst at the present time she is, in a military point of view, excluded from communication with the mother country for six months of the year:

That your memorialists believe that the immediate completion of a line of Railway from Halifax to Quebec is essential to the preservation and integrity of the British Empire in North America:

That your memorialists believe that, in addition to its adding to the security and permanence of the British empire in North America, accelerating the communication with the mother country, reviving that identity of interest with her which has been too long engrossed by the United States, the proposed Railway would also effect a saving to the Imperial Treasury far exceeding any assistance that may be required for its completion.

Your memorialists therefore humbly pray, that Her Majesty's Government will be pleased to grant such aid and assistance, in conjunction with the Provincial Governments of Canada, New Brunswick, and Nova Scotia, as will bring to a successful completion this great national undertaking.

And your memorialists will ever pray.

(signed) *Alex. Gillespie,*
Jas. E. Cummins,
R. Carter,
W. R. Chapman,
John B. Ellis,
T. H. Milner,
William Chapman,
Tho. H. Brooking,
John Ranking,
} Directors of the Bank of British North America.

Jas. Hutchinson,
C. Morrison,
J. M. Noycester,
Wm. Gordon Thomson,
Baring Brothers & Co.,
} Directors of the Trust and Loan Company of Upper Canada.

S. Cunard.
D. Dunbar & Son.
Phillipps, Shaw & Lowther.

Glyn, Mills & Co.
H. Wollaston Blake.
Finlay, Hodgson & Co.
M. Rothschild & Co.
Charles Franks, Governor of the Canada Company.
Rob. W. Carden,
W. Wilson,
G. Bosanquet,
W. T. Hibbert,
F. H. Mitchell,
} Directors of the Canada Company.
M'Calmont, Bros. & Co.
Sam. Leo. Schuster.
R. Morinson.
John Chapman.
Charles Morris.
Thos. Hughes.
Charles Lewis Meryon.
John Dawson Lowden.
Thomas Allason.
Charles Hill.
Geo. Marshall.
Thomas Chapman,
Chas. R. Halford,
W. Simpson,
G. H. Tyser,
Rob. Burford,
W. Walter Saunders,
Jno. Hy. Steinmetz,
} Members of the Committee at Lloyd's.
Gillespies, Moffatt & Co.
Jaurrins, Grassie & De Lisle.
Gilman, Rankin, Shaw & Co.
Martin & Co.
Spooner, Attwoods & Co.
Morrison, Dillon & Co.
Dent, Allcroft, Lycett & Co.
Copestake, Moore, Crampton & Co.
Leaf, Sons & Co., Old Change.
J. F. Pawson & Co., St. Paul's Church Yard.
Ellis, Everington & Co., St. Paul's Church Yard.
Wm. Forman & Co., Queen-street, Cheapside, London.
P. Pn. The Union Bank of London, *W. W. Scrimgeour*, Manager.
P. Pn. London Joint Stock Bank, *F. Hewett*, Manager.
The City Bank, London, per *A. J. White*, Manager.
Boyson, Hoyer & Tagart, 19, St. Helen's Place.
P. Pn. London and County Bank, *W. M'Kirvan*, General Manager, 21, Lombard-street.
Heywood, Kinnairds & Co., 4, Lombard-street.
Thos. Hankey, 7, Fenchurch-street.
J. N. Berens, Governor of the Hudson's Bay Company.
F. N. Micklethwait, Director of the Electric and International Telegraph Company.
Crawford, Colvin & Co.
Alfred Charles Bridge, Chairman of General Mining Association.
Robert Grimston, Chairman of the Electric and International Telegraph Company.
Mark Huish, Deputy Chairman of the Electric and International Telegraph Company.
Geo. P. Molden,
William H. Smith, jun.,
Richard Till,
Thos. Critchley,
Wm. Fothergill Cooke,
Alfred Paget,
} Electric and International Telegraph Company.
M. Carmichael, Chairman of the Submarine Telegraph Company.
W. Newmarsh, 7, Cornhill.
Thos. Stirling Begbie, 4, Mansion House Place.
Laurence, Son, & Pearce, Auction Mart.
Smith, Payne & Smiths.
Wm. Hartridge.
Bischoff, Coxe & Bompas.
Dimsdale, Drewett & Co.

A. M. Wier, 28, Threadneedle-street.
James Capel, Norbury, Trotter & Co.
Brown, Janson & Co.
Burges & Stock,
Holmwood, Row & Co.,
George Laurence,
J. L. M. Farquhar,
Wm. Elliott,
Fred. Melhuish,
John Melhuish,
Leonard C. Wakefield,
Walter Hyslop,
Francis G. Fox,
Arthur Oldfield & Hammond,
John Sercombe,
Joseph Street,
Charles A. Hardman,
Arthur C. Burnaud,
George Allfrey Mist,
} Lloyd's.
M. C. Haliburton, Chairman,
H. E. Montgomerie, Director,
P. C. Glyn, Director,
} Canada Agency Association.
Churchill & Sim.
Joseph Frey, Director,
Wm. Hazlitt, Director,
} Canada Agency Association.
Barber Brothers.
John Gladstone & Co.
W. Winfield Crace.
S. Mill Brothers.
Henry Paull.
John Hackblock.
Fownes Brothers & Co.
Welch, Margetson & Co., 16 and 17, Cheapside.
Jones, Randall and Way, 127, Cheapside.
John Robertson, 4, Crown-court, Old Broad-street.
Archd. Macnicoll, 4, Crown-court, Old Broad-street.
S. Sewell, Gresham House.
Henry Sewell.
H. P. Roche, Lincoln's Inn.
Bradbury, Greatorex, & Beall, Aldermanbury, E. C.
J. & R. Morley, 18, Wood-street.
Robert Curling, 3, Frederick-place, Old Jewry.
John Wreford & Co., 17, Aldermanbury.
Thos. Tapling & Co., 1 to 8, Gresham-street West.
Foster, Porter & Co., Wood-street.
Cook, Son & Co., St. Paul's.
Charles Candy & Co., Watling-street.
William Evans, Gresham House.

To the Right Honourable the Lords Commissioners of Her Majesty's Treasury.

71, Old Broad-street, E.C.
25 February 1862.

My Lords,

I HAVE been requested, as one of the representatives of the City of London, to forward to your Lordships the accompanying memorial of the directors of the New Brunswick and Nova Scotia Land Company, praying that Her Majesty's Government will co-operate with the Governments of Canada, New Brunswick, and Nova Scotia, in affording such pecuniary aid as will ensure the completion of the proposed Intercolonial Railway between Halifax and Quebec at the earliest possible period.

I have, &c.
(signed) *R. W. Crawford.*

To the Right Honourable the Lords Commissioners of Her Majesty's Treasury.

The Memorial of the Directors of the New Brunswick and Nova Scotia Land Company—

Respectfully showeth,

That your memorialists and their co-stockholders own about half a million acres of land in the Province of New Brunswick, which they purchased from the Crown in the year 1833.

That they have expended in purchase-money, roads, bridges, &c. about 200,000 *l.* sterling, and have hitherto received no return for their outlay.

That your memorialists have viewed with serious apprehension and alarm the recent threatened outbreak of hostilities between Great Britain and the United States, and the difficulties, danger, and uncertainty attending the transport of troops and munitions of war for colonial defence.

That these apprehensions are shared by a large proportion of the emigrating classes in this country, whose arrangements for emigrating to New Brunswick have consequently been suspended, or directed in another course, and the property of your memorialists damaged thereby.

That in the opinion of your memorialists the best, if not the only, guarantee for the preservation and future prosperity of the British North American possessions would be the construction of an Intercolonial Railway to connect the three Provinces of Canada, New Brunswick, and Nova Scotia with the Atlantic Ocean at all seasons of the year.

That the proposed Railway would bind those Colonies more closely together; would secure them in the peaceful and uninterrupted enjoyment of their industrial occupations, and, according to a long experience of your memorialists, would tend more than anything else to develop the resources of the Colonies and promote their prosperity.

Your memorialists therefore respectfully pray that Her Majesty's Government will co-operate with the Governments of Canada, New Brunswick, and Nova Scotia, in affording such pecuniary aid as will ensure the completion of this great national and colonial undertaking at the earliest possible period.

And your memorialists will ever pray, &c.

Given under our hand, and the seal of the company, this twenty-eighth day of January, One thousand eight hundred and sixty-two, by order of the Court of Directors.

L.S.

Thos. Hughes, Chairman.
Wm. Aggas, Secretary.

To the Right Honourable the Lords Commissioners of Her Majesty's Treasury.

The Memorial of the Master, Wardens, Searchers, Assistants, and Commonalty of the Corporation of Cutlers, in Hallamshire, in the County of York—

Showeth,

That in conjunction with many other commercial and municipal corporations, and principal manufacturers and merchants in this country, your memorialists solicit the assistance of Her Majesty's Government to the development of a perfect system of communication with our North American Colonies, by the completion of the Railway from Halifax to Quebec.

That for this important object the several Provinces of Canada, New Brunswick, and Nova Scotia, have agreed to contribute a guarantee upon one moiety of the cost of the Railway, and it is confidently submitted that the contribution of the other moiety by this country would be well repaid by the readier means of transporting troops and stores at any period of the year to Canada, thereby considerably reducing to this country the expense of our military force there, by greatly accelerating the postal correspondence with British North America and a considerable portion of the United States, and by the increased facilities to the exchange

exchange of British manufactures for the very valuable agricultural and mineral productions of the western world.

Your memorialists, therefore, do most earnestly press upon your Lordships the consideration of the matters referred to, and the importance of taking steps without delay, for helping forwards the completion of the Railway from Halifax to Quebec.

By order of the master, wardens, searchers, assistants, and commonalty of the Corporation of Cutlers, in Hallamshire, in the county of York, at their common hall in Sheffield assembled.

George Wilkinson,
Master Cutler.

To the Right Honourable the Lords Commissioners of Her Majesty's Treasury.

The Memorial of the Directors of the Chamber of Commerce and Manufactures, Incorporated by Royal Charter in the City of Glasgow—

Showeth,

That for six months of the year we are dependent on the United States of America for our communication with Canada.

That in case of an interruption of our friendly relations with the United States, our intercommunication with Canada during that period is liable to be cut off at a moment's notice, and an important portion of the British Empire placed in great jeopardy.

That the completion of a line of Railway from Halifax to Quebec would render us perfectly independent of the United States; at present, our trade and correspondence with our own Province of Canada, and the local trade and correspondence between the lower British provinces and foreign countries is, for half the year, subject to the will and fiscal enactments of the United States.

By the completion of the proposed line, direct railway communication will be established through British territory from Halifax to Lake Huron, a distance of 1,400 miles accessible at all seasons, and thereby accelerate the delivery of the Canadian mails and despatches at least 36 hours in advance of the present route through the United States; and it would open up for colonization and settlement by emigrants from the mother country upwards of 14,000,000 acres of ungranted lands within a journey of 10 days from our own shores.

That the present cost of conveying the British North American mails through the United States will be saved to the Imperial Treasury.

That the completion of this line of Railway would effect a great saving in military expenditure on the one hand, and render Canada much more easy of defence on the other, as she would be accessible within 10 days at all seasons, whilst at the present time, she is, in a military point of view, excluded from communication with the mother country for six months of the year.

That your memorialists believe that the immediate completion of a line of Railway from Halifax to Quebec is essential to the preservation and integrity of the British Empire in North America.

That your memorialists believe, that in addition to its adding to the security and permanence of the British Empire in North America, accelerating the communication with the mother country, reviving that identity of interest with her which has been too long engrossed by the United States, the proposed Railway would also effect a saving to the Imperial Treasury, far exceeding any assistance hat may be required for its completion.

Your Memorialists, therefore, humbly pray, that Her Majesty's Government will be pleased to grant such aid and assistance, in conjunction with the Provincial Governments of Canada, New Brunswick, and Nova Scotia, as will bring to a successful completion this great national undertaking.

And your Memorialists will ever pray.

Henry Dunlop, Chairman.
J. S. Fleming, Secretary.

CANADA (HALIFAX, &c., RAILWAY).

COPY of MEMORIALS, and of other Representations recently addressed to the Lords Commissioners of Her Majesty's Treasury, with reference to a proposed Communication by RAILWAY between the Port of *Halifax* and the Provinces of *Canada* and *New Brunswick*.

(Mr. Crawford.)

Ordered, by The House of Commons, *to be Printed*,
5 *May* 1862.

209.

Under 2 *oz.*

CANADA (HALIFAX, &c. RAILWAY).

RAILWAYS (BRITISH NORTH AMERICA).

RETURN to Two Addresses of the Honourable The House of Commons, dated 11 April and 2 May 1862;—*for*,

(ADDRESS, 11 April 1862.)

A "COPY of any OFFICIAL COMMUNICATIONS between the Secretary of State for the Colonies and the Commissioners representing the Provinces of *Canada*, *New Brunswick*, and *Nova Scotia*, on the subject of a Proposed Communication by RAILWAY between the Port of *Halifax* and those Provinces."

(ADDRESS, 2 May 1862.)

'THAT there be added to the RETURN relative to CANADA (HALIFAX, &c. RAILWAY), addressed for on the 11th day of April last, COPIES or EXTRACTS of any DESPATCHES from the Governors of those Colonies on the same subject, and of any ANSWERS which may have been given conveying the Decision of Her Majesty's Government."

Colonial Office, 5 May 1862.

C. FORTESCUE.

(*Mr. Crawford.*)

Ordered, by The House of Commons, *to be Printed*, 5 *May* 1862.

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1.	The Delegates from Canada, Nova Scotia, and New Brunswick, to the Duke of Newcastle, K.G.	2 December 1861	Memorialising the Duke of Newcastle on the subject of the proposed Intercolonial Railway between Halifax and Quebec, and praying for an early decision. Arguments in favour of their proposals are embodied in the documents enclosed, viz.: Memorandum by the Delegates; Letter from Messrs. Johnston & Archibald, dated 20 August 1857, addressed to the Right Honourable H. Labouchere; Letter from the Delegates to the Secretary of State, dated 26 October 1858; and a Memorandum by Messrs. Macdonald & Rose - -	1
			DESPATCH FROM THE GOVERNOR GENERAL OF CANADA.	
2.	Viscount Monck to the Duke of Newcastle, K.G.	31 October 1861 (No. 4.)	Enclosing Copy of a Recommendation of the Executive Council of Canada, made in consultation with the Members of the Councils of Nova Scotia and New Brunswick, to renew the offer made to the Imperial Government to aid in the construction of an Intercolonial Railway between Halifax and Quebec; and also Copy of a further Order in Council, approved by Sir E. Head, authorising the Honourable P. M. Vankoughnet, a Member of the Executive Council, to proceed to England for that purpose - - - -	15
			DESPATCHES FROM THE LIEUTENANT GOVERNOR OF NOVA SCOTIA.	
3.	The Right Hon. the Earl of Mulgrave to the Duke of Newcastle, K G.	4 April - 1861 (No. 27.)	Transmitting a joint Address to Her Majesty, passed by the Legislative Council and House of Assembly of Nova Scotia, on the subject of the Intercolonial Railway, and assuring Her Majesty of their anxiety for the completion of the line. Should the Duke of Newcastle be enabled to advise Her Majesty to entertain the proposition, the Province will appoint a Delegation to proceed to England - - - - -	17
4.	The Right Hon. the Earl of Mulgrave to the Duke of Newcastle, K.G.	29 October - 1861 (No. 73.)	Announces the appointment of the Honourable Mr. Howe and the Honourable Mr. M'Cully, as Delegates, to proceed to Quebec, to consult with the Government of Canada, in hope that some united action might be agreed upon to facilitate the carrying out of the Intercolonial Railway; points out the advantages to be derived by an unbroken line of railway of 1,400 miles in extent; states that Mr. Howe has been commissioned to proceed to England to co-operate with the gentlemen selected by the Governor General of Canada and the Governor of New Brunswick - - - - - - - - - - -	18

No. in Series.	From Whom.	Number and Date.	SUBJECT.	Page.
			DESPATCH FROM THE LIEUTENANT GOVERNOR OF NEW BRUNSWICK.	
5.	Lieutenant Governor the Hon. J. H. T. Manners Sutton to the Duke of Newcastle, K.G.	12 April - 1861 (No. 11.)	Enclosing a joint Address to Her Majesty from the Legislative Council and House of Assembly, praying that Imperial aid may be afforded to the construction of the Intercolonial Railway - - - - - -	20
			DESPATCHES FROM THE SECRETARY OF STATE.	
6.	The Duke of Newcastle, K.G., to the Viscount Monck.	11 December 1861 (No. 17.)	Acknowledging Despatch No. 4, of the 31st October 1861; transmitting copies of Minutes of the Executive Council respecting the appointment of Delegates to proceed to England, and authorizing the Honourable P. M. Vankoughnet to represent the Government of Canada - - - - - - - - - - -	22
7.	The Duke of Newcastle, K.G., to the Viscount Monck.	12 April - 1862 (No. 93.)	In reply to Despatch No. 4, of the 31st October 1861, reporting that at a Meeting at Quebec of Members of the Councils of Canada, Nova Scotia, and New Brunswick, it was resolved that the three Governments should renew the offer made to the Imperial Government to aid in the construction of an Intercolonial Railway between Halifax and Quebec; and that Mr. Vankoughnet had been appointed to represent Canada, Mr. Howe, Nova Scotia, and Mr. Tilley, New Brunswick. Announces the decision of Her Majesty's Government on the subject - - - - - - - - -	22

COPY of any OFFICIAL COMMUNICATIONS between the Secretary of State for the Colonies and the Commissioners representing the Provinces of *Canada*, *New Brunswick*, and *Nova Scotia*, on the subject of a Proposed Communication by RAILWAY between the Port of *Halifax* and those Provinces; also, COPIES or EXTRACTS of any DESPATCHES from the Governors of those Colonies on the same subject, and of any ANSWERS which may have been given conveying the Decision of Her Majesty's Government.

— No. 1. —

No. 1.
Memorial by Delegates from Canada, &c. to the Duke of Newcastle, K.G.
2 December 1861.

COPY of a MEMORIAL addressed by the Delegates from *Canada*, *Nova Scotia*, and *New Brunswick*, to the Duke of *Newcastle*, K. G., dated London, 2 December 1861.

May it please Your Grace,

THE undersigned, having presented their credentials, and discussed informally with your Grace, and with some other Members of the Cabinet, the objects of their mission, were about to forward to your Grace a communication on the subject of the intercolonial railroad (the draft of which they enclose) when the startling events of the past week rendered that task supererogatory.

Those events so completely vindicate the forethought and patriotism of the Colonial Legislatures, of the gentlemen who, from time to time, have represented their views in this country, and of the British statesmen who have given them countenance and aid, that the undersigned deem it unnecessary to do more than to present to your Grace a list of the papers in which their arguments are embodied, and a copy of the Minute of Council by which they have been empowered to make, as they now do in the terms of that Minute, a renewed offer to Her Majesty's Government.

The war, which in the Provinces we have long foreseen as likely to arise out of complications between the mother country and the United States, is now imminent; the frontier which would have been defended by means of rapid communication, is unprotected, and exposed to the concentration of troops upon the termini of at least seven railroads.

Winter is upon us, and a hundred thousand men can be thrown by the enemy upon the frontier with more ease than a single battery can be transported to Canada, or a single barrel of flour can be brought down to the seaboard Provinces, which, cut off by war from the United States, and by ice from Canada, must depend upon Europe for breadstuffs with the granaries of half a continent in their rear.

If those events, and strategic contrasts, now patent to all the world, do not plead the cause of British America, and finally settle this question, the undersigned feel that any thing they could add would be a needless intrusion upon the patience of the Cabinet.

The undersigned do not believe, that, in presence of the perils which all Her Majesty's subjects are called upon to confront, an hour should be lost in deciding upon a question which lies at the very basis of national defence. If the Provinces are to be plunged into a war without the cheap defence which they have urged was indispensable to their protection, let them have at least the satisfaction of reflecting that it is for the last time; and if our commerce is to be imperilled, and our cities exposed to pillage and conflagration, let us not have to defend both with the depressing conviction on our minds, that Her Majesty's Ministers are indifferent to our position, and care less for the security of our frontier than they do for that of their island homes.

Whatever the answer is to be, the undersigned would respectfully urge that it should not be long delayed. War will find all the Provinces in many ways unprepared, and the undersigned, upon whom will rest heavy responsibilities,

will require every hour of time to meet the exigencies of the period as they ought. They will not permit themselves to believe that any but one answer will be given, but whatever the answer is, it should if possible be prompt and decisive, that their minds may be freed from other thoughts than those which the stern duties of the hour imperatively demand.

We have, &c.
(signed) *P. M. Vankoughnet,*
for Canada.
Joseph Howe,
for Nova Scotia.
S. L. Tilley,
for New Brunswick.

Enclosure 1, in No. 1.

Encl. 1, in No. 1. AT a Meeting held in the Executive Council Chamber at Quebec, on Monday, the 30th September 1861, there were present—

The Honourable	Joseph Howe,	From Nova Scotia.
„	Mr. Archibald,	
„	Mr. M'Culley,	
The Honourable	Mr. Tilley,	From New Brunswick.
„	Mr. Smith,	
„	Mr. Mitchell,	
„	Mr. Walters,	
The Honourable	Mr. Cartier.	
„	Mr. Macdonald.	
„	Mr. Ross.	
„	Mr. Vankoughnet.	
„	Mr. Alleyn.	
„	Sir N. F. Belleau.	
„	Mr. Galt.	
„	Mr. Cauchon.	

And it was unanimously resolved, that the three Governments of Canada, New Brunswick, and Nova Scotia do renew the offers made to the Imperial Government on the 26th day of October 1858, to aid in the construction of an intercolonial railway, to connect Halifax with Quebec; and that a delegation from each Province shall immediately proceed to England, with the object of pressing the project upon the attention of the Home Government, giving them the assurance that the Governments of the respective Provinces will endeavour to procure the necessary legislation at the next ensuing Sessions of their respective Parliaments.

It was further resolved, that the route to be adopted be decided by the Imperial Government.

Certified,
(signed) *Wm. H. Lee,*
C. E. C.

Enclosure 2, in No. 1.

MEMORANDUM.

Encl. 2, in No. 1. THE undersigned have been deputed by the Governments of Canada, Nova Scotia, and New Brunswick to submit a renewed proposition for the completion of the intercolonial railroad connecting the harbour of Halifax, which is open all the year round, with the railways on the St. Lawrence. Having delivered our credentials, and discussed the subject of our mission with his Grace the Duke of Newcastle and with some other members of the Cabinet, we now proceed to submit in a more formal shape a recapitulation of the grounds upon which we think that the proposition we have been sent to make ought to be favourably and speedily entertained.

These naturally divide themselves under three heads:—

1. To what extent previous communications with the Imperial Government have justly led the Provinces to rely upon Imperial assistance in the construction of that which has been admitted to be an Imperial work:

2. The reasons of public policy, which render its construction at the present time a measure of wise precaution, indispensable to our national defence: and,

3. The financial aspect of the question.

1. On

1. On this head, we beg, in the first place, to refer to the memorandum dated August 1857, and signed by Messrs. Macdonald and Rose, together with the letter of Messrs. Johnston and Archibald, of 20 August 1857, and also to the memorandum, dated 26 October 1858, and signed by Messrs. Cartier, Ross, Galt, Fisher, Smith, Tupper, Henry, and Dickey, which contain the history of the question as well as the general argument. These papers are enclosed.

To the memorandum and letter of August 1857 a reply is contained in the Despatch of the Right honourable H. Labouchere, addressed to the Governor General of Canada, and dated 15th May 1858. That despatch states, "Although participating with the members of the several local governments, and with their own predecessors in office, in a strong sense of the importance of this object, Her Majesty's advisers cannot feel themselves justified in applying to Parliament for the required guarantee. Their reasons for declining to take this step are solely of a financial description. They feel that the heavy expenditure to which this country has been subjected of late years, and the calls upon the resources of the Empire for pressing emergencies, do not leave them at liberty, for the present at least, to pledge its revenue to so considerable an extent for the purpose of assisting in the construction of public works of this character, however in themselves desirable."

In answer to the memorandum of the 26th October 1858, a Despatch from the Right Hon. Sir E. B. Lytton to the Governor General of Canada and the Lieutenant Governors of New Brunswick and Nova Scotia, and dated 24th December 1858, states, that, "Independently of any military advantages which might attend the existence of an uninterrupted communication by rail over British territory, in the event of any disturbance of the existing friendly relations of Great Britain with all other countries, some benefits of an Imperial kind would at once accrue from the completion of the Intercolonial Railway; the letters from England would pass over a shorter and cheaper route, and the movement of troops would gain in point of convenience and economy."

The Despatch, however, postpones Imperial assistance, for reasons analogous to those given in the despatch of Mr. Labouchere.

This Despatch closes the official correspondence on the subject.

We submit, therefore, appealing to past communications, that the Provinces have full justification for relying upon Imperial co-operation; to be rendered at least when the position of Great Britain warranted her in undertaking the responsibility of the completion of the Intercolonial Railway.

The undersigned feel that here they might rest their case, as they do not believe that Her Majesty's Advisers will forget the hopes held out by previous Governments, or press a literal construction of any bargain or understanding with the Colonies, where, especially as in this case, it can be shown that, in a measure of common interest and mutual defence, the Colonies have already done more than their share; but they are desirous to meet every argument by which the proposition for Imperial aid may be opposed.

Those who in this country fear the cost of colonial garrisons in the west, should remember that the British Provinces lost more during the last war than those garrisons have ever cost, and that in a single year of war with the United States they would again lose more than the value of all the military expenditure for half a century to come.

We are content, however, with our present position, and with the affectionate and honourable relations with the mother country, which it is clearly our mutual interest to maintain, and which were never more firmly based in thorough loyalty than at this moment. But the question arises always, how can the connexion be best cemented and the frontier put in the best attitude of defence.

The Colonial Secretary, who has recently visited America, does not require to be informed, that since the war of 1812 the United States have covered their country with a network of railways, and that seven of these lines run directly in upon the Canadian frontier, while others traverse or reach the shores of the Great Lakes, commanding the chief *entrepôts* of Canadian commerce; and others, again, extend to the seaboard cities directly fronting the Province of Nova Scotia, or through the State of Maine to within 80 miles of the borders of New Brunswick. If these railroads did not exist, the colonial militia, with slight aid from the Imperial Government, could defend our frontiers in case of war, as they did in 1812; but by the aid of these railroads it is obvious that the United States could, at any time within a week, concentrate upon their termini 100,000 men or more, a force that we might in the end successfully oppose, but one so formidable as to enable them to capture, and, if they were so disposed, to destroy our chief cities before, by any means now at our disposal, we could concentrate our domestic forces, or receive effective aid from England. While the United States maintained a standing army of only 10,000 men, the danger of a surprise did not appear to be very imminent. A few British regiments would have been sufficient to cope with such a force, and our volunteers, with such instructors, could have been disciplined as fast as theirs.

But all this has been changed within the year. The Northern States have now at least a quarter of a million of embodied troops upon the Potomac, and considerable numbers under arms in various States, besides 50,000 three-months men, who have returned to their homes with some degree of discipline, and some knowledge of camp life. The whole of the Northern States is one vast recruiting ground. Should the present civil war continue, it is contended by some that there will be full employment for these forces at the south; but vulnerable as Canada now is, she invites attack from that surplus force which now exists. But when this contest ends, and end it must (even should no conflict with us mark the interval), either by exhaustion, by conquest, or by the interference of Foreign

Powers, there will remain in the Northern States 200,000 or 300,000 trained soldiers, with a fair proportion of ambitious military chieftains emulous of distinction, or, it may be, not indisposed to wipe out in foreign fields the remembrance of discomfiture experienced in civil strife. Besides disciplined masses of soldiers, the United States will have accumulated vast stores of warlike materials. Enormous quantities of small arms and of cannon have been purchased or manufactured, and the establishments founded by a lavish expenditure can readily supply as many more. The United States thus have been suddenly transformed from peaceful communities pursuing lawful commerce to a military republic.

The British Provinces survey these phenomena without fear, but not without emotion; and they ask, as the first measure of indispensable precaution and obvious defence, that the Intercolonial Railroad shall be completed without delay.

Without that road the Provinces are dislocated, and almost incapable of defence for a great portion of the year, except at such a sacrifice of life and property, and at such an enormous cost to the mother country, as makes the small contribution which she is asked to give towards its construction, sink into insignificance. With that railroad we can concentrate our forces on the menaced points of our frontier, guard the citadels and works which have been erected by Great Britain at vast expense, cover our cities from surprise, and hold our own till reinforcements can be sent across the sea; while without the railway, if an attack were made in winter, the mother country could put no army worthy of the national honour, and adequate to the exigency, upon the Canadian frontier, without a positive waste of treasure far greater than the principal of the sum, the interest of which she is asked to contribute, or rather to risk.

The British Government have built expensive citadels at Halifax, Quebec, and Kingston, and have stores of munitions and warlike material in them; but their feeble garrisons will be inadequate for their defence, unless the Provincial forces can be concentrated in and around them. An enterprising enemy would carry them by coups de main before they could be reinforced from England; and, once taken, the ports and roadsteads which they have been erected to defend would not be oversafe for the naval armaments sent out too late for their relief.

Since this subject was pressed upon the attention of the British Government in 1851, taking the very moderate military expenditure of last year as the basis of an estimate, 4,477,590*l.* have been expended in the British Provinces for the maintenance of a few thousand troops in a time of profound peace. Of what avail is this expenditure? With what object has it been incurred, or are similar disbursements to be continued, if the only work which, during five months of the year, will furnish the means of securing the Provinces is to be neglected? Why spend so much money if it is to be of no use hereafter, and if proper precautions are not taken to protect the property which has been made thus valuable?

Therefore, we desire to strengthen our frontier by the completion of a work indispensable to its defence. It is not too much to say, that the construction of the Intercolonial Railroad might save us the cost of a war, for the Americans are themselves sagacious enough to see that with that work completed surprise is impossible, and the results of a protracted war at least extremely doubtful. Without it, Canada and the Maritime Provinces may be cut asunder and outflanked at any moment, without the possibility of their population leaning upon common points of support, and aiding and strengthening each other. We are reluctant to believe, then, that Her Majesty's Government will forget the opinion expressed by Lord Durham in his Report, or will, even if disposed to construe strictly the terms of the offer made in 1851 by Lord Grey, overlook the momentous interests now at stake, or the altered circumstances which at the present moment invest this subject with so much of national interest and importance.

Though the undersigned argue this question upon higher grounds than those of mere finance, they repeat that they are not indifferent to the financial aspect of it.

The Colonies, unaided, have themselves, since 1851, already made nearly one half of the railway route, and the construction of about 350 miles more, by the joint action of the Imperial and Colonial Governments, will complete the Intercolonial Railway. Our Governments and people, having done so much already, now propose to contribute more than one half of the liability of what remains, and thus to be responsible for 60,000*l.* a year, and also for the right of way. The mother country is only now asked to give 60,000*l.* a year, so far and so long only as the deficiency of the revenue of the railway would need it.

What is she to get or to save, is not, however, an unreasonable question. We will endeavour to supply an answer.

The British Government now pay to two lines of steamers, one of which carries her mails and passengers past the British Provinces, 189,500*l.* Make the Intercolonial Railroad, and there cannot be the slightest pretence under any circumstances for continuing these subsidies beyond the port of Halifax, and the subsidy ought then not to exceed 112,000*l.*, the amount of postage now actually received.

If the contract to the Galway Line is renewed, the subsidy should only cover the sea service from the nearest point in Ireland to the nearest port on the Continent of America. It is a mistake to suppose that subsidies are required to maintain communications between the Maritime Provinces and the United States; steamers run all summer from Halifax and St. John to Portland and Boston, maintained by private enterprise, and will soon be adequate to the winter service, if left to a fair field of open competition. Subsidies to a reliable line of ocean steamers may, by the British Government, notwithstanding the differences

differences of opinion existing, be considered indispensable, but these, if limited to the amount of postage (112,000*l.*), would save 77,500*l.* a year, so soon as the International Railroad is completed to Halifax. This saving would more than cover the entire sum which the Imperial Government is now asked to risk to insure the construction of that work.

But in addition to the cost of ocean steamers, the British people now pay for the transmission of their correspondence with their own provinces, 12½ cents per ounce on letters and two cents on newspapers sent through the United States, amounting in the whole to a large sum per annum, which could be saved to the country.

The cost of conveying by land a single regiment from Halifax to Quebec in 1838, is stated to have been 30,000*l.* The cost of transportation in winter was so great in 1855, that the regiments so much wanted in the Crimea, and not required in Canada at all, had to be left there till the war was over.

Were the Intercolonial Railway built, troops could be forwarded from Halifax to Quebec in 24 hours.

If to the amount which may be fairly deducted from the steam ship subsidies be added the amount paid to the Post Office of the United States, and the actual cost of moving troops and material, on an average of 10 years, the figures will show an amount of saving far beyond the aid asked for, and which ought to satisfy the most rigid economist that while what we urge secures Imperial interests now in peril, it saves the resources of the English people.

There is one view of this subject, which surely should not be overlooked. Within the last 10 years, but 235,285 emigrants from the British Islands went to the Provinces, while more than six times the number, or 1,495,243, went to the United States, and are now citizens of that country, whose northern commercial policy is seen in the Morrill Tariff, which shuts out the manufactures of this country. Let us hope that it is not too late to turn the tide of emigration elsewhere, that the life blood of the parent state may not be drained off to extend the power of a people who alone can threaten or endanger the British rule in America, and whose jealous sensitiveness renders a continuance of their friendship towards Great Britain at all times uncertain.

To sum up, the proposal made to the British Government is to join the three Provinces in a guarantee of four per cent. upon 3,000,000*l.* sterling, the assumed cost of the proposed works, less the cost of the right of way, which the Provinces will provide. The Provinces are ready to pass bills of supply for 60,000*l.* a year, if the Imperial Government will do the same; and as no doubt this Imperial route will gradually work on with increasing returns, the sum of the risk will gradually diminish, until at last, and perhaps before many years are over, the liability may cease altogether. The Canadian Railway Companies are open to treat for the working of the new line, so as to avoid any liability beyond the gross amount of the joint guarantee. The selection of the route of the line is left solely to the British Government.

Should the British Government prefer to raise the capital for building the road, their outside responsibility under such arrangements would be 3½ per cent. on 3,000,000*l.*, or about 97,500*l.* a year, and the Provinces would still be responsible for one-half, leaving a net liability to the British Government of only 48,750*l.* a year; but if they are not disposed thus to increase their nominal and decrease their real responsibility, the sum required for the estimated length of 350 miles of railway, namely 3,000,000*l.*, can be raised on the terms named; viz., by the mutual guarantee of 120,000*l.* a year, or 60,000*l.* a year from the Provinces, and 60,000*l.* a year from the British Government, which guarantee will enable the issue at par of 3,000,000*l.* of four per cent. stock.

And now, believing that in this and former papers submitted to the Imperial authorities, all the arguments in detail in favour of the intercolonial policy sought for have been fully set forth, the undersigned have only to add that it appears to them that such arguments are conclusive. That the subject should be looked upon and dealt with mainly in regard to the consideration of permanent connexion between Great Britain and the Provinces, and the relative positions of England and the United States, in the event of hostilities between them.

Is or is not the completion of the line of railway between Halifax and Quebec essential, or at least of infinite importance, as enabling England to carry on by land as well as by sea, a war with the only power in America which can assail her, as enabling her to protect a portion of her own dominions?

Should war with the United States of America break out during the present or any winter, how is England to cope with her adversary by land? How can she transport a month hence to the points of strategy in Canada, the necessary troops and material of war? And to what mortification and disaster may not her few soldiers usually in garrison there be subjected, for want of that aid which the Intercolonial Railway could bring them? Again, England has pledged herself, and without a formal pledge would doubtless strive that the whole force of the Empire should be put forth for the defence of the Provinces in the event of a foreign invasion; but how can that strength be put forth in Canada without the means of reaching it in winter.

But while she may by her navy hold the American seaboard in terror, the American forces can enter Canada, and 3,000,000 of people will be left to cope with 20,000,000, in a war in the cause of which they would have had no concern, and in the conduct of which they could have no voice.

A dispute in the China seas may involve the United States and England in war, and

Canada without this means of protection will have to bear the brunt and suffering of it, without having provoked the difference, or being directly interested in the quarrel.

The undersigned must desire it to be understood that the financial position of the Provinces does not enable them to hold out any hope that more than is herein proposed can be offered by the Provinces themselves. The heavy responsibilities for her railway undertakings now pressing upon her have compelled Canada, in order to preserve her credit with her debenture holders, to impose import duties on a scale which has already raised discussion in England, and laid her under the imputation of having had resort to a system of commercial protection, when in fact she was simply straining her resources to preserve her credit and good faith.

To her, therefore, as well as to the other Provinces, greater sacrifices are impossible.

As the selection of the route to be adopted has been confided by the Provinces to the British Government, and all local disputes in regard to it thus removed, the undersigned would urge the importance of making use of the coming winter to select and locate the line of railway. And, if it were possible to lay upon the ground some of the heavier material, most valuable time would also be gained.

The line can be completed in two summers, and if the coming winter be used, the railway may be completed by the fall of 1863.

[Draft of the proposed Memorandum referred to in the Letter to his Grace of the 2d December 1861.]

Enclosure 3, in No. 1.

Encl. 3, in No. 1.

Sir, 2, Suffolk-place, Pall Mall East, 20 August 1857.

In preparing, agreeably to your desire at our late interview, a statement of the considerations on which we solicit, on behalf of Nova Scotia, subject to the approval of the Legislature, Imperial assistance towards the construction of a railroad from Halifax to Quebec, through British territory, we beg to recall the fact that the application is not now made for the first time.

2. The policy of connecting the Provinces of British North America by a line of railway extending from the sea shore of Nova Scotia into the interior of Canada, was first suggested by a British statesman of great sagacity and political foresight. Lord Durham saw the immense advantages of this great work, not only to the Provinces but to the Empire.

The idea, once suggested, was not lost sight of. Earl Grey, when Colonial Minister, felt the importance of the question, and in a Despatch to Lord Elgin, dated 31st December 1846, he referred to a convention, to be composed of delegates from the Government of the different British Colonies, the consideration of "the mode in which the Provinces should co-operate with each other and with Her Majesty's Government in promoting the construction of the proposed railway."

3. The Provinces thus invited by Her Majesty's Ministers to the consideration of a question of deep interest, entered eagerly upon it; and from that period to the present have done everything in their power to promote this great work.

Up to 1850, various modes of carrying it out were suggested from time to time; and the different Colonial Legislatures readily gave to each scheme that was brought forward such offers of assistance as their resources enabled them to afford. In the summer of that year, however, their hopes of success were frustrated by a Despatch from the Colonial Secretary, informing the Government of Nova Scotia that the British Ministry, receding from their original position, would afford no assistance to carry out a project too great for unassisted colonial resources.

4. Disappointed in her original hopes, Nova Scotia turned her attention to the construction of such local railways as were required for the development of her own commerce and industry, and shortly afterwards sent to England a delegate charged to endeavour to interest the British Government in the question, so as to procure such a guarantee of the Provincial bonds as would enable her to borrow the money she required, upon favourable terms.

The delegate, upon submitting his propositions, was informed that the Government could not undertake to furnish any aid to projects of merely Provincial importance, but he was invited to a renewal of the intercolonial scheme. This was again deliberately considered by Her Majesty's Government; and Earl Grey communicated through Mr. Hawes, in a Despatch, dated 10th March 1851, a formal decision on the part of himself and his colleagues to afford a guarantee, or advance the money from the Imperial Treasury, upon the express condition of provision being made by the three Provinces for opening a complete line of communication from Halifax to Quebec or Montreal, through British territory; and in a communication to Lord Elgin, then Governor of British America, written four days afterwards, he put forth, as the ground of the guarantee, the importance of the work to the interests of the Empire.

We refer to the correspondence on that occasion, and to the engagements given on the part of the Government, as expressed in Earl Grey's Despatches to the Governor General and to Mr. Howe, through Mr. Hawes, before alluded to.

The principles upon which our present application is made are stated with so much significancy in these documents, that we beg permission to quote a few passages.

In

In Mr. Hawes' letter the delegate of Nova Scotia was told, "You are already aware, from the repeated conversations which you have had with Lord Grey, of the strong sense entertained by his Lordship and colleagues of the extreme importance, not only to the Colonies directly interested, but to the Empire at large, of providing for the construction of a railway by which a line of communication may be established on British territory, between the Provinces of Nova Scotia, New Brunswick, and Canada; and the various plans which have been suggested for the accomplishment of this object have undergone the most attentive consideration." Mr. Hawes is directed to state, in very distinct terms, the conditions and considerations on which the aid was granted. His language is—

"As Her Majesty's Government are of opinion that they would not be justified in asking Parliament to allow the credit of this country to be pledged for any object not of great importance to the British Empire as a whole, and they do not consider that the projected railway would answer this description, unless it should establish a line of communication between the three British Provinces, it must be distinctly understood that the work is not to be commenced, nor is any part of the loan for the interest on which the British Treasury is to be responsible to be raised until arrangements are made with the Provinces of Canada and New Brunswick, by which the construction of a line of railway, passing wholly through British territory from Halifax to Quebec or Montreal, shall be provided for to the satisfaction of Her Majesty's Government."

The language of the Colonial Secretary is not less emphatic: he says, "From the correspondence which I have already had with your Lordship on the subject of the projected railroad from Halifax to Quebec, you are well aware that, although Her Majesty's Government have not hitherto been enabled to take any steps towards the execution of that work, it is an undertaking which they have long earnestly desired to see accomplished, as they believe it to be one calculated very greatly to advance the commercial and political interests both of the British Provinces in North America and of the mother country. It is therefore with great satisfaction that I have now to acquaint your Lordship that I have reason to hope that the time is at length come when this great national enterprise may be undertaken with advantage, if there still exists, as I am assured there does, as strong a desire to promote it, on the part of the inhabitants of Canada and New Brunswick, as they formerly expressed, and as the people of Nova Scotia have recently manifested."

The three Provinces accepted the proffered assistance on the conditions announced to them, and agreed upon a line of railroad along the northern shore of New Brunswick, acceptable to the British Government. The contemplated enterprise was only abandoned in consequence of a misunderstanding as to the extent of the guarantee proposed by Earl Grey, which, on the one hand, was supposed to include a railroad through New Brunswick, along the Bay of Funday, towards the boundary of the United States, while, on the other hand, it was held to be confined to the direct line to Canada.

Subsequently this obstacle was attempted to be removed by an arrangement among the governments of the three Provinces, that the line through New Brunswick to Canada should be transferred from the northern shore to the Valley of St. John. Her Majesty's Government declined to accept the latter line, on the ground that it defeated a material consideration on their part, by bringing the line of communication through the British Provinces in too close proximity to the American frontier.

The positive pledge of the British Government, thus deliberately given, has never been withdrawn. The conditions upon which that pledge was given, Nova Scotia has faithfully complied with, and her people, whose policy, to a large extent, has been moulded by that pledge, feel that they have a strong claim upon the consideration of Her Majesty's Government.

On the failure of the intercolonial scheme, Nova Scotia has reverted to her former policy, but, despairing of Imperial assistance, has borrowed money on the credit of her own bonds, and is pushing forward her local railways as rapidly as her resources allow. Already she has put 100 miles under contract; one-fourth of the whole is in operation, and the remainder approaches completion.

Of these lines the only part available for the Intercolonial Railway is the section between Halifax and Truro. From Truro to New Brunswick border, the intercolonial line presents less prospect of remunerative return, and would not be undertaken by the Province without aid, and unless to connect with the Intercolonial Railways. Still Nova Scotia is not insensible to the position she occupies on the foreground of British America. For intercolonial and Imperial purposes she is willing to make sacrifices which commercial considerations alone would not justify. She will construct a road which, but for these considerations, she would not venture upon, if Great Britain will enable her to do so. She asks no contribution, though she believes the Imperial Government might well give it. What she does ask is, that her bonds for the expenditure from Halifax to the New Brunswick border shall be guaranteed by the British Government, and the Province be thus enabled to borrow, upon the most favourable conditions, the amount she requires, and she will engage to construct and to maintain and work the road throughout that distance, on the account and at the risk of the Province.

The guarantee asked for involves no risk.

The Province of Nova Scotia is advancing in material prosperity at a rate which will compare favourably with any part of the western world.

Her taxes the lowest in the world, her revenue has always been equal to her requirements, and is rapidly increasing. From 1849 to 1854, with no material alteration in imposts, the revenue doubled in amount.

The population increases at a rate nearly equal to that of the whole of the United States, and much greater than that of the States immediately contiguous to our border.

Insular in its position, Nova Scotia largely engages in maritime enterprises. Her coasts skirted by fisheries, the best in the world; her bosom filled with enormous deposits of coal and other minerals, not to be found on the seaboard of the United States, the natural habits of a maritime population have in these sources unlimited scope for enterprise; while in the interior of the country large tracts of the best land for farming purposes reward the industry of an agricultural population, not inferior in enterprise to any similar class in any part of the world.

Nova Scotians may, with some pride, refer to the various sources from which the prosperity of their country springs; and we allude to it now and dwell upon it because we wish the British Government to understand that we will incur no debt that we are not able, as well as willing, to pay, and to show them that what we now solicit may be safely granted. To us the boon will be large, but they may confer it without loss and without risk.

The course of events since 1851 has not weakened the claims of the Colonies, or diminished the obligation or interest of the Imperial Government to extend assistance towards the object in view.

Without that period all the three Colonies, and especially Canada, by embarking largely their own resources in railroad enterprise, have earned a right to seek assistance which they did not possess before; while, by this absorption of their own resources, they have diminished their ability to accomplish this great work.

Under no circumstances would they enter without assistance upon the construction of an Intercolonial Railroad from Halifax to Quebec. Neither of them, if possessed of the means, has a sufficiently large inducement or separate interest in the undertaking to justify encountering its hazards and burthens; and were it otherwise, a work so large and of so little remunerative promise is beyond the compass of their own largely-taxed resources.

Hence it may be truly assumed, that if the British Government do not afford essential aid, this great "national undertaking, calculated very greatly to advance the commercial and political interests both of the British Provinces in North America and of the mother country," to use the language of the British Cabinet in 1851, will never be accomplished.

It will not, however, fail because Her Majesty's North American subjects are too short-sighted to comprehend its important national bearings, or too indifferent to the general welfare to care for its accomplishment, or too much occupied with their own mere immediate concerns to be willing to contribute towards it. It is because of the higher and larger influences of the work, as much as in consideration of local benefits, that we urge the undertaking on Her Majesty's Government.

In case of hostilities with the United States, the facility which a railroad from Halifax, through British territory, would afford for the transport of troops and munitions of war would be of incalculable advantage, and, in a mere financial point of view, would probably in a few months repay all that the Government might have contributed. In connexion with large steamers on the ocean, enabling the Government to transport, in a few weeks, on any threatened emergency, an army to any point of Her Majesty's North American possessions, it would render unnecessary the constant maintenance of a large military force within them.

Nor is it the least of the advantages that would result from this facility, that the knowledge of its existence would tend to avert hostilities that otherwise might grow out of a sense of comparative impunity attendant on aggressive movements. Not less than 17 * lines of American railroads lead through the United States to the borders of Canada, and give the means of rapid hostile approach. Not a single line of British railroad connects the Provinces together, or affords communication from the Atlantic shore through national territory. Of the three routes by which Canada is reached, viz. by the St. Lawrence, by lines of railroad that traverse the United States, and through the wilderness. The latter would alone be available for the transport of troops or munitions of war, in the case of hostilities commenced or threatened at the beginning of winter.

* Sic in orig.

On such an event the spectacle might be presented of a large and prominent Colonial Possession of the Empire, assailed by a superior force, and cut off except at great exposure, expense, and delay, from effectual aid, not only from the parent State, but from the adjoining Colonies.

None more than the inhabitants of Nova Scotia appreciate the advantages of peaceful relations with the United States. They, however, who are placed in close proximity, are less credulous than others may be as to the impossibility of hostilities between the two Powers, and yet it is apparent to all that the foreign relations of no Government are so subject as those of the United States to the influence of popular impulse, or of party interests. This consideration, illustrated as it recently was by the enlistment dispute, sufficiently indicates that a policy founded on the assumed impossibility, or high improbability of hostilities with that people, must be deficient in the forecast that seeks by timely and suitable preparation to prevent aggression, or successfully to repel it.

The great work we advocate is as necessary to enable Her Majesty's North American Colonies to promote their mutual progress in peace, as it is requisite for their common defence in war. It is almost impossible for those at a distance to comprehend how much New Brunswick and Nova Scotia are unallied to Canada by those bonds of mutual intercourse that might be expected to subsist between Colonies of the same Empire placed together under circumstances that make a close union their common interest and security.

With

With the United States Canada has unlimited means of communication by lakes, rivers, canals and railroads, and extensive and intimate intercourse is the result. The capital of New Brunswick, connected with the United States by a short and easy navigation, maintains relations as close. Nova Scotia, almost an island, sends vessels from every part of her shores to the neighbouring ports of the Union, and carries on a trade so extensive, that of the annual tonnage that enters the port of Boston, more than half is from Nova Scotia.

The means of intercommunication between Canada and the Lower Provinces is utterly insignificant in the contrast.

By land; for practical purposes none exists, an uncultivated and hilly country opposes an effectual barrier: Colonel Robinson's valuable report of his surveys in 1848 gives unquestionable information on this head. By water, the comparatively distant and circuitous navigation of the St. Lawrence offers the only route, one little used while open and closed through a large part of the year; the result is ignorance and indifference as regards each other, with little concern or ability for mutual benefit.

An Intercolonial Railroad would give the means of communication at present wanting; it would open to Canada an Atlantic seaboard on British soil, from which she is now cut off, and it would offer to the lower Provinces a ready access to the vast field of enterprise and progress occupied by their fellow subjects in the interior; it would prove a benefit of incalculable value, should it be the precursor of, as it is an absolute necessity towards, a legislative union of Her Majesty's North American Provinces, a measure essential to the full development of the power which their situation and character are calculated to confer, and without which they never can attain the high position to which their united energies and advantages would lead them.

When the important objects to be accomplished by this work are considered, and the difficulties of carrying it out, owing to the large extent of uncultivated country through which it must pass in New Brunswick and Canada, with the consequent drawbacks upon its remunerative character, it seems not unreasonable to expect, in addition to the Imperial guarantee for the loan contracted by the Provinces, some more direct and substantial aid as a contribution from the national funds for national advantage.

Confining ourselves, however, to Nova Scotia, the aid we solicit is, we think, moderate, and such as would entail neither inconvenience nor loss on the British Government.

In pressing upon your urgent consideration the obligations which, in our opinion, impose upon Her Majesty's Government the duty of extensively aiding the construction of an Intercolonial Railroad, we are not insensible to the feeble influence excited by the representation of dangers distant and problematical, when the attention is already occupied by objects of present and urgent interest.

Much that we have suggested is, however, neither distant nor hypothetical, but is of actual existence and daily operation. For while Canada remains cut off from communication with the lower Provinces and with the Atlantic shore on British territory, the tendencies to alienation between her and the sister Provinces, and to the approximation of all the Colonies to the United States, must strengthen and mature.

That portion of our observations founded on the contingency of war with the United States, deals indeed with the future; but if the history of nations, and the experience of the past, may be relied on, it can hardly be treated as hypothetical in the sense which should preclude it from present consideration; for the undertaking which we urge must be accomplished while the danger that prompts it is distant and contingent, otherwise it will come too late to avert the evils it is designed to counteract. That the time will come when the evils resulting from the want of such a communication between the North American Provinces will be felt should the measure be delayed; and that the question will arise, where rests the responsibility for neglect? We cannot doubt Her Majesty's colonial subjects will not be found chargeable.

As early as the year 1848, at the instance of the Legislature of Nova Scotia, and at the expense of the three Colonies, the survey of Colonel Robinson was made; and his report, full of the most useful information, exists, to show the necessity, the difficulties, and the practicability of the undertaking. Since that time repeated and strenuous efforts have been made by those Colonies towards promoting the object. Now, without mutual concert, and each acting on its own apprehension of the importance of the measure, the Governments of Canada and Nova Scotia have severally commissioned delegates to press the subject on the attention of Her Majesty's Government.

We have, &c.
(signed) *J. W. Johnston.*
A. G. Archibald.

The Right Honourable Henry Labouchere,
Her Majesty's Principal Secretary of State for the Colonies.

Enclosure 4, in No. 1.

The Intercolonial Railway (Canada, &c.)

Copy of a Letter addressed by the Delegates from Canada, New Brunswick, and Nova Scotia, to the Secretary of State.

3, Charles-street, St. James's-square, London,
26 October 1858.

Sir,

Encl. 4, in No. 1. The subject of an Intercolonial Railway from Halifax to Quebec has been so frequently and so fully discussed, both as between the Colonies interested, and between those Colonies and the Home Government, that the undersigned do not now propose to reproduce at length the arguments which have been from time to time urged in favour of its construction.

The late Earl of Durham, in his Report upon the affairs of British North America, suggested the importance of this railway.

The first practical step, however, was taken in the organization of a survey by Mr. Gladstone, when Secretary of State for the Colonies in 1846, which survey occupied a considerable period of time, involving a large amount of expense, and to which expense Canada, New Brunswick, and Nova Scotia contributed.

Earl Grey, when Secretary of State for the Colonies in 1851, distinctly pledged the Imperial Government to aid in making the line, by affording the Imperial guarantee to the payment of the interest on the capital required for the work, and this pledge would doubtless have been carried out at the time had not a difficulty arisen as to a branch line from the main line into the State of Maine, for the cost of which Mr. Howe, of Nova Scotia, also claimed the Imperial guarantee.

Subsequently, in 1852, Mr. Hincks, on behalf of Canada, and Mr. Chandler, acting for New Brunswick, brought the matter under the notice of Sir John Pakington, then Secretary of State for the Colonies, who in effect repeated the pledge of Earl Grey; but a difficulty arose as to the route.

His Grace the Duke of Newcastle, as Secretary of State for the Colonies, in the ensuing year had the project under consideration, with a view to carrying it out; the Russian war, however, unfortunately intervened, and prevented any progress being made until last year (1857), when Messrs. Macdonald and Rose from Canada, and Messrs. Johnson and Archibald from Nova Scotia, again made application to the Home Government, and submitted to Mr. Labouchere propositions for the completion of this railway.

The undersigned have thus but briefly referred to the action in relation to this question as between the Imperial and Colonial Governments, knowing, sir, as they do, that you are fully acquainted with its history in all its bearings, and that a reference to the Parliamentary Blue Books for the documents and Despatches alluded to, will be more convenient and satisfactory to you than a repetition of their contents.

It must be borne in mind, however, that the state of the question in the Colonies interested has been materially changed since the correspondence with Earl Grey and Sir John Pakington.

At that time Canada, New Brunswick, and Nova Scotia, had not, in fact, taken any step incurring debt or liability for the purpose of aiding the project; and it is proposed here to state briefly what has been done and what liabilities incurred in the respective Provinces towards carrying out this great Imperial and Provincial work.

Canada has not only provided for the construction of a line of railway from Quebec to Montreal, and thence westward, passing through Kingston and Toronto to the western boundary of that Province at Sarnia, the foot of Lake Huron, but 40 miles below Quebec have been made, and are now worked for traffic; and during next year a further distance of 70 miles to Rivière du Loup, now being made, comprising in the aggregate 110 miles below Quebec, or 864 miles in all, from Rivière du Loup to Sarnia, will be completed, at a cost to the Province of 3,111,500 *l.* sterling, raised and paid out since 1852 to aid in the construction of this railway, and involving an annual charge upon the revenues of the Province to the extent of 186,000 *l.* sterling. From River du Loup to the New Brunswick Frontier, the distance to be yet made depends upon the route selected, the shortest distance being about 50 miles; and there will then be a continuous line of railway throughout the entire length of Canada, from its extreme eastern boundary on the New Brunswick border to its western boundary at Sarnia on Lake Huron.

In addition to this large outlay, Canada will contribute the sum of 20,000 *l.* sterling annually, to aid in raising the capital for the completion of this important work.

New Brunswick has incurred a heavy debt in the construction of railways. Upon the completion of the unfinished portion of the road between Shediac and the city of St. John, a distance of 110 miles, which are now under contract, her total expenditure for the construction of railways will exceed 800,000 *l.* sterling, for which she will be subject to the payment of an annual interest of 48,000 *l.* sterling. She has already given 100,000 acres of land to the St. Andrew's and Quebec Railway and Land Company, and has pledged a further large grant of land, and agreed to pay an annual sum of 5,000 *l.* sterling to the same company on certain conditions, to assist in the construction of a railway from St. Andrew's to Woodstock, a distance of 85 miles, 60 miles of which will be finished this autumn. Notwithstanding these large expenditures, New Brunswick will now provide a free right of way, and contribute

20,000 *l.*

20,000 *l.* sterling annually to aid in raising the necessary capital for the completion of the intercolonial railway.

Nova Scotia before the close of this year, will have opened for traffic 61 miles of the Trunk line from Halifax to Truro, and a branch line of 31 miles connecting the main line with Windsor, and the fertile counties of the western portion of the Province on the basin of mines, has been in operation since June last.

This portion of the trunk line has cost about 500,000 *l.* sterling, and the Windsor branch 300,000 *l.* sterling, the interest of which is chargeable upon the revenues of the Province, the capital having been raised upon Provincial debentures bearing six per cent. interest. To complete the trunk line from Truro to the borders of New Brunswick, there remain about 69 miles.

Unless it be in connexion with the intercolonial railway, it forms no part of the policy of Nova Scotia to carry the line from Truro, to the New Brunswick frontier, as unaided it is entirely beyond her resources; and a line is now being located from Truro to Picton, by which communication will be opened with the Gulf of St. Lawrence, Prince Edward Island, and the Eastern Counties, including Cape Breton.

In the event, therefore, of the present effort failing to enlist the sympathy and co-operation of the Imperial Government in completing the intercolonial railway, in which the general interests of the Empire are so largely involved, Nova Scotia must turn her resources to the construction of the line to Picton; and no hope can be entertained that she will afterwards be able to contribute to the Quebec and Halifax Line, as all her means will have been expended upon the local lines already indicated. So deeply impressed is she, however, with the immense importance of this great Imperial and Colonial Railway undertaking, that although nearly one half of the line through Nova Scotia has been made and completed since the action of her Legislature in 1849, she is now willing to renew the pledges then given to grant a free right of way, and provide and pay 20,000 *l.* sterling annually, so long as it may be required to aid in meeting the interest of the additional capital to be expended in making the line from Truro to Rivière du Loup.

Referring, then, to the action of the Home Government, to the pledges of Earl Grey, in 1851, to the adoption of those pledges in effect by Sir John Pakington in 1852; and to the repeated admissions on the part of the Imperial authorities, that the interests and integrity of the Empire are involved in the speedy construction of this railway, the undersigned respectfully submit, that the period has arrived when it is essential that the Imperial assistance necessary be granted.

It is estimated that the different sections required to complete the line from Halifax to Quebec, may now be made at a cost of 3,500,000 *l.* sterling. If the 1,500,000 *l.* which Canada owes to, and proposes to raise, and pay off at once to the Imperial Government, be appropriated there remain but 2,000,000 *l.* more to be provided; and to meet the interest on this sum, each Province here proposes to contribute to the extent of 20,000 *l.* sterling in each year.

The British North American Provinces would thus be brought together and consolidated; the postal communication between England and all North America would be conducted through Halifax, and that for the United States would thus pass first through British Territory, inasmuch as letters for Boston, New York, and other American cities would reach their destination sooner through Halifax, and over the rail, than in any other way.

When the intercolonial railway is completed there will be an unbroken communication by railway from Halifax, in Nova Scotia, to the western part of Canada, at Sarnia, extending over a distance of about 1,400 miles in the direction of British Columbia and Vancouver Island, the whole being in the dominions of the Queen; and from Sarnia, there is now an unbroken water communication for steamers and vessels of the largest class to the head of Lake Superior, at Fort William, a further distance of nearly 1,000 miles.

The military objects are now so thoroughly understood, and have been so fully dwelt upon in former communications on the subject of this railway, that they are not here repeated.

Trusting that this important matter may receive the early and favourable consideration of Her Majesty's Government,

We have, &c.

(signed) *G. E. Cartier,*
John Ross, } Canada.
A. T. Galt,

Chas. Fisher,
A. I. Smith, } New Brunswick.

Charles Tupper,
W. A. Henry, } Nova Scotia.
R. B. Dickey,

Memorandum.

The necessity of constructing a military road between Halifax and Quebec so as to render Canada accessible to Her Majesty's forces at all seasons of the year, seems long to have engaged the attention of the British Government.

In 1838 and 1839, when Canada was invaded by organized parties of marauders from the neighbouring country, with the avowed intention of conquest, troops were transported by that route in winter, when the St. Lawrence was closed, with much difficulty, at an enormous expense, and with great suffering to the soldiery; and the impossibility of carrying military stores in sufficient quantities, was then also fully proved.

Several explorations were consequently made by the military authorities, with a view to the construction of a military road as part of the system of defence of the British North American Colonies. It was then suggested that a railway, besides being of more utility for this purpose than an ordinary road, would be of great commercial benefit to those Provinces, and at the same time confer the political advantage of connecting them more intimately with the mother country and with each other.

As this scheme would cost much more than the road originally intended, and as the Colonies would be so much more benefited thereby, it was thought right that they should contribute to the expense of construction.

A survey was accordingly made in the year 1848 by Major Robinson and other officers selected by the Imperial Government, but at the expense of the Colonies.

Several lines were explored by Major Robinson, but he reported the eastern or coast line as preferable, although the longest and most costly for several reasons, principally of a military character, given by him.

This route was considered by the Colonies, and especially by New Brunswick, as being comparatively of little value except in a military point of view. It was long and circuitous; it passed through a country but little settled, and could not be expected to make any pecuniary return on the cost of construction for years.

The interest, therefore, of any monies borrowed by the Provinces to build the railway would fall entirely on their general revenues, a burden which they were little able to bear. These considerations being strongly pressed on Earl Grey, then Secretary of State for the Colonies, he acknowledged their justice, and in a Despatch, dated 14th March 1851, agreed that the British Government would guarantee the payment of the interest on monies borrowed by the Provinces for the purpose of making the road, on the condition that it should pass exclusively through British territory, but he stated that it need not of necessity be built on Major Robinson's line. Any deviation from that line was, however, to be subject to the approval of Her Majesty's Government.

Misapprehension arose between Earl Grey and Mr. Howe, of Nova Scotia, then conducting the negotiation, as to whether, in case Major Robinson's line were adopted, the Imperial guarantee would not also be extended to a lateral railway running from the main line through New Brunswick westward to the frontier of the United States.

This side line, if constructed, would have much improved the commercial character of Major Robinson's line, as it would have formed a valuable feeder, and connected it with the general railway system of the United States. Acting, therefore, under the belief that the guarantee was to be so extended, the three Provinces of Canada, New Brunswick, and Nova Scotia, made an agreement to construct the railway from Halifax to Quebec in equal proportions, and proceeded to legislate upon it with a view to the immediate execution of the work.

On its being ascertained that it had not been intended by the British Government to grant the guarantee to the local line above referred to, all the objections to Major Robinson's route revived, and the arrangements between the Provinces fell to the ground.

Anxiously desiring the construction of the railway, the Provinces, although much disappointed at the frustration of their expectations, entered into a new arrangement.

They agreed that if the railway was built along the valley of the River St. John, Nova Scotia would advance three-twelfths, Canada four twelfths, and New Brunswick five-twelfths of the cost of the construction.

This line promised great commercial advantages and a fair pecuniary return, and at the same time satisfied the condition imposed by the Imperial Government, that it should pass exclusively through British territory. The agreement thus altered was submitted to the Imperial Government for approval, but Sir John Pakington, then Colonial Secretary, in a Despatch dated 20th May 1852, intimated his disapproval of the proposed deviation from the eastern line, and that he therefore did not feel warranted in recommending the guarantee to Parliament. He, however, at the same time stated that the Imperial Government was by no means insensible to the great national object involved in the construction of the line, and that the most favourable attention would be given to any modification of the proposals then before him. The negotiations thus fell a second time to the ground; the Provinces are without their intercolonial railway, and England has yet no military road to Canada.

The three Provinces have been driven, from the failure of these negotiations, to undertake within their several territories, within concert, and on their own unaided credit and responsibility, the construction of railways, no doubt of local advantage, but not of general or national importance.

It was not thought in Canada a fitting time to press this subject again on the British Government, when all its emergencies were directed to the vigorous prosecution of the Russian war, a struggle in which Canada fully sympathised and was ready to make its own. But now that peace has been restored, it would seem that no time should be lost in undertaking this great work. Circumstances have arisen during the progress of the war, the enlistment and Nicaraguan questions with the United States, for instance, which show the necessity for such a road has not decreased, whether as a means of pouring into Canada a sufficient force, or withdrawing it therefrom without delay and at all seasons, in case of sudden exigency it is equally called for.

The only bar to its construction up to 1852 was the difference of opinion as to route, and that difference, it is believed, is not irreconcilable.

It is understood in Canada that the route by the valley of the St. John is not now considered by military men competent to judge, objectionable as a military road, nay, that there are strong reasons for its selection as such; at all events, no difficulty is apprehended in finding a line combining the requisites for a military and a commercial road. While Imperial interests require as imperatively as ever the completion of this project, the position of Canada with respect to it has materially altered.

In 1852 there were no railways in operation in Canada (with two unimportant exceptions), and she had no winter route to the Atlantic; but since that time ten lines, extending over about 1,600 miles, have been constructed, at an aggregate cost of about 19,000,000*l.* sterling by private companies, chartered and aided by money grants from the Provincial Government to the extent of nearly 5,500,000*l.* This sum has been raised partly by the bonds of Canada, on the immediate credit of her consolidated revenue, bearing six per cent. interest, and partly by her bonds, issued on the credit of a general municipal fund, established in the Province by legislative authority. Preparations are now also in progress for the construction of an interior line of communication, far removed from the American frontier, by a combined system of railway and canal between the River Ottawa and Lake Huron.

Canada has, therefore, already assumed the full measure of pecuniary obligation which her resources render prudent; but as access to the ocean and communication with England can only be had in winter through the United States, it is manifest that, in so far as Imperial interests are concerned, the railway facilities are in a great measure incomplete. Canada is fully alive to the importance of providing for the maintenance of her connexion with England, and she has sought opportunity and availed herself of every occasion practically to cement that relation.

For the purpose of establishing a direct postal communication with England, which should not only put a stop to a large contribution to the revenue of the United States, but also attract to the Colony a share of that trade and that emigration which was being diverted to that country, she has established, by the payment of an annual subsidy of 50,000*l.*, a direct weekly line of ocean steamers between the Colony and England. In this enterprise she is not only unaided by England, but has to combat a line plying to the ports of the United States, supported by a subsidy from the Imperial Government exceeding 180,000*l.* per annum.

The Province has also enrolled, drilled, and armed at her own expense a large and available volunteer force, consisting already of 16 troops of cavalry, 7 field batteries of artillery, 5 companies of foot artillery, and 50 companies of riflemen, all provided with the most modern and effective arms. This force is maintained at a heavy cost to the Colonial Treasury, and being well disciplined, would be of essential and immediate service, should occasion arise for their active employment.

In addition to this, Canada has been divided into military districts, and the whole sedentary militia, consisting of every man capable of bearing arms, has been organized.

In so far as the commercial wants of the Province are concerned, they are amply supplied by the existing railway communications to the American seaports, New York and Boston, and by the railway from Montreal to Portland, over which a Canadian company has complete control; but this entire dependence on, and exclusive relations with a foreign country, cannot but exercise an important and wholesome influence on the status of Canada as a portion of the Empire, and tend to establish elsewhere that identity of interest which ought to exist between the mother country and the Colony.

We are sensible that we need not dwell on the grave and possibly disastrous consequences which, if a rupture should unhappily arise with the United States may result, from the want of communication in winter between England and the interior of the Province; but it is evident that the safety of the Colony can only be secured either by keeping, from the moment of the first apprehension of danger, a military power within it of such magnitude as would repel any invading force during the five months when reinforcement or supplies could not be obtained by sea, or the means must be created of throwing in that force, and transporting them to those points which are assailable.

We would further mention some facts whith show that while the means of resisting invasion are in no way increased, the facilities for accomplishment are daily becoming greater.

There are now no less than seven American railways terminating directly at the Canadian boundary, and a far greater number touching the waters of the River St. Lawrence and the Lakes Ontario and Erie, which divide Canada from the United States. All these roads may be said to form together a continuous line running parallel with, or in easy

proximity to, the provincial boundary, and by their means America would be enabled to concentrate, with the utmost expedition and ease, all her forces upon any quarter, and to choose her own point of attack.

It may be urged that war with America is impossible, or, at least, an event so unlikely and remote as to justify no expenditure in anticipation of it. Admitting that the character and moderation of the Federal Government afford assurances of continued amity, it is not to be forgotten that there are other elements not subordinate whose influence may at any time become too powerful for control. The best safeguard against aggression is the power of repelling it. The knowledge of our weakness and exposure to attack may do much to precipitate that which were our strength understood would never be undertaken. It is now well known that being cut off from England, the Province cannot make her resources and strength available should the necessity for their exercise unhappily come to pass, and when the occasion does arise, it will be too late to provide the means. The road cannot be constructed, with a due regard to reasonable economy, for several years, and experience shows how impossible it is to foresee what events within that period may interrupt the friendly relations with a country the peculiar constitution of which vests so much power in a class, whose interests or passions may at any time prompt them to acts which would necessarily lead to a rupture. While, therefore, the commercial or material advantages to Canada which would follow the construction of the road are comparatively unimportant, she feels it her duty to urge the high national considerations which demand that the work should be undertaken.

There can be little fear of any causes of difference between the Colonies and the United States. The danger hitherto has sprung from subjects wherein, as a Colony, Canada had no interest, but which (such as the Central American, the Oregon, and Enlistment questions) were purely of Imperial concern; so that, should hostilities arise, Canada would (as she was during the last war) be made the battle ground in a quarrel which she did not cause, and in which she had no special concern. The Colony has received the solemn assurance of the Imperial Government, a promise on which she implicitly relies, that while she is expected to assume her share of the burden of any force which her own internal wants may require in time of peace, yet that the whole power of the Empire will be put forth for her protection and security against foreign aggression. Canada has acted on this assurance, and performed her part of the obligation; but we would respectfully urge that, without means of communication with Great Britain, the Imperial Government is powerless to perform its share, and that the very first step towards the fulfilment of the promise, is to provide proper access to the country.

But apologising for presenting at perhaps too great a length arguments whose weight may be fully admitted, we proceed to suggest a mode by which we propose that the work should be constructed.

The question of route is one which, in so far as Canada is concerned, might be left to the Imperial Government and the Lower Provinces; but the distance of that which would probably be chosen may be assumed 600 miles; by Major Robinson's report the cost of the longest or coast route of 635 miles is 7,000 *l.* sterling per mile, to which ten per cent. is added for contingencies; making the cost in round numbers 5,000,000 *l.*

Now Canada has already built, or has in progress 110, and Nova Scotia 60 miles available for any route selected for the intercolonial road, leaving 420 to be constructed. Allowing 1,000,000 *l.* sterling to be added to Major Robinson's estimate for the rise of the cost of labour and materials since 1848, the balance to be provided for is 5,000,000 *l.* This would include the cost of the whole section apportioned to and now in process of construction by Nova Scotia, but does not include the cost of 110 miles in Canada, on which 1,000,000 *l.* raised from other sources will be expended.

We have reason to think that if the facilities we are about to mention be extended to Nova Scotia, that Province would complete the additional 60 miles to her own frontier, and allow the whole to form a part of the national line.

Assuming that New Brunswick would perform a nearly equal share (and her Legislature has already assumed a larger burden), there would remain for completion about 250 miles, at an estimated cost, making allowance for the engineering difficulties, of between 2,500,000 *l.* and 3,000,000 *l.*

We propose that this sum shall be raised as follows:

In the year 1841, Canada obtained from the Imperial Government a loan of a million and a half for the construction of her public works. This matures at a distant period, but meanwhile a sinking fund has been formed for its redemption. We suggest that the amount of this loan, including the sinking fund, be granted in aid of the proposed railway, and that Canada shall be relieved from its repayment in consideration of her expending the whole amount in the construction of the line from Rivière du Loup, in Canada, towards Halifax.

Canada and New Brunswick have already appropriated all their ungranted public lands, for 10 miles on each side of the line, in aid of the undertaking. It is assumed that these lands amount to about 4,000,000 of acres; and it is proposed, that on the security of these, and the road generally, any balance requisite to complete the work should be raised as a first charge.

The system of land grants to aid the construction of railways has been followed, with the most entire success, in the United States of America, where lands, from being almost worthless

worthless and unsaleable, have risen in value with a rapidity far exceeding the most hopeful anticipations.

It is apprehended that the Provinces of Nova Scotia and New Brunswick would not feel warranted in burdening themselves with so large an amount of interest as a loan to be effected on their own credit would involve; and it, therefore, seems necessary, that the Imperial guarantee promised by Lord Grey, should be extended to the bonds of these Provinces to the extent of their respective contributions. This guarantee would enable them to raise the money at such a reduced rate of interest as would justify their incurring the obligation.

The contribution of the Imperial Government then, would amount to this:

First. A guarantee of the bonds of the Provinces of Nova Scotia and New Brunswick.

Second. The conditional discharge of Canada's debt of 1,500,000 *l.*

And as a direct equivalent, there would be secured, not only a military road from Halifax to Quebec, but continuous railway communication for the transport of men and stores from Quebec to the western extremity of the Province of Canada.

We do not pretend to hold out the prospect of any immediate direct return on the outlay, because we have no data on which to base reliable calculations; but we must express the conviction, that even in a financial point of view, the cost of the road, although the entire outlay were assumed by the Imperial Government, would ultimately be more than saved by the lessened expenditure which England would be called upon to bear after its completion, by enabling her to reduce her military establishments in Canada.

But in the scheme submitted, the Provinces, cherishing, and sensible of the value of their connection with England, offer substantial aid and co-operation.

It will be seen that our object is not to involve the Imperial Government in an undertaking in the hope of a pecuniary return, or to assume a liability in the special interest of any Colony. If the best interests of the empire, the extension of her commerce, and the permanence of British power on the Continent of America, do not warrant the immediate construction of the work, and the contribution of England towards it, we desire to abstain from urging considerations of minor weight on behalf of the enterprise; but the material aid which the Colonies are ready to extend, affords sufficient proof that, in their opinion, its importance on national grounds has not been exaggerated.

We trust that a consideration of these views (which, it is to be understood, are made subject to the approval of the Executive and Legislature of Canada), may meet with the favourable and early attention of Her Majesty's Government.

If provisionally acquiesced in, no time will be lost in seeking to obtain the sanction and co-operation of the other Provinces.

(signed) *John A. Macdonald.*
John Rose.

Despatch from the Governor General of Canada.

— No. 2. —

(No. 4.)

COPY of a DESPATCH from Viscount *Monck* to His Grace the Duke of *Newcastle*, K. G.

No. 2.
Viscount Monck to the Duke of Newcastle, K. G.
31 October 1801.

Government House, Quebec, 31 October 1861.
(Received, 30 November 1861.)
(Answered, No. 17, 11 December 1861, page 22.)

My Lord Duke,

Executive Council, 30 Sept. 1861.

I HAVE the honour to enclose, for your Grace's information, a copy of a recommendation of the Executive Council of Canada, made in consultation with the Members of the Councils of Nova Scotia and New Brunswick present in Quebec, and approved by my predecessor, by which it has been resolved to send a delegation from each of the three Provinces, to renew the offer made to the Imperial Government to aid in the construction of an Intercolonial Railway between Halifax and Quebec, and a copy of a further Order in Council,

Executive Council, 23 October 1861.

 approved

approved by Sir E. Head, authorizing the Honourable P. M. Vankoughnet, Chief Commissioner of Crown Lands, and a member of my Executive Council, to proceed to England for this purpose.

Mr. Vankoughnet is the bearer of this Despatch.

I have, &c.
(signed) *Monck.*

Enclosure 1, in No. 2.

Encl. 1, in No. 2. AT a Meeting held in the Executive Council Chamber at Quebec, on Monday, the 30th September 1861, there were present—

The Honourable	Joseph Howe,	From Nova Scotia.
„	Mr. Archibald,	
„	Mr. M'Culley,	
The Honourable	Mr. Tilley,	From New Brunswick.
„	Mr. Smith,	
„	Mr. Mitchell,	
„	Mr. Watters,	
The Honourable	Mr. Cartier,	From Canada.
„	Mr. Macdonald,	
„	Mr. Ross,	
„	Mr. Vankoughnet,	
„	Mr. Alleyn,	
„	Sir N. F. Belleau,	
„	Mr. Galt,	
„	Mr. Cauchon,	

And it was unanimously resolved, That the three Governments of Canada, New Brunswick, and Nova Scotia, do renew the offer made to the Imperial Government on the 26th day of October 1858, to aid in the construction of an Intercolonial Railway, to connect Halifax with Quebec, and that a delegation from each Province shall immediately proceed to England with the object of pressing the project upon the attention of the Home Government: giving them the assurance that the Governments of the respective Provinces will endeavour to procure the necessary legislation at the next ensuing Sessions of their respective Parliaments.

And it was further resolved that the route to be adopted be decided by the Imperial Government.

Certified,
(signed) *Wm. H. Lee,*
C. E. C.

Enclosure 2, in No. 2.

COPY of a REPORT of a Committee of the Honourable the Executive Council, approved by His Excellency the Governor General in Council on the 23d October 1861.

Encl. 2, in No. 2. WITH reference to the Order in Council of the 30th ultimo, to renew the offer made to the Imperial Government on the 26th October 1858, to aid in the construction of an Intercolonial Railway to connect Halifax with Quebec, and that a delegation from each of the Provinces of Nova Scotia, New Brunswick and Canada, shall proceed to England with the object of pressing the project upon the attention of the Home Government, giving them an assurance that the Governments of the respective Provinces will endeavour to procure the necessary legislation at the next ensuing Sessions of their respective Parliaments;

The Committee recommend that the Honourable P. M. Vankoughnet be authorized to proceed to England for the purpose of urging on the attention of the Imperial Government, and otherwise promoting the object referred to in the Order in Council of the 30th ultimo, with such other of your Excellency's advisers as may be there present.

Certified,
(signed) *Wm. H. Lee,*
C. E. C.

Despatches from the Lieutenant Governor of Nova Scotia.

— No. 3. —

(No. 27.)

No. 3.
The Right Hon. the Earl of Mulgrave to his Grace the Duke of Newcastle, K.G.
4 April 1861.

COPY of a DESPATCH from the Right Honourable the Earl of *Mulgrave*, to His Grace the Duke of *Newcastle*, K.G.

Government House, Halifax, Nova Scotia,
4 April 1861.

My Lord Duke, (Received, 16 April 1861.)

I HAVE the honour to enclose a joint Address to Her Majesty, passed by the Legislative Council and House of Assembly of Nova Scotia, on the subject of the Intercolonial Railway.

The question is of the most vital importance to the interests of this Province, but it is one which has so frequently been brought under the notice of the Imperial Government, that it is hardly necessary for me to add any arguments in its favour.

Information was received from England by last mail that a strong feeling was getting up there in favour of the proposed line from Halifax to Quebec, and that petitions were preparing for presentation to Parliament in support of this measure.

Stimulated by this information, the Legislature of this Province have lost no time in preparing this Address to Her Most Gracious Majesty in order to assure Her Majesty that their anxiety for the completion of the intercolonial line is unabated.

Your Grace is aware that since this question was first raised a line from Halifax to Truro has been completed by the Government of this Colony, but the resources of this Province are at present unable to bear the expense of carrying on the line to the borders of New Brunswick, a distance of about 60 miles, without external aid, given either by the Imperial Government, or by a company taking the line into their own hands.

Should your Grace, taking into consideration the great national importance of this line of communication between the North American Provinces, be enabled to advise Her Majesty to entertain this subject, my Government, on the part of this Province, will be prepared either to appoint a delegation to wait on your Grace in England, or to give their most careful and willing consideration to any scheme which has for its object the completion of this great work.

I have, &c.
(signed) *Mulgrave.*

Enclosure in No. 3.

To the Queen's Most Excellent Majesty.

The humble Address of the Legislative Council and House of Assembly of Nova Scotia.

Enclosure in No. 3.

May it please your Majesty,

WE, Her Majesty's dutiful and loyal subjects, the Legislative Council and House of Assembly of Nova Scotia respectfully beg leave again to invite our Sovereign's consideration to a work of national importance.

For nearly 20 years the people of British America have been struggling to secure a great highway extending from the sea to the western bounds of Canada, and have made many sacrifices to obtain it. The foremost men in all the Provinces, of all political parties,

have from time to time united to accomplish this work. They are united now, and they justly regard the realisation of their hopes as an object not unworthy of the grave consideration of the Imperial Government.

The recent visit of His Royal Highness the Prince of Wales to these Provinces has not only enabled our Sovereign's son to survey their boundless resources, but has illustrated the spirit of loyalty and love of British connection which pervades them. To unite them in the bonds of peace, to develope their resources, to enlarge their population, to harmonise their public sentiments by mutual intercourse, to strengthen them in time of war, and to keep alive in their midst the traditions and the policy of the mother country, appear to us objects worthy of combined effort on the part of the Provincial and Imperial Governments; and we rejoice to perceive that, at last, the great cities of the three kingdoms are awakening to a sense of their importance, and are about to petition Parliament for aid to construct a great highway from the St. Lawrence to the Harbour of Halifax.

The Legislature of Nova Scotia beg respectfully to refer your Majesty to the various efforts made by means of Addresses and delegations from the Colonies to enlist Imperial support to this great national undertaking, and the heavy sacrifices made by them in constructing several sections of railway which may now be incorporated in this work, sufficiently evince the anxious desire of the people and Legislatures of all the Provinces to secure its speedy completion, which cannot be done without Imperial aid.

We entertain the confident hope that the assurances repeatedly given by your Majesty's Ministers of their determination to aid this important enterprise, may yet be realised, and that your Majesty's reign may witness the completion of an undertaking which involves the interests not only of British America, but the Empire at large.

Trusting that your Majesty will give to the subject of this Address the grave consideration due to its magnitude and importance, the Legislative Council and House of Assembly, as in duty bound, will ever pray.

House of Assembly, 4 April 1861,
(signed) *A. C. M'Donald*, Speaker.

Legislative Council Chamber, 4 April 1861,
(signed) *Edw. Kenny*, President.

— No. 4. —

(No. 73.)

No. 4.
The Right Hon. the Earl of Mulgrave to his Grace the Duke of Newcastle, K.G.
29 October 1861.

COPY of a DESPATCH from the Right Honourable the Earl of *Mulgrave* to his Grace the Duke of *Newcastle*, K. G.

Government House, Halifax, Nova Scotia,
29 October 1861.
(Received, 11 November 1861.)

My Lord Duke,

THE question of the Intercolonial Railway having again been brought under the consideration of the Governments of Canada, New Brunswick, and Nova Scotia by Mr. Watkin, and other gentlemen from England, it was decided that a delegation from the two latter Provinces should proceed to Quebec to consult with the Government of Canada, in the hope that some united action might be agreed upon which would facilitate the carrying out of this most important project.

2. I therefore directed the Honourable Mr. Howe, the Attorney General, and the Honourable Mr. McCully to proceed to Quebec for that purpose. On the 30th September, a meeting of the representatives of the different Governments took place at Quebec, when a resolution, a copy of which is enclosed, was unanimously agreed to.

3. The importance of a railway communication with Canada, passing through British territory, has so often been recognised by Her Majesty's Government, that I feel that I need offer no apology in again pressing the subject on your Grace's consideration, especially as at present there are reasons which would render such a communication more than ordinarily desirable.

4. The encouragement held out at different times by Her Majesty's Government to the formation of this line, has undoubtedly created in this Province the expectation that in consideration of the national importance of the undertaking, the Imperial authorities would not be unwilling to extend their aid in order to ensure its completion, provided such arrangements could be made by the three Provinces as would meet with their approbation.

5. Notwithstanding,

5. Notwithstanding, therefore, the unfavourable reply which I received from your Grace in answer to the joint Address to Her Majesty from both branches of the Legislature in April last, my Government are emboldened to make one more effort, in the hope that they may now be enabled to bring such new arguments and facts before your Grace as may induce Her Majesty's Government to reconsider the decision at which they then arrived.

6. The Governments of Canada, New Brunswick, and Nova Scotia, are now thoroughly united upon this subject, and have determined to renew the offer originally made of 20,000 *l.* per annum from each Colony towards the carrying out of this work, notwithstanding the large sums which have since been expended by each of the Provinces for railway purposes, provided they can obtain the co-operation and assistance of England.

7. I am well aware of the objections entertained in England to subsidies of this description, but at the same time there are considerations connected with this undertaking, which I trust may induce your Grace to consider it of sufficient Imperial interest to justify your giving it your support.

8. I will not pause to point out the advantages which would be derived in time of war by such a communication, extending as it would in an unbroken line over a distance of about 1,400 miles, because they must be self-evident to your Grace, and I believe that the advantages which it would offer even during peace, are such as would nearly if not quite compensate the Imperial Treasury for the aid requested. £. 25,000 a year is now paid to the Government of the United States for the transmission of mails to and from Canada, which would, of course, be saved by the construction of the Intercolonial Railroad, while the time occupied in their transmission would be considerably diminished. A further saving might also be made in the subsidy paid to the Cunard line of steamers, and troops and warlike stores would at all times be forwarded over the line without incurring the risk and expense of the voyage up the St. Lawrence, which can only be undertaken in the summer season.

9. These three items alone would, I believe, even in a pecuniary point of view, entitle the proposed arrangement to favourable consideration, while at the same time it would confer a boon on these Colonies, which I think would tend more than anything else to develope their resources.

10. I have commissioned the Honourable Mr. Howe to proceed to England to co-operate with the gentlemen who have been selected by the Governor General of Canada and the Governor of New Brunswick, and I can only trust that the shape which this question has now assumed, may be such as will induce Her Majesty's Government to adopt the proposal.

I have, &c.
(signed) *Mulgrave.*

Enclosure in No. 4.

At a meeting held in the Executive Council Chamber at Quebec, on Monday, 30 September 1861, there were present— Enclosure in No. 4.

The Honourable	Joseph Howe,	From Nova Scotia.
„	Mr. Archibald,	
„	Mr. M'Cully,	
The Honourable	Mr. Tilley,	From New Brunswick.
„	Mr. Smith,	
„	Mr. Mitchell,	
„	Mr. Watters,	
The Honourable	Mr. Cartier,	From Canada.
„	Mr. Macdonald,	
„	Mr. Ross,	
„	Mr. Vankoughnet,	
„	Mr. Alleyn,	
„	Sir N. F. Belleau,	
„	Mr. Galt,	
„	Mr. Cauchon,	

And

And it was unanimously resolved,—

That the three Governments of Canada, New Brunswick, and Nova Scotia, do renew the offers made to the Imperial Government on the 26th day of October 1858, to aid in the construction of an intercolonial railway, to connect Halifax with Quebec, and that a delegation from each Province shall immediately proceed to England with the object of pressing the project upon the attention of the Home Government, giving them the assurance that the Governments of the respective Provinces will endeavour to procure the necessary legislation at the next ensuing Session of their respective Parliaments; and it was further resolved that the route to be adopted be decided by the Imperial Government.

Certified.

Wm. H. Lee, Clerk Executive Council.

Despatch from the Lieutenant Governor of New Brunswick.

— No. 5. —

(No. 11.)

No. 5.
The Hon. J. H. T. Manners Sutton to his Grace the Duke of Newcastle, K. G.
12 April 1861.

COPY of a DESPATCH from Lieut. Governor Hon. *J. H. T. Manners Sutton* to the Duke of *Newcastle*, K. G.

Government House, Fredericton, New Brunswick,
12 April 1861.

My Lord Duke, (Received, 30 April 1861.)

I HAVE the honour to forward to your Grace, with the request that it may be laid before Her Majesty, the enclosed joint Address to Her Majesty of the Legislative Council and House of Assembly of this Province, praying that Imperial aid may be afforded to the construction of an Intercolonial line of Railway.

It was my duty three years ago to transmit to the Secretary of State a similar Address; and while I have the honour again to express my readiness to furnish any additional information which I can afford, it is, I think, unnecessary for me to trouble your Grace, on this occasion, with any remarks on a question which has been so frequently submitted to Her Majesty's Government, and so fully explained both in Despatches and by deputations from this Province.

I have, &c.

His Grace
The Duke of Newcastle, K.G.

(signed) *J. H. T. Manners Sutton.*

Enclosure 1, in No. 5.

Encl. 1, in No. 5.

To the Queen's Most Excellent Majesty.

The humble and dutiful Address of the Legislative Council and House of Assembly of the Province of New Brunswick.

May it please your Majesty,

WE, the Legislative Council and House of Assembly beg leave to approach your Majesty with renewed assurances of our attachment and fidelity to your Majesty's person and Government.

In common with your Majesty's loyal subjects in these North American Provinces, we are deeply impressed with the great advantages, if not absolute necessity, of a railway from Halifax to Quebec, connecting Nova Scotia and New Brunswick with Canada.

The Legislature and people of New Brunswick have, on all occasions, manifested the greatest interest in the importance of the work to the British Empire, and have expressed their willingness to contribute for its accomplishment to an extent commensurate with the financial ability and resources of the country.

Your

Your Majesty's Government are aware that the construction of railways has so far absorbed our resources as necessarily to lessen the means at our disposal to assist in this important undertaking; but the lines of railway already in operation in this Province may be made available for the purposes of this great work.

The importance of the intercolonial railway for the development of the great and manifold resources of the Provinces, the facilitating the transmission of the mails, the securing improved postal communication between Great Britain and Canada through British territory, the advantages of the line for military purposes and for the consolidation of your Majesty's dominions on this continent, have often been urged in former representations, and as often conceded by your Majesty's Ministers.

Recent events have demonstrated the necessity for renewed exertion for the attainment of an object so essential to national interests and the maintenance of national honour.

New Brunswick has millions of acres of ungranted lands fit for cultivation and settlement, which, under a good system of colonization, might be made to contribute to this work.

Should your Majesty's Government, in view of the great national advantages the carrying out of this work will secure, adopt measures to promote its construction, New Brunswick will cheerfully contribute, in lands and money, to the utmost of her means, toward the accomplishment of an object so desirable.

We therefore humbly pray your most gracious Majesty to take this our petition into your most favourable consideration, and grant such aid for the construction of an intercolonial railway as may be proportionate to the magnitude of the work, and to the Imperial interests involved in this great enterprise.

(signed) *William Black*,
President of Legislative Council.
J. M. Johnson,
Speaker of Assembly.

Enclosure 2, in No. 5.

To the Queen's Most Excellent Majesty. Encl. 2, in No. 5.

The humble and dutiful Address of the Legislative Council and House of Assembly of the Province of New Brunswick.

May it please your Majesty,

We, the Legislative Council and House of Assembly, beg leave to approach your Majesty with renewed assurances of our attachment and fidelity to your Majesty's person and Government.

In common with your Majesty's loyal subjects in these North American Provinces, we are deeply impressed with the great advantages, if not absolute necessity, of a railway from Halifax to Quebec, connecting Nova Scotia and New Brunswick with Canada.

The Legislature and people of New Brunswick have on all occasions manifested the greatest interest in the importance of the work to the British Empire, and have expressed their willingness to contribute for its accomplishment to an extent commensurate with the financial ability and resources of the country.

Your Majesty's Government are aware that the construction of railways has so far absorbed our resources as necessarily to lessen the means at our disposal to assist in this important undertaking, but the lines of railway already in operation in this Province may be made available for the purposes of this great work.

The importance of the intercolonial railway for the development of the great and manifold resources of the Provinces, the facilitating the transmission of the mails, the securing improved postal communication between Great Britain and Canada through British territory, the advantages of the line for military purposes, and for the consolidation of your Majesty's dominions on this continent, have often been urged in former representations, and as often conceded by your Majesty's ministers.

Recent events have demonstrated the necessity for renewed exertion for the attainment of an object so essential to national interests, and the maintenance of national honour.

New Brunswick has millions of acres of ungranted lands fit for cultivation and settlement, which, under a good system of colonization, might be made to contribute to this work.

Should your Majesty's Government, in view of the great national advantages the carrying out of this work will secure, adopt measures to promote its construction, New Brunswick will cheerfully contribute, in lands and money, to the utmost of her means, toward the accomplishment of an object so desirable.

We therefore humbly pray your most gracious Majesty to take this our petition into your most favourable consideration, and grant such aid for the construction of an intercolonial railway as may be proportionate to the magnitude of the work, and to the Imperial interests involved in this great enterprise.

(signed) *William Black*,
President of Legislative Council.
J. M. Johnson,
Speaker of Assembly.

Despatches from the Secretary of State.

— No. 6. —

(No. 17.)

No. 6.
The Duke of Newcastle, K.G., to the Viscount Monck.
11 Dec. 1861.
* Page 15.

COPY of a DESPATCH from the Duke of *Newcastle*, K.G., to the Viscount *Monck*.

My Lord, Downing-street, 11 December 1861.

I HAVE the honour to acknowledge the receipt of your Lordships' Despatch, No. 4,* of the 31st October, transmitting copies of minutes of the Executive Council of Canada, respecting the appointment of delegates to proceed to England to submit to Her Majesty's Government the views of the North American Provinces on the subject of the construction of an intercolonial Railway, and authorising the Hon. P. M. Vankoughnet, the Chief Commissioner of Crown Lands, to represent the Government of Canada on this occasion.

I have, &c.
(signed) *Newcastle.*

— No. 7. —

(No. 93.)

No. 7.
The Duke of Newcastle, K.G. to the Viscount Monck.
12 April 1862.
* Page 15.

COPY of a DESPATCH from the Duke of *Newcastle*, K.G., to the Viscount *Monck*.

My Lord, Downing-street, 12 April 1862.

YOU are aware that I duly received your Despatch, No. 4,* of the 31st October last, reporting that at a meeting in the Council Chamber at Quebec of Members of the Councils of Canada, Nova Scotia, and New Brunswick, it was resolved that those three Governments should renew the offer made to the Imperial Government on the 26th October 1858, to aid in the construction of an intercolonial railway between Halifax and Quebec, and that a delegation from the Provinces should proceed to England with the view of promoting this object.

You reported to me that the Honourable Philip Vankoughnet was appointed to represent Canada, and not long afterwards this gentleman, associated with the Honourable Joseph Howe from Nova Scotia, and the Honourable Samuel Tilley from New Brunswick, arrived in England.

I had several interviews with these gentlemen, who urged with great ability the project committed to their charge, and eventually embodied their views in a memorandum communicated to me in a letter dated the 2d December 1861.* But owing to the urgency of business connected with the threatening aspect of affairs in the United States, I was unable to bring the subject under the consideration of Her Majesty's Government before the deputies were obliged to return to their homes, and other urgent matters have hitherto prevented the adoption of a decision. The subject has now been before Her Majesty's Government, and I need scarcely assure you that they have examined it with the care due to the importance of the question, to the high authorities from whom it has emanated in the Provinces, and to the character and position of the delegates by whom it has been so powerfully presented to notice in this country.

* Page 1.

The length of railway necessary to complete the communication between Halifax and Quebec is estimated at 350 miles, and the cost, after deducting the right of way which the Provinces will provide, is estimated at three millions sterling. Such being the data supplied by the deputation, the project is that the Imperial Government should join the three Provinces in a guarantee of four per cent. upon 3,000,000*l.*, in which case the Provinces are ready to pass bills of supply for 60,000*l.* a year (20,000*l.* in each Province) if the Imperial Government will do the same. The selection of the route is left solely to the British Government.

Should

Should the sum of three millions be found insufficient, nothing very definite is said on the essential point of the provision to be made for the completion of the railway.

I much regret to inform you that, after giving the subject their best consideration, Her Majesty's Government have not felt themselves at liberty to concur in this mode of assistance. Anxious, however, to promote as far as they can the important object of completing the great line of railway communication on British ground, between the Atlantic and the westernmost parts of Canada, and to assist the Provinces in a scheme which would so materially promote their interests, Her Majesty's Government are willing to offer to the Provincial Governments an Imperial guarantee of interest, towards enabling them to raise by public loan, if they should desire it, at a moderate rate, the requisite funds for constructing the railway. This was the mode of action contemplated by Earl Grey in the year 1851, and is the same method which was adopted by Parliament in the Act of 1842, in order to afford to Canada the benefit of British credit in raising the money with which she has completed her great system of internal water communications. The nature and extent of the guarantee which Her Majesty's Government could undertake to recommend to Parliament, must be determined by the particulars of any scheme which the Provincial Governments may be disposed to found on the present proposal, and on the kind of security which they would offer.

I fear that this course will not be so acceptable to the Provincial Governments as that which the delegates were authorised to propose for consideration. It is, however, the only one in which Her Majesty's Government, after anxious deliberation, feel that they would be at liberty to participate. I trust that the proposal will at all events be received as a proof of their earnest wish to find some method in which they can co-operate with the Provinces in their laudable desire to complete a perfect intercolonial communication over British territory. And it will be a source of sincere pleasure to me if, adverting to all the different bearings of the subject, and to the condition of their respective finances, the Provincial Governments should end by finding it in their power to make use of the present offer, and to propound some practicable scheme for applying it to the attainment of the desired object.

I have addressed a similar Despatch to the Lieutenant Governors of Nova Scotia and New Brunswick, and I must now leave the subject in the hands of the several Provincial Governments, who will best know, in case they prosecute the subject further, how to provide for the requisite mutual consultations.

I have, &c.
(signed) *Newcastle.*

[Similar Despatches, with the requisite adaptations, were addressed at the same date to the Lieutenant Governors of New Brunswick and Nova Scotia.]

CANADA (HALIFAX, &c. RAILWAY).

RAILWAYS (BRITISH NORTH AMERICA).

COPY of OFFICIAL COMMUNICATIONS between the Secretary of State for the Colonies and the Commissioners representing the Provinces of *Canada*, *New Brunswick*, and *Nova Scotia*, on the subject of a Proposed Communication by RAILWAY between the Port of *Halifax* and those Provinces; also, COPIES or EXTRACTS of DESPATCHES from the Governors of those Colonies on the same subject; &c.

(*Mr. Crawford.*)

Ordered, by The House of Commons, *to be Printed,*
5 *May* 1862.

210.

Under 4 *oz.*

316

CANADA (MR. RYLAND'S CLAIMS).

RETURN to an Address of the Honourable The House of Commons, dated 11 March 1862;—*for*,

A "COPY of all CORRESPONDENCE which has taken place between the Imperial Government and the Colonial Government of *Canada* on the Subject of the CLAIMS of Mr. *Ryland*."

(In continuation of House of Commons Paper, No. 85 of 1859.)

Colonial Office,
15 May 1862.

C. FORTESCUE.

(*Mr. Gregory.*)

Ordered, by The House of Commons, *to be Printed*,
19 *May* 1862.

SCHEDULE.

Number in Series.	Number and Date.	SUBJECT.	Page.
		DESPATCHES FROM THE GOVERNOR.	
1	18 February 1861 (No. 15).	Enclosing letter from Mr. Ryland to the Duke of Newcastle, respecting certain unsatisfied claims which he believes himself to have on Her Majesty's Government.	3
2	5 April 1862 (No. 64).	Transmits a copy of an Order of the Executive Council and Report of the Attorney General of Lower Canada, upon which it is founded.	5
		DESPATCHES FROM THE SECRETARY OF STATE.	
1	17 March 1861 (No. 154).	Acknowledging Sir Fenwick Williams' Despatch, No. 15, of 18 February 1861, enclosing Mr. Ryland's letter of 28 January 1861.	6
2	24 April 1861 (No. 171).	Stating, that in order fully to carry out the award of Chief Justice Carter, as far as the Imperial Government was concerned, the Duke of Newcastle had recommended the Lords Commissioners of the Treasury to allow Mr. Ryland interest on the sum of 4,500 *l.* currency, forming the Imperial moiety; and that their Lordships having concurred in that recommendation, the Paymaster General had been authorised to accept Mr. Ryland's bill for 174 *l.* 5 *s.* 9 *d.* sterling, as interest at the rate of five per cent. on that amount. Suggests the expediency of the Governor proposing to the Canadian Government the adoption of a similar course.	6
3	3 July 1861 (No. 215).	Transmitting letter from Mr. Ryland, addressed to the Duke of Newcastle, and requesting the Governor to refer him, in reply, to the communication which was directed to be made to him in the previous Despatch; and to impress also on Mr. Ryland that that payment must be considered as made in full satisfaction of his claim upon the Imperial Government, and that he must regard the case as finally closed.	6
4	21 October 1861 (No. 257).	Requesting the Governor to inform Mr. Ryland that his letter of the 20th September 1861, addressed to the Duke of Newcastle, has been received, but that his Grace is unable to comply with the requests which it contains.	8
5	2 February 1862 (No. 48).	Forwarding a copy of a letter from Mr. Ryland of the 20th December 1861, addressed to the Duke of Newcastle, and requesting the Governor to acquaint Mr. Ryland, in reply, that Her Majesty's Government do not feel it their duty to interfere further with the discretion of the Canadian Government, with respect to the payment of interest upon the moiety of the sum paid to him by that Government; nor can they recommend to the Treasury and to the House of Commons any payment from Imperial funds beyond that which he has already received.	8
		APPENDIX.	
	20 September 1861	Mr. Ryland to the Duke of Newcastle, K.G.	10

COPY of all CORRESPONDENCE which has taken place between the Imperial Government and the Colonial Government of *Canada* on the Subject of the CLAIMS of Mr. *Ryland*.

Despatch from the Officer Administering the Government of Canada.

— No. 1. —

(No. 15.)

COPY of a DESPATCH from the Officer Administering the Government of Canada to His Grace the Duke of *Newcastle*, K.G.

No. 1.
The Officer administering the Government of Canada to the Duke of Newcastle, K.G.
18 February 1861.

Quebec, 18 February 1861.

(Received 8 March 1861.)

My Lord Duke, (Answered, No. 154, 17 March 1861, page 6.)

I HAVE the honour to enclose, at the request of Mr. G. H. Ryland, a communication addressed to your Grace by that gentleman, respecting certain unsatisfied claims which he believes himself to have on Her Majesty's Government.

I also forward a copy of his letter to me which accompanied it.

I do not know that it is necessary for me to make any remarks upon these papers, and I merely place them in your Grace's hands.

I have, &c.
(signed) *W. F. Williams*,
Lieut. General Administering the Government.

Enclosure 1 in No. 1.

Encl. 1 in No. 1.

My Lord Duke, Montreal, 28 January 1861.

ON the 28th* of November last I had the honour to address a letter to your Grace suggesting a compromise of my long standing claim.

* 21st?

Considering that the case was one which concerned the Imperial Government only, I addressed my communication direct to yourself, instead of through the official channel here, which would have been the course had I considered that the Government of this country had anything to do with the question at issue.

Having, however, within the last few days received a private note from Mr. Edward Ellice, dated Nice, 26 December, in which he suggests that the Government may experience some difficulty in re-opening my case, I feel bound, in order to place my protest against such an idea more clearly on record, to address your Grace in a more formal manner than I have hitherto done on the subject.

Had my case been really closed, a suggestion as to a possible difficulty in re-opening it might have been worthy of consideration in delivering me from the pursuit of an unattainable object. But the case never has been closed, and never can be, until an arrangement satisfactory to both parties has been arrived at.

It is not, I respectfully maintain, for a Government like that of England, in the face of facts, in the face of law, equity, and justice, to say we have done this or we have done that, and therefore the petitioner must be satisfied.

The question is, has right been done? You must, my Lord Duke, in your own mind, feel that it has not.

Rejecting, then, the idea that because the British Government has the power, it will exercise it to crush my petition for right, I again appeal to your Grace for justice, and in order that no part of the question may escape your consideration, I shall take the liberty of again briefly recapitulating a few leading facts connected with the case.

1st. Lord John Russell, in his Despatch of the 20th July 1855, officially admits that I had a right to retain the office of Clerk of the Council of Canada, and that I was induced on public grounds to surrender it, in order to meet the views of Her Majesty's then Government in England.

Having, then, the right to retain, it must be allowed that I had a right to attach conditions to the surrender.

I did attach conditions which were repeated, and not having been objected to, they are binding on the Crown.

It would, indeed, be contrary to reason to suppose, under the peculiar circumstances of the case, and the admissions of Lord John Russell, that the letter of Mr. Murdoch, offering a guarantee, would be binding without my consent.

2d. When, after the lapse of many years, during which the Government, by an exercise of power, endeavoured to close my case, as they may possibly wish to do now, Chief Justice Carter was at last appointed to report upon my claim, he was restricted by his instructions to ascertain, not the amount of injury inflicted on me by my conditional surrender of office, but what sum would be necessary to cover the balance of the amount of pension on which I might have retired under the Act 4 & 5 Will. 4, in 1841.

3d. That the report of Mr. Carter, made under limited instructions, was based on the annual receipts of office up to a certain fixed period only.

In this report (for Mr. Carter, in his letter of the 1st of November 1856, distinctly denies that it was an award) he proposes two modes of settlement, one of which affording me the least possible relief, and in fact perpetuating the wrong of which I complained, the Government without my consent arbitrarily adopted.

Mr. Carter states the amount then due to be 7,735*l.* 12*s.* 6*d.*, and suggests that the sum of 1,264*l.* 7*s.* 6*d.* should be added as a kind of commutation of my pension of 515*l.* per annum, and in lieu of all further claims under my arrangement with Lord Sydenham for the rest of my life; at least, such is the substance of his report.

Now, my Lord Duke, if this report, based on certain annual calculations, and not taking in any of my losses directly consequent on the breach of faith of the Crown, could have been binding on me, it would have been necessary that the whole amount should forthwith have been paid, and that I should have accepted it without comment or dissent.

Your Grace, however, is aware that it was upwards of a year before any portion of it was paid, when my necessities compelled me to take the moiety offered, under a distinct and formal protest on record among the papers laid before the House of Commons by Lord Carnarvon, on the 23d of February 1859. It was not until the lapse of nearly three years that the remaining moiety was forthcoming, during which, in prosecution of my claim, and without which I should not to this day have been paid, I was twice compelled to visit England at a loss of upwards of 2,000*l.*

It is plain, then, that even if Mr. Carter's report was intended as a finality, it has never in its integrity been carried out; consequently there can be no question of re-opening a case which has never been closed.

With these facts before you, I cannot but hope that the proposal I had the honour to submit to your Grace in my letter of the 28th November last, will meet with your favourable consideration.

In conclusion, I would impress upon your Grace, that not only have my pecuniary prospects and those of my family been blighted by my ready acquiescence in the views of the representative of the Crown, but the property inherited from my parents and the best years of my life have been wasted and sacrificed in my protracted struggle for justice. That (to use the words of one of your Grace's most distinguished colleagues) the compensation granted "is trivial as compared to what is due to me," and, I may add, altogether inadequate to the injury I have sustained.

I have, &c.
(signed) *G. H. Ryland.*

His Grace the Duke of Newcastle,
Secretary of State.

Encl. 2 in No. 1.

Enclosure 2 in No. 1.

Sir, Montreal, 1 February 1861.

* 21st?

On the 28th* November last I addressed a communication to his Grace the Duke of Newcastle relative to certain unsatisfied claims on Her Majesty's Government.

Looking upon it that the Imperial Government were alone responsible for the debt, I mailed my letter direct to his Grace, instead of through the usual official channel here.

As the Province, however, may ultimately be looked to for a portion of the interest due under Chief Justice Carter's report, I take the liberty of addressing, through your Excellency, a more formal application to the Secretary of State on the subject, as a preliminary step preparatory to such ulterior proceedings as may be forced upon me.

I have, &c.
(signed) *G. H. Ryland.*

His Excellency Sir W. Fenwick Williams, Bart., K.C.B.,
Administrator of the Government,
&c. &c. &c.

— No. 2. —

(No. 64.)

No. 2.
Governor General Viscount Monck to his Grace the Duke of Newcastle, K.G.
5 April 1862.

COPY of a DESPATCH from Governor General Viscount *Monck* to His Grace the Duke of *Newcastle*, K.G.

Quebec, 5 April 1862.
(Received, 23 April 1862.)

My Lord Duke,

WITH reference to the suggestion contained in your Grace's Despatch to Sir E. Head, of the 24th April 1861, No. 171,* on the subject of Mr. Ryland's claims upon the Government of this Province, I have the honour to transmit to your Grace a copy of an Order of the Executive Council, and report of the Attorney General of Lower Canada upon which it is founded.

* Page 6.

13 March 1862.

I have, &c.
(signed) *Monck*.

Enclosure in No. 2.

Enclosure in No. 2.

COPY of a Report of a Committee of the Honourable the Executive Council, approved by His Excellency the Governor General in Council on the 13th March 1862.

ON the several applications of George H. Ryland, Esq., claiming interest on the half of the award of Judge Carter, paid by the Provincial Government:

The Hon. the Attorney General for Lower Canada reports, that the payment of the one-half only of Judge Carter's award, viz. 4,500 *l.*, was recommended to Parliament in consideration of the Despatches from the Secretary to the Colonies of the 1st July 1857, and 7th of October 1858, and was made as a matter of courtesy to effect a final adjustment of Mr. Ryland's claim, as mentioned in the former of those two Despatches. That he, the Attorney General, does not consider Mr. Ryland has any legal claim upon the Provincial Government for the payment of interest, since the Canadian Government was never legally bound or pledged to pay even the one-half of the principal.

That the liberality of the Canadian Government in paying the above half of the award cannot be construed as giving a claim or title to Mr. Ryland for interest thereon during the period the propriety of paying it was under consideration.

That if the claim of Mr. Ryland for interest is viewed on equitable ground, he does not consider that such a claim against the Provincial Government can be maintained; for Judge Carter, in making his award, very liberally estimated Mr. Ryland's loss at 7,735 *l.* 12 *s.* 6 *d.*, upon the calculation that during the preceding seven years there had been a deficiency of 140 *l.* per annum; and in view of that deficiency continuing for nine years, he added a further sum of 1,264 *l.* 7 *s.* 6 *d.*; but it does not appear that any such deficiency will occur during that period, for Mr. Ryland's receipts have been during last year more than sufficient to produce, with his pension, the annual income (515 *l.*) guaranteed to him by Lord Sydenham. In proof of this, he, the Attorney General, annexes a copy of the official returns of last year, by which it appears, on page 22, that the net profits of Mr. Ryland's office for the year 1860 were 486 *l.* 18 *s.*, which, added to the pension of 111 *l.*, make the sum of 597 *l.* 18 *s.*

The Attorney General must here observe, that the liberality of the British Government, in paying interest on the one-half of the award paid by them, cannot be considered as binding on the Canadian Government to pay the interest on the other half, nor could any such payment be made without the authority and sanction of Parliament, inasmuch as the past appropriation was made for the payment of 4,500 *l.* only.

The Committee concur in opinion with the Attorney General, and recommend that his report be approved.

Certified,
Wm. H. Lee,
Clerk of the Executive Council.

Despatches from the Secretary of State.

— No. 1. —

(No. 154.)

No. 1.
The Duke of Newcastle, K.G., to the Right Honourable Sir Edmund Head, Bart.
17 March 1861.
* Page 3.

COPY of a DESPATCH from the Duke of *Newcastle*, K.G., to the Right Honourable Sir *Edmund Head*, Bart.

Sir, Downing-street, 17 March 1861.

I HAVE to acknowledge the receipt of Sir Fenwick Williams's Despatch, No. 15,* of the 18th of February last, enclosing a letter addressed to me by Mr. G. H. Ryland, dated the 28th of January last.

I have, &c.
(signed) *Newcastle.*

— No. 2. —

(No. 171.)

No. 2.
The Duke of Newcastle, K.G., to the Right Honourable Sir Edward Head, Bart.
24 April 1861.

COPY of a DESPATCH from the Duke of *Newcastle*, K.G., to the Right Honourable Sir *Edmund Head*, Bart.

Sir, Downing-street, 24 April 1861.

WITH reference to previous correspondence on the subject of Mr. G. H. Ryland's claim to compensation for loss of office in Canada, I have the honour to acquaint you that, in order fully to carry out the award of Chief Justice Carter, as far as the Imperial Government is concerned, I recommended the Lords Commissioners of the Treasury to allow Mr. Ryland interest on the sum of 4,500 *l.* currency, forming the Imperial moiety of the amount due to him under the award.

Their Lordships have concurred in my recommendation, and the Paymaster General has accordingly been authorised to accept Mr. Ryland's bill for 174 *l.* 5 *s.* 9 *d.* sterling, being interest at the rate of five per cent. on the sum of 3,698 *l.* 12 *s.* 7 *d.* sterling, from the 3d of October 1856 to the 11th September 1857, the bill for 3,698 *l.* 12 *s.* 7 *d.* (being equivalent to 4,500 *l.* currency) having been paid on the 12th of September 1857.

I have to request that you will communicate this decision to Mr. Ryland as the final adjustment of his claim against Her Majesty's Government; but I am desirous of taking this opportunity of suggesting to you the expediency of proposing to the Canadian Government the adoption of a similar course as a means of removing any just cause of complaint on the part of Mr. Ryland.

I have, &c.
(signed) *Newcastle.*

— No. 3. —

(No. 215.)

No. 3.
The Duke of Newcastle, K.G., to the Right Honourable Sir Edmund Head, Bart.
3 July 1861.

25 May 1861.

* Page 6.

COPY of a DESPATCH from the Duke of *Newcastle*, K.G., to the Right Honourable Sir *Edmund Head*, Bart.

Sir, Downing-street, 3 July 1861.

I HAVE the honour to transmit to you a further letter from Mr. Ryland on the subject of his claim. I have to request that you will refer Mr. Ryland to the communication which you no doubt made to him in pursuance of the instructions contained in my Despatch, No. 171,* of the 24th of April last, to the effect that

that the interest upon the sum of 4,500 *l.* currency was paid to him in order fully to carry out the award of Chief Justice Carter, as far as the Imperial Treasury is concerned, and as a final adjustment of his claim upon Her Majesty's Government.

I am desirous that you should, at the same time, impress upon Mr. Ryland that he has been repeatedly informed that the payment of the above sum would be considered as made in full satisfaction of his claim upon the Government of this country; that I cannot admit that he has advanced any grounds upon which a departure from this decision can be justified ; and that, regarding the case as finally closed, I must decline to re-open it by giving any pledge such as that which he requests at the conclusion of his letter.

I have, &c.
(signed) *Newcastle.*

Enclosure in No. 3. Enclosure in No. 3.

My Lord Duke, Montreal, 25 May 1861.

About a fortnight ago I received a communication from the Governor General, intimating that your Grace had forwarded an authority to enable me to draw upon the Paymaster General for 174 *l.* 5 *s.* 9 *d.*, being interest at five per cent. on one moiety of the amount paid by the Imperial Government under Chief Justice Carter's report, but without reference to the interest on the other moiety, the payment of which your Grace gave me to understand you would take measures to secure.

Trifling as the present concession is, I have this day, as a matter of right, and under protest, unhesitatingly drawn for the amount as money legally due, which I should have been paid years ago, and with the understanding that it is not to be considered as a final settlement, or in any way affecting my general claim, but as a portion only on account of a much larger sum due under my arrangement with Lord Sydenham, and as conveying a further acknowledgment on the part of the Imperial Government of the aggravated injustice I have sustained at its hands.

And now, having placed this protest officially and unmistakably on record, let me again respectfully press my case upon your Grace's notice, with a view to a really final and equitable settlement of this vexatious suit.

The Imperial Government have by its acts, and by the written admissions of Lord John Russell and Earl Grey, backed by the deliberate verdict of the House of Lords, acknowledged the validity of the contract between the representative of the Crown and myself, as well as my right to compensation for all losses consequent on the surrender of my office in 1841.

Appealing to your Grace's sense of honour, I would ask have I received compensation for losses consequent on the surrender of my office, or is the arbitrary adoption by Government, without my concurrence, of the least advantageous to me of two suggestions made by Mr. Carter, under limited instructions, justice? Nay, more; will any man of ordinary understanding and moral rectitude of thought, for a moment argue that the payment of 9,000 *l.* currency, nearly one moiety of which was expended in obtaining payment of the other, is compensation for a loss already sustained of 21,000 *l.* of official income, exclusive of interest, for the loss of large landed estates pledged and sacrificed in my reliance on the official promises of the representative of the Crown, together with the loss of a retirement of 515 *l.* per annum in the shape of pension, to which I am entitled under an Imperial statute till the day of my death.

I have never, my Lord, affected, nor do I for a moment pretend, to exercise any great influence in this country, but my family name is historically connected with it. I and my case are known from one end of the land to the other, and the public press, without exception, have denounced the treatment I have experienced.

If, then, hereafter, an arrangement between a colonial subject and the Crown is to be considered of equal force and validity as an arrangement between the Crown and a subject living in England, and the loyal devotion of Her Majesty's servants here, is of any value in her eyes—if there is honour in the conduct of public affairs at home, and the vaunted justice of the British Government is not a sham and a delusion, I pray of your Grace, that, casting aside all considerations of mere expediency, you will deal with my case in the true pirit of an English statesman.

It cannot be pleasing to a nobleman of your Grace's exalted character, to whom, of all men who have ever held the reins of the Colonial Department, the people of Canada look for protection, to call to mind the manner by which my last appeal to Parliament was defeated.

I believe that you have a desire to do me justice; that Mr. Fortescue must regret the great wrong he was led to do me, and that he has the magnanimity when an opportunity offers, to set himself right.

Granting, then, that your Grace has not the power to extend further money compensation to me without a vote of Parliament, which it may be too late to obtain during the present Session, yet, taking into consideration what I have suffered, and how much the honour of the Crown is implicated, I hope you will acquiesce in my reasonable request, that a pledge be given that when the Houses are again called together a Committee will be granted me, so that the case may finally be disposed of by a jury of English gentlemen selected from the representatives of the people, in whose hands, if the Government have nothing to hide, the matter may be left with perfect safety to all parties.

I have, &c.
(signed) *G. H. Ryland.*

His Grace the Duke of Newcastle,
Secretary of State, Colonial Department,
&c. &c. &c.

— No. 4.—

(No. 257.)

No. 4.
The Duke of Newcastle, K.G., to the Right Honourable Sir Edmund Head, Bart.
21 October 1861.

Copy of a DESPATCH from the Duke of Newcastle, K.G., to the Right Honourable Sir *E. Head*, Bart.

Sir, Downing-street, 21 October 1861.

I HAVE the honour to request that you will inform Mr. Ryland, that I have received a letter which he has addressed to me, dated Picton, Bay of Quinté, September 20th, 1861*, but that I am unable to comply with the requests which it contains.

* This letter is printed as Appendix, page 10.

I am, &c.
(signed) *Newcastle.*

— No. 5. —

(No. 48.)

No. 5.
The Duke of Newcastle, K.G., to Viscount Monck,
2 February 1862.

26 December 1861.

Copy of a DESPATCH from the Duke of *Newcastle*, K.G., to Viscount *Monck*.

My Lord, Downing-street, 2 February 1862.

I HAVE the honour to transmit to your Lordship the copy of a letter addressed to me by Mr. Ryland, dated Montreal, 26 of December last; I have to request that you will acquaint Mr. Ryland, in reply, that Her Majesty's Government do not feel it to be their duty to interfere further with the discretion of the Canadian Government with respect to the payment of interest upon the moiety of the sum assigned in Chief Justice Carter's award, and paid to him by that Government; nor can they recommend to the Treasury and to the House of Commons any payment from Imperial funds beyond that which Mr. Ryland has already received.

I have, &c.
(signed) *Newcastle.*

Enclosure in No. 5.

Enclosure in No. 5.

My Lord Duke, Montreal, 26 December 1861.

SHORTLY after Lord Monck's arrival, I received from him a communication of your Grace's Despatch declining to adopt any of the suggestions I had the honour to submit for the final adjustment of my claims on Her Majesty's Government.

I cannot say how deeply disappointed I am at your Grace's persistent refusal to do me justice.

Suffice it, that I did think after the cruel injury I had sustained at the hands of Mr. Fortescue, that the Secretary of State for the Colonies only required an opportunity to set himself right.

In the present crisis of affairs between England and the United States, the Governor General having accepted a tender of services on the part of my sons and myself to raise volunteers for the defence of the frontier, it will be my duty to remain where I am for the present, in order to lend any little assistance in my power in support of the national honour.

In

In the meantime, protesting against your Grace's decision, I owe it to myself distinctly to declare that the instant matters on this continent are brought to a peaceful issue, I shall renew my application to the House of Commons for a Committee of Inquiry into my case, in the hope that no further unfair attempt will be made to prevent my obtaining from a jury of English gentlemen an expression of opinion on the treatment I have experienced.

In concluding this communication, and without in any way wishing to reflect on the conduct of the most unpopular and least regretted Governor we have ever had, who happily for the interests of Great Britain and Canada is no longer here to palsy the loyal hearts of Her Majesty's faithful servants, I take the liberty of calling your Grace's attention to the fact that no action appears to have been taken on your Despatch of May* last, relative to the payment of interest due on the Canadian moiety of money paid under Chief Justice Carter's report, which, calculated at the legal rate of 7 per cent. interest in Canada, would in round numbers amount to about 800 *l.*; the period between the date of Mr. Carter's report and date of payment here being two years and eight months.

* April?

Permit me, my Lord Duke, to remark, that, under the peculiar circumstances of the case, it was the duty of the Imperial Government at once to have paid this money, and to have called upon the local Government afterwards to make it good as so much advanced on their account.

The protracted delay in the payment of this money is not only an aggravation of the injury I have sustained, but it demonstrates the truth of the arguments I have advanced, showing that Chief Justice Carter's report cannot be considered as a finality, inasmuch as five years have elapsed without its being fully carried out.

In claiming, then, that I be authorised to draw upon the Paymaster General for the amount in question, I trust that I am but anticipating your own conclusion on the subject.

I have, &c.
(signed) *G. H. Ryland.*

His Grace the Duke of Newcastle, K.G.
&c &c. &c.

APPENDIX.

LETTER FROM MR. RYLAND.

Warwick House, Picton, Bay of Quinté,
20 September 1861.

My Lord Duke,

I AM well aware how difficult it is for an individual, particularly a colonist, to contend against the power of the Crown, and the will of its Minister.

But I have a duty to perform to my family and others, who have incidentally suffered by the injustice I have experienced, which compels me to protest against your Grace's decision on my case, as conveyed in your Despatch of the 3d July to the Governor-General of Canada.*

* Page 6.

It may be convenient to get rid of a just claim by a simple denial of justice, and expediency may, on particular occasions, suggest that the door should abruptly be closed against a pertinacious creditor or troublesome claimant.

But the fundamental principles of right and justice which protect society and regulate transactions between man and man remain the same, and are as binding on the Sovereign as on the subject.

I would, therefore, humbly submit that it is not competent in a Minister of the Crown arbitrarily to dispose of a case like mine by a compulsory settlement which would not hold good in private life.

Mr. Fortescue emphatically remarked, that it required two parties to an agreement. If so, it surely requires the consent of both to dissolve one.

Now, your Grace must bear in mind that my case is not one of mere ordinary hardship. It is one of gross wrong.

On my part there has never been a waver from the first moment of my negotiation with Lord Sydenham to the present period, which could in any way invalidate my claim.

Whereas, on the part of the Crown there has been a succession of official acknowledgments, amounting in fact to a direct confession of judgment that I am entitled to compensation for all losses consequent on the surrender of my office in 1841.

I fall back on this acknowledgment, confirmed by the fiat of the House of Lords; and if there is meaning in words or official language, I invoke this admission in aid of justice.

But your Grace remarks that I have advanced "no grounds upon which a departure from your previous decision can be justified."

No grounds! What new grounds are required?

Are not the facts patent and undeniable that a contract was entered into with me by the representative of the Sovereign, for the surrender into his hands, for public purposes, of a patent office of the value of 1,030*l.* per annum. That having, as admitted by Lord John Russell, a right to retain the office, I attached conditions to the surrender, which were tacitly agreed to, and never refused.

That Lord Sydenham was at the time charged with extraordinary powers which I could not inquire into or dispute, to attain a great political end, then ardently desired by the Imperial Government and Parliament, and was authorised to take every step which, in his judgment, might be conducive to that end.

That I had an acknowledged right at that time to retire under an Imperial Statute upon a pension of 515*l.* per annum for the rest of my life.

That, trusting to Lord Sydenham's verbal promises, and in the honour of the Crown he represented, I confidingly agreed to his proposals, dispossessing myself of vested rights on which my family depended for their daily bread.

That the intentions of the agreement by which I was to have been secured an income equal to that which I surrendered, have never been carried out.

That in the performance of my share of the contract, I have been stripped of my property, and irretrievably ruined.

That though your Grace's predecessors in office and the House of Lords distinctly admitted my right to compensation for all my losses, 16 years were, nevertheless, allowed to elapse before any relief was extended to me, and that even then the gentleman deputed to report on my case was debarred by his instructions from examining into the most important portion of my claim—that portion, in fact, to which Lord Grey had previously acknowledged me to be entitled.

Are not these facts, my Lord Duke, I ask, patent; and is it not true that when I appealed to Parliament for a Committee of Inquiry in order to lay them more fully before a jury of English gentlemen, the Under Secretary of State, in his official capacity, stifled my appeal by a statement which has since been proved by documentary evidence, laid before your

your Grace by Mr. Gregory, to have been unfounded in truth, and at variance with common sense and reason ?

And will your Grace, or any conscientious person, contend, that after a lapse of 20 years of mental and pecuniary suffering, the making up to me of an official income to a certain fixed period only on the scale of a retirement to which I was entitled for life, with a forced commutation of 1,200 *l.* dribbled out to me at distant and different periods, in a way to do me more injury than good, is a measure of justice ; or that I am to be compelled to accept it as a liberal and final settlement from the Government, at whose hands I have suffered a grievous loss, amounting in round numbers to 50,000 *l.* ?

But it is argued that my surrender of office was made with a view to Canadian objects, and in aid of a policy suggested by, and directed to, the interests of Canada.

Granted ; but what had I to do with Canada, and by whom was the policy adopted and applied ? By the Imperial Government and Parliament, with whose accredited agent alone I treated ; who never contemplated granting advantages to any class of Her Majesty's subjects at the expense of an individual, and that individual a public servant, in the possession of vested rights granted to him by his Sovereign, in reward of his own and his father's services, as for value received.

To refer me, then, to a third party in no way amenable would be an act not only of aggravated injustice, but of unparalleled dishonesty, unworthy of a great Government.

Let us suppose that your Grace were to purchase from one of your tenants a property of a yearly ascertained value, with the understanding that he was to receive an equivalent; that you were then to bestow it on a neighbour, to whom, when the fulfilment of the agreement was demanded, you were to refer the claimant for indemnification, would not such an act be justly condemned as fraudulently dishonest ? And can your Grace, then, as a Minister of the Crown, countenance on the part of the British Government, of which you are a member, a proceeding which in the ordinary transactions between man and man could not honestly be maintained, or will you, because you have been led into an expression of opinion, consider it necessary to maintain it in the face of facts, of reason, and of justice ?

Permit me to say that had Lord Stanley remained in office, or had his mind when my case was brought before him not been so fully occupied with the all-important question of India that he could not be expected to go personally into a private grievance, I feel assured that I should not now be suing in vain at the shrine of the Colonial Office.

And, even as it is, with the impression still fresh in my memory of my first interview with your Grace, before the Crimean war, when reposing full confidence in your justice, I at once, at great loss and inconvenience to myself, agreed to your suggestion that I should not press my case till after the arrival of Lord Elgin, whom I knew to be personally opposed to me, I cannot but hope that now, when your Grace's legislative duties are for a time suspended, you will consent to look into my case dispassionately, receiving no impressions from others, but weighing my case yourself with a view to a reconsideration of the facts to which I have endeavoured to direct your attention.

Surely I have been sufficiently punished for my ready acquiescence in the views of Her Majesty's Government 20 years ago.

There are several remedies in your power.

I have a right, without any favour, to be restored in a pecuniary point of view to the position I held at the time of my contract with the representative of my Sovereign.

If your Grace cannot grant me full money compensation and the pension to which, under the Act of 4 & 5 Will. 4, I am entitled, and if from motives of delicacy towards Mr. Fortescue you object to a committee of enquiry, which some influential political friends of mine in England urge me, with every hope of success, to apply for on the reopening of Parliament, when, please God, I shall be in England,—your Grace has a certain amount of Crown patronage in your hands. There are offices in England, and governments abroad.

You have disposed of New Zealand and South Australia, but I am told that a course has been determined on which will place the Government of the Red River Settlement at the disposal of the Secretary of State for the Colonies.

Give me this, or office in England, with an adequate income, and a trifling compensation for the losses I have suffered, and I will give the Government a discharge in full.

Forty years' experience and confidential service in Canada should fit me for any official trust.

Earl Durham, Lord Metcalfe, and others, who might have spoken to my administrative capacity, are gone, but Lord Seaton will, I am sure, bear testimony to my ability, and the manner in which I supported him at the period when the assistance of every loyal man was required to save the Canadas to the British Crown.

I have, &c.

(signed) *G. H. Ryland.*

His Grace the Duke of Newcastle, K.G.
Secretary of State,
&c. &c. &c.

CANADA (MR. RYLAND'S CLAIMS).

COPY of all CORRESPONDENCE which has taken place between the Imperial Government and the Colonial Government of *Canada* on the subject of the CLAIMS of Mr. *Ryland*.

(*Mr. Gregory.*)

Ordered, by The House of Commons, *to be Printed,*
19 *May* 1862.

256. *Under* 2 *oz.*

NORTH AMERICA.

No. 10.

DESPATCH

FROM

LORD LYONS

RESPECTING THE

RECIPROCITY TREATY.

Presented to both Houses of Parliament by Command of Her Majesty.
1862.

LONDON:
PRINTED BY HARRISON AND SONS.

Despatch from Lord Lyons respecting the Reciprocity Treaty.

Lord Lyons to Earl Russell.—(*Received March* 15.)

(Extract.) *Washington, February* 28, 1862.

I HAVE the honour to inclose a copy of the Report of the Committee of the House of Representatives on the Reciprocity Treaty.

Inclosure.

HOUSE OF REPRESENTATIVES.

37th Congress, 2nd Session.] [Report No. 22.

Reciprocity Treaty with Great Britain.

MR. WARD, from the Committee on Commerce, made the following Report:—

The Committee on Commerce, to whom were referred the concurrent Resolutions of the Legislature of the State of New York in relation to the Treaty between the United States and Great Britain, commonly known as the "Reciprocity Treaty," report as follows:—

The subject of our commercial relations with the British provinces and possessions demands the most close investigation, not only as regards the population and territory of these dominions, but also because the principles and plans necessary to a mutually satisfactory solution of our existing difficulties with them, may have an important influence on the future policy of the United States, and form the basis for a system of interchange with other nations upon this continent.

The State of New York having a larger extent of co-terminous frontier with the most populous portion of Canada—the most important of all the provinces—than is possessed by any other State in the Union, her people would naturally be the first to reap the benefits of free intercourse with Canada, and the first to be injured by exclusive legislation on the part of that province. The subject being thus brought home to the people of New York, the following Resolutions were duly passed by the Legislature of that State, and have been referred to this Committee for consideration:—

Concurrent Resolutions of the Legislature of the State of New York in relation to the Treaty between the United States and Great Britain, commonly known as the Reciprocity Treaty.

"Whereas, under the Treaty made by the United States with Great Britain, on behalf of the British North American Colonies, for the purpose of extending reciprocal commerce, nearly all the articles which Canada has to sell are admitted into the United States free of duty, while heavy duties are now imposed upon many of those articles which the United States have to sell, with the intention of excluding the United States from the Canadian markets, as avowed by the Minister of Finance and other gentlemen holding high official positions in Canada; and similar legislation, with the same official avowal, has been adopted by the imposition of discriminating tolls and duties in favour of an isolating and exclusive policy against our merchants and forwarders, meant and intending to destroy the natural effects of the Treaty, and contrary to its spirit; and whereas we believe that free commercial intercourse between the United States and the British North American Provinces and Possessions, developing the natural, geographical, and other advantages of each, for the good of all, is conducive to the present interest of each, and is the only proper basis of our intercourse for all time to come; and whereas the President of the United States, in the first session of the thirty-sixth Congress, caused to be submitted to the House of Representatives an official Report, setting forth the gross inequality and injustice existing in our present intercourse with Canada, subversive

of the true intent of the Treaty, owing to the subsequent legislation of Canada; and whereas the first effects of a system of retaliation or reprisal would injure that portion of Canada known as the Upper Province, whose people have never failed in their efforts to secure a permanent and just policy for their own country and ourselves, in accordance with the desire officially expressed by Lord Napier when British Minister at Washington, for the 'confirmation and expansion of free commercial relations between the United States and British Provinces:' Therefore—

"*Resolved.* That the Senators and Representatives in Congress for the State of New York are requested to take such steps, either by the appointment of Commissioners to confer with persons properly appointed on behalf of Canada, or by such other means as may seem most expedient, to protect the interests of the United States from the said unequal and unjust system of commerce now existing, and to regulate the commerce and navigation between 'Her Majesty's Possessions in North America and United States in such manner as to render the same reciprocally beneficial and satisfactory,' as was intended and expressed by the Treaty. And

"*Resolved.* That the foregoing preamble and Resolutions be transmitted to our Senators and Representatives in Congress, with a request that they be presented to both Houses thereof."

The chief points for consideration are the extent, population, position, and resources of the British North American Provinces and Possessions; the present co-called "Reciprocity Treaty;" the existing condition of our commercial and fiscal relations with Canada, and the line of policy most conducive to the interest and welfare of both countries; the tendencies of modern inventions and civilization on the intercourse of nations, including the leading principles of the German Commercial Union or *Zollverein*, and their applicability to the United States and the co-terminous or adjacent British Provinces and Possessions; the mutual relations of Great Britain and Canada, and the Colonies, so far as they affect the United States; and a method of negotiation for the removal of existing difficulties.

Extent, Character, Resources, &c., of the British North American Provinces and Possessions, and Climate of the Interior.

The great and practical value of the British North American Provinces and Possessions is seldom appreciated. Stretching from the Atlantic to the Pacific Ocean, they contain an area of at least 3,478,380 square miles—more than is owned by the United States, and not much less than the whole of Europe, with its family of nations. No small portion of these British territories consists of barren and inhospitable regions in the extreme north; but, as a recompense, the arid plains extending through Texas, and thence northward beyond the limits of the United States, are comparatively insignificant as they enter the British Possessions, where the Rocky Mountains are less elevated, and have a more narrow base. The isothermal line of 60° for summer rises on the interior plains of this continent as high as the sixty-first parallel, its average position in Europe; and a favourable comparison may also be traced for winter and the other seasons of the year. Spring opens almost simultaneously on the vast plains reaching from St. Paul's to the Mackenzie river—a distance northerly of about 1,200 miles. Westward from these regions—now scarcely inhabited, but of incalculable value in the future—are countries of yet milder climate, on the Pacific slope and in Vancouver's Island, whose relations to California are already important. On the eastward, but yet far distant from other abodes of civilization, are the small settlements enjoying the rich lands and pleasant climate of the Red River of the North, a stream capable of steamboat navigation for 400 miles.

It is asserted by those who add personal knowledge of the subject to scientific investigation, that the habitable but undeveloped area of the British possessions westerly from Lake Superior and Hudson's Bay comprises sufficient territory to make twenty-five States equal in size to Illinois. Bold as this assertion is, it meets with confirmation in the isothermal charts of Blodgett, the testimony of Richardson, Simpson, Mackenzie, the maps published by the Government of Canada, and the recent explorations of Professor Hind of Toronto.

North of a line drawn from the northern limit of Lake Superior to the coast at the southern limit of Labrador exists a vast region, possessing in its best parts a climate barely endurable, and reaching into the Arctic regions. This country, even more cold, desolate, and barren on the Atlantic coast than in the interior latitudes, becoming first known to travellers, has given character in public estimation to the whole north.

Another line, drawn from the northern limit of Minnesota to that of Maine, includes

nearly all the inhabited portion of Canada, a Province extending opposite the territory of Dakota and States of Minnesota, Wisconsin, Michigan, Ohio, Pennsylvania, New York, Vermont, New Hampshire, and Maine, possessing a climate identical with that of our Northern States.

The "Maritime Provinces" on the Atlantic coast include New Brunswick, Nova Scotia, Prince Edward's Island, and Newfoundland. Geographically they may be regarded as a north-easterly prolongation of the New England system. Unitedly they include an area of at least 86,000 square miles, and are capable of supporting a larger population than that at present existing in the United States or Great Britain. They are equal in extent to the united territory of Holland, Greece, Belgium, Portugal, and Switzerland.

New Brunswick is 190 miles in length and 150 in breadth. Its interests are inseparably connected with those of the adjacent State of Maine. It has an area of 22,000,000 acres, and a sea-coast 400 miles in extent and abounding in harbours. Its population some years ago numbered 210,000, whose chief occupations are connected with ship-building, the fisheries, and the timber trade. Commissioners appointed by the Government of Great Britain affirm that it is impossible to speak too highly of its climate, soil, and capabilities. Few countries are so well wooded and watered. On its unreclaimed surface is an abundant stock of the finest timber; beneath are coal-fields. The rivers, lakes, and sea-coast abound with fish.

Nova Scotia, a long peninsula united to the American continent by an isthmns only fifteen miles wide, is 280 miles in length. The numerous indentations on its coast form harbours unsurpassed in any part of the world. Including Cape Breton, it has an area of of 12,000,000 acres. Wheat and the usual cereals and fruits of the Northern States flourish in many parts of it. Its population in 1851 was declared by the Ceusus to be 276,117. Besides possessing productive fisheries and agricultural resources it is rich in mineral wealth, having beneath its surface coal, iron, manganese, gypsum, and gold.

The Province of Prince Edward's Island is separated from New Brunswick and Nova Scotia by straits only nine miles in width. It is crescent-shaped, 130 miles in length, and at its broadest part is 34 miles wide. It is a level region, of a more moderate temperature than that of Lower Canada, and well adapted to agricultural purposes. Its population in 1848 was 62,678.

The Island of Newfoundland has a sea-coast 1,000 miles in extent. It has an area of 23,040,000 acres, of which only a small portion is cultivated. Its spring is late, its summer short, but the frost of winter is less severe than in many parts of our own Northern States and territories. It is only 1,665 miles distant from Ireland. It possesses a large trade with various countries, including Spain, Portugal, Italy, the West Indies, and the Brazils.

The chief wealth of Newfoundland and of the Labrador coast is to be found in their extensive and inexhaustible fisheries, in which the other Provinces also partake. The future products of these, when properly developed by human ingenuity and industry, defy human calculation. The Gulf Stream is met near the shores of Newfoundland by a current from the Polar basin, vast deposits are formed by the meeting of the opposing waters, the great submarine islands known as "The Banks" are formed, and the rich pastures created in Ireland by the warm and humid influences of the Gulf Stream are compensated by the "rich sea-pastures of Newfoundland." The fishes of warm or tropical waters, inferior in quality, and scarcely capable of preservation, cannot form an article of commerce like those produced in inexhaustible quantities in these cold and shallow seas. The abundance of these marine resources is unequalled in any other portion of the globe.

Canada, rather a nation than a province, in any common acceptation of the term, includes not less than 346,863 square miles of territory, independently of its North-Western Possessions not yet open for settlement. It is three times as large as Great Britain and Ireland, and more than three times as large as Prussia. It intervenes between the great North-West and the Maritime Provinces, and consists chiefly of a vast territorial projection in the territory of the United States, although it possesses a coast of nearly 1,000 miles on the River and Gulf of the St. Lawrence, where fisheries of cod, herring, mackerel, and salmon are carried on successfully. Valuable fisheries exist also in its lakes. It is rich in metallic ore and in the resources of its forests. Large portions of its territory are peculiarly favourable to the growth of wheat, barley, and the other cereals of the north. During the life of the present generation, or the last quarter of a century, its population has increased more than fourfold, or from 582,000 to 2,500,000.

The population of all the Provinces may be fairly estimated as numbering 3,500,000

Many of the inhabitants are of French extraction, and a few German settlements exist; but two-thirds of the people of the Provinces owe their origin either to the United States or to the British Islands, whose language we speak, and who "people the world with men industrious and free."

Natural Characteristics of Northern Nations, and the necessary Principle of our Policy.

The climate and soil of these Provinces and Possessions, seemingly less indulgent than those of tropical regions, are precisely those by which the skill, energy, and virtues of the human race are best developed. Nature there demands thought and labour from man, as conditions of his existence, but yields abundant rewards to wise industry. Those causes which, in our age of the world, determine the wealth of nations, are those which render man most active; and it cannot be too often or too closely remembered in discussing subjects so vast as these, where the human mind may be misled if it attempts to comprehend them in their boundless variety of detail, that sure and safe guides in the application of political economy, and to our own prosperity, are to be found in the simple principles of morality and justice, because they alone are true alike in minute and great affairs, at all times and in every place. They imply freedom for ourselves, and those rules of fraternity or equality which enjoin us to regard our neighbours as ourselves. We can trust in no other policy.

Principle of Reciprocity—its Necessity for the British Possessions, and Approval by American Statesmen.

While free access to the markets of the United States is mutually valuable to the Maritime Provinces and ourselves, by far the most extensive portions of the British Possessions is behind the territory of the United States, and, under an unwise and illiberal system, would be debarred from direct communication with the Atlantic Ocean and those Southern regions whence it must always derive many daily necessaries of civilized life in exchange for the products of its own Northern industry. Let us not inquire curiously which of the two would render the most useful service to the other under a just system and perfect development of actual reciprocity. The various parts of the American continent, like those of the human body, are wonderfully adapted to each other. The different portions of the continent do not profitably admit of any commercial separation, and the principle of unrestricted commercial intercourse with the British North American Possessions has been approved alike by free-traders and Protectionists at all periods of our national existence.

Date of the Treaty, and Policy advised by Agents of the United States' Treasury.

With the intention of establishing a system thus mutually advantageous, a Treaty was made in 1854 by the United States with Great Britain on behalf of the Provinces of Canada, New Brunswick, Nova Scotia, Prince Edward's Island, and Newfoundland.

Various representations having been made as to the unfriendly, adverse, or restrictive legislation of Canada, the Hon. I. T. Hatch, of the State of New York, and James W. Taylor, of Minnesota, were appointed as Agents of the Treasury Department of the United States, to inquire into the operations of the Reciprocity Treaty. They reported the results of their investigations in 1860. Minor differences of opinion exist between the two Commissioners, but they fully agree as to the ultimate object of our national policy towards the Provinces, that of unrestricted commercial intercourse.

Comprehensive Statement by Mr. Hatch.

Mr. Hatch briefly sketches the chief causes of the uniformity of opinion among all political parties in this country, at all times, by the following comprehensive statement:—

"The territory of the Provinces is indented with our own along a line extending across the continent from ocean to ocean. The wages of labour (the great modern test of one phase of national equality) are nearly equal in both countries. The cost in the production of wheat and other cereals differs but little on both sides of the boundary line. Shown thus to be apparently commercially alike by these leading considerations, and minor parallels confirming the similitude, it is not singular that at various periods of our national existence the idea of reciprocity in trade between the two countries has received the favourable regard of eminent men."

Decided Opinion of Mr. Van Buren.

"The policy of the United States," wrote Mr. Van Buren, referring especially to the North American Colonies, to Mr. Mc Lean, who was then our Minister at the Court of St. James, in 1829, during the Presidency of General Jackson, "in relation to their commercial intercourse with other nations, is founded on principles of perfect equality and reciprocity. By the adoption of these principles they have endeavoured to relieve themselves from the discussions, discontents, and embarrassments inseparable from the imposition of burdensome discriminations. These principles were avowed while they were yet struggling for their independence, are recorded in their first Treaty, and have been adhered to with the most scrupulous fidelity."

Mutual Advantages of a Home Market.

The considerations which have led many American statesmen to advocate a "protective" system, and establish "home markets," dictate the adoption of unrestricted intercourse with the Provinces. A "home market" is the market nearest home, and this is furnished by our respective possessions to each other at every point of our neighbouring or co-terminous territory.

Advantages of a Continental or American Policy appreciated by both Political Parties.

The recent increase of facilities for communications by canals, railroads, bridges, steamboats, and telegraphs, assisting the transfer of merchandise, the travel of passengers, and the free interchange of thought between the United States and the British Provinces, add to this policy a value which we cannot estimate too highly, and of which we cannot foresee the future greatness. Long before these additional considerations pressed upon public attention, and brought home a knowledge of our true continental policy to almost every inhabitant of our vast northern frontier by the common experience of his daily life, the exceptional character of our natural relations with the Provinces had been duly observed by those American Statesmen who have advocated a protective policy.

Opinions and Testimony of Henry Clay.

Among the foremost advocates of this system was Mr. Clay, who, in his letter dated October 11, 1826, to Mr. Vaughan, alike expressed his own convictions and added his valuable testimony to the uniformity of opinion among American Statesmen in his time, and of the policy by which this Government has always been guided. He said, in his letter to Mr. Vaughan dated October 11, 1826: "The Government of the United States has always been anxious that the trade between them and the British Colonies should be placed on a liberal and equitable basis. There has not been a moment since the adoption of the present Constitution when they have not been willing to apply to it principles of fair reciprocity and equal competition."

Unanimity of the Agents appointed by the Treasury of the United States.

Mr. Hatch maintains "that no commercial arrangement can be permanently advantageous to one party without being so to both; that the basis of virtual, if not of literal, reciprocity, is the only solid ground of international relations; and that the increased prosperity of one of the family of nations only offers an enlarged market for the industry, and an expanded field for the commerce, of every other;" and that with reciprocal free trade we should present to the world the "sublime example of two contiguous nations abandoning suspicion of injury from each other, and practising in their intercourse the best principles professed in modern civilization."

To these opinions Mr. Taylor gives a hearty assent, quoting, in his support, the opinions of various eminent Statesmen. He presents to the consideration of the Government of the United States the removal of all restrictions upon the commerce of these kindred communities, and brings forward a suggestion which has long engaged the attention of many intelligent men on both sides of the frontier—to extend the principle of reciprocity to manufactures as it now exists in raw or unmanufactured products, and "*establish an American Zollverein, each country adopting the policy of unlimited free trade with the other.*"

Complete Reciprocity recommended by the Canadian Parliamentary Committee in 1858.

The same plan has, on more than one occasion, received the sanction of the Canadian Parliamentary Committee on Commerce. In 1858, taking cognizance, also, of the

restrictions checking the mutual intercourse of the different provinces, which have been aptly termed "countries foreign to each other without diplomatic relations," the same Committee advised the removal of all duties on the productions of the British Possessions in America, so that "precisely the same principle as exists in the intercourse between the different States of the American Union may be established in these Colonies," and also that "*the principle of reciprocity with the United States may be extended to manufactures, the registration of Canadian and United States' built vessels, and to the shipping and coasting trade, in the same manner as to the productions of the soil.*"

In the Canadian Parliament a desire has frequently been expressed to do away with the four or five currencies, and the four or five different Tariffs, now existing in the Provinces, and to remove obstacles to trade with the United States, thereby mitigating many evils which are injurious to the national interests of the Provinces, and tend to dwarf the minds and patriotism of their people. It will be impossible to say how far these opinions prevail in Canada, until some more efficient indication, on our part, has been given of a desire to reciprocate this policy fully and cordially, and to liberate the people, on both sides, from the present oppressive restrictions. The market to be created, by free access to our citizens, for all the products of Canadian industry, is duly appreciated by many influential men in all parts of the Provinces. In Upper Canada the chief journals of both political parties are alike in favour of a liberal system of commerce with the United States, although many inequalities and much injustice towards this country now exist in consequence of the adverse and restrictive policy of Canada, adopted since the date of the Treaty.

Former Revenue on Articles made Free by the Treaty.

The amount contributed to our revenue by taxes on Canadian products on articles rendered free by the Treaty was, during the previous year, nearly 1,300,000 dollars, while the amount contributed to the Canadian revenue on the corresponding articles was less than 200,000 dollars.*

Value of Canadian Productions increased 20 per cent. by the Treaty.

Here the special operation of the laws of political economy is worthy of note. Superficially, it is said that the markets of Europe regulate for agricultural productions the markets of this continent, and that the duty remitted on Canadian products was a saving to the pockets of our people; but the products of Canada and our relative position and requirements are such that the United States possess, to some extent, a monopoly of the Canadian market as purchasers of the products of the field. For cattle, sheep, swine, the coarse grains, and certain kinds of lumber, we constitute for Canada the only market worthy of naming; and the wheat of Canada, from its peculiar adaptation to our uses, was largely sold to us before the Treaty. Of the large amount of wheat received at Toronto, the metropolis of Upper Canada, in 1859—the last year of which we possess any authentic statistics on the subject, which have been published—only 2 per cent. were sent viâ the St. Lawrence; the rest having been received at Oswego and other American ports;† and that the duties (of 20 per cent.) were, in effect, paid by the Canadians prior to the Treaty is incontrovertibly established by the Report of the Select Committee on Commerce, appointed by the Legislative Assembly of Canada in 1858, testifying that the effect of the repeal of discriminating duties on grain imported into Great Britain was "to depreciate the value of all articles grown or produced in Canada 20 per cent. under the value of like articles grown or produced in the United States, and this difference in value continued up to the year 1854 (the year of the Treaty), a period of nearly nine years."

Right of the United States to a just Reciprocity.

The "Reciprocity Treaty" is thus shown to have been productive of extraordinary advantage to Canadian industry, which is chiefly employed in agricultural pursuits. From Canada, as from the newer States of this Union, the chief articles of export are raw products; but a considerable share of the exports naturally made from the United States to Canada consists of the products of manufacturing industry; and it does not admit of any doubt or question that commercial reciprocity, apart from the confusion arising from a conventional and technical construction of the words—actual reciprocity of commerce between the two countries—implies a free and fair exchange on equal terms of all the products of labour in both. In admitting Canada to the commercial advantages she

* As nearly as can be ascertained.—See Report of Canadian Commissioner of Customs.

† See Report of Canadian Commissioners of Public Works, page 7.

would enjoy if she were a State of this Union, we have a right to expect from her in return the same commercial privileges which each State of the Union confers upon the others.

Canadian Minister of Finance officially avows a Policy adverse to Reciprocity with the United States.

It was indeed expected, when the Treaty was made, that Canada would continue to impose moderate duties upon American manufactures; but if at that time she had announced a determination to enact laws especially discriminating against all forms of our industry, except those which are nominated in the bond, the benefits we have conferred upon her would never have been granted, nor can she expect their continuance beyond the time required by the Treaty. Yet this tendency and intention to isolate herself and exclude us, except so far as we may be purchasers of her products, was not only commonly proclaimed by a large party in the province, but was officially avowed by the Canadian Minister of Finance,* and various alterations have been made in the method of levying duties on merchandise of foreign origin for the avowed purpose of checking the trade of New York and Boston.

Canadian Taxation of American Productions in contrast.

The statistics of the Canadian Government show that for the first three years after the Treaty, Canada taxed forty-five times as large an amount of American productions as the United States taxed of Canadian productions. Since that time our exports of manufactures to Canada have diminished. Having deducted from the importations from Canada into this country the articles of iron, hardware, and salt, as they are not produced for exportation in Canada in appreciable quantities, but are evidently of foreign origin, the following is a tabular statement for each fiscal year since the Treaty went into full effect to January 1, 1861:—

	1856.	1857.	1858.	1859.	1860.
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
Products of the United States on which duty was paid in Canada	7,981,284	6,203,320	4,524,503	4,197,316	4,425,001
Products of Canada on which duty was paid in the United States	136,370	160,086	119,358	173,478	174,259
Value of American products charged with duty in Canada above that of Canadian products charged with duty in the United States ..	7,844.914	6 043.234	4,405,145	4.023,838	4,250,742

The United States tax Canadian Productions only 40,000 *dollars, while American Productions are taxed* 1,000,000 *dollars annually in Canada.*

While we have levied annually since the Treaty only about 40,000 dollars on Canadian productions,† the average amount of duties levied on American productions in Canada has been more than 1,000,000 dollars annually.

If the policy of the United States towards Canada had been founded upon the theory of free imports only, our objections to this state of things would have no weight, but as our intention was to act upon the principle of reciprocity in the common sense of the term, the giving and receiving of equivalents on each side, any intentional adoption of the spirit of isolation or exclusion on either side is a departure from that system of mutual liberality and profit which the Treaty was intended to inaugurate.

Intentions formerly expressed in Canada.

In those Diplomatic positions where official changes are frequent, and where those who are the chief agents in important negotiations are frequently removed to distant spheres of labour, verbal understandings are readily forgotten; but when delay occurred in the negotiations leading to this Treaty, Canada, through the British Minister at Washington, emphatically declared "*the disappointment was the greater, inasmuch as the Canadian Government has always adopted the most liberal commercial policy with respect to the United States, as well in regard to the transit through its canals as in regard to the admission of manufactured goods coming from this country,*" and alleged, upon the official

* See Report, May 1, 1860, pp. 34, 36, and elsewhere.

† The foregoing Table is too favourable to Canada, and includes many articles evidently not of Canadian origin.

authority of the Canadian Government, that if the natural products of Canada should be admitted duty free, that Government would be willing to carry out still further the same liberal commercial policy already pursued towards the manufactures of the United States, adding that, in the event of our refusal, "the Canadian Government and Legislatures are likely forthwith to take certain measures which, both in themselves and their consequences, will effect a considerable change in the commercial intercourse between the Canadas and the United States."

Natural Exchanges of Canada and the United States.

Canada is in many respects like our new North-Western country, her farms and forests yielding a great variety of products, which under a fair system of reciprocity would be exchanged for articles manufactured in the Eastern and older States. So different are the relative circumstances of the two countries, that, under the moderate Canadian Tariff in operation when the Treaty was made, we exported to Canada manufactures to the value of nearly 8,000,000 dollars in one year, while the manufactures of Canada sold to us have never exceeded about 150,000 dollars in value, so far as they can be ascertained. The free admission of the products of Canada is injurious to our farming and lumbering interests, while our manufacturers, shippers, and merchants are attacked by the unjust and restrictive laws of that Province.*

Unfair system of Canadian Tolls discriminating against the United States.

Under the stipulations of the Treaty, Canada granted the use of her canals to American vessels on the same terms as those enjoyed by British vessels. The Welland Canal, connecting Lakes Erie and Ontario, is extensively used by American shipping. Under an enactment of 1860, if vessels and goods having paid toll on the Welland Canal enter the St. Lawrence Canals or any Canadian port, all except 10 per cent. of the Welland charges is refunded; thus creating a discrimination of 90 per cent. against vessels going to American ports, besides a free passage through the Canals of the Galops. Point Iroquois, Rapid Flat, Favian's Point, Cornwall, Beauharnois, and Lachine—a discrimination against the forwarders and millers of Rochester, Oswego, and Ogdensburg, the carrying systems of New York, and the shippers and merchants of that port. In the same way, vessels from Canadian ports on Lake Ontario or the St. Lawrence are charged only one-tenth of the Welland tolls exacted if they pass from American ports.

These enactments are evidently inconsistent with our just expectations. They clearly discriminate in favour of the route viâ the St. Lawrence, and against the great carrying systems of the United States. By thus throwing off a large amount of its revenue, and at the same time unnecessarily assuming large debts already incurred by municipal incorporations for a similar purpose, the Canadian Government has lost all claim to the plea frequently urged on its behalf, of financial necessity, as a reason for its high tariffs on American manufactures.

The late Governor-General of Canada represents Discriminating Tolls as a Free Trade Movement.

Although the policy of Canada in reference to her canals is thus plainly restrictive and adverse to American shipping and ports, Sir Edmund Head, lately the Governor of the Province, in a despatch to the Secretary of State for the Colonies of Great Britain, dated July 26, 1860, represented these discriminating measures, subversive of the intentions of the Treaty, as steps towards greater freedom of trade.

Canadian system of Free Ports.

Canada is also deprived of the plea of insufficient revenue, the excuse usually alleged by the apologists for her adverse Tariff, by having given up the collection of Customs duties in different parts of her territory, throughout lines of frontier extending for some thousands of miles, evidently to the injury of her revenue and our own.

By Proclamation dated November 30, 1860, and published in the "Canadian Gazette," it was officially declared, in pursuance of an Act of the Provincial Parliament, passed the previous session, that the harbour of Gaspè Basin, in the Gulf of the St. Lawrence, and on the southern side of that river, was constituted a free port, where goods, wares, and merchandize of every description, may be imported either for consumption or exportation, without being liable to any duties of Customs; and the limits of this port were

* See Report of J. D. Colver, 1860, adopted by the Chamber of Commerce at Milwaukie.

practically extended so as to include so much of the promontory on the southern side of the St. Lawrence as is eastward of a line formed by and from the River Nouvelle, in the Bay of Chaleur, to the headwaters of the River Chatte, and thence down that river to the River St. Lawrence—a river which, measuring from its chief headlands, has a sea-coast of about 220 miles; and the privileges thus conferred upon this section of the district of Gaspè are also extended to the Magdalen Islands and the Island of Anticosti, and also to the north shore of the River St. Lawrence from Point des Monts eastward to the eastern limits of Canada, on the coast of Labrador, including an additional line of sea-coast of more than 500 miles,* measuring on the water from the chief headlands; the whole, following the line of indentations on the shore, presenting a sea-coast of 1,200 or 1,500 miles, where goods from all parts of the world can be brought free of Customs duties at the entrance to the River St. Lawrence, and near the other British Provinces and the United States.

It is more important to the United States that by a similar Proclamation another "free port" has been established, under the name of the Port of Sault St. Marie, so as to include practically not only that port itself, but also nearly the whole Canadian coast of Lakes Huron and Superior, beginning at the point of intersection of the principal meridian line with the waters of Lake Huron, extending westerly and northerly along the line of Canada to the westerly boundary of the province, and including the adjacent islands. All goods, wares, and merchandise from any part of the world can be brought into this port, and thence exported or taken to any part of a coast which, by land measurement, commencing from the chief headlands, is not less than 400 miles, and including the islands, is more than 1,000 miles in extent. A wholesale merchant from the North-Western States, or the region of the lakes, may purchase goods in bond in New York, convey them free of duty to Sault St. Marie and the territory fiscally attached to that port, and thence smuggle them into the United States—a process of which the risk of insurance by responsible parties is asserted to be no more than from 5 to 10 per cent., according to the nature of the commodities themselves.

Besides the injury which such a state of things must inflict upon the revenue of the United States, and the great expense of maintaining a sufficient number of officers to check illegal traffic, injuries no less serious will arise from the demoralizing influence of the vast army of smugglers which in a few years will thus be called into existence, and who, both by day and night, will be engaged in a system of continual secret warfare against the laws of the United States.

Fiscal reasons for a Continental System.

A valid reason for a fiscal system which should embrace the whole American Continent, is to be found in the extreme difficulty which must always attend the collection of revenue on both sides of any boundary in the interior, and the comparative ease with which smuggling on the Atlantic coast can be prevented. An army of functionaries, maintained at vast expense, would be needed on both sides of our northern frontier, if, under a system of retaliation, aiming at injury to each other, eaeh nation should endeavour to promote a system by which the revenue of the other will be defrauded of its just dues.

Debt of Canada created in efforts to divert the Trade of the United States.

While it is to be regretted that the Canadian Government, having thought proper to diminish its own revenue in various methods known to be injurious to the revenue and commerce of the United States, should also have relied for its own revenue chiefly upon a Tariff avowedly adverse to the interests of the United States, although many other usual sources of revenue remained untouched, the justice of this complaint becomes yet more clear upon examination of the Report entitled "Canada, 1849 to 1859, by Hon. A. T. Galt, Finance Minister of Canada, 1860," showing that the direct public debt of the province then amounted to 8,884,672*l.*, or 43,001,812 dollars; all of which, except 107,796 dollars, was contracted by making canals and railroads in Canada to compete with American interests, and in fruitless but persistent efforts to divert the trade of the Western States from the natural channels it had already formed.

* The extent of these free ports has been carefully estimated from maps published under the official authority of the Canadian Government; and it is intended, as no accurate measurement can be given, to give too low rather than too exaggerated a statement.

Official Avowal of Discriminating Duties against the Merchants and Carriers of the United States.

Mr. Galt thus explains the change in the method of levying duties so as to divert trade from the ports of the United States:—

"By extending the *ad valorem* principle to all importations, and thereby encouraging and developing the direct trade between Canada and all foreign countries by sea, and so far benefiting *the shipping interests of Great Britain*—an object which is partly attained through the duties being taken upon the value in the market where last bought—the levy of specific duties for several years had completely diverted the trade of Canada in teas, sugars, &c., to the American markets (our Atlantic cities), and had destroyed a very valuable trade which formerly existed from the St. Lawrence to the lower provinces and West Indies. It was believed that the competition of our canals and railroad systems, viâ Portland, together with the improvements in the navigation of the Lower St. Lawrence, justified the belief that the supply of Canadian wants might be once more made by sea, and the benefits of this commerce obtained for our own merchants and forwarders. Under this conviction, it was determined by the Government to apply the principle of *ad valorem* duties."

Special Exemptions in favour of the Grand Trunk Railroad.

In pursuance of this discriminating system, it was also provided (see "Consolidated Statutes of Canada," chap. xvii, sec. 24) that the Governor of Canada, by a Departmental Order, might discriminate in favour of particular routes through the United States—a singular violation of the comity or hospitality of the United States in extending unusual facilities not required by any Treaty for the transfer of goods on the Grand Trunk Railroad, viâ Portland, into Canada.

Value of the St. Lawrence hitherto.

During the debates in Congress on the subject of the Treaty, great stress was laid on the use of the St. Lawrence. One honourable member, expressing only the general expectation of many others, said:—

"The free navigation of the St. Lawrence is only necessary to show us, in the fall of every year, long lines of vessels seeking the Atlantic, through Canada, laden with western produce, and in the spring making their way back with foreign wares, and with the avails of profitable labour for nearly half a year."

Hope seldom told a more flattering tale than on this subject. Sixteen hundred vessels, with an aggregate burden of 400,000 tons, were, so long ago as 1856, employed on our northern "inland seas;" but from the date of the Treaty to 1860, a period of nearly six years, only 40 American vessels, with a burden of no more than 12,550 tons, passed seaward through the St. Lawrence, and less than one-half of them ever returned; while, in 1857 alone, no less than 109 British vessels cleared from Chicago alone, on Lake Michigan—a privilege which they only enjoy by means of the Treaty.

Remembering that the Treaty had no practical effect until 1855, the following Table of the imports and exports into and from Canada, viâ the St. Lawrence, from 1853 to 1859, inclusive of those years, affords the best data for an accurate comparison of the value of the St. Lawrence, and those routes through the United States through which free transit was granted to Canadian productions by the Treaty. It is compiled from the official Returns published by the Canadian Government.

COMPARATIVE Imports and Exports into and from Canada, by way of the St. Lawrence River, from 1853 to 1860, inclusive.

	Imports.	Goods *in transitu* for United States.	Exports.
	Dollars.	Dollars.	Dollars.
1853*	19,268,260	1,047,964	15,556,594
1854	21,171,735	495,326	14,709,621
1855	11,494,028	18,014	8,195,500
1856	15,319,361	13,492	11,817,137
1857	14,561,884	183,789	13,756,786
1858	10,795,077	26,916	9,727,413
1859	11,472,754	76,314	8,983,773
1860	13,527,160	21,505	8,400,096

* We find no statistics on this subject previous to 1853.

Since 1855, the first year when freedom of import, export, and transit through the United States was granted to Canada for all her raw products, her people, as is shown by the foregoing Table, chose routes through our territory as most conducive to their own interests; and this diminution of trade viâ the St. Lawrence has occurred when the aggregate of the imports and exports of Canada, from all sources together, has greatly increased.

The "Reciprocity Treaty" removed many impediments to our use of the St. Lawrence, and the free use by the Canadians of the routes through the territory of the United States.

	Dollars.
In 1854, the year before the Treaty, the value of imports by the St. Lawrence was	21,171,756
Value of exports	12,501,372
Total value of trade	33,673,128
In 1855, the year after the Treaty, the value of imports by the St. Lawrence decreased to	11,494,028
Exports decreased to	6,975,500
Total value of trade	18,469,528

The decrease thus exhibited, so soon as the routes and markets of the United States were opened, was 15,203,600 dollars, and the whole was transferred to our carriers, for in the same time the trade to the United States increased 15,856,624 dollars, or from 24,971,096 to 40,827,720 dollars. In these estimates no notice is taken of heavy differential duties in Great Britain in favour of Colonial timber sent by way of the St. Lawrence, tending to increase the shipments by that route.

The ready access to New York, at all times of the year, alike from southern and northern regions, making it a market for the products of all, gives it insuperable advantages over ports in the St. Lawrence, shut out from all connection with the South except by a route always circuitous, and entirely closed by ice for nearly half the year. Let us at least concur in the belief that a system of free competition will best solve the question, and that the cheapest and safest route is the best for both countries.

Trade of Canada with the United States greater than with all other Countries together.

The natural commercial relations of Canada and the neighbouring States are so great that they may justly be said to arise from geographical necessities; conditions not indeed necessary to existence, but absolutely necessary to the full development of the prosperity of each country. They are amply shown by the statistics of the Canadian Government. Every year since the Treaty, to January 1, 1861, she has sold a larger amount of her productions to us than to all other countries together. The relative value of our markets to Canada is already increased by the removal, in 1860, of very important duties discriminating in favour of Colonial timber in the markets of Great Britain. Timber is a very large item in the exports of Canada, and the effect of the change in the English law must be to increase the sales to the United States.

SUMMARY showing an annual excess of Exportations from Canada to the United States, above those to all other countries together, from December 31, 1854, to January 1, 1861.

Years.	Total Exports from Canada to the United States, Great Britain, and all other countries.	Exports from Canada to the United States.
	Dollars.	Dollars.
1855	28,108,461	20,002,290
1856	32,047,016	20,218,653
1857	27,006,624	14,762,641
1858	23,472,609	13,373,138
1859	23,102,378	13,922,314
1860	34,631,890	20,698,398
Total Exports	168,368,978	97,955,504
Total Exports to the United States ..	97,955,504	
Amount of Exports from Canada to the United States, above those to all other countries together, for the last six years .	70,413,474	

Although our importations into Canada have been made under Legislative restrictions, they yet exceed those from all other countries together, as is shown by the following Table :—

Summary showing an Annual Excess of Importations into Canada from the United States, above those from all other countries together, from December 31, 1854, to January 1, 1861.

Years.	Imports into Canada from the United States and all other countries.	Imports into Canada from the United States.
	Dollars.	Dollars.
1855	36,086,169	20,828,676
1856	43,584,387	22,704,509
1857	39,430,597	20,224,650
1858	29,078,527	15,635,565
1859	33,555,161	17,592,916
1860	34,447,935	17,273,029
Total Imports	215,982,776	114,259,345
Imports from the United States . ..	114,259,345	
Imports from all other countries . ..	101,723,431	
Imports from the United States, above those from all other countries together, for the last six years	12,535,914	

Natural Results of the Treaty and its Abrogation.

A great and mutually beneficial increase in our commerce with Canada was the natural and primary result of the Treaty. Many causes of irritation were removed, and a large accession to our trade was acquired, through the Treaty, with the Maritime Provinces.* Arguments founded upon the results of the Treaty, as a whole, with the various Provinces, have a valid and incontrovertible application against the unconditional and complete abrogation of the Treaty, so far as it refers to Provinces against which no complaint is made. The isolated and disconnected condition of the various Governments of these Provinces towards each other, and the absence of their real responsibility to any common centre, are little understood. No fault is found with the acts of Newfoundland, Prince Edward's Island, Nova Scotia, and New Brunswick. These separate Provinces and that of Canada have each a separate Tariff and Legislature, and neither of them is accountable to or for any other. An abrogation of the Treaty, as a whole, would therefore be a breach of good faith towards the other Provinces, even if it were expedient to adopt such a course towards Canada, but no advantages gained by the Treaty with the Maritime Provinces can be admitted as offsets in favour of Canada. Each Province made its own bargain, and gave and received its separate equivalents.

Exports and Imports between Canada and the United States.

The following presents a comparative view of all the imports and exports to and from the United States and Canada from December 31, 1849, to January 1, 1861 :—

* See Appendix, Nos. 1 and 2.

	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
Imports into Canada	6,594,860	8,365,765	8,477,693	11,782,147	15,533,097	20,828,676	22,704,509	20,224,650	15,635,565	17,592,916	17,273,029
Imports into the United States	4,951,159	4,071,544	6,284,521	8,936,382	8,649,002	16,737,277	17,979,753	13,206,436	11,930,094	13,922,314	18,427,968
Excess of Imports into Canada	1,643,701	4,294,221	2,193,172	2,845,765	6,884,095	4,091,399	4,724,756	7,018,214	3,705,471	3,670,602	....
Other Imports into the United States*	982,083	845,833	1,251,632	1,789,073	1,769,880	3,265,013	2,238,900	1,556,205	1,443,044	1,664,603	2,270,430
Estimated excess of Imports into Canada from the United States above Canadian Imports into the United States	661,618	3,448,388	941,540	1,056,692	5,114,215	826,385	2,485,856	5,462,009	2,262,427	2,005,999	1,115,491

* These amounts are named in the statistics published under the sanction of the Canadian Government as returned not reported at inland ports in Canada, and it may be inferred were chiefly sent to the United States.

The following Table shows the imports and exports between Canada and the United States, of articles free under the Treaty to January 1, 1861:—

	1855.	1856.	1857.	1858.	1859.	1860.	Totals.
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
Imports into the United States from Canada	16,476,093	17,810,684	17,812,308	11,514,364	15,289,070	20,365,829	94,268,348
Imports into Canada from the United States	7,725,561	7,909,554	8,642,030	5,564,615	7,106,116	7,069,689	44,017,565
Excess of Imports free under the Treaty in favour of Canada ...	8,750,532	9,901,130	4,170,278	5,949,749	8,182,954	13,296,140	50,250,783

Continued increase in Canadian Tariffs since the Treaty, and their injurious effect on our Northern Frontier.

During this unequal condition of trade few complaints were made until the Canadian Tariff of 1859 was enacted. Until that time when a Tariff against American manufactures reached its maximum, Canada had increased her Tariff every year since the Treaty, as will be seen by the following sketch of the Canadian tariff from 1855, the year when the Treaty went into effect:—

Articles.	1855.	1856.	1857.	1858.	1859.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Molasses	16	11	11	18	30
Sugar, refined	32	28	25	26½	40
Sugar, other	27½	20	17½	21	30
Boots and shoes	12½	14½	20	21	25
Harness	12½	17	20	21	25
Cotton goods	12½	13⅓	15	15	20
Iron goods	12½	18½	15	16	20
Silk goods	12½	13½	15	17	20
Wool goods	12½	14	15	18	20

The duties now levied in Canada on many of our manufactures—such as boots and shoes, harness and saddlery, wearing apparel, &c.—are 100 per cent. heavier than in 1854, when the Treaty was signed; and on nearly all our other manufactures, such as woollens, cottons, leather, hats, household furniture, hand-bills, glass, agricultural implements, edge tools, fire-arms, carriages, nails and other hardware, India-rubber goods, manufactures of brass, copper, lead, tin, &c., and almost all our other manufactures, it has been increased 62½ per cent. The injury thus inflicted upon our people is avowed by the Hon. A. T. Galt, the Financial Minister of Canada, to be "no subject of regret to the Canadian Government." The Tariff of which Mr. Galt speaks with so much complacency extinguished the trade of our frontier cities with Canada in their own manufactures. Many manufacturing establishments on our side dismissed their workmen and were closed, and many were removed to Canada in order to avoid the payment of duty on their productions.

It can create no surprise that much indignation was excited, without exception, in all those cities on the Canadian frontier which are daily and hourly witnesses of the one-sided nature of our dealings with Canada in the products of American labour. Some ports of Buffalo, for instance, are scarcely half a mile from the Canadian shore. Fort Porter, until lately unoccupied on this side, and Fort Erie in ruins on the other, attest the long cessation of warlike aggression on both sides; but the natural benefits of peace do not exist. Under the full operation of these causes Buffalo would be the commercial and manufacturing metropolis of a large region in Canada, greatly for the common good; with a view to this natural advantage she advocated the enactment of this Treaty. She expended large sums of money on a railroad extending across Canada from Niagara River to Lake Huron, and has been ready to assist in constructing a bridge over the river. Many of her citizens, and those of Rochester also, have been compelled by the Canadian Tariffs to leave their homes and remove their families to Canada. The daily and hourly view of a country close to their own doors, and into which their manufactures and goods are almost forbidden to enter, although the chief products of that country are admitted free of duty, under the name and disguise of "reciprocity," into all ports of the United States, must be a cause of frequent irritation to the citizens of Buffalo, and in the early periods of this discussion such projects of a retaliatory policy naturally arose as from other points of view seem less likely than more moderate counsels to accomplish the desired object.

Remonstrances from Boards of Trade in Canada West.

The origin of the tariff, tolls, and discriminating duties of which the people of our Northern States complain is not with their neighbours of the Upper Province, who have always opposed this legislation, but with those of the Lower Province, who have

endeavoured, in violation of the laws of trade, to force the trade of Canada West and of the Western States to Montreal and Quebec, instead of allowing New York and Boston to compete on equal terms with the ports on the St. Lawrence. As the chief exports of Canada to the United States are made from the Upper Province, to stop the importation of these productions into the United States would injure most that section of Canada against which no complaint has been made.

The chief cities of Canada West, through their Boards of Trade, presented petitions against the objectionable Tariff, of which the following is an example :—

"Your petitioners are of opinion that so uncalled-for and unwise a scheme is calculated to affect the existing pleasant commercial relationship between Canada and the United States in the working of the Reciprocity Treaty, the great advantage of which to this province is well known to your Honourable House, inasmuch as the proposed policy of the Inspector-General practically shuts the door to the admission into Canada of the leading articles of commerce hitherto purchased in the great markets of the United States, and *forcing Upper Canada to import viâ the St. Lawrence, or otherwise pay an enormous increase of duty.*"

Retaliation considered.

Commercial retaliation is justified by the highest authorities and precedents, but only when it is the best course towards the desired end. It is not always the shortest or safest road to our objects. As in a war of arms, so also in a war of legislation, the influence of reason is diminished. Passion and prejudice are excited, and often, in pursuit of a temporary and doubtful gratification, we commit lasting and incurable evils. It may turn friends into enemies, and strengthen our opponents. As in the common business of life, and in reference to conflicts of any kind, so also on this occasion, some effort at negotiation should be made before recourse is had to hostilities. A friendly feeling assists negotiation, and in this case more than half the permanent value of victory is in the sentiment of concord, if for no other reason than that moral forces have great material power. Besides, there is difference of opinion among ourselves as to the justice of retaliation, but *from one end of our frontier to the other there is practically no difference of opinion as to the object to be gained for the mutual benefit of Canada and ourselves—a reciprocity of commerce, not only in name, but in substance, giving neither party the vantage ground.**

Legislation should promote substantial Reciprocity.

The adoption of this policy on both sides would at once put an end to many causes of expense and irritation. The material barriers which have divided the people of the British provinces from those of the United States have already been practically removed by the increase of neighbouring settlements and the progress of modern methods of intercourse by means of steam and electricity. In the power of these agents we have a guarantee for the indestructibility of the beneficent civilization we desire to establish; and from their agency seconded and advanced in mutual alliance by the power of the printing press, arises from one end of the northern frontier to the other an universal knowledge of the advantages to be gained in both countries by a removal of the legislative barriers to our commercial and social intercourse with the provinces, in pursuance of a settled policy, based upon a just regard to their interests and rights. Let practical legislation secure the beneficent results of this wisdom.

Prevalent Opinions throughout the Northern Frontier of the United States.

In Minnesota and Dakota, where a knowledge of the climate and fertility of the British North-Western Possessions prevails, a strong and uniform feeling as to the value of this commerce exists. At Milwaukie the Chamber of Commerce reported in favour of reciprocity, but stated its inability to discover any fair or equitable equivalents for the present advantages given by us to Canada. Chicago, conscious that, by the interposition of the great chain of lakes stretching northward from her through seven degrees of latitude, she is the "inevitable gateway to and from the British possessions in the North-West," and that, being within striking distance of the navigable waters falling into the Gulf of Mexico, and having both railway and water-communication with it, she will collect within her storehouses the products of every zone, as the great commercial metropolis between the North and South, the East and West,† "demands even a much more liberal Reciprocity Treaty." Detroit, of which the neighbouring region of Canada is naturally a suburb or a

* See Report of Detroit Board of Trade.

† Report of the Board of Trade at Chicago.

part, finds that the sale of her manufactures and goods of foreign origin is almost prohibited in Canada, while the winter wheat and other products of her State meet those of Canada in Eastern markets free of duty. Her Board of Trade expressed its preference of a cessation of intercourse with Canada to the present system, but is in favour of a fair and equal reciprocity. Cleveland desires a complete and harmonious development of the resources of each country. Buffalo and Rochester see, in their proximity to the coal of Pennsylvania, and the absence of this valuable mineral in the geological formations of Canada West, and, in other causes, an inexhaustible source of mutually profitable commerce between themselves and Canada, but cannot deem that system reciprocally free which admits the products of the province free of duty, but closes American manufactories, and removes them to a foreign country. At Oswego the Board of Trade declared itself in favour of a Zollverein. Ogdensburg, ever liberal towards Canada, finds itself, like the other frontier cities, permitted to buy from, but prevented from selling to, that province. The interests of Maine, necessarily, from her geographical projection into the territory of the provinces, tend strongly towards commercial unity with the provinces. No State is more interested than Massachusetts, whose manufacturing industry would thus become free throughout the entire North. The conclusion at which the people of the frontier have thus unanimously arrived has not been reached at any moment of passing excitement. It is the deliberate opinion of practical men, whose daily interests are involved in the question, who perceive that the attainment of the objects at which they aim may be retarded, but cannot be prevented, and who ask of the Statesmen of their country to cast the sentiment of the frontier into a useful and permanent form, by the removal of restrictive laws, and by opening such channels of trade as, beginning at the frontier, will enrich the interior of their various States, concentrating wealth and commerce at our seaports, increasing our shipping, and adding materially to our national resources.

Our Mutual Interests.

The British possessions on this continent have a population nearly equal in number to that of our Union at the time of its origin, and nearly twice as large as that of the seven originally Seceding States. Sprung from the two great rival nations of the Old World, their people so closely resemble our own that they mingle with us unobserved, and almost without distinction, in our daily thoroughfares, wondering, it may be, why they and their vast country, close to our own doors, should have less importance, as may superficially appear, in the estimation of the United States, than has been awarded to the small and remote Island of Japan and its oriental inhabitants, on whom we have lavished large sums for luxurious entertainments and costly Embassies.

It is computed that Canada alone, if her past and present rate of increase is continued, will have 20,000,000 of inhabitants at the end of this present century, numerically exceeding the population of Great Britain when this century began.

Adding our own territories to those of Great Britain on this continent, we find that instead of discussing only the interests of a few frontier cities, our attention is directed to the commercial relations of one-eighth of the habitable surface of the world. There is no part of the globe where greater natural advantages await the use of civilized man.

Such are the physical proportions of the subject, but the political ideas and moral agencies which public opinion desires to apply to it are yet more comprehensive, sublime, and perpetual. It seeks a unity, "not of Governments, but of people." It desires to extend to the provinces and ourselves the same system of mutual and material benefits which has been found so beneficial to the various States of this Union. It is the system by which the present enlightened Rulers of England and France are endeavouring to reverse the political estrangement of "those two great nations whose conflicts have often shaken the world, by undoing for their purpose that which their forefathers did for a different purpose, and pursuing, with equal consistency, an end that is more beneficial."*

The provinces may be said to be foreign countries, but each of them is less distant from the United States than many of our own States are from each other; and while Providence has thus made us neighbours, and by the indentations of our respective territories has rendered mutual rights of transit almost necessary to both, it has also given to us, as Northern and Southern nations, so great a variety of climate and productions as to render us capable of conferring upon each other such benefits as we cannot estimate too highly. The timber, wheat, and other grains, water-power, and fisheries of the provinces, furnish abundant material of beneficial exchange for the corn, cotton, tobacco, coffee, sugar, fruits, and mineral wealth of the more Southern portions of this continent.

With full development of these material interests, social relations and the beneficial

* See the memorable speech of Mr. Gladstone, Chancellor of the British Exchequer, February 10, 1860.

interchange of ideas will increase. It was an object worthy of European statesmen, and honourable to our common nature, to eclipse the glories of former history by endeavouring to substitute between France and England the realities of peace and those true and mutual interests which, when understood, are always found to be harmonious, for the memories of false glory, and "a policy founded upon war, conquest, expenditure, and patronage." To us a wider and clearer field is open on a new continent. We and the British provinces, young as nations, are comparatively unimpeded by petty interests and hostile traditions. A policy based upon the best and purest foundation will grow with our growth, and strengthen as we become stronger. The traveller on our joint frontier has been accustomed to see our forts in ruins or without garrisons. The standing armies of Europe are computed to include more than 3,000,000 men, withdrawn permanently from productive pursuits. Less than 20,000 men have hitherto sufficed for defence on both sides of our frontier.

In the Old World the enormous evils resulting from the system of isolation, although deplored by all who deserve the name of statesmen, have been continued through mutual ignorance and fear, forming a vast international aggregation of crimes, which all civilized men abhor in detail and among individuals; for war, when it is the habitual condition of mankind, bequeathing legacies of hatred and revenge from one generation to another, is not only demoralization and death to multitudes of men, but brings with it degradation, misery, and vice to women and children. It is adverse to those social and domestic ties by which all real civilization is connected.

If the treasure and lives of men wasted by mutual destruction in Europe, since the discovery of America, had been spent in a war upon the wilderness we are considering, instead of a war upon mankind, many other new and prosperous States would now have existed upon this continent. The annual expense of Government in Great Britain alone, with a population of nearly the same number as that of the United States, is more than 350,000,000 dollars. Taking only one item from the vast European and Asiatic aggregate of military expenditure, and applying it to a subject which has frequently engaged the attention of the American people, it is computed, upon medium estimates, that the amount now remaining as the national debt of Great Britain alone, would suffice to construct fifty railroads from the cities of the Western States to the Pacific Ocean.

It is not utopian to believe that the world may be better governed than it has been heretofore, or that nations, for the purposes of peaceful policy, should avail themselves of the new discoveries and material agencies known and useful to individuals in common daily life.

Free intercommunication and the great material interests of our continent are, under a wise guidance, the true medium for its government. Instead of garrisons and armies, our policy should be to substitute those mutual interests and quiet forces by means of which each individual, even when he seeks only his own personal welfare, is, perhaps unconsciously, subserving the great decrees of Providence.

The Zollverein, or German Commercial Union—its Origin, Success, Extension, Character, and Tendencies.

By adopting the principles embodied in the *Zollverein*, or Prussian Confederacy of the German States, we and the British Possessions can obtain all the commercial advantages of union without political entanglement, leaving each country free to practise in its own self-government such rules as it believes to be most in accordance with the genius of its people, and best adapted to promote its own interests.

The principle of the *Zollverein*, *Toll-Alliance*, or *Customs' Union*, is an uniformity among its component States as to IMPORTS, EXPORTS, and TRANSIT.

It allows and encourages among its members as complete freedom of communication and exchange as exists between different countries of the same State, or between different States of the American Union, and commends itself to the approbation of all who comprehend the spirit of the age. It facilitates the collection of revenue, by collecting only on the frontier of its Confederated States. The payment of duties in one of the States is sufficient to procure a free sale or transit in each other, and the revenue was originally divided among its members in proportion to the number of their respective inhabitants.

In the United Kingdom of Great Britain and Ireland the Custom-house laws which formerly separated Scotland and Ireland from England have been superseded by a general system of taxation applicable to the whole. In France, local barriers have given way to a general system of taxation. These two Empires have now entered upon a system of legislation for their mutual benefit; but the *Zollverein* itself arose in Germany.

The wisdom of its founders is demonstrated by the great test of time. No material

alteration has been made in the principles, or even in the details, of the laws established at its origin. Many additional States have voluntarily become members of its Union.

It began in 1818—forty-four years ago—when Prussia formed a Commercial Union with a few minor States. The alliance arose from no hostility to other Powers, but from a desire to get rid of those obstacles to intercourse which separate fiscal laws created among people whom natural feelings and commercial interests would otherwise connect more intimately together. The Prussian Tariff of 1818 was adopted.

In 1834 the experience of its benefits had given strength to its influence. Statesmen perceived that Prussia had, by her liberal policy, conferred upon Germany advantages second only to those she had initiated by the diffusion of education and intelligence. At that time the Zollverein was joined by other States, and thenceforward included Prussia, Bavaria, Saxony, Wurtemberg, the Grand Duchy of Baden, the Electorate, and also the Grand Duchy of Hesse, and the Thuringian Association; representing, in all, a population of 26,000,000. It was regarded by philosophic minds throughout Europe as having brought many liberal and patriotic ideas out of the realms of hope and fancy into those of positive and material interests.

The political consequences which must arise from it did not escape the notice of its founders. They pursued no aggressive policy, but could not avoid the knowledge that it tended to lessen the hostility of differently constituted Governments, and that a powerful political alliance would arise upon the basis of pecuniary interests and intimate social intercourse.

It effected so great a saving in the collection of revenue that in three years—from 1834 to 1836—the expenses of the fiscal establishments were reduced from 18,000,000 dollars to 14,500,000 dollars. Advantageous to all, this result was especially beneficial to the smaller States, whose revenue service, like that of Canada, was spread along extensive frontiers, and absorbed a large proportion of their income.

Owing to increased prosperity, and the consequently increased consumption of tax-paying articles, the revenue of Prussia rose from 18·8 silver groschen per head in 1834, to 23·4 in 1838.

The saving in the expense of collection, the increased prosperity of our people, and the additional demand for foreign goods consequent upon it, would afford a basis for a friendly and satisfactory arrangement with European Powers, so far as they might be affected by the adoption of a policy which could not fail to be beneficial to the Provinces and the United States.

The laws of the Zollverein provide for the means of mutual investigation, so as to insure accurate returns of revenue from each place of collection. They contemplate the extension of its operations to other States, and provide for retaliation where commercial restrictions adverse to it are adopted.

Its influence has continued to spread more and more widely. On September 7, 1851, a Treaty was made with a rival Association, called the *Steuverein*, and consisting of Hanover, Oldenburg, and Brunswick, by which, from the 1st of January, 1854, both were included in one revenue system—the *Zollverein*—thus extending its operation to 36,000,000 of Germans; and a Treaty for limited reciprocal trade has been made with Austria, to last for twelve years from February 19, 1853. It is believed by many that this Treaty will lead to the actual consolidation of the whole Germanic race now existing in Europe.

Reasons for adopting a similar System.

At the present period of history, assuming that the popular sentiment of the Canadian people is Monarchical, and not Republican or Democratic, the benefits of reciprocal trade can only be enjoyed by the United States and the British North American Possessions under a system resembling that of the Zollverein. It might include other regulations necessary for the freedom and convenience of our commercial and social intercourse, such as an uniform system of light-houses, copyrights, postage, patents, telegraphs, weights, measures, and coinage.

Neither country is ready to adopt the plan of collecting a revenue entirely by direct taxation. Duties on imports are at present necessary for the government of each.

It is desirable that the principle of reciprocity should be extended to manufactures as well as to the products of the field and forest; but to do this fairly there must be an uniformity of duties on the materials forming the component parts of the articles manufactured. If of two manufacturers, one purchases his material free of duty, and the materials used by the other are subject to a high duty, there is no equal competition. The same is true of every consideration affecting the price of labour; hence an identity of Tariffs is necessary.

The ease with which revenue can be collected on the Atlantic frontier, and the difficulties which attend its collection in the interior of the Continent, and the neighbourhood of countries commercially hostile, have already been indicated.

Nor can the natural, geographical, and other advantages of our respective countries, in their several parts, be developed upon a proper Continental plan, unless a system of free purchase and sale is extended through all their parts, in reference to productions of foreign as well as of domestic origin. There is a great difference between a bonded system and a system of perfect freedom, as to exports and imports. The annoyances, vexations, and delays necessarily attached to any bonded system are often sufficient, in this day of easy communication, to turn away business from its natural and best centre. It is also to be remembered that hitherto the Government of the United States has not thought it expedient to refund duties on the re-exportation of foreign merchandise in less quantities than the original package, thus creating an obstacle, often amounting to prohibition, to the jobbing and retailing of goods. This is felt every day on our frontier, where it has caused ruin to some merchants and serious loss to many others, while at the same time it injures those who, under a free and natural system, would consult their interests by purchasing the commodities sold by these merchants.

So far as can be ascertained, the whole amount of revenue collected by the United States on the North-Western Lakes, from 1855 to 1859 inclusively, was less by 189,730 dollars than the expenses of collecting it.

A mere identity of Tariffs would not suffice for the exigencies of the case. Philadelphia, New York, Boston, and Portland would frequently receive duties on articles consumed in Canada and the North-Western Possessions; and Montreal and Quebec would frequently receive duties on commodities used in the Western States. Thus the best port might collect nearly all the duties, and the region in which it is situated would have a large income derived from the goods consumed in other parts of the Continent.

To those British Settlements of which the capital of Minnesota is the general emporium for merchantable commodities of every description, this commercial unity is the only system by which connection with Great Britain can long be maintained. For the whole vast and yet almost unoccupied expanse of the North-West, so far exceeding the present provinces in extent, fertility, and the means of supporting human life, and for Canada West, the Zollverein would secure an uninterrupted access to the southern and tropical regions of both American Continents and the adjacent islands, affording markets for the products of their labour, and contributing to their social and domestic comforts. It would give them in their several regions a free choice between the Mississippi, the Hudson, the St. Lawrence, and the various systems of artificial communication in the valleys of these rivers. If compelled by the United States, as a barrier, or by the laws of Lower Canada, to import from Cuba to Toronto, viâ the St. Lawrence, a distance must be traversed nearly three times as great as if free transit were given and secured through the United States. The increase of 20 per cent. in the value of the agricultural productions of Canada would be continued, and those manufactures for which she is naturally adapted would find a market increased by the addition of the population of the United States.

Relations of Great Britain and the North American Colonies.

As the present so-called "Reciprocity Treaty" was made between the United States and Great Britain, and not with Canada, although it received the approbation of the Government of each Province before it went into effect in that province, the relations of Great Britain and Canada require some consideration.

The progress of self-government in the British Colonies has advanced until the control of Great Britain is little more than nominal. The ancient theory of Colonial Possessions was that Great Britain should control their trade and have the exclusive privilege of supplying them with manufactures, in return for which she was expected to defend them by force of arms upon any and every occasion of real or imaginary wrong. The most simple principles of human intercourse were at variance with these doctrines. The manufacture of the commonest article was treated as a felony in one at least of the former American Colonies of Great Britain; but at the present time the British merchant has not any advantage over those of foreign countries in the Colonies. The tax-payers of Great Britain yet furnish armies and navies for the real or supposed benefit of the Colonies, but receive no benefit in return.

In accordance with the Report of Lord Durham, Governor-General of the Provinces, and a Special Commissioner appointed to inquire into their condition soon after the rebellion of 1837-38, a system of gradual concessions began. In 1846 England abandoned the old colonial system of trade; the "corn laws" were repealed, and most of the

productions of Canada were placed on the same footing as those of other countries. In the same year, under Lord John Russell, the principle of colonial self-government was fully admitted. It was a natural result of the withdrawal of special privileges in favour of colonial products. In 1848 the differential duties in the Colonies in favour of British goods were repealed, and in 1849 the privilege of entirely controlling her own trade and her own customs dues was awarded to Canada. From that time the same duty was charged on goods manufactured in Great Britain as on those manufactured in the United States.

When the preferential laws in the British markets in favour of colonial produce were abolished, Canada became increasingly solicitous for the admission of her products into the American markets, and the "Reciprocity Treaty" took effect in 1855.

Proposals of the British Minister, in 1859, *for Free Commercial Relations between the United States and the Provinces.*

In 1859, when many complaints were made, representing the legislation of Canada as adverse to the Treaty, Lord Napier, then British Minister at Washington, submitted proposals for the "confirmation and expansion of free commercial relations between the United States and the British Provinces."

Differences between the British and Colonial Governments.

In the same year, on the 27th of August, the Canadian Government having urged a law inflicting certain disabilities on our shipping, the Duke of Newcastle, Secretary of the Colonies, on behalf of the Government of Great Britain, transmitted to the Colony an official despatch, of which the following is part:—

"The highest respect for Colonial self-government in domestic matters is not inconsistent with the rule that commercial freedom cannot be maintained by the Imperial Legislature, while systems of exclusion, protection, or retaliation are maintained, or rather recommended, by that of a portion of the empire. I trust that the Canadian Government and Legislature will fully weigh the force of these reasons, and will acknowledge that (all discussion on speculative truth in political economy left aside) the advisers of the Crown in this country could do no less than maintain, as far as in them lies, *unity of legislation* on this most important subject throughout Her Majesty's dominions.

"*An Order in Council disallowing the Bill* will be accordingly forwarded to you by an early opportunity.

"I have, &c.

"Right Hon. Sir E. W. Head, (Signed) "NEWCASTLE.
&c. &c. &c."

The tendency of the Tariff enacted by the Canadian Parliament in 1859 having been, as was admitted by Mr. Galt, the Financial Minister of Canada, "somewhat to interfere with the existing close commercial relations between Western Canada and the United States,"* and, as he also stated, to exclude certain articles of American manufacture, "which could be no cause of regret;" and it being subversive of the spirit and intentions of the Treaty for Reciprocity of Trade between the United States and Canada, and likely to produce suspicion as to the liberal commercial policy of Great Britain in the minds of those who do not know how little control she exercises over her Colonies, the course of the Canadian Government excited much attention. Its inconsistency with the avowed policy of the British Empire drew from the Colonial Secretary a remonstrance, on the same grounds as those named in his despatch of August 27, 1859. The nature of this despatch, and of the reply of the Colonial Government to it, were related by the Minister of Finance in the Canadian Parliament, April 17, 1860. He said:—

"The Colonial Secretary took occasion to express views of rather a strong character in reference to the measure to which I allude—the Tariff—and even went so far as to intimate that under certain circumstances, although he did not absolutely state that they existed in regard to this measure, the question of the right of the Colonial Legislature to decide upon its own measures of taxation might come before the Imperial Government, and that Her Majesty *might possibly be advised to disallow Acts of this kind.* (Hear! hear!) I will read a part of the answer the Government of this country thought it their duty to make to these remarks. (Hear! hear!)

"'From expressions used by his Grace in reference to the sanction of the Provincial Customs Act, it would appear that he had even entertained the suggestions of its disallowance; and though happily Her Majesty has not been so advised, yet the question

* See his letter to the Duke of Newcastle, October 25, 1859.

having been thus raised, and the consequences of such a step, if ever adopted, being of the most serious character, it becomes the duty of the Provincial Government distinctly to state what they consider to be the position and rights of the Canadian Legislature. (Hear! hear!) Respect to the Imperial Government must always dictate the desire to satisfy them that the policy of this country is neither hastily nor unwisely formed, and that due regard is had to the interest of the mother country as well as of the province. *But the Government of Canada, acting for its Legislature and people, cannot, through those feelings of deference which they owe to the Imperial authorities, in any manner waive or diminish the right of the people of Canada to decide for themselves both as to the mode and extent to which taxation shall be imposed.* The Provincial Ministry are at all times ready to afford explanations in regard to the acts of the Legislature to which they are a party, but, subject to their duty and allegiance to Her Majesty, their responsibility in all general questions of policy must be to the Provincial Parliament, by whose confidence they administer the affairs of the country. And in the imposition of taxation, it is so plainly necessary that the Administration and the people should be in accord that the former cannot admit responsibility or require approval beyond that of the Local Legislature. Self-government would be utterly annihilated if the views of the Imperial Government were to be preferred to those of the people of Canada. *It is, therefore, the duty of the present Government distinctly to affirm the right of the Canadian Legislature to adjust the taxation of the people in the way they deem best, even if it should unfortunately happen to meet the disapproval of the Imperial Ministry.* Her Majesty cannot be advised to disallow such Acts, unless her advisers are prepared to assume the administration of the affairs of the Colony, irrespective of the views of its inhabitants.

" 'The Provincial Government believes that his Grace must share their own convictions on this important subject, but *as serious evil would have resulted had his Grace taken a different course, it is wiser to prevent future complication by distinctly stating the position that must be maintained by every Canadian Administration.*' (Applause.)

"These, Mr. Chairman, are the views the Government felt it their duty to lay before the Imperial authorities (Hear!), and I am gratified to be able to add that when these papers are read by members of the House, it will be found that on *the point on which they objected to the Tariff, they have been obliged to admit that we were in the right, and that any assumed interference with our rights and privileges is not for one moment to be entertained.*" (Hear! hear!)

So far as can be ascertained, no further correspondence between the Government of Great Britain and the Government of Canada as to the restrictive and adverse policy of the province has been made public; but some other questions having arisen on another subject, the Governor-General of Canada, at the opening of the Canadian Parliament in March 1861, declared it was expedient for that Assembly to "define by statutory enactments of your own the nature and extent of the laws and customs of Parliament as they shall exist in Canada."

The intentions expressed in the words of the "Reciprocity Treaty" made by the United States with Great Britain in 1854 were "to regulate the commerce and navigation between Her Majesty's possessions in North America and the United States in such manner as to render the same reciprocally beneficial and satisfactory." The Financial Minister of Canada carried into practical effect a policy avowedly restrictive and adverse to the interests of the United States. To these efforts the Government of Great Britain, through the Duke of Newcastle, Secretary for the Colonies, objected in terms of force unusual in diplomatic correspondence. The reply of the Canadian Government was a declaration of complete self-control or independence in its financial affairs, and as regards its commercial relations with the United States. It seems that Great Britain, acquiescing in the principle of Colonial self-government, made no further public attempt to regulate the Tariff of Canada, retaining only the power to make Treaties on behalf of the Provinces, while Canada assumes and exercises a right to make laws in opposition to their spirit and intentions, the enactments of the Canadian Government being opposed to the development of those mutual interests which on both sides of our vast and co-terminous frontier contribute no little to the best system of national defence, although it yet relies to a considerable extent for military protection upon the arms and expenditures of a Power whose policy and wishes it disregards.

No Basis of Settlement hitherto offered by the United States.

The Government of the United States has never yet presented to Great Britain, on behalf of the Provinces, any basis or means of negotiation by which the existing causes of complaint on both sides may be removed, and a system established enabling the people

to enjoy all the reciprocal advantages which they and their posterity must be capable of conferring upon each other so long as the relative geographical position of their respective territories remains unchanged, increasing the liberties and rights of each, and strengthening the sense of honourable patriotism by demonstrating its consistency with international goodwill.

Method of Negotiation.

The Committee on Commerce believe, with the Legislature of the State of New York, that "free commercial intercourse between the United States and the British North American Provinces and Possessions, developing the natural, geographical, and other advantages of each for the good of all, is conducive to the present interests of each, and is the proper basis of our intercourse for all time to come;" and that such measures should be adopted as will fully carry into effect the principles announced by the British Minister at Washington, in 1859, "for the confirmation and expansion of free commercial relations between the United States and the British Provinces," and to "regulate the commerce and navigation between Her Majesty's Possessions in North America and the United States in such manner as to render the same reciprocally beneficial and satisfactory," as was intended and expressed by the Treaty made between the United States and Great Britain, and commonly known as the "Reciprocity Treaty."

The Committee on Commerce would, therefore, recommend that three Commissioners be appointed by the President of the United States to confer with persons duly authorized by Great Britain in that behalf, with a view to enlarging the basis of the former Treaty, and for the removal of existing difficulties.

APPENDIX.

In No. 1 of the following Tables the commerce of the United States with Canada and the other Provinces is shown distinctly and apart, inasmuch as no complaint is made against the "Maritime Provinces." In No. 2 a general view is given of the trade with all the Provinces together.

No. 1.

TABLE showing the Exports from the United States to Canada and the other British North American Provinces, and the Imports into the United States from the same places, from 1850 to 1859, inclusive.

Date.	Provinces.	Domestic Exports.	Of foreign Origin.	Total.	Imports.
		Dollars.	Dollars.	Dollars.	Dollars.
1850	Canada	4,641,451	1,289,370	5,930,821	4,225,470
	Other British North American provinces .	3,116,840	501,374	3,618,214	1,358,992
1851	Canada	5,535,834	2,093,306	7,929,140	4,956,471
	Other British North American provinces .	3,224,553	861,230	4,085,783	1,736,651
1852	Canada	4,004,963	2,712,097	6,717,060	4,589,969
	Other British North American provinces .	2,650,134	1,141,822	3,791,956	1,520,330
1853	Canada	4,005,512	3,823,587	7,829,099	5,278,116
	Other British North American provinces .	3,398,575	1,912,968	5,311,543	2,272,602
1854	Canada	10,510,373	6,790,333	17,300,706	6,721,539
	Other British North American provinces .	4,693,771	2,572,383	7,266,154	2,206,021
1855	Canada	9,950,764	8,769,580	18,720,344	12,182,314
	Other British North American provinces .	5,855,878	3,229,798	9,085,676	2,954,420
1856	Canada	15,194,788	5,688,453	20,883,241	17,488,197
	Other British North American provinces .	7,519,909	626,199	8,146,108	3,822,224
1857	Canada	13,024,708	3,550,187	16,574,895	18,296,834
	Other British North American provinces .	6,911,405	776,182	7,637,587	3,832,462
1858	Canada	13,663,465	3,365,789	17,029,254	11,581,571
	Other British North American provinces .	5,975,494	646,979	6,622,473	4,224,948
1859	Canada	13,439,667	5,501,125	18,940,792	14,208,717
	Other British North American provinces .	8,329,960	883,422	9,213,382	5,518,834

No. 2.

Trade between the United States and the British Provinces.

STATEMENT exhibiting the increase in the Exports to, and the Imports from, Canada and other British Possessions in North America, from the 30th day of June, 1851, to the 1st day of July, 1859.

Years ending	Exports.			Imports.	Increase each successive Year over 1852.	
	Foreign.	Domestic.	Total.		Exports.	Imports.
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
June 30, 1852 ..	3,853,919	6,655,097	10,509,016	6,110,299		
1853 ..	5,736,555	7,404,087	13,140,642	7,550,718	2 631,626	1,440,419
1854 ..	9,362,716	15,204,144	24,566,860	8,927,560	14,057,844	2,817,261
1855 ..	11,999,378	15,806,642	27,806,020	15,136,734	17,297,004	9,026,435
1856 ..	6,314,652	22,714,697	29,029,349	21,310,421	18,520,333	15,200,122
1857 ..	4,326,369	19,936,113	24,262,482	22,124,296	13,753,466	16,013.997
1858 ..	4,012,768	19,638,959	23,651,727	15,806,519	13.142,711	9.696,220
1859 ..	6,622,473	17,029,254	28,154,174	19,727,551	17,654,158	13,617,252
	52,228,830	124,388,993	181,120,270	116,594,098	97,057,142	67,811,706

No. 3.

TABLES showing in contrast the Customs Revenues of the United States and Canada.*

UNITED STATES CUSTOMS REVENUE.

	Dollars.
Year ended June 30, 1857	63,875,905
„ „ 1858	41,789,621
„ „ 1859	49,565,824
„ „ 1860	53,187,511
Total for four years . ..	208,418,861
Average each year . ..	52,104,715

Amount paid yearly by each individual—reckoning the population of the United States as 32,000,000—1 dollar 62 c.

CANADIAN CUSTOMS REVENUE.

	Dollars.
Year ending December 31, 1857 ..	3,925,051
„ „ 1858 ..	3,381,389
„ „ 1859 ..	4,437,846
„ „ 1860 ..	4,758,465
Total for four years	16,502,751
Average each year	4,125,688

Amount paid yearly by each individual—reckoning the population of Canada as 2,500,000—1 dollar 65¼c.

The amount contributed by each individual in the two countries towards the Customs revenue is almost identical.

In the preceding Tables the period of four years is taken as a proper basis of calculation, the present Tariff of Canada having been in operation about half that period. The intention of those who framed that Tariff having been to exclude American manufactures and increase those of Canada, the Canadian revenue derived from goods of American origin will, under the present system, be gradually diminished.

It is estimated that the saving in the expense of collecting revenue would under a free system be, to both countries together, nearly 500,000 dollars annually; and the profits which under adverse systems would go into the hands of lawless smugglers, would be the honest gain or saving of consumers and legitimate dealers.

As a system of national defence, the economy of this plan can scarcely be estimated.

In 1849 the Hon. William Hamilton Merritt, having been requested by the Governor-General of Canada to bring under the consideration of the United States the condition of the commercial relations between this country and Canada, stated that an extension of the principle of reciprocity to the manufactures of the United States and Canada could be obtained at any future time, if deemed desirable by the United States.

The dissatisfaction with the present Treaty has arisen from its incompleteness. The Committee on Commerce in the House of Representatives, 1853, regarded a limited and partial reciprocity as being reciprocal free trade. Had the reciprocity been actual and perfect, the hope would have been realized which was expressed in the Report presented by the Hon. David L. Seymour, as Chairman of that Committee, in the following words:—

"They confidently present this measure as a system of broad and comprehensive

* The fiscal year of the United States ends on the 30th of June, and that of Canada on the 31st of December in each year.

international trade, mutually beneficial to the commercial interests of both countries. They recommend it as a peaceful method of gathering up and putting to rest for ever many vexed questions and possible future causes of contention between Great Britain and ourselves, while the Colonies, bound to us by a commercial alliance which removes all causes for changing their present political position, as the pulsations of a common social and mercantile vitality beat through our joint body politic, become hostages to insure our permanent peace with Great Britain, and through her with the whole European world."

No. 4.

STATEMENT exhibiting in contrast the Value of each Class of Imports into each country (the United States and Canada), from the other, of the different Classes of all Articles enumerated in the Treaty, for five years before the Treaty, and to January 1, 1861.

	1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.		1859.		1860.	
	Into the United States.	Into Canada.	Into the United States.	Into Canada.	Into the United States.	Into Canada.	Into the United States.	Into Canada.	Into the United States.	Into Canada.	Into the United States.	Into Canada.	Into the United States.	Into Canada.	Into the United States.	Into Canada.	Into the United States.	Into Canada.	Into the United States.	Into Canada.	Into the United States.	Into Canada.
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
Produce of the mine	...	41,587	17,623	62,516	192	64,857	58,400	126,586	118,628	256,182	23,303	425,739	84,228	488,984	189,894	509,494	93,405	324,374	227,911	328,139	318,537	406,688
Produce of the forest	1,539,488	45,505	1,279,929	18,620	1,838,775	116,159	2,589,898	66,620	2,131,725	107,459	3,016,880	186,830	3,345,284	302,904	3,393,068	411,820	3,290,383	232,177	3,524,850	162,113	4,019,278	137,392
Produce of the sea	30,943	21,473	43,784	26,494	50,289	31,079	73,422	383,436	85,472	74,851	148,550	261,853	140,948	411,716	154,417	314,226	158,485	157,674	201,583	183,575	185,873	227,112
Animals and their produce	490,477	455,036	564,787	962,176	966,189	454,475	1,107,870	570,587	684,439	845,591	1,485,925	1,878,664	2,375,388	2,896,838	1,974,516	2,134,339	2,231,786	1,464,873	3,391,772	1,758,428	3,557,912	1,679,912
Agricultural produce	2,706,362	427,084	1,937,293	676,327	3,277,929	473,137	4,949,576	668,113	5,295,667	1,500,521	11,801,435	4,972,475	11,864,836	3,809,112	7,100,413	5,272,151	5,740,305	3,385,517	6,278,351	4,671,882	10,013,799	4,603,114
Total	4,767,270	990,685	3,843,416	1,746,133	6,133,374	1,139,707	8,779,166	1,815,342	8,305,931	2,784,604	16,476,093	7,725,561	17,810,684	7,909,554	12,812,308	8,642,030	11,514,364	5,564 615	13,624,467*	7,104,137	18,095,399	7,054,218

* A considerable addition to the articles imported into the United States from Canada should be made for articles named in the statistics of the Canadian Government as "Exports not reported at inland ports," amounting, for instance, in 1859, to 1,064,603 dollars, and in 1860 to 2,270,430 dollars; nearly all of which were imported into the United States, and were free under the Treaty.

NORTH AMERICA.

No. 10.

DESPATCH from Lord Lyons respecting the Reciprocity Treaty.

Presented to both Houses of Parliament by Command of Her Majesty. 1862.

LONDON:
PRINTED BY HARRISON AND SONS.

CANADA (MILITARY EQUIPMENTS).

RETURN to an Address of the Honourable The House of Commons, dated 23 March 1863;—*for*,

"RETURN of all ARMS, AMMUNITION, SADDLERY, CLOTHING, or any kind of MILITARY EQUIPMENT sent out from this Country to *Canada* since June last; distinguishing what has been sent into Stores there, or destined for the Use of any Local Forces, from what has been sent out for English Troops or Garrisons, and what Portion of the Cost of any such Supplies has been charged to the Canadian Treasury."

War Office, 2 June 1863.

HARTINGTON.

(*Mr. Adderley.*)

Ordered, by The House of Commons, *to be Printed*, 22 *July* 1863.

RETURN of ARMS, AMMUNITION, SADDLERY, and other MILITARY STORES forwarded from *Woolwich* and the Tower to *Canada*, from June 1862 to March 1863.

	Supplies for Troops.	Supplies for Store.	Total Number of each Article	Value.
		*		£. s. d.
Arms, rifled muskets	-	40,000	40,000	99,547 2 10
Ammunition for small arms	48,000	6,842,680	6,890,680	230,770 2 7
Cartridges, various, gun	23,736	6,205	29,941	1,563 6 2
Guns, iron	28	-	28	2,136 8 –
Ditto, brass	20	-	20	1,170 – –
Carriages, gun and ammunition	56	-	56	4,362 6 –
Fuzes	8,190	3,430	11,620	508 19 6
Tubes	12,100	15,950	28,050	95 2 6
Platforms, gun	3	4	7	333 8 4
Wagons, forage, ambulance, &c.	9	-	9	479 7 4
Shot, gun, various	10,208	415	10,623	618 5 10
Shells „	6,042	25	6,067	1,006 13 10
Other artillery stores and equipments	-	-	-	1,761 17 6
Fire engines and hose	-	10	10	888 5 –
Accoutrements, sundry	For 63d Regt. and 1st Grenadier Guards -	-	-	39 4 7
Intrenching stores	Chiefly for troops	-	-	144 5 6
Commissariat stores, candles for	Commissariat	-	-	415 7 –
Hospital and purveyor stores	For troops	-	-	87 8 6
Regimental and barrack stores	„	-	-	934 15 3
Military prison stores	„	-	-	101 6 9
Saddlery and harness	„	-	-	5,504 5 2
Materials, small arm	-	For store	-	6,820 3 9
Miscellaneous stores	-	„	-	1,376 12 4
Packing cases and materials	-	-	-	2,620 12 –
		TOTAL Value - £.		363,285 6 3

* The arms and other articles in this column will be supplied upon proper authority to the Imperial or local forces, as the case may be.

No portion of the cost of these supplies has been charged to the Canadian Treasury, as they are still in Imperial stores.

J. Craufurd Caffin,
Director of Stores.

RETURN of CLOTHING and NECESSARIES sent from this Country to Canada, from June 1862 to March 1863.

	Number for Troops.	Number for Store Department.	Number for Commissariat Staff Corps.	Number for Army Hospital Corps.	Number for Garrison District.	Number for Barrack Officers.	Number for Enrolled Pensioners.	TOTAL.
CLOTHING:								
Badges, Arm, Pioneers	44	–	–	–	–	–	–	44
Ditto, Artificers	87	–	–	–	–	–	–	87
Ditto, Color	87	–	1	–	–	–	–	88
Ditto, Good conduct	5,694	–	–	37	–	–	–	5,731
Ditto, Shooting	962	–	–	–	–	–	–	962
Ditto, Trumpeter and Trumpet Major	34	–	–	–	–	–	–	34
Boots, pairs	23,751	–	138	131	2	–	–	24,022
Busbies, complete	223	–	–	–	–	–	–	223
Chacos	3,103	–	1	66	–	–	–	3,170
Chevrons	1,832	–	24	4	–	–	–	1,860
Cloaks	226	–	–	–	–	–	–	226
Crowns	5	–	3	–	–	–	–	8

RETURN of Clothing and Necessaries, &c.—*continued.*

	Number for Troops.	Number for Store Department.	Number for Commissariat Staff Corps.	Number for Army Hospital Corps.	Number for Garrison District.	Number for Barrack Officers.	Number for Enrolled Pensioners.	TOTAL.
CLOTHING—*continued.*								
Gold tassel	1	–	–	–	–	–	–	1
Great coats	319	401	–	–	1	–	–	721
Jackets	371	–	–	–	–	–	–	371
Kilts, sergeants'	1	–	–	–	–	–	–	1
Leggings, leather	4,232	–	–	–	–	–	–	4,232
Letter or figure for shoulder straps — gold	310	–	–	–	–	–	–	310
Letter or figure for shoulder straps — worsted	4,306	–	–	–	–	–	–	4,306
Measures, brass, busby	5	–	–	–	–	–	–	5
Overalls	652	–	–	–	–	–	–	652
Sashes	95	–	–	–	–	–	–	95
Schoolmasters' clothing. Cap and cover	3	–	–	–	–	–	–	3
Schoolmasters' clothing. Frock coats	11	–	–	–	–	–	–	11
Schoolmasters' clothing. Sashes, silk	2	–	–	–	–	–	–	2
Schoolmasters' clothing. Shoulder knots	7	–	–	–	–	–	–	7
Schoolmasters' clothing. Trowsers	11	–	–	–	–	–	–	11
Size Sticks, sets	6	–	–	–	–	–	–	6
Straps, foot, pairs	1,933	–	–	–	–	–	–	1,933
Sword knots, staff	4	–	–	–	–	–	–	4
Trowsers, pairs, cloth	13,600	1	173	68	1	2	2	13,847
Ditto, serge	900	–	104	58	–	–	–	1,062
Tunics	11,948	1	172	68	1	2	2	12,194
Waistcoats	2,099	–	–	–	–	–	–	2,099
NECESSARIES:								
Bags, brush	16	–	–	–	–	–	–	16
Ditto, stable	16	–	–	–	–	–	–	16
Caps	1	1	–	3	1	2	2	10
Drawers, cotton	36	–	–	–	–	–	–	36
Gloves, pairs	104	–	–	–	–	–	–	104
Ditto, leather	343	–	–	–	–	–	–	343
Mess tin (Cavalry)	4	–	–	–	–	–	–	4
Straps for do. do.	4	–	–	–	–	–	–	4

STATEMENT of CLAIMS made by the WAR DEPARTMENT on the Colonial Government of *Canada*, for STORES supplied as reported, from June 1862 to March 1863.

	£.	s.	d.		£.	s.	d.
3 June 1862	4,544	16	8	20 Aug. 1862	1,675	–	–
5 „ „	4,237	10	7	3 Sept. „	330	3	5
10 „ „	7,099	6	4	23 „ „	358	12	6
11 „ „	45	5	7	23 Dec. „	5	13	3
23 „ „	653	16	5	30 „ „	370	16	11
27 „ „	850	7	7	14 Jan. 1863	4,754	17	4
28 „ „	71	10	10	15 „ „	301	2	11
4 July „	518	3	5	17 „ „	513	19	7
5 „ „	22	8	9				
17 „ „	1,141	1	9				
18 „ „	3,957	17	5	£.	31,452	11	3

CANADA (MILITARY EQUIPMENTS).

RETURN of all Arms, Ammunition, Saddlery, Clothing, or any kind of Military Equipment sent out from this Country to *Canada*, since June 1862; distinguishing what has been sent into Stores there, or destined for the use of Local Forces, from what has been sent out for English Troops or Garrisons; &c.

(*Mr. Adderley.*)

Ordered, by The House of Commons, *to be Printed*,
22 *July* 1863.

476.

Under 1 *oz.*

360

CANADA AND BRITISH COLUMBIA.

RETURN to an Address of the Honourable The House of Commons, dated 10 July 1863;—*for*,

"COPY of all CORRESPONDENCE, from the 1st day of January 1862 to the present Time, between the Colonial Office and the Hudson's Bay Company or other Parties, relative to a ROAD and TELEGRAPH from *Canada* to *British Columbia*, and the Transfer of the Property and Rights of the HUDSON'S BAY COMPANY to other Parties."

Colonial Office,
14 July 1863.

C. FORTESCUE.

(*Mr. Aytoun.*)

Ordered, by The House of Commons, *to be Printed*,
15 *July* 1863.

SCHEDULE.

CORRESPONDENCE relative to a ROAD and TELEGRAPH to BRITISH COLUMBIA, and the TRANSFER of the RIGHTS of the HUDSON'S BAY COMPANY to other Parties.

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COPIES

OF

CORRESPONDENCE between the COLONIAL OFFICE and the HUDSON'S BAY COMPANY since 1st January 1862, relative to a ROAD AND TELEGRAPH to British Columbia, and the Transfer of the Rights of the Hudson's Bay Company to other Parties.

No. 1. No. 1.

COPY of a LETTER from H. H. BERENS, Esq., to his Grace the Duke of NEWCASTLE, K.G.

MY LORD DUKE, Hudson's Bay House, London, May 19, 1862.

I HAVE the honour to enclose, for your Grace's information, copy of a correspondence that has passed between Mr. Charles Alleyn, Secretary to the Government of Canada, and Mr. Dallas, who has lately succeeded Sir George Simpson in the government of the Hudson's Bay Territory in North America, on the subject of a proposed road and line of telegraphic communication between Canada and the gold regions of British Columbia.

I take the liberty of forwarding this correspondence to your Grace, because my colleagues agree with me that any negotiation on the subject should be carried on, not with the Colonial Authorities, but with Her Majesty's Government in this country.

The Canadian Government propose, in the first instance, to establish steam communication on Lake Superior, and to open up roads from Fort William in the direction of Red River; and they appear to consider that it is the duty of the Hudson's Bay Company to undertake the further prosecution of the work through their territories. Of course there is no difficulty as far as steamers on Lake Superior are concerned; but between Fort William and the heights of land, the natural difficulties of the country will make road-making a very expensive business; while the soil, which consists chiefly of rock and swamps, will offer no inducement to settlers, even if they obtain the land for nothing.

Within the last few years a considerable sum of money has been granted and expended by the Canadian Government for the purpose of opening this route; but I am not aware that there has been any practical result. Beyond Red River to the base of the Rocky Mountains, the line will pass through a vast desert, in some places without wood or water, exposed to the incursions of roving bands of Indians, and entirely destitute of any means of subsistence for emigrants, save herds of buffalo, which roam at large through the plains, and whose presence on any particular portion of these prairies can never be reckoned on. These again are followed up by Indians in pursuit of food, whose hostility will expose travellers to the greatest danger.

With regard to the establishment of a telegraphic communication, it is scarcely necessary to point at the prairie fires, the depredation of natives, and the general chapter of accidents, as presenting almost insurmountable obstacles to its success.

I have thought it my duty thus slightly to sketch the difficulties in the way of the enterprise, the subject of the correspondence which I have brought under your Grace's notice. But if it be thought that the interests of Canada and British Columbia, or of this country, require that the experiment should be made, the Hudson's Bay Company will most readily acquiesce in the decision of Her Majesty's Government. At the same time it is my duty to state that, in justice to our proprietors, the Directors of the Hudson's Bay Company cannot risk their capital in doubtful undertakings of this description, spread over such vast distances through a country where the means of maintaining them, if once made, will lead to an expenditure scarcely to be contemplated. Although, therefore, the Directors, on behalf of the Company, are ready to lend Her Majesty's Government all the moral support and assistance in their power, it must be distinctly understood that the Company have no means at their disposal beyond those employed in carrying on their trade, and cannot consequently undertake any outlay in connexion with the schemes suggested by the Canadian Government.

I think it may not be improper to take this opportunity of referring your Grace to former communications between the Hudson's Bay Company and the Colonial Office on the subject of settlement in their territories. The Company have always expressed their

willingness to surrender the whole or any part of the territorial rights upon terms that would secure fair compensation to the proprietors as well as to the officers and employés in the country. The Governor at Red River Colony has instructions to make grants of land to settlers, on easy conditions, without any restriction as to the Company's right of exclusive trade ; and if Her Majesty's Government, with reference to the interests of the public, consider more extensive plans for the improvement of the country expedient, the Directors of the Company will be quite ready to entertain them with the desire to meet the wishes of Her Majesty's Government in any manner not inconsistent with the vested rights of the constituents.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) H. H. BERENS,
&c. &c. &c. Governor.

Encl. in No.1.

Enclosure in No. 1.

Secretary's Office,
Quebec, 15th April 1862.

SIR,

THE Government of Canada have had their attention very strongly directed to the important subject of an overland communication with British Columbia through the Hudson's Bay Territory, viâ the Red River; and I am now commanded by his Excellency the Governor General to inform you of the steps proposed towards effecting this object, and to seek the co-operation of the Hudson's Bay Company therein.

The Canadian Government do not wish at present to raise any question as to the rights of the Company, who must be regarded as de facto in possession of the country intervening between Canada and British Columbia. They consider that most important public interests demand the establishment of a practicable line of communication across the continent, and they desire to have the practical aid of your Company in carrying it into effect.

Arrangements were made within the last four years for postal service with Red River, but the want of territorial rights at Red River and along the greater part of the route defeated the plans of the Canadian Government, and after a very considerable outlay the line had to be abandoned. Another effort is now being made in the same direction, and as the Hudson's Bay Company claim the right of territory and government over this region, it is hoped they will also assume their co-relative duties, and unite with Canada in opening up the country.

The Canadian Government is about to establish steam communication with Fort William on Lake Superior immediately. A large tract of land at this point has been surveyed, and a Crown lands agent, has been recently appointed to reside there. Appropriations have been made by the Legislature for roads towards Red River, on which free grants will be made to settlers, and every effort will be made to attract settlement, the ultimate object being the connexion with the Red River and Sackatchewan. Canada is therefore now prepared to guarantee that, so far as her undisputed boundary extends, every facility will henceforward exist towards a communication with the West.

The Canadian Government cannot doubt that the Hudson's Bay Company are fully alive to the vast importance of such a communication. The recent gold discoveries on the Sackatchewan cannot fail to attract many adventurers, who must at present be principally drawn from the United States. The settlement of Red River itself has now its sole communication with Minnesota, and will naturally imbibe American principles and views unless brought into connexion with the British settlements. East and West Canada must look with some apprehension to the probable result that in a very few years the population lying to her west will be wholly foreign, and that unless facilities for settlement be afforded from Canada equal to those enjoyed from the United States, and unless efficient civil government be speedily established, British rule over this part of the continent will virtually have passed away, and the key of the trade to British Columbia, and ultimately China, have been surrendered to our rivals. The Hudson's Bay Company cannot desire a result that would equally militate against their own interests, and the Canadian Government therefore hopes for their hearty co-operation in opening up the Red River and Sackatchewan territories by a commmunication from Canada to British Columbia.

The Government of Canada consider that, in connexion with the means of transport across the continent, a telegraph communication should be established as especially necessary for Imperial interests, inasmuch as both the United States and Russia possess telegraphic lines to the Pacific, while Great Britain has no other mode of doing so but through the Hudson's Bay Territory. Recent events have proved the paramount importance of such a line.

Leaving untouched, therefore, all disputed questions, I am commanded by his Excellency the Governor General to state that the Canadian Government have decided at once to establish steam and stage communication to the extreme limit of the territory under their government, and are ready to unite with the Hudson's Bay Company in a mail service and post route to British Columbia. The Canadian Government is also prepared to guarantee the construction of a telegraph line to the extreme western limits of the province.

I request that you will inform me how far you will be prepared to act for the Hudson's Bay Company in carrying out objects of such great national importance, and which cannot be long delayed without the most serious injury to the interests of the empire, and especially to the future progress and security of Canada.

I have, &c.

Alexander G. Dallas, Esq. (Signed) CHARLES ALLEYN,
&c. &c. &c. Secretary.

Sir, Montreal, 16th April 1862.

I have the honour to acknowledge receipt of the important communication which you have addressed to me by command of his Excellency the Governor General, under date the 15th instant, wherein you intimate the desire of the Government of Canada to establish an overland communication with British Columbia, through the Hudson's Bay Territory, as well as the steps proposed towards effecting that object, and further request the co-operation of the Hudson's Bay Company therein.

After stating that the Government of Canada, regarding the Company as de facto in possession of the intervening territories, does not wish to raise any questions as to its rights, you proceed to point out the great public interests which are involved by the formation of a chain of settlements connecting Canada with British Columbia by postal and telegraphic services, the paramount importance of which is proved by recent events. You also point out the danger of the Red River settlement from its close connexion with Minnesota, consequent on its isolated position with regard to Canada, becoming imbued with American principles and views, and passing away to our rivals, thus depriving the country of the key of the trade to British Columbia and ultimately to China.

While fully admitting the force of the above arguments, and the immediate necessity of some arrangement being come to, I am reluctantly compelled to admit my inability to meet the Government of Canada in this forward movement, for the following reasons:—

First, the Red River and Saskatchewan Valleys, though not in themselves fur-bearing districts, are the sources from whence the main supplies of winter food are procured for the Northern posts from the produce of the buffalo hunts. A chain of settlements through these valleys would not only deprive the Company of the above vital resource, but would indirectly in many other ways so interfere with their Northern trade as to render it no longer worth prosecuting on an extended scale. It would necessarily be diverted into various channels, possibly to the public benefit, but the Company could no longer exist on its present footing.

The above reasons against a partial surrender of our territories may not appear sufficiently obvious to parties not conversant with the trade or the country; but my knowledge of both, based on personal experience, and from other sources open to me, point to the conclusion that partial concessions of the districts which must necessarily be alienated would inevitably lead to the extinction of the Company.

Second, granting that the Company were willing to sacrifice its trading interests, the very act would deprive it of the means to carry out the proposed measures. There is no source of revenue to meet the most ordinary expenditure, and even under present circumstances the Company has practically no power to raise one. The co-operation proposed in calling on the Company to perform its co-relative duties pre-supposes it to stand on an equal footing with Canada.

It is not to be supposed that the Crown would grant more extensive powers to the Company than those conveyed by the Charter. If any change be made it is presumed that direct administration by the Crown would be resorted to as the only measure likely to give public satisfaction.

Not having anticipated the present question I am without instructions from the Board of Directors in London for my guidance. I believe I am, however, safe in stating my conviction that the Company will be willing to meet the wishes of the country at large by consenting to an equitable arrangement for the surrender of all the rights conveyed by the Charter.

I shall by the next mail forward copies of this correspondence to the Board of Directors in London, who will thus be prepared in the event of the subject being referred to Her Majesty's Secretary of State for the Colonies.

I may state that it is my intention to make immediate arrangements at the existing settlement of Red River for the sale of land on easy terms, free from any restrictions of trade. It would, I believe, be impolitic to make any distinction between British subjects and Foreigners. The infusion of a British element must be left to the effects of a closer connexion and identity of interests with Canada and the mother country.

I have, &c.

Hon. Charles Alleyn, &c. &c. (Signed) A. G. Dallas.

No. 2. No. 2.

COPY of a LETTER from Messrs. Baring, Glyn, and others, to his Grace the Duke of Newcastle, K.G.

My Lord, London, 5th July 1862.

The growing interest felt by the commercial world in British Columbia, and in the communications which commerce, as well as considerations of empire, require across the continent of British North America, renders it, as it appears to us, opportune and desirable for some adequate organization to apply itself, under the sanction of Government, to the task of providing a telegraphic service, and of securing the means of travelling with regularity to the British territory on the Pacific.

Connected with a country so new and so vast, and as to which so little is popularly known, such an enterprise could only hope for success in the event of its being undertaken with the full approbation and support of Government.

As a preliminary to any practica discussion of the question, it is desirable to ascertain how far Her Majesty's Government recognize the importance and desirability of such an enterprise to be placed in proper hands, and also how far assistance would be given to aid in its prosecution.

Parliament is naturally averse to the increase of the national burdens, and it may be that a money grant might be out of the question ; but without adding to the expenditure of the country, there are large resources available in the shape of territory. Would, therefore, the Government, if approving such an attempt, be ready to grant to any sound and sufficient company a considerable tract of land in aid to the construction of the means of communication by telegraph, and the provision of the means of transit across the continent?

Knowing the interest which your Grace feels in the progress of the British empire in North America, we do not hesitate thus to call attention to the subject.

We have, &c.,

(Signed) Thomas Baring.
Geo. Carr Glyn.
R. D. Hodgson.
Geo. G. Glyn.
R. W. Crawford.
William Chapman.

To his Grace the Duke of Newcastle, K.G.
&c. &c. &c.

No. 3.

No. 3.

Copy of a LETTER from Sir F. Rogers, Bart., to Thos. Baring, Esq., M.P.

Sir, Downing Street, July 31, 1862.

The Duke of Newcastle has received the letter signed by you and other gentle men, dated the 5th of July, relative to the formation of a company for the purpose of opening a route for passenger traffic, and telegraphic communication across the continent of British North America to the British Colonies on the Pacific.

I am desired in reply to express the Duke of Newcastle's regret that Her Majesty's Government cannot afford any direct pecuniary assistance to this object, and that, except in British Columbia, he has no power to make any grant of land for the purpose. At the same time his Grace fully appreciates the importance of the proposed scheme, and will give it every encouragement in his power. For this purpose he has written to the Hudson's Bay Company, through whose territories any such communication must pass, to enquire what facilities they would be ready to afford to the undertaking; and the Duke of Newcastle would suggest that you, and the gentlemen associated with you, should place yourselves in communication with the chairman of that Company, and in case of any satisfactory arrangement being made with them, his Grace will write to the Governors of Canada and British Columbia, and endeavour to procure for you some concession of land from those Colonies.

I am, &c

Thos. Baring, Esq., M.P. (Signed) FREDERIC ROGERS.

No. 4.

No. 4. Copy of a LETTER from Sir F. Rogers, Bart., to H. H. Berens, Esq.

Sir, Downing Street, July 31, 1862.

I am directed by the Duke of Newcastle to request that you will bring under the consideration of the Hudson's Bay Company the enclosed copy of a letter* from Mr. Thomas Baring, M.P., and other gentlemen, relative to the formation of a company for the purpose of opening a route for passenger traffic and telegraphic communication across the continent of British North America to the British Colonies on the Pacific.

His Grace, appreciating the importance of the scheme submitted to him, is disposed to give it every encouragement in his power, and for that purpose intends to invite the co-operation of the Governments of Canada and British Columbia.

As, however, the proposed communication could only be carried through the territory over which the Hudson's Bay Company claims rights, his Grace, though not permitting himself to doubt from the tenour of your letter of the 19th of May † that the Company would afford such facilities as are in their power for co-operating in this great public object, would nevertheless be glad to learn distinctly whether they would concede a

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* July 5, 1862. Printed at page 5. † Printed at page 3.

line of territory to any company which men of such position and character as those who have signed the enclosed letter might form for the purpose.

His Grace is in communication with Mr. Baring on this subject.

I am, &c.

H. H. Berens, Esq. (Signed) FREDERIC ROGERS.
&c. &c.

No. 5. No. 5.

Copy of a LETTER from H. H. Berens, Esq., to His Grace the Duke of Newcastle, K. G.

Hudson's Bay House, London,
August 11, 1862.

My Lord Duke,

I have communicated with my colleagues in the direction of the Hudson's Bay Company on the subject of your Grace's letter of the 31st of July, of which I had the honour to acknowledge the receipt on the 1st instant.

They direct me to assure your Grace of their readiness to co-operate with Her Majesty's Government in any measures they may be pleased to recommend for the improvement of the communication across the territories of the Company, and for the settlement of the country, provided always they are not required to advance the capital of their constituents in aid of speculations projected by other persons, of the success of which the projectors are the most competent judges.

The Directors of the Hudson's Bay Company will have no objection to make such free grant of land to any association, of which the gentlemen who have made the application to your Grace, by their letter of the 5th July,* are the responsible Directors, as may reasonably be required for effecting the proposed communication, on the sole condition that adequate security is taken for the establishment and completion of a sufficient road for passenger traffic and telegraphic communication across the continent. * Page 5.

I have, &c.

(Signed) H. H. BERENS,
Governor.

His Grace the Duke of Newcastle, K. G.
&c. &c. &c.

No. 6. No. 6.

Copy of a LETTER from Sir F. Rogers, Bart., to Thos. Baring, Esq., M.P.

Sir,

Downing Street, August 18, 1862.

With reference to my letter of the 31st ult.,† I am directed by the Duke of Newcastle to transmit to you for your information a copy of a letter from the Chairman of the Hudson's Bay Company,‡ stating the extent to which the Company will be willing to co-operate with yourself and colleagues in establishing telegraphic communication with British Columbia across British North America. † Page 6. ‡ Aug. 11, 1862. Supra.

I have, &c.

T. Baring, Esq., M.P. (Signed) FREDERIC ROGERS.
&c. &c.

No. 7. No. 7.

Copy of a LETTER from Sir Frederic Rogers, Bart., to H. H. Berens, Esq.

Sir,

Downing Street, August 28, 1862.

Your letter of the 11th instant§ has been laid before the Duke of Newcastle, and his Grace requests that you will express to your colleagues in the management of the Hudson's Bay Company his gratification at their readiness to make a grant of land to the promoters of the contemplated undertaking of a passenger and telegraphic communica- § Supra.

tion between Canada and British Columbia. It will be obvious to you that the means of any association which may be formed to effect this great design must depend upon the extent of the proposed concession. His Grace, therefore, directs me to ask you to have the goodness to state what breadth of land the Governors of the Hudson's Bay Company are willing to grant for this purpose.

I am, &c.

H. H. Berens, Esq. (Signed) FREDERIC ROGERS.
&c. &c.

No. 8.

No. 8.

Copy of a LETTER from H. H. Berens, Esq., to his Grace the Duke of Newcastle, K.G.

Hudson's Bay House, London,

My Lord Duke, September 5, 1862.

I have the honour to acknowledge the receipt of Sir Frederic Rogers' letter of the 28th August,* and am pleased to observe that your Grace is gratified by the readiness of this Company to meet the views of Her Majesty's Government in reference to the contemplated communication between Canada and British Columbia. In reply to your inquiry as to the breadth of land the Hudson's Bay Company are willing to grant for the purpose of the undertaking, I beg to say that being in utter ignorance of the sort of route projected, and in the absence of any communication from the promoters of the undertaking, it is impossible for me to state to what extent the grant would amount.

* Page 7.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) H. H. BERENS,
&c. &c. &c. Governor.

No. 9.

No. 9.

Copy of a LETTER from T. Frederic Elliot, Esq., to H. H. Berens, Esq.

Sir, Downing Street, November 21, 1862.

With reference to your interview with the Duke of Newcastle on the 18th instant, upon the subject of a proposed Postal and Telegraphic Route from the Canadian frontier to that of British Columbia, at which his Grace understood you to express the willingness of the Hudson's Bay Company to enter into personal communication with some of the gentlemen who are desirous, under certain conditions, of undertaking this scheme, and to confer with them either upon the basis of forming a road through the country comprised in the Charter of your Company, or upon that of the purchase of the whole of the Company's rights, I am directed by his Grace to inform you that he has to-day seen a deputation of the gentlemen referred to, and they, on their part, expressed their readiness to attend the proposed meeting.

The Duke of Newcastle thinks that it would be desirable that you should now arrange an interview either with Mr. Thomas Baring or with Mr. Edward Watkin, and, as it is evident that with a view to any consideration of the second proposal it would be necessary that some details of the property to be sold should be laid before the intending purchasers, he hopes that the Company will be good enough to authorize such information to be given as may be necessary, and as may not be detrimental to their own interests.

I have, &c.

H. H. Berens, Esq. (Signed) T. FRED. ELLIOT.
&c. &c.

No. 10.

No. 10.

Copy of a LETTER from E. W. Watkin, Esq., to his Grace the Duke of Newcastle, K.G.

My Lord Duke, London, December 27, 1862.

Referring to the interview which Messrs. G. G. Glyn, M.P., R. W. Crawford, M.P., H. Wollaston Blake, William Chapman, Robert Benson, Captain Glyn, R.N., and myself, had the honour to have with your Grace at the Colonial Office, on the 21st November, in reference to the important question of telegraphic and other means of communication through British territory to the Pacific, I have now to report to your Grace, on behalf of the gentlemen who have moved in this matter, that the subject has

been fully discussed with the Governor and Directors of the Hudson's Bay Company, and also with the delegates from Canada, the Honble. Messrs. Sicotte and Howland, who were specially authorized by their Government to deal with it, and that considerable progress has been made with the negotiation.

The Hudson's Bay Company still decline to do more in aid of telegraphic and road communication than to make a free grant of land for the actual site of the proposed works, which is much to be regretted.

The larger question raised has, however, not been forgotten, and accounts are promised on behalf of the Hudson's Bay Company, which, it is stated, will give a clear view of the financial position of that undertaking, and thereby enable calculations to be made of its real value to purchase.

It is considered desirable, however, to keep the two questions above alluded to distinct, the more especially as time is so much an object.

In the absence of a large grant of land, it will, therefore, be necessary to ask for assistance by way of guarantee from the Imperial and Provincial Governments.

The Canadian delegates, recognizing this necessity, have officially notified to us their readiness on behalf of the Canadian Government to recommend the participation by Canada in a minimum guarantee of four per cent. upon a capital of not exceeding 500,000*l.*, to be devoted to the construction of telegraph and road communication. They propose to participate to the extent of one third of the guarantee in the event of Her Majesty's Government and British Columbia joining in the responsibility, or of one half in the event of the refusal of Imperial aid; that refusal, however, they state that they cannot anticipate, considering the Imperial importance of the work.

The enterprize having now, and after much negotiation, been thus brought to a practical stage, I am desired further respectfully to ask if your Grace is prepared to recommend in like manner that Her Majesty's Government and British Columbia, or if, unfortunately, Imperial aid is impossible, then that British Columbia alone, participate in the proposed guarantee, to the extent, in the former case, of two thirds, or, in the latter case, of one half, of the very moderate responsibility suggested?

Copies of the correspondence with the Canadian delegates, detailing all that has transpired, are enclosed for your Grace's information.

Should your Grace favourably consider this request, immediate measures will be taken to raise the capital required through an influential company; and so soon as that is effected the drafts of the Bills which would have to be submitted to the Imperial and Provincial Parliaments should be discussed and settled. Those Bills would embody all the details of the arrangement as between the promoters and Her Majesty's and the Provincial Governments; and it would be most desirable that they should be discussed in the ensuing session, so that, should Parliament adopt and approve the policy of assisting these works in the manner proposed, they may, if possible, be commenced in the early part of the summer of 1863.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) E. W. WATKIN.
&c. &c. &c.

Enclosure in No. 10. Enclosure No. 1

A.

MEMORANDUM.

THE gentlemen who have to-day met the Honourable Messrs. Sicotte and Howland at 67, Lombard Street, will take measures to form a company without delay for the object of carrying out—

First, the construction of a telegraph and system of posts, and the conveyance of telegraphic messages and correspondence, from the Canadian boundary at the head of Lake Superior to the Pacific, (and also, if desired, from the United States boundary to Fort Garry); and,

Second, for the provision of facilities for travel by ordinary waggon roads and steamers—

On the following conditions; viz.

1. That possession of the free grant of the right of way for an adequate width, already proposed to be made by the Hudson's Bay Company, be confirmed to the Company under Imperial and Colonial Legislation; and that a grant of land of reasonable width be in like manner made by the Imperial and Colonial Governments through their respective territories, to the east and west of the grant from the Hudson's Bay Company.

2. That similar rights and privileges as were granted to the "North-west Transit Company," and to others, by the Canadian Parliament, be secured to the Company proposed to be formed.

Memorandum.—It would be desirable, if fair terms can be agreed, that the property and rights of the Transit Company, or others, be incorporated with those of the new company, thereby securing a fair protection to any existing interests, and unity of action in Canada.

3. That the Canadian and British Columbian Governments arrange for the guarantee of a minimum rate of interest of four per cent. per annum upon the capital required, which, for the telegraph and system of posts and letter express, is not to exceed three hundred thousand pounds, and for the provision of facilities for travel two hundred thousand pounds in addition; or, for the whole, a capital of not exceeding five hundred thousand pounds sterling.

4. Proper protection of the property of the Company, and of the persons employed by it, to be extended by the Governments under the laws existing for the time being, and, so far as the Hudson's Bay Territory is concerned, under the protective powers for the time being exercised by the Hudson's Bay Company.

5. That the works of the Company shall be free from all taxation for not less than thirty years.

6. That a proper tariff of rates for messages and letters be agreed upon between the Governments and the new Company, and that the Company's telegraphs and letter post be used by the Governments on terms to be agreed.

7. The Governments may have the power to purchase the whole concern after it has paid per cent. for a period of five years, at a premium of per cent.; or, after the Company has, for a past period of five years, paid six per cent. per annum, half the surplus profits may be devoted to a sinking fund.

It is desired again to repeat that the gentlemen who have this day met Messrs. Sicotte and Howland are merely desirous of seeing executed, without further delay, the works herein proposed; and do not wish to undertake any action unless with the entire approval of the delegates from Canada. Should Messrs. Sicotte and Howland consider that practical assistance to the object of their mission can be rendered in any other or better way, they will be quite ready to discuss the suggestions of the delegates, and either to co-operate or retire, as may be thought best to serve the great policy initiated by Canada.

67, Lombard Street, London,
8th December 1862.

B.

With a view of better enabling the gentlemen whom they met yesterday at 67, Lombard Street, to take immediate measures to form a company for the object of carrying out the construction of a telegraph line and of a road to establish frequent and easy communication between Canada and the Pacific, and to facilitate the carrying of mails, passengers, and traffic, the undersigned have the honour to state, that they are of opinion that the Canadian Government will agree to give a guarantee of interest at the rate of four per cent. upon one third of the sum expended, provided the whole sum does not exceed five hundred thousand pounds, and provided also that the same guarantee of interest will be secured upon the other two thirds of the expenditure by Imperial or Columbian contributions.

If a company composed of men of the standing and wealth of those they had the pleasure to meet is formed for the above purposes, under such conditions as will secure the interests of all parties interested, and the accomplishment of the objects they have in view, such an organization will be highly favourable to the settlement of an immense territory, and if properly administered, may prove to be also of great advantage to the trade of England.

(Signed) L. V. Sicotte.
(Signed) W. P. Howland.

London, 10th December, 1862.
To MM. Glynn,
Benson,
Chapman,
Newmarch,
Watkin,
&c. &c. &c.

C.

Gentlemen, London, December 17, 1862.

At a conference of the gentlemen who have been in communication with you in reference to the provision of the means of telegraphic and other communication to the Pacific, held this day at 67, Lombard Street, I was requested to acknowledge the receipt of your communication of the 10th December, and to thank you for it.

Referring to conversations which have taken place, and to your private suggestion that an alternative proposition should be considered under probable circumstances then discussed, I am desired further to say, that should Her Majesty's Government not accede to the proposals which we understand you have already made to the Colonial Minister, but in place thereof should propose that British Columbia, as a province of the Crown, shall take a larger share of the proposed responsibility, they will be ready to proceed, at your instance and with your approval, to form a Company for the purposes detailed, upon the condition that the rate of interest shall be increased say to $4\frac{1}{2}$ or 5 per cent.

The simplest form of working the arrangements in the short time now left open would be for the Imperial and Canadian Governments to obtain the passage of measures in the ensuing sessions of Parliament, by which British Columbia and Canada agreed to pay, in equal proportions, an annual sum of say 22,500*l.* to the Company who would execute and establish the proposed works.

Then all the details could be made matter of arrangement between the Colonial Minister, on behalf of British Columbia, and the Governor General in Council for Canada and the promoters of the enterprize.

The adoption of this suggestion would enable measures for the formation of a company and the subscription of capital (conditional upon the granting of Parliamentary sanction) to be at once taken, and

while money is still abundant; whereas if all practical action to this end were postponed until the Parliaments have met, unforeseen financial difficulties might arise.

It is hoped, therefore, that as early an answer as possible may be given.

I have, &c.
(Signed) Edward W. Watkin.

To the Hon. Louis V. Sicotte and W. P. Howland.

D.

Although little disposed to believe that Her Majesty's Government will not accede to the proposal of co-operation they have made in relation to the opening of communication from Canada to the Pacific, the undersigned have the honour to state, in answer to the letter of Mr. Watkin of the 17th instant, that, in their opinion, the Canadian Government will grant to a company organized as proposed in the papers already exchanged, a guarantee of interest, even on one half the capital stated in these documents, should the Imperial Government refuse to contribute any portion of this guaranteed sum of interest.

The undersigned must state, in answer to another demand made in the same letter, that the guarantee of the Canadian Government of this payment of interest ought to secure the monies required at the rate of 4 per cent., and that they will not advise and press with their colleagues a higher rate of interest as the basis of the arrangement.

I have, &c.
London, 20th December 1862. (Signed) L. V. Sicotte.
W. P. Howland.

No. 11. No. 11.

Copy of a LETTER from T. Fredk. Elliot, Esq., to E. W. Watkin, Esq.

Sir, Downing Street, March 5, 1863.

I am directed by the Duke of Newcastle to acknowledge the receipt of your letter of the 27th of December,* and to express his Grace's regret that so long though quite unavoidable a delay should have occurred in replying to it. * Page 8.

I am now desired to make to you the following communication:—

Her Majesty's Government are of opinion that they cannot apply to Parliament to sanction any share in the proposed subsidy by this country; and though they take great interest in the project contemplated with so much public spirit by the gentlemen represented by you for carrying a telegraphic and postal communication from the confines of Canada to the Pacific, they do not concur in the opinion of the Canadian delegates that the work is of such special "Imperial importance" as to induce them to introduce for the first time the principle of subsidising or guaranteeing telegraphic lines on land.

Her Majesty's Government are further of opinion that without a submarine transatlantic telegraph the proposed line in America will be of comparatively small value to the Imperial Government, and that whenever a scheme of the former kind is renewed it is almost certain that this country must be called upon to bear a much larger charge for it than that which it is now proposed to devolve upon the British Colonies in respect of the land telegraph and communication.

As Canada has offered to bear one half of the proposed guarantee the Duke of Newcastle is prepared to recommend, and his Grace has no doubt of ready acquiescence, that British Columbia and Vancouver Island shall pay the sum of 10,000*l.* per annum as their share of 20,000*l.* (being at the rate of 4*l.* per cent. on a capital of 500,000*l.*) to commence when the line is in working order.

It will, however, be necessary, before any proposal is made officially to the Colonies, that the Duke of Newcastle should receive further details.

It is requisite that his Grace should be informed what provision will be proposed as to the duration of this subsidy; what conditions as to the right of purchasing the line; and to what authorities that right should belong; and on what terms the whole arrangement may be revised in the event of the Hudson's Bay Company coming to any agreement for the sale of their territory. There will also doubtless be other provisions which the Colonies will expect.

I have, &c.
E. W. Watkin, Esq. (Signed) T. FREDK. ELLIOT.

No. 12.

No. 12.

EXTRACT of a LETTER from E. W. WATKIN, Esq., to his Grace the Duke of NEWCASTLE, K.G.

Grand Trunk Railway Office,
21, Old Broad Street, E.C.
April 25, 1863.

I BEG to enclose an extract from a letter I have received from Mr. Howland, which I think should be in your Grace's possession.

Encl. in No. 12.

Enclosure in No. 12.

EXTRACT from a Letter from Hon. W. P. Howland to Mr. Watkin.

"However important the Intercolonial Railroad may be, the opening up of the North-west territory would increase its value, and, in fact, afford much stronger grounds for its construction than exist at present; and the immediate result of opening up that territory would, in my opinion, be productive of much greater good to the people of England and Canada than would result from the construction of the Intercolonial Railroad.

"I send by post the report of Mr. Taylor to the United States Government upon the North-west territory of British America, by which you will perceive that they attach much greater importance to the future of that country than the people of England or Canada have hitherto shown.

"The description given of the climate appears to have been compiled from reliable data, and affords the clearest information upon that point that has yet come before the public. I regret not having another copy to send his Grace the Duke of Newcastle. If he has not received one, will you be kind enough to send him this?

"Mr. Sandford Fleming, (who is an engineer of high character and ability,) is now here [Quebec] as a delegate from the people of Red River, in charge of a memorial on their behalf to the Governments of Canada and England. This memorial is accompanied with a very clear statement of the condition and prospects of the country, and a report upon the proposed communication to be made through it. I am now getting the documents printed; and, when done, I will send you a copy, and one will be forwarded by his Excellency to the Duke."

No. 13.

No. 13

COPY of a LETTER from E. W. WATKIN, Esq., to his Grace the Duke of NEWCASTLE, K.G.

21, Old Broad Street, London, E.C.,
April 28, 1863.

MY LORD DUKE,

REFERRING to the letter which I had the honour to receive by direction of your Grace from Mr. Elliot under date of the 5th ultimo,* to the interview which your Grace was good enough subsequently to afford to Mr. G. G. Glyn, M.P., Mr. Benson, Mr. Blake, Mr. Chapman, and myself, and to the discussions which have recently taken place, on general details, under your Grace's instructions, with Sir Frederic Rogers and Mr. Murdoch, I have now to enclose proposals, which I trust will meet your Grace's approval, for the establishment of a postal and telegraphic route between Canada and the Pacific Ocean.

* Page 11.

It is hoped that these proposals will be found to be such as your Grace may be able to recommend, and that their adoption by Her Majesty's Government, by Canada, by British Columbia, and by Vancouver Island, may lead to the completion of the most important work involved at a very early period.

Throughout the discussion, which has now occupied a considerable period, it has been assumed as a condition, that the Hudson's Bay Company will agree to the confirmation of the grant and consequent rights which in their letter to your Grace of the 11th August* last they offered to afford in aid of the enterprise; and that Her Majesty's Government will carry through such measures as are requisite for securing to the Company the rights and privileges necessary to the security of the undertaking; and, considering the deep interest which your Grace has taken in proposals for connecting the Atlantic and Pacific for purposes of communication through British territory, from the first suggestion of such a measure by your Grace to this moment, the promoters of the Company have had pleasure in voluntarily adding as a concluding article of the enclosed document, a provision that any further questions of detail, or matters of difference, should any arise, shall be left to the sole decision of your Grace.

* Page 7.

I have to observe that the rate of interest to be secured to the Company when it was assumed that Her Majesty's Government would take a direct part in the guarantee was

4 per cent. as a minimum ; but at the same time it was proposed that in the event of the Colonies alone becoming responsible, a larger rate of interest would be considered necessary. A reference to the documents will show that this was the case. In the enclosed paper, therefore, the maximum rate of interest has been taken at 5 per. cent., while a minimum of 4 per cent. is preserved ; and it will be for your Grace, should the Colonies decide to accept the proposals, to accord, as between the parties, such a rate, and such a rate only, as the circumstances of the time may render necessary, with a view to securing the absolute success of the undertaking.

I have, &c.
(Signed) EDWARD W. WATKIN.

His Grace the Duke of Newcastle, K.G.
&c. &c. &c.

Enclosure in No. 13. Encl. in No.13.

HEADS of PROPOSAL for ESTABLISHING TELEGRAPHIC and POSTAL COMMUNICATION from LAKE SUPERIOR to NEW WESTMINSTER.

The "Atlantic and Pacific Transit and Telegraph Company" propose to establish and maintain communication by electric telegraph and a mail post passing at such intervals, fortnightly or otherwise, as shall be agreed upon, between a point at the head of Lake Superior and New Westminster in British Columbia, on the following terms:—

1. That the Imperial Government, the Colonies of Canada and British Columbia, and the Hudson's Bay Company, shall each, within the territories belonging to them, grant to the Company such land belonging to the Crown or Company, and all such rights, as may be required for the post route, telegraph, and necessary stations, and for the proper working thereof.

2. The line of telegraph shall be divided into proper sections, and so soon as telegraphic communication is established throughout any such section, the Colonies of Canada, Vancouver Island, and British Columbia will guarantee to the Company a rate of profit on the capital expended at the rate of not less than 4 nor more than 5 per cent.; provided that the total amount of the capital guaranteed shall be limited at 500,000*l.*, and that the total annual payment to be made by Vancouver Island and British Columbia together shall not exceed 12,500*l.*; provided also, that the interest accruing upon the money paid up by the shareholders until the above guarantee shall take effect shall be reckoned as capital; and provided further, that in case the telegraphic line shall not be completed within five years, unless by reason of war or commotion, or of any interruption not arising from any wilful default of the Company, the above guarantee shall be suspended till the line shall be so completed.

3. In case the route shall run through Crown land not within the limits of Canada or British Columbia, nor within the territory claimable by the Hudson's Bay Company, the Company shall be entitled to demand Crown grants to the extent of five square miles for every mile of telegraph line within such Crown land. Such grants shall be demandable so soon as the telegraph communication shall be completed across such Crown land, and the blocks granted shall be adjacent to the telegraph line, and shall be as near as may be five miles square, and shall alternate on each side of the line with blocks of similar size and frontage, which shall remain in the possession of the Crown. The Company is not to sell this land except under effectual conditions of settlement, and in case the undertaking shall be permanently abandoned the land not so sold is to revert to the Crown.

4. The Company shall not dispose of the telegraph without the consent of the Imperial Government.

5. The Colonial Governments within their respective limits, or the Imperial Government in any part of the line, may at any time take temporary possession of the telegraph line in case the public interest requires it, on payment of a rate of compensation to be hereafter agreed, and Government messages shall at all times when demanded have priority over all others.

6. The Home Government, with the consent of the parties, will introduce into Parliament such measures as may be requisite to give effect to this proposal.

7. The telegraph and works, and the servants and agents of the Company, shall be considered as under the protection of the Crown and of the Colonial Governments, as fully as if in the settled districts of British North America.

8. The company and its works shall be exempt from all taxation for a period of 30 years.

9. Any further matters of detail, or questions of difference requiring discussion, to be remitted to the sole decision of his Grace the Duke of Newcastle, Her Majesty's Principal Secretary of State for the Colonies.

No. 14. No. 14.

COPY of a LETTER from C. FORTESCUE, Esq., M.P., to E. W. WATKIN, Esq.

SIR, Downing Street, May 1, 1863.

I AM directed by the Duke of Newcastle to state that he has had much satisfaction in receiving your letter of the 28th ult.,* enclosing the heads of a proposal for establishing telegraphic and postal communication between Lake Superior and New Westminster through the agency of the Atlantic and Pacific Transit and Telegraph Company. These proposals call for some observations from his Grace. * Page 12.

New Westminster is named as the Pacific terminus of the road and telegraph. His Grace takes for granted that if the Imperial Government and that of British Columbia should find on further inquiry that some other point on the coast would supply a more convenient terminus the Company would be ready to adopt it.

Article 1. His Grace sees no objection to the grant of land contemplated in this Article, but the "rights" stipulated for are so indeterminate that without further explanation they could scarcely be promised in the shape in which they are asked. He anticipates, however, no practical difficulty on this head.

Nos. 1 and 2. The Duke of Newcastle, on the part of British Columbia and Vancouver Island, sees no objection to the maximum rate of guarrantee proposed by the Company, provided that the liability of the Colonies is clearly limited to 12,500*l.* per annum. Nor does he think it unfair that the Government guarantee should cover periods of temporary interruption from causes of an exceptional character, and over which the Company has no control.

But he thinks it indispensable that the Colonies should be sufficiently secured against having to pay for any lengthened period an annual sum of 12,500*l.* without receiving the corresponding benefit, that is to say, the benefit of direct telegraphic communication between the seat of Government in Canada and the coast of the Pacific.

It must therefore be understood that the commencement of the undertaking must depend on the willingness of the Canadian Government and Legislature to complete telegraphic communication from the seat of Government to the point on Lake Superior at which the Company will take it up. Nor could his Grace strongly urge on the Colonies of Vancouver Island and British Columbia the large annual guarantee which this project contemplates, unless there were good reason to expect that the kindred enterprise of connecting Halifax and Montreal by railway would be promptly and vigorously proceeded with. It will also be requisite to secure by formal agreement that the guarantee shall cease, and the grants of land for railway purposes revert to the grantors, in case of the permanent abandonment of the undertaking, of which abandonment some unambiguous test should be prescribed, such as the suspension of through communication for a stated period.

The Duke of Newcastle does not object to five years as the maximum period for the completion of the undertaking, and he thinks it fair to exclude from that period, or from the period of suspension above mentioned, any time during which any part of the line should be in occupation of a foreign enemy. But injuries from the outbreaks of Indian tribes, and other casualties which are inherent in the nature of the undertaking, must be taken as part of the risks which fall on the conductors of the enterprise, by whose resource and foresight alone they can be averted.

His Grace apprehends that the Crown land contemplated in Article 3. is the territory lying between the eastern boundary of British Columbia and the territory purporting to be granted to the Hudson's Bay Company by their Charter. His Grace must clearly explain that Her Majesty's Government do not undertake in performance of this Article of the agreement to go to the expense of settling any questions of disputed boundary, but only to grant land to which the Crown title is clear.

With regard to the 7th Article the Duke of Newcastle could not hold out to the Company the prospect of protection by any military or police force in the uninhabited districts through which their line would pass, but he would consider favourably any proposal for investing the officers of the Company with such magisterial or other powers as might conduce to the preservation of order and the security of the Company's operations.

With reference to the 9th and concluding Article, the Duke of Newcastle would not willingly undertake the responsible functions proposed to him, but he will agree to do so if by those means he can in any degree facilitate the project, and if he finds that the Colonies concur in the proposal.

Subject to these observations, and to such questions of detail as further consideration may elicit, the Duke of Newcastle cordially approves of the Company's proposals, and is prepared to sanction the grants of land contemplated in the 3d Article. He intends to communicate the scheme, with a copy of this letter, to the Governor General of Canada and the Governor of Vancouver Island, recommending the project to their attentive consideration.

I am, &c.

E. W. Watkin, Esq. (Signed) C. FORTESCUE.

No. 15. No. 15.

Copy of a LETTER from C. Fortescue, Esq., M.P., to H. H. Berens, Esq.

Sir, Downing Street, May 1, 1863.

I am directed by the Duke of Newcastle to enclose the heads of a proposal* made to me by Mr. Watkin, acting on behalf of the "Atlantic and Pacific Transit and Telegraph Company," with a view to the establishment of telegraphic and postal communication from Lake Superior to New Westminster. * Printed at page 13.

With reference to your letters to this office of 11th August and 5th September last,† I am to call your attention to the article numbered 1 in this paper, and to request that you will inform his Grace whether this clause expresses correctly the concessions which the Hudson's Bay Company is prepared to make to the proposed Company. † Pages 7 and 8.

I have, &c.

H. H. Berens, Esq. (Signed) C. FORTESCUE.

No. 16. No. 16.

Copy of a LETTER from C. Fortescue, Esq., M.P., to E. W. Watkin, Esq.

Sir, Downing Street, May 5, 1863.

I am directed by the Duke of Newcastle to acknowledge the receipt of your letter of the 25th ultimo, enclosing a copy of one which you had received from the Hon. Mr. Howland of Canada, relative to the Intercolonial Railway, and the opening up of the North-west territory.

I have, &c.

E. W. Watkin, Esq. (Signed) C. FORTESCUE.

No. 17. No. 17.

Copy of a LETTER from H. H. Berens, Esq., to his Grace the Duke of Newcastle, K. G.

Hudson's Bay House, London,

My Lord Duke, May 6, 1863.

I have the honour to acknowledge the receipt of Mr. Under Secretary Fortescue's letter of the 1st instant,* enclosing the heads of a proposal from the Atlantic and Pacific Transit and Telegraph Company in reference to the establishment of telegraphic and postal communication from Lake Superior to New Westminster. * Page 15.

Referring to the Article numbered 1 in this paper, I beg to state that so far as this Company is concerned we shall be prepared to grant such portion of land within the territories belonging to us as may reasonably be required for the purpose of the proposed post route, telegraph, and necessary stations. As to any other rights which the Company may require for the proper working of their undertaking, we presume the grant of these would rest with Her Majesty's Government.

We of course assume that Her Majesty's Government does not assent to the application now made to them, unless they are satisfied with the intentions and ability of the parties to carry out the project; but, of course, should it ultimately be abandoned, the land given up by this Company will revert to them.

I have, &c.

His Grace the Duke of Newcastle, K. G. (Signed) H. H. BERENS,
&c. &c. &c. Governor.

No. 18.

No. 18.

COPY of a LETTER from C. FORTESCUE, Esq., M.P., to E. W. WATKIN, Esq.

SIR, Downing Street, May 16, 1863.

* Page 15. WITH reference to my letter of the 5th instant,* on the subject of the proposed telegraphic and postal communication between Canada and British Columbia, I am directed by the Duke of Newcastle to enclose for your information a copy of a letter from Mr. Berens, stating that the Hudson's Bay Company will be prepared to grant such portion of land within their territories as may reasonably be required for carrying out the undertaking.

I am also directed to transmit to you the accompanying copies of Despatches addressed to the Governors of Canada and British Columbia, on the receipt of your letter of the 28th ultimo.

I have, &c.

E. W. Watkin, Esq. (Signed) C. FORTESCUE.

Encl. 1. in 18.

Enclosure 1. in No. 18.

SIR, Downing Street, 1 May 1863.

* Page 13. I ENCLOSE copies of a letter addressed to me by Mr. Watkin on the part of the Atlantic and Pacific Transit and Telegraph Company, in which he transmits the heads of a proposal* made by that Company for establishing telegraphic and postal communication between British Columbia and the head of Lake Superior.

I also enclose copies of the answer which I caused to be returned to that letter, and of a despatch which I have addressed to the Governor General of Canada on the subject.

This proposal I apprehend to be made in the confident expectation that the Canadian Government will provide similar means of communication up to the head of Lake Superior, and that means will be adopted for completing the communication by railway from Halifax to Montreal, thus establishing a chain of telegraphic communication, and facilitating enormously the rapid transit of letters and passengers across British North America.

I need hardly insist on the advantages which such an enterprise, if completed in all its parts, will confer on the British Colonies on the Pacific. It is difficult to say whether they will be greater in war or peace. In war the rapid communication of intelligence will relieve those Colonies from the constant apprehension of surprise by an enemy, and will give to the harbours of Vancouver Island, as a station for Her Majesty's Navy, an importance immeasurably beyond what they can at present attain. In peace it can hardly fail to add a powerful and healthy stimulus to that immigration which is principally wanting to develope the resources of the Colonies.

I should hope that the colonists, without whose concurrence I am by no means desirous of proceeding, will agree with me in thinking that the guarantee of 12,500*l.* per annum to be paid (if necessary) by British Columbia and Vancouver Island, in such proportions as the two Governments may agree upon, is no unreasonable price for advantages of so great magnitude.

I have had no hesitation in giving a conditional consent on the part of the Imperial Government to the grants of land contemplated in the first and third of the conditions set forth in the enclosed paper, and I shall transmit a copy of this draft and of its enclosures to Canada, recommending the project to the consideration of the Canadian Government.

I have to request that you will submit these papers to the Legislature of Vancouver Island, and will ascertain the sentiments of the inhabitants of British Columbia respecting the proposed undertaking; and I shall receive with great satisfaction the intelligence that laws are to be enacted which will enable you, if the Canadian Government shall afford their co-operation in the matter, to conclude in detail an arrangement with the Company on the basis of the enclosed proposals.

I have, &c.

Governor Douglas, C.B. (Signed) NEWCASTLE.
&c. &c. &c.

Encl. 2. in 18.

Enclosure 2, in No. 18.

MY LORD, Downing Street, 1st May 1863.

* Page 13. I ENCLOSE copies of a letter addressed to me by Mr. Watkin, on behalf of the "Atlantic and Pacific Transit and Telegraph Company," and transmitting the heads of a proposal * made by that Company for establishing telegraphic and postal communication from Lake Superior to New Westminster.

I also enclose copies of the answer which I have caused to be returned to that letter, and of a despatch which I have addressed to the Governor of Vancouver Island. From these you will perceive that I value highly the advantages promised by this scheme, taken as it ought to be as part of a large scheme for connecting, through British territory, the shores of the Atlantic with that of the Pacific; that I am prepared to accede, on the part of Her Majesty's Government, to the grant of land contemplated in the 3d Article of the "Heads of Proposal"; and that I have recommended the project to the acceptance of the Colonies of British Columbia and Vancouver Island, subject to such modifications of detail, if any, as further examination may show to be necessary. With this information I should wish you to submit the proposal for the consideration of your Government.

I have, &c.

The Viscount Monck, (Signed) NEWCASTLE.
&c. &c. &c.

No. 19.

No. 19.

Copy of a LETTER from H. H. Berens, Esq., to his Grace the Duke of Newcastle, K.G.

Hudson's Bay House,
London, June 15, 1863.

My Lord Duke,

With reference to Mr. Elliot's letter of the 21st of November last,* expressing your Grace's desire that this Board should place itself in communication with Mr. Edward Watkin, with a view to the consideration of proposals for the purchase of the whole of the rights of the Hudson's Bay Company, I have now the honour to inform your Grace, that in compliance with your Grace's suggestion. terms have been agreed upon, by which the whole interests of the Hudson's Bay Company are to be transferred to the parties represented by Mr. Edward Watkin. * Page 8.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) H. H. BERENS,
&c. &c. &c. Governor.

No. 20.

No. 20.

Copy of a LETTER from the Right Hon. Sir Edmund Head, Bart., K.C.B., to his Grace the Duke of Newcastle, K.G.

My Lord Duke, London, July 3, 1863.

I think it right to inform your Grace that I was yesterday elected Governor of the Hudson's Bay Company under the following circumstances.

A large majority of the proprietors of the Hudson's Bay Company have disposed of their shares to the International Financial Association, Limited, which has found the money for completing at once so important a purchase without delay or obstacle.

This transfer could only have been effected by this process, which was a matter of difficulty on account of the large sum required to be paid down at once.

The Association are about to re-issue the shares thus transferred to a new body of proprietors, who are to carry on the present trade of the Company under the Charter; whilst they will it is hoped, administer its affairs on such principles as to allow the gradual settlement of such portions of the territory as admit of it, and facilitate the communication across British North America by telegraph or otherwise. The Governor and the greater part of the Committee or governing body of the Hudson's Bay Company, having thus disposed of their interest in the Company, the re-organization of such body has become necessary, and accordingly a new Committee has been formed comprising some members of the former body, joined with a number of gentlemen of high standing in the City of London, under a new Governor and Deputy Governor. The latter and the Committee have this day been sworn in by me, after a Court of Proprietors had been held for the purpose of making certain changes in the bye laws.

The majority of the proprietors present at this court were persons who have held stock in the Company up to the present time, and the transfers are only effected as proprietors call and ask for the cheques in exchange for their stock.

I enclose, for your Grace's information, a copy of the prospectus this day circulated by the International Financial Society, and I hope soon to be able to communicate with you on the subject of the steps which it may be necessary to take for attaining some of the objects therein referred to.

I have, &c.

His Grace the Duke of Newcastle, K.G. (Signed) EDMUND HEAD.
&c. &c. &c.

Enclosure in No. 20.

Encl. in No. 20.

The International Financial Society, Limited,

Are prepared to receive subscriptions for the issue at par of capital stock in the Hudson's Bay Company, incorporated by Royal Charter, 1670.

The stock will be issued in certificates of 20*l.* each, and the instalments will be payable as follows:—

1*l.*, being	5	per cent.,	on application.	To be returned in the event of no allotment being made.
4*l.* „	20	„	„	on allotment.
5*l.* „	25	„	„	on 1 Sept. 1863.
5*l.* „	25	„	„	on 2 Nov. 1863.
5*l.* „	25	„	„	on 1 January 1864.
20*l.*				

With an option of prepayment in full on allotment, or on either of the days fixed for payment of the instalments, under discount at the rate of 4 per cent. per annum.

The capital of the Hudson's Bay Company has been duly fixed at 2,000,000*l.*, of which amount the International Financial Society, Limited, have obtained, and are prepared to offer to the public, 1,930,000*l.*

The subscribers will be entitled to an interest, corresponding to the amount of their subscription, in—

1. The assets (exclusive of Nos. 2 and 3) of the Hudson's Bay Company, recently and specially valued by competent valuers at 1,023,569*l.*
2. The landed territory of the Company, held under their Charter, and which extends over an estimated area of more than 1,400,000 square miles, or upwards of 896,000,000 acres.
3. A cash balance of 370,000*l.*

The present net income, available for dividend amongst stockholders of the Company, secures a minimum interest exceeding 4 per cent. on the above 2,000,000*l.* stock.

The Directors of the Hudson's Bay Company are as under:—

The Right Honourable Sir Edmund Head, Bart., K.C.B. (late Governor General of Canada), Governor.
Curtis Miranda Lampson, Esq. (C. M. Lampson and Co.), Deputy Governor.
Eden Colvile, Esq., Hudson's Bay House, Fenchurch Street.
George Lyall, Esq., M.P., Headley Park, Surrey.
Daniel Meinertzhagen, Esq. (F. Huth and Co.)
James Stewart Hodgson, Esq. (Finlay, Hodgson, and Co.)
John Henry William Schröder, Esq. (J. H. Schröder and Co.)
Richard Potter, Esq., Standish House, Gloucestershire.

The Hudson's Bay Company were incorporated, under a Royal Charter granted by King Charles II. in 1670, by the name of "The Governor and Company of Adventurers of England trading into Hudson's Bay," and, by the Charter, a vast tract of territory was vested in the Company, together with the sole right of trade and commerce, and all "mines royal," as well then discovered as not discovered, within the said territory.

The operations of the Company, which, with slight exceptions, have been hitherto exclusively of a trading character, have been prosecuted from the date of the Charter to the present day.

It has become evident that the time has arrived when those operations must be extended, and the immense resources of the Company's territory, lying as it does between Canada and British Columbia, should be developed, in accordance with the industrial spirit of the age and the rapid advancement which colonisation has made in the countries adjacent to the Hudson's Bay territories.

The average net annual profits of the Company (after setting aside 40 per cent. of them as remuneration to the factors and servants at the Company's posts and stations) for the ten years ending the 31st May 1862 amount to 81,000*l.*, or upwards of 4 per cent. on the present nominal capital of 2,000,000*l.* A portion only of this income has been distributed as dividend, while the remainder is represented in the assets and balances. The assets of the Company, in which the subscribers will be entitled to an interest corresponding to the amount of their subscription, will consist of goods in the interior, on shipboard, and other stock in trade, including shipping, business premises, and other buildings necessary for carrying on the fur trade, in addition to which there will be funds immediately available for the proposed extended operations of the Company, derived partly from the cash balance of the Hudson's Bay Company, and partly from the new issue of stock, and amounting in the whole to a sum not less than 370,000*l.*

The Company's territory embraces an estimated area of more than 1,400,000 square miles, or eight hundred and ninety-six millions of acres, of which a large area, on the Southern frontier, is well adapted for European colonization. The soil of this portion of the territory is fertile, producing in abundance wheat and other cereal crops, and is capable of sustaining a numerous population. It contains 1,400 miles of navigable lakes and rivers, running for the greater part east and west, which constitute an important feature in plans for establishing the means of communication between the Atlantic and Pacific Oceans, across the continent of British North America, as well as for immediate settlement in the intervening country. The territory is, moreover, rich in mineral wealth, including coal, lead, and iron.

In addition to its chartered territory, the Company possess the following valuable landed property: several plots of land in British Columbia, occupying most favourable sites at the mouths of rivers, the titles to which have been confirmed by Her Majesty's Government; farms, building sites in Vancouver's Island; and in Canada ten square miles at Lacloche, on Lake Huron, and tracts of land at fourteen other places.

The trading operations of the Company are chiefly carried on in the fur-bearing and northern portion of the territory, where the climate is too severe for European colonization. These trading operations will be actively continued, and as far as possible extended, whilst the management will be judiciously economized.

Consistently with these objects, the outlying estates and valuable farms will be realized where the land is not required for the use of the Company. The southern district will be opened to European colonization, under a liberal and systematic scheme of land settlement. Possessing a staff of factors and officers who are distributed in small centres of civilization over the territory, the Company can, without creating new and costly establishments, inaugurate the new policy of colonization, and at the same time dispose of mining grants.

With the view of providing the means of telegraphic and postal communication between Canada and British Columbia, across the Company's territory, and thereby of connecting the Atlantic and Pacific Oceans by an exclusively British route, negotiations have been pending for some time past between certain parties and Her Majesty's Government and the representatives of the Government of Canada, and preliminary arrangements for the accomplishment of these objects have been made through Her Majesty's Government (subject to the final sanction of the Colonies), based upon a 5 per cent. guarantee from the Governments of Canada, British Columbia, and Vancouver Island. In further aid of these Imperial objects, Her Majesty's Government have signified their intention to make grants of land to the extent of about 1,000,000 acres, in portions of the Crown territory traversed by the proposed telegraphic line.

One of the first objects of the Company will be to examine the facilities and consider the best means for carrying out this most important work, and there can be little doubt that it will be successfully executed, either by the Hudson's Bay Company itself, or with their aid and sanction.

For this as well as for the other proposed objects, Mr. Edward Watkin, who is now in Canada, will be commissioned, with other gentlemen specially qualified for the duty, to visit the Red River and Southern districts, to consult the officers of the Company there, and to report as to the best and safest means of giving effect to the contemplated operations.

Applications for allotments of certificates of stock of 20*l.* each to be made to the International Financial Society (Limited), at their offices, 54, Old Broad Street, E. C.

A preference in allotment will be given to parties hitherto holders of stock in the Hudson's Bay Company, and to the shareholders in the International Financial Society (Limited).

No application will be received after Wednesday, 8 July, at 12 o'clock.

HUDSON'S BAY COMPANY.

Form of Application for Allotment of Stock.

No.

To the Directors of the INTERNATIONAL FINANCIAL SOCIETY, LIMITED.

GENTLEMEN,

I REQUEST you to allot me certificates of 20*l.* each of the stock in the "Company of Adventurers of England trading into Hudson's Bay," and I hereby agree to become a member of that Company, subject to its rules and regulations, and to accept such stock, or any less amount that may be allotted to me.

I am, gentlemen,
Your obedient servant,

Name in full _____

Address in full _____

Date _____

N.B.—If the applicant has hitherto been a holder of Hudson's Bay stock, or is a proprietor of shares in the International Financial Society, Limited, the fact should be stated, together with a memorandum of the amount of the holding.

HUDSON'S BAY COMPANY.

Bankers' Receipt for Deposit on Application for Allotment of Stock.

No.

RECEIVED the day of 1863, of
on account of the Directors of the International Financial Society, Limited, the sum of £
being the first instalment made in accordance with the terms of the prospectus on an application for an allotment of certificates of 20*l.* each in the above undertaking.

For Messrs. Glyn, Mills, & Co.,

£ : :

No. 21.

COPY of a LETTER from the Right Hon. Sir E. HEAD, Bart., K.C.B., to his Grace the Duke of NEWCASTLE, K. G. No. 21.

MY LORD DUKE, Hudson's Bay House, 6 July 1863.

In my letter of the 3d instant * I intimated a hope that I should have to communicate again with your Grace shortly. * Page 17.

Accordingly I have now the honour to enclose a copy of a minute this day passed at a meeting of the Committee of the Hudson's Bay Company.

I am, &c.

His Grace the Duke of Newcastle, K.G. (Signed) EDMUND HEAD.
&c. &c. &c.

Encl. in No. 21.

Enclosure in No. 21.

EXTRACT of a Minute of the Committee of the Hudson's Bay Company, dated 6 July 1863.

"That Mr. Edw. Watkin be authorized to proceed to the Red River Settlement without delay, for the purpose of reporting on the condition of that settlement, the condition of the neighbouring territory, the prospects of settlement therein, and the possibility of commencing operations for a telegraph line across the southern district of Rupert's Land.

"That, looking to the lateness of the season, it will be impossible for Mr. Watkin to do more at present than make preliminary inquiries on these subjects, with a view to a more exact and complete examination of them next spring.

"That Governor Dallas and Chief Factor William Mactavish be informed of Mr. Watkin's employment, and that the former be associated with Mr. Watkin in all the above inquiries.

"Further, that the Governor be authorized to communicate a copy of this minute to his Grace the Duke of Newcastle."

APPENDIX.

Appendix No. 1.

Copy of a LETTER from Sandford Fleming, Esq., to his Grace the Duke of Newcastle.

My Lord Duke, London, June 10, 1863.

I have the honour to solicit permission to present a Despatch from his Excellency the Governor General of Canada, which was placed in my hands before leaving Quebec a short time ago, in order that I might convey it to your Grace.

The Despatch, I believe, contains my credentials, and it will probably inform your Grace that I have been nominated to represent to the Imperial as well as the Canadian Governments the views entertained at the Red River Settlement, in the interior of British North America, regarding the extreme importance of opening up a line of communication to the Settlement for the conveyance of the mails, and for traffic, entirely through British territory, at the earliest possible moment.

His Excellency the Governor General of Canada was pleased to honour me with an interview, and to receive the memorial of the people of Red River, which I was charged to present. His Excellency was also pleased to allow me to accompany the document referred to, with some observations on the adaptability of the country for settlement; its climate, soil, and mineral wealth; the political and commercial importance of a line of communication to the settlers, without being dependent on a foreign power for the means of ingress and egress; together with remarks on the establishment of a great territorial road from Canada to British Columbia.

I now venture to ask permission to enclose copies of these documents,* and I do myself the honour to solicit your Grace's attention to them.

Your Grace will probably pardon me for here respectfully stating that an early and favourable consideration of the subject alluded to is all important to the people of Red River Settlement, who, if we except the postal and commercial accommodation extended to them by a foreign government, are at present in an isolated and unsatisfactory condition.

* These papers are not inserted here, as they form a printed pamphlet.

I have, &c.
(Signed) SANDFORD FLEMING.

His Grace the Duke of Newcastle, K.G.
&c. &c. &c.

Appendix No. 2.

Copy of a LETTER from T. Fredk. Elliot, Esq., to Sandford Fleming, Esq.

Sir, Downing Street, June 29, 1863.

With reference to your letter of the 10th instant, I am directed by the Duke of Newcastle to acquaint you that he has given his best attention to the memorial which was entrusted to you by the inhabitants of the Red River Settlement on the establishment of a regular communication with Canada.

The question of forming such a communication has long been under his Grace's anxious consideration; and at length he has every reason to hope that it will shortly be accomplished. A scheme is in preparation, and almost matured, for establishing a postal and telegraphic communication, embracing the Red River Settlement in the route between Canada and British Columbia. With the aid of those two Colonies, which have already been addressed on the subject, and by means of a concession to the promoters of the enterprise of land in the district of country which is free from the rights of the Hudson's Bay Company, the Duke of Newcastle trusts that the execution of the project will be entered upon at no distant date.

I have, &c.
(Signed) T. FREDK. ELLIOT.

Sandford Fleming, Esq.
&c. &c.

CANADA AND BRITISH COLUMBIA.

COPY of all CORRESPONDENCE, from 1 January 1862 to the present Time, between the Colonial Office and the Hudson's Bay Company or other Parties, relative to a ROAD and TELEGRAPH from *Canada* to *British Columbia*, and the Transfer of the Property and Rights of the HUDSON'S BAY COMPANY to other Parties.

(*Mr. Aytoun.*)

Ordered, by The House of Commons, *to be Printed*,
15 *July* 1863.

438.

Under 3 *oz.*

CANADA (HAMILTON MUNICIPAL BONDS).

RETURN to an Address of the Honourable The House of Commons, dated 21 April 1863;—*for*,

A "COPY of all the CORRESPONDENCE between the Secretary of State for the Colonies and the Governor General of *Canada*, on the subject of the HAMILTON MUNICIPAL BONDS."

Colonial Office, 19 May 1863.

C. FORTESCUE.

(*Mr. Western Wood.*)

Ordered, by The House of Commons, *to be Printed*, 29 *May* 1863.

SCHEDULE.

No. in Series.	From whom.	Number and Date.	Subject.	Page.
1.	His Grace the Duke of Newcastle, K.G., to Governor General Viscount Monck.	21 February 1863 (No. 25.)	Transmits letter from the Solicitors to the holders of certain Bonds of the Municipality of Hamilton, together with a copy of the answer returned. Calls Lord Monck's attention to the subject, and requests that he will furnish the applicants with such reply as the circumstances of their claim may require. Requests information as to the nature and merits of the case.	3
2.	Governor General Viscount Monck to his Grace the Duke of Newcastle, K.G.	20 March 1863 (No. 30.)	In reply to the above. Encloses Minute of Executive Council on the original Memorial of Messrs. Dawes; and also, a statement by the Mayor of Hamilton, in reply to the allegations contained in the Memorial of Messrs. Dawes.	5

APPENDIX.

1.	Messrs. Dawes & Sons to C. Fortescue, Esq., M.P.	4 February 1862	Forwards the "Money Market Review" of the 18th January, containing a Circular from the Mayor, stating the circumstances under which payment had been refused; an advertisement setting forth the Resolutions passed at a meeting of Bondholders; and a form of Memorial. Requests that the Memorial may be forwarded by the Duke of Newcastle.	8
2.	Sir F. Rogers, Bart., to Messrs. Dawes & Sons.	10 February 1862	In reply to the above, stating that it is a subject upon which the Secretary of State cannot undertake to interfere, and regrets that he is unable to comply with the request of the Bondholders, and must leave them to make their own application to the Governor of Canada.	11
3.	T. Frederick Elliot, Esq., to Messrs. Dawes & Sons.	10 April 1863 -	Stating that a Despatch had been received from the Governor of Canada, in which he reports that he has sent a reply to their communication on the subject of their claims on the Municipality of Hamilton.	11
4.	Messrs. Dawes & Sons to his Grace the Duke of Newcastle, K.G.	14 April 1863 -	Forwards the "Money Market Review" of 11th April 1863, containing a letter received from the Governor General of Canada, acknowledging the receipt of the Memorial of 17th March 1862, and transmits the Report of the Executive Council, the Memorial of the Mayor and Deputation from the city of Hamilton, and also the Census. Requests the Duke of Newcastle to afford the Bondholders such assistance as his Grace may deem for their interests.	11
5.	T. Frederick Elliot, Esq., to Messrs. Dawes & Sons.	21 April 1863 -	In reply to the above, and stating that while the Duke of Newcastle regrets the loss and inconvenience to which the Bondholders have been exposed, the case is not one in which it is in the power of the Home Government to exercise further influence on their behalf.	12

COPY of all the CORRESPONDENCE between the Secretary of State for the Colonies and the Governor General of *Canada*, on the subject of the HAMILTON MUNICIPAL BONDS.

— No. 1. —

COPY of a DESPATCH from His Grace the Duke of *Newcastle*, K.G., to Governor General Viscount *Monck*.

No. 1.
His Grace the Duke of Newcastle, K.G., to Governor General Viscount Monck.
21 February 1863.

(No. 25.)

My Lord, Downing-street, 21 February 1863.

I HAVE the honour to transmit to you, for your information, the enclosed copy of a letter from the solicitors to the holders of certain bonds of the Municipality of Hamilton, together with a copy of the answer which has been returned to it by my direction.

You will see that I have informed the parties interested in this case that it is one on which Her Majesty's Government cannot exercise any interference. But, on their first application to me, I pointed out to them that it was open to them to address themselves to your Lordship, and as they state that they have done so without receiving any answer or acknowledgment, I think it right to call your Lordship's attention to the subject, and to request that you will furnish the applicants with such reply as may appear to you to be called for by the circumstances of their claim.

I should also be glad to receive, for my own information, any account which you may be able to give me of the true nature and merits of the case.

I have, &c.
(signed) *Newcastle.*

Enclosure 1, in No. 1.

Angel Court, Throgmorton-street, London, E.C.
4 February 1863.

My Lord Duke,

As solicitors to the Committee of Hamilton Bondholders, we beg to forward to your Grace a print of the "Money Market Review" of the 31st ultimo, which contains a copy of a Memorial transmitted for presentation to the Houses of Legislature of Canada.

The fact of the Municipality of Hamilton having refused payment of the interest due upon their bonds is one upon which we have already had the honour of addressing your Grace on behalf of the Committee, and the circumstances connected with it are, no doubt, officially known to you.

Your Grace will observe, on reading the Memorial, that a year-and-a-half's interest is now due from the municipality to the bondholders; and that the municipality not only refuse payment of the interest, but are raising every obstacle to the collection of a rate by the sheriffs under the proceedings instituted on behalf of the bondholders for recovery of their interest.

On a former occasion of presenting a Memorial to his Excellency the Governor General and the Houses of Legislature, the Memorial was forwarded direct, at your Grace's suggestion, to the Governor General, but the Committee were not honoured by an acknowledgment of it; and they have, therefore, on the present occasion to beg your Grace's interference, so that the Memorials about to be presented to the Houses of Legislature in Canada may receive that attention which the special circumstances of the case and the unjustifiable conduct of the municipality entitle the bondholders to expect.

We have, &c.
(signed) *Dawes & Sons.*

His Grace the Duke of Newcastle, K.G.
&c. &c. &c.

Extracted from the " Money Market Review" of 31 January 1863.

To the Honourable the Speaker and the Legislative Assembly of Canada.

The Memorial of Hamilton (Canada West) Debenture Holders, residing in Great Britain and Ireland,—

Humbly showeth,

That your Memorialists being the committee appointed by holders of debentures of the amount of 100,000 *l.* and upwards, granted by the Municipality of the City of Hamilton (Canada West) for loans made to that municipality for the construction of railways and waterworks in, about, and in connexion with such municipality.

That the loans for which such debentures were given, are payable at the expiration of about 20 years from the dates of the debentures, and the interest thereon is payable on the 1st day of January and the 1st day of July in every year during the period from which such debentures were issued at the City Bank, London, England.

That for the payment of the debentures and the half-yearly interest thereon, it was provided that there should be levied and raised upon the whole rateable property, both real and personal, within the said city, a special rate in each year over and above, and in addition to all other rates whatever, and which provision was the chief inducement to your Memorialists to advance their money upon the security of the debentures.

That your Memorialists believe that no such rate has been levied and raised for the payment of the debentures, or that if it has been, the money so raised has been applied to other purposes than for the payment of the debentures.

That your Memorialists and the other debenture-holders presented their coupons for the interest on the debentures, which became due on the 1st day of January, and the 1st day of July 1862, for payment, and payment thereof was refused by the Bank.

That in consequence of such refusal to pay the interest, your Memorialists and the other debenture-holders have been put to considerable expense in causing the coupons to be sent out to Canada under notarial acts, for the purpose of commencing actions against the municipality to enforce payment of the same.

That several actions have been commenced against the Municipality of Hamilton by the instructions, and at the instance of your Memorialists and other debenture-holders, to enforce payment of such interest, and judgments have been obtained against the municipality, and writs of execution issued and placed in the hands of the sheriff, with directions to levy the amount by a rate for the payment of the same in due course of law.

That many of the coupons for payment of the interest on the debentures which became due on the 1st day of January 1863, have been presented at the City Bank for payment, and payment of such interest has again been refused, but no actions have, as your Memorialists believe, been brought to enforce payment of the same.

That your Memorialists are informed that great and serious difficulties were presented to the sheriff's proceedings in levying the rates by reason of the council of the municipal corporation withholding the assessment rolls from him, whereby it became necessary for him to obtain an order of the Court of Queen's Bench for the production of such rolls to him.

That such order of the said Court was served upon the Council of the Corporation, and they for a time set the Court at defiance by disobeying the order, with a view to prevent the levy and collection of the rate in payment of the just debts due to the respective debenture-holders, and it was not until after a rule for an attachment was directed to issue against the members of the Council by the Court of Queen's Bench, that the sheriff obtained access to the rolls.

That your Memorialists have been informed that since the rule for an attachment was obtained, and the sheriff had access to the rolls, the Corporation of the City of Hamilton have most dishonourably obstructed the sheriff in the execution of his duty in levying the execution rate as far as is in their power, and have neglected and refused to appoint collectors of the rate, as they are required to do, so that it will be necessary for an application to be made at the instance of the debenture-holders to the Court of Queen's Bench for a mandamus to compel the appointment of collectors, thereby causing to your memorialists and the other debenture-holders great and unjustifiable delay in obtaining payment of the interest due to them.

That your Memorialists are advised that in the event of the interest which fell due on the 1st January 1863, and the future interest not being paid, and actions having to be brought for recovery thereof, it will be necessary that the debentures should be sent over to Canada for the purpose of being given in evidence in such actions.

That from the unjustifiable course recently adopted by the Municipal Corporation of the City of Hamilton, in opposing the sheriff in the discharge of his duties, and their disobedience in not obeying the order of the Court, and their refusal to appoint collectors, and unwillingness to raise the necessary rate for the purpose of paying such interest, your Memorialists are alarmed lest by the municipality pleading to such actions to be brought for the recovery of future interest, and to which the said municipality can have no valid defence, it may be rendered imperative for them to incur the risk of sending out their securities to be given in evidence in such actions.

That the securities of the debenture-holders have been greatly reduced in value by reason of no rate, as provided, having been especially levied and raised for payment of the

the debentures, and of there being no powers given to the debenture-holders to enable them to foreclose their mortgages.

That the debenture-holders feel, from the facts of the interest not having been fully paid, and no special rate levied and raised for payment of the debentures, there has been such a breach of contract as to cause the principal money to become due, and that they are entitled to the consideration and assistance of your Honourable House to perfect their securities, and make them, so far as they can be made, available.

Your Memorialists therefore humbly pray that your Honourable House will be pleased to take into consideration the grievance of which they complain, and provide for some course being adopted to render unnecessary the useless expense of sending to Canada notarial acts of protest on each occasion of the interest not being paid, as well as to prevent the great risk which would be incurred in the transit of their securities between this country and Canada, and to amend the law as respects collecting debts from the defaulting municipality, and also to enable your Memorialists to foreclose their mortgages, and realise their securities, and to give to your Memorialists such other relief as the circumstances of the case imperatively demand.

Enclosure 2, in No. 1.

Encl. 2, in No. 1.

Gentlemen, Downing-street, 21 February 1863.

I AM directed by the Duke of Newcastle, to acknowledge the receipt of your letter dated the 4th instant, in which you transmit a copy of a petition which the holders of certain bonds given by the Municipality of Hamilton, Canada, are about to present to both Houses of the Provincial Legislature, and you request his Grace's interference for the purpose of securing due attention to this petition.

I am directed to acquaint you in answer that the subject itself is one upon which, as you were before informed, Her Majesty's Government cannot exercise interference, and I am to state that still less can they interfere with the proceedings of the Houses of the Provincial Parliament of Canada.

But as you apprize the Duke of Newcastle that you have received no answer to the letter which you formerly addressed on this matter to the Governor of Canada, I am desired to acquaint you that his Grace will forward a copy of your present communication to Lord Monck, and will request his Lordship's attention to the subject.

I am &c.

Messrs. Dawes and Sons. (signed) *T. Fred. Elliot.*

— No. 2. —

No. 2.
Governor General Viscount Monck, to His Grace the Duke of Newcastle, K.G.
20 March 1863.
* Page 3.

COPY of a DESPATCH from Governor General Viscount *Monck*, to his Grace the Duke of *Newcastle*, K.G.

(No. 30.)

My Lord Duke, Quebec, 20 March 1863.

IN reply to your Grace's Despatch No. 25,* of February 21, in reference to the Memorial of Messrs. Dawes & Son, solicitors for some creditors of the city of Hamilton, I have the honour to enclose an approved Minute of my Executive Council, on the original Memorial of Messrs. Dawes, received last April by me.

I also have the honour to enclose a copy of a statement which, at my request, the mayor of Hamilton has made for your Grace's information, in reply to the allegations contained in the memorial of Messrs. Dawes.

I regret that, through inadvertence on my part, the receipt of the memorial in last April was not formally acknowledged to Messrs. Dawes, but no time was lost in referring it to the Provincial Secretary to whom it was sent on the 3d April, in order that he might bring the matter before the Executive Council.

Very shortly afterwards, the Ministry left office, and no report was made to me on the Memorial until a few days since.

The case of the clients of Messrs. Dawes appears to me precisely similar to that of a private creditor who has lent his money on a bad investment to a private debtor.

Neither the Provincial Government nor the Provincial Legislature, are in any sense more responsible for the debts of the city of Hamilton, than they are for those of any individual living in Canada, nor are they under any obligation

that I can see, to use extraordinary interposition to assist the creditors of that city in the assertion of their rights, for which the law provides ample remedies.

I am assured that there is no disposition on the part of the authorities of the city of Hamilton to evade their legal liabilities, and that an arrangement has been made, or is in progress, with the creditors of the city, by means of which it is confidently expected that the interests of those parties will be ultimately secured.

The complaint made by the Memorialists with respect to the risk and expense of sending out their debentures, in order to enable them to prove their claims against the Municipality of the city of Hamilton, is one that applies to the laws of evidence which are common to England and Canada; and I can hardly think it would be proper to make, by legislative enactment, the case of the creditors of the city of Hamilton, an exception from the rule which prevails whenever it becomes necessary on the part of a creditor to enforce his claims.

I have caused Messrs. Dawes to be informed of the cause of the delay in answering their former communication, and I have sent them copies of the enclosures in this Despatch.

I have, &c.
(signed) *Monck.*

Encl. 1, in No. 2.

Enclosure 1, in No. 2.

COPY of a Report of a Committee of the Honourable the Executive Council, approved by his Excellency the Governor General, on the 19th March 1863.

On a Despatch, dated 21st February 1863, from his Grace the Secretary of State for the Colonies, transmitting copy of a letter from the solicitor to the holders of certain bonds of the city of Hamilton, C. W., respecting the non-payment of interest thereon; and requesting that the applicants may be furnished with a reply to a previous application on the same subject, and that an account of the true merits and nature of the case may be also forwarded for His Grace's information;—

19 March 1863.

The Honourable the Attorney General, U. C., reports, that with respect to the request contained in the letter of the solicitors, of the 17th March 1862, which craves the attention of your Excellency to the protection of the interests of the Memorialists in any steps that may be taken; that no movement has been made to alter or derange the existing legal claims or securities of the Memorialists, as against the City of Hamilton, and that therefore no interference on the part of the Government can be exercised.

4 February 1863.

That in regard to the letter of Messrs. Dawes and Sons, in which they allude to petitions being about to be presented to both Houses of the Legislature of Canada, in reference to the failure of the City of Hamilton to meet the interest due on the debentures mentioned, he, the Attorney General, whilst deeply regretting that any necessity should exist on the part of the debenture holders to submit any remonstrance, is unable to find that relief can be afforded by the Government.

That the law under which these debentures were authorised, and the mode of enforcing payment of both principal and interest, provides for the collection of arrears of interest and accruing sums, and remains unaltered; and that there is no provision under which the Government of Canada can come to the relief of the Memorialists.

That the usual supervision by the Government over any measures which may be introduced for legislative action, will no doubt be extended to any proceedings which may be brought forward during the present Session, having for their object an alteration of the laws affecting the rights and interests of the Memorialists.

The Committee concur in the view expressed by the Honourable Attorney General, and submit the same for your Excellency's approval.

(Certified.)
W. H. Lee, C. E. C.

Enclosure 2, in No. 2.

Encl. 2, in No. 2.

To accompany the Memorial from Hamilton, 27th February 1863.

"Daily Spectator."

Census of the City of Hamilton.

From the labours of the city assessors, just completed, we learn that there are now within the limits of Hamilton, 22,134 souls. These are distributed through the different wards, as follows, viz.:—

	MALES.	FEMALES.	TOTALS
St. Mary's Ward - - - -	2,825	2,682	5,507
St. George's Ward - - - -	1,985	2,147	4,132
St. Lawrence Ward - - - -	2,235	2,516	5,751
St. Andrew's Ward - - - -	2,262	2,028	4,290
St. Patrick's Ward - - - -	1,591	1,863	3,454
			22,134

This number shows an increase of 3,038 over that returned by the census of 1861. The military has, of course, made up a share of this increase; there being at present settled amongst us 1,200 souls, men, women, and children, all told. Thus we have a natural growth in two years of nearly 2,000 inhabitants. This is a sign of prosperity which augurs well for the future healthy rise and progress of Hamilton. On the removal of the incubus which has held her down for the past few years (and we expect soon to see it disappear), her motto, "I advance," will be no empty boast, but the indication, as it once was, of a prosperity and growth hitherto unequalled by any other city in Western Canada.

Enclosure 3, in No. 2.

Encl. 3, in No. 2.

To his Excellency the Right Honourable *Charles Stanley* Viscount *Monck*, Baron *Monck* of Ballytrammon, in the county of Wexford, Governor General of British North America, &c. &c. &c.

The Memorial of the Mayor and Deputation from the City of Hamilton,—

Humbly showeth,

That the present deputation was sent to the seat of Government by the City Council of Hamilton, to satisfy your Excellency and the other branches of the Legislature, that Hamilton has always been and is now willing and anxious to do all in its power for its creditors, and to solicit the aid of the Provincial Executive, as well as the Legislature, to this great end, upon the double plea that the financial distresses of Hamilton have arisen from faith not being kept with our city, by former Legislatures having violated the original agreement that the Main Trunk Line of Railway should pass through Hamilton; and that the financial distresses of Hamilton are now (from being misunderstood in England) inflicting most serious disgrace and discredit on the Province generally, as well as the city of Hamilton.

That on being to-day honoured with an interview with your Excellency, we explained the position and views of the city of Hamilton in detail, and were requested by your Excellency to put the same on paper, which we now do as follows:—

1st. The city of Hamilton is wrongfully accused of throwing impediments in the way of justice. It was impossible for the city, in the interest of its general creditors, not to prevent unnecessary sacrifice of property; nor is it in the city's power to alter (as was insisted on) the law, which required primary instead of secondary evidence by distant claimants, although we can have no objection to this if the Legislature sees fit.

2d. No difficulty has been intentionally thrown in the way of the sheriff in levying rates. The assessment for the interest proposed by the Hon. J. H. Cameron for the present year was regularly made by the City Council; but the day for legally appointing collectors was inadvertently allowed to pass by, during a most anxious discussion on the subject of whether it was not the duty of the City Council in the interest of the general creditors (as opposed to the few judgment creditors), to avoid for the moment actually collecting the

 revenue,

revenue, a course which would have put the money for the payment of this year's interest into a position to be garnished by creditors who had got judgment for principal which fell due last year.

3d. Though the Court of Queen's Bench was applied to for a mandamus, none such was issued, the City Council's explanation being satisfactory to the judges of that court.

4th. The reduction of the value of the Hamilton debentures has not been caused by the action of the City Council, and would have been far greater had the Council followed the advice of its distant creditors, to levy a rate to pay its whole arrears, as in such case the city, which had already lost more than a fourth of its inhabitants, would have been depopulated irretrievably.

5th. The good policy and good intentions of the City Council are now corroborated by the fact of the city having already actually got back much of the population it had lost, thus giving increased security to its creditors.

6th. The City Council has felt justified by the improving prospects of the city, to accept the terms offered on behalf of the city's creditors by the Honourable John H. Cameron, and will support the legislation required to secure the creditors what Mr. Cameron demands; although it is the general opinion in Hamilton that the settlement is more favourable to our creditors than ought to have been demanded, and than can be paid without threatening a rate of taxation which would continue to prevent all building and improvement, as has been the case for the last five years, no capitalist being willing to lay out money on property with the certainty that at least half the interest or rental of its increased value will be required for taxes per annum.

7th. The City Council has also felt it due to its creditors to apply to the Executive Government of the Province for the Burlington Bay Canal (a public work which the city has hitherto refused to take over with the condition of keeping it up), so as to be able to levy tolls, and give the same in security to its creditors for their arrears, if money cannot be raised on these for that purpose.

And your Memorialists, as in duty bound, will ever pray.

(On behalf of the deputation,)
(signed) *Robert M'Elvoy*,
Mayor.

Quebec, 17 March 1863.

APPENDIX.

Appendix, No. 1.

Messrs. Dawes & Sons, to C. Fortescue, Esq., M.P. 4 February 1862.

COPY of a LETTER from Messrs. *Dawes* & Sons, to *C. Fortescue*, Esq., M.P.,

9, Angel Court, Throgmorton-street, London, E. C.
4 February 1862.

Sir,

WE are desired by the committee appointed by the holders of bonds of the city of Hamilton (Canada West) to inform you, that it is the desire of many of them to memorialize the Governor and Houses of Legislature of Canada on the subject of the step taken by the municipality of Hamilton in refusing payment of the interest which became due on their bonds on the 1st day of January last.

As it will probably be more convenient to you to read a report of what has taken place from print, we beg to hand you a copy of the "Money Market Review" of the 18th ult., which contains a printed circular from the Mayor, stating the circumstances under which payment has been refused; and an advertisement setting forth the resolutions passed at a meeting of bondholders in this country, and giving the names of the gentlemen appointed to act as the committee; and in an article in that paper on the subject of the refusal, will be found the form of memorial proposed to be presented: these we have marked conspicuously with red ink.

At the meeting there appeared to be a feeling with some of the bondholders that the memorial might interfere with the proceedings at law against the municipality, but since then much of that feeling has been removed, and many have signed,

signed, the object of the memorial not being to pray the Legislature to interfere to enforce payment, but simply to bring a question, which seems to the memorialists to reflect upon the credit of Canada generally, before the highest authorities of the land.

Under these circumstances, we are desired to beg the favour of your informing us whether, in the event of the committee waiting, through a proper introduction, upon his Grace the Duke of Newcastle, he may be induced to allow the memorial to be forwarded with his own Despatches to his Excellency the Governor of Canada.

The committee, in asking this favour of his Grace, deem it but right that any communication from them to his Excellency, should pass through the proper official channel, and the bondholders feel that if this facility be granted, their interests are less likely to suffer

Waiting the favour of your early reply,

We have, &c.
(signed) *Dawes & Son.*

Enclosure 1, in No. 1. Encl. 1, in No. 1.

EXTRACTED from "The Money Market Review," 18 January 1862.

To the Holders of the Debentures of the City of Hamilton.

Gentlemen, City Hall, Hamilton, Canada West, 6 December 1861.

I AM directed by the Corporation of this city, over which I have the honour to preside, to inform you that its affairs are in a very embarrassed position, and that it will be unable to meet the interest falling due on its debentures on the 1st January next, or the principal of those debentures now maturing. It is with very great reluctance that the Corporation has come to this conclusion, but the suspension of payment is unavoidable, as the liabilities of the city for the current financial year are so large, that it would require a tax of 10*s.* 6*d.* in the pound on its assessed annual value to meet them, a rate which would cause people to remove from the city, and thus destroy the value of the property which forms the security of the creditor. This suspension of payment, apparently sudden, arises in part from the circumstance that the Corporation is called upon this year, for the first time, to meet the interest on the heavy expenditure of the city for waterworks, the water commissioners having previously paid it (necessarily out of capital), during the construction of the works, and further the disappointment in not receiving from the Hamilton and Port Dover Railway the interest on the city debentures issued for that work, which the city should have received during the period of construction. It is proper to state the origin of these difficulties. The growth of this city from 1851 to 1856 was very rapid, with every prospect of continuing to improve, which induced its inhabitants to assist in the construction of four lines of railway leading to the city; and to add to their safety, health, and comfort, waterworks were determined upon. These undertakings caused the large expenditure of 1,666,000 dollars (342,328*l.* sterling); but it was confidently believed that the railways would be beneficial, both directly and indirectly, and that the waterworks would probably pay the interest on their cost. Unfortunately, however, two of the railways are unfinished, and the other two pay no dividend at present, while the waterworks yield only a small proportion of the interest on their cost. In addition to these causes of embarrassment, the commercial crisis of 1857–58 was so severely felt, that the population of the city greatly diminished, the annual value of real estate became depreciated, and the resources of the municipality seriously curtailed. Every exertion has been made to maintain the credit of the city, but it is found impossible to continue to do so under existing engagements, and it is with extreme regret that the Corporation has to suspend payment. Under these circumstances the city Corporation appeal to their creditors to give them time to apply to the Provincial Parliament for some measure of relief, to accomplish which they have taken active measures by communicating with other embarrassed municipalities to advocate a combined plan of action. I enclose a copy of a report on the subject. The Corporation obtained from the Legislature, at its last session, an Act, enabling them to consolidate their debt by the issue of debentures at a longer date, for the redemption of those now in the hands of their creditors, and (in the event of no adequate relief being obtained from the provincial Legislature), should the bondholders consent to accept a much lower rate of interest, and defer the payment of the principal until such a time as a reasonable sinking fund would accumulate to meet it, the Corporation would consider any proposal emanating from them. A full statement of the financial affairs of the Corporation, together with certain other statistical information calculated to throw light upon the present embarrassed condition of the city, will be forwarded to you at as early a day as possible.

I have, &c.
(signed) *H. M'Kinstry*, Mayor.

Encl. 2, in No. 1.

Enclosure 2, in No. 1.

Extracted from the " Money Market Review " of 18 January 1862.

HAMILTON (CANADA WEST) BONDHOLDERS.

AT a meeting of the above bondholders, held at the London Tavern, on Tuesday, the 14th instant (*Edgar Garland*, Esq., in the chair), to take into consideration the withholding of payment by the city of Hamilton of the dividend due on the 1st instant, the following Resolutions were submitted to the meeting, and carried unanimously:

Moved by *J. R. Morrison*, Esq., and seconded by *W. Stobart*, Esq., and carried:

Resolved—1. That the printed circular, dated the 6th December 1861, signed by H. M'Kinstry, the Mayor of the city of Hamilton, and addressed to the bondholders of that city, having been read to the meeting, this meeting view with surprise and indignation the purport and tenor thereof, in which it is pleaded as a reason for discontinuing the payment of interest on the bonds, that it would necessitate the levying of a tax of 10 *s.* 6 *d.* in the pound on the assessed annual value of rateable value within the municipality, and suggesting that in the event of no relief being obtained from the provincial Legislature, the bondholders should consent to accept a much lower rate of interest than is payable on the bonds, and that payment of the principal should be deferred until a reasonable sinking fund should have been accumulated to meet it.

Moved by *David Aitchison*, Esq., and seconded by *Peter Hardie*, Esq., and carried:

2. That this meeting unanimously deprecate the idea of compromise both as regards principal and interest, and will take every step the bondholders may be advised for immediate recovery of what is due under the bonds.

Moved by *A. Morrison*, Esq., seconded by *W. Stobart*, Esq., and carried:

3. That it is the opinion of this meeting that all the holders of bonds of the city of Hamilton should unite for protecting and enforcing their legal rights.

Moved by the Rev. *F. P. Sprowle*, and seconded by Captain *Hutchinson*, and carried:

4. That Messrs. Dawes & Sons be instructed to act in England for the bondholders, and to take such steps as they think proper, and that the thanks of this meeting are due to the Canada Agency Association (Limited) for kindly agreeing to be their channel of communication with the colony.

Moved by Dr. *Drake*, and seconded by *Peter Hardie*, Esq., and carried:

5. That a Committee be appointed to confer with Messrs. Dawes & Sons, and take such action as may seem advisable, and that Mr. Edgar Garland, Mr. W. Stobart, Mr. J. R. Morrison, and Mr. D. Aitcheson be requested to form such committee, with power to add to their number.

Moved by Mr. *Alex. Morrison*, and seconded by Mr. *Malcolm Haldane*, and carried:

6. That the expenses incurred up to the time of calling this meeting, and all future expenses in connexion with the object of it, be borne rateably by the bondholders signing these resolutions; but it is the intention of the Committee not to exceed 100 *l.* without communicating with them, and taking their opinion as to the further proceedings.

Several of the bondholders then signed the resolutions.

Bondholders desirous of communicating with the Committee will please address

Dawes & Sons,
Angel Court, Throgmorton-street, London, E. C.

14 January 1862.

Encl. 3, in No. 1.

Enclosure 3, in No. 1.

Extracted from the " Money Market Review" of 18 January 1862.

To the Honourable the Speaker and Legislative Council of Canada.

The Memorial of Hamilton (Canada West) Bondholders, residing in Great Britain and Ireland,

Humbly showeth,

THAT your Memorialists, whose names are hereunto subscribed, are holders of debentures of the city of Hamilton (Canada West), now in default for interest due in London on the 1st of January 1862.

That

That your Memorialists have received from his worship the Mayor of Hamilton a circular, bearing date the 6th of December 1861, setting forth as the reason for non-payment of such half-yearly dividends, that it would necessitate the levying of a tax of 10 *s.* 6 *d.* in the pound on its assessed annual value to meet them, and suggesting "that in the event of no adequate relief being obtained from the Provincial Legislature, the bondholders should consent to accept a much lower rate of interest, and defer the payment of the principal until such a time as a reasonable sinking fund would accumulate to meet it."

That, besides being disappointed that no sinking fund already exists, your Memorialists are indignant at any proposition of compromise being even hinted at, because of an alleged inconvenience, not inability, to meet your Memorialists' just and legal demands; and your Memorialists cannot help contrasting the Municipality of Hamilton with the State of Virginia, which, despite the horrors of civil war now concentrated on its soil, advertises payment of its dividends, due in London, the same time as the Hamilton dividends now in default.

That while suffering as holders of City of Hamilton Bonds, your Memorialists are thus threatened with a consequent distrust and depreciation in all colonial securities.

Your Memorialists therefore, in the interest of the Crown of Great Britain, the British Colonies generally, and the Province of Canada in particular, respectfully but most earnestly appeal to your Honourable House: That Canada may be rescued from initiating a course of repudiation, as suicidal to the Colony as it would be disastrous to its creditors, as derogatory to as it would be subversive of British rule, and reminding your Memorialists that in a neighbouring country the very facts of kindred and indebtedness have been considered as giving a license towards England, such as no other power would tolerate, and all Christendom condemns.

And your Memorialists will ever pray, &c.

Appendix, No. 2.

COPY of a LETTER from Sir *Frederic Rogers*, Bart., to Messrs. *Dawes & Sons.*

Sir Frederic Rogers, Bart., to Messrs. Dawes & Sons.
10 February 1862.

Gentlemen, Downing-street, 10 February 1862.

I AM directed by the Duke of Newcastle to acknowledge the receipt of your letter, dated the 4th instant,* on behalf of the holders of bonds of the City of Hamilton, Canada West. I am to acquaint you in reply, that as the subject of your letter purely regards the management of local affairs in Canada, it is one upon which the Secretary of State cannot undertake to interfere, and that his Grace regrets therefore that he is unable to comply with the request of the bondholders, and can only leave them to make their own application to the Governor of the Province.

I have, &c.
(signed) *Frederic Rogers.*

* Page 8.

Appendix, No. 3.

COPY of a LETTER from *T. Frederick Elliot*, Esq., to Messrs. *Dawes & Sons.*

T. F. Elliot, Esq., to Messrs. Dawes & Sons.
10 April 1863.

Gentlemen, Downing-street, 10 April 1863.

WITH reference to your letter of the 4th,† and to the answer from this office of the 21st of February last,‡ I am directed by the Duke of Newcastle to acquaint you that a Despatch has been received from the Governor of Canada, in which he reports that he has sent direct to you a reply to your communication on the subject of your claims on the Municipality of Hamilton.

I have, &c.
(signed) *T. Fred. Elliot.*

† Page 3.
‡ Page 5.

Appendix, No. 4.

COPY of a LETTER from Messrs. *Dawes & Sons*, to his Grace the Duke of *Newcastle*, K.G.

Messrs. Dawes & Sons to his Grace the Duke of Newcastle, K.G.
14 April 1863.

9, Angel Court, Throgmorton-street, London, E. C.
14 April 1863.

My Lord Duke,

WE have the honour to forward to your Grace a print of "The Money Market Review" of the 11th instant, containing an article headed "What will the Government of Canada do with the Bondholders of Hamilton?" to which we beg to invite the favour of your Grace's attention.

Your Grace will observe, on perusal of the article, that the grievances of the bondholders arise in a great measure out of a breach of faith on the part of the Canadian Government with the Municipality of Hamilton; and as the matter is one of most serious importance to many of the bondholders, whose limited means are greatly crippled by the conduct of the Municipality, it is hoped that your Grace will take the case into consideration, and afford the bondholders such assistance, and in such manner as your Grace may deem for their best interests.

We have, &c.
(signed) *Dawes and Sons*,
Solicitors to the Committee of Bondholders.

To His Grace the Duke of Newcastle, K.G.

Encl. 1 in No. 1.

Enclosure in No. 4.

Extracted from "The Money Market Review" of 11 April 1863.

Government House, Quebec,
20 March 1863.

Gentlemen,

I AM directed by the Governor General of Canada to acknowledge the receipt of your Memorial of 17th March 1862, and to regret that, through inadvertence, you were not at the time apprised of his having received it.

The Memorial was referred, on the 3d of April, to the Provincial Secretary for the consideration of the Provincial Government.

The Administration then in office resigned soon after, and the matter appears to have been overlooked by their successors.

I now have the honour to transmit to you a copy of a Minute of Council on the subject, together with a statement of the Mayor of Hamilton.

I have, &c.
(signed) *Denis Godley.*

Messrs. Dawes & Sons.

Note.—The documents transmitted in this letter are already printed.
For the Report of the Executive Council, *vide* page 6.
For the Memorial of the Mayor and Deputation, *vide* page 7.
For the Census of the City of Hamilton, *vide* page 7.

Appendix, No. 5.

T. Frederick Elliot, Esq., to Messrs. Dawes & Sons.
21 April 1863

COPY of a LETTER from *T. Frederick Elliot*, Esq., to Messrs. *Dawes & Sons*.

Gentlemen,

Downing-street, 21 April 1863.

I AM directed by the Duke of Newcastle to acknowledge the receipt of your letter of the 14th instant, in which you request that his Grace will afford the bondholders of the City of Hamilton such assistance, and in such manner as he may deem for their best interests.

In reply, I am to acquaint you that while the Duke of Newcastle regrets the loss and inconvenience to which the bondholders have been exposed, the case is not one in which it is in the power of the Home Government to exercise further influence in their behalf.

I am, &c.
(signed) *T. Frederick Elliot.*

To Messrs. Dawes & Sons.

CANADA (HAMILTON MUNICIPAL BONDS).

COPY of CORRESPONDENCE between the Secretary of State for the Colonies and the Governor General of *Canada*, on the subject of the HAMILTON MUNICIPAL BONDS.

(*Mr. Western Wood.*)

Ordered, by The House of Commons, *to be Printed*,
29 *May* 1863.

301.

Under 2 oz.

396

VANCOUVER ISLAND.

RETURN to an Address of the Honourable The House of Commons, dated 13 July 1863;—*for*,

"COPIES or EXTRACTS of any CORRESPONDENCE between Mr. *Langford* and the Colonial Department, relative to alleged Abuses in the Government of *Vancouver's Island*:"

"Of any CORRESPONDENCE between the Colonial Department and Governor *Douglas*, referring to Mr. *Langford*'s Charges:"

"And, of any CORRESPONDENCE with the Government of *Vancouver's Island*, relative to the Appointment of Chief Justice *Cameron*, and the Remonstrances against such Appointment."

Colonial Office,
24 July 1863.

C. FORTESCUE.

(*Mr. Fitzwilliam.*)

Ordered, by The House of Commons, *to be Printed*,
25 *July* 1863.

SCHEDULE.

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Correspondence between Mr. Langford and the Colonial Department.

— No. 1. —

No. 1.
E. E. Langford, Esq., to the Duke of Newcastle, K. G.
10 March 1860.

COPY of a LETTER from *E. E. Langford*, Esq., to his Grace the Duke of *Newcastle*, K. G.

[This letter was transmitted in Governor Douglas's Despatch, No. 14 of 23 March 1860, printed at page 13.]

My Lord Duke, Vancouver's Island, 10 March 1860.

I HAVE the honour most respectfully to submit the enclosed correspondence and the following memorandum for the consideration of your Grace, in the hope that his Excellency Mr. Douglas may be directed to cause that proper inquiry be instituted which he has manifested a lukewarmness to afford me. It is with regret that I make the complaint these documents represent, Mr. Dallas, the agent for the Puget Sound Company, in whose favour the colonial surveyor acted to my disadvantage, being the son-in-law of Governor Douglas; yet the Land Office of this Colony has been held in such extremely low estimation by the community in general, that it becomes a public duty on my part not to relinquish proceedings in which sufficient testimony is, as I think, produceable, to bring a case (supposed to be but one) of many similar home to the offending parties. In urging the matter upon the notice of your Grace, I am sensible of the responsibility I incur, and of the manner in which failure to substantiate my statement must recoil upon myself; for, being a justice of the peace for the Colony, continuance in such office would, of course, be an impossibility should my representations lack foundation. It is with a confidence, therefore, inspired by the sense of the necessity for caution and accuracy, that I venture to submit facts, which appear to me to be such as your Grace's predecessor in office (who, in his Despatch of 14 August 1858, warned Governor Douglas to take precautions against "cheating in land,") would have desired to have been made aware of.

MEMORANDUM of original Complaint, with Observations upon Mr. *Pemberton's* Statement, and the Delay of Governor *Douglas* in meeting my representations.

1st. That in the summer of 1858, I made personal (that being the usual) application at the Land Office to purchase a certain tract of land, and was informed by the colonial surveyor, Mr. Pemberton, that the land was already disposed of to Mr. Dallas; that, doubting this, I further questioned Mr. Pemberton, who then stated that the first instalment or purchase money had been

paid by the said Mr. Dallas; in proof of the correctness of this narration by me, I enclose an affidavit made by Dr. Wallace, assistant surgeon (Her Majesty's ship "Satellite"), who was present at my interview with Mr. Pemberton.

2d. That the above statement of Mr. Pemberton that the money had been paid by Mr. Dallas was untrue. Mr. Pemberton, in his letter of 20th December 1859, admits that no money was ever paid, and that by such false statement I was defrauded of my right as an individual, by being prevented from then making a purchase of land I was by law entitled to have executed; and though Mr. Pemberton in his letter of 20th December may not be aware of it, was thereby deprived of an opportunity of profiting by the circumstances of the day, and consequently experienced a loss.

3d. That Mr. Pemberton's excuse that the land was bespoken by Mr. Dallas is frivolous, and but proves the illegality of Mr. Pemberton's proceedings in withholding the land from me; the false statement to me concerning the payment having been made, it is remarkable Mr. Pemberton does not deny, though, in my letter of 17th December, referred to him by the Governor, I charged him with the subterfuge.

4th. It is remarkable, moreover, that Mr. Pemberton in his attempt at extenuation, admits that *subsequently* to the bespeaking of Mr. Dallas (on which he rests his defence), he did dispose of certain sections of the bespoken land to other parties. Mr. Pemberton pleads some discretionary power in land sales; to admit this would be to open the door to every phase of fraud; the law is clear, the land cannot be denied to any man, except reserved for public purposes or previously *bonâ fide* sold.

5th. The attempt to mix my name with the application of Mr. Dallas, which was made in 1857, not 1858, can only be regarded as an attempt to confuse the case: the question is, did or did not Mr. Pemberton make a false statement to me concerning the purchase-money, when I made personal application for the land in my own name; his admission, and the affidavit of Dr. Wallace, I think, answer this.

Such is the case against the Land Office. My complaint against Mr. Douglas is, that, although I applied to his Excellency for an inquiry to be instituted *before* the *departure* of Mr. Pemberton from the Colony, he permitted Mr. Pemberton to leave for England without affording me such inquiry, and, that gross delay took place in forwarding to me Mr. Pemberton's explanation; not until after frequent application could I obtain it; thus, from December 20th to February 4th was I precluded from taking further steps, and, as I think, the correspondence shows for itself the systematic attempt to defeat the object of my application, an early solution, is a justifiable cause for dissatisfaction on my part, a reproach to his Excellency the Governor, and reasonable ground for my venturing to crave the aid of your Grace in a matter the public would desire should be closely sifted, the Lands Department of the Colony having been long regarded with grave distrust by the people generally.

I have, &c.
(signed) *Edward E. Langford.*

Encl. in No. 1.

Enclosures in No. 1.

Sir, 17 December 1859.

I BEG to complain to you of the unjust, partial and improper conduct of the colonial surveyor with regard to the disposal of the colonial lands; the particulars of the complaint which I now most respectfully submit to you are as follows: in the summer of 1858 I applied to the colonial surveyor to purchase a certain tract of land, but was informed that the land I wanted, about 200 or 300 acres, and also a quantity adjoining, amounting in all to about 1,200 acres, had been purchased by Mr. Dallas, either on his own account, or on that of the Puget Sound Company, and that the necessary instalment had been paid; on learning this, I naturally felt disappointed (but had then no cause of complaint) as, in common with every one else in the Colony, I was anxious in a legitimate manner to realize something, after a long residence in Vancouver's Island, barren as to any pecuniary benefit. I could, at the time when I wanted it, have re-sold the land at five times the original cost. Now the land that I required was never duly disposed of as stated by the surveyor, has never been occupied

occupied or improved in any manner, but has been unjustly withheld from the market to my injury as an individual, and possibly, also, to the interests of the colony. I beg most respectfully to request that you will cause an early investigation of my complaint, as I hear that the surveyor is soon about to depart for England.

I have, &c.

To his Excellency James Douglas, Esq.,C.B., (signed) *Edward E. Langford.*
Governor of Vancouver's Island,
&c. &c. &c.

Colonial Secretary's Office, Victoria, Vancouver Island,
Sir, 20 December 1859.

I HAVE the honour, by direction of his Excellency the Governor, to acknowledge the receipt of your letter of the 17th instant, making complaint against the colonial surveyor for partial conduct in effecting the sales of land; and, in reply thereto, I am to acquaint you that his Excellency having received from the colonial surveyor a report upon the matter in question, has forwarded the same to the Attorney General, who will enter into communication with you on the subject.

I have, &c.

E. E. Langford, Esq., (signed) *William A. G. Young,*
&c. &c. &c. Acting Colonial Secretary.

Sir, 31 December 1859.

I HAVE the honour to acknowledge the receipt of a letter from the Colonial Secretary, dated 20th December instant, informing me that the Attorney General would enter into communication with me on the subject of my charges against the colonial surveyor, Mr. Pemberton, and having received no communication from the Attorney General, though a sufficient time has elapsed, I have the honour to request that there may be no further delay in the necessary investigation, which is a subject of public importance.

I have, &c.

To his Excellency James Douglas, Esq., C.B., (signed) *Edward E. Langford.*
Governor of Vancouver Island,
&c. &c. &c.

Attorney General's Office, Victoria,
Sir, 2 January 1860.

I HAVE been directed by his Excellency the Governor to communicate with you upon the subject of a letter addressed by you to his Excellency, and dated 17th ultimo, I have therefore to request that you will inform me what is the precise object of your letter of that date, whether you make any claim, and against whom, or whether you simply desire to enter a complaint against the colonial surveyor.

I have, &c.

(signed) *George Hunter Cary,*
Edward E. Langford, Esq., J.P. Attorney General, British Columbia
and Vancouver Island.

Sir, Victoria, 3 January 1860.

I BEG to acknowledge the receipt of your letter dated 2d instant, and in reply to inform you that my charges against the surveyor, Mr. Pemberton, addressed to his Excellency the Governor on the 17th ultimo, were specific and required an official investigation, which is what I am seeking for, and should such investigation not be afforded me prior to the departure of the next mail, I shall be compelled to forward my complaint to the Secretary of State for the Colonies.

I have, &c.

G. H. Cary, Esq., Attorney General. (signed) *Edward E. Langford.*

Sir, 10 January 1860.

BEING in town this morning, and not yet having received any reply to a letter which I addressed to you on the 30th ultimo, I should feel obliged if you would have the goodness to inform [me] whether I may expect to receive any further communication from you on the subject of my complaints against the colonial surveyor, Mr. Pemberton.

I have, &c.

To the Attorney General of (signed) *Edward E. Langford.*
Vancouver Island.

Sir, Victoria, 10 January 1860.

I BEG to acknowledge the receipt of your letter of the 10th January, 1860, and have the honour to inform you that I have received and attended to your letter of the 30th ultimo; I have also to inform you that Mr. Joseph Pemberton, the acting colonial surveyor for Vancover's Island, has addressed a letter to his Excellency the Governor, and that I shall have the honour to address the Governor myself upon the subject within the space of this week.

I have, &c.

E. E. Langford, Esq., J.P. (signed) *George Hunter Cary,*
Attorney General.

Sir, 1 February 1860.

I HAVE the honour to forward to you the copy of a letter addressed to me by the Attorney General on the 10th ultimo, and not having received any communication whatever since that period on the subject of my complaints against the acting colonial surveyor, Mr. Pemberton, I now beg most respectfully to call your Excellency's attention to the same.

I have, &c.

To His Excellency James Douglas, Esq., C.B., (signed) *Edward E. Langford.*
Governor of Vancouver Island,
&c. &c. &c.

Colonial Secretary's Office, Victoria, Vancouver Island,
Sir, 4 February 1860.

WITH reference to your letter of the 17th December last, I am desired by his Excellency the Governor to forward to you copy of a letter received from the Attorney General, and also one from the colonial surveyor, on the subject of the complaint made by you in your aforesaid letter.

I have, &c.

E. E. Langford, Esq., (signed) *William A. G. Young,*
&c. &c. &c. Act. Col. Secy.

Sir, Attorney General's Office, Victoria, 26 January 1860.

I HAVE perused the letter of Mr. Langford, dated 17th day of December, 1859, which I enclose herewith; also the reply of the acting colonial surveyor, Mr. Pemberton, dated the 20th day of December 1859, also enclosed herewith; and have the honour to report to your Excellency that the reply made by the acting surveyor general of Vancouver's Island seems to me a sufficient explanation of the matters complained of by Mr. Langford. In the absence of the acting surveyor general, I need not say that I think it undesirable to take any further steps in the matter, and should therefore advise that the matter stand over till his return.

I have, &c,

His Excellency the Governor, (signed) *George Hunter Cary.*
&c. &c. &c.

Sir, Land Office, Victoria, 20 December 1859.

I HAVE the honour to receive your Excellency's command to answer to the complaint of Mr. Langford, touching the disposal of certain lands adjoining the Puget Sound Company's farm at Esquimalt, of which he is the bailiff. The circumstances are briefly as follows: Early in 1858, when land was scarcely marketable, in compliance with the request of Mr. Langford, the agent of the Puget Sound Company, requested me to make certain additions to the farm; this I did to the best of my ability; the land was considered by me sold, and the transaction recorded in the colonial books, the consideration having been in previous similar cases paid, and the deeds (being of a special character) prepared in London. Subsequently, as land rose in value, Mr. Langford made verbal application to purchase some of the same land on his own account, and was refused, as I considered the land sold.

The agent had selected lands similarly situated elsewhere for the Company, which transactions were in due course completed.

In this instance, however, the agent, on examining the ground, contended that I had failed to comply with the instructions given, in omitting certain sections sold subsequently to those instructions, and on that ground refused to complete the purchase.

Under those circumstances there were but two courses open to me; 1st, to compel the Puget Sound Company to purchase the land in question, in which I might not have succeeded; 2d. to throw the land into the market on the same terms as it had been offered to the agent, which I did, and in either case it is difficult to see (as the land is still unsold) how Mr. Langford is the loser. I would, therefore, respectfully submit to your Excellency, that

that the discretionary power which ought to belong to the head of the department, which I have the honour to superintend, has not been in this instance exceeded or misapplied.

I have, &c.
(signed) *Joseph D. Pemberton,*
Colonial Surveyor.

To his Excellency
James Douglas, Esq., C.B., Governor, &c. &c.

Sir, Vancouver Island, 10 March 1860.

I HAVE the honour to acknowledge the receipt of a letter from the Acting Colonial Secretary, dated 4th February, and in reply to inform your Excellency, that the manner in which my complaint against the Acting Colonial Secretary Mr. Pemberton, has been met by you, is, in my opinion so unsatisfactory, that there is left me no alternative but to request that you will have the goodness to forward by the next mail the enclosed correspondence to his Grace the Secretary of State for the Colonies, to whose notice I wish most respectfully to bring the charge I now reiterate; the indifferent character in which the lands' department has been held in the estimation of the public, and the, as I consider, delay and evasion of your Excellency in not affording me, prior to Mr. Pemberton's departure, that open investigation by professional men conversant with the duties of a colonial surveyor, which could alone satisfy the ends of justice or the public, who share my views with respect to the matter in point; an investigation which, there being at your Excellency's command Colonel Moody and other gentlemen versed in professional subjects, I conceive could have been conveniently afforded me.

I have, &c.
(signed) *Edward E. Langford.*

To his Excellency
James Douglas, Esq., C.B., Governor, &c.

MEMORANDUM.

I, PETER WILLIAM WALLACE, M.D., of Edinburgh, at present attached to Her Majesty's screw steam ship "Satellite," solemnly and sincerely declare that I am well acquainted with Edward Edwards Langford, of Colwood Farm, in Esquimault district, Vancouver's Island, and am also acquainted with Joseph D. Pemberton, the Colonial Surveyor of Vancouver's Island, and that I did, on or about the month of July 1858, proceed with the said Edward Edwards Langford to the office, in the town of Victoria, of the said Joseph D. Pemberton; whereupon the said Edward Edwards Langford applied to the said Joseph D. Pemberton for several hundred acres of land in the immediate vicinity of his farm, whereupon the said Joseph D. Pemberton informed the said Edward Edwards Langford that the said land had been taken up and the instalments paid by Mr. Dallas, in proof of which the said Joseph D. Pemberton offered to show his books, whereupon the said Edward Edwards Langford declined, stating at the time to the said Joseph D. Pemberton, "No, your word is sufficient."

Peter W. Wallace, M.D.

Signed and declared before me by the within-named Peter William Wallace, at Victoria, Vancouver's Island, this 20th day of March, A.D. 1860.

Before me, *George J. Wight,*
(L. S.) Notary Public, Victoria, Vancouver's Island.

Commission registered at Dean of Faculty's Office, Doctors' Commons, London.

— No. 2. —

No. 2.
E. E. Langford, Esq., to the Duke of Newcastle, K.G.
18 June 1861.

COPY of a LETTER from *E. E. Langford,* Esq., to His Grace the Duke of *Newcastle,* K. G.

31, Queen's-road, Camden-square, N. W.,
18 June 1861.

My Lord Duke,

I BEG most respectfully to claim your Grace's attention to the statement herewith forwarded; a statement containing complaints of a serious nature against certain Government officials in Vancouver Island.

STATEMENT.

AT the general election that took place in Vancouver Island in January 1860, I was solicited by numerous electors of the town of Victoria to come forward as a candidate to represent them in the Assembly; I acceded to their

request, and published an address explanatory of my opinion on the affairs of the Colony, founded on the experience of nearly nine years' residence therein, having been nearly the whole of that time a magistrate, and chairman of the sessions.

A few days after my address was published, an anonymous libel (in the shape of a placard) was published and posted in the town, containing insulting allusions to my family, and also defamatory of my private character.

The printer of this libel refused, on being applied to, to give up the names of the authors of the libel; I then, hoping to compel a disclosure of the names of the authors, brought an action against the printer, in the supreme court of civil justice.

The proceedings in court at the trial were of an improper, illegal and vexatious character; and, on my refusing to answer a question which was irrelevant to the statement contained in the declaration, inquisitorial and harsh in its tendency, and which affected the interests of society at large, I was removed from the court in custody of the sheriff; the examination for the defence was carried on in my absence, evidence which I had given on oath was struck out by direction of the Judge, and a nonsuit recorded; I was then brought into court, was sentenced to be imprisoned in the common gaol, and to pay a fine of 10 *l.* I was taken to prison and locked up with felons, Indians and maniacs.

A bill of costs was afterwards sent in by the Attorney General (who acted both as attorney and counsel for the defence) amounting to 90 *l.* 9 *s.* 2 *d.*, which I declined to pay; judgment was then entered up for the amount of the Attorney General's bill of costs, and my furniture and other effects seized under an execution, when, two days prior to the time at which the sale was advertised to take place, I was presented, by a committee of gentlemen, with the sum of 500 dollars, the amount of a subscription raised by the inhabitants of the island for the purpose of enabling me to satisfy the amount of the execution, which I did on the 14th July 1860.

In October last, I accidentally made the discovery that the Attorney General's bill of costs contained items of payment which had never in fact been made; and soon after Captain King, who was the printer of the libel against me, revealed to me the name of the author of the libel; it was Mr. Begbie, Judge of British Columbia; and he further informed me that Mr. Good (then, and I believe now, the private secretary to Governor Douglas) brought the libel, in manuscript, to the printing office; and Captain King further told me that Mr. Good gave him 20 *l.* to pay to the Attorney General, stating that he was to defend the action.

It is my wish that your Grace should distinctly understand that, in bringing the circumstances above mentioned to your notice, it is not my object to seek any pecuniary redress whatever for the ill treatment that I have received, but that it is an official inquiry which I ask for, concerning acts which I believe colonial officials have been guilty of, disgraceful to them in their official capacity; and when your Grace may be satisfied that my complaints are well grounded, I feel assured that such acts as my statement contains would not be allowed to be perpetrated with impunity in any of Her Majesty's colonies, however distant or insignificant.

I have, &c.
(signed) *Edward E. Langford.*

— No. 3. —

No. 3.
E. E. Langford, Esq., to the Duke of Newcastle, K.G.
21 May 1862.

COPY of a LETTER from *E. E. Langford*, Esq., to his Grace the Duke of *Newcastle*, K.G.

49, St. Paul's-road, Camden-square,
21 May 1862.

My Lord Duke,

I HAVE the honour to enclose to your Grace the copy of a letter from the Registrar of the Supreme Court of Demerara, and also the copy of one from the Sheriff Clerk at Perth, giving information concerning Mr. David Cameron, the Chief Justice of Vancouver Island, who is one of the officials whose conduct is complained

complained of in the statement which I had the honour to address to your Grace on the 18th June last, which statement was placed in your Grace's hands by Mr. Charles W. FitzWilliam.

I have, &c.
(signed) *Edward E. Langford.*

Enclosure 1, in No. 3.

Colonial Registrar's Office, Demerara, 24 June 1861. Encl. 1, in No. 3.

Sir,

Your letter addressed to the Colonial Secretary has been received, asking for information as to the bankruptcy of David Cameron; we have no bankruptcy law here, but Mr. David Cameron filed a petition to be adjudged insolvent on the 28th January 1851; there was no opposition, and on the 28th April 1851 the Supreme Court granted a full discharge to the insolvent.

I have, &c.
(signed) *James C. Hitzler,*
Pro Registrar.

E. E. Langford, Esq.

Enclosure 2, in No. 3.

Perth, 11 November 1861. Encl. 2, in No. 3.

Dear Sir,

I have to apologize for not sooner answering yours of 10th ultimo, but you will excuse the delay when I tell you that I have for the last few weeks been suffering from indisposition, generally confined to the house, and a good deal to bed, and so prevented from obtaining the information noted below. I cannot discover that D. Cameron obtained any more formal discharge from his creditors than is implied in the fact that certain of his creditors took bills for his composition. By the law of Scotland, although these bills were dishonoured when due, and so rendered the proceedings for recovery necessary, which I showed you, that would not revive the original claim of the creditors to 20 *s.* per pound. William Cameron, the cousin, has made thorough search for the acknowledgment by David, of which he thought he was possessed, without being able to find it, and I have not succeeded in finding any specimen of his handwriting. Mr. Gray had nothing to do with the bankrupt, nor with the creditors, having only acted as notary for the banks at which the bills fell due.

I find, however, that David has two brothers, Charles and John Cameron, who carry on business as bakers in London; their address is 16, Duke-street, Strand.

I regret that I am unable further to satisfy your inquiries, and remain,

Yours, &c.
(signed) *Arch. Reid.*

E. E. Langford, Esq.

— No. 4. —

No. 4.
C. Fortescue, Esq., M.P., to E. E. Langford, Esq.
31 May 1862.

Copy of a LETTER from *C. Fortescue*, Esq., M.P., to *E. E. Langford*, Esq.

Sir, Downing-street, 31 May 1862.

I am directed by the Duke of Newcastle to acknowledge the receipt of your letters of the 18th of June 1861 and the 21st of May 1862, containing complaints against certain Government officers in Vancouver Island.

I am to state to you in reply, that any charges which you had to prefer against the administration of justice in Vancouver Island ought either to have been brought forward in the Colonial Legislature, where their justice would have been tested by public discussion, or transmitted through the Governor, in which case he would have taken steps, before referring the charges to the Secretary of State, to give the parties inculpated the opportunity of explanation.

I am to add, that it is wholly impossible for the Duke of Newcastle to take any other steps, on such *ex parte* and imperfect statements as have now been submitted to him, than that of sending your letters to the Governor, with instructions to submit them to Mr. Cameron, Mr. Begbie and Mr. Good, and to forward to his Grace, with his own observations, whatever statements any of those gentlemen may think it necessary to make on the subject.

I have, &c.
(signed) *C. Fortescue.*

— No. 5.—

No. 5.
E. E. Langford, Esq., to the Duke of Newcastle, K. G.
5 June 1862.

COPY of a LETTER from *E. E. Langford*, Esq., to his Grace the Duke of *Newcastle*, K. G.

49, St. Paul's-road, Camden-square, N.W.,
5 June 1862.

My Lord Duke,

I HAVE the honour to acknowledge the receipt of a letter from Mr. Fortescue of the 31st ultimo, in which he states, that any charges that I had to prefer against the administration of justice in Vancouver Island ought to have been brought forward in the Colonial Legislature, or transmitted through the Governor; in reply to these remarks I beg to state, that from the peculiar composition of the small Legislative Assembly of Vancouver Island, an appeal to that body would have been futile, and that from the connexion of Mr. Good and Mr. Cameron with the Governor, I felt that an application to his Excellency would have been also useless.

Mr. Fortescue remarks in his letter, that my statements are imperfect; I must observe, that from the singular nature of those statements, and the position of the persons that they affect, it could scarcely be expected that a complete chain of evidence could be produced in England; but as regards the unfitness of Mr. Cameron, and the impropriety of confiding the supreme judicial authority to his hands, I did think that the copies of the letters from the Sheriff-Clerk at Perth and the Registrar of the Supreme Court in Demerara would have been considered as fairly conclusive. I herewith give the simple facts regarding the Chief Justice, Mr. Cameron, which facts can be proved by persons now living in this country. Mr. Cameron is a man of obscure origin, with no legal education whatever, and a very imperfect general one; he was an uncertificated bankrupt in Scotland, and was some time afterwards discharged as an insolvent debtor in Demerara, shortly before arriving in Vancouver Island. But for the impropriety of such a person as Mr. Cameron holding such a high and responsible office, it is extremely unlikely that I should ever have had to lay such grievances before your Grace.

I can most unhesitatingly assert that the purity of justice has been entirely overthrown in Vancouver's Island, rendering the proceedings in the law courts in the Colony the theme of scorn and derision among the colonists, as also throughout the American territories in the Pacific.

I have felt disappointed at the delay that has taken place in instituting even the preliminary inquiries now about to be made, the treatment that I received at Vancouver having been to me fraught with serious loss and inconvenience.

It is important for me to remark that no allusion to Mr. Cary, the Attorney General of Vancouver Island, is made by Mr. C. Fortescue: the charge against Mr. Cary is, that he committed a fraud in his professional capacity, and from which I know that he could not exculpate himself before a qualified and impartial judge.

I have, &c.
(signed) *Edward E. Langford.*

— No. 6. —

No. 6.
C. Fortescue, Esq., M. P., to E. E. Langford, Esq.
21 June 1862.

COPY of a LETTER from *C. Fortescue*, Esq., M. P., to *E. E. Langford*, Esq.

Sir,

Downing-street, 21 June 1862.

I AM directed by the Duke of Newcastle to acknowledge the receipt of your letter of the 5th instant, and to acquaint you that a copy of it, as of all your previous communications, has been forwarded to the Governor of Vancouver Island for his report.

I am, &c.
(signed) *C. Fortescue.*

— No. 7. —

No. 7.
E. E. Langford, Esq., to the Duke of Newcastle, K. G.
20 February 1863.

COPY of a LETTER from *E. E. Langford*, Esq., to His Grace the Duke of *Newcastle*, K. G.

13, Mornington Crescent, Regent's Park,
20 February 1863.

My Lord Duke,

I WAS informed by Mr. Chichester Fortescue, by a letter dated 21 June 1862, that a copy of all my communications relating to my charges against certain officials in Vancouver Island had been forwarded to the Governor of that Colony for his report; I am now desirous of being made acquainted whether any communication on the subject has been received from Governor Douglas, and, if so, I beg to request that a complete copy of the same may be forwarded to me.

I have, &c.
(signed) *Edward E. Langford*,

His Grace the
Duke of Newcastle, K. G.
&c. &c.

— No. 8. —

No. 8.
T. F. Elliot, Esq., to E. E. Langford, Esq.
6 March 1863.
* *See* above.

COPY of a LETTER from *T. Frederick Elliot*, Esq., to *E. E. Langford*, Esq.

Sir,

Downing-street, 6 March 1863.

I AM directed by the Duke of Newcastle to acquaint you, in reply to your letter of the 20th February,* that a Despatch has been received from Governor Douglas in answer to the communication addressed to him in consequence of your letter of the 21st May 1862, but that this Despatch does not enable his Grace to come to any decision respecting the subjects adverted to in your letter.

I have, &c.
(signed) *T. Fred^k Elliot.*

— No. 9. —

No. 9.
Sir F. Rogers, Bart., to E. E. Langford, Esq.
23 April 1863.
* Page 7.

COPY of a LETTER from Sir *F. Rogers*, Bart., to *E. E. Langford*, Esq.

Sir,

Downing-street, 23 April 1863.

ON the 18th of June 1861,* you left at this office a letter purporting to prefer charges against certain officials in Vancouver Island and British Columbia, and you shortly afterwards stated, orally, that it was your intention to send to this department some further documents connected with these charges. Those further documents were received on the 21st of May 1862, when both letters were forwarded to the Colony for the report of the Governor. That report has been received, and the Duke of Newcastle is now in a position to answer your letter.

Your personal complaints relate to an electioneering placard published in Victoria in 1859-60, and alleged by you to be libellous.

You complain that having brought an action for libel against the printer of this placard, and having refused in court to answer a question which you considered irrelevant, you were committed for contempt.

On this point I am directed by his Grace to say that he does not feel justified in assuming that you were wrongly committed.

You complain that the Attorney General, who acted as attorney for the defendant in the trial, charged you in the bill of costs with payments which he had not made.

With regard to this point Mr. Cary alleges (and the Duke of Newcastle has no reason to doubt his allegation), that he had nothing to do with the receipt and disbursement of the costs recovered from you.

Lastly, on the authority of Mr. King, the printer of the placard (who it appears is since dead), you connect with its publication the chief justice and the private secretary to the Governor of the neighbouring Colony of British Columbia. The Duke of Newcastle, on a full consideration of the case, does not think it advisable to pursue an inquiry respecting the authorship of a placard published during the heat of an electioneering contest in 1859 or 1860.

If you thought yourself aggrieved by such a placard, your proper course was that which you pursued; namely, to bring an action for libel. If that action

had shown that the placard was essentially false or malicious, it might have become the duty of the Government to inquire whether any Government officer was concerned in it; but as, apparently by your own fault, the action broke down, the Duke of Newcastle thinks it unnecessary and undesirable that a matter thus disposed of should be now taken up by the Government here.

I have, &c.
(signed) *F. Rogers.*

— No. 10. —

No. 10.
E. E. Langford, Esq., to the Duke of Newcastle, K.G. 27 April 1863.

COPY of a LETTER from *E. E. Langford*, Esq., to his Grace the Duke of *Newcastle*, K. G.

13, Mornington Crescent, Regent's Park,
My Lord Duke, 27 April 1863.

I HAVE the honour to request that I may be furnished with copies of any statements that may have been made by Mr. Cameron, Mr. Cary, Mr. Begbie and Mr. Good, in reply to my charges against those officials; also with a copy of Governor Douglas's report in the matter.

Accompanying my letter of the 18th June 1861 to your Grace, were some memoranda (of which I now forward a copy), also several other documents, of which I beg particularly to request that the undermentioned may be returned to me; viz., office copy of bill of costs in the action Langford *v.* King, and a letter dated 19 June 1860, applying for payment to Mr. Cary.

I have, &c.
(signed) *Edward E. Langford.*

Enclosure in No. 10.

Encl. in No. 10.

MEMORANDA.

1. ADDRESS to Electors.
2. The libel, with copy of Mr. Dallas's letter appended.
3. I have no evidence as to what took place in court in the trial beyond my own statement, but in corroboration I would refer to the recorded proceedings of the court, and the judge's notes, which I presume should still be in existence; I considered it necessary to make a statement of the facts in order to give an intelligible account of the circumstances, out of which the main charge against Mr. Attorney General Cary arises.
4. Office copy of the bill of costs in the action Langford *v.* King, accompanied by a letter dated 19th June 1860, applying for payment of the amount to Mr. Cary; having regard to the fact that the bill of costs was the bill of Mr. Cary himself, charges marked A. in the bill were improper, the payments marked B. were impossible, and the payments marked C. were never made; Mr. M'Kenzie and Mr. Munro, who are each alleged to have received 2*l.* 2*s.*, informed me that they had never received anything; both of these persons are still living in Vancouver Island.
5. Captain King, the printer of the libel, has died since the occurrence in question; in his lifetime he informed,* in the presence of Dr. Wallace, surgeon in charge of Her Majesty's Naval Hospital in Vancouver, of the facts referring to the authorship of the libel which are set forth in my statement, and which facts cannot be denied by the parties implicated, if they be questioned upon the subject.

* *Sic.*

E. E. L.

— No. 11. —

No. 11.
C. Fortescue, Esq., M.P., to E. E. Langford, Esq. 7 May 1863.

COPY of a LETTER from *C. Fortescue*, Esq., M. P., to *E. E. Langford*, Esq.

Sir, Downing-street, 7 May 1863.

I AM directed by the Duke of Newcastle to acknowledge the receipt of your letter of the 27th ult., and to acquaint you that his Grace does not consider it necessary or advisable to furnish you with copies of any of the reports received from the Governor of Vancouver Island with reference to your letter of the 18th of June 1861.*

* Page 7.

I am further to inform you that your letter of that date does not purport to contain any enclosures, and the Duke of Newcastle cannot find that the documents for which you apply were ever received at this office.

I am, &c.
(signed) *C. Fortescue.*

Correspondence between the Colonial Department and Governor Douglas.

— No. 1. —

(No. 14.)

Copy of a DESPATCH from Governor *Douglas*, C.B., to His Grace the Duke of *Newcastle*, K.G.

No. 1.
Governor Douglas, C.B., to the Duke of Newcastle, K.G. 23 March 1860.

Victoria, Vancouver's Island,
23 March 1860.
(Received, 12 May 1860.)
(Answered, No. 28, 26 July 1860, page 16.)

My Lord Duke,

I HAVE the honour to forward to you herewith a letter which was delivered to me yesterday for transmission to your Grace, from Mr. E. E. Langford, a bailiff in the service of the Puget Sound Agricultural Company, residing upon and in charge of one of their farms in Vancouver Island.* Enclosure No. 1.

2. The tenor of the letter itself, and the correspondence which it covers, render report from me almost unnecessary; but as Mr. Langford reflects upon the integrity of the land office in this Colony, as well as upon my own course of action in connection with the complaint he made to me, it may not be inconvenient that I should lay before your Grace a *résumé* of the subject, with such comments as may appear necessary.

3. On or about the 17th December 1859, I received a letter from Mr. Langford, complaining of the unjust, partial, and improper conduct of the Colonial Surveyor with regard to a circumstance which occurred in the summer of the preceding year, and requesting an early investigation thereof. I was somewhat surprised at this application, made one year and a half after the transaction alluded to; but as it was known that Mr. Pemberton, the Colonial Surveyor, was about to leave the Colony to proceed to England, and as a general election was pending, Mr. Langford himself being a candidate, and having in his address to the electors distinguished himself by the display of an unusual degree of animosity to myself personally as Governor, and to the Government of the Colony generally, I had not much difficulty in surmising the true object of the application. I, nevertheless, instantly investigated the matter, and called upon Mr. Pemberton for a report, which he forthwith made to me; but I could elicit nothing which seemed to require that I should take further steps than to furnish Mr. Langford with a copy of Mr. Pemberton's report.

I placed the matter in the hands of the Attorney General, who perfectly coincided with me in this conclusion, but I instructed him to enter into communication with Mr. Langford, with the view of ascertaining, if possible, what was the precise object of his application.

4. I forward a copy of Mr. Langford's letter of complaint, together with Mr. Pemberton's report thereupon; and I conceive that every point alluded to by Mr. Langford is fully met by Mr. Pemberton. Mr. Langford avows in his letter that he was desirous of purchasing a certain tract of land for purposes of speculation, but that Mr. Pemberton informed him that the land had been sold, and the instalment paid. Enclosure No. 2. Enclosure No. 3.

Mr. Pemberton replies that early in 1858, when land was scarcely marketable, Mr. Dallas, the agent of the Puget Sound Company, applied for, and selected certain tracts of land lying contiguous to a farm already belonging to the Company, and that, in consequence, the land required was reserved, but that afterwards, when Mr. Dallas examined the ground, he refused to complete the purchase,

* Mr. Langford's Letter, of 10 March 1860, to the Duke of Newcastle, will be found at page 3.

purchase, upon the plea that certain portions selected had been omitted. Mr. Pemberton thereupon remarks that but two courses remained open to him, either to compel the agent of the Puget Sound Company to complete the purchase, or to throw the land into the market; and as it might have been difficult to succeed in the former, he adopted the latter; and as the land at the date of his letter was still unsold, Mr. Langford could have no just cause of complaint, for if he wished to purchase, it was still open to him to do so.

5. Mr. Langford asserts, Mr. Pemberton informed him that the instalment had been paid upon the land, and he supports his assertion by the affidavit of a bystander, who further affirms that Mr. Pemberton offered to show his books in proof thereof. This is positively denied by Mr. Pearce, the Assistant Colonial Surveyor, who was present at the time, and states he "distinctly recollects" the whole occurrence. The Colonial Surveyor "did not tell Mr. Langford that the first instalment had been paid," but simply "that the land was sold." Apart from this, I must remark that it appears to me a circumstance scarcely credible that the Colonial Surveyor should offer the official books for inspection to any chance purchaser of land, as Mr. Langford was, or that he should volunteer information regarding the payments made.

6. From the investigation instituted by me upon Mr. Langford's complaint, I ascertained one or two other points which it may be as well to mention. I would in the first place observe that before the gold excitement in 1858, we had great difficulty in disposing of land in Vancouver's Island, and every facility was given to an intending proprietor to induce him to purchase, and it was customary for the Colonial Surveyor himself to proceed to the spot to exhibit the land, and to assist in its selection. Having done so in this particular instance, and the agent of the Puget Sound Company having agreed to purchase the land, I consider the surveyor was justly entitled to regard it as sold, although the land was not surveyed. It was upon the land being surveyed, subsequent to Mr. Langford's application, and finding the boundaries did not exactly accord with the position roughly designated by Mr. Pemberton (an acre and a half was, I believe, about the difference), that the agent of the Puget Sound Company refused to take the land. That the transaction was a *bonâ fide* one, so far as the Colonial Surveyor is concerned, is indisputable, for I have examined the office books, and there is the cancelled instalment paper which was made out at the time the land was surveyed, with the current number upon it.

7. If Mr. Langford felt himself injured by Mr. Pemberton's conduct, or that an unlawful action had been committed, why did he not have recourse to legal measures to obtain redress; or why did he not bring the matter to notice at an earlier date?

8. I trust your Grace will pardon my trespassing thus long upon your time, but I have been somewhat full in my report, as I have to address your Grace in a further Despatch upon another matter, in which this present complaint will be referred to.

I have, &c.
(signed) *James Douglas.*

Enclosure 1, in No. 1.

Encl. 1, in No. 1. *E. E. Langford*, Esq., to Governor *Douglas*.

Sir, Vancouver Island, 10 March 1860.

I HAVE the honour to acknowledge the receipt of a letter from the acting Colonial Secretary, dated 4th February, and in reply, to inform your Excellency that the manner in which my complaint against the acting Colonial Surveyor, Mr. Pemberton, has been met by you is, in my opinion, so unsatisfactory, that there is left me no alternative but to request that you will have the goodness to forward by the next mail the enclosed correspondence to his Grace the Secretary of State for the Colonies, to whose notice I wish most respectfully to bring the charge I now reiterate, the indifferent character in which the Lands Department has been held in the estimation of the public, and the, as I consider, delay and evasion of your Excellency in not affording me, prior to Mr. Pemberton's departure, that open investigation by professional men, conversant with the duties of a Colonial

Colonial Surveyor, which could alone satisfy the ends of justice, or the public who share my views, with respect to the matter in point; an investigation which, there being at your Excellency's command Colonel Moody and other gentlemen versed in professional subjects, I conceive could have been conveniently afforded me.

I have, &c.
(signed) *Edward E. Langford.*

Enclosure 2, in No. 1.

E. E. Langford, Esq., to Governor *Douglas.* Encl. 2, in No. 1.

Sir, Vancouver Island, 17 December 1859.

I BEG to complain to you of the unjust, partial, and improper conduct of the Colonial Surveyor, with regard to the disposal of the Crown lands.

The particulars of the complaint which I now most respectfully submit to you are as follows:

In the summer of 1858 I applied to the Colonial Surveyor to purchase a certain tract of land, but was informed that the land I wanted (about 200 or 300 acres), and also a quantity adjoining, amounting in all to about 1,200 acres, had been purchased by Mr. Dallas, either on his own account or on that of the Puget Sound Company, and that the necessary instalments had been paid. On learning this, I felt disappointed (but had then no cause of complaint), as, in common with every one in the Colony, I was anxious, in a legitimate manner, to realize something after a long residence on Vancouver's Island, barren as to any pecuniary advantage. I could at the time when I applied for it have re-sold the land at five times the cost price. Now, the land I have mentioned was never duly disposed of, as stated by the surveyor, has never been either occupied or improved in any way, but has been unjustly withheld from the market, to my injury as an individual, and possibly also to the interests of the Colony.

I beg most respectfully to request that your Excellency will cause an early investigation of my complaint, as I hear that the surveyor is soon about to depart for England.

I have, &c.
(signed) *Edward Edwards Langford.*

Enclosure 3, in No. 1.

Joseph J. D. Pemberton, Esq., to Governor *Douglas.* Encl. 3, in No. 1.

Sir, Land Office, Victoria, 20 December 1859.

I HAVE the honour to receive your Excellency's command to answer to the complaint of Mr. E. E. Langford, touching the disposal of certain lands adjoining the Puget Sound Company's farm at Esquimalt, of which he is bailiff.

The circumstances are briefly as follows:

Early in 1858, when land was scarcely marketable, in compliance with the request of Mr. Langford, the agent of the Puget Sound Company, requested me to make certain additions to the farm; this I did to the best of my ability.

The land was considered sold, and the transaction recorded in the Colonial Books, the consideration having been, in previous similar cases, paid, and the deeds (being of a special character) prepared in London.

Subsequently, as land rose in value, Mr. Langford made verbal application to purchase some of the same land on his own account, and was refused, as I considered the land sold. The agent had selected lands similarly situated elsewhere, for the Company, which transactions were in due course completed. In this instance, however, the agent, on examining the ground, contended that I had failed to comply with the instructions given, in omitting certain sections sold subsequently to those instructions, and on that ground refused to complete the purchase.

Under these circumstances, there were but two courses open to me:

1st. To compel the Puget Sound Company to purchase the land in question, in which I might not have succeeded. 2d. To throw the land into the market on the same terms as it had been offered to the agent, which I did; and in either case, it is difficult to see (as the land is still unsold) how Mr. Langford is the loser.

And I therefore respectfully submit to your Excellency, that the discretionary power which ought to belong to the head of the department which I have the honour to superintend, has not been in this instance exceeded or misapplied.

I have, &c.
(signed) *Joseph J. D. Pemberton,*
Colonial Surveyor.

— No. 2. —

No. 2.
Secretary of State to Governor Douglas, C. B.
26 July 1860.

(No. 28.)

COPY of a DESPATCH from the Secretary of State to Governor *Douglas*, C. B.

Sir, Downing-street, 26 July 1860.

I HAVE received your Despatch of the 23d March, No. 14,* forwarding a letter, with several enclosures, from Mr. E. E. Langford, containing a complaint against the Surveyor of Vancouver Island, and reflections upon yourself, on account of an application which had been made by Mr. Langford for leave to purchase a certain lot of land in Vancouver Island.

* Page 13.

You will have the goodness to inform Mr. Langford that I have carefully perused all the documents submitted to me upon this transaction, and that I am unable to find any cause for blame in Mr. Pemberton's conduct. Neither do I see that you showed any want of readiness in investigating the case when your notice was called to it, or that blame is attributable to you for the delay which occurred in communicating the answer of Mr. Pemberton to Mr. Langford.

I have, &c.
(signed) *G. C. Lewis.*

— No. 3. —

No. 3.
Duke of Newcastle, K. G., to Governor Douglas, C. B.
2 June 1862.

(No. 101.)

COPY of a DESPATCH from His Grace the Duke of *Newcastle*, K. G., to Governor *Douglas*, C. B.

Sir, Downing-street, 2 June 1862.

I HAVE the honour to transmit to you copies of two letters which I have received from Mr. Edward E. Langford, containing allegations affecting certain Government officers in Vancouver Island, and the administration of justice in that Colony.

18 June 1861, p. 7.
21 May 1862, p. 8.

I have to request that you will submit these statements to Mr. Cameron, Mr. Begbie, and Mr. Good, to whom they refer, and that you will forward to me, together with your own observations, whatever explanations these gentlemen may have to offer on the subject.

* Pages 37-38.

Upon referring to your Despatches in 1854,* I find no allusion to the circumstances affecting Mr. Cameron, as detailed in the enclosures to Mr. Langford's letter of the 21st of May last.† On this point I wish to receive a report from you, explaining how far this gentleman's antecedents were known to you; and if they are correctly stated by Mr. Langford and his correspondents, how it happened that you took no notice of them at the time you recommended him for the Acting Chief Justiceship.

† Page 8.

I observe that this appointment, when created, was regarded by you as a mere temporary expedient, and as I am of opinion that the time is approaching when it will be necessary that Vancouver Island should receive the services of a professional judge, I should, therefore, wish you to bring the question of making provision for his remuneration before the local legislature.

I have, &c.
(signed) *Newcastle.*

— No. 4. —

No. 4.
Duke of Newcastle, K.G., to Governor Douglas, C. B.
19 June 1862.

(No. 106.)

COPY of a DESPATCH from His Grace the Duke of *Newcastle*, K. G., to Governor *Douglas*, C. B.

Sir, Downing-street, 19 June 1862.

WITH reference to my Despatch, No. 101,* of the 2d instant, I transmit to you a copy of a further letter from Mr. Edward E. Langford, and I have to instruct you

* Page 16.

you to submit the statement affecting Mr. Cary, the Attorney General of Vancouver Island, to that gentleman, for any observations which he may have to make upon it.

5 June, p. 10.

I have, &c.
(signed) *Newcastle.*

— No. 5. —

(No. 44.)

No. 5.
Governor Douglas, C. B., to the Duke of Newcastle, K.G.
23 August 1862.

COPY of a DESPATCH from Governor *Douglas*, C.B., to His Grace the Duke of *Newcastle*, K.G.

Victoria, 23 August 1862.

(Received, 10 October 1862.)

My Lord Duke,

I HAVE the honour to acknowledge receipt of your Grace's Despatch, No. 101, of the 2d June last, referring for report copy of letters from Mr. E. E. Langford, formerly a resident of Vancouver Island, containing complaints against certain of the officers connected with my Government; and I have also the honour to acknowledge receipt of your Grace's Despatch, No. 106,* of the 19th June, transmitting, for the same purpose, copy of a further letter of complaint from Mr. Langford upon the same subject.

* Page 16.

2. I have, in accordance with your Grace's instructions, called upon the officers concerned for any remarks they may have to offer in respect of the allegations of Mr. Langford, and so soon as I receive their replies, I will forward them to your Grace, with such report thereon as the circumstances of the case may require. Mr. Begbie, the judge of British Columbia, one of the gentlemen inculpated by Mr. Langford, is absent on circuit, and by last accounts was at Carribou; it may therefore be some time before I can hear from him.

3. With respect to the latter portion of your Despatch of the 2d June,† which refers especially to Mr. Cameron, the chief justice of Vancouver Island, I will take an early opportunity of placing before your Grace all the circumstances in connection with the appointment of Mr. Cameron. I may, however, at present mention that, so far as I am aware, Mr. Cameron performs his duties with much ability, and his decisions give general satisfaction. Individually, I believe him to be much respected throughout the Colony. The allegations of Mr. Langford in regard to the administration of justice in Vancouver's Island, I have no hesitation in at once pronouncing to be unfounded. I hear for the first time that "the proceedings in the law courts of the Colony are the theme of scorn and derision amongst the colonists." Had such a state of things existed, I must have known it; and I think I should, in such case, long ago have put an end to it. I did indeed once receive a letter of complaint against Mr. Cameron from Mr. Langford, and in that he asserted that "life and liberty had been illegally sacrificed and jeopardised, and the ends of justice defeated;" but as the allegation was merely a general one, and as I found, on inquiry, that just at that time Mr. Langford had been very properly committed by Mr. Cameron for a gross contempt of court, the cause of this letter, as well as its object, was so evident, that, anxious as I may be that no just complaint should go unnoticed, I yet felt that in this case it would be most inexpedient for me to interfere.

† Page 16.

4. Mr. Langford is the same person who brought the complaint against Mr. Pemberton, the Colonial Surveyor General, for unjust, partial, and improper conduct in respect of the sale of some land, which complaint I forwarded to your Grace in my Despatch, No. 14,‡ of the 23d March 1860. Mr. Pemberton was fully exonerated from the charge, as will be seen by the Secretary of State's Despatch, No. 28,§ of the 26th July 1860. I would respectfully request your Grace's attention to both these Despatches, as serving to give some insight into Mr. Langford's character, and to throw some light upon his present proceedings.

‡ Page 13.

§ Page 16.

I have, &c.
(signed) *James Douglas.*

— No. 6. —

No. 6.
Governor Douglas, C.B., to the Duke of Newcastle, K.G.
14 February 1863.

(No. 3.)

COPY of a DESPATCH from Governor *Douglas*, C.B., to his Grace the Duke of *Newcastle*, K.G.

Victoria, 14 February 1863.
(Received, 14 April 1863.)

My Lord Duke,

* Page 22.

IN connexion with my Despatch of this date, No. 4,* and referring to your Despatch, No. 106† of the 19th June 1862, I have the honour to transmit herewith the report I have received from Mr. G. H. Cary, the Attorney General of this Colony, in reply to the charges brought against him by Mr. Langford.

12 Sept. 1862.

† Page 16.

2. The evidence Mr. Cary produces appears so satisfactorily to clear him from Mr. Langford's imputations, and so forcibly to expose the character of Mr. Langford, that it does not seem to me necessary to trouble your Grace with further remark.

I have, &c.
(signed) *James Douglas.*

Enclosure in No. 6.

Encl. in No. 6.

The Attorney General to the Colonial Secretary.

Attorney General's Office,
12 September 1862.

Sir,

IN reply to your letter of the 27th of August 1862, enclosing a letter addressed to the Duke of Newcastle by a person named Edward E. Langford, and calling upon me to furnish, at my earliest convenience, any observations which I might have to offer in the matter, I have the honour to inform you, for his Excellency's information, that the charge laid against me is in general terms, without allusion to any facts which would enable me to ascertain the particular matter complained of.

In the month of January 1860, I was practising as a barrister in the Supreme Court of Civil Justice of Vancouver Island, and about that time was specially retained to act as counsel for Edward Hammond King, in an action of libel instituted against him by one Edward E. Langford.

At that time the professions had not been separated, and I acted (nominally only) as attorney in the cause.

The cause, so far as the attorney's part of the business was concerned, was conducted on behalf of the defendant by Mr. Drake, a solicitor of the court, whom I instructed in that behalf, and I performed the ordinary duties of counsel only.

On the 16th day of April 1860, the trial was had, and I succeeded in nonsuiting the plaintiff, who delined to stand the test of cross-examination, and was committed for contempt.

Upon obtaining the nonsuit my duties ceased, and I had nothing to do, and did not (except in one instance) interfere in any way with the subsequent proceedings in the cause, which were conducted to their legitimate termination by the attorney for the defendant.

This instance was my requesting Mr. Drake to give Langford every possible opportunity of avoiding the annoyance of a seizure, and I intervened upon that occasion at the instance of the Sub-sheriff Culverwell, who requested me so to do, I believe at the request of Langford.

In the month of November 1860, to my utter astonishment, I was served with a summons to appear in the magistrate's court to answer a charge made by one E. E. Langford against me for obtaining money from him on false pretences.

I have procured from the magistrate a copy of the depositions in the case, which was dismissed.

The charge is, that I obtained two guineas as a witness' fee by fraudulent pretences.

On reference to the depositions, it will be found that Mr. Drake was the recipient of eight guineas received for witnesses' fees under the execution; that Mr. Drake paid over the whole amount to one John Miles on account of himself and the three other witnesses; and that by mutual arrangement between the witnesses the fees were offered to be paid back again to the person named Langford, who refused to accept them; and that by the like mutual arrangement these fees were presented as a contribution to the hospital.

It will also be seen that the person named Langford well knew all these facts at the time of swearing his first deposition.

As soon as the charge was dismissed, I preferred a charge against the former complainant for perjury, and at the earnest request of several country gentlemen reluctantly withdrew it; these

these gentlemen pressing upon me the imminent peril in which Mrs. Langford's life would be placed were I to proceed, and urging that she was then in great danger from illness of a grave character.

I declined withdrawing the charge, however, until I had consulted with my friend, Mr. Donald Fraser, who subsequently advised me to take no further notice of the matter.

Had I prosecuted the charge for perjury, Langford would have been inevitably convicted, as the most casual perusal of the depositions will show.

I can only regret that my absence from England prevents my bringing the complainant to the punishment suited to him for such a malignant libel on my professional character.

I have, &c.
(signed) *George Hunter Cary.*

William A. G. Young, Esq., Colonial Secretary,
&c. &c. &c.

Edward E. Langford, being duly sworn, and his Information having been read, says it is true.

Cross-examined by Mr. *Cary.*—I was not offered eight guineas to be returned. John Miles never offered to return to me eight guineas, to the best of my belief. He told me he had a sum of money to give me, which he had received as a witness. This offer was made to me on the 12th day of June, as near as I can remember, and before I filed the protest.

I have had a conversation with Mr. Munroe previous to making this charge. Mr. Munroe was walking up the bush with me near Mr. Cameron's house, about a week or ten days ago, before the institution of this charge. I asked Mr. Munroe if he received two guineas for that trial, Langford *v.* King; he said "No." I asked him if that money was ever tendered; he said "No;" and he said "I was asked about two days after the trial, I think by Mr. Drake, what my charge was for attending as a witness;" he said "I told him nothing, nor would I take anything." I never told Mr. Munroe that the whole money had been paid to the hospital. I may have said so since the information.

I believe that you had received the money, because I paid it to the sheriff. I was informed the money was paid into your office. I will not swear what the sheriff said that day.

I did not think it necessary to ask if the money was paid to Mr. Drake or not. I paid that money from money that was presented to me for the purpose of paying the expenses of that suit. I knew previous to to-day that the money was paid to the hospital. I was not aware that the offer made by John Miles was made with reference to whole expenses of witnesses. He did not state any particular sum. I believe it was on or about the 12th day of June. I gave Miles to understand that I refused to take the money in the most peremptory manner.

(signed) *Edward E. Langford.*

William Culverwell, being duly sworn, says,—

Cross-examined by Mr. *Cary.*—I put an execution into your house by order of the Supreme Court; the writ was given to me by Mr. Drake; I told Mr. Cary that Mr. Langford wanted the sale postponed; Mr. Cary said he would be willing to oblige Mr. Langford.

(signed) *W. Culverwell.*

W. Culverwell re-called.

By Mr. *Langford.*—I remember coming to you on the 14th day of July; I remember seeing you pay Mr. Naylor about the sum of 97 *l.* 15 *s.* 5 *d.*; I believe I went with Mr. Naylor to Mr. Drake, and Mr. Naylor paid Mr. Drake the money; I cannot swear that no receipt was given; I did not see Mr. Drake take a pen in hand.

(signed) *W. Culverwell.*

William Brooke Naylor, being duly sworn,—

By Mr. *Cary.*—I received the money, 97 *l.* 15 *s.* 5 *d.*; I paid Sheriff Heaton his fees, and I paid the remainder to Mr. Drake: I took no receipt from Mr. Drake; Mr. Culverwell was in Mr. Drake's office at the time; I informed Mr. Langford that I paid Mr. Drake the money last Monday, before these proceedings were commenced. The only person I had dealings with in this matter was Mr. Drake; I had nothing to do with Mr. Cary; I did not know that Mr. Cary had anything to do with the execution; Mr. Langford could not have helped hearing me say that I had paid Mr. Drake the money.

(signed) *Wm. Brooke Naylor.*

KENNETH M'KENZIE, being duly sworn, says,—

I was offered the sum of two guineas; I did not receive it.

I have no recollection of the time it was since the trial; I was in my own parlour at the time.

Mr. Miles offered me the money; I never spoke to Mr. Cary about it; I offered to do whatever Mr. Munroe did; Munroe and I agreed that if Mr. Langford would not take the money, it should be given to the hospital. I do not know when it was; it was after the trial; I cannot swear if it was before or after the 12th of June. I do not know whether that money was paid to the hospital; I made no further inquiry about it.

(signed) *K. M'Kenzie.*

THOMAS G. WILLIAMS, being duly sworn, says,—

The copy of the judge's order (now produced) was issued from the Supreme Court. The copy produced is a certified copy of the defendant's bill of costs. I cannot remember who filed the copy.

Cross-examined by Mr. *Cary*.—I attended the taxation of costs personally. You did not attend the taxation of costs. Mr. Drake attended the taxation of costs.

The custom is to notify the defendant to attend, and he attends, or not, as he likes. The voucher produced was shown to me at the taxation of costs.

By Mr. *Cary*.—The bill of costs must of necessity be taxed previous to execution.

By Mr. *Langford*.—I invariably tax bills of costs when they are brought to me to be taxed. This bill of costs was laid before the chief justice.

(signed) *Thomas G. Williams.*

EDWARD H. KING, being duly sworn, says,—

I saw the bill of costs now produced in the registrar's office for the first time in the hands of Mr. Drake. Mr. Cary was most decidedly my attorney in the case of Langford *v.* King. I did not order any witnesses to be summoned on the trial. I never gave any instructions as to how the case was to be conducted. I never ordered Mr. Munroe to be summoned; I never employed anyone else in the trial but Mr. Cary; I did not know that these witnesses would be of any benefit to me.

(signed) *E. Hammond King.*

E. H. KING re-called.

I most decidedly believe that no one except Mr. Cary had anything to do with the case until long after the trial.

By Mr. *Cary*.—Mr. Drake was sitting in court with the papers. I had some conversation with Mr. Drake during the trial.

(signed) *E. Hammond King.*

A. G. DALLAS, being duly sworn, says,—

I received two guineas as a witness in the case of Langford *v.* King. I received it from Mr. Miles; I think it was about a week or ten days after the trial; I told Mr. Miles to hand it over to the hospital.

(signed) *A. G. Dallas.*

ALEXANDER MUNROE, being duly sworn, says,—

I never received the sum of two guineas in the case of Langford *v.* King; I think it was never tendered me. Mr. Drake asked me what my expenses were as a witness; I said I had not been put to any expense in the matter. Mr. Drake said I was entitled to two guineas as a fee; I said I did not want to have any fee. The money was never offered to me after that: a few days after that, Mr. Drake said that my two guineas had been paid to Mr. Miles. On that occasion I added that I did not want any fee; I never asked Mr. Miles for it; I never spoke to Mr. Miles on the subject.

By Mr. *Pemberton*.—I never had any understanding with Mr. M'Kenzie about the disposal of the fee. I did not intend to have any fee. This occurred shortly after the trial.

By Mr. *Cary*.—If Mr. M'Kenzie or Mr. Dallas had authorised Mr. Miles to give Mr. Langford back that money, I should have felt bound by their decision. If Mr. M'Kenzie

or

or Mr. Dallas had authorised Mr. Miles to pay that money to the hospital after offering it to Mr. Langford, I should have felt bound by that decision. I meant that I did not mean personally to enjoy it. I never had any interview with Mr. Cary. Mr. Drake served me with the summons to attend.

By Mr. *Langford.*—After I was told the money was in Mr. Miles' hands, I never troubled myself any more about it. I intended it should not be charged to Mr. Langford.

(signed) *Alexander Munroe.*

M. W. T. Drake, being duly sworn, says,—

The sheriff paid me the amount of the bill of costs in the case of Langford *v.* King from the sheriff. Mr. Cary, I feel certain, knew that the money was paid. I paid Mr. Cary his fees out of the sum.

By Mr. *Cary.*—After the trial of the case the professions were separated, and I became attorney in the case.

When the professions were separated I entirely conducted the case; I did not know Mr. Cary in it.

I did the whole of the solicitor's business in the case, and Mr. Langford's attorney attended on the taxation.

I acted as attorney in the case, under Mr. Cary's instructions, from the beginning. I caused the witnesses to be subpœnaed. I caused Munro, Dallas, M'Kenzie and Miles to be subpœnaed in consequence of information I gained while getting up the case for trial. Mr. Cary was only concerned in the case as counsel in court. I got up the brief. Among other costs there are fees for four witnesses; I paid the money to John Miles previous to the final taxation of costs. Mr. Dallas was absent at the time, and I thought it would be better to pay the costs to one man. Mr. Langford's counsel attended the taxation of costs, and did not object to anything in the bill of costs.

From the hearing of the cause down to the present time Mr. Cary has had nothing to do with the costs, nor did he know one single word about it. The person who filled the place of counsel filled that of attorney too.

Mr. Cary informed me I was to act as attorney in the case to get up the case. I fancy I had some casual conversation with Mr. King. I attended in court. Mr. Cary, I think, could not make a bill of costs. Mr. King was aware of my position, because he ordered me not to pay some of the money.

Mr. Cary had nothing to do with the costs whatever. I received the money, and paid the money to Mr. Miles. The note produced is in my handwriting, signed for Geo. H. Cary. Mr. John Miles was a witness. Mr. Wight raised no objection to the money being paid to one witness.

I was not employed by Mr. King. I never received any instructions from Mr. King. No one told me to summon those witnesses. I summoned them as the attorney, it being my place to get up the case in the best way I could.

I know the handwriting of the letter produced; it is Mr. Cary's. I was here on the 25th of January. I did the whole of the solicitor's business after the plea was filed.

(signed) *M. W. Tyrwhitt Drake.*

Information.

District of Vancouver Island and its Dependencies, to wit. } The information of Edward Edwards Langford, of Colwood, near Esquimalt, in the district aforesaid, taken this 1st day of November in the year of our Lord 1860, before me, Augustus F. Pemberton, Esq., one of Her Majesty's justices of the peace for the said district of Vancouver Island and its dependencies, who, being sworn upon his oath, saith: A judgment and execution was issued against me for the sum of 90*l.* 9*s.* 2*d.* or thereabouts, being the amount of a bill of costs charged by George Hunter Cary, acting as attorney and barrister for the defendant in an action Langford *v.* King, which bill of costs contains various sums of money charged as having been paid to sundry witnesses, the said witnesses never having been paid such sums as therein stated. And I further state that the sum of 97 *l.* 15*s.* 5*d.* was paid by me in satisfaction of the judgment and execution to the sheriff of Vancouver Island on the 14th day of July last.

On or about the 19th day of June 1860, I received a letter from George Hunter Cary, requesting the payment of the sum of 90*l.* 9*s.* 2*d.*, the amount of the defendant's taxed costs, and threatening to enforce immediate payment thereof. On the 17th of July last, I obtained from the Registrar of the Supreme Court an official copy of the taxed bill of costs of the defendant, E. H. King; in which, among other items, is a sum of two guineas charged as having been paid to one Alexander Munroe for his expenses as a witness. I have seen the said Alexander Munroe, and he has told me that he never received the said sum of two guineas.

 George

George Hunter Cary has, to the best of my belief, obtained the said sum of two guineas by false pretence, with intent to defraud me, and he knew the pretence was false. I believe the money was paid to G. H. Cary at Victoria.

(signed) *Edward E. Langford.*

Sworn before me, the day and date above written,

(signed) *Aug. F. Pemberton.*

— No. 7. —

(No. 4.)

No. 7.

Governor Douglas, C.B., to the Duke of Newcastle, K.G. 14 February 1863.

COPY of a DESPATCH from Governor *Douglas*, C.B., to His Grace the Duke of *Newcastle*, K.G.

Victoria, 14 February 1863.

My Lord Duke, (Received, 14 April 1863.)

* Page 17. † Page 16. ADVERTING to my Despatch, No. 44,* of the 23d August last, and to your Grace's Despatch, No. 101,† of the 2d June 1862, in which were transmitted for report certain letters from Mr. E. E. Langford, formerly resident at Esquimalt, Vancouver Island, containing statements affecting various officers of my Government, and the administration of justice within the Colony, I have now the honour to forward herewith a report from Mr. Cameron, the chief justice, upon Mr. Langford's complaint in respect of certain proceedings in the Supreme Court, accompanied by copy of minutes of evidence, and of the judge's notes of the trial in which Mr. Langford was concerned. I have also the honour to enclose the reports I have received from Mr. Begbie, the judge of British Columbia, and from Mr. Good, the chief clerk in the office of the Colonial Secretary of British Columbia, in reply to the particular charges preferred by Mr. Langford against them.

Enclosure No. 1. Enclosure No. 2. Enclosure No. 3.

2. Your Grace desires me, in forwarding these documents, to accompany them with my own observations. It seems to me, however, that the documents in question, when read with Mr. Langford's correspondence, and considered in connexion therewith, and with the report furnished by Mr. Cary, forwarded in my Despatch of this date, No. 3,‡ so clearly disclose the character and evident object of Mr. Langford, that it is unnecessary for me to occupy your Grace's time by adding the result of my general experience of Mr. Langford during the period that he was a resident of Vancouver Island; but I deem it right, nevertheless, to observe that when I appointed Mr. Langford a justice of the peace I had no choice of candidates. He was the first settler who could consistently be appointed to that office, and the circumstance upon which he lays so much stress, of having filled the responsible position of chairman of quarter sessions, was simply the result of his seniority; and I must also observe that had I been in possession of all the circumstances now disclosed, I should have felt it my duty, prior to Mr. Langford's departure from Vancouver Island, to strike his name off the commission of the peace.

‡ Page 18.

I have, &c.

(signed) *James Douglas.*

Enclosure 1, in No. 7.

Encl. 1, in No. 7.

Chief Justice *Cameron* to the Colonial Secretary.

Chambers, Court House, Victoria,

Sir, 29 January 1863.

I HAVE to acknowledge the receipt of your letter, dated the 5th day of August last, enclosing extracts from a Despatch dated the 2d day of June preceding, from Her Majesty's Principal Secretary of State for the Colonies, together with certain papers, enclosures to that Despatch, embodying certain allegations put forth by Mr. Edward E. Langford, affecting me personally, and the administration of justice in Vancouver Island generally. And also your subsequent letter, dated the 27th day of August, transmitting for my information copy of a further letter from Mr. Langford to His Grace the Duke of Newcastle, upon the subject

subject of his statement affecting certain of the officers of this Government, and requesting me to furnish you at my earliest convenience with any explanation which I may have to offer in the matter.

Pressure of business has, I regret to say, delayed my reply until now; but in reference thereto, I have the honour to observe that I have read Mr. Langford's statement, dated the 18th day of June 1861, and his subsequent letters, dated respectively the 21st day of May and the 5th day of June 1862, and, as far as their contents concern myself, that they do not much surprise me, as I have long before been vituperated in much the same manner, and, as I have reason to believe, at Mr. Langford's instigation.

I will confine myself to answering the most important of his charges, viz., those affecting the administration of justice, reserving those against myself for a separate communication.

His charges affecting the administration of justice may be considered first, as in his statement, that "the proceedings in Court at the trial were of an improper, illegal, and vexatious character;" and, second, his general assertion, as in his letter dated the 5th day of June, "that the purity of justice has been entirely overthrown in Vancouver Island, rendering the proceedings in the law courts in the Colony the theme of scorn and derision among the colonists, and also throughout the American territories in the Pacific."

My answer to the first is a most emphatic denial that any of the proceedings were improper or illegal. If he felt some of them vexatious, such a result arose only from his own misconduct. The exhibits transmitted herewith, viz., a copy of the record as entered for trial, marked (A.); a copy of the daily minutes of the proceedings of the Court, dated the 17th day of April 1860, marked (B.); and a copy of the Judge's notes of the trial, marked (C.), show what were the actual proceedings; and also whether the question which Mr. Langford refused to answer was "irrelevant or inquisitorial and harsh in its tendency, and which affected the interests of society at large."

My answer to the second is, that it would be a grave charge, were it true and supported by evidence of any credibility; but where is such evidence? it is certainly not known or heard of here, and he has cited none. I say, therefore, that this is a reckless assertion, more bold than true; and of as much value as the first charge, that the proceedings at the trial were improper and illegal.

I have, &c.
(signed) *David Cameron*, C. J.

(A.)

In the Supreme Court of Civil Justice.

The 8th day of February A. D. 1860.

Victoria, to wit.

Edward Edwards Langford, by George John Wight, his attorney, sues Edward Hammond King, who has been summoned to answer the said Edward Edwards Langford, by virtue of a writ issued on the 5th day of January in the year of our Lord 1860, out of Her Majesty's Supreme Court of Civil Justice of Vaucouver's Island, for that the Defendant heretofore, to wit, on the 3d day of January in the year of our Lord 1860, falsely and maliciously printed and published, in a hand bill, of and concerning the Plaintiff, the words and figures following; that is to say,

"To the Electors of Victoria.

"Gentlemen,

"Some injudicious person assuming my name has put forward, in answer to your requisition, a long-winded and spiteful address, containing many things which I, of course, should not like to have repeated; among other things, his Excellency's complaint that he was without any intelligent assistance when I was at his elbow; a statement that I required a a full discussion of the whole subject of taxation before I could form any opinion in reference to it; and other matters showing a shallowness of comprehension and an envious disposition which I really ought to be ashamed of.

"The easiest way for you, gentlemen, to judge of my merits is to make a short statement of what I am and what I have done.

"I came here about eight years ago, the hired servant of the Puget Sound Company, for the wages of about six dollars a week and my board and lodging; the privileges of board and lodging were also extended to my wife and family, in consideration of the Company having the benefit of their labour on the farm, of which I was to have the charge.

"I was brought out here at the expense of the Company; I was placed on the farm I now occupy, bought by the Company, stocked by the Company, improved by labour supplied by the Company entirely. In fact, I have not been put to a penny expense since my arrival in the Colony. The boots I wear and the mutton I and my family and guests eat have been wholly supplied at the expense of the Company; and I flatter myself that the Colonial reputation for hospitality, as displayed by me at the expense of the Company, has not been allowed to fall into disrepute. I have given large entertainments, kept riding horses, and other means of amusement for myself and my guests; in fact, I may say that

I and they have eaten, driven, and ridden the Company for several years, and a very useful animal it has proved, though its ears, gentlemen, are rather long.

"All this time I was and am the farm bailiff of the Puget Sound Company, at wages of 60 *l.* ($. 300) per annum and board, a position I value much too highly to vacate until I shall be kicked out of it. I have refused to render any account, any intelligible account, of my stewardship; in fact, I had kept no accounts that I or anybody else could make head or tail of. When requested to give satisfactory explanations, I told my owners pretty squarely that they should have no satisfaction except that usual among gentlemen; and as I knew nobody would call me out and pistol me, I commenced a system of abuse with which you are doubtless tolerably well acquainted, at the same time currying popularity with my farm servants by letting them eat and drink, play or work, just as they liked, which I could do cheap, as the Company pays for all.

"I am sorry to say, however, gentlemen, that although pretty jolly just now, I have not been careful enough to keep a qualification for myself for the House of Assembly, although I have run my owners many thousands of pounds in debt. However, I hope to bully them out of their property entirely; 'improve' them out of their land. How I propose to do this, seeing that all the land, capital, stock, and labour has been provided by them, is a secret. In the meantime, if I should not be fortunate enough to nail a qualification before the election, I shall do as I did before, hand in a protest against the grinding, despotic tyranny which requires a qualification at all, notwithstanding Runnymead and Rule Britannia. The House, I doubt not, will allow me to sit, and I shall be too happy to serve you as I have served my present employers.

"I have, &c.
(signed) "*E. E. Langford.*"

The Defendant meaning thereby that the Plaintiff had committed a breach of trust in refusing to render any account of his the Plaintiff's stewardship as the farm bailiff of the Puget Sound Company, and that he the Plaintiff was attempting, by improper means, to defraud the Puget Sound Company out of their land entrusted to him the Plaintiff as their farm bailiff; by means of the committing of which said grievance by the Defendant, the Plaintiff hath been and is greatly injured in his good name, credit, and reputation. To the Plaintiff damage of 2,000 *l.*

The 20th day of March A.D. 1860.

The Defendant, by his Counsel, George Hunter Cary, says he is not guilty of the said alleged grievance above laid to his charge, or any or either of them, or any part thereof, in manner and form as the Plaintiff hath above thereof complained against him. And of this the Defendant puts himself on the country. Therefore let a jury come, and let a jury try—

1st. Whether the said Defendant did falsely and maliciously print and publish the alleged libel of and concerning the Plaintiff.

2d. What damages the Plaintiff has sustained, if the Plaintiff succeeds on the first issue.

Afterwards, on the 17th day of April A.D. 1860, at Victoria aforesaid, before David Cameron, Esquire, Chief Justice, came the parties within mentioned, by the attorney and counsel within mentioned, and a jury of the said town being summoned also came, who, being sworn to try the matters in question between the said parties, after evidence been given to them thereupon, withdrew from the bar here to consider of the verdict to be by them given upon the premises; and after they had considered thereof and agreed among themselves, they returned to the bar here to give their verdict in this behalf. Whereupon the Plaintiff, being solemnly called, came not, nor does he further prosecute his suit against the Defendant.

Judgment signed 12th day of June A.D. 1860.

Therefore it is considered that the Plaintiff take nothing by his said suit, and that the Defendant do go thereof without day, &c. &c. And that the Defendant do recover against the Plaintiff 87 *l.* 6 *s.* 2 *d.* for his costs of defence.

(B.)

In the Supreme Court of Civil Justice.

Thursday the 17th day of April A.D. 1860.

E. E. Langford *v.* E. H. King.

THE following special jury were called, sworn, and empanelled to well and truly try the issue joined, to wit—

John D. Ewes, Foreman.	Alfred Fellows.
James M. Sparrow.	William B. Smith.
Benjamin P. Griffin.	Robert Homfray.
John Wright.	Frederick W. Wood.

Mr. *Wight* appeared as counsel for Plaintiff, and Mr. *Cary* for the Defendant.

The

The plaintiff was called and sworn on his own behalf, and thereupon testified, upon his cross-examination, he declined to answer certain questions touching his accounts with the Puget Sound Company, which had been audited by the proper person, and which audited accounts the plaintiff had produced at defendant's request. The court ruled that "the witness must answer the question," which the witness still refusing, the court ordered him into the custody of the sheriff. And the court then took recess until two o'clock p.m. Two o'clock p.m. the court met, the witness still remaining in contempt, and refusing to reply. Defendant's counsel moved for a nonsuit, which the court refused to grant; whereupon E. Hammond King was called and sworn on behalf of plaintiff. Witness was not cross-examined. Defendant then moved for nonsuit, but afterwards asked for a verdict, but before verdict was rendered, the plaintiff took a nonsuit.

Whereupon his Honor the Judge discharged the special jury.

The witness E. E. Langford being still in contempt, his Honor the Chief Justice ordered him to remain in the custody of the sheriff for 24 hours, and to pay a fine of 10 *l.*

The court then adjourned until Wednesday the 18th instant, at 10 o'clock forenoon.

I certify that the foregoing is a true copy and perfect copy from the minute book of the Supreme Court of Civil Justice under the above date.

Dated this 30th day of August A.D. 1862.

Thos. G. Williams, Registrar.

In the Supreme Court of Civil Justice.

Tuesday the 17th day of April A.D. 1860.

Edward Edwards Langford *v.* Edward Hammond King.

It is ordered that the plaintiff Edward Edwards Langford, for his contempt committed in the face of the court, in refusing to answer questions put to him on his cross-examination as a witness in this action, be committed to the custody of the sheriff for 24 hours, and further, that he pay a fine for his said contempt, to Her Majesty's use, of the sum of 10 *l.* of lawful money.

(signed) *David Cameron*, C.J.

(C.)

Copy of Judge's Notes, Tuesday the 12th day of April A.D. 1860.

Sittings Nisi Prius.

Record No. 1. Between *Edward Edwards Langford*, Plaintiff, and *Edward Hammond King*, Defendant.

Mr. *George John Wight* appeared for Plaintiff. Mr. *George Hunter Cary* appeared for Defendant.

Declaration for libel. Damages 2,000 *l.*

Special jury called, and sworn, at instance of Defendant:—

John D. Ewes, Foreman.	William B. Smith.
Frederick W. Wood.	James M. Sparrow.
Robert Homfray.	Benjamin T. Griffin.
Alfred Fellowes.	John Wright.

Mr. *Wight* opened and stated plaintiff's case to the jury, and then called as a witness the plaintiff.

Edward Edwards Langford sworn, and answers,—I am the plaintiff in this action; I reside at Colwood, in the district of Esquimault; I have been there nine years as bailiff of the Puget Sound Company, and entitled to one-third of the profits of the farm. I contracted with the Governor of the Hudson's Bay Company in London on the 11th day of October 1850, where I had been residing for two years. This is my contract. (Contract of Agreement betwixt Plaintiff and Puget Sound Company put in, and read to jury).

We arrived here and dropped anchor on the 9th day of May 1851. *I paid the greater portion of the passage money. *I paid 100 *l.* passage money and all the cabin fittings. *I landed on the 10th May, and reported myself to the agent of the Puget Sound Company. There was no other agreement as far as I can recollect. I have performed my duty under it as far as circumstances would allow. I have rendered accounts, and, as far as circumstances

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* The questions which produced these answers were objected to by defendant, on the ground that they were not relevant to the issue. Objections overruled, and questions allowed.

stances would allow, they have been admitted as satisfactory. In pursuance of the terms of my agreement I have rendered my employers correct accounts, and I am still in possession of my farm as their bailiff. Up to this time they have not demanded possession of the farm. They had done so previous to the arrival of Mr. Dallas, the writer of that letter (witness produced letter). As near as I can recollect it was two years or a year and a half before his arrival. I showed him all the correspondence between me and the agent here, and that I think he considered a full answer. I first became acquainted with the defendant in the latter part of the summer of last year. He was publisher of the "Gazette" and "New Westminster Times." The printing office is close to Langley's, in Yates-street. In the month of January last I had reason to go to the printing office of the defendant. He was there. There was a person with me, Mr. Bull, master of Her Majesty's Ship "Plumper;" I had a conversation with defendant; I said, "You have published an infamous lie concerning me;" he said, "I know I have, I am very sorry for it;" I said, "Of course you are aware that it is actionable;" he replied, "I am;" and he pointed to a corner where some of the placards were lying, and asked me if I wished for one; I said "No, I have one;" I then said, "You must tell me who the author of this is;" he said, "I can't do that," not in a very positive manner; I said, "I will give you an hour to consider;" he said, "Very well." At the expiration of the hour I returned to the office with Mr. Bull; he said, "I am very sorry, but I cannot give you up the author;" I then said, "I shall have to bring an action against you, and lay the damages at 2,000 *l.*" I have one of the placards (placard put in, and read to jury). Since that letter has been received (letter of Mr. Dallas to the plaintiff, dated 23 September 1859, also put in, and read), I have rendered my accounts. I have not seen the original of this placard in defendant's possession.

Cross-examined by Mr. *Cary*.—In May, June, or July 1851, I entered on Colwood farm. I received a notice to produce certain papers and books. I have not got my books of account. I object to produce them, as it might be objected to by my employers. I will not produce them as a favour. I produce the audited accounts made up from my books by the auditor of the Puget Sound Company. I came to Colwood in May 1851.

Witness here declined to answer.

Question by Mr. Cary.—What book does folio No. 2 refer to in that account (one of witness's accounts)?—I decline to answer.

Question repeated.—No answer.

Question. Will you or will you not answer my question?—I will not, positively.

Mr. *Cary* applied to the judge to enforce an answer.

Judge to Witness.—You must answer; there is nothing improper in the question, or your own counsel would have objected to it. You must remember that the defendant has a right to cross-examine on every relevant point, however disagreeable it may be, and which right he may call on the court to enforce.—Witness still declined to answer.

Judge to Witness.—There is nothing degrading in answering such a question; it is not irrelevant. The court has waived your production of your books because you say your employers might object, but as your answer to the question may be material to the defendant, he has a right to insist on it.—Witness still refused to answer.

Judge again to Witness.—You must know that a witness refusing to answer proper questions in a court of justice is guilty of a contempt, and liable to be committed.—*Witness.* I refuse to answer, at my peril.

Judge.—This is virtually daring the authority of the court. This is Her Majesty's court, and it is the judge's duty to uphold Her authority; I must therefore warn you that unless you give an immediate answer to the question, you will be committed to the custody of the sheriff.

The witness still refusing, the sheriff was ordered to take him in charge and bring him before the court at its rising in the afternoon.

The court then adjourned to allow jury to take refreshment; at 2 p.m. the court reassembled.

Mr. *Cary* now applied to the judge to direct a nonsuit to be entered on the ground of the misconduct of the plaintiff in refusing to answer questions on his cross-examination which were important to the defendant.

Mr. *Wight* opposed the application; he had not finished his case; he would call another witness; whereupon—

Judge refused to grant Mr. Cary's application.

Mr. *Wight* then called as a witness the defendant.

Edward Hammond King, sworn, and answers,—I am the defendant in this case; my printing office was in Langley-street in January last; I recollect the plaintiff coming to me in that month. I had a conversation with him. I don't know that the placard is a libel.

Question. Have you been served with a "*subpœna duces tecum*" to produce the original of the placard?

Objected to by Mr. Cary, on the ground that the question was irrelevant, as the witness, being the defendant in the action, cannot be obliged to produce a document that has nothing to do with the issue between him and the plaintiff, that being simply the publishing of an alleged libel, and not the authorship.

Mr. *Wight* replied, maintaining that he was entitled to an answer.

Judge.—The objection must be sustained, as the question is not relevant to the issue.

Mr. *Wight* then put in evidence a letter from Mr. Cary, as agent for the defendant to him (Mr. Wight) in which the publication of the placard was admitted.

Letter read to the jury.

Mr. *Wight* said that was plaintiff's case.

DEFENCE.

Mr. *Cary* began by saying that the strange conduct of the plaintiff made it his duty to apply to the judge before he opened the defence to the jury, to have the whole of the plaintiff's evidence struck out of his (the judge's) notes, on the ground of his refusal to be cross-examined, alleging that by doing so he practically denied the defendant a most important legal right, and which was essential to his defence, citing Taylor.

Judge.—The plaintiff's evidence is not very material as far as it goes, as the general issue, the only plea on the record, admits the printing and publishing, and only denies that the placard is a libel as alleged by the plaintiff, and that he has suffered damage to the amount of 2,000 *l.*; but even if it were very material, I cannot allow it to go to the jury without a cross-examination. Defendants have rights as well as plaintiffs, and it is the business of the court to hold the scales even between them. The plaintiff by his conduct has virtually denied the defendant the exercise of a right which the law gives him, and which is essential to secure a fair trial. He can have no reason therefore to complain if the court strikes out his evidence. In justice to the defendant this evidence must be struck out.

Mr. *Cary* then addressed the jury, stating that he would now call no witnesses, but leave defendant's case in their hands. They had witnessed the misconduct of the plaintiff. There was no evidence before them that his character was injured by the placard, or that he had sustained damage in any way; their verdict, therefore, he had no doubt must be for defendant.

Mr. *Wight* said he would not address the jury.

Judge began to sum up the evidence the jury had to consider, when

Mr. *Wight* said that under the circumstances he would now ask that plaintiff be at liberty to enter a nonsuit, which the judge granted, and the jury thereupon discharged.

Mr. Sheriff now brought the plaintiff into court as ordered.

He was asked if he had anything to say in extenuation of his contempt, and saying nothing, was ordered, that he be imprisoned for 24 hours, and pay a fine of 10 *l.* to the use of Her Majesty for his contempt.

The court was then adjourned until to-morrow, at 10 p.m.

Additional.—I had just left the bench and got into my chamber, when Messrs. Skinner, Yates, Meyers, and three or four other gentlemen literally forced themselves into it, and implored me to alter the order I had just made. They admitted that I could not overlook the plaintiff's conduct, but they said his wife was then dangerously ill, and if she heard that he was confined in gaol, it would very likely kill her. For this reason only they said they begged me to rescind the imprisonment to save her. I said that I had made the order in the performance of my judicial duty, and had been as lenient in awarding the punishment as was consistent with its object of deterring others from the commission of similar conduct. I did not therefore think that it was proper to rescind the imprisonment, but as I had no wish that Mrs. Langford should be injuriously affected by it, the order will be drawn up, directing the imprisonment to be in the custody of the sheriff, and as the term is so short, he may keep him in his own office like a prisoner arrested under a bailable writ. The gentlemen then left.

Enclosure 2, in No. 7.

Mr. *Begbie* to the Colonial Secretary.

Encl. 2, in No. 7.

Sir, New Westminster, 23 December 1862.

I HAVE the honour of acknowledging the receipt here, on the 29th ultimo, of your Despatch of the 28th November, enclosing a copy of a Despatch from his Grace the Duke of Newcastle, dated the 2d June last; and also a copy of a letter addressed to his Grace by Mr. E. E. Langford (late of Vancouver Island), and dated 18th June 1861, in which Despatch of the 28th November you request me to make for transmission to his Grace such statement as I may think proper with reference to Mr. Langford's assertions, connecting my name with the authorship of an alleged libellous placard.

I entirely deny Mr. Langford's right to have any answer from me at this time, on this subject. He has never before thought fit to interrogate me, either directly or indirectly. His only object evidently is to acquire, if possible, the means of continuing to annoy one or more persons for whom I feel a strong personal regard and esteem. He can now summon me, and always could have summoned me as a witness in any court of law. I decline now to answer him elsewhere after the line of conduct he has thought proper to pursue.

For the satisfaction of his Grace, however, and for his Excellency's information, I have, of course, no difficulty or hesitation in making the following statement. I am not aware how far such official communications can be considered as confidential. But I hope that this may be deemed a privileged communication, so far at least as that the original may not be produced in any court of law.

The only mention made of my name by Mr. Langford is where he states that Captain King, the printer of the placard in question, once told him that I was the author.

I have no doubt but that Mr. Langford is in this instance speaking correctly; and that Captain King did once tell him so. But it is also true, and true to Mr. Langford's own knowledge, that Captain King on various other occasions attributed the authorship to various other persons; all, I have no doubt, with equal confidence and sincerity, and equal ignorance of the truth; and I fully believe that were Captain King now alive, he would be just as ready to admit (as I believe the fact was) that he never had any knowledge at all on the subject. I am quite sure that neither he nor Mr. Langford ever had any grounds, except their own imaginations, for attributing it to me.

I observe that Mr. Langford himself makes no statement whatever as to his present or former state of belief on this point.

It is probably quite unnecessary for me to add anything to what I have already stated. But since Mr. Langford has thought fit to cause me to be applied to for information on the subject, it may not be out of place that I should state my view of the placard and its contents; especially as, by reason of my peculiar position in Vancouver Island, entirely unconnected with the administration, and holding no office or authority there of any description, and at the same time being on terms of personal intimacy with the officials, both of the Government and of the Hudson's Bay Company, and with many of the older settlers of the island, I had, perhaps, peculiar means of forming a correct estimate of Mr. Langford's position and conduct.

I am glad that, since Mr. Langford has thought proper to bring forward my name at all, he has connected it with a document not otherwise than creditable to its author. I do not know why that author should any longer wish to conceal his name (except for one reason, which I shall mention presently). The placard is a very temperately worded election squib. Notwithstanding Mr. Langford's insinuations, there is not in it one scurrilous epithet nor one insulting allusion directed against him or any of his family; nor has he ever, so far as I am aware, attempted since its publication to deny one fact, or to qualify one adjective contained in it. It is a dry statement of facts, which at that time were known to many people in the island, including, of course, Mr. Langford himself. And it would have been (with a few verbal alterations, and those not affecting him) a manly and decorous address for him to have really made to the public, instead of the address on which it is a parody. Undoubtedly, so plain a statement of undenied and undeniable facts took by surprise most of Mr. Langford's supporters at that time, who were previously in ignorance of his real position.

As to what Mr. Langford calls an insulting allusion to his family, I have been wholly unable to discover any such in the placard. The only allusion to his family appears to have been copied from a clause in his own sealed agreement with the Puget Sound Company, and is by no means insulting. Poverty is not (of itself) disgraceful, nor is it (in these colonies) an insult (except perhaps in Mr. Langford's opinion) to suppose that any person, man, woman or child, works for his daily bread. I have seen that agreement by which Mr. Langford bound himself in very stringent terms to be the working farm servant of the Puget Sound Company, and to be entirely submissive to the authority of the Company's agent here. That agreement is entirely in accordance with the statements in the placard. I have also seen Mr. Langford's letter to Mr. A. G. Dallas, the then agent of the Company here (now Governor of Assiniboia), refusing accounts, and couched in terms of insolence which, between persons of equal rank, would undoubtedly have tended to provoke a breach of the peace, but which, coming from a person in the position of a servant, and addressed to his master, were unnoticeable by Mr. Dallas, and simply prevented the possibility of any intercourse between master and servant, except on the terms of unconditional submission on the part of the latter. That unconditional submission, Mr. Dallas informed me, was at last yielded, and Mr. Langford, when he was enabled, by the, perhaps, weak indulgence of Mr. Cary, and by the charity of those around him, to leave the Colony, a man ruined by his own wilfulness, levity, and extravagance, expressed with many tears his contrition for his past misconduct, and his grateful sense of the undeserved mercy which the Company had extended to himself and his family.

The real author of the placard in question would probably have been avowed long ago, were it not that he would, if known, be exposed during Mr. Langford's life to every description of annoyance (except personal violence) from a man who has shown himself to be most unscrupulous, unreasonable, and litigious; capable therefore of inflicting a great amount of annoyance without the means of making the smallest compensation. And since Mr. Langford's departure, he, and the placard, the action for libel, and all the surrounding circumstances, have ceased to be of any interest to the public.

I would suggest that his Grace would derive more information concerning Mr. Langford and his grievances (which may be also taken, to some extent, as indicating the tone of some other colonial grievances), from a perusal of the placard itself, of Mr. Langford's agreement for taking service with the Puget Sound Company, and the witness of his Excellency, or of Mr. Dallas, or (probably) of any of the home directors of the Hudson's Bay Company, as to the truth or falsehood of the statements in the placard, than from any further observations of mine.

I have, &c.
(signed) *Matt. B. Begbie.*

To W. A. G. Young, Esq., Colonial Secretary.

Enclosure 3, in No. 7.

Mr. *Good* to Colonial Secretary.

Encl. 3, in No. 7.

British Columbia.

Sir, Colonial Secretary's Office, 23 December 1862.

I HAVE the honour to acknowledge the receipt of your letter of the 28th ultimo, forwarding copy of a Despatch from the Duke of Newcastle, with enclosure from Mr. E. E. Langford, late of Victoria, and calling upon me, as requested by his Grace, for any explanation I may have to offer on Mr. Langford's statement.

Before making any remarks upon that portion of Mr. Langford's complaint which affects myself, I think it necessary to call attention to an inaccuracy into which he has fallen in describing me as private secretary to Governor Douglas, and as an official of Vancouver Island, and on which assumption his cause of complaint is based.

I beg to state that I have never occupied any position, either as a paid or unpaid official, under the Government of Vancouver Island, my office from the first having been chief clerk in the Colonial Secretary's office for British Columbia, acting as private secretary to his Excellency the Governor only on the occasions of his absence in the interior of British Columbia. The ground, therefore, held by Mr. Langford in "making complaints of a serious nature against certain Government officials in Vancouver Island," is, in my case, at the outset untenable.

With regard to the particular charges against me, I have to state that they are by no means new to me, Mr. Langford having, prior to his leaving the colony, strenuously endeavoured to connect my name with the electioneering squib of which he complains. Upon one occasion, one of Mr. Langford's friends waited upon me, and demanded to know whether or no I was the author of the squib in question? I naturally declined to be catechised either by Mr. Langford or by his friends. Upon another occasion I was directly accused of being the author, and not only the author, but that I had also delivered the manuscript to the printer, and had performed the office of bill-sticker at an early hour on a Sunday; and it was then stated, as Mr. Langford now states, that the printer, Captain King, had given this information to him. Absurd as these allegations were, nevertheless I felt called upon to wait on Captain King, and to request him to explain his reasons for making these unwarrantable statements concerning me. He, in reply, assured me in the most solemn terms that he had never given any such information to Mr. Langford, and that Mr. Langford's assertion that he had done so was untrue. The whole thing then became apparent, and Mr. Langford's object was evident. The squib which appeared being, as I have since heard, almost a literal extract from his agreement as a farm bailiff with the Puget Sound Company, and generally a concise and not untrue account of his proceedings while a servant of that company, it was clear that the author of it must have been well acquainted with these matters, and therefore could be sought within a limited circle. In consequence, nearly every person so circumstanced was in turn accused of the authorship, either by Mr. Langford or his partisans, and by assuming what he was not warranted to assume, and extorting a denial, as I presume he hoped to do from each applied to, the circle would have been easily narrowed, and probably the real author at last arrived at.

Had Mr. Langford possessed a shadow of proof of my having inflicted upon him any wrong, he would not have failed to try and turn it to his advantage while in the colony; and it is evident that he now again brings up my name, designating me as private secretary to Governor Douglas, only to give a governmental character to a private electioneering squib, which I read at the time of its publication, which caused me a hearty laugh, and which, as a private individual, I must say I do not think was a very unseemly parody upon the pompous and silly effusion which was placarded over the town with Mr. Langford's name attached, and acknowledged by him as being his electioneering address. Fortunately for the good of the colony the parody in question was a death-blow to Mr. Langford's hopes of election and of place. Dismissed from his situation by the Puget Sound Company, his hopes of employment under Government for ever gone, the colony was no longer a home for him, and he became more embittered than ever against Governor Douglas and every one connected with his government; and when he left the colony he openly avowed his intention of seeking the aid of Mr. Fitzwilliam and other members of Parliament he knew by name, to have Governor Douglas and every one connected with him removed from office. These threats are more than ridiculous, but, in connexion with Mr. Langford's present accusations, they are significant; and I recently heard that Mr. Langford had admitted to a naval officer whom he met in England and had formerly known in Vancouver Island, that he was paid by some of his partisans here to hunt up (query manufacture?) information to the disadvantage of those in power in Vancouver Island.

I trust I may be pardoned for making these remarks. They might, perhaps, be deemed out of place by one at a distance, but to anyone acquainted with Mr. Langford, his character, history, and proceedings, I am sure they will be considered not inapposite to the subject of his complaint now referred to.

In conclusion, I would point out, as a general specimen of Mr. Langford's truthfulness, a letter I have recently seen published in the English newspapers, in which he not only

makes many wilful misstatements concerning his knowledge and connexion with this colony, having always been a resident in Vancouver Island, and I believe never in British Columbia at all, excepting a few days' visit to New Westminster, but he even confirms the monstrous and ridiculous falsehoods disseminated by D. G. F. Macdonald, in his late work upon the colony.

I have, &c.
(signed) *Charles Good*,
Chief Clerk, Col. Sec. Office.

— No. 8. —

No. 8.
Governor Douglas, C.B., to the Duke of Newcastle, K. G.

(No. 5.)

COPY of a DESPATCH from Governor *Douglas*, C. B., to His Grace the Duke of *Newcastle*, K. G.

Victoria, 14 February 1863.
(Received, 14 April 1863.)

My Lord Duke,

* Page 16.

REFERRING to that part of your Despatch of the 2d June 1862, No. 101,* which relates particularly to Mr. Cameron, the chief justice of this Colony, and to his antecedents, as brought to your Grace's notice by Mr. E. E. Langford, I have the honour to transmit herewith to your Grace copy of a communication from Mr. Cameron detailing matters connected with his early history, and rebutting Mr. Langford's representations that he was an uncertificated bankrupt prior to his coming to Vancouver Island.

2 February 1863.

† Pages 18—22.
‡ Page 13.

2. The documents which I forward in my other Despatches of this date, Nos. 3 and 4,† as well as those which were transmitted in my Despatch, No. 14,‡ of the 23d March 1860, relating to another serious complaint of Mr. Langford's when placed in contrast with Mr. Langford's statements and accusations, do, I think, lead to the inevitable conviction that Mr. Langford is a person wholly unworthy of credence, and one who is principally actuated in these representations against Mr. Cameron by malevolent feelings engendered through his having been very properly, although apparently too leniently, punished by Mr Cameron for gross contempt of court.

3. Under such circumstances, it would not be necessary for me to accompany Mr. Cameron's statement with further remark, but as your Grace desires to know whether Mr. Cameron's antecedents were known to me at the time of his appointment, and at the same time expresses an opinion that the period is approaching when it will be necessary that Vancouver Island should receive the services of a professional judge, it becomes incumbent upon me to review the circumstances under which Mr. Cameron became the chief justice of this Colony.

§ Page 37.

4. In my Despatch of the 7th January 1854, No. 2,§ I represented to your Grace that in consequence of the inexperience of the magistrates, and of certain irregularities in the proceedings of their court, it was found requisite to limit their jurisdiction in civil cases; and in order to provide for the wants of the Colony, to constitute a supreme court of civil justice, I selected to be the provisional judge of that court, Mr. David Cameron, who was undoubtedly the most fitting person I could obtain for that position, he being a man of good business habits, of liberal education, some legal knowledge, and what was equal to all, possessed of a more than ordinary amount of discretion and common sense. I would beg your Grace to note that Mr. Langford was then the senior magistrate in the Colony, and it is not unnatural to assume from subsequent events that Mr. Langford, forming his own estimate of himself, must have viewed Mr. Cameron's appointment to a superior position with much jealousy and heart-burning; and I may as well here state that I selected Mr. Cameron in preference to Mr. Langford, because an experience of nearly three years had shown me that Mr. Langford was singularly deficient in judgment, temper, and discretion, and was much inferior both in legal and general knowledge to Mr. Cameron. At the time I selected Mr. Cameron I was but very imperfectly acquainted with his early history, and had no knowledge of the circumstance of his having twice failed in business. My knowledge of him extended to the

fact

fact that he had given up the management of a large sugar estate in Demerara, where he was living in the enjoyment of every comfort, to accept an appointment in Vancouver Island, offered to him by Mr. Colvile, then governor of the Hudson's Bay Company, principally induced thereto by the opportunity it afforded him to seek a more temperate climate to benefit the failing health of his wife, since deceased.

5. In reporting the appointment of Mr. Cameron in my Despatch, No. 2, of the 7th January 1854,* I stated that he was not a professional lawyer, that he had accepted the appointment solely at my request, and only until a law officer could be appointed, a measure which I solicited might be early carried into effect. And in my Despatch, No. 42,† of the 11th December 1854, in reporting upon a memorial addressed to your Grace upon the subject of Mr. Cameron's appointment, I again observed that if Her Majesty's Government thought the appointment of Mr. Cameron improper, I had no wish to retain him in the position, and I requested that a judge might be sent out from England. I would remark that this same memorial was the production of a small but violent political clique, with whom were prominently connected Mr. Langford, and Mr. James Cooper, the present harbour-master of British Columbia, the particular grievance of the latter against my government being that the sale of ardent spirits without a licence had been prohibited, and that he, being a member of the Council, having become a retail vendor of spirituous liquors, I had brought the matter to the notice of the Council, and expressed my opinion that such proceedings were improper, and derogatory to the dignity of the Council.

* Page 37.

† Page 38.

6. The circumstances of the provisional appointment of Mr. Cameron must have been duly weighed by the Secretary of State, and I presume a favourable estimate arrived at of his abilities and fitness for the office, for by Mr. Labouchere's Despatch, No. 8,‡ of the 26th April 1856, referring to my Despatch of the 7th January 1854,§ and to the correspondence which had subsequently passed on the subject of the establishment of a Supreme Court of Civil Justice, I was informed that Mr. Cameron would be appointed Chief Justice, and a warrant for that purpose under the Royal Sign Manual was forwarded to me in Despatch, No. 9,‖ of the 5th May 1856.

‡ Page 45.

§ Page 37.

‖ Page 46.

7. In consequence thereof Mr. Cameron abandoned his employment under the Hudson's Bay Company, and devoted himself, as I can testify from actual knowledge, with the most untiring assiduity to the duties of his office.

8. On the 28th July 1857, in my Despatch, No. 25,¶ I requested instructions as to the amount and payment of the salary to be assigned to Mr. Cameron as Chief Justice of the Supreme Court. In reply, I was informed by the Secretary of State's Despatch, No. 14,** of the 6th November 1857, that the matter had been referred to the Hudson's Bay Company, with whom the decision was considered to rest. Mr. Cameron, however, continued to receive no larger salary than that attached to the office in 1853, viz., One hundred pounds (100 *l.*) per annum, until the 8th August 1860, when a salary of Eight hundred pounds (800 *l.*) per annum, payable from the land revenues of the Colony, was fixed by the Local Legislature for the Chief Justice.

¶ Page 42.

** Page 49.

9. The foregoing is a statement of the circumstances under which Mr. Cameron became the Chief Justice of Vancouver Island. It will be seen that he was originally selected by me on account of his being the only person near to me to whom I could with safety intrust the duties of a most responsible office; that I solicited that he might speedily be relieved from those duties by a professional judge; that Her Majesty's Government thought it desirable to retain Mr. Cameron in the office in which I had provisionally placed him; and not only so, but, unsolicited, to elevate him to the higher and more responsible office of Chief Justice; and I can most conscientiously say that during the period Mr. Cameron has discharged these responsible duties, I am not aware of one single act which would show his appointment to have been unwise or inexpedient. On the contrary, his high integrity, his firmness, discretion, and sound common sense, coupled with the most even temper and amiable manners, have been a source of much satisfaction to me.

10. Although

10. Although Mr. Cameron was not originally educated as a lawyer, yet I believe him by close application and study for a period of more than nine years to have acquired a knowledge of the profession that would compare favourably with the great mass of those regularly educated in the profession; indeed, I have on more than one occasion found his opinion, although at variance with that of members of the profession, to be correct; and so far as my own personal experience of Mr. Cameron is concerned, I can assure your Grace that although I was not, after the advent into the Colony of regularly qualified lawyers, at first disposed to place very great confidence in Mr. Cameron's opinions on points of law, yet I have lately very considerably altered my views in that respect.

11. However, should Her Majesty's Government still consider that a professional Chief Justice should be appointed, I will, if your Grace desires it, call upon Mr. Cameron to resign, and I have no doubt that he will, under such circumstances, be prepared to meet the views of Her Majesty's Government; but I presume that in such case Her Majesty's Government will grant him a pension in consideration of his services, and of his having abandoned a certainty in order to accept an appointment from which he is removed through no fault of his own.

I have, &c.
(signed) *James Douglas.*

Enclosure in No. 8.

Encl. in No. 8.

Mr. *Cameron* to the Colonial Secretary.

Chambers, Court House, Victoria,
2 February 1863.

Sir,

* Page 22.

With reference to my letter of the 29th ultimo,* concerning the charges preferred by Mr. Langford in the documents therein mentioned against the administration of justice here generally, and against myself personally, I have now the honour to say that, having given my answer in that letter to his charge against the administration of justice, I propose in this to answer his personal charges. These may be condensed into two, viz., first, that "I am a man of obscure origin, with no legal education whatever, and a very imperfect general one;" and, second, that "I was an uncertificated bankrupt in Scotland, and was some time afterwards discharged as an insolvent in Demerara, shortly before arriving in Vancouver Island."

To the first, I think it unnecessary to reply, as I consider the alleged obscurity a matter of indifference to everybody but himself, and the nature of my education to be best tested by the manner in which I have executed the duties of the high office which I have had the honour to hold since the year 1853.

To the second I must reply; on it he founds his case; but as, in explanation, I must go back many years, and refer to incidents of my early life, I must crave your indulgence if I should be tedious.

It is necessary to say that I was born in the autumn of the year 1804, and was started in the business of life as a cloth merchant in Perth by my relatives in the spring of the year 1824, that is, before I was 20 years of age. This, I believe, was done to check an inclination which I had early shown to go abroad. For two or three years everything went well; but I was young, and had not the caution of age. I was too liberal in giving credit. Some of my debtors failed; the value of goods fell considerably, and I was a great loser in consequence. From these causes I lost more than my capital, and felt it necessary to stop payment, and submit the state of my affairs to my creditors. They agreed to take a composition, payable by instalments, at a pretty long date. This credit was given to induce me to continue the business, but I was disheartened, and shortly after decided to wind-up and pursue my original intention of going abroad. The winding-up and settling the claims against me occupied another year or two; when completed, I finally left Scotland in the year 1830 for the Colony of Demerara. There I began life again as overseer on a sugar plantation. In 1838, I became owner of a small property on the river Essequibo, which I held for a few years. During this period, from the effects of emancipation, there were great difficulties with the labourers, who were fickle and unsteady in their labour, and almost every proprietor in the Colony suffered serious losses in consequence. I had my share; and after some vain struggles to overcome the loss, I surrendered this property, and everything else I then possessed, to satisfy the claims against it. There was, notwithstanding, a considerable residue of personal liabilities, which existed for years afterwards. My creditors, however, never pressed me; they were satisfied with my surrender. In the year 1850, a relative offered to demise some property for the benefit of my family if I got a legal discharge from these liabilities. This was the cause of the application to the Court in January 1851. I

was

was then managing a sugar plantation, with a fair income, and every comfort consistent with my position. This my creditors well knew, and yet not only was the application unopposed, but, if I remember right, the majority expressly gave their assent to my discharge. About two years after, and while still holding this management, I was surprised by the receipt of a letter from the late Mr. A. Colvile, then Governor of the Hudson's Bay Company, dated Hudson's Bay House, London, 1st March 1853, offering me an appointment at the coal mines, which had been then newly opened at Nanaimo, on this island. At that time I had not the slightest intention of leaving Demerara; however, after some consultation with my friends, and influenced principally by the failing health of my wife, who required a more temperate climate, I accepted the offer, arranged my business matters, and left that Colony with my family early in May following for this place, where we arrived in July 1853. Here I first met Mr. Langford. In December of that year I was appointed by the Governor and Council to the office which I now hold, with a salary of 100 *l.* a year. I then foresaw that this appointment would create a feeling of jealousy against me in the breasts of the other magistrates (as it was made in consequence of their having exceeded their jurisdiction), and entail, in the proper execution of its duties, far more labour than such a salary would compensate. I accepted it, however, simply from a feeling of public duty. I was not a lawyer (there were none in the Colony), but I had been conversant enough with courts of law to know what steps to pursue in organizing a court that would satisfy its wants and prevent abuses until some more competent person could be sent from England. As my first duty, I drafted a scheme for a supreme court of civil justice, which was adopted by the Governor and Council. On its publication, it was opposed by Mr. Langford, and the other magistrates, and by Messrs. Cooper, Swanston, and a few others, on the ground, I believe, that it took away the right of trial by jury, which I may here observe was not the case. Their efforts to have it superseded were unsuccessful in the Council, and what other, and underhand, proceeding they took to ensure success in another place it is not necessary for me now to state, as I believe they are to be found in the files of the Colonial Office in England. In 1856 the Governor received the Order in Council, constituting the present Supreme Court of Civil Justice, and Her Majesty's warrant, appointing me to the office of chief justice. I felt it very gratifying to be thus honoured, as it was unexpected, and in the face of the opposition to my original appointment, and resolved, although with some hesitation as to my knowledge, and the want of sufficient remuneration to support its dignity, to perform the duty thus anew devolved upon me to the very best of my ability. Since that time I have been before the public, and I may safely say that the manner in which that duty has been performed has met scarcely a caviller, except Mr. Langford. I have thus sketched my history at sufficient length to enable you to observe that my mercantile failure in early life was not of the nature charged by Mr. Langford. Unfortunate as it was, I never became a bankrupt, and, therefore, never was an uncertificated bankrupt. His own evidence (Mr. Reid's letter) shows conclusively that what I say is true; and, as to the circumstances stated in that letter, I may say that about 35 years have elapsed since their occurrence, and that although I know that I have a cousin of the name mentioned resident in Perth, that I never had any dealings with him of a pecuniary nature, and that, if he has any such claims, that he has never once thought it worth his while to apply to me for payment, although he well knew where I was resident in Demerara, and also where I have been resident since I came hither. This sketch will also shew you the care and art observed in making this charge, so as to raise at once a prejudice against me. Dates are withheld, and the events are made to run as it were in a natural sequence, so that the reader might jump to the conclusion that from the premises I must be unworthy. I hope, however, that what I have now written will remove such an impression, and will show that while Mr. Langford has not hesitated to suppress the dates and exaggerate the facts on which his charges are based, he has also carefully abstained from any allusion to conduct which gave rise to a second punishment for contempt. These charges, I must suppose, are the threatened consequences that were to fall upon my head if I dared to act regardless of his threat. The circumstances are these: on the meeting of the Court, on the day after the trial complained of, it was discovered that the sheriff had, in dereliction of his duty, let Mr. Langford out of his custody after a confinement of only two or three hours, and without payment of the fine, notwithstanding the order of commitment for 24 hours. The sheriff was in consequence peremptorily ordered to bring into Court the body of the prisoner committed to his custody by two o'clock that afternoon. This order the sheriff failed to execute; in its stead he produced a letter from Mr. Langford, copy of which is Exhibit (D.), in which he designates the proceedings of the previous day as vile and illegal, and threatens me with consequences if I dared to enforce the order of the Court. This I held to be so grossly insulting to the Court, and of so flagrant a nature, that I felt justified in ordering an attachment to issue. On it he was brought up, and ordered to enter into a recognizance, with sufficient sureties, to answer interrogations touching the contempt. Exhibit (E.) is a copy of these interrogations, and his answers. On these answers he was reported in contempt. Judgment, however, was deferred, as I well knew he could not pay a fine, and for the sake of his family refrained from again committing him to custody. He was, therefore, from a motive of lenity, and as a precaution against future misconduct, only held on his recognizance to appear for judgment at some future time. This kept him quiet until he left the Colony, when his sureties were discharged.

Such, sir, is my answer to Mr. Langford's personal charges. I have to apologise for its length, but I could scarcely tell the real facts of these unfortunate incidents of my early career more briefly. I have found it a painful task, and still more so, that I should be

obliged to do it at the instance of a man who was my near neighbour for several years, and whom I have never even thought of injuring in any way whatever.

I have, &c.
(signed) *David Cameron.*

(D.)

COPY of a Letter of *Edward Edwards Langford* to Chief Justice, and Indorsement thereon.

Sir, 12 o'clock, Esquimalt, 18 April 1860.

THE sheriff has just shown me an order to appear in court this day at two o'clock. From the state of health of my wife, as a man and a husband I shall not leave her. The effects of the *vile* and *illegal* proceedings of yesterday have had most evil effects, although she is yet ignorant of my having been committed to the common gaol. Should you insist on enforcing your order, the consequence will rest on your head.

I have, &c.
(signed) *E. E. Langford.*

To David Cameron, Esq.,
Chief Justice, &c. &c.

Received from the sheriff while sitting in Court on Wednesday the 18th day of April instant.

David Cameron, C. J.

Filed Friday the 20th day of April, A. D. 1860.

F. G. W., Registrar.

(E.)

In the Supreme Court of Civil Justice, April Term, in the 23d year of the reign of Queen Victoria.

VANCOUVER'S ISLAND.

The Queen *v.* Edward Edwards Langford.

INTERROGATORIES to be exhibited to Edward Edwards Langford, of Colwood, in the district of Esquimalt, Esq., the defendant, touching contempts supposed to have been by him committed against this Court.

First. What is your name, age, occupation, and where your place of residence?

Second. Were you in the Supreme Court of Civil Justice of Vancouver's Island on Tuesday the 17th day of April of this present year, A. D. 1860?

Third. Did you, when so being in the said Court, speak or use any contemptuous words concerning the Judge thereof?

Fourth. Did you, when so being then and there in the said Court, say to or speak of the Judge of the said Court, when he was sitting on the bench, these words, to wit, "I did not expect to get justice from you?" If not, what were the words concerning the Judge which you then and there used?

Fifth. Did you, on Wednesday the 18th day of the said month of April, write and deliver a letter to the sheriff's deputy, William Culverwell, at Esquimalt, superscribed and addressed David Cameron, Esq., Chief Justice, &c. &c. &c.?

Sixth. Did you write the words following in that letter, to wit, "the effects of the vile and illegal proceedings of yesterday"?

The above-named Edward Edwards Langford was sworn the 7th day of May, A. D. 1860, true answers to make to such questions as should be asked him on his examination on the above interrogatories, before me, at my Chambers, Court House, Victoria.

David Cameron, C. J.

Registrar's Office, Supreme Court.

Tuesday, 8th day of May, 12 o'clock.

BEFORE me, Thomas G. Williams, Registrar of the said Court, this day, comes E. Edwards Langford, of Colwood, in the district of Esquimalt, Esq., and in reply to the interrogatories on file, and copies of which are in the hands of the said respondent, to the first of the said interrogatories he having previously been sworn by the Chief Justice, to true answer make to such questions as said interrogatories contain, answering saith:

First. Edward Edwards Langford, age 50 years, bailiff to Puget Sound Company, residence Colwood, district of Esquimalt, Vancouver's Island.

Second.

Second. I was present in the Supreme Court of Civil Justice of Vancouver's Island, on Tuesday the 17th day of April, A. D. 1860.

Third. I did not, when so in the Supreme Court at said time, speak any contemptuous words concerning the Judge thereof.

Fourth. After Mr. Cameron had left the bench, I said, "Well, I did not expect justice, for even the Judge of British Columbia, Mr. Begbie, had stated, in a public room here, that the contents of the placard were true, for he had seen my agreement, and he (Mr. Begbie) had circulated the same opinion in British Columbia." These words, or words having the same import, were the words I believe I used on that day.

Fifth. I did write and deliver a letter to William Culverwell, sheriff's deputy, at Esquimalt, superscribed and addressed to David Cameron, Esq., Chief Justice, &c. &c. &c., or superscribed to the Chief Justice. I have no copy of the letter; I wrote it in a hurry, as the sheriff's deputy was waiting.

Sixth. To the best of my recollection I wrote the words "vile and illegal proceedings of yesterday," but I have no copy of the letter.

In further reply and explanation respondent states, that in the use of the word "illegal," he did not use it in a contemptuous sense towards the Court, but only having reference to the demand made upon him in Court to answer certain questions touching his accounts with the Puget Sound Company, which had been already audited and approved by them, and which it seemed to respondent it was illegal for him to further explain to the counsel of the defendant. And respondent further states, that as regards the use of the word "vile," referred to as being in said letters, it had reference to the conduct of the counsel for the defendant, whose general conduct through the trial was of an offensive and insulting character towards the Court, as instanced more particularly when the judge decided a point of law against him, he threw a book across the table in a contemptuous manner, pulled off and threw down his gown in Court, and rushed out of it, and was then led back again by Mr. Drake. This was stated to me; I did not see it, because I was in the custody of the sheriff at this time, but learned it afterwards upon the breaking up of the Court. Respondent also further adds, as regards the use of the word "illegal," that it referred to the striking out of respondent's evidence as a witness in the case then before the Court, which evidence had already been recorded, and had gone to the jury; that evidence and the letter of Mr. Cary admitting the publication of the placard being in respondent's judgment the proof of the publication of the placard by defendant, and as so admitted by the jury while sitting on the case. Respondent further saith, that as the plaintiff in the case, suffering a nonsuit in consequence of not answering the question proposed to him, and that, in addition to being fined 10*l.*, he was also thrust into a common prison, with felons and vile persons; that in his estimation such proceedings were calculated in addition to private anxiety caused by domestic sickness, to call forth the utterance of remarks that, under other circumstances, would not have been used.

Edward E. Langford.

The foregoing answers and explanations were read over to the respondent, and by him pronounced to be his answers and explanations to interrogatories filed and served upon him in case of Regina *v.* Langford, taken before me, at Registrar's Office, on Tuesday the 8th day of May, A. D. 1860.

Thos. G. Williams, Registrar.

— No. 9. —

(No. 8.)

No. 9.
Duke of Newcastle, K. G., to Governor Douglas, C. B., 5 March 1863.

COPY of a DESPATCH from his Grace the Duke of *Newcastle*, K. G., to Governor *Douglas*, C. B.

Sir, Downing-street, 5 March 1863.

MY attention has been again directed to the subject of the charges preferred by Mr. E. E. Langford in the letters which formed enclosures to my Despatches of the 2d and 19th * of June last; and I regret to be compelled to express my surprise that, being in receipt of these communications, which bring in question not only the conduct of certain public officers in Vancouver Island but your own, you should have contented yourself with furnishing such a casual and incomplete reply as that contained in your Despatch of the 23d of August last †, and have allowed the matter to rest from that date to the present time.

* Page 16.

† Page 17.

I have, &c.
(signed) *Newcastle.*

— No. 10. —

(No. 12.)

No. 10.
Duke of Newcastle, K. G., to Governor Douglas, C. B., 23 April 1863.

COPY of a DESPATCH from his Grace the Duke of *Newcastle*, K. G., to Governor *Douglas*, C. B.

Sir, Downing-street, 23 April 1863.

* Page 22.

I HAVE to acknowledge the receipt of your Despatch, No. 4,* of the 14th of February, enclosing reports by Chief Justice Cameron, Mr. Justice Begbie, and Mr. Good, chief clerk in the office of the Colonial Secretary for British Columbia, on the subject of the complaints which have been preferred by Mr. E. E. Langford, relating to an electioneering placard which was published in Victoria in 1859–60, and to proceedings in the Supreme Court of Vancouver Island, in an action for libel arising out of that publication.

23 April, page 11.

I annex a copy of the letter, in which I have caused my decision on the subject of Mr. Langford's complaints to be communicated to him.

While, however, I have declined to pursue an enquiry into the authorship of the placard complained of by Mr. Langford, I wish you to understand, and to make it understood by the Government officers of Vancouver Island and British Columbia, that an officer connected with the administration of justice is, in my opinion, bound to abstain scrupulously from all interference in party politics, and that other permanent officers of Government, though their duties are of necessity in some respects political, cannot, without injury to the public interest, be permitted to adopt that personal and aggressive mode of political warfare which is perhaps allowable to those who are not identified with the administration of affairs.

I must also add with reference to one sentence in Mr. Begbie's letter, that it is impossible for me to consider a communication addressed to me by a public officer, in answer to a charge made against him, as being in any sense confidential.

I have, &c.
(signed) *Newcastle.*

— No. 11. —

(No. 13.)

No. 11.
Duke of Newcastle, K. G., to Governor Douglas, C. B., 25 April 1863.

COPY of a DESPATCH from his Grace the Duke of *Newcastle*, K. G., to Governor *Douglas*, C. B.

Sir, Downing-street, 25 April 1863.

* Page 30.

I HAVE to acknowledge the receipt of your Despatch, No. 5,* of the 14th of February, enclosing copy of a letter from Mr. Cameron, the chief justice of Vancouver Island, in answer to the representations respecting his career previously to his arrival in Vancouver Island, which have been made by Mr. E. E. Langford.

Mr. Cameron's letter appears to me very straightforward and satisfactory.

I am not prepared at present to decide whether Mr. Cameron shall retain permanently the office of chief justice of Vancouver Island.

I have, &c.
(signed) *Newcastle.*

Correspondence with the Government of Vancouver Island, relative to the Appointment of Chief Justice Cameron.

DESPATCHES FROM THE GOVERNOR.

— No. 1. —

(No. 2.)

COPY of a DESPATCH from Governor *Douglas* to His Grace the Duke of *Newcastle*, K.G.

No. 1.
Governor Douglas to the Duke of Newcastle, K.G.
7 January 1854.

Victoria, Vancouver Island, 7 January 1854.
(Received 15 April 1854.)
(Answered, No. 8, 26 April 1856, p. 45.)

My Lord Duke,

I HEREWITH transmit for the information of Her Majesty's Government, copies of the proceedings in the Council of this colony from the 20th day of September to the 2d day of December last, inclusive.

Your Grace will observe that the attention of Council was drawn, in the first place, to certain irregularities in the practice of the Justices' Court, arising from the inexperience of the magistrates, which required amendment. It was therefore resolved to limit the jurisdiction of the Justices' Court, in civil cases, to such simple matters as our justices are competent to deal with, and to establish a Supreme Court of Civil Justice, with jurisdiction over the whole colony of Vancouver Island and its dependencies, in all matters of law or equity, where the amount in dispute is of the value of 50 *l.* sterling and upwards.

An Act to that effect, containing the rules and forms of pleading to be used in said court, was passed in Council on 2d day of December last, and David Cameron, Esq., was appointed judge for the time being, with a yearly salary of 100 *l.* sterling, and a sum was appropriated out of the proceeds of the duties on licensed ale-houses to meet that outlay.

A copy of the Act in question is herewith transmitted for your Grace's information, and I beg that it may be submitted to a law officer of the Crown for revision, as Acting Judge Cameron, by whom the rules were compiled, is not a professional lawyer, and accepted the appointment solely in compliance with my request, until a law officer for the colony is appointed by the Crown, a measure which, for the sake of the colony, and for my own relief from an unusual amount and variety of responsibility, I am desirous should be soon carried into effect.

We next proceeded to pass an Act imposing a small duty on timber cut upon the public lands, and restricting the exercise of that privilege to Her Majesty's subjects residing on Vancouver Island. The object of that Act is altogether protective, it being thereby intended to prevent the waste and destruction of timber on the public lands, and to throw the timber trade, as much as possible, into the hands of the actual colonist.

The other matters contained in the minutes now transmitted, relating chiefly to the charge for the board of pupils at the colonial school, and the scale of fees in the Justices' Court, will explain themselves, and I will therefore not detain your Grace with any further remarks.

Trusting that those proceedings may meet with your Grace's approval,

I have, &c.
(signed) *James Douglas*, Governor.

— No. 2. —

(No. 42.)

No. 2. Governor Douglas to Sir G. Grey, Bart., 11 December 1854.

COPY of a DESPATCH from Governor *Douglas* to the Right Hon. Sir *George Grey*, Bart.

Victoria, Vancouver Island, 11 December 1854.

Sir, (Received 27 February 1855.)

I HAVE the honour to acknowledge the receipt, on the 6th instant, of your Despatch No. 3* of the 20th August last, transmitting copy of a petition to the Queen, together with the copy of a memorial addressed to the Duke of Newcastle by certain inhabitants of Vancouver Island, complaining of the composition of the recently established Supreme Court of Civil Justice, and of other matters affecting the good government of the settlements on Vancouver Island, and your desire that I should furnish you with an early report upon those complaints, which I shall now do.

* Page 43.

The petition to the Queen, after the usual preamble, goes on to assert that the petitioners are "groaning" under grievances inflicted by the local government of this colony of Vancouver Island, "that there can be no sound basis for happiness amongst a people where the courts of justice are not pure, efficient and reliable;" then proceeds to state their wish "to have the laws of our country ably and impartially administered by men of integrity, ability, learning and experience;" and closes by entreating "that Her Majesty would graciously cause a strict inquiry to be immediately instituted into the circumstances of the recent creation of a court entitled 'The Supreme Court of Civil Justice for Vancouver's Island,' and the appointment of Mr. David Cameron, the Governor's brother-in-law, as judge of the same, and by declaring their belief that whilst it is allowed to continue, they cannot but complain of as an intolerable grievance, which they pray may be speedily removed."

In reporting on this petition, I am really at a loss how to treat the subject brought before Her Majesty for redress, or what to explain or what to defend, as the grievances alluded to in the petition are not stated, and I have carefully reported to Her Majesty's Government every step that has been taken by this government in the establishment of the Supreme Court of Civil Justice, and the reasons which led to the temporary appointment of Mr. Cameron as judge; and I trust it will appear that the sole object of those measures has been to maintain the purity and efficiency of the courts of justice, and to secure the impartial administration of the laws.

I, moreover, feel confident that no instance of neglect of duty in that respect can be justly laid to the charge of the Governor and Council of this colony.

I will now proceed to recapitulate, for your information, the causes which induced the Council to decide on establishing the Supreme Court. I have, on various occasions, informed Her Majesty's Government that, as Governor of Vancouver Island, I had no person of experience to advise or assist me in the administration of publie affairs, the entire onus and responsibility of which consequently devolved on me.

As a relief from the unceasing calls upon my time for the settlement of disputes between the colonists, I appointed in the month of March 1853, during Her Majesty's pleasure, four persons to fill the office of justice of peace in this colony, and it was decided that they should hold a petty session on the first Thursday of every month, and a general session four times a year, and to them I referred all disputes that properly came within the jurisdiction of a justices' court.

In the month of June following, I had occasion to call Mr. Skinner, one of the justices then appointed, to account for issuing a rash and ill-considered process, at the instigation of Mr. Webster, an American adventurer, who was striving to secure a monopoly of the timber exports from Soke District.

That person accompanied the constable, employed by Justice Skinner in serving the process, to the settlement at Soke. The constable there arrested, without any just cause, and at the suggestion of the said Webster, two vessels, one English and one American, which were taking in cargoes of spars, commanding the masters of those ships, in the Queen's name, to receive no more timber on board of their vessels.

On complaint being made to me by the said masters of that unjustifiable act, I ordered

I ordered the vessels to be immediately released from custody, and persuaded the sufferers to overlook the proceedings, which had evidently arisen from ignorance of the law, and not from malicious motives on the part of the magistrate.

In the month of September 1853, a case was tried here before the Justices' Court, which attracted much attention in this country.

It was commenced at the suit of the before-mentioned Webster, against the Muirs, an industrious family holding several hundred acres of land at Soke, and was decided in a very hasty manner against the defendants, who were condemned to pay damages to the amount of 2,213 dollars, besides the costs of suit.

The manifest injustice of that sentence, to which I soon afterwards called the attention of the Council, *see* Extract of Minutes of Council, 20th September 1853, transmitted with my Despatch, No. 2, of the 7th January 1854, deeply impressed upon my mind the necessity of limiting the jurisdiction of the Justices' Court to matters strictly within their province and legal experience, and of making a better provision for the administration of justice by establishing a higher court, where cases of importance might be carefully heard and investigated, proper records kept, and justice as much as possible be done to all parties.

In the meantime, until that measure was carried into effect, I appointed Mr. Cameron to the office of justice of the peace, and enjoined him to keep proper records of every important case, and to be careful in observing the forms required by law, which from the ignorance of the other magistrates had been previously neglected in the Justices' Court.

I was also induced to take that step by the proceedings of Mr. Webster, who encouraged by his former success, had commenced a fresh suit, founded on some frivolous pretext, against the unfortunate Muirs; a circumstance of which Mr. Muir, senior, with tears in his eyes, came to inform me: and strange as it may appear, after that addition to the bench, Mr. Webster decamped, and has never returned to this colony.

The establishment of a Supreme Court was thus in the first place suggested by the inefficiency of the Justices' Court, and was, moreover, rendered indispensable by the increasing wants of the colony, and the absence of any other court properly possessed of jurisdiction in civil cases. There is nothing unconstitutional in the nature of the Supreme Court, nor inconsistent with the practice of the Mother country, and of all other British colonies. The constitution and forms of pleading drawn up by Mr. Cameron, were transmitted in my Despatch, No. 2, of the 7th January 1854, for consideration and correction; and I, therefore, cannot conceive by what process of reasoning the authors of the petition could be led to suppose that a measure so manifestly intended for the protection of the subject, and the efficient administration of justice, could be intended as an invasion of their civil rights.

The temporary appointment of Mr. Cameron to the office of judge of that court might be so considered, as he has no doubt his faults like other men, but I am confident of his firmness and integrity, and fully convinced that he will not wilfully commit an act of injustice, nor decide on a point of law which he does not fully understand; and besides, there is no other disposable person in the colony so well qualified by experience or legal knowledge to fill the office which, were he suspended, must for want of a qualified person remain vacant.

I beg also to remark, that I have no wish to retain Mr. Cameron as judge, and will suspend the temporary appointment made to him should such be your wish; in that case, however, a judge should be sent out from England, otherwise the clamour will be equally great among the colonists, for the want of a properly constituted civil court.

The argument of the petitioners, founded on the fact of Mr. Cameron's being a servant of the Hudson's Bay Company, will apply with equal force to the other magistrates, as they are servants of the Puget Sound Company, and in a much more dependent position than Mr. Cameron; this, is, however, an unavoidable evil, as there are no qualified persons in the colony for such offices, except the officers of those companies.

The memorial to the Duke of Newcastle appears to be a mere repetition of the complaints set forth in the petition to the Queen.

My opinion of Mr. Cameron's character and capacity has been before stated.

I highly approve of his manly and fearless conduct in the administration of justice, and in checking neglect, and the careless discharge of duty on the part of his brother magistrates.

11 January 1854. He did so in consequence of my instructions; and the accompanying copy of an address forwarded to me, and signed by all the freeholders in the colony except two, will show that his services were appreciated by those who have really an interest at stake in the colony, and that they did not think with the memorialists that the appointment of Mr. Cameron would endanger either their property or their personal safety, or that "he had acted with notorious and gross partiality" in the capacity of justice of the peace.

Those charges against Mr. Cameron are, I believe, without any foundation in truth. Any parties so aggrieved had a right to appeal to the Governor and Council for redress, a right which is well understood, and the people here are not slow in using it, yet no appeal has ever been made to the Council against any of Mr. Cameron's legal proceedings.

The memorialists, in stating that the appointment of Mr. Cameron was hurried through the Council in one day, are evidently in error, as you may observe by copy of the Minutes of Council held on the 20th day of September 1853, transmitted with my Despatch, No. 2, of the 7th January 1854, which will show that the inefficiency of the Justices' Court, and the establishment of a Superior Civil Court, as a protection to person and property, were the subjects discussed on that day, the 20th of September, and that the Council adjourned, without coming to a decision, till the following 23d of September, when the measure, as it now stands, was finally decided on.

Mr. Cooper's complaint of having been "betrayed into acquiescence with Mr. Cameron's appointment" is, therefore, as unreasonable as his weak and vacillating conduct was unseemly at a time when he was bound to support the measures of Council, knowing them, as he admitted, to be necessary for the proper administration of justice, and solely intended to promote the best interests of the colony.

I really do not understand what the memorialists refer to in the closing paragraph of that document, as no attempt has been ever made "to deprive them of their just rights, or to require the sacrifice of their dearest interests, or to exercise over them a lawless and arbitrary power."

They have not ventured to specify their "real grievances," nor the wrongs inflicted upon them, "nor the grievances under which they are deeply suffering," neither have they ever stated them to me. I have, therefore, come to the conclusion that those grievances are less real than imaginary, a conclusion strengthened by the present prosperous state of the country. The people, moreover, appear happy and contented, the frugal and industrious are rapidly improving their condition in life; there are no taxes nor public burdens, the laws are justly administered, the means of education are extending, intemperance is on the decrease, and crimes are almost unknown; in short, since the departure of the Rev. Mr. Staines and his coadjutor Mr. Swanston, I have not heard a complaint from any person in this colony, except in regard to the sale price of land, which seems to be the only real grievance affecting the colonists generally, and that grievance I have no power to redress.

Mr. Staines, unfortunately for himself, was a violent party man, and was prudent neither in his conduct nor associations; the affidavit of William Conolly, herewith transmitted, does not give an exalted opinion of his loyalty or attachment to his country, seeing he was using his influence to encourage Her Majesty's subjects to take lands on the Arro Islands, under the United States, thereby aiding and abetting the contemplated encroachments of that Government on Her Majesty's territories.

I have, &c.

(signed) *James Douglas*, Governor.

Enclosure 1, in No. 2.

Victoria, Vancouver Island,

Encl. 1, in No. 2. May it please your Excellency, 11 January 1854.

1. We, the undersigned, holding landed property, or otherwise interested in the welfare of the colony of which you are Governor, beg leave to protest against the tenor of a petition

petition recently addressed to you, and praying you to annul the appointment of David Cameron, Esq., as Judge *pro tempore*, of a court of equity at Victoria.

2. We believe that but few of the subscribers to that petition have property at stake in the Island; that persons were instigated to sign it without having any real grievance to complain of, of whom not a few were absolutely unacquainted with the substance of the petition they signed.

3. We are convinced that you, with the advice of counsel, made the appointment in question, because you considered the institution of the office indispensable, and because you felt as we do, that David Cameron, Esq., a gentleman of business habits and considerable colonial experience, was the fittest man here of those not already professionally occupied to preside in such a court.

4. If that gentleman had committed any injustice, we presume, as a matter of course, an appeal to the Governor and Council would have met with proper attention, but so short was his tenure of office previous to the date of that petition, that he has had no equity cases to adjudicate upon, which circumstance alone must stamp the proceedings of the former petitioners as ill-advised and hasty in the extreme.

5. We are further of opinion, that if in this Colony, where there is perfect freedom of action, where life and property are as yet secure, where the market is so extensive and remunerative, and where the produce is so lamentably small, the labouring and industrious classes were to employ their time more in raising wheat and potatoes, constructing houses to live in, &c. &c., and suffer themselves less to be led away into discussions upon abstract political questions, all would gain by the alteration, progress become more decided, and foreigners and visitors, whose good opinion we respect, would say more for our common sense.

6. If the unreasonable clamour of a few individuals, who have little or no vested interest in the island, were found effectual to rescind important enactments framed expressly to protect property, we feel that law and order would be in jeopardy, and therefore sincerely hope that no personal feeling may induce David Cameron, Esq., to resign the duties of an office which we are satisfied he will do his best to exercise for the benefit of all.

7. Wishing your Excellency continued health and strength to govern with your usual forbearance and moderation, and with firmness and vigour when you are of opinion that the interest of the Colony require it,—

We beg to subscribe ourselves, with due respect to your person and office,

Your most obedient servants,

John Tod, Member of Council.	*E. E. Stuart.*
John Work, Member of Council.	*B. W. Pearse.*
Alexander Kennedy.	*George Simpson.*
Roderick Finlayson, Member of Council.	*Richard Golledge.*
William H. M'Neill.	*J. D. Pemberton.*
William F. Tolmie.	*Charles Dodd.*
William Leigh.	*Joseph Millar.*

And 40 other signatures, representing nearly all the landed proprietors in the Colony.

Enclosure 2, in No. 2.

Encl. 2, in No. 2.

WILLIAM CONOLLY deposeth, that on or about the 1st day of February 1854, that the Rev. R. J. Staines told him that he had no further need of his services, and asked him how he intended to employ himself, and that he told Mr. Staines he did not know.

He then inquired of Mr. Staines if he knew if San Juan Island was going to be given up to the United States Government. Mr. Staines replied he did not know how that would be, but that Colonel Ebey, the Collector of Customs in Washington territory, would be on San Juan Island in the following week, to take possession of it in the name of the Government of the United States.

He then consulted with Mr. Staines, and asked him if it would not be well for him if he went to San Juan Island, and took possession of some land before Colonel Ebey arrived, in order to secure the pre-emption right. Mr. Staines said it would be a good speculation, and seemed to wish him to go, saying that he would supply him with provisions, &c., enough for a month, to enable him to do so. Upon the 4th of February, Mr. Staines sent for him into his room, and in the presence of Mr. Swanston gave him an order upon the person in charge of the Hudson's Bay Company's provision store, for one bag flour, 2 lbs. of tea, 12 lbs. sugar, and 20 dried salmon, to proceed to San Juan Island with, and take possession of land.

(signed) *William Conolly.*

Taken before me,
(signed) *John Work*, Member of Council.

Witness. (signed) *Richard Golledge.*
Charles Dodd.

Victoria, 15th March 1854.

— No. 3. —

No. 3.
Governor Douglas to the Right Hon. H. Labouchere. 15 Sept. 1856.
* Page 46.

EXTRACT of a DESPATCH from Governor *Douglas* to the Right Hon. *Henry Labouchere*; dated Victoria, Vancouver Island, 15 September 1856 (No. 23).

"I HAVE the honour to acknowledge the receipt of your Despatch, No. 12* of the 8th of July last, transmitting copies of a correspondence with Mr. Robert Swanston, of San Francisco, relative to the selection of Mr. Cameron for the office of Judge of the Supreme Court of Vancouver Island.

"I feel deeply obliged for the highly becoming and pointed reply to Mr. Swanston's communications, of which you have favoured me with a copy, and appreciate the support thereby given to my administration.

"Mr. Swanston's friends are few in number, and certainly do not represent the respectable part of this community, nor their real wants and sentiments."

— No. 4. —

No. 4.
Governor Douglas to the Right Hon. H. Labouchere. 28 July 1857.

EXTRACT of a DESPATCH from Governor *Douglas* to the Right Hon. *Henry Labouchere*; dated Victoria, Vancouver Island, 28 July 1857 (No. 25).

(Answered, No. 14, 6 November 1857, page 49.)

"I TAKE this opportunity of requesting you to inform me of the amount of salary or emolument which Mr. Cameron is annually to receive from Her Majesty's Government, for his services as Chief Justice, and to direct how I am to draw for payment of the same.

"May I trust that Her Majesty's Government will take that matter into their early and favourable consideration, as Mr. Cameron is clearly a zealous and most useful public servant; and having no private fortune of his own, he naturally looks to his profession for the support of himself and family."

— No. 5. —

(No. 3.)

No. 5.
Governor Douglas to the Right Hon. H. Labouchere. 22 January 1858.

COPY of a DESPATCH from Governor *Douglas* to the Right Hon. *Henry Labouchere.*

Victoria, Vancouver Island, 22 January 1858.

(Answered, No. 2, 30 April 1858, page 49.)

Sir,

* Page 49.
† Page 42.

1. I HAVE the honour to acknowledge the receipt of your Despatch, No. 14* of the 6th of November last, in reply to my Despatch of the 28th of July,† in which I requested your instructions as to the amount and payment of the salary to be assigned to Mr. Cameron, the Chief Justice of the Supreme Court of Vancouver Island, and I observe that you have referred the question to the Hudson's Bay Company, with whom it appears the decision rests.

2. As Mr. Cameron received his appointment from Her Majesty's Government, and as it is obviously conducive to the best interests of the Colony, and to his efficiency as judge, that he should be placed in a perfectly respectable and independent position as to the emoluments of his office, may I request the support of Her Majesty's Government in favour of any measures having that object in view, which may be hereafter proposed by the Hudson's Bay Company.

I have, &c.
(signed) *James Douglas*, Governor.

DESPATCHES FROM THE SECRETARY OF STATE.

— No. 1. —

(No. 3.)

No. 1.
Right Hon. Sir G. Grey, Bart., to Governor Douglas.
20 August 1854.

COPY of a DESPATCH from the Right Hon. Sir *George Grey*, Bart., to Governor *Douglas*.

Downing-street, 20 August 1854.
(Answered, No. 42, 11 December 1854, page 38.)

Sir,

I HAVE to transmit to you the copy of a Petition to the Queen, together with the copy of a Memorial addressed to the Duke of Newcastle by certain inhabitants of Vancouver Island, complaining of the composition of the recently established "Supreme Court of Civil Justice," and of other matters affecting the good government of the Settlement, and I have to desire you to furnish me with your early report upon these complaints.

20 April 1854.

I have, &c.
(signed) *G. Grey.*

Enclosure in No. 1.

Your Grace, Victoria, Vancouver Island, 20 April 1854.

Encl. in No. 1.

A CATASTROPHE of the most melancholy kind has rendered it imperative on us, as a committee elected to act in the matters on which we have the honour of addressing you, by our fellow colonists, to wait upon your Grace with the prayers of the independent residents of this island for protection from the arbitrary and unconstitutional enactments of the present Governor.

Situated as we are at so great a distance from the Imperial Government, and feeling that the most certain and speedy way of laying a clear statement of our grievances before your Grace would be by securing the presence in England of some member of our community to whom we might entrust our cause, the colonists, at a meeting held on the 4th February ultimo, for the purpose of arranging the preliminaries of the proposed step, unanimously selected the Rev. R. J. Staines, Chaplain to the Hudson's Bay Company for this island, as the most proper person to proceed to England for the purpose of waiting on your Grace.

This gentleman, at the earnest request of the colonists, undertook the commission, and sailed hence for San Francisco, *en route* to England, on the 1st March (ultimo), but never, as it has pleased the Almighty, to reach his destination, the vessel having been discovered some short time since by a passing ship, in a water-logged state, and but one of the crew surviving to tell the sad state of his fellows.

Deeply regretting, as we do, the untimely end of one who had the interests of our infant community so much at heart, and than whom, none could more efficiently have depicted the crushing effect of the incubus under which our energies are paralyzed, we, at the same time, are so well assured of your Grace's earnest wish, as ever shown for the protection of the true interests of this Colony, that in laying before you the documents with which our delegate would have been charged, we do so with a perfect confidence that they will meet from your Grace every consideration and attention their importance entitles them to.

We have, &c.
(signed) *James Cooper*, M.C.
Edward E. Langford, J.P.
Thomas James Skinner, J.P.
Wm. Banfield.
James Yates.
Committee elected by the Colonists.

His Grace the Duke of Newcastle,
Her Majesty's Secretary for the Colonies,
&c. &c. &c.

Sub-Enclosures.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

Most Gracious Sovereign,

WE, your Majesty's most dutiful and loyal subjects, being inhabitants of the Colony of Vancouver Island, in approaching the foot-stool of your Throne, humbly beg leave to express

express our unshaken fidelity and devoted attachment to your Majesty's Royal person and family, and the constitution and laws of our beloved country, over which your Majesty so benificently reigns.

Groaning as we do under grievances inflicted by the local government of this Colony of Vancouver Island, we gratefully revert to the consolatory reflection that it has been your Majesty's gracious and wise disposition and practice to promote the real happiness of your subjects, and redress, as soon as known, their actual causes of complaint, which are indeed the great end and chiefest pleasure of the exercise of Sovereignty.

We trust your Majesty will not deem us guilty of impertinence in respectfully but emphatically asserting that there can be no sound basis for happiness amongst a people where the courts of justice are not pure, efficient, and reliable. We regard this as a fundamental maxim of government, unshaken and eternal.

It is our most anxious wish to have the laws of our country ably and impartially administered amongst us by men of adequate integrity, ability, learning, and experience, in whom we can repose our entire confidence, and towards whom we can cordially extend our deserved respect.

We, therefore, most humbly entreat that your Majesty would graciously cause a strict inquiry to be immediately instituted into the circumstances of the recent creation of a court, entitled "The Supreme Court of Civil Justice" for Vancouver Island, by the Governor and Council thereof, and the appointment of Mr. David Cameron, the Governor's brother-in-law, as judge of the same; which we, your Majesty's loyal and devoted subjects (as we now hereby solemnly declare that, whilst it be allowed to continue, we cannot consider our safety to depend upon our innocence, or the rectitude of our cause), cannot but complain of as a most injurious and intolerable grievance, a grievance which we humbly beseech your Majesty, for the good of your loving and peaceful subjects, and the sacred cause of justice, speedily, of your Royal goodness, to remove.

And your petitioners will, as in duty bound, ever pray.

(signed) *James Cooper*, M.C.,
and by 69 others.

Victoria, Vancouver Island,
1 March 1854.

To His Grace the Duke of Newcastle, Her Majesty's Secretary of State for the Colonies.

The respectful Memorial of the undersigned Inhabitants of the Colony of Vancouver Island.

Humbly showeth,

1st. THAT it is their anxious desire to call your Grace's serious attention to the circumstances attending the creation, by the Governor and Council of this Colony, of a court styled the "Supreme Court of Civil Justice for the trial of all causes in Law and Equity, when the amount in dispute is of the value of 50 *l.* sterling, and upwards," and the appointment as judge presiding in the said court of Mr. David Cameron, brother-in-law to the Governor of the Colony; for that if this appointment be allowed to stand, your memorialists cannot feel themselves safe either in liberty, in property, or in any other respect where safety depends upon the due and impartial administration of justice.

2d. That the said Mr. David Cameron, besides the improperly close family connexion with the Governor, is not a lawyer by profession, and has exhibited notorious and gross partiality, acrimony, malice and indecorum in the capacity of justice of the peace, to such a degree as to have roused the extreme disgust and indignation of the community, and to have brought contempt upon the judicial office; that he is, with the exception of the aforesaid display of his character, an utter stranger to the Colony, having arrived only eight months since from the former slave colony of Demerara; that the community know nothing to recommend him for the appointment save the family connexion before mentioned; that two of the four members of Council have acknowledged that it was solely to this circumstance that the fact of his appointment was owing.

3d. That, moreover, the said Mr. David Cameron holds a commercial situation as clerk of the Honourable Hudson's Bay Company's coal mines at Nanymo, transacting all the business of selling the coals from the said mines, in the transaction of which business, as might be expected, there have been disputes already, so that it might not improbably fall to Mr. Cameron's lot, as judge in a court of equity, alone to adjudicate upon contested cases in which he himself was a principal party.

4th. That this appointment was made on the 2d December last, in the midst of a case which has, through Mr. Cameron's means, obtained great notoriety, not only in the Colony, but in the neighbouring countries, wherein he laboured strenuously to defeat the ends of justice, convict the innocent, and screen the guilty, contrary to all the probabilities of evidence, and as it has accordingly turned out in the issue, contrary to all truth, an issue which was brought about only by the most unflinching opposition to his most vehement exertions on the side of knavery; an issue also which was contributed to by persons in the capacity of grand and petty jurors, from the mere strength of evidence, and the absolute intrinsic merits of the case; which persons nevertheless, being in the service of the Honourable

Honourable Hudson's Bay Company, and under the influence of the Governor in the capacity of chief factor and member of the board of management of the aforesaid Company, and having promotion in the Company's service at his command, have, contrary to the effect of their own finding and verdict on oath, signed an address, stating that they feel, as the Governor does, that he is the fittest person for the office of those not already professionally occupied.

5th. That his Excellency the Governor was informed, both by magistrates and in an address signed by a large number of the people, all interested in the welfare of the colony, and in the purity and efficiency of the courts of justice, of the illegality of the appointment, and of Mr. Cameron's personal unfitness, as proved by his conduct, for that office, even were the appointment not illegal; that he refused to listen to their arguments or remonstrances, saying that he did not recognise as colonists any persons who were not landed proprietors, and denying the right to speak on such a subject to men of intelligence, commercial interest, and industrious pursuits, who have come among us with the desire of permanently settling if they found the prospects good, but who would not blindly invest their property in land in the colony before they saw whether the administration of the Government were able, just and impartial, and whom the present system is accordingly, as your memorialists believe for the sake of securing a monopoly it was designed to do, driving away to seek in other lands a permanent home, and carry on their operations where they can dwell in safety.

6th. That the only member of Council who is unconnected with the company, and who was appointed M. C. by the former Governor, Blanshard, having unwittingly been betrayed into acquiescing in this appointment, from its being hurried through the Council, and passed all in one day, and having on reflection perceived its impropriety, had a personal interview with his Excellency the Governor on the subject, when he still persisted in maintaining the appointment, saying he would give way for nobody, and when it was mentioned to him that the people would probably address the Imperial Government, that they might do what they liked; that not satisfied with this effort, the same gentleman subsequently addressed to his Excellency a note, to which he has never received any reply.

7th. That your memorialists, not being able to give up in this way their just rights, not being ready to sacrifice their dearest interests to the overbearing and reckless assertion of a lawless and arbitrary power, wielded, as they think, not solely with a view to, and certainly not, they are assured, with an operation for, the benefit and credit of the colony, and being convinced that Her Majesty's Government needed only to be informed, with accuracy, of their real grievances, in order to redress them, in public meeting determined to appoint a representative to convey to your Grace personally, on their behalf, the statement of the wrongs inflicted upon them, and of the grievances under which they are deeply suffering, that they accordingly have appointed the Rev. R. J. Staines to this office, whom they have commissioned to express to your Grace how deeply they feel that this application to your Grace's sense of justice will be of the most decisive effect, for the weal or the woe of this colony, for its hopeful progress or its desperate retardation, this being, as they conceive, the critical point and period of its history; and finally,

That, relying on your Grace's readiness to do them justice as soon as you are made aware of their sufferings, they earnestly beseech your Grace, for that end, to inquire into all the facts and circumstances of the case, and subject them to the most rigid scrutiny.

And your Memorialists, as in duty bound, will ever pray.

(signed) *James Cooper*, M.C.,
and by 69 others.

Victoria, Vancouver Island,
1 March 1854.

— No. 2. —

(No. 8.)

COPY of a DESPATCH from the Right Hon. *H. Labouchere*, M.P., to Governor *Douglas*.

No. 2.
Right Hon. H. Labouchere, M.P., to Governor Douglas.
26 April 1856.
* Page 37.

Sir, Downing-street, 26 April 1856.

WITH reference to your Despatch, No. 2,* of the 7th January 1854, transmitting an Act passed by your Council to establish a Supreme Court of Civil Justice, and to the correspondence which has since passed on the subject, I now transmit to you an Order in Council for the same purpose.

2. Mr. Cameron will be appointed chief justice, and the warrant for that purpose will be transmitted to you with as little delay as possible.

3. Criminal jurisdiction has not been included. Your Despatch, No. 11, of the 25th July last, shows that you have not felt any difficulty as yet on this score, and as soon as you have assembled the lawful legislature of the colony, as directed by my Despatch, No. 5, of the 28th February last, you will be able to make such further provision for the purpose as you may consider advisable.

I have, &c.
(signed) *H. Labouchere.*

— No. 3. —

No. 3.
Right Hon. H. Labovchere, M.P., to Governor Douglas.
5 May 1856.
* Page 45.

(No. 9.)
EXTRACT of a DESPATCH from the Right Hon. *H. Labouchere*, M.P., to Governor *Douglas*; dated 5 May 1856.

"REFERRING to my Despatch, No. 8,* of 26th ultimo, I transmit to you, herewith, a Warrant under the Royal Sign Manual, authorising you to pass Letters Patent under the Public Seal of Vancouver Island, appointing Mr. David Cameron to the office of Chief Justice of that Colony."

— No. 4. —

No. 4.
Right Hon. H. Labouchere, M.P., to Governor Douglas.
8 July 1856.

Mr. Swanston.
4 January 1856.
C.O. 1 July 1856.

(No. 12.)
COPY of a DESPATCH from the Right Hon. *H. Labouchere*, M.P., to Governor *Douglas*.

Sir, Downing-street, 8 July 1856.

I TRANSMIT, for your information, copies of a correspondence with Mr. Robert S. Swanston of San Francisco, relative to the selection of Mr. Cameron for the office of Judge of the Supreme Court of Vancouver Island.

I have, &c.
(signed) *H. Labouchere.*

Enclosure 1, in No. 4.

Encl. 1, in No. 4.

My dear Sir, San Francisco, 4 January 1856.

I ARRIVED on the 29th ultimo from Vancouver Island, where I have been staying since I last addressed you; the residents, as a last effort to save the colony, have begged of me to apply in the strongest terms to you to exert what influence you can bring to bear in their favour; enclosed I send you such documents as they were enabled to furnish me with. The copies of the memorials to the Colonial Secretary, the House of Commons, and the Queen, forwarded last year, and of which you were to have been furnished with duplicates, having been in some way mislaid, it was decided to place you in the best position possible, and leave it to yourself to do what you can.

On my arrival at Victoria, I found that the colonists were so disheartened at the apathy and indifference shown by the Colonial Office in their grievances, that it required the strongest representations on my part to induce them to make one more effort, however weak, availing of your good offices; if one must die, it is well to die doing. The feeling existing in the colony is that the place is doomed; and there is every probability, if matters do not mend, of a general exodus shortly. I know of no fewer than six families who are preparing to leave this next summer. Once the move commences, it will be too late to attempt restoring confidence by any patching compromises.

I trust, that in writing you on the matter, and occupying your time, I am not taking any undue advantage of your kind offer of services in favour of Vancouver Island, and I sincerely hope that you may have the opportunity of doing something, however little, towards drawing the attention of the Government to that important place.

The colonists are all delighted at the idea of having convicts introduced, and they express themselves strongly as to the benefits likely to result to the island by such a measure.

The war is raging with unabated violence on the American shores of the Straits of Fuca; the farmers and their families have either been massacred or forced to fly into the little townships along Puget's Sound for protection. The Nisqually and Pugallup Indians (fishers) and the Klileatats and Yahemaspiane Indians are as yet the only tribes who have openly declared war, but they are using every effort of persuasion and intimidation to induce the adjoining tribes to side with them, and there is, I believe, but little doubt as to what will be the result of their machinations. As yet the Vancouver Island Indians are quiet, and apparently uninterested; but, from personal investigation, and through the agency of Indians in my pay, I have become cognizant of a state of feeling amongst them, which is not to be trifled with. The progress of the war is a matter of constant discussion with

with them, and the as yet successful efforts of the red skin is viewed with evident satisfaction; the Hudson's Bay Company have been furnishing the Americans with powder and arms, and also have tendered the use of their steamer on various occasions; this has not escaped the notice of the savages, and the belief is current amongst them at present that the King George Man (the British subject), and the Bostons (citizens of the United States), are allies, and that the ultimate destruction of the red skins is their object. The whites on Vancouver Island are placed in a very difficult position, a position that requires an abler man at the head of affairs than Mr. Douglas. *Nous verrons!*

I have been endeavouring to secure some Washington territory newspapers for you, but with small success. The call for volunteers there has been so urgent that editors and devils have been forced to take up the rifle and bowie knife, thus causing a cessation to the issue of "Gazette extraordinary." The accompanying newspapers from that quarter will, though somewhat soiled, I trust, not be unacceptable to you, and enable you to form a more correct idea of the state of affairs at the time of their issue than you can obtain by any other means.

The small bust herewith, though far from a favourable specimen of the talent of the Indian sculptor, will suffice to give you an idea of their ingenuity in the line. I have seen most beautiful work of this description by the Northern Indians, likenesses so striking as to be recognised at a glance.

The fall of the southern portion of Sebastopol was appropriately honoured here by the resident British and French; a medal was struck on the occasion, of which I forward you a specimen.

You will have noticed how successful our friend Walker is in Nicaragua; he showed wisdom in refusing the Presidency; the sympathy for him here is very strong; by every steamer volunteers flock to his standard; he has wealthy men at his back, as you may judge from the fact of an agent of his having within the last few weeks endeavoured to purchase a steamer, showing credits to the tune of 100,000 dollars.

Believe me, &c.
(signed) *Robert S. Swanston.*

Thomas Banister, Esq.,
5, Child's-place, Temple Bar.

Sub-Enclosures.

(No. 1.)

COPY of Enclosures, with Mr. *Swanston*'s Letter of 4th January 1856, to *Thomas Banister*, Esq.

My dear Sir, Vancouver Island, 20 December 1855.

THE accompanying letter to yourself, authorising you to inquire at the Colonial Office whether Her Majesty's Government are disposed to pay any regard to the prayers of the residents of this island, contained in the several documents fowarded to Downing-street in the early part of last year, and of which I herewith forward you copies, was presented to the five gentlemen who constitute the committee appointed by the colonists of this place, and was signed by three out of the five, to wit, by Messrs. Cooper, Yates and Banfield; the other two, Messrs. Langford and Skinner, though strongly approving of the measure, and thoroughly satisfied with the application to you, declined signing, because were it known to the gentlemen constituting the Honourable Hudson's Bay Company and the Puget Sound Company, it would seriously damage the interests of their families, and perhaps result in active measures against them which might entail ruin on those dependent on them.

No. 2.

You may thus judge of the crushing measures adopted by the Hudson's Bay Company against all efforts made to open the eyes of the Home Government to what is going on here. I cannot do better than conclude with a remark made last week by the senior Member of Council here, Mr. J. Tod, viz., that he was afraid of the Indians rising here *en masse*, as several tribes on the island who, ever since he knew them (for 20 years), have been leading a cat and dog life, have lately become firm friends.

I remain, &c.
(signed) *Robert S. Swanston.*

We have read the above, and vouch for the truth of what is therein stated.

(signed) *James Cooper*, M. C.
James Yates.

(No. 2.)

COPY of LETTER to *Thomas Banister*, Esq.

Dear Sir,

WE, the undersigned residents, colonists of this island, having been appointed a committee, at a public meeting held at this place on the —— February 1854, to draw up a petition to Her Majesty's Secretary for the Colonies, wherein we were to bring to the

notice of Her Majesty's Secretary the many disadvantages under which we are labouring, among the most prominent of which is the non-existence of a Court before which we can appear for the adjudication of cases in law and equity, and the necessarily great state of insecurity to our rights arising therefrom ;

And the said petition having been delivered in Downing-street now nearly two years since, and as we still remain in the same deplorable position, and as we have been informed how much you appreciate, and how thoroughly you are aware of the important position this island holds, beg to forward you copies of the memorials and other papers connected therewith ; and we pray you, should it be in your power, to aid us in securing the object of our prayers, and thus advance the interests of this portion of the British Empire.

We take this opportunity of drawing your attention to the bloody war that has just broken out at our very doors, between the American people residing in Washington and Oregon territories and the Indian tribes of those lands, and we trust you will be enabled to induce the Home Government to adopt such measures as may in some degree place us in a state to defend and protect our homes and families in time of need, as in the present position of the Colony we are most entirely helpless, and at the mercy of any hostile visit, being without the protecting presence of even one of the many of Her Majesty's ships which are now wintering at Valparaiso, Sandwich Islands, and San Francisco.

Though strangers to you, sir, we do not hesitate to pray your services in this our need, satisfied as we are that an Englishman is ever ready to hold out a helping hand to a brother countryman, more particularly when in so doing he is aiding to advance the power of their common country.

We remain, &c.

(signed) *James Cooper*, M. C.
R. Banfield.
James Yates.

(No. 3.)

To His Excellency *James Douglas*, Esq., Governor of Vancouver Island.

Sir,

We, the undersigned residents of Vancouver Island, having been made acquainted, through a proclamation issued by the local Government, and bearing date the 7th January last, that you have created a Court with powers exceeding those granted to the bench of magistrates who have hitherto dispensed justice, and that you have appointed Mr. David Cameron to the high position of judge of that Court, and have invested him with "jurisdiction over the whole Colony of Vancouver Island and its dependencies in all matters of law and equity where the amount in dispute is of the value of 50*l.* (Fifty pounds) and upwards," do most earnestly pray that you will well weigh and review the subject, and, taking into consideration our sentiments in the matter, will retract, before it is too late, a measure so obnoxious to the community at large.

You have appointed Mr. Cameron to a trust which, under all Governments, is reposed only in men of the highest repute for honour, honesty and impartiality—on men who, through a lifetime of unwearied and arduous application, have proved their ability in the honourable profession of the law—on men of the most acknowledged temperance and discretion, whose characters having been for years at the bar of public opinion, are adjudged worthy of the confidence of the country.

Mr. Cameron has barely resided six months amongst us, and in that brief space he has not so conducted himself as to have obtained the respect of the community ; he, during the short time he has officiated as a magistrate, has most signally failed in impressing us with a sense of his integrity and uprightness ; he has in that position proved himself most singularly rash and indecorous in his language ; he has exhibited the most profound ignorance of the duties attaching to the commission of the peace, and is totally void of the little practical knowledge necessary to conduct the business of a magisterial court, as have made him a laughing stock, and indirectly brought scorn on the proceedings of the whole bench of magistrates. And this man, with whose previous career none of us who are so deeply interested in the securing of upright magistrates, are in the slightest degree acquainted, you have invested with powers which, when even in the hands of the approved and chosen of a nation, are sometimes harmful ; we therefore most respectfully beg that you will, on reconsideration, alter your decision, and thus allay the painful excitement and alarm to which this proceeding has given rise.

We expressed our most unqualified satisfaction with the Court of Magistrates as originally constituted, and we do most unhesitatingly affirm that, in our opinion, the alteration that has been so lately effected in the hitherto existing arrangements of our courts of justice, will, in the present state of the country, but tend to serious inconvenience.

We at the same time do join most heartily in desiring that steps may be taken by the Government to obtain the assistance of a properly qualified legal adviser from England, whose duty, in addition to that of counsel to the local Government, will be to regulate and put upon a proper footing the courts of law of this island.

We have, &c.

Signed by 90 persons.

Enclosure 2, in No. 4.

Sir, Downing-street, 1 July 1856.

Encl. 2, in No. 4.

Mr. Thomas Banister, of No. 5, Child's-place, Temple Bar, placed in Mr. Labouchere's hands some month's ago, a letter which you addressed to the former gentleman from San Francisco on the 4th of last January,* requesting his intervention with Her Majesty's Government on behalf of certain inhabitants of Vancouver Island, who expressed themselves dissatisfied with the administration of justice there, and with the governor's selection of Mr. Cameron for the provisional office of judge. I am now directed to inform you that the representations therein made have not been overlooked by Mr. Secretary Labouchere, and that, in pursuance of a design for some time in contemplation, measures have been conpleted by Her Majesty's Government for establishing a Supreme Court of Civil Justice in the colony. For this purpose an Order of the Queen in Council was transmitted to Governor Douglas on the 26th of last April.

* Page 46.

With respect to the objection taken by certain inhabitants of Vancouver Island to the employment of Mr. Cameron in the capacity of judge, I am to inform you that Mr. Labouchere, having forwarded a copy of their memorial to the Governor, received from that officer a report which was, in his opinion, satisfactory; and that, in consequence, he has felt it his duty, in the absence of any more eligible person in the settlement, to recommend the Queen to nominate Mr. Cameron to the office of Chief Justice.

Mr. Labouchere trusts that the performance by this gentleman of his duties will be such as to remove any unfavourable opinion entertained of him in the colony.

I am, &c.
(signed) *J. Ball.*

Robt. S. Swanston, Esq.,
San Francisco.

— No. 5. —

No. 5.
Right Hon. H. Labouchere, M.P., to Governor Douglas.
6 November 1857.

(No. 14.)

Copy of a DESPATCH from the Right Hon. *H. Labouchere*, M.P., to Governor *Douglas*.

Sir, Downing-street, 6 November 1857.

* Page 42.

I have to acknowledge the receipt of your Despatch, No. 25,* of the 28th of July, in which you request instructions as to the amount and payment of the salary to be assigned to Mr. Cameron, the Chief Justice of the Supreme Court of Vancouver Island.

I have referred this question to the Hudson's Bay Company, with whom alone the decision rests, and they have apprized me that it is their intention to communicate with you on the subject by an early opportunity.

I have, &c.
(signed) *H. Labouchere.*

— No. 6. —

No. 6.
Right Hon. Lord Stanley to Governor Douglas.
30 April 1858.

(No. 2.)

Copy of a DESPATCH from the Right Hon. Lord *Stanley* to Governor *Douglas*.

Sir, Downing-street, 30 April 1858.

* Page 42.

I have to acknowledge the receipt of your Despatch of the 22d January, No. 3,* requesting the support of Her Majesty's Government in favour of any measure which may be proposed by the Hudson's Bay Company for defraying the salary of the Chief Justice of the Colony.

Having communicated with the Governor of the Company upon this subject, I learn from him that instructions (of which he has sent me a copy) were sent to you upon it in November last. It appears to be the opinion of the Company, from which I do not myself see reason to dissent, that it should devolve upon the local legislature to provide the means of defraying the salary of the Chief Justice, and I trust that you will be enabled to secure a proper provision for him from that source.

I have, &c.
(signed) *Stanley.*

Appendix.

APPENDIX.

No. 1.

No. 1.
T. Banister, Esq. to the Right Hon. H. Labouchere.
2 May 1856.

Thos. Banister, Esq., to the Right Hon. *H. Labouchere.*

Sir, 5, Child's-place, Temple Bar, 2 May 1856.

In consequence of my noticing the appointment of Mr. David Cameron to the office of Chief Justice of Vancouver Island, I have addressed a letter to the parties of that settlement who brought that gentleman's name under your notice.

A copy of that letter I take leave to enclose to you, and

I have, &c.
(signed) *Thomas Banister.*

Enclosure in No. 1.

Encl. in No. 1.

5, Child's-place, Temple-bar, London,
Gentlemen, 1 May 1856.

On the 29th of February last, I addressed Mr. R. S. Swanston on the subject of the petition to the Secretary of State (which was delivered at the Colonial Office now two years since), and the documents committed to my charge by Mr. Swanston at your request early this year.

Copies of the documents entrusted to me, as I therein stated, were placed by me in the hands of Mr. Labouchere; he told me they should have his consideration, and I have expected, not unreasonably, some communication from him thereon; no communication, however, has been made to me; but I perceive in the papers of yesterday, that a Mr. David Cameron has received the appointment of Chief Justice of Vancouver Island; and as I have ascertained that this gentleman is the person whose unfitness for high office you complained of, and brought under the notice of the Minister, I conclude that Mr. Labouchere not only attaches no weight to your petition, and to the statements contained in the documents placed in his hands, but that, to show his sense of the case, he submitted the name of Mr. David Cameron to Her Majesty, as belonging to a gentleman eminently qualified to do credit to the Bench as a lawyer and a gentleman, and therefore deserving of so high a trust as that conferred upon him by Her Majesty on his recommendation.

The Secretary of State would not thus have compromised himself and the British Government by his full approval of Mr. Cameron's judicial conduct and otherwise, if he believed there was substance in the charges brought under his notice by you and the colonists, whose interests are so deeply involved that the person filling such an office should be above reproach. It is clear the Secretary of State, with your remonstrances before him, is now responsible for his conduct.

Under these circumstances, it will be for you to consider what step it may be proper for you and the colonists to take. I can only regret that documents containing such heavy charges against Mr. Cameron should have been entrusted to me to lay before the Government unless there are sufficient grounds; I am bound to suppose from the act of the Minister, that there are not sufficient grounds, and thus it falls back upon you to maintain the charges or to abandon them.

Should you and the colonists therefore still be of opinion that the charges made and general allegations are true, and that their interests will be seriously affected, and the credit of the British Government compromised by Mr. Cameron receiving from the Crown, on the recommendation of the Minister, honour, when, as you allege, he merits the reverse, the only course which appears to me open to you is to get some Member of Parliament to bring the case before the House of Commons by petition, that British subjects may know that such wrongs to the community as those of which you complain, if supported by evidence, shall not be permitted to remain unredressed, though they may have been permitted to continue by the Minister through indifference, negligence, or from any other cause, even in so weak and remote a Colony as Vancouver Island and its dependencies, to the great scandal of the British Empire.

In conclusion, I beg to add that I shall transmit a copy of this to Mr. Labouchere.

I received a few days since a letter from Mr. Swanston, informing me that he was to leave San Francisco for the Navigators' Islands on the 5th of March, the date of his letter, and therefore I enclose this to the care of a merchant in San Francisco to be forwarded to you by the earliest opportunity.

I have, &c.
(signed) *Thomas Banister.*

James Cooper, M. C. Banfield, and
James Yates, Esqrs.

No. 2.

H. Merivale, Esq. to *Thomas Banister*, Esq.

No. 2.
H. Merivale, Esq.
to T. Banister, Esq.
16 May 1856.

Sir, Downing-street, 16 May 1856.

I AM directed by Mr. Secretary Labouchere to acknowledge the receipt of your letter, dated the 2d instant, enclosing the copy of one which you have addressed to Messrs. Cooper, Banfield and Yates, of Vancouver Island, relative to the appointment of Mr. David Cameron to the office of Chief Justice of that settlement.

I am, &c.
(signed) *Herman Merivale.*

No. 3.

J. Ball, Esq., M.P., to *Thomas Banister*, Esq.

No. 3.
F. Ball, Esq., M.P.,
to T. Banister, Esq.
1 July 1856.
*Page 49.

Sir, Downing-street, 1 July 1856.

I AM directed by Mr. Secretary Labouchere to enclose you the copy of a letter* which he has addressed to Mr. Swanston, of San Francisco, in consequence of the representation which you made to Mr. Labouchere in February last, relative to the affairs of Vancouver Island.

I am, &c.
(signed) *J. Ball.*

No. 4.

Thomas Banister, Esq. to the Right Hon. *H. Labouchere.*

No. 4.
T. Banister, Esq.
to the Right Hon.
H. Labouchere.
2 July 1856.
* Page 51.

Sir, 5, Child's-place, Temple Bar, 2 July 1856.

I HAVE had the honour to receive your letter of yesterday's * date, with its enclosure, viz., a copy of a letter addressed to Robert S. Swanston, Esq., and I hope I may be permitted to remark that it did not appear to me that the inhabitants of Vancouver Island expressed themselves dissatisfied with British courts of justice, but that they were with the conduct of the individual appointed to preside over those courts as Chief Justice. I anxiously trust the very high estimate you entertain of his abilities may be fully realised, otherwise I much fear that dissatisfaction may be manifested in a manner by no means agreeable to those administering the affairs of the Colonial Office in this country.

I shall feel it incumbent upon me to forward this reply, with your communication, to the gentlemen at Vancouver Island, inasmuch as Mr. Swanston having left that part of the world, as communicated to you by me in May last (on my noticing in the Gazette Mr. Cameron's appointment), the purport of your letter to him might be unknown to them, through him, for an indefinite period.

I have, &c.
(signed) *Thomas Banister.*

No. 5.

Thomas Banister, Esq. to the Right Hon. *Henry Labouchere.*

No. 5.
T. Banister, Esq.
to the Right Hon.
H. Labouchere.
16 January 1857.

2 November 1856.

Sir, 5, Child's-place, Temple, 16 January 1857.

I HAVE the honour to transmit you a copy of a letter I have received from Vancouver Island by the last mail, referring to the matter brought under your consideration last year at the instance of the colonists of that Colony. This communication acknowledges the receipt of a letter from me of the 10th of July 1856, referred to in the copy of my letter to them of the 8th of November last, a copy of which I beg also to transmit to you.

I have, &c.
(signed) *Thomas Banister.*

Enclosure 1, in No. 5.

Encl. 1, in No. 5.

Sir, Vancouver Island, 2 November 1856.

I BEG to acknowledge receipt of a communication received from you, dated 10th July 1856, and have to thank you on behalf of myself, and others interested, for the trouble you have taken.

A packet, addressed to you, was forwarded from this place in reply to your former letter, containing such evidence that we think conclusive to substantiate our just cause of complaint of the propriety of the appointment of Mr. Cameron to the very high office of judge.

The Colony of Vancouver Island under the present rulers is now at the lowest ebb; in fact, all who can wind up their affairs, are preparing to do so, myself among the number, for the colonists have lost faith with the Government, when, notwithstanding our remonstrances, such appointments are forced upon us.

It is my intention (God willing) to be in England next April or May, when I shall have much pleasure in waiting upon you.

I have, &c.

Thomas Banister, Esq. (signed) *James Cooper*, M.C.

To the letter accompanying the packet referred to in the above letter, I replied as follows:—

(No. 27.)

London, 5, Child's-place, Temple,

Gentlemen, 8 November 1856.

I HAVE had the honour to receive this day your letter of the 20th of September, to which is attached a copy of one from Mr. Cooper of the 23d of January 1854, as are also several other papers.

I find that your letter, though it acknowledges the receipt of my letter of the 1st of May, yet that my communication of the 10th of July, with its enclosures, had not been received by you. I think it important that I should have from you a reply to my letter of the 10th July, as you will then have had before you everything that has taken place in this matter before I communicate with any Member of Parliament.

It may also possibly occur that Mr. Cameron's course may have been such since the acts of which you complain (and I notice that they are of rather an old date), as to induce you to reconsider whether you will persevere in submitting that he is an improper person for the office which the Secretary of State, as I have informed you, has approved of his filling.

I wait your next letter with some anxiety, and I will act upon your wishes.

I should have preferred that the documents should have been officially verified by a notary public, or some official person, so that no exception could be taken against them, for it may be that a Member of Parliament may not like to present them supported as they are.

I remain, &c.

(signed) *Thomas Banister.*

To James Cooper, M.C., Edward E. Langford, J.P.,
William Banfield, James Yates, Thomas James Skinner, Esqrs.

Enclosure 2, in No. 5.

Encl. 2, in No. 5.

Sir, Downing-street, 31 January 1857.

I AM directed by Mr. Secretary Labouchere to acknowledge your letter and its enclosures of the 16th instant, relative to the appointment of Mr. Cameron as Judge of the Supreme Court of Vancouver Island.

I am also to acknowledge the receipt of your further letter of the 20th instant, on the subject of the establishment of a railroad through the British North American territories to the Pacific.

I am, &c.

Thomas Banister, Esq. (signed) *J. Ball.*

VANCOUVER ISLAND.

COPIES or EXTRACTS of CORRESPONDENCE between Mr. *Langford* and the Colonial Department, relative to alleged Abuses in the Government of *Vancouver Island*; of CORRESPONDENCE between the Colonial Department and Governor *Douglas*, referring to Mr. *Langford*'s Charges; and, of CORRESPONDENCE with the Government of *Vancouver Island* relative to the Appointment of Chief Justice *Cameron*, and the Remonstrances against such Appointment.

(*Mr. Fitzwilliam.*)

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THE

JOURNALS, DETAILED REPORTS, AND OBSERVATIONS

RELATIVE TO

THE EXPLORATION,

BY CAPTAIN PALLISER,

OF

THAT PORTION OF BRITISH NORTH AMERICA,

WHICH,

IN LATITUDE, LIES BETWEEN THE BRITISH BOUNDARY LINE AND THE HEIGHT OF LAND OR WATERSHED OF THE NORTHERN OR FROZEN OCEAN RESPECTIVELY,

AND

IN LONGITUDE, BETWEEN THE WESTERN SHORE OF LAKE SUPERIOR AND THE PACIFIC OCEAN

During the Years 1857, 1858, 1859, and 1860.

Presented to both Houses of Parliament by Command of Her Majesty,
19*th May* 1863.



LONDON:
PRINTED BY GEORGE EDWARD EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

4844. 1863.

JOURNALS, DETAILED REPORTS, AND OBSERVATIONS

RELATIVE TO

CAPTAIN PALLISER'S EXPLORATION

OF

A PORTION OF BRITISH NORTH AMERICA.

THE GENERAL REPORT.

13, Gate Street, Lincoln's Inn, London,
4th April 1862.

My Lord Duke,

Having heard from the Colonial Office that the Government have expressed their willingness to print "in extenso" the journals containing the details of my expedition for the exploration of British North America during the years 1857, 1858, 1859, and 1860, some extracts from which have been already presented to both Houses of Parliament by Her Majesty's command, in 1859 and 1860, I have the honour of laying before your Grace these documents, which have been prepared by me, with the aid of my colleagues, Doctor Hector, Mons. Bourgeau, and Mr. Sullivan.

In them will be found a complete narrative, not only of those portions of the expedition which fell to my immediate share, but also of the branch expeditions which I organized from time to time under the charge respectively of Doctor Hector and Mr. Sullivan.

I have, &c.

To his Grace the Duke of Newcastle, K.G.,
Colonial Office, Downing Street, London.

(Signed) JOHN PALLISER.

Introduction.

I propose in the following remarks, which are introductory to the journals and other detailed papers relative to the Expedition recently under my command, to give a short sketch of the physical features of the country explored, with especial reference to its economic value. These remarks will be principally based upon the facts and observations to be found in detail in the body of the Report.

The portion of British North America examined by the Expedition is contained between the western shore of Lake Superior, in longitude 89° W., and the Okanagan Lakes, in longitude 119° W., and extends from the frontier of the United States, in latitude 49° N., northwards to the sources of the chief rivers that flow to the Arctic Ocean. In other words, it embraces 30° of longitude, and in some places 6° of latitude. Some portions of this large extent of British territory were well described previously to the organizing of this Expedition, especially the neighbourhood of Red River, where the Selkirk Settlement is situated.

The district stretching from thence to the north-west along the valley of the Assineboine and the North Saskatchewan was also well known, from the Hudson Bay Company having for many years had a chain of trading posts or forts on that river at intervals of about 200 miles, established partly for the trading of furs, but mainly for the purpose of procuring provisions from the vast herds of buffalo, on which their more valuable trading posts in the northern districts depend for subsistence.

It is by the trail passing from fort to fort on this route along the North Saskatchewan river that the few emigrants have travelled, who, besides travellers connected with the fur company, have passed through the country on their way to cross the Rocky Mountains. The southern portion of the country along the South Saskatchewan remained, however, comparatively unknown.

Many years ago, indeed, the Hudson Bay Company had sent an expedition of a hundred men up that river and endeavoured to establish two trading posts; but after a very short trial the attempt was abandoned as too expensive and dangerous, owing to the menacing and often hostile tendencies of the Indian tribes who inhabit that district.

The information we possessed concerning the Rocky Mountains, and the extent to which they truly formed a barrier to the formation of a road across the continent in the most southern latitudes within the British territory, was extremely vague and unsatisfactory. The late Sir George Simpson had, indeed, described the crossing from the Saskatchewan to the source of the Columbia and several parties of emigrants from the Red River Settlement to Oregon, on the Pacific coast, were known to have crossed the Rocky Mountains, under the guidance of the late James Sinclair, by nearly the same route, taking with them not only horses, but also cattle. Nothing was, however, published as to the exact nature of the difficulties encountered by any of these parties, or whether or not these could be easily evaded or removed.

The United States' Government, since 1853, have sent a succession of exploring parties into different parts of the mountain country within their territory, with the immediate object of selecting the best route by which to carry a line of railway to connect the States on the Atlantic with those on the Pacific coast.

The reports and surveys of these expeditions already published fill twelve large quarto volumes, abounding with valuable information of every kind respecting the country, and embellished with views of the scenery.

No one of these surveys, however, offers a favourable prospect for the ultimate construction of a line of railway connecting the Atlantic with the Pacific, principally from the fact that in the central part of the continent there is a region, desert, or semi-desert in character, which can never be expected to become occupied by settlers.

It was, therefore, with considerable interest and anxiety that public attention was turned to our own territories, and the wish to have more exact information concerning their nature and resources induced Her Majesty's Government in 1857 to despatch the Expedition which I had the honour to command.

For my guidance in effecting these objects I received from Her Majesty's Secretary of State for the Colonies the following instructions:—

Sir, Downing Street, 31st March 1857.

With reference to the letter which, by my direction, was addressed to you on the 28th inst., I have now the honour to communicate to you special instructions for your guidance in the conduct of the Expedition for exploring that portion of British North America which lies between the northern branch of the River Saskatchewan and the frontier of the United States, and between the Red River and the Rocky Mountains.

Having completed all preliminary arrangements necessary for the future safety and success of the Expedition, it is the desire of Her Majesty's Government that you should proceed by the Soult St. Marie, on Lake Superior, to Fort William, and from thence by the Kaministaquoia as far as the Kakabeka falls, and that you should ascertain the precise geographical position of the point at which the White Fish River falls into the Kaministaquoia. From thence it is desired that a party should be detached to explore the country to the westward towards the height of land, and, as far as may be practicable without long delay, to determine the height and direction of the watershed for some distance on either side of the line due west from the White Fish River.

If this preliminary exploration should lead you to think such a measure practicable, it would be desirable that you should detach a small party, lightly equipped, and supplied with provisions for a few days' march, who should pursue a line directly to the westward, meeting the ordinary canoe route either at Cross Lake or Sturgeon Lake.

From the point at which this party shall rejoin the rest of the Expedition you will proceed by the ordinary route to Fort Garry on the Red River.

In regard to the entire region lying between Lake Superior and Lake Winnipeg, it is desirable that in addition to the ordinary observations upon the physical features and geology of the country, the attention of all the members of the Expedition should be directed, to ascertain the relative levels of all the points which can be recorded and laid down with topographical accuracy; as, for instance, the height of the falls and rapids on the streams which lie along the canoe route, and the relative height of the several points in the watershed between the above-mentioned lakes which may be visited by the Expedition. In case, as is probable, the botanical collector should not accompany the separate exploring party, information should, nevertheless, be obtained as to the nature and quantity of timber which may be found on the line of march.

From Fort Garry you will start, as soon as you have organized your party, in a west-

wardly direction, taking such a course as you shall consider most advisable for acquiring additional knowledge of the country on either side of the Bow River, or south branch of the Saskatchewan River, during the remainder of the season of 1857; and you will make arrangements in advance for wintering the Expedition at Carlton House, where you will meet Lieutenant Blakiston.

At the commencement of the season of 1858 you will start, as soon as the weather is sufficiently open and favourable, to explore the country between the two branches of the Saskatchewan River, and south of the southern branch, and thence proceeding westward to the head waters of that river, you will endeavour, from the best information you can collect, to ascertain whether one or more practicable passes exist over the Rocky Mountains within the British territory, and south of that known to exist between Mount Brown and Mount Hooker.

Great care must be taken that the Expedition shall return to Fort Garry in sufficient time to allow them to reach England, *viâ* Fort Pembina, and the United States, in the fall of 1858.

In the event of you yourself desiring to proceed westward from the Rocky Mountains to Vancouver's Island, Her Majesty's Government consent to your doing so, only under the express conditions that the homeward conduct of the Expedition can, with perfect prudence, be entrusted to the charge of Lieutenant Blakiston or Dr. Hector, and that the expenses of your travelling from Vancouver's Island are defrayed from your own resources; and further, that the Indian war now raging in the country west of the Rocky Mountains shall have terminated.

It being the desire of Her Majesty's Government that the Expedition should, as far as practicable, be made available for extending general as well as special scientific knowledge, I have to impress upon you the importance (in addition to maintaining a regular series of instrumental observations) of regularly recording the physical features of the country through which you will pass, noting its principal elevations, the nature of its soil, its capability for agriculture, the quantity and quality of its timber, and any indications of coal or other minerals.

Separate instructions will be furnished by Major General Sabine, Sir Roderick Murchison, and Sir William Hooker, for the guidance of the scientific gentlemen attached to the Expedition.

The result of your surveys and observations should be embodied in a journal of the Expedition, to be kept with the utmost practicable regularity. A duplicate of that journal, and of any special observations and reports on the geology and natural history of the country, should be completed at all convenient stations, and forwarded at every favourable opportunity to England, addressed to Her Majesty's Principal Secretary of State for the Colonies, Downing Street, London.

In full reliance upon your ability and discretion, Her Majesty's Government have not hesitated to entrust to you the conduct of the Expedition, with the express understanding that the scientific gentlemen of your party will consider themselves subject to your authority, and bound to be guided implicitly by the orders which your experience may suggest for the safety of the Expedition, and for the complete success of the objects for which it is undertaken.

In the event of any unforeseen accident which might deprive the Expedition of your services as leader, the command of the party may be entrusted by you either to Lieutenant Blakiston or to Dr. Hector, and you will furnish a duplicate copy of these instructions to whichever officer you may select for that purpose.

In conclusion, I cannot too earnestly impress upon you the necessity for the utmost caution in the selection of the line of route to be taken by the Expedition, and in avoiding all risk of hostile encounters with any native tribes who may inhabit the country through which you may pass.

I have to request that you will communicate to me, for the information of the Lords Commissioners of the Treasury, the mode in which the expenditure incurred by you while in the territories under the control of the Hudson's Bay Company is to be defrayed; and you will understand that the limits of expense prescribed for the Expedition cannot be exceeded, unless under circumstances of urgent necessity, which you will at once report for the information of Her Majesty's Government.

I have, &c.

H. Labouchere.

In compliance with the foregoing instructions, when the Expedition commenced the journey at Fort William, on the north-west shore of Lake Superior, I made additional preparations, besides those requisite for the long canoe journey, having for their object the examination of the White Fish River; but this river was found to be only a very

small stream flowing into the Kaministaquoia, at a distance of about 12 miles, in a direct line from its mouth, and totally unfitted for any purpose of navigation.

The general aspect of the northern shore of Lake Superior is precipitous and rugged. Around Thunder Bay, however, and extending for some distance up the valley of the Kaministaquoia there is a considerable extent of rich alluvial land, heavily timbered. The rise to the crest of the rocky district that forms the height of land is almost abrupt, to an altitude of 800 feet above Lake Superior, or 1,400 feet above the sea level.

The country which succeeds to the west and north is wild and rocky, but with no hill more than 300 feet above the general level, so that it cannot be called a mountainous region. It is intersected by long narrow lakes and innumerable watercourses, broken by ridges of rock, across which the traveller has to make tedious portages. The extent of the continuous water communication improves considerably as we descend to the west, and there are some large lakes which would be available for steam navigation in the event of the country ever becoming settled.

As a line of communication with the Red River and the Saskatchewan prairies, the canoe route from Lake Superior to Lake Winnipeg, even if modified and greatly improved by a large outlay of capital, would, I consider, be always too arduous and expensive a route of transport for emigrants, and never could be used for the introduction of stock, both from the broken nature of the country passed through, and also from the very small extent of available pasture. I therefore cannot recommend the Imperial Government to countenance or lend support to any scheme for constructing or, it may be said, forcing a thoroughfare by this line of route either by land or water, as there would be no immediate advantage commensurate with the required sacrifice of capital; nor can I advise such heavy expenditure as would necessarily attend the construction of any exclusively British line of road between Canada and Red River Settlement.

As regards the fitness for settlement of the district traversed by the canoe route, I beg to state that there are only very few and isolated spots where agriculture could be carried on, and that only by the discovery of mineral wealth would this region be likely to attract settlers. At present the considerable number of Indians living in it subsist by hunting, fishing, trapping, and trading furs to the Hudson Bay Company; but the fitness of the country for these pursuits is by no means a proof of its being so for those of civilized man.

The winter experienced in this district is severe but steady. From the commencement of November till May the whole country is icebound, so that vegetation is perfectly dormant. The spring is very lingering, owing to the great extent of surface occupied by the large lakes to the south-east, and by Hudson Bay to the north-east, as the slow melting of the ice which accumulates during the winter on these sheets of water keeps the temperature depressed until far on in the summer season. Thus, when crossing Lake Superior in the second week of June 1857, the Expedition encountered much cold weather, and got entangled in icefloes that were still drifting on the lake.

The summer temperature is high, but does not reach the same extreme as in Canada; its duration is, however, prolonged by the alternations caused by the influence of large land-locked sheets of water, which do not tend to produce an equalized climate like that on a sea-coast, but merely prolong the effects of the two half-yearly extremes of heat and cold.

The whole territory explored may be naturally divided into three districts, marked by different physical features. Concerning the first of them, the canoe route, it is not necessary for me to enter into further particulars, as it has been made the subject of a minute and able report (already laid before Parliament) by a Canadian Expedition, which had much greater facilities for making an examination of this region than my Expedition possessed. I shall, therefore, pass to the consideration of the central prairie region, and as this is for the purpose of agricultural settlement by far the most valuable portion of the territory traversed by the Expedition, and is also somewhat diversified in its character, I shall be warranted in entering more into detail upon this portion of my subject.

Immediately to the west of the rocky district already referred to succeeds a chain of lakes, the principal of which is Lake Winnipeg, which has the same altitude above the sea level as Lake Superior, viz., 600 feet. From these lakes to the Rocky Mountains the central region may be considered as a plain gradually rising until it gains an altitude of 3,000 feet at the base of the mountain chain. The surface of this slope is marked by steppes, by which successive and decided increases of elevation are effected, accompanied by important changes in the composition of the soil, and consequently in the character of the vegetation.

These steppes are three in number. The first may be said to spring from the southern shore of the lake of the woods, and, trending to the S.W., crosses Red River considerably south of the boundary line; thence it runs irregularly in a north-westerly direction towards

Swan River to meet the North Saskatchewan below Fort à la Corne. The general altitude of this first or most easterly prairie steppe may be estimated at 800 to 900 feet above the sea level.

The second or middle steppe, conterminous with the limit of the first just described, extends westward to the base of the third steppe, which may be defined by a line crossing the United States frontier not far from the "Roche Percée," in longitude 104° W.; thence passing in a north-westerly direction to near the elbow of the South Saskatchewan, and northwards to the Eagle Hills, west of Fort Carlton. The mean altitude of this second steppe is about 1,600 feet above the sea level.

The third and highest steppe extends to the base of the Rocky Mountains, and has a mean altitude of 2,700 feet.

The composition of the plains being, to a great depth, of soft materials, these steppes do not influence the river channels, so that the rivers rising in the Rocky Mountains traverse the plains with an uniform current, uncontrolled by the superficial features of the country. These rivers have, generally speaking, formed deep rather than wide valleys, their lateral extent being rarely proportionate to their steep and lofty banks; consequently, these valleys do not afford a great extent of alluvial land, or land of first quality, for agricultural purposes; and this is more particularly true of the western plain country, where the rivers traverse the higher plateaus.

The existence of a general law regulating the distribution of the woods in this portion of the continent suggested itself to us during our first summer's explorations, and subsequent experience during the seasons of 1858-9 fully confirmed it.

The fertile savannahs and valuable woodlands of the Atlantic United States are succeeded, as has been previously alluded to, on the west by a more or less arid desert, occupying a region on both sides of the Rocky Mountains, which presents a barrier to the continuous growth of settlements between the Mississippi Valley and the States on the Pacific coast. This central desert extends, however, but a short way into the British territory, forming a triangle, having for its base the 49th parallel from longitude 100° to 114° W., with its apex reaching to the 52nd parallel of latitude.

The northern forests, which in former times descended more nearly to the frontier of this central desert, have been greatly encroached upon and, as it were, pushed backwards to the north through the effect of frequent fires.

Thus a large portion of fertile country, denuded of timber, separates the arid region from the forest lands to the north, and the habit which the Indian tribes have of burning the vegetation has, in fact, gradually improved the country for the purpose of settlement by clearing off the heavy timber, to remove which is generally the first and most arduous labour of the colonist.

All the rivers which intersect the plains traversed by the Expedition east of the Rocky Mountains, with the exception of the Athabasca, flow into Lake Winnipeg and thence into Hudson Bay. The Athabasca, on the other hand, joins the McKenzie, which flows to the Arctic Ocean.

In describing the prairie country I shall successively treat of the lands adjacent to the different large rivers, not however with a view to scientific classification, but merely for the greater facility of indicating where lands fit for settlement are to be met with.

The most easterly stream flowing into Lake Winnipeg is the river of the same name. It flows wholly within the eastern rocky belt of country, and was descended by the Expedition with canoes on the way from Lake Superior. The country on both sides of this river is so rocky and covered with swamp as to afford but little extent fit for agricultural development.

Lake Winnipeg, which is the principal reservoir in which the waters of these rivers collect, has its outlet by Nelson River to Hudson Bay. It extends from latitude 50½° to 54½° N., but from lying somewhat obliquely, it is about 290 miles in length.

Its rugged eastern shore is principally composed of primitive rocks, while along the west the headlands are formed of beds of limestone, and the country in their rear is low and marshy.

Lake Winnipeg communicates with several other sheets of water, of which Manitoba and Wimpegoors lakes are the most considerable. None of these lakes are deep, and many parts of them are extremely shallow, but still they present fine stretches for future steam navigation, and from the facility of access which they give to the timbered districts they will doubtless prove of great value in opening up and settling the country.

Fish abound in these lakes, and the sturgeon of Lake Winnipeg especially often reaches a large size without losing its rich and delicate flavour.

Next in order comes the Red River of the North, so called to distinguish it from a river of the same name in the state of Arkansas.

Although this is not the largest, it is by far the most important river in this portion of the British territories, on account of the great extent of arable land which the lower portion of its valley affords for agricultural development, and much of which is already under cultivation by the inhabitants of the Selkirk Settlement.

Red River has its source in the same district of marshes and lakes, from which flows also the Mississippi. This district is situated in about lat. 46½°, long. 95° W., and is elevated 860 feet above the sea level. The course of Red River is slightly west of north to where it falls into Lake Winnipeg, in lat. 50½° N. and long. 97° W. After crossing the frontier at Pembina, in lat. 49°, it flows with a very serpentine course for about 140 miles through British territory. At 8 or 10 miles from the lake the land on the banks of the river becomes sufficiently elevated to be available for agriculture; it stretches back for many miles on either hand in fine rich savannahs or lightly timbered country. Indeed, the valley of Red River being rarely confined by lofty banks in any portion of its course, is valuable for settlement the whole way up stream and for a considerable distance south of the international line.

Of the prairies along Red River only narrow strips on the top of the banks have been yet brought under cultivation by the colonist, as there the land is naturally rather higher and better drained than that lying further in the rear, both from its proximity to the river and also from the frequent gullies cut in the soft clay soil by the numerous small creeks that carry off the surface water. These gulleys at present reach but a very short distance back from the river, but were they artificially extended so as to serve as main drains, much land at present covered by swamps and marsh would be reclaimed. As it is, however, these marshes are of considerable value to the colonist from the abundant supply of natural hay which they yield. The channel of Red River is from 50 to 60 feet in depth, but occasionally the floods in spring are so high as to raise the river above that level, and to inundate the prairies to a great distance on either hand, devastating the property of the settlers. These floods seem to occur at intervals of 8 or 10 years, the last having occurred in 1852, previous to one which has again damaged the settlement this summer (1861).

It is not improbable that these floods could to a great extent be prevented by attention to the state of the river channel, especially towards its mouth. Both Red River and its large tributary the Assineboine, bring down an excessive quantity of fine sediment that gradually fills up the channels wherever the force of the current is checked.

From this cause these rivers apparently increase in size for a course of years, till at last a flood in the upper country towards their sources happens at the same time that Lake Winnipeg is at a high level, or that its south end is blocked by ice in early spring. The result of this is, that the river, from the sluggishness of its current at its mouth, overflows the lip-like ridges which bound the channel, and submerges the lower country in their rear on either hand. During the remainder of the season in which the overflow occurs, the great body of water which thus accumulates only slowly escapes to the lake, and by keeping the river in high flood for a much longer term than usual, and until the level of the lake has fallen with the advancing summer, the channel is thus scoured out and a second flood is averted, until the river-bed has again been blocked up by the accumulation of sediment. Were this cleansing of the river channel effected artificially, so that there should be always a sufficient depth to allow the flood water to escape with the requisite velocity under all circumstances, the great calamity of periodic floods might be averted from this settlement, especially if these labours were combined with works for raising the banks of the river in a few places where they are below the general level.

Full details and statistics of the Red River Settlement have been recently published, and from the study of these, as well as from my own more limited opportunities for examination, I can entirely coincide in the hopeful views which have been expressed regarding the future development of this settlement as a British Colony.

Its position is, however, too much isolated for it to progress rapidly, unless some arrangement be made to allow of a secure system of traffic through or with the north-western United States, for there can be no question that the natural line of ingress to the country is from the south, by way of St. Pauls, Crow Wing, and Pembina. There are two routes from Crow Wing to Pembina, which is a distance of 310 miles; one of which can only be used in winter when the swamps are frozen. The other is somewhat longer, but as it passes out into the plains along the border of the Sioux Indians' country, it is sometimes dangerous for travellers unless they form a strong party.

A few years ago these roads were in a very bad state, being nothing more than trails, without any attempt at grading or constructing bridges where necessary.

The Hudson Bay Company have however now commenced to bring their goods for the fur trade into the country by this route, and a steamer plies on Red River as high as Grahams Point, which is about 230 miles above Pembina, in connexion with stage waggons

that continue the route to St. Pauls. The road has doubtless been much improved since I traversed it, and soon no greater difficulty will exist in gaining access to the Red River Settlement than to any of the more western towns of the United States which are not yet reached by railways.

With regard to the climate of the district of Red River and the Assineboine, we are in need of more complete and careful observations than have yet been obtained to justify our speaking with confidence on the subject.

It would appear, however, that the winter is somewhat shorter in this region than in that about Lake Superior. The average time for its commencement is in the beginning of November, and by the middle of the month all the lakes and streams are completely frozen, and the ground covered with snow, which lasts throughout the season.

The winter really lasts till about the second week in April, although during the month of March there are many warm genial days, with hard frosts during the nights; but, in addition to this period of five months, there is a previous frost of two or three weeks, preceding the freezing over of the rivers, and sufficiently severe to stop agricultural operations, so that the winter may generally be estimated at six months' duration. The extreme cold is in the month of February, when the thermometer sometimes falls to about 45° below zero. The winter is the most favourable time for the transport of heavy materials, such as those required for building purposes. Thaws rarely occur before the month of March; but, at this time, the existence of horses and horned cattle becomes precarious, owing to the thaws by day being succeeded by frosts at night, causing a crust on the snow, in many cases, too hard for the animals to remove in order to feed. The inhabitants, however, by the exercise of a little forethought during the previous autumn, might, without any difficulty, provide abundance of the finest natural hay from the adjacent swamps. Horses and cattle, if provided with a sufficiency of hay for only six or seven weeks, will not only survive, but continue useful and serviceable during the whole of the winter and spring. Spring progresses with great rapidity; in a few days snow disappears, and the new grass has already commenced to grow up by the beginning of May. At the end of that month agricultural operations may be commenced. During the month of June, however, severe night frosts frequently occur, rendering the wheat crops very precarious; but the climate is well suited to the growth of barley, oats, potatoes, and garden vegetables.

The heat during summer is very great, ripening all fruits rapidly with some curious exceptions; among these are apples, which will not grow on standard trees either there or in the north of the State of Minesota.

The harvest for hay, which is very abundant, commences in the beginning of July, and that for the cereals about the tenth of August. Great damage often occurs at this time to the crops from thunder storms, and also from grasshoppers (*i.e.* locusts).

The soil is that of an ancient lake bottom, consisting of variously proportioned mixtures of clay, loam, and marl, with a remarkable deficiency of sand.

It is overlaid by a great thickness of vegetable mould, varying from two to four or five feet in depth.

The settlement at present occupies an area of about 50 square miles in extent, its centre is at the forks of the Assineboine and Red River, in lat. 49° 52′ N., long. 96° 53′ W., and at an elevation of 800 feet above the level of the sea.

The chief wealth of the agriculturist would be derived from the rearing of cattle, large quantities of very nutritious grasses abounding everywhere, together with hemp, flax, and hops, which grow admirably. Between the Red River and the Saskatchewan, no river of any great size enters on the west side of Lake Winnipeg. There are indeed several streams which are navigable for boats, but these are merely channels of communication between various lakes.

The Assineboine, which joins Red River from the west at Fort Garry, rises in lat. 52°, nearly. Its course, of nearly 300 miles, lies wholly within fertile and partially wooded country. The upper portion of the valley has only a small extent of alluvial land of the finest quality, as the banks are lofty and steep, enclosing alluvial bottom of rarely more than $1\frac{1}{2}$ miles in width.

The land on the high level is, however, of considerable value in many places, with a prevalence of light sandy soil supporting bluffs of timber and rich pasture.

The lower part of the valley of the Assineboine, for 70 miles before it joins Red River, affords land of surpassing richness and fertility, to the extent of several hundred thousand acres.

The Assineboine is navigable to the Hudson Bay boats, which are 42 feet in length, and draw 3 feet of water, for a great distance, but the channel though deep is narrow and extremely tortuous.

During the spring floods, the channel of this river would be more direct, and then a steamer of light draught (I have been informed) might ply at least as far up as Fort Ellice.

The Saskatchewan enters Lake Winnipeg near its northern extremity, in lat. 53° N., nearly; and with the exception of two or three rapids, might be navigated by steamers in summer to within sight of the Rocky Mountains.

Its general width is about 300 yards; unfortunately a very serious impediment to navigation occurs at its mouth, where there is a very formidable rapid called "the Grand Rapid." Here the river makes a descent of 40 feet in less than 3 miles, and actually foams through a rocky channel. This rapid would form an obstacle to the ascent of steamers; how far surmountable by a reasonable outlay of capital I am not prepared to say, but I think it highly probable, since there is no want of depth of water in the channel of the river at the rapid, that steamers could be made to ascend it by the American plan of warping.*

A second small rapid occurs below Fort Carlton, where the difficulty to contend against would be an insufficiency of depth in the channel at that spot. The other rapids are but trifling obstacles, and, if removed to a sufficient extent, the river would be available for steam navigation during the greater part of the months of May, June, and July.

The lower or main Saskatchewan River, below the confluence of the north and south branches, (or North and South Saskatchewan, as I shall in preference term them,) flows entirely through thickwood country, which is often low and marshy, and does not properly fall within the prairie region explored by the Expedition.

The North Saskatchewan has its source from glaciers in the Rocky Mountains, in latitude 52° N., and longitude 117½° W., and from the same ice-filled valleys also rise branches of the South Saskatchewan and the Columbia. At first the North Saskatchewan has a north-easterly course until it reaches the Snake Portage in latitude 54° and longitude 111°, half-way between Fort Edmonton and Fort Pitt. It then changes to a south-east direction, which it pursues until it reaches latitude 52° 20′ at its "Elbow," where it changes its course again with a sudden bend, and flows to the N.E.

It is a singular phenomenon, which may be observed by a glance at the map, that all the large rivers of the plains, and many of the smaller streams also conform to these great and abrupt deflections from their general direction.

From the Rocky Mountain House to Fort la Corne, the North Saskatchewan traverses the plains in a valley that varies in depth from 100 to 300 feet, and never exceeds two miles in width. The greater part of this width is occupied by alluvial flats, the river itself rarely exceeding 400 yards in width. The alluvial flats, which form the finest quality of land in this part of the country, are often well timbered, but from the manner in which the river winds from side to side of the valley, the "points," as they are termed, are seldom more than two or three miles in extent.

Wherever the banks of the valley slope gently back to the higher prairie level, as at Fort Carlton, there are to be found the most desirable spots for settlement. By inspecting the map it will be observed that the general course of the river is bounded by hills which sometimes recede to a considerable distance. These hills rise two to four hundred feet above the general level, and skirting along their base there is often to be found areas of land of fine quality, while the whole distance, sometimes equal to 30 miles between the hills and the river, is fine grazing land, and as it all lies within the limit of the partially wooded belt of country, there are "bluffs" that will afford shelter to stock.

The richness of the natural pasture in many places on the prairies of the second level along the North Saskatchewan and its tributary, Battle River, can hardly be exaggerated. Its value does not consist in its being rank or in great quantity, but from its fine quality, comprising nutritious species of grasses and carices, along with natural vetches in great variety, which remain throughout the winter sound, juicy, and fit for the nourishment of stock.

Almost everywhere along the course of the North Saskatchewan are to be found eligible situations for agricultural settlement, a sufficiency of good soil is everywhere to be found, nor are these advantages merely confined to the neighbourhood of the river; in several districts, such as N.W. of Carlton, we traversed fine land fit for all purposes, both of pasture and tillage, extending towards the thickwood hills, and also to be found in the region of the lakes between Forts Pitt and Edmonton.

In almost every direction round Edmonton the land is fine, excepting only the hilly country at the higher level, such as the Beaver Hills. Even there, however, there is nothing like sterility, only the surface is too much broken to be occupied while more

* We have been on board American steamers while they have ascended rapids by means of an anchor at the head of the rapid, from which a rope is connected to a capstan on board, driven by the steamer's machinery, and were thus warped up the current.

level country can be obtained. The places which have been chosen for mission stations are all at a distance from the river, a preference having naturally been given to the borders of the large lakes which lie along the base of the hilly country for the sake of the fine fish which these yield in abundance. The quantity of fish of very fine quality obtained from some of these lakes is enormous. The best fishing season is just as the winter commences, and in the course of a few weeks, some years ago, there were taken in Lake St. Ann's alone 40,000 of these "white fish" (*coregonus albus*), having an average weight of 3 to 4 lbs. each. The fish are preserved during the winter simply by being frozen, and afford a cheap and nutritious article of food.

In the upper part of the Saskatchewan country coal of fair quality occurs abundantly, and may hereafter be found very useful; it is quite fit to be employed in the smelting of iron from the ores of that metal, which also occurs in large quantities in the same strata. Building stone is wholly absent until quite close to the Rocky Mountains, but brick earth and potter's clay may be obtained in many parts of the country. The climate is more irregular than that of Red River, and partial thaws often occur long before the actual coming of spring and do great harm to the vegetation. The winter is much the same in its duration, but the amount of snow that falls decreases rapidly as we approach the mountains.

The North Saskatchewan freezes generally about the 12th November, and breaks up from the 17th to the 20th of April. During the winter season of five months the means of travelling and transport are greatly facilitated by the snow, the ordinary depth of which is sufficient for the use of sleighs, without at the same time being too great to impede horses. If proper roads were formed this facility would be greatly increased, and as a result there would be no season during which the country could be said to be closed for traffic.

Between Carlton and Edmonton there is no valuable timber to be found south of the river, the only trees growing there being small aspen poplars. To the north, however, and along the river above and below these points, the spruce, fir, pine, and birch occur abundantly. There is neither oak, ash, elm, maple, or any of the hardwood trees that are found at Red River in any part of the Saskatchewan. Only a few trees of the false sugar maple, from which the Indians make a coarse kind of sugar, being found in certain places.

The South Saskatchewan, which in its upper part is called Bow River, resembles the North Saskatchewan in size, volume of water, and its general direction, but it passes through a very different description of country.

After leaving the eastern limit of the country that is within the influence of the mountains (which may be considered to commence about 20 miles below where it receives Ispasquehow River), the South Saskatchewan flows in a deep and narrow valley, through a region of arid plains, devoid of timber or pasture of good quality. Even on the alluvial points in the bottom of the valley trees and shrubs only occur in a few isolated patches. The steep and lofty sides of the valley are composed of calcareous marls and clays that are baked into a compact mass under the heat of the parching sun. The sage and the cactus abound, and the whole of the scanty vegetation bespeaks an arid climate. The course of its large tributaries, Red Deer River and Belly River, are through the same kind of country, except in the upper part of the former stream, where it flows through rich partially wooded country similar to that on the North Saskatchewan.

Towards the confluence of Red Deer River and the South Saskatchewan, there are extensive sandy wastes. For 60 miles to the east of this point the country was not examined by the Expedition, but at the elbow the same arid description of country was met with, and it seems certain that this prevails throughout the entire distance. Below the elbow the banks of the river and also the adjacent plains begin to improve rapidly as the river follows a north-east course and enters the fertile belt. From the Moose Woods to its confluence with the North Saskatchewan it in no way differs from that river, which indeed is nearly flowing parallel with it, only 30 or 40 miles distant.

In the midst of the arid plains traversed by the South Saskatchewan, there are isolated patches of table land, upon the surface of which the vegetation becomes luxuriant, and pasture of fair quality may be found. The Expedition spent two weeks at the Hand Hills, which form one of these patches, for the purpose of recruiting the horses.

To the south of the river also, in lat. 49° 40′ N., at the Cyprées Hills, there is abundance of water and pasture, and also a heavily timbered slope facing the north, where spruce firs, pines, maple, and many kinds of shrubs flourish in abundance, while for hundreds of miles around in every direction there is no appearance of the plains having ever supported a forest growth.

In the commencement of August 1858, and previous to any attempt to cross the Rocky Mountains, I determined to examine the whole line of country along their base to

the boundary line. Although the strip of fertile country lying between the central arid plains and the foot of the mountains is nowhere so wide as that its eastern limit is out of view of the Rocky Mountains, yet there is a considerable extent of valuable and fertile land reaching (with the exception of one slight break) the whole way to the international line, and following nearly the general direction of the Rocky Mountains, namely, from N.W. to S.E. The general direction of the eastern limit of fertile land is from north to a little east of south, so that as you approach the boundary line the breadth of fertile soil between the arid region and the base of Rocky Mountains considerably diminishes: thus, in lat. 52° the fertile belt extends over 2° of long.; in lat. 51° it is not more than 1° in width. South of this the fertile belt is encroached on by a tongue or spur of the sterile plains, about 15 miles in width. South of this, again, in about lat. 50°, the fertile land appears, extending from the mountains over about 1° in long., and continues gradually to diminish in breadth down to the international line, where it extends about 20 miles to the eastward of the " Cheif " Mountain.

The whole of this land, the position of which I have just described, may be compared to the similarly situated lands of Switzerland and the Tyrol, known to be fertile, and especially valuable for the very nutritious grasses which they produce. The whole region is well wooded and abundantly watered, and enjoys a climate far preferable to that of either Sweden or Norway.

The whole of this region of country would be valuable not only for agriculturists but also for mixed purposes of settlement. To the north it stretches considerably to the westward, enlarging in proportion as the Rocky Mountains recede to the westward, and comprising the upper portions of the Saskatchewan and their numerous lesser tributaries. In the first place, along this region of country, the first quality of land is not merely confined to the river valleys, but much of the third steppe is abundantly watered, and probably its greater elevation obtains for it increased moisture and consequently a superior class of soil. The snow here is not so deep as it is further to the eastward, the winters are more open and the springs are earlier.

The lands exhibit great diversity of surface and are rolling and well adapted for sheep; the timber is abundant and more substantial in bulk than that to the eastward, and therefore better suited for building purposes; lime-stone exists in great quantity, and the beds of some rivers afford argillaceous clay capable of being converted into bricks, and coal of a fair quality was found and possibly exists in considerable quantity.

Throughout the district are numerous lakes abounding in fish.

I now proceed to make some remarks upon the natural facilities offered to agricultural settlement.

Of these, the first is the facility for obtaining good fish for food during the transition state that a country must endure between the periods when its inhabitants live on wild animals alone, and that period when bread becomes the staff of life and animal food is produced by the care and forethought of civilized man.

All along the northern districts in the country above described occur very numerous lakes, supplying immense quantities of nutritious fish, among which are pike, sturgeon, cat-fish, gold-eyed carp, and white fish in greatest abundance. I have seen these obtained with the greatest ease even in winter where holes had to be chopped through the ice in order to catch them. None can so readily appreciate the advantage that a farmer would derive from a certainty of obtaining plenty of fish in the neighbourhood of his farm as those who know the difficulties attending the hunting of animal food, where the settler would have to compete for a bare existence against the Indian trained almost from his birth to the tracking and killing of thickwood animals, such as deer, elk, and moose.

Granting even that the colonist is a skilled hunter and able to compete with the man born in the forest, the greater portion of his time would be absorbed in the same pursuit as the Indian, and little time or energy would remain for agriculture.

Add to this the fact that the smoke and the noise attending the home of the white man frightens the game far and near, and so increases the labour necessary to obtain it.

The second advantage found by the settler is the abundance of good food for cattle growing throughout the region, such as goose-grass, pease-grass, vetches, astragalous and other plants, which preserve their nutritious quality through the winter season. Horses and horned cattle would resist the rigour of winter well and continue in good condition, if not poor when turned out at its commencement, and if provided with artificial food in the very early spring when the partial thaws during the day cause a coating of ice over the herbage, which the animals find very difficult to remove in order to feed. I have killed many fat buffaloes in the months of January and February; after which I have invariably found them lean, and sometimes seen the ground sprinkled with blood from the hardness of the surface, which the animal tries to shovel aside with its nose.

If even the buffalo, whose nose is formed by nature for this purpose, finds a difficulty in obtaining his food, how much more difficult must be the task of self-support to the domestic animals.

There would be no difficulty in providing and storing abundance of excellent hay before the fall of the year. Hay was cut for my horses at Carlton, at my request, in September 1857, which lasted them well into the middle of spring, although they began to use it shortly after Christmas. In September 1858, two of my men cut hay sufficient from the swamps around Edmonton to provide amply for 46 horses during the early spring of 1859.

A third inducement to settlement in the valley of the Saskatchewan is the fact that the settler has not to encounter the formidable labour of clearing the land from timber. The frequent fires which continually traverse the prairie have denuded the territory of large forest trees, indeed so much so as in some places to render their absence deplorable, and the result of these fires is that the agriculturist may at once commence with his plough without any more preliminary labour.

Although throughout the whole of the fertile region, as well as in the subarctic forests of the north and west, there is no timber fit for export, such as the white pine or the gross larch, so highly prized by the lumberer. Yet there is abundance which would serve the purpose of the settler, and suffice to construct houses and furnish him with fuel. Coal, available for smelting purposes, exists abundantly, and iron in very large quantities.

The capabilities of this country and its climate, for the success of the cereals, have hardly been sufficiently tested. But I have seen first-rate specimens of barley and oats grown at many of the forts. Wheat has not been so successful, but I am hardly prepared to say that this was because of the unfitness of the climate to produce it. I have much reason to believe that the seed has been bad, and the cultivation neglected, and the spots chosen not of a suitable aspect. I have not only seen excellent wheat, but also Indian corn (which will not succeed in England or Ireland) ripening on Mr. Pratt's farm, at the Qu'appelle Lakes, in 1857.

Harvest would commence early in September, and its operations would not be seriously interrupted by three or four wet days in that month, taking that as a fair average of the rain that falls at that period; more rain falls in the spring than in the autumn, but even then it is inconsiderable.

The only principal disadvantage accruing from the greater altitude of the region approaching the Rocky Mountains, is the almost continual night frosts during the summer, not severe during that season, but so frequent as to be almost of nightly occurrence; these would probably prove prejudicial to wheat; barley and oats, however, would do well.

The only objection to raising sheep and pigs would arise from the number of their natural enemies, the wolves, which roam everywhere through wood and plain, and this is probably the cause why the sheep of the country are prompted by their natural instinct to shelter in the inaccessible cliffs of the Rocky Mountains. The ewes and lambs are frequently seen feeding at a low altitude, and evince a preference for the grass below, which naturally grows in greater quantities.

The proceedings of the Expedition from the termination of the canoe route, to the period of its arrival at winter quarters in 1857, was directed to the examination of the country, from the forks of Red River and the Assineboine to the boundary line at Pembina, in longitude 97° W., nearly; and thence along the boundary line to the limit of the fertile belt, in longitude 105°, whence we started again from Fort Ellice, and reached the boundary line at the Roche Percée.

Starting again in September, the Expedition proceeded to the Qu'appelle Lakes, and to the elbow of the South Saskatchewan. Then crossing the South Saskatchewan proceeded northward to Fort Carlton, where the members of the Expedition established their winter quarters, and all further work for the horses ceased for that season. For the first season's explorations, I engaged 14 men and purchased about 30 horses.

The second season's explorations commenced about the termination of the month of May 1858, and were directed to the examination of the country between the two Saskatchewans, and subsequently the Expedition was divided into branch parties, in order to explore the mountains in several directions before the termination of the season.

Previous to crossing the mountains in 1858, I made a branch tour, accompanied by my Secretary, Mr. Sullivan, along that portion of the fertile belt skirting the base of the Rocky Mountains to the boundary line, which we crossed again in long. 113° W.

The branch expeditions into the Rocky Mountains were effected in August and September 1858. They proved very satisfactory, and established the fact that several

passes across these mountains which are available for horses, and by which, with a reasonable outlay, a road could be made, connecting the Kootanie and Columbia valleys with the plains of the Saskatchewan.

The four passes across the Rocky Mountains.

These passes are four in number:—The Kananaskis pass, the Vermilion pass, the British Kootanie pass, the Kicking-horse pass; all these passes traverse the watershed of the continent within British territory.

Besides these, there are three lesser passes connecting the waters of a transverse watershed, between the head waters of the Kootanie and those of the Columbia, both which rivers are on the western slope of the continent. A pass also was subsequently traversed by Dr. Hector between the head waters of the North and of the South Saskatchewan.

The passes between the Kootanie and Columbia rivers are the Lake pass and the Beaver-foot pass, and that from the head waters of the North to those of the South Saskatchewan is called the Little Fork pass.

The Kananaskis pass.

I undertook the exploration of the Kananaskis pass myself, accompanied by my secretary, Mr. Sullivan, and after traversing the mountains we returned to the eastern plains again by the British Kootanie pass.

Our journey across the Kananaskis pass, although arduous, was not formidable, on account of abrupt ascents and descents on the eastern slope of the mountains, and the principal difficulty to be overcome was the amount of timber to be cut in order to allow the horses to force their way through. On the western slope we found the descent very steep, and the obstructions from fallen timber so thick and so severe that on the 24th of August we were occupied 14 hours in accomplishing six miles, and hard work it was.

North Kootanie pass.

The North Kootanie pass, traversed by Captain Blakiston and subsequently by myself, is not encumbered by fallen timber; the track is well defined and kept clear from obstructions by the Kootanie Indians, who constantly travel that way to hunt buffaloes on the eastern plains. The natural facility which this pass affords for crossing the Rocky Mountains is not so great as that of the Kananaskis pass, which presents only one height of land to overcome.

Of all the passes traversed by our Expedition, the most favourable and inexpensive to render available for wheel conveyances would appear to be Vermilion pass, as the ascent along it to the height of land is the most gradual of them all. All these passes are defined in the map, and need no allusion here to their longitudes or latitudes.

The timber on the western slope of the mountains was somewhat finer than that which we found on the eastern side, and we saw several new pines, together with oak, ash, birch, and larch, but the lands in the valleys of the Columbia and Kootanie rivers, as far as I could judge, were neither valuable for their extent nor for their quality.

A ride from the Columbia Lakes to the boundary line sufficed to show me that the difficulties to be overcome in crossing the continent to the westward, without passing to the southward of that line, were far from being overcome. A formidable tract of country still remained to be traversed before a connexion with British Columbia could be effected. A cursory glance at a map of that country will show that the Columbia, which flows into the Pacific, takes its source from the Little Columbia Lakes, and that this large body of water is forced into a channel northwards for 2½ degrees, when making an abrupt bend it is borne back again to the southward over the same latitudes before it can effect its escape to the westward.

The Kootanie River.

The Kootanie River, which, with its branches, derives its source north of the international line, descends over 40 miles into the American territory, and thence returns to the north to flow into Flat Bow Lake, and finally terminates into the Columbia. The irregular quadrilateral piece of country thus formed by these two rivers represents a most formidable tract where even the banks of the rivers are cloud-capped mountains. I determined, however, to penetrate it in order to endeavour to discover if the passage of the continent north of the boundary line could be effected: with what success will appear below when I shall discuss the proceedings of the Expedition in 1859. But on recrossing the mountains in September and October 1858 I left the Kootanie and Columbia valleys under the impression that although much had been effected, still a great deal more remained to be done. Early in September 1858 we recrossed the mountains, and reached Fort Edmonton at the termination of the second season; when all further work for the horses was terminated for that year, and the men all paid off with the exception of two or three engaged throughout the winter as attendants and to guard the horses. Twenty-four men were engaged for the second exploring season and 50 horses purchased, inclusive of those which remained over of those previously bought in 1857.

During the winter of 1858–9, Mr. Sullivan and Mons. Bourgeau were chiefly occupied with meteorological observations, while Dr. Hector employed himself in the various

winter journeys with dogs and sledges as detailed in the journal. He penetrated over the height of land to the northward whence the waters flow to the Frozen Ocean and down the Athabasca River, visiting Fort Assineboine and Jasper's House, and acquiring much valuable information concerning the winter temperature along the base of the mountains.

Temperature at the base of the Rocky Mountains.

Among other interesting phenomena, he discovered that the average temperature during the winter months at the base of the Rocky Mountains is higher by 15° than that of the western portions of Canada, and that the mean depth of snow at the same place is much less than in the prairie country.

During the winter I made two hunting trips to the south of Edmonton, visiting the Beaver Hills, and a considerable extent of country to the eastward. Subsequently I started with two dog sleighs to the Rocky Mountain House, where I made an extensive acquaintance among the principal chiefs and leading men of the Blackfeet and Piegans, and also hunted with them, sleeping in their tents. I adopted this course in anticipation of an assent from the Home Government to my proposal of exploring the Blackfoot country from Edmonton in the season of 1859.

On the breaking up of the ice in the spring of 1859 I left the Rocky Mountain House and descended the Saskatchewan in a skiff to Edmonton.

It was also at this period that I was obliged to say farewell to our friend and companion Monsieur Bourgeau, whose activity, sociability, and zeal in every way rendered his departure deeply regretted by all. In addition to his acquirements as a botanist, he showed the most untiring energy in superintending and saving the specimens, notwithstanding the numerous difficulties and fatigues so often to be encountered in such a country.*

We wait for instructions from the Home Government.

My intention had been to remain in my winter quarters at Edmonton, and there to await the decision of Her Majesty's Government as to whether the exploration should be renewed again at the commencement of the season of 1859, but owing to the great scarcity of provisions at Edmonton and the total absence of buffalo in that part of the country, I was obliged to quit the fort and take my party southward to the plains in search of buffalo as fast as possible, and to leave Dr. Hector to follow from Edmonton as soon as my instructions had arrived.

Our party consisted of 16 men, including my secretary and two friends, gentlemen from England, who joined me from Edmonton, where they had wintered along with us. We first proceeded to Buffalo Lake, and from thence to the Hand Hills, where I established a permanent camp which commanded an extensive view of the plains; thus enabling us to discern at a great distance any bands of buffalo which might be traversing this region of country, and thus I was in a position to await Dr. Hector's arrival from Edmonton with instructions to me from the Colonial Office to proceed on my exploration to the westward, returning by way of the Pacific. We then proceeded to carry out these objects for the season of 1859, travelling through a portion of country hitherto considered too dangerous to be accessible. We first proceeded in a south-easterly direction to the forks of the South Saskatchewan and Red Deer River, and from this point south to the Cyprés mountains and boundary line, thence westward again until we recrossed the mountains for the third time about the middle of August 1859.

Our route to Fort Colville.

My secretary and I, on this occasion, traversed by the North Kootanie pass, and followed the Indian trail along the Kootanie River to Colville.

This track led us through the United States territory, south of the boundary line. When about half the distance had been accomplished (between the western extremity of British Kootanie pass and Fort Colville), I left Mr. Sullivan to pursue the trail with the men and horses, and having engaged two Indians of the Paddler's tribe, sometimes called Flatbows, worked my way by canoe to the northward along Flat Bow Lake and down the Columbia to Fort Shepherd, a post of the Hudson Bay Company, situated a little to the north of the boundary line, in about the same longitude as Fort Colville, to which post I descended along the Columbia and met Mr. Sullivan, who had arrived by land the day before.

While we were thus engaged exploring the western slope in the neighbourhood of the boundary line, Dr. Hector with four men had crossed the mountains by the most northerly pass leading from the Saskatchewan River. This he found to be *Howe's pass*, a route that had at one time been used by the North-western Fur Company, for communicating with their posts on the Pacific. It had been abandoned, however, for such a long period, that he found hardly any trace of the trail that once existed, so that his progress was

* I did all in my power to persuade Mons. Bourgeau to remain, but a previous engagement for the Caucasus compelled him to depart.

much obstructed by fallen timber. The summit of this pass he considers to be less elevated than any other yet examined, but in approaching it from the east by the valley of the North Saskatchewan he had to travel over shingle flats that are flooded in spring, the channel being bounded on either hand by lofty and thickly-wooded precipices. No appreciable ascent was made, nor any decided ridge crossed, to reach the source of the stream, along which he descended, through a narrow and tortuous valley for about 20 miles, to reach the Columbia in lat. 51° 30′ N.

The Columbia at this point flows to the N.W., through a valley several miles in width, with rocky and mountainous country on either side. In that direction, however, the country appeared more open, and were it not for the dense woods might have been easily traversed. The river itself is already of large size, with a sluggish current, and continues so for the whole distance to its source at the Upper Columbia Lakes.

Not having succeeded in his attempt to proceed due west, Dr. Hector retraced his steps to the Kootanie River, and following down the ordinary trail rejoined us at Colville at the end of October.

At Fort Colville I had the means of provisioning men and procuring horses. I therefore determined that we should retrace our steps to the northward of the boundary line in order to carry out, if possible, the object of establishing a line of communication across the Rocky Mountains to the Pacific without crossing the boundary of the United States.

With this object in view I directed Mr. Sullivan to proceed with a small party of men and horses to Fort Shepherd, and thence pursue his way to the north-east in the hope of completing a junction with the Kananaskis pass, and I likewise started with a small party of men and horses to Fort Shepherd, intending thence to pursue my way to the westward.

These two branch explorations were finally successful, though only after very hard labour. Mr. Sullivan, who was obliged to send the horses back on account of the obstruction presented by fallen timber, proceeded on foot accompanied by Indians. All had to carry their provisions with them, for generally speaking there is very little game in the country, and consequently little or no food save on the lakes and rivers.

During my branch exploration by the westward, I was accompanied by an Indian and a half breed, and in addition to the fallen timber I encountered almost insuperable difficulties in the mountainous nature of the country westward of the Columbia River, and although I succeeded in forcing my way and taking the horses across from Fort Shepherd to the place where I met the American Commission upon the boundary line in long. 119°, yet I could not recommend that line of country as one through which it would be advisable to carry a road. Besides, the lateness of the season did not admit of my crossing the Cascade Range, otherwise I should myself have crossed the continent altogether in an unbroken line from Canada to the shores of the Pacific.

Here I met the gentlemen employed under the American Commissioners for laying down the boundary line from the Gulf of Georgia, near the Little Okanagan Lakes, from which point the Hudson Bay Company's trail passes north of the boundary line, altogether crossing the Cascade Range at Mansen's Mountain.

This Hudson Bay trail, which is used for bringing in supplies to Colville from Fort Langley (on the west coast) crosses the boundary line for the first time on the lesser Okanagan Lakes in long. 119° 10′ W. Being already aware of this fact, and being subsequently confirmed in this opinion by Lieut. Palmer, R.E., who made a reconnaissance of the Hudson Bay Company's trail all the way from Fraser River to Fort Colville, I did not think it necessary or justifiable to cross the Cascade Range so late in the season, and to run the risk of losing the horses without obtaining any further knowledge with regard to this old established trail beyond that already known to the Hudson Bay Company, and already supplied to Her Majesty's Government by Lieut. Palmer, R.E.

The connexion therefore of the Saskatchewan plains, east of the Rocky Mountains, with a known route through British Columbia, has been effected by the Expedition under my command, without our having been under the necessity of passing through any portion of United States Territory. Still the knowledge of the country on the whole would never lead me to advocate a line of communication from Canada across the continent to the Pacific, exclusively through British territory. The time has now for ever gone by for effecting such an object, and the unfortunate choice of an astronomical boundary line has completely isolated the Central American possessions of Great Britain from Canada in the east, and also almost debarred them from any eligible access from the Pacific coast on the west.

Objection to a line of railway across North America to the Pacific.

The settler, who will always adopt the shortest and least expensive route, will undoubtedly follow the line of traverse indicated by the formation of the country.

He will travel by steamer along the Canadian Lakes through Sault Ste. Marie to Superior City, situated at the extremity of the "Fond du Lac" or most western extremity of Lake Superior; and he will then be only 70 or 80 miles distant from Crow Wing, on the high road between Saint Pauls and the Red River Settlement.

Commercial and general prospects of the neighbourhood of the Red River.

American squatters and lumberers are rapidly settling up Red River, and the railway communication (now nearly complete to Saint Pauls), will soon be completed to Pembina, in which case the establishment of a branch line to Superior "Fond du Lac" would be a positive certainty, thus easy and rapid communication would be established between Lake Superior and the frontier of Red River Settlement.

Railway extension.

In the event of railway communication being extended as far as Pembina, it would not be unreasonable then to entertain the prospect that the Imperial Government might feel justified in encouraging the extension of such railway on the British side of the line to the northward and westward, through the southern portion of "the fertile belt" to the Rocky Mountains; at all events as soon as the country showed symptoms of becoming sufficiently populated to warrant such an effort.

As the case at present stands all communication with the Colony at Red River is through the States. Soon after the publication of my despatch, declaring the navigability of the Red River for steamers, American enterprise established one there; this, as I now understand, plies the whole way from Lake Winnipeg to Graham's Point, above the forks of the Shienne, and, now that the results of the Expedition lately under my command are known, even the Hudson Bay Company have adopted the route *viâ* St. Pauls and Pembina, for bringing their merchandise into this country. As for the importation of horses, cows, and any other species of live stock, all such traffic would be impossible either *viâ* Hudson Bay or by the canoe route. To the westward of the Rocky Mountains the communication is very arduous; no road fit for carts exists north of the boundary line, nor indeed is there a single portion of the territory that could be traversed by the roughest or strongest cart, from the plains at the entrance of the several Rocky Mountain passes in the east until you come to the western slope of the Cascade range. A road from the Kananaskis pass to the Columbia River, in the neighbourhood of the 49th degree, would not be a very arduous undertaking; from this point, however, there would be no further desirable road to the westward by land, without passing through American territory. The present track from Fort Shepherd to the westward follows the Ohailpitku (or Colville) river, crossing and recrossing the boundary line, until it passes the Okanagan Lakes: thence it bears away to the north of west by the valley of the Similkameen and crosses the Cascade range over Mansen's Mountain. This is the trail now used by the Hudson Bay Company for communicating between their posts on either side of the Cascade range. Any attempt to take a road between the Columbia River and Little Okanagan Lake exclusively in British territory, or otherwise than by the valley of the Ohailpitku or Colville River (although not impossible, for I have forced the traverse myself), would be a most formidable and expensive undertaking.

Another route to the Pacific.

There is, however, another means of proceeding from the Columbia to the westward, in a more northern latitude, which I can advocate upon excellent authority,* although I cannot describe it from personal observation.

The Columbia River, north of the boundary line, is navigable by steamers the whole way up the Great Columbia Lakes, and above the most northern one to an extensive plain or table land, along which my informant has taken heavily laden horses with ease round both the northern and the southern shores of the Great Okanagan Lake to the forks of Frasers and Thompsons rivers.

A steamer here would not only serve for effecting communication between the Saskatchewan plains and the west coast of British Columbia, but would also form an additional link to that chain of American steamers already along the Columbia from Astoria on the Pacific coast.

From Astoria, ocean steamers can ascend the Columbia River up to the point where it cuts the Cascade range, a distance of 135 miles; here a boarded portage and tramway, about two miles long, enables the traveller to reach a second steamer which runs up to the Dalles, distant about 48 miles. At this place a steep waggon road, which is kept in good order, takes the traveller on to the Des Chutes, a distance of 12 miles, whence a third steamer runs up as far as old Walla Walla, and when occasion requires up to Priests Rapids, distant from the Des Chutes 180 miles.

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* Namely, that of Mr. Angus McDonnell, one of the gentlemen in charge of Fort Hope, and subsequently of Fort Colville, where he had been long resident, and in the constant habit of travelling backwards and forwards through the country.

The navigation of the river is still unbroken as far as the Okanagan, where a rapid occurs 10 miles long. From the Okanagan to Colville, a distance of over 300 miles, it is said that there is but one rapid to interrupt the navigation of the river, but of this portion of the river we have no personal knowledge.

From the upper part of the Kettle Falls at Colville there are but two portages that would interrupt steam navigation to the mouth of Pendoreilles River in British territory, and from this point I am credibly informed that the river is available for steam navigation as far as and beyond the upper of the two great Columbian lakes, up to a point where a road might be resumed as I have suggested above.

Possible introduction of agriculture among the Indians.

We do not apprehend that the Indians along the North Saskatchewan are likely to cause any serious difficulties to the settlement of the "fertile belt." The Salteans, Crees, and Thickwood Assineboines have been for many years on the best terms not only with the members and servants of the Hudson Bay Company, but with all the free traders, missionaries, visitors, &c., that have visited their country; this may be in some measure accounted for by the justice and good faith which characterize all the dealings of the Hudson Bay Company with them, and also by the number of the company's servants who have adopted their women, and have established with them relationships of which they feel proud.

If white men, or indeed if half-breeds were to settle as agriculturists in the country, I do not say that they would never have serious cause of complaint with the Indians of the North Saskatchewan; quarrels doubtless would arise sometimes out of horse stealing, at other times out of their harmless mischief; but I do not think that any organized system of aggression would be attempted against the settlers, and I even think that many Indians, provided they could obtain farming implements, would follow the examples they saw before them, and begin to till the soil themselves.

No doubt it would often happen that the Indians might carry off horses or oxen, and that the white man in pursuit of them would come into deadly collision with them, the result of which would be a regular system of reprisals. But if examples of practical agriculture, and facilities for obtaining agricultural implements were offered to the Thickwood Crees and Mountain Stoneys, I am certain that they would very rapidly commence planting potatoes, and so save themselves from much of the labour and hunger which they have to endure throughout the winter in providing the flesh of the elk, moose, and deer, as food for their large families. First-rate hunters have frequently told me that such hard and constant labour in pursuing thickwood animals for the support of themselves and their families left them neither courage nor time to devote to their traps, and that consequently they could not get furs wherewith to purchase blankets and other comforts for themselves from the company, adding that if they could be sure of a meal of potatoes sometimes they could follow the traps.*

Prospects and dangers of the settlers amongst them.

The settlers, however, would not find all the Indians with whom they came in contact so friendly as the generality of those that occupy the fertile belt. The country to the southward on both sides of the international line is that of the Blackfeet, Piegans, and Blood Indians, and I should apprehend that these Indians would form large war parties (against the Crees ostensibly), and these war parties, although first organized without any hostile intention against their agricultural neighbours, yet infallibly would end in attacks on the property of the settler and in loss of life to both Indians and settlers. When once the party goes forth to war, its individual members are not very nice in their distinctions who may be the owners of the horses they steal. Add to this the fact of the settler being a friend of their enemies, the Crees, will be accused of having furnished them with ammunition, which will render him liable to be ill-treated when he is in the power of these wilder and more uncertain tribes. In the exploring season of 1859 our Expedition traversed the whole of the British portion of the territory of the Blackfoot, Piegan, and Blood Indians, but such was the general terror of the half-breeds whom I had engaged, that it was with the utmost difficulty I could lead them on, and, indeed, if it had not been for the gentlemen and the Americans who had taken service under me, I do not think I could have gone forward at all.

The Hudson Bay Company have long given up the posts they once held in that country as too dangerous to maintain, and since my departure from the country even the Rocky Mountain House, the last of the Blackfoot posts, has been abandoned

Causes of our success among the Blackfoot tribes.

The successful preservation of our friendly relations with the Blackfoot tribes while travelling through their country was not so much owing to the strength of our party, although we were twenty-three in number, as to two other causes. In the first place, I

* Martens, fishers, beaver, &c., are caught by the Indians in traps, larger, but similarly constructed to our vermin traps made in England, supplied to them by the Hudson Bay Company.

had previously become acquainted with many of them while staying at the Rocky Mountain House during the preceding winter, when I had met them in several hunting excursions, and when they go about in small camps and have no opportunities of becoming excited by war or liquor.

The next cause was Dr. Hector's great success in his profession, especially among the women and children, which called forth their astonishment, and in many cases deep, though undemonstrative gratitude. Although we were always well armed and on the alert, and never in their power (save in the very large camps along with the head chiefs), yet I think it in a great measure owing to the causes above mentioned that we have succeeded in effecting the objects of the Expedition without experiencing any disastrous results from a single one of those tribes.

However, I do not consider that a total stranger to them would be equally safe, or that any one accompanied by a military force (unless that force was a very large one) could do so with impunity. In either case his horses would be stolen, and this, of course, would lead to fighting and loss of life; for these Indians traverse the plains together in very large camps of from 400 to 600 tents.

I have great pleasure in alluding severally to the members of the Expedition, from whom I have always received the most cordial and efficient support.

Dr. Hector, whose able assistance and exertions mainly contributed to the success of the Expedition, was most indefatigable not only during the general exploration seasons, but also during the several winter excursions, which he prosecuted in snow shoes, accompanied by dogs drawing provisions on sleighs, exposed to the hardships of an almost arctic temperature.

During the winter of 1857-8 Dr. Hector mapped the whole of the North Saskatchewan, from Carlton to Rocky Mountain House, a distance of nearly 9° of longitude.

Starting at the commencement of the second winter from Edmonton, he passed over to the glaciers of the South Saskatchewan, to the Assineboine, a tributary of the Arctic Ocean, and thence to Jasper House, through the Rocky Mountain forests, as far as 116° of longitude: besides such arduous journeys so ably accomplished, Dr. Hector had the charge of making the maps, both geographical as well as geological. I have also the pleasure of recording the efficient services of my secretary, Mr. Sullivan, a most able astronomical observer and surveyor, also a most accomplished mathematician; on him devolved the principal labours of computation. Besides his avocations of writing, observing, and computing, Mr. Sullivan, late in the season of 1859, accomplished successfully a most arduous branch expedition, *viz.*, the connexion of the western exit of the Kananaskis pass with the Columbia River, above that point where it intersects the boundary line, and a most important link in an exclusively British communication between the Saskatchewan and British Columbia.

Of Mons. Bourgeau, our botanist, I have also to speak with the highest praise. Ever intent on and devoted to his department of science, he not only prosecuted his researches indefatigably in the field, but also was most careful and successful in preserving his specimens in the evenings and during night under the most trying occasions, never allowing fatigue or any other adverse circumstances to interfere with the interests of his collections.

The men employed by the Expedition were chosen from the French and English half-breeds, most of whom had (more or less frequently) been in the employment of the Hudson Bay Company. These men were engaged generally for the summer, or exploring season, commencing in May and terminating in October, after which they became entitled to be sent back free of expense to where they came from, in addition to their wages.

At the termination of the season the men were discharged, with the exception of two or three employed continually during the winter guarding the horses, and one who attended on us when we resided at a Hudson Bay Company's post. When any of us started on a winter trip, a man, or, perhaps, two were engaged specially, and frequently we obtained the services of men in the employment of the Hudson Bay Company, by permission of the officer of the post from which we started.

Beyond the immediate neighbourhood of Red River Settlement no money of any coinage whatsoever is in use, and all payments are made in kind; the men, therefore, had to be paid in such articles as coats, trousers, blankets, guns, ammunition, tea, tobacco, axes, knives, &c., and as the Hudson Bay Company's stores never contained a sufficiency of such goods for the purposes of their own trade, I organized a further supply (in anticipation of the payments at the end of each season to men employed by the Expedition). These supplies were forwarded to me from Norway House up the Saskatchewan to Carlton in 1857 and to Edmonton in 1858, along with supplies of tea, sugar, and flour, for the use of the Expedition.

During our canoe route in the commencement of the summer of 1857, we were provided by Iroquois half-breeds, engaged for us by Sir G. Simpson, from La Chine in Canada. These men were only engaged up to the period of our arrival at Red River Settlement. Those engaged for our first season's journeys in the plains were English and French Red River half-breeds, about 12 in all, and their services terminated at our arrival at Carlton, whence they started again on foot to return to Red River, a journey of 600 miles. I paid them for the time consumed on the journey, and allowed them two carts and horses to carry their bedding and provisions.

During the second season's explorations, when we contemplated passing through a portion of the Blackfoot country, previous to crossing the mountains, I deemed it necessary to employ a greater number of men, and therefore engaged 12 from Red River, and directed Dr. Hector to procure the services of 12 others from the settlement of Lake St. Ann, about 40 miles west of Fort Edmonton. These men were directed to go down from Lake St. Ann to Carlton, where they met the men engaged by me, who also started for the same place in March 1858, from Red River Settlement.

During the third season's explorations, I had not only English and French half-breeds in the service of the Expedition, but also employed several Americans who had failed in crossing the mountains in search of the gold already reported to be abundant on Fraser River. Although these men were not experienced in the usages of prairie life, yet I found their assistance most valuable, as I could always rely on their siding with the gentlemen in supporting me, when I insisted on traversing the Blackfoot country, at the time when only one or two of my half-breeds were to be depended on, and had it not been for them, I should have found it impossible to coerce the rest. In alluding to this subject, however, I cannot omit to mention that the gentlemen of the Expedition (Dr. Hector and Mr. Sullivan) were ably seconded by my friends, the late Capt. Brisco and Mr. Mitchell, in staunch adhesion to my proposed plan of operations.

From among all the men engaged in the service of the Expedition, I feel great satisfaction in bringing forward for special notice the services of James Beads, a half-breed from Red River. In the year 1857 he was in the service of the late Sir George Simpson, who transferred him to me at the commencement of the Expedition, and he remained equally faithful and zealous to the last, always charged by me with the most trustworthy missions and the most arduous undertakings. James Beads finally accompanied me into California, where, by my advice and at the request of the gentlemen in charge of the boundary line commission from the Gulf of Georgia, he left us to remain still in the service of the Imperial Government under Colonel Hawkins.

Before concluding this Report I must avail myself of this opportunity to express my thanks to the officers of the Hudson Bay Company for the assistance they have always afforded in furthering the objects of the Expedition. At Red River Settlement we were most hospitably entertained by Mr. Swanston, who, according to directions sent by me to him before I left England in 1857, purchased horses and engaged men for our first season's explorations. In addition to this, Mr. Swanston most kindly undertook and carried on very valuable meteorological observations in connexion with those which the gentlemen under my command were conducting at Carlton.

Mr. McTavish, who succeeded Mr. Swanston in charge of Red River, was also most zealous in assisting to carry out the objects of the Expedition, and in furthering my views when engaging men during the winter of 1857, for the explorations of 1858.

On Mr. Hardisty, the officer in charge of Carlton, where the Expedition wintered in 1857-8, devolved the labour of increasing the accommodation for the Expedition; the winter was subsequently a very trying one, for many reasons, among which was the absence of buffalo from that part of the country; nevertheless Mr. Hardisty acquitted himself most ably and cheerfully, and obtained the good wishes of every member of the Expedition.

Mr. Christie, the gentleman in charge of Edmonton, during the wintering of the Expedition in 1858-9, did everything in his power to contribute, not only to the welfare of the Expedition, but also to our personal comforts He undertook for me also the organizing of my goods for payment, and paid the men, a most troublesome office, which I should have had the greatest difficulty in completing without his assistance.

Mr. Moberly, the officer in charge of Jasper House, entertained Dr. Hector with all the hospitality in his power, and also himself carried on meteorological observations at Jasper House, the furthest point of west longitude reached by the Expedition east of the mountains.

Of Mr. Brazeau, the gentleman in charge of the Rocky Mountain House,* I have to speak in terms of the highest praise.

* The only fort held by the Hudson Bay Company in the Blackfoot country, and since then abandoned.

It was at his trading post above mentioned that I myself resided during a considerable portion of the winter of 1858–9, and from whence I made several hunting excursions along Battle River and Red Deer River, in order ostensibly to hunt, but really to establish personal acquaintance with the chiefs and principal men among the Blackfeet and Piegan Indians. I was most hospitably received by Mr. Brazeau, who also did everything in his power to assist me in effecting interviews and establishing friendly feelings towards us among these Indians. Subsequently Mr. Brazeau was in charge of Fort Edmonton during the summer of 1859, and complied with some urgent requests of mine at considerable personal inconvenience to himself. And this timely assistance from Mr. Brazeau proved of great importance to the welfare of the Expedition.

On our arrival at Fort Colville, we found Mr. Blenkinsop in charge of that post, and to this gentleman I have to express my sincere thanks for aiding us most liberally under circumstances of great difficulty connected with the resources of the Expedition. Mr. Blenkinsop also assisted me in every way to furnish horses and provisions for the several branch expeditions undertaken from Colville, and likewise permitted one of the gentlemen under his command (Mr. Margary) to accompany Mr. Sullivan as interpreter, while the latter was conducting his explorations for the connection of the Kananaskis pass. In this service Mr. Margary displayed zeal and powers of endurance of no common order.

Before our final departure from Fort Colville, Mr. Angus McDonnell arrived there, and subsequently succeeded Mr. Blenkinsop in the charge of that fort. To Mr. McDonnell I am indebted for much valuable information concerning the country between the Rocky Mountain chain and the Cascade range.

Finally the thanks of the Expedition are due to Mr. Dallas, through whose courtesy the money matters of the Expedition were finally adjusted.

EXPLORATION OF BRITISH NORTH AMERICA.

Introduction.

The objects for which Government sent out the Expedition.

Her Majesty's Government being anxious to obtain correct information with respect to the facilities or difficulties of communication between the Canadas and the country west of Lake Superior and north of the 49th parallel, determined early in the year 1857 to send out an expedition to examine the present route of travel with a view to ascertain whether it could be either shortened or rendered less formidable by any reasonable outlay, and whether if such an expenditure of capital were devoted to that object there was any prospect of a result favourable to emigration or agriculture commensurate with the sacrifice.

Object 1st. Information relative to a route favourable for emigration or agricultural objects.

The Government was also desirous of obtaining information relative to a large belt of country until now almost unknown, namely, that comprised between long. 97° W. and the Rocky Mountains, and ranging from the 49th parallel of latitude to the North Saskatchewan.

2nd. To ascertain the nature of the country westward of Red River and elbow of Saskatchewan and north of boundary line.

In addition to both these motives, the Government wished to ascertain whether any practicable pass or passes available for horses * existed across the Rocky Mountains within the British territory and south of that known to exist between Mount Brown and Mount Hooker in latitude 54° 10′.

To find a pass or passes across the Rocky Mountains north of boundary line and south of the Boat Encampment.

Ever anxious to promote the interests of science, when that object can be obtained consistently with a just economy of public money, Her Majesty's Government attached to the Expedition Lieut. Blakiston, R.A., Dr. Hector, Mr. Sullivan, and M. Bourgeau, at the several recommendations of General Sabine, Sir Roderick Murchison, Doctor Purcell, and Sir William Hooker.

Gentlemen attached to the Expedition.

At the suggestion of General Sabine, Lieut. Blakiston did not take his passage by steamer along with myself and my other companions to New York, but remained with the many delicate instruments for magnetical observations under his charge together with some meteorological ones, and started about six weeks later by the Hudson Bay Company's ship "Prince of Wales" to York Factory, Hudson Bay, thence by boat route to Norway House, Lake Winnipeg, and up the Saskatchewan to Carlton, where he joined the Expedition before the commencement of winter.

Lieut. Blakiston.

My other companions, Doctor Hector, Mr. Sullivan, and Monsieur Bourgeau, started with me from Liverpool to New York on the 16th of May 1857, in the "Arabia," Capt. Stone.

Doctor Hector
Mr. Sullivan.
M. Bourgeau.

Difficulties with the Custom House authorities overcome.

On the 28th of May we entered the Hudson, and experienced considerable difficulty with the Custom House authorities owing to our unwillingness to unpack the cases containing our barometers, thermometers, and other fragile instruments on account of the great difficulty of packing them again. Subsequently, however, through the kind assistance of Mr. Pompelly, a merchant of New York, who took an immensity of pains in the matter, our cases were not only unopened but passed duty free.

Start for Detroit.

On the 2nd of June we started from New York for Detroit on Lake Huron, there to await the American lake steamer "Illinois," in order to proceed to Sault Sainte Marie, where I expected my two canoes, which I had (by directions from England several mails previous to my departure) arranged to meet me from La Chine in Canada.

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* The only pass then known to be within British territory being that between Mount Brown and Mount Hooker, known as the Boat Encampment, and impassable for horses.

Journal of Expedition, 1857-8.

Start from Detroit. Steamer Illinois much damaged by ice.

June 6. This evening the steamer "Illinois" which plies between Lake Erie and Lake Huron arrived at Detroit, we got our luggage on board and obtained tickets for the passage. The steamer was much behind her usual time, owing to damage which she had received on this her first trip this season, in passing through the ice on Lake Superior, Mr. Trowbridge, a Detroit man to whom we had a letter from Mr. Pompelly of New York, showed us much attention and introduced us to the captain of the Illinois (Captain Wilson), who afterwards did everything in his power to further our views and assist our arrangements.

We found the steamer "Illinois," like all first-class American steamers, most comfortably fitted up for the accommodation of passengers, and the table and attendance excellent.

Fellow-passengers.

Among the passengers on board were many settlers, who with their wives and families were returning home to their farms, after spending the winter months either in amusement in the towns, or in the enjoyment of a summer climate in the south.

We had also on board several managers and people employed in the copper mines, who described a most prosperous state of things both as to the richness and the quantity of the ore taken up there, which they told us paid very well, notwithstanding the high rate of wages. Our course from Detroit was for

River Huron.

the first seven hours northerly up the River Huron. This river averaged three hundred yards in breadth, and its banks assume an elevation of about thirty feet. The lands beyond are flat and densely wooded.

More settled on the American side. Lake Huron.

There are a considerable number of comfortable looking dwellings on the banks of the river, but by far the greater number are on the American side. Towards evening we entered Lake Huron, and during the night we made 70 miles along the west shore, and striking across the wide funnel-shaped part of the lake, the next day found us quite out of sight of land.

Ste. Marie River.

June 9. Very cold during the greater portion of this day, and the thermometer as low as 42°: after nearing the north shore of Lake Huron at 5 p.m., we entered the beautiful River of Ste. Marie. For the first 10 miles it varies greatly in breadth, being in some places 2 or 3 miles across, and in others only 200 or 300 yards; in this part of its course it is thickly studded with islands, which add greatly to the beauty of the scene. From the entry to the Ste. Marie to the falls of that name the distance is 54 miles. As

Navigation difficult. Church's Settlement.

the river was shallow in many places and difficult to navigate, we stopped that night at Church's Settlement, and awaited the morning for our further progress up the river. The man who gives his name to this spot had frequently been a bankrupt in the mercantile world, and in order to escape from his creditors came to settle here, where he now realizes a fine income from the manufacture of raspberry jam and

Wild fruit and maple sugar.

maple sugar. During the last year Mr. Church imported 1½ tons of white sugar for the manufacture of raspberry jam alone, and exported 7 tons of sugar procured from the maple. He possesses a store which contains almost every thing that a traveller can want. Besides his establishment, however, the houses are small and few in number. The mouth of Ste. Marie's River is in a bay, the shores of which are flat and thickly wooded. About 3 or 4 miles from its mouth it expands into a succession of lakes thickly

Granitic rocks.

studded with numerous rocky islets consisting of rounded bosses of granite and gneiss; further up the stream, where its banks again approach, they are composed of smoothed shining bosses of a deep red granite; as a rule these exposures of rock are confined to the north bank of the river, the south bank and the country beyond being much flatter and apparently swampy.

Sault Ste. Marie.

June 10. By daybreak this morning we started for the Sault, which we reached in about an hour. Here we were met by Mr. Simpson, the agent at the Hudson Bay Company's post at the Sault, who

Our canoes.

delivered over to us two north canoes, with their outfit and their crews of 16 men. The names of our voyageurs are here subjoined.

1st Canoe.

*Jack Sakarontaketato	1st Guide.
Antoine Charlot	2nd Servant.
Michel Ochichagaron	Middle man.
Olivier Laderoute	do.
Louis Tekakowakii	do.
Jacques Kariwagoron	do.
Bazil Mentour	do.
Olivier Bourdeau	do.

2nd Canoe.

Ignace Mentour	2nd Guide.
†James Beads	1st Servant.
Michel Tisowanotow	Middle man.
Francois Atohareson	do.
Michel Kanosesari	do.
Michel Achiwatone	do.
Ignace Kantantne	do.
Henri Sorwanhantow	do.

Our canoes were of the old north-western voyageur sizes and model, differing considerably from the Indian shape, with 2 bows measuring 30 feet long and 5 feet in greatest breadth. Their cradles of cedar wood were only ½ inch in thickness, and the exterior or covering of the canoe was of birch bark. The seams are sewn with pine rootlets, and, like the crevices in the bark, are daubed over with the resin which is obtained from the red pine.

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* Old Jack Sakarontikitato had frequently served as guide and steersman to Sir George Simpson, and had not missed one season for 30 consecutive years in starting each spring, and performing the whole journey from La Chine to Norway House on Lake Winnipeg, and back again.

† James Beads was also very kindly transferred by Sir George Simpson from his service to ours, and ever afterwards proved the most valuable man in the Expedition, and followed us during the whole of our three years' work until we arrived at San Francisco, where, upon my recommendation, he still continues in Her Majesty's service in the Expedition from the Gulf of Georgia, under the command of Col. Hawkins.

At Sault Sainte Marie there is no settlement on the Canadian side, save the Hudson Bay Company's trading post. But on the American side houses are scattered in every direction, the land is plotted out as if in expectation of the sudden growth of a large city, and several hotels, bars, and billiard-rooms have already sprung up.

At Sault Sainte Marie I made an arrangement with Captain Wilson to take my two canoes and 16 voyageurs on board the "Illinois," and strike across the lake out of his course, and approach the western portion of the island as near as in the present knowledge of the soundings he could venture. I adopted this plan in preference to the course hitherto in practice, viz., that of coasting along the north shore of Lake Superior in the canoes. Thus I not only saved time but provisions, and calculated on shortening the voyage to Fort William on the Kaministaquoiah by eight days. The saving of time was an object, as the summer was progressing rapidly, and still the lake was full of floating ice. At the Hudson Bay Company's post at Sault Sainte Marie we obtained some more provisions and a few further necessaries for our future canoe voyage, and then returned to the "Illinois" steamer, along with our 16 voyageurs, and our canoes, which were now placed on board, and we ascended the grand canal which unites the Sainte Marie River with Lake Superior.

This canal was constructed to avoid the falls which occur here. It is cut through beds of calciferous sandstone belonging to the lower silurian period, and by it a rise of 30 feet is attained. The falls are more properly speaking a long rapid filled with boulders and loose fragments of rock. This rapid is two or three miles long, and presents very much the appearance of the St. Lawrence about three miles above the Canadian Fall at Niagara, though of course nothing like the gigantic scale of the latter. On the English side many large masses of granite, gneiss, and greenstone are strewn about, and above the falls where the river rapidly expands into an arm of the lake, the south shore becomes high, while the north shore, although low, is by no means flat.

Lake Superior. Ice on the lake.

On entering the lake the scene was almost arctic, and the cold intense. Floating ice pervaded the lake, but was easily broken when coming in contact with the sides of the vessel, and some curious phenomena resulted from the collision, which caused the floats generally to split into small prisms whose length was the thickness of the hummock, a structure induced by the thawing of the mass; and the cohesion of these with one another being very slight, no sooner did the vessel strike one than it flew into a multitude of needles; or, if the cohesion was not altogether overcome, then the mass floated like a brush with the hair uppermost, and in that state, from the absorption of water, assumed a black colour, which contrasted strongly with the glistening whiteness of the surrounding masses. Some were observed to be five or six feet thick.

Curious structure of the hummocks.

South shore. Copper Harbour.

June 11. Early in the morning we regained the south shore of the lake, and during the day stopped at several places. One of them, Copper Harbour, is an excellent anchorage, being protected by a natural breakwater which extends across the mouth of the bay. The largest settlement along this portion of Superior is Outanagan, at which place, the navigation being very difficult, we waited till morning. The town is situated on a bay of that name.

Outanagan.

June 12. At daybreak came within sight of Isle Royale, bearing away to the N.E. The steamer stopped within four miles of its shore, and here our canoes were lowered into the water, and the loading commenced; this did not occupy much time, as the two cargoes had already been portioned to each. Considerable care is requisite in loading a canoe, and none but an experienced voyageur should be entrusted with it. No heavy solid article of any kind should be allowed to rest upon or against any part of the canoe. Long poles reaching fore and aft are placed along the bottom of the canoe, on which the hard and the heavy articles rest, thereby avoiding all thrust or undue pressure on any one point. These poles are kept separate by a light wooden grating in the centre of the canoe, and on which the bedding of the two passengers is placed as a kind of seat or lounge. Little more than half an hour's brisk paddling brought us into a small bay on the island, where we landed for breakfast. Notwithstanding the quantity of drift ice that filled up the eastern end of the lake, the temperature of the water was here 48° Fah. and that of the air 51°. While we were at breakfast a smart breeze arose, and we did not regret that our stay on the island was prolonged by the strong wind which had sprung up, which allowed us a little time for a partial examination of the island. Isle Royale is of considerable extent, measuring 160 miles in circuit. It presents a very rocky shore, and consists of alternate beds of trap, a dark green stone. Although the soil on the island is not deep, yet it supports very dense forests, and chiefly consists of decomposed vegetation. Its principal botanical productions are *Betula papyracea* (by far the most abundant tree), *Abies alba*, *Pinus Banksiana*, *Alnus* (two species of), *Larix Canadensis*, and *Thuya occidentalis*. The vegetation at this date was not in an advanced state, the trees not yet being in leaf, and the herbaceous plants had not appeared. The lynx is the largest animal on the island, and is said to be very common. At 1 P.M. we commenced preparing for our start, and the voyageurs gummed the canoes, an operation necessary at almost every encampment. The gum is first warmed at the fire and then rubbed into the seams of the canoes. After this a piece of burning wood split answers the purpose of a blow pipe, by which the crevices are all stopped up. We had about 17 or 18 miles to paddle across from our breakfasting place on the island to the nearest point on the main shore, and were hardly half way when we were threatened with a storm to windward of us, and the men worked hard to reach the opposite side, as these lake storms are very dangerous for canoes under any circumstances, but especially to one heavy laden as we were. The storm, however, passed over without reaching us, and in four hours after starting we arrived on the opposite shore of the lake, and landed on a small islet consisting of red trap rock in Hamishee (or Thunder) Bay.

Isle Royale. Geological structure.

Vegetation.

Gumming the canoes.

Thunder Bay.

This small islet is one of a group called the Victoria Islands, laid down in a manuscript note on a copy of Captain Bayfield's map given to us by Professor Nicolay in London.

Victoria Islands.

When we first started from Isle Royale to cross to the lake shore, the men did not in the least know where they were, and were evidently uneasy until about half way across, when they recognized headlands in the north-west, which were familiar to them. After a short delay we pushed on again for Fort William, now distant about 16 or 17 miles. The evening was calm and lovely, the shores were thickly clothed with pines, through which occasionally peeped dark cliffs of basalt columns. In addition to the grandeur of the scene we could not avoid being impressed by a silence to which we were not yet accustomed, and broken only by the noise of our paddles. Thunder Mountain crowned the magnificence of the view, defining the eastern extremity of the bay, and rising 1,300 feet above the level of the lake.

Basalt cliffs.

Thunder Mountain.

Pie Island.

We passed close under the cliffs of Pie Island, which stands at the entrance to Thunder Bay, and observed its conical summit 800 feet high, to be densely wooded. A group of low, well wooded islands lie further up the bay, called the "Welcome Islands," and on one of them the tents of a few Indian families were pitched for the sake of the fisheries. It was dark when we entered the Kaministaquoiah River, and at 10 P.M. we landed at Fort William, and were most hospitably received by Mr. McIntyre, the gentleman in charge. We learnt from this gentleman that Sir George Simpson had preceded us about eight or nine days on his annual inspection. Fort William was built in 1803, in the time of the North West Company, and came into the hands of its present owners, the Hudson Bay Company, in 1821, at the union of the two companies. It was of considerable importance to the former, being the place at which their annual general councils were held. At present its returns as a trading post are inconsiderable. The fort consists of a large dwelling-house of wood erected parallel to the banks of the river, in which the family of the Hudson Bay Company's officer resides; two large storehouses, built at right angles to the dwelling-house; and the whole enclosed by pickets five feet high.

Enter the Kaministaquoiah River and land at Fort William.

An old post of the North West Company.

Adapt our luggage for the portages. How the voyageur carries his loads across the portage.

June 13. Occupied all day in repacking our luggage, so as to render it in weight and bulk most convenient for the portages, which are very numerous on the route; the luggage is, as nearly as possible, portioned out in lots of about 90lbs. each, called "pieces." The voyageur carries two of these pieces at each trip backwards and forwards across the portage on his back; they are held by a long leather strap called a portage strap, the peculiarity of which is its being broad in the middle, where it is adjusted to the man's forehead, leaving him the free use of his arms in passing through the brush.

Nature of the country about Fort William.

The country about Fort William is richly wooded with spruce, white cedar, birch, and scrubby pines, but, except strips along the river banks, its swampy nature will prevent its ever becoming valuable to the agriculturist; it is in fact a delta composed of the sediment brought down by seven or eight rivers which pour their waters into Thunder Bay. There is a Catholic mission two miles above the fort, under the guidance of two French priests, M. P. P. Chone and M. D. du Roquees, who have built a very pretty little chapel of pine wood. Two hundred of the Chippewa tribe were tenting about the mission, and also a few pagan families; one of the chiefs belonging to the pagan portion of the tribe possessed ten wives.

Roman Catholic mission.

Indians live by fishing.

The occupation of these Indians is chiefly fishing, a fact of which even a passer-by on the river need not be informed, as the fish oil used by them for their hair and for culinary purposes taints the atmosphere around. A great deal of fish is bartered by them at Fort William, consisting chiefly of sturgeon, white fish, cat fish, trout, and gold eyes; from all accounts there are seven kinds of sturgeon in Lake Superior. The largest trout we saw weighed 30 lbs. In a letter received from Sir George Simpson at Sault Ste. Marie, we were advised to change the canoes at Fort William for others more suited for carrying over the portages. We are much indebted to Mr. McIntyre for his attention and hospitality, and for his kindness in assisting us to carry out our views in every way in his power. We were sorry to find here that one of the Kew thermometers and the max. reg. of Negretti and Zambra had been broken, also one of the mountain barometers. During the day Mr. Sullivan obtained the latitude and longitude of Fort William, also the variation of the compass: these results are calculated elsewhere. The chronometer rates have been very uniform since leaving England, as his longitude differs only a few seconds from Captain Bayfield's determination on the survey of Lake Superior. I was occupied the greater part of the day in making arrangements for a branch expedition up White Fish River, so that we made but a short distance from Fort William, and reached our evening encampment on the left bank of the Kaministaquoiah at 7.30 P.M. In this portion (12 miles) the river is not rapid, and winds through a kind of inland delta, as above stated. It is beautifully clothed with vegetation, having the same character as that on Isle Royale, but a great difference was observable in the more forward state of the trees here than at the former place, as here they were in full leaf. The spruce and birch attain a much greater size in the environs of Fort William than at Isle Royale. In the windings of its course, the river passes close under McKays Mount, which is elevated 1,000 feet above Lake Superior, and forms a conspicuous landmark.

Obtain smaller canoes.

Instruments broken.

Start from Fort William.

Vegetation on the Kaministaquoiah further advanced than on Isle Royale.

The Grand Rapid.

June 14. Rose a few minutes before sunrise and were off at 4 A.M., the barometer at starting 29·34, thermometer 49°; in less than an hour reached the Grand Rapid, where the men had to lay down their paddles, take their long poles, with which they had previously provided themselves, and punted up the river.

The vegetation on either side is less luxuriant than lower down, and the banks have a much greater elevation. When a long bend of the river allowed us to see over the tree-tops, we again obtained a glimpse of the high basalt cliffs of McKays Mount to the south of the valley.

Banks marked by terrace levels.

At 10 A.M. we stopped for breakfast, and landed on a part of the bank devoid of wood, and forming well-marked terrace levels. This terrace structure commences about 20 miles from the mouth of the river, rising to the height of from 60 to 80 feet above the level of a broad alluvial flat, through which the river has a comparatively straight course. These terraced banks are composed of a red sandy marl, from the summit of which the country is level, as far back as we could perceive, with little or no swamp. The clearing at this place is only partial, and had evidently been caused by fire. At 12.15 P.M. our canoes arrived at Lazy Portage.

Lazy Portage.

"Tracking" the canoes.

Here rocky ledges cross the river bed, causing a rapid, but no fall. Most of our baggage was landed, and two lines attached to the head of the canoes, while their crews "tracked" or towed them up the rapids, wading to their waists in water. After crossing the portage and reloading our canoes, we continued to ascend the stream. Above the rapids the river again becomes sluggish, the rocky obstruction acting as a dam to the descending waters. At this portion of its course numerous mud islands covered with a thick growth of willows rise in its centre. At 3.15 P.M. we encamped opposite the mouth of White Fish River. Soon after we had pitched our camp the rain came down in torrents, thus preventing any further work for the time. The Kaministaquoiah here cuts a channel for itself through a great thickness of reddish black alluvial deposit. We can easily imagine that the existence of such a tributary as the White Fish River might be overlooked, since, at its embouchure on the right bank of the Kaministaquoiah, it has much the appearance of a bay or indentation of the main river. On ascending the bank immediately behind our encampment, which attains an altitude of 70 feet, the country presents great irregularities in every direction, and, as a rule, is densely wooded. The light green tints of the cypress pine distinguishes the high dry lands from the low river margins, which are characterized by the sombre

Mouth of White Fish River.

Appearance of the surrounding country.

green of the spruce. From this place also we observed a line of hills stretching from the neighbourhood of Fort William to the south-west; the same range with rounded summits are seen to skirt the shore of Lake Superior, between Thunder Bay and Pigeon Point. The country to the west and north does not seem to possess any greater elevations than the range of heights to S.E.

June 15th.—A very wet day, every hour showed a descent of the barometer. Occupied all the forenoon in completing my preparations to ascend White Fish River, for this purpose I hired, while at Fort William, three Indians, and obtained three very small canoes, (in order to command the least possible draught of water), and were barely of sufficient size to hold three people, namely, a paddler fore and aft, and a passenger in the middle; much experience and practice is necessary to paddle or punt these small canoes without upsetting them, and even the passenger in the middle must remain perfectly quiet in order to preserve their equilibrium. Doctor Hector, with an Indian and one of our voyageurs, occupied one canoe, I took the second, accompanied by James Beads and another volunteer from among our voyageurs. The other two Indians took charge of the canoe containing our provisions; about 11 o'clock the day cleared up and Hector and I started on our branch expedition up White Fish River, and Mr. Sullivan and Mons. Bourgeau to camp, with directions that the former should ascertain the position of the mouth of White Fish River, make measurements of its breadth, and take soundings for about two or three miles up the stream. His results are, breadth at mouth, 55 yds.; depth at mouth, 4½ ft.; and for the distance which he proceeded up the stream, no considerable difference was observable in the breadth, but the depth of the river only averaged one foot.

Our three small canoes.

In my ascent of White Fish River we soon encountered rapids; at the first of which, 100 yards from its mouth, there is only 2 feet of water, and this is about the depth of most of them, while the intermediate pools are about 5 feet deep. Thus, for all purposes of navigation, the stream must be useless. During the first afternoon we passed in all 26 rapids at most of which the men, and sometimes ourselves, were forced to get into the water, in order to assist the canoe over the river bed. For the first half mile the direction of the White Fish River is parallel to the river into which it flows, and in this part of its course, a small section of clay schist was observed dipping at a high angle to S.E. Large gravel beds and a gravel island rises from the surface of the water, but the river banks are composed of mud deposits in regular strata, supporting a dense growth of willows. On its right bank aspen poplars occur in bluffs. About two miles up the stream there are several places where boulders have become imbedded in the stiff clay of the river deposit, and have very much the appearance of an artificial causeway. Three miles further up, the banks become elevated, and at the bends of the river immense sections of dark red marl earth are exposed, and at one spot, where the river seems to cut through a "drift" ridge running from S.E. to N.W., these sections have a thickness of 100 ft. at least.

Quite unnavigable.

Strata of clay schist.

Imbedded boulders.

Marl earth.

The woods are mostly young, as only a few clumps of old trees were observed to have escaped from the fires so frequent in this part of the world. Only a few pines are to be seen, and these are of inconsiderable size. We continued punting until 5.30 p.m. when we halted for the night on a point among a clump of tall pines, some of which were more than 2½ feet in diameter. I may mention here that at a place where we landed to allow our men a little rest in the course of our laborious ascent, we discovered the fresh tracks of a black bear, an animal not uncommon in this part of the country. I am told also that the reindeer (Cariboo) is killed very often in this neighbourhood, especially during the winter, but that the moose are now very scarce. After supper, having constructed a shelter from the incessant rain, we were soon rolled in our blankets and slept soundly.

Reindeer.

June 16th.—The rain was still so heavy that in hopes of its clearing up a little we deferred our further advance till a little after noon, but as the river increased in rapidity and strength by the continued rain, we made but little progress; we were forced to walk in the water as on the previous day, and soon I found myself in advance of Dr. Hector, his canoe, in a rapid of considerable strength, having been whirled round and round and shot down the current, which it had taken him half an hour to ascend. In about two hours we came to a low section of dark-coloured slaty rock of 4 ft or 5 ft in height, and covered by about 50 ft. of dark sandy clay. There is a powerful rapid at this place but no fall. The stream still continues to make bends round alluvial points in a wide valley, but it is now crossed by ledges of rock, and enormous boulders are very common.

Canoe caught in a rapid.

About 5 p.m., finding that the men could no longer withstand the continual soaking, both from wading in the river and from the torrents of rain which still fell, I landed on the bank just above a more than usually strong rapid, to await the arrival of Dr. Hector. While here, an accident occurred which effectually put a stop to our further exploration of the river, and which at any rate had become obviously useless. The men, in order to warm themselves, set fire to a large dead pine, and then foolishly commenced to fell it; it fell, unexpectedly, right over the place where I was standing beside the canoe which I was unloading. By an effort I was fortunately enabled to escape beyond the reach of any but the smaller branches, which did me no injury, but the canoe was crushed to atoms. This was unfortunate, as we were obliged to stay here for the night, on a flat only 6 ft. broad, at the base of a high steep bank. Just as we were deliberating we nearly lost a second canoe, for the swollen stream was so violent that it detached it from the shore, and was carrying it towards the rapid below, when one of the voyageurs observing this at once plunged into the river, and with difficulty recovered the canoe at the risk of being swept down the rapid and lost. Our camp was certainly one of the most cheerless a traveller can well experience, being only 4 feet above the waters of the river, which, from its rapid rise, appeared likely to inundate us before morning; we were also entirely exposed to the torrents of rain which had been incessant throughout the day. Our three Chippeway Indians whom I engaged for this trip, at Fort William, displayed considerable ingenuity in their method of protecting themselves from the inclemency of the weather, by strips of bark which they rapidly stripped from pine trees.

Continued rain.

Burning tree smashes one of the canoes.

Dangerous plunge.

Indian bark shelter.

During the evening I examined the Indians carefully as to what was the nature of the river above as far as they knew: they informed me that at a distance which they could not specify, very high falls occur, to the foot of which at certain seasons Indians resort to fish for sturgeon. Also that the river, both below and above that place for some distance, was very rapid and enclosed by high banks. It emerges from a lake of considerable size, which, as far as I could make out from their confused statements, is not far from another which discharges its water into Sturgeon River flowing westward. This they call "White Fish Lake," but the falls upon the river they call the Sturgeon Falls. Seeing that even in the high state of the water the river was unnavigable, I determined that next morning I

Indian report of upper part of river.

Abandon further examination of White Fish River.

would despatch the two remaining canoes down the river to where I had left the rest of the party, with orders that they should push on to the Kakabeca Falls, to which place I intended to pass by crossing the country on foot along with Dr. Hector and the other two Indians.

June 17th.—The rain still continued as heavily as ever, and shortly after sunrise we got off from camp, just in time to avoid being flooded by the river, which had now risen to its level. At the same time our two canoes started on their downward progress, and from the swollen state of the river, their passage was a speedy one, uninterrupted by any of the shallow rapids which caused our ascent to be so laborious.

Walk to the Kakabeca Falls.

Character of country.

We now commenced our walk to the Kakabeca Falls, by ascending a steep bank about 150 feet high, behind our now flooded camp. Keeping on the plateau thus gained, we threaded our way through dense forests of pine and larch. The country was undulating and intersected by deep ravines; the swampy bottoms of these latter are occupied by large black spruce firs, some of which are of an enormous size. Here the walking was very difficult owing to the fallen timber and dense undergrowth, and forming a great contrast to the summits of the ridges, where the dry soil supported fine open glades of the Banksian pine. This character was interrupted by tracks of wet mossy ground, from which sprung small streams, and such places are always occupied by groups of the yet leafless larch. On the whole the timber in this locality is very fine.

Crossing streams.

We were obliged to cross numerous streams, which, though of inconsiderable size at other times, were now deep and rapid, and now presented considerable obstacles to our advance; we crossed, however, by selecting places on the margin of the streams where two trees grew exactly opposite to one another on different sides, then cutting one down in such a manner that it should fall across the stream, one of the party crossed on it cutting off all the uppermost branches. After this the second tree was thrown across the stream with its branches locking into those of the first, and after lopping off its uppermost branches also, a very good bridge was formed. In the course of our walk we killed two grouse and a rabbit, which served us for dinner.

The direction we had travelled was mainly N.E., and we first reached the Kaministaquoiah at nearly a mile or two from the falls. The distance we had gone over was about 20 miles. That portion of country we passed along the banks of the main river led us through dense thickets of willows and cypress swamps, forming a marked contrast to the vegetation met with during the early part of the day. On reaching the lower end of the Mountain Portage we found that our party had already started. At this place a high rocky cliff appears on both sides of the river, running from N.E. to S.W., and through which the river has cut for itself a channel which extends as far back as the "Falls." By a winding path the summit of this cliff is gained at an elevation of 140 feet above the landing place. This

Mountain Portage.

constitutes what is called the Mountain Portage, but on reaching the plateau above, the canoes and baggage had still to be carried a distance of rather more than a mile before a part of the river was reached where they could again with safety be launched. At the upper end of the portage we found

Encamp above the falls.

our party encamped, having arrived there not many hours before us. I learnt from Mr. Sullivan that our small canoes had arrived in safety at 9.30 a.m., having taken only three hours in making the descent of the White Fish River. The party had immediately followed my directions and started for the place where we now found them encamped.

Description of Kaministaquoiah River below the falls.

Mr. Sullivan thus describes that portion of the Kaministaquoiah River between the mouth of White Fish River and the foot of Mountain Portage. The Kaministaquoiah in this part of its course resembles very much its character at the Long Rapid, but the late heavy and continuous rain has considerably increased its volume, the right bank being flooded for some distance. In ascending the current we kept close to this bank, where the overhanging branches of the trees aided us in the ascent, but after experiencing painful blows on the face from them as our crews grasped and let them go, M. Bourgeau and I disembarked and kept along the margin of the stream. Our progress was slow and tedious, owing to the density of the undergrowth of willows, and the fallen trees lying in every direction, which were frequently hidden from sight by a depth of two or three feet of water.

The following plants were in full flower at this time:—amelanchier, verbenum, ribes and cerasus.

From opposite the mouth of White Fish River the left bank of the Kaministaquoiah commences to increase in elevation until it attains its highest at the Kakabeca Falls, but its right bank preserves the low flat character up to the foot of the Mountain Portage, seldom being more than three feet above the surface of the river and often inundated. The Kakabeca Falls are about 7 miles from the mouth of White Fish River, and in this distance the river makes a bend at right angles from a south-east course.

Nature of the portage work.

On arriving at the Mountain Portage our canoes were emptied of their cargoes, and with the luggage were carried to our present encampment. It was here for the first time that we had an opportunity of witnessing what all travellers on this route have so justly admired, viz., that light spirit with which the voyageurs perform their hard tasks. They are mostly half-breeds of French and Iroquois extraction, and their cheerful French spirit is in happy harmony with the stern endurance of their Indian nature. The mode which they adopt for carrying their load is by means of a leather strap of about three inches in width, which they fasten round the load, leaving a loop which passes round the forehead. When all is ready away they run, and return until there is no more to carry, never resting on the road, and but rarely slackening their pace into a walk. Here, I regret to say, our last mountain barometer was broken.

June 18th.—The rain has been heavy occasionally, and only now and then the sun emerged from behind the clouds, but as all wished to see the grand falls, we started off a little after mid-day, and pushing our way through a forest of spruce and arbor vitæ, we reached a jutting eminence, which commanded an

The Kakabeca Falls.

excellent view of the Kakabeca Falls. From where we stood we beheld the whole volume of the river advancing on a level with the eye to plunge into a chasm bounded by precipitous walls of slate. At the base of the fall nothing could be seen but wreathing mist and dashing spray, while below us the river rushed with tumultuous eddies through the magnificent gorge it has hewn for itself in the solid

Height.

rock. We then measured their height by dropping a stone and noting the time of falling. A mean of seven observations of this kind gave us for result, 115 feet. After this we measured a base line, and

Breadth.

with a pocket sextant took angles and determined the breadth of the falls to be 335·8 feet. On the spot which we had chosen, a large quantity of ice and snow still rested. The vegetation in the neighbourhood of the falls was of a beautiful light green, resulting from the constant moisture of the ground by their spray. After returning to our camp, we measured also by a rough trigonometrical measurement

the breadth of the river at this point, and found it to be 770 feet. About one mile above the grand falls, and in sight of our encampment, where the river takes a bend to N.E., is a little fall, which has a very picturesque appearance from the small islands clothed with scrubby pines, contrasting with the foaming white of the river as it rolls rapidly by them. The weather still continues unfavourable, and the barometer very unsteady. No astronomical observations possible.

The country in this neighbourhood at a little distance from the river rises to an elevation of 100 feet, a steep bank on either side of the stream forming an additional terrace to those before mentioned. High river terraces.

June 19th.—Still obliged to remain encamped in consequence of the continuance of bad weather. Great difficulty experienced by M. Bourgeau in preserving his botanical specimens.

June 20th.—At 9 a.m., the morning promising fair, our canoes were packed, and we left the Kakabeca camp, but not more than ten minutes passed when they had to be unpacked and carried with all the luggage over "Priest's Portage," or, as the voyageurs term it, "Portage du Prêtre." At this place granite knolls made their appearance, and in the spaces between berry-bearing bushes formed dense thickets. In the centre of the island over which the portage is made, there was a large sheet of water, the result of the late heavy rains, through which we had to wade on again embarking above the falls, avoided by crossing Priest's Portage, and pursuing our course we observed the river to widen considerably, and to become beautifully picturesque; its banks also assuming a much greater altitude. The same luxuriance of vegetation characterized the banks as was observed lower down the river. At 2 p.m. we arrived at Island Portage, at which place the canoes and baggage are carried over an island in the centre of the stream, while the river rushes past on either side with extreme violence. Our men had a very hard day of it, with constant carrying, paddling, and wading to their waists in water, and were not sorry when our evening camp fire was lighted. Altogether we crossed nine portages, the principal of which were "Portage of the lost one," "Plamchamp's Portage," and "Bad Portage." Priest's Portage. Island Portage. Portage of the lost one.

June 21st.—A fine day at last, the first since the 14th, and we commenced our start with a portage. The thermometer indicated 52° at sunrise. After making four portages we halted for breakfast 9.30 a.m. at "Trembling Portage." At this place observations for longitude and variation of the compass were obtained. The weather throughout the day has been delightful after the long continued rain, but our enjoyment was much interrupted by the myriads of musquitoes and bulldog flies which continually tormented us. A large branch above the "Discharge of the Plain Stones" joins the main river from N. 35° W. At 1.20 p.m. we halted for dinner, landing on a low wooded bank. The country through which we passed during the early part of the day has lost all its timber from the ravages of recent fires, and the woods on the banks opposite to our camp were quite bare, and nothing left but dead trunks. We met occasionally during the morning a few small canoes, each paddled by an Indian and his squaw. They were on their way to Fort William, and formed picturesque objects as they glided down the stream. After passing through the finest scenery, the enjoyment of which was greatly enhanced by the stillness of the evening, we reached the lower end of "Dog Portage" at 7 p.m., and encamped for the night. The river at this place is dilated to a considerable breadth, forming a basin, which receives the waters from above by a fall of great beauty. From its banks the land rises rapidly in every direction to the height of 500 to 600 feet, clothed with the rich green of pines, relieved by patches of the light yellowish tints of the young aspens. High hills, which have been skirting the river at a considerable distance, here converge and seem to offer an impassable barrier. As there still remained a few hours of daylight, we crossed over the hill by the portage trail, and made barometric measurements of the altitude. The weather having been so unsteady that little reliance can be placed on the results of the barometric measurements in our ascent hitherto, but by estimate our rise since leaving the upper end of "Mountain Portage" is about 115 feet, while to the observed height of the Kakabeca Falls 115 feet, 55 feet may be added for the rise of the river in the rapids below, thus making a total ascent of 285 feet from Lake Superior to the lower end of "Dog Portage." Destructive fires. Reach Dog Portage. Altitude of Dog Portage above Lake Superior.

June 22nd.—Long before sunrise this morning our voyageurs had commenced their portage work. With a view to ascertain more accurately the change of level, two trips were made over the portage, and thus we obtained three sets of observations, the means of which, with their results, are tabulated below. From the longitude at this place it will be seen that our course has been a little to the east of N.:—

TABLE (Means of three sets of observations.) Aneroid barom. 178·67. To determine the rise of the Dog Portage.

Length of portage path	4,407 yards.
True altitude of rest place above river below	406 feet.
Highest point of path above river below	440 „
True altitude of top level above Dog Lake	144 „
Altitude of upper above lower end of portage	296 „

Or in the following manner:—

Difference in level	297 „

Dog Lake and lower end of Portage.

Altitude of lower end of portage above Lake Superior	285 „
Altitude of upper end of portage above lower end	297 „
Height of Dog Lake above Superior	582 „
Extreme heigh of portage path	726 „

The point where the canoes were again launched on the lake was distant about 3½ miles to the east of the place where the river leaves it, and we regretted much not having had time to examine that portion of its course, which is avoided by theportage, as there must probably be a series of very fine waterfalls, where the difference of level is so great as 29 6 feet inthe short distance of from two to three miles. The view which we obtained across the lake was magnificent; its waters were as clear as crystal, with a pebbly bed. The shores are bounded everywhere by hills, having much the same elevation as that we had now crossed in making the portage; but. while on the southern shores of the lake rich woods Dog Lake.

covered their slopes, these to the north and east were bare rounded masses of granite, with only a scanty vegetation clinging in the crevices and sheltered ravines. The longest direction of the lake is due north and south, and its breadth at some parts is very considerable. The whole morning was consumed in crossing the portage, so that we breakfasted before leaving the upper end. After a little delay caused by one of the canoes requiring repair, we started at 10 a.m., and at noon touched at a point on the west shore of the lake to take an observation for latitude.

Glacialization.

The ledges of rock close to the water are worn smooth, and marked most probably by the influence of the shore ice in spring; but Dr. Hector also observed parallel groovings and scratches on the rounded summits of the rocky masses at an elevation quite beyond the reach of any ice that could be formed upon the lake. These are doubtless true glacial markings, the effect of ancient icebergs, at a time when, from the depression of the land, the Arctic Seas extended much to the south of their present limits.

Dog River.

Drift.

After reaching the upper end of Dog Lake we entered the river of that name, which winds through a low swampy flat, traversed by only slightly elevated ridges and rounded hills, which we saw by repeated sections to consist of nothing but coarse reddish sand, mixed with water-worn stones, some of great size. When entering the river we disturbed several large flocks of water-fowl, with their broods of young, from its sedgy margin. A short way up the river we went ashore for dinner at a well-wooded spot on its right bank, and took observations for longitude and also for variation of compass. During the afternoon we continued to ascend Dog River, which has a breadth of 150 yards, and here again found that the forest on either bank had been devastated by fire. The land is so little elevated above the river that it was not until after repeated trials that we were able to find a spot sufficiently dry on which to make our encampment, which was in a clump of tall dead pines, and the effect of the reverberation from their bare stems gave rise to a singular echo in the tone of the voice entirely wanting among the green woods.

Camp in burnt woods.

June 23rd, Tuesday.—The morning broke cold and rawy, and started us at 5 a.m.; continued our course up Dog River. At 7.30 a.m. we breakfasted on a portion of the bank slightly more elevated than any lower down the river. The whole country was at this time flooded by the continued rains, so that we were not able to determine whether it is permanently as swampy as we found it. Observations for longitude and variation of the compass were also made at this point by Mr. Sullivan. A few miles beyond this place we emerged into a wide swampy lake, where, as there was no channel, the canoes had to be forced for some miles through a dense growth of sedge and willow. Above this the water is again confined to a channel. At 12.30 p.m. we halted for dinner at the point where the route leaves Dog River and follows up a small muddy tributary from the west. To the north of us a bluff rises out of the swampy flat to the height of 150 feet; it is abrupt towards the south and appears to be composed of rock. The stream which we now ascended was extremely narrow, and wound very much through fine meadow land, and finally expands into a series of small lakes, one of which is the "Viscon's Lake" of Franklin, through the waters of which there is said to exist some impediment to the progress of canoes; of this, however, we neither saw nor felt anything. In the stream one of our party shot a pike as it skimmed along near the surface of the water, which we found excellent for supper. At about 6 p.m. we arrived at Clear-water Lake, where the long Prairie Portage over the summit of the watershed commences. This lake is only a small sheet of water enclosed by sandy hills, which rise on all sides to the height of about 200 feet. It is interesting on account of the extreme purity and low temperature of its waters, which have attracted the attention of every traveller. About three-quarters of a mile further on one-fourth of the whole distance over which the canoes and baggage had to be carried for this portage, we encamped for the night, as time did not allow of the whole being accomplished this evening. Our encampment was beside a second small lake, which is as remarkable for the warmth and impurity of its waters as Clear-water Lake is for its purity and coldness. The remaining portion of the evening was devoted to the examination of this curious phenomenon, and with the following results:—The Upper or Warm-water Lake is fed by several small streams that run into it, but none issue out of it. Its depth in many places is as much as 27 feet, and the temperature of its waters is 67°, when the thermometer in air stood at 60°. Like Clear-water Lake, it lies in a deep hollow among sand-hills, with this difference, that its basin is unbroken at any point. It is separated from the former by two lofty ridges, with an intervening valley, in which, however, there is no water. The difference of level between the surfaces of the two lakes is 40 feet, the bottom of the valley between being at a higher level than the upper one. Clear-water Lake is uniformly the depth of two feet, and its bottom is composed of beautifully white dispouraceous mud; it partly derives its waters from springs issuing from the bottom, but receives by far the greater quantity from a stream which enters it at the end next the upper lake. This stream, when followed up for about 100 yards, disappears at an elevation of 20 feet above the level of the lake, at which place it is seen to boil violently out from the side of the hill. The temperature of Clear-water Lake was found to be 37°, that of the stream 34°, and of the air at the same time 60°. This, therefore, is nothing more than a filter on a large scale, the warm impure waters of the deep upper lake finding vent only by escaping through the porous sandy soil into the lower lake, which plays the part of a receiver. The waters in the course of their passage through the earth acquire their low temperature, and as they are far removed from the surface and the thickness through which they flow is great, we may assume their temperature to approximate closely to the mean annual temperature of the soil at the place.

Pass through swampy lake.

Viscon's Lake.

Prairie Portage.

Phenomenon of coldand warm water lakes.

We are on the watershead dividing the waters of the Gulf of Mexico from Hudson Bay.

We were now on the watershed of the continent, which divides the waters flowing into the Gulf of Mexico from those which run into Hudson's Bay, and also the boundary between Canada and the Hudson Bay Company's territories. Doctor Hector ascended the highest hill in the neighbourhood and found himself 270 feet above Warm-water Lake, and * feet above Lake Superior. Lat. Observ. Polar., by Mr. Sullivan, 48° 56′ 3″ N.

Prairie Portage.

Indian traps.

June 24th, Wednesday.—Rose early and completed Prairie Portage, 3,200, this was the longest though not the worst portage on the route; its whole length is a little over 5,000 yards, and the path winds through a forest of tolerably large trees over a country which is nearly level. In our traverse of the portage we observed that the Indians had set a number of wooden traps for catching martens, fishers, lynx, and other fur-bearing animals found in this part of the country. At the west end of the portage

* *Sic* in original.

there is a small round swampy lake, and in the boggy ground in its neighbourhood M. Bourgeau obtained numerous specimens of a curious little pitcher plant (Nepenthis). Here we breakfasted and took an observation for latitude, then loading the canoes and having crossed the small lake, we again made another portage a quarter of a mile long, by which the Savannah Lake is reached. This lake is of inconsiderable size, shallow, and its low swampy shores being covered with a dense growth of spruce. Its foul waters swarm with leeches and other small aquatic animals. After crossing the Savannah Lake we had again to disembark in order to pass the Savannah Portage, considered to be the worst on the whole route between Lake Superior and Red Run Settlement Walk. The greater portion of this desperate portage is over a dreary swamp, through which the men, loaded as they are, (each with nearly 200 lbs. on his back,) have the greatest difficulty in struggling. It is, perhaps, not quite so long as the Prairie Portage, but far more formidable; it would be impassable but for trees and logs of wood along which the men walk and so avoid sinking to their middle in the swamp; but in many places these planks were rotten, and the poor fellows had to use desperate exertions to extricate themselves. No accidents, however, occurred here to either men, or instruments, while carrying the baggage over this arduous portage, for the greatest labour, however, is the carrying the canoes, which is the severest test of strength and endurance.

Swampy Lake.

Savannah Lake.

Great Savannah Portage.

Great labour in carrying the canoes.

At the west end of the portage we reached the Savannah River, which is a stream of considerable size, having its source somewhere to S.E., and only receiving a very small tributary from the lake of that name. We were now about to commence our descent towards Lake Winnipeg, having quite crossed the watershed. With a view to determine which of the lakes through which we had passed was highest in level, the following observations were made with the aneroids; and, as the weather was favourable and steady throughout the day, the following measurements are tolerably worthy of reliance.

Savannah River.

Commence the descent to the basin of Lake Winnipeg.

Table of Measurement.

Barom. 178·67.

From Warm Water Lake camp of 23rd June.

Altitude of highest point of Portage Path agreeing with altitude of Swampy Lake	58 feet.	Table of the principal changes of level.
Swampy Lake and Savannah Lake are on the same level.		
Descent of Savannah Portage - - - - - - -	14 „	

Table of Total Altitudes.

Dog Lake above Lake Superior - - - - - -	582 „
Ascent to Cold Water Lake - - - - - - -	10 „
Ascent to Warm Water Lake - - - - - -	40 „
Ascent to Swampy Lake - - - - - - -	58 „
Total altitude of portage route - - - - - -	690 „
Altitude of Warm Water Lake above Lake Superior - - - -	632 „
Greatest altitude of watershed observed by Dr. H. above Warm Water Lake -	270 „
Extreme observed altitude of watershed above Lake Superior - -	902 „

The weather was excessively warm, and the musquito bites more virulent than usual, not only causing our hands and faces to swell very much, but leaving blueish marks that in some cases did not disappear till many months afterwards.

June 25th, Thursday.—Before starting to-day, took observations for longitude, and variation of compass.

At 10.30 a.m. we left camp, and commenced to descend the River Savannah. The heat was intense; a thermometer, lying in the canoe, and shaded from the direct rays of the sun, stood at 101, at noon. M. Bourgeau presented us with the first strawberries we had seen this season, which he had gathered while botanizing in the woods. The Savannah River is not above 30 yards wide, but is very swift and deep, and its waters have a very low temperature. Barriers of drift wood frequently arrested us in our course, through which a passage had to be cut by the axe. The banks are low, and clothed with fine woods, among which larch predominates, associated with the Banksian pine. At three o'clock we halted an hour for dinner on the right bank of the river, after which we started again, and entered the Lake of the "Thousand Isles" at five o'clock. The air was hot and sultry, and the dense clouds lowering to the south-west betokened a coming storm. We coasted along the south shore of the lake, which is low, with protruding rounded masses of rock, covered in some places with coarse red sandy gravel, till making for one of the many thickly wooded islands, we landed, and encamped for the night. Night brought with it a violent thunder-storm, accompanied by magnificent lightning; its flashes were repeated at intervals of only a few seconds, and its headed appearance resembled the discharges of a monster Leyden jar.

Intense heat.

Drift wood.

Lake of "Thousand Isles."

During the night we experienced great trouble with our luggage, having to shift it several times, in consequence of the violence of the storm driving the waters upon the low shores of the island.

June 26th.—Continued our journey along the lake, threading our way among its thousand islands. Observed several trees, which had been split by the lightning during the storm last night. As a strong breeze succeeded to the calm of the early morning, we were obliged to remain until 11 a.m. on another island, to await its moderating. Then starting again, we struck across to the western end of the lake, and arrived at the Barrier Portage, when we left the "Lake of the Thousand Isles." It has taken us in all six hours' paddling to traverse the beautiful sheet of water, so that its length may be estimated at 30 miles. The islands in its centre, as well as the surrounding shores, are composed of rounded masses of granite rock, but little elevated above the lake, and covered in many localities by a deposit of coarse sand mixed with boulders, some of which are of great size. Towards the western extremity of the lake the land becomes higher, perhaps more so than any part of the watershed, and finely wooded, some of the trees being of an enormous height (hard wood and pines).

Trees split by lightning.

Barrier Portage.

Fine timber.

The portage path, by which Bar Lake is reached, passes over a ridge 70 feet high, and by a double

set of barometric observations it was found that the lakes at either end are upon the same level. The length of this portage is rather under 400 yards. Took observations here for longitude, and at 6 30 p.m. we arrived at Ridge Portage, and encamped for the night at its western extremity.

There is here a slight change of level, as a small stream flows from Bar Lake into Ridge Lake, with a short rapid, the descent of which cannot be more than eight or ten feet. Our camp was at the lower end of this rapid, and our canoes were ready to be launched in the stream (which does not measure more than 12 or 14 feet across), and by which we were to reach Ridge Lake. High cliffs rise here, composed of a soft fine-grained granite. The length of this portage is about 500 yards, and the path passes through some of the finest timber-woods we have yet seen, except on the lower part of the Kaministaquoiah. One of these pines measured 110 feet in height.

Indians. Just after we had fixed our camp this evening, two Indians arrived in a canoe, travelling up stream on their way back from the trading post on Lac-la-Pline, where they had conveyed Mr. Murray, a gentleman in the Hudson Bay Company's service. There were originally four, but two had deserted that morning, taking with them all the provisions of their companions. We gave them a small quantity of provisions, although we had begun to feel the need of a supply ourselves, from having been detained so long at various places since we left Fort William. A steady drizzling rain fell during the night, which, however, did not preserve us from the incessant attacks of the musquitoes and sand-flies.

June 27th, Saturday.—This morning we were off again at 4 a.m., following down the small stream which, although so small as hardly to admit of our canoes, was, nevertheless, very deep; we then entered Bridge Lake. The scenery here entirely changes its character; high perpendicular cliffs rise everywhere at a short distance from the shore. As far as we could perceive, no other stream than that which we descended enters this lake.

French Portage. At 7.15 a.m. we reached the French Portage, and remained for breakfast at its eastern end. The whole forenoon was spent in crossing it. The portage is about 3,800 yards long, and traverses three distinct ridges, with intervening valleys; the highest point on the portage path is 70 feet above the lake to the east, and 108 feet above the point where we launched our canoes at its western extremity, showing an actual descent of, in the waters here, of 38 feet. At this place there is no communication between the two lakes. The country still continues to be well wooded, and M. Bourgeau is beginning to reap a rich harvest of the flowering plants. In the centre of the portage observations were made for longitude, and variation of the compass.

Perch Lake. One of our canoes having been broken, we were detained until 3.40 p.m. When crossing this lake we entered Perch Lake by a short and swift stream. It is small compared to the "Lake of the Thousand Isles," but like it is studded with numerous granitic islands. On one of these, not more than 50 yards across, we encamped for the night, and although seemingly it consisted of little else than naked rock, a considerable quantity of vegetation has secured a footing, drawing nourishment from the many crevices that intersect these rocky islands. The river by which we reached Perch Lake receives a large tributary from the north, which is not laid down in Franklin's map. The banks of the river, as well as the shores of the lake, are beautifully wooded, resembling much the country in the neighbourhood of the Dog Portage. Before leaving the south shore to strike for the island on which we encamped, Mr. Sullivan took observations for variation of the compass; the one taken in the morning he considered not to have given a reliable result owing to a derangement of the instrument.

June 28th, Sunday.—During last night a high wind prevailed from S.W., but it fell towards the morning, which broke misty and thick threatening rain. We broke up camp and started at 5.30 a.m., and at 6.45 a.m. reached the "Dead Man's Portage," so called from an accident which occurred long ago to one of the voyageurs, who was carrying the canoe across the portage, and who missed his footing and fell across a stone, where the canoe killed him on the spot, nearly severing his head from his body. The length of this portage (given incorrectly by a misprint in Franklin as 58 yards) is 575 yards. There is exceedingly fine timber at this place. At 7.45 a.m. we reached the "Portage of the Two Rivers," over which we passed and halted for breakfast at its western extremity.

The change of level of these two portages amounts to about 70 feet, but from some cause which I have not yet discovered, the aneroid barometer became unworthy of reliance.* Starting again at 9.45 a.m., we traversed several small lakes separated from one another by short rapids, the total descent of which is inconsiderable, and reached Sturgeon River at 10 minutes before noon. In hopes of getting a meridian altitude of the sun, we at once put ashore on a small island situated at its mouth, but the sun became obscured and the weather relapsed into the steady drizzle which had continued during the whole of the forenoon. Although this was by no means a favourable place, the main body encamped here for

Sturgeon River. the night, while a small party employed the afternoon in making a short ascent of Sturgeon River. On this service we started in one of the canoes with a crew of volunteers. "Old Jack" accompanied us, although he could now be of no use as guide, considering that he knew no more of whereabout we should proceed than ourselves. It had been all along our intention to devote several days to the examination of this river, and it was with considerable reluctance that we felt it necessary to alter the plans in consequence of the want of provisions, at which the men were discontented, and complained of the many

Explore the Sturgeon Lake. delays which had already taken place. Sturgeon River flows into Sturgeon Lake close to its eastern extremity, but the main body of the lake is not seen from its mouth in consequence of a long island which, lying at a short distance from the shore, causes here a narrow strait. The river at its mouth is about 100 yards wide, with an excessively swift current. After ascending it, however, for about $1\frac{1}{2}$ miles in a south-easterly direction, to accomplish which our crew had to punt up a long shallow rapid, the river expands into a magnificent lake with several large islands of about 8 miles from E. to W. and not less than 10 miles long. Still keeping in the same direction we made for what appeared to us an inlet, in hopes of again meeting the continuation of the river. However it proved to be a communication with another lake, not quite so large as the first, and along the south and west shores of which we coasted, and after several fruitless attempts at length discovered the river, which flows into its south-

Sturgeon Falls. eastern angle. There are here a series of fine falls, up which it was impossible to take the canoe, and as there was no portage track, and none knew how far we would have to go, before we came to still

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* This was found to be owing to the shifting of the dial plate, which is very imperfectly [*sic*] in most of these instruments.

water, we left the canoe and men at this place, and proceeded on foot to inspect the river further up. In the course of our ascent, Dr. Hector roughly calculated with a pocket level the rise at this place to be about 55 feet. After a walk of about a mile we again struck the river, and found it to emerge from another lake of almost equal dimensions with the first. Keeping on top of the high granite cliffs which form the southern shore, we continued our walk for several miles further, but at last seeing no prospect of adding more to our knowledge of this watercourse unless by reaching the further extremity of the lake, which our time would not permit of, we determined to return to the canoe. In doing so, however, we ascended the highest point we could find, in order to get a view of the surrounding country, and although the woods rendered this to be but a limited one, we saw enough to satisfy us, that we were in the heart of a wilderness of lakes, hardly separated from one another by narrow and irregular ridges. It occurred to us on the spot that winter would be the best season for the examination of a country like this, when the lakes would be frozen and travelling with dogs easy.

The short river which connects the upper lake with the one below is confined within high shelving cliffs of smooth water-worn granite, through which the stream gushes with great velocity, making a succession of small leaps, the last of which is about ten feet in height and crosses the whole width of the stream.

For finely grouped masses of water these falls surpass all we have yet seen on the route, and in spite of the incessant rain, we lingered to admire the beautiful wildness of the scene. Embarking again, we continued to make a circuit of the second lake which we had entered, leaving it by a narrow strait different to that by which we gained access to it. This strait led us into another lake, which we again left by a narrow opening to the west, and emerged upon the first lake not far from the point where we had entered it from Sturgeon River. The shores of all these lakes, which in fact may be looked upon as one divided into segments by barrier-shaped islands, are composed of bare rounded masses of granite rock, with much the same features as Perch Lake. The land, however, at some distance from the water's edge rises to a considerable height, and is densely wooded. The islands also, which are generally of considerable size and not very numerous, are covered by a dense forest growth.

From the hazy nature of the weather it was difficult to judge of distances correctly, but the extent of the first lake in a south-westerly direction seemed to be not less than 9 or 10 miles. Dr. Hector has made a map of our route as we threaded along among these previously unexplored lakes. (See first Parliamentary Blue Book of Explorations in British North America, among maps at the end.) Extent of the lakes.

Descending the short and rapid portion of Sturgeon River, we reached our camp about an hour after sunset. The distance we had penetrated in this direction was about 16 or 17 miles. Subjoined is a Table of the data, by which we estimate the altitude of Sturgeon Lake, and which, it will be observed, does not differ much from that of Dog Lake:— Table of altitudes.

	Feet.
Estimated descent of Savannah River	15
Descent of Ridge Portage	8
„ French „	38
„ Portage of the Dead and of the Two Rivers	70
Descent of the rapids before reaching Sturgeon Lake	20
Estimated total descent	151
Altitude above Superior	539 ft.

From careful consideration of these levels, it is evident that any attempt to force a road in a direct line from the mouth of "White Fish River" to this lake will not diminish the difficulties which are to be met with on the ordinary route, in so far as they are dependent upon the altitudes to be overcome. For although we have been five days occupied in our descent from the summit level, while it cost us only four short days to gain the same, the distance travelled is by no means to be taken as a measure of the relative ascent and descent. Indeed, since reaching the highest point over which the canoe route passes, we have been rather keeping along the top of the ridge than making any decided descent of its western flank. The only advantage of such a route, therefore, would be its more direct course, and consequent shortness, which I fear would be quite overbalanced by the want of any water communication by which the height of land can be attained, unless the old portage route by Pigeon River were partially adopted, but in that case its course would be along the frontier. General conclusions respecting a route by Sturgeon Lakes.

As to the construction of a road, there might be perhaps no great difficulty in taking one as far as the eastern border of that tract of country, abounding in lakes, which we first entered upon about Dog Lake, and which we have traced as extending continuously to Sturgeon Lake at least, but it is hard to conceive how the obstacles which this tract of country itself would present to such a work could be overcome. In it there is neither continuous land nor continuous water; any attempt, therefore, to construct a road would be met by numberless lakes and straits, some of great width and depth; and the rocky structure of the country would preclude the possibility of rendering the water communication continuous. In any case the expense would be so great, that the requirements of a large traffic could alone justify such an undertaking.

June 29th, Monday.—Started from camp at 4 a.m.; the morning raw and cold. At 8.15 a.m. we arrived at Bad River, where our canoes, after having been emptied, were run down the rapid. There are several other rapids in this river where portages are made in ascending the current, but which can be run down with comparative safety. The whole descent of its waters cannot exceed 20 feet. Still continuing to descend Bad River, the rocky bed of which widens into a sluggish lake, we reached "Island Portage" at 12.30 p.m. After an hour's delay at this place, in a very short time we emerged upon the "Lake of the Cross." A fresh wind from the west created waves upon it, which, meeting the waters of the river that were flowing swiftly in an opposite direction, produced at its mouth a sea, which did not a little try the strength of our bark canoes. During the afternoon we coasted along the north shore of the lake, and left it by paddling over a tract of flooded land, pushing our way through the branches of submerged trees until we reached a group of lakes, at a little distance to the north. Bad River. Lake of the Cross.

Splendid water communication exists in this part of the country in almost every direction, for as we threaded our way through narrow sheets of water without any apparent current we obtained glimpses in Water communication in all directions.

succession of long narrow rock-bound vistas, the placid waters of which reflected the beautiful rich green of the overhanging woods. After a little distance, however, these scattered waters took the form of a river of great breadth, and soon we came to rapids succeeded by a fall, to avoid which a portage was necessary. This was most probably the River Nimican, in Franklin's map, and we were following it so as to cut off the long bend which occurs to the west of the "Lake of the Cross." On reaching the second portage we encamped for the night. Here the river dashes with violence between high perpendicular walls, while the portage track leads over the high cliff which forms a left bank. Our camp was chosen on the top of this cliff, preferring rather to sleep on the bed of hard rock than on the soft herbage, where our constant foes, the musquitoes, could carry on their unremitting attacks.

Namikan Falls.

Took observations for longitude and variation of the compass.

June 30th, Tuesday.—This morning was exceedingly beautiful, and we enjoyed the view of the "Great Sturgeon Falls," which occurred at the first portage we came to. They are about 20 feet high, the waters falling over a semi-circular ledge of rock at a sharp bend in the river. Passing a violent rapid, which on account of an acute angle which occurs in its course, requires great steadiness on the part of the steersman, we entered the Lower Sturgeon Lake at 9 a.m. We halted on the right bank of the river at one of the most lovely spots for agricultural purposes that we have seen on the whole route. There was something in the natural grouping of the trees and shrubs at this place which irresistibly called to mind rural scenes at home, and it was hard to realize the fact that the hand of man had taken no part in producing this effect. We found here the remains of an Indian camp, among which, in a secluded grove, were several coffins raised above the ground upon posts to the height of 5 or 6 feet. In one of these, which we had the curiosity to open, we found the skeleton of a child, which Dr. Hector was of opinion had died from disease of the bones of the skull, which was much enlarged and thickened. Upon a conspicuous point of land, we found a surveyor's post erected, probably in connexion with some survey of the American shore on the opposite side of the lake. Here were fine oaks and ash growing singly and in clumps, as if in grounds laid out by the landscape gardener, and a shrubby growth of underwood interspersed with large willows grew luxuriantly. The shores of this lake are low and rocky. At 10.45 a.m. we again started, and after passing a point on the north shore, which seemed to be continued by a chain of small islands to a similar point jutting from the south shore, we ran up to the head of a deep bay and made a portage to a small stream which runs in to the eastern extremity of Rainy Lake. The water communication is said to be quite continuous between Sturgeon Lake and Rainy Lake, and this portage is only made to shorten the distance by avoiding a great bend to the south, which the north shore of the former lake makes. I hardly think that this portage involves much, if any change of level. The descent which we made from the Lake of the Cross to Sturgeon Lake, we estimate at about 70 feet. I suspect that this latter lake is distinct from the one passed through by Sir J. Franklin and on a lower level, as he has marked several rapids at the exit of *his* Sturgeon Lake into Rainy Lake which do not occur between ours and the lake we have passed through, which are almost on the same level. Moreover, the lake which he lays down as Sturgeon Lake is of much greater size and more studded with islands than that which we have traversed.

Great Sturgeon Falls.

Lower Sturgeon Lake.

Indian coffins.

The stream we now reached was excessively small, being little other than a chain of grassy pools, none of which exceeded five or six yards in breadth. These were, in some cases, separated by narrow ledges of rock only a few yards across, and not rising more than a foot above the level of the water, but which, nevertheless, required all the ceremony of portaging before they could be crossed. This led us to a swampy arm of Rainy Lake, where a few ducks were rearing their young broods. We obtained a few, and putting ashore just before entering the main body of the lake we dined on them. At this place there are lofty rounded heights of granite, the northern declivities of which, as well as their summits, proved on inspection to be deeply furrowed and grooved with glacial markings. During the afternoon we kept along the south shore of Rainy Lake, and towards sun-set made for a group of islands in its centre, on one of which we camped for the night.

Descend a small stream.

Reach "Rainy Lake."

July 1st, Wednesday.—Four hours' sailing before a fresh breeze this morning brought us to the commencement of Rainy River, where there is a rapid, on running which and descending the river for about two miles further, we arrived at the Hudson Bay Company's post, Fort Francis.

Arrive at Fort Francis.

At this place there are fine falls, to avoid which a portage is necessary. On the ridge over which the portage path passes, the establishment of the company is built; here our canoes were unloaded, and their freight put into the stores of the fort.

A large camp of about 200 Chippeways or Ojibeways were pitched in the neighbourhood, and we were amused while passing through their tents on our way to the fort with the number that pressed forward to shake hands with us, but with such a manner as to leave it doubtful whether the honour was done *to* us or *by* us.

Indian camp.

Mr. McDonald, who was in charge of the post, handed us a letter from Sir George Simpson, intimating that a supply of provisions had been prepared for us as far as the resources of the place admitted. In this, as well as in many other instances, the highest praise is due to my late lamented friend Sir George Simpson for all the assistance which we obtained from him in carrying out our instructions.

Letter from Sir George Simpson.

Fort Francis is built in much the same manner as Fort William, with the exception, that instead of being picketed like those posts which we had previously visited, Fort Francis is surrounded by stockades of about twelve feet in height.

We determined its geographical position as well as the variation of the compass. Colonel Lefroy had previously chosen this place for a magnetical station. Our observations, therefore, on the variation of the magnetic needle when compared with his will afford a good opportunity of observing the change in declination of the needle during the interval.

Observations.

Shortly after our arrival we observed a good deal of excitement and consultation among the Indians, and at once concluded that a begging deputation was in contemplation. Presently a loud beating of drums announced the signal of assembly to the tribe. Five long stools were arranged in a pentagon, and five chairs were placed in the centre of this enclosure. Here and there, at a very respectful distance, sat groups of women and children awaiting the commencement of the ceremony. The sound of the drum came nearer and nearer, and shortly the men of the tribe marched into the fort, in Indian file, with faces painted of every colour, heads decked with eagles' feathers, necks and fingers with brass

Indian deputation.

rings, and many wearing very elegantly beaded dresses. The men were all armed, with the exception of the old or principal chief, who bore the calumet or pipe of peace, thus indicating that a friendly parley was sought. The principal men of the tribe seated themselves on the stools, and the young men either sat or stood behind. The drum ceased, and the old chief entered the house and demanded an interview with us. We assented, and forthwith repaired to the seats which had been placed for us. For at least five minutes after we were seated a profound silence reigned—a silence generally preserved for some time previously to the commencement of all Indian ceremonial speeches. The palaver.

The chief commenced his harangue by assuring us that if we imagined that his tribe had assembled on this occasion for the purpose of begging we were mistaken; the reason of the present convocation was of a far greater moment than that. "Perhaps," said he, "you wonder who *I* am that *I* should "address you. My arms extend far back into time; my father and his father were the chiefs of this "once mighty tribe. Their graves are in our lands, and not far from here. If you further question "my authority for addressing you, look around me! These are my chiefs,—my soldiers,—my young "men. It is by their wish and desire that *I* address you." Here many voices grunted approbation. "All around me," continued he, "I see the smoke of the pale faces to ascend; but my territories I "will never part with; they shall be for my poor children's hunting fields when I am dead. But all "they are poor now! our woods were wont to teem with animals, and our rivers and lakes to abound in "fish; in those happy times our hearts were glad, but now my poor children often feel the pangs of "hunger, and at those moments *I think long*, (a favourite Indian expression,) and my heart bleeds "every noon to see my poor children nearer extermination. The Great Spirit causes the sun to give "you light and heat as well as to us; you are our equals, so do not deceive us, but inform us of the true "reason of your visit, and whither you are about to proceed to from here." I then replied to them, briefly pointing out the advantages of agricultural pursuits and fixed habitations over their mode of life, with the chase as their sole dependence, and told them how provident foresight is the main reason of the more comfortable circumstances of the white man. We quieted all his anxieties concerning their lands by telling them that we were going a long distance from this place, and were only passing through their country on our route to much further lands, and that our object was neither to take them by force or even bargain with them for the sale of their territories; and moreover, if any body of people should wrest their lands from them, our great Queen would send her soldiers to drive those people back, and would restore their lands to them again. The chief's account of their grievances.

At this point an Indian of a different tribe, who had been trading with the Americans, stepped up and said aside to the old chief, "Make him put that on paper, I "say; make him put that on paper." "Oh!" replied the old chief, "there is no need of that, what he "says he will act up to, for no one who came from the great Queen ever lied." I was much interested in listening to this testimony, from the lips of a savage, in favour of English honesty and good faith, and which indeed is also quite characteristic of the dealings of the Hudson Bay Company towards them. His sceptical friend, however, not so easily satisfied, replied, "Ah, well, it is of course no business of "mine, but I know how my people have been treated by the Kitje Mohomans" (Big Knives, a word for the Americans). The old chief concluded by asking us to speak to the great Queen on the subject of the poverty of himself and tribe, and to tell her that "they were very miserable and wretched, their "pipes often cold, and their tents melancholy." He requested also that M. Bourgeau should take no plants out of the country while travelling through his dominions, for fear that people far off should think the lands valuable and seize them. The assembly then broke up after having lasted 3¼ hours, during which time we were exposed to the intense heat of the sun, without shelter, so that after presenting the old man with a gun, at which he was delighted, and to the others a little tobacco, we gladly escaped from the throng. Their estimate of the American traders. Presents.

At 6.30 p.m. we started and paddled for an hour down the river, and encamped on the left or American bank. The river forms a large bay between the falls, sweeping round at the base of the bank upon which the fort is built, and from a little distance below the eye can embrace in one view the foaming cascade boiling over huge masses of grey rock, its white waters finely contrasting with the deep green of the surrounding woods, and to the left, the fort, surrounded by the picturesque wigwams of the Indians, all combining to form a most charming landscape. The river below the fall is very wide, and from its great depth the waters look quite black, and are overhung by dense masses of foliage; indeed, the profusion of the vegetation is very remarkable for a country which has so rigorous a winter. Some of our men amused themselves this evening by fishing, and obtained several perch and gold-eyed carp. We all suffered greatly from the effects of a poisonous plant which grows among the sedgy grass on the margin of the stream, and which produces a most intense itching sensation, attended with considerable swelling and the breaking out of a rash, the small vesicles of which ultimately form scabs. These effects last for many days, and some of our voyageurs are continually suffering from them. Leave Fort Francis. Picturesque scenery.

July 2nd, Thursday.—This morning we were off very early, and had not proceeded far when we met Mr. Kennedy, whose name has been prominently before the public in connexion with the Red River Settlement, and who was now on his way to Canada. Without stopping we hailed him, and found that he had left Red River on the 15th ultimo, being the same day on which Sir G. Simpson had arrived there. Meet Mr. Kennedy.

During the remainder of to-day we continued to descend Rainy River, which maintains its beautiful character throughout. At noon we passed what are known as the falls of Rainy River, but which are nothing but a couple of violent rapids of limited extent. We ran them both, and drew near to the shore below them, as a number of Indian women came rushing down from a few tents which were pitched on the top of the right bank of the river. Their object was to sell sturgeon to us, a fish which they spear in great quantities at these falls. We observed several large rivers in the course of the day joining Rainy River from the south, and at one of these, which entered the main river by a beautiful fall, there was a large green meadow free from trees, on which an Indian village was situated. At nightfall we reached our camping place on the English side of the river, elevated about six feet above its surface, and covered with a rank vegetation, from which as night drew on clouds of fire-flies issued, illuminating the bushes as they flitted through them. This was the first time we had seen them on the route. The night was warm, and a light fog lay on the stream and the adjacent banks. Throughout the whole length of this river up to this point we have been in a constant fever from the unremitting attacks of musquitoes. The only time when we are not tormented from their bites, and Rainy River.

their horrid buzzing, is when moving swiftly over the waters far from the vegetation in which they shelter.

July 3rd, Friday.—Where we have seen sections of the bank of the river, they have been composed of a bright-coloured sandy marl, but a marked change took place as we approached the outlet of the river into the Lake of the Woods, which we reached at breakfast time this morning; for here the banks become higher, and are composed of pure sand, and the vegetation becomes gradually more and more spare as we neared the lake until it disappears, leaving nothing but extensive wastes of blown sand. Astronomical observations were made at this place. We found the mouth of the river swarming with young fish, probably the young of the white fish. Soon after entering the Lake of the Woods, we remained a short time at one of the sand islands which abound in its southern part to allow of M. Bourgeau's landing to botanize. These islands are formed by crescentic banks of sand heaped up to a considerable height, having a narrow opening towards the south, and enclosing a tract of flat marshy ground only slightly above the waters of the lake, and covered with a scanty vegetation, consisting principally of shrubs, among which are small cherry trees. The waters of the lake are very shallow here, and frequently the men were obliged to step out of the canoes in order to assist them over the sandy shoals. A pleasant breeze now sprung up, which enabled us to continue sailing across the lake during the whole of the forenoon. The shores were now rocky, as the sand accumulations seemed to be entirely confined to its southern border. The country is wooded, but the timber is by no means good, and there seems to be a great scarcity of soil. During the afternoon, as we still had fair wind, we continued sailing, but towards evening got behind the shelter of clusters of islands, which made us again take to the paddle. On one of these rocky islets we encamped for the night.

Lake of the Woods.

Its islands.

July 4th, Saturday.—We were off at sunrise and steered for a narrow strait, by means of which, with a small portage across a narrow neck of land, we cut off a large headland which projects from the eastern shore. In this strait we landed for breakfast at a place where the shore is composed of high shelving rock, on which are to be seen both the effects of the lake ice and also of true glacial markings. On coming to that portion of our route known as the Portage des Bois we found the lake waters so much above their usual level that we were able to sail right over it. We now continued threading our way among wooded islands during the remainder of the day, and at 5 p.m. reached the Rat Portage at the head of Winnipeg River. The fall at the Rat Portage is only one of several outlets, by which the waters of the Lake of the Woods escape, afterwards to unite in forming the larger river we were about to descend. The fall is of considerable height, and enclosed between high perpendicular walls of rock, and at a distance of four or five hundred yards further on the waters mingle with those of another stream, which, although of great width, we were surprised to find was spanned by a wooden bridge. The scenery here is very wild, having all the requisites for grandeur, such as dashing waters, rugged precipices, and variegated foliage. On the left bank of the river, opposite to where the portage path terminates, there is a small temporary trading post of the Hudson Bay Company. We did not land at this place, but we obtained from the person in charge a small supply of sturgeon and white fish. Sturgeon are caught in great numbers below the falls, principally by spearing, an operation which is performed with great dexterity by the Chippeway Indians. They stand on a projecting rock over some suitable eddy, until one of these large fish comes within reach, when they secure it by a skilful thrust with a barbed spear.

Paddled right across the portage.

How Indians obtain sturgeon.

For a short way below the fall the river runs with a swift current in a trough-like rocky bed, but soon after expands and ramifies in every direction, the current becoming imperceptible, and presenting much the same appearance as the first portion of the River Nemican, through which we passed after leaving the Lake of the Cross; with this difference however, viz., the inferiority of the surrounding wood. We encamped on an island in an expansion of the river which forms a lake of considerable size. We enjoyed a fine moonlight night, and sat for a long time on the rocks watching the surface of the lake, which every moment was broken into phosphorescent circles by the plunge of fish darting at the flies which hovered over the water.

Phospho-rescent appearances.

July 5th, Sunday.—Started at 4.30 a.m. and soon came to strong rapids, where the river, which is narrow, rushes down between shelving rocky banks, having much the appearance of a large gutter. The smallness of the stream we were following can only be accounted for by supposing that we were in one of many branches into which the river becomes broken up while passing through this district. Owing to the nature of the country this assumption is very probable, as we were constantly passing long vista-like expansions running off in every direction, sometimes forming a beautiful perspective of many miles in extent, and by these no doubt the waters inosculate freely at many points. In short, the whole country here, as well as many other parts of the route we have travelled, is a complete network of narrow lakes and swift streams. We required to make no portage till after breakfast to-day, and continued the far preferable enjoyment of running the rapids instead. At one of these, known as the Spout Fall, the river narrows gradually until it is not more than 10 yards across, when being thus compressed, the waters make a leap of about 4 feet, and with such force as to curve from the rocky ledge into the pool below. This dangerous looking rapid both of our canoes ran in perfect safety. The speed with which we rushed at this leap was almost that of a railway train. Immediately below this fall the river suddenly increases in size, receiving many branches from both sides. The scenery now became very grand, and lofty bluffs of granite overhung the river on both sides. On our arrival at the first rapid of Winnipeg River took astronomical observations for longitude and variation of the compass, and were surprised with the sudden increase in the amount of variation which the needle displayed in this locality. The river continued to make large bends during the rest of our course this day, and on turning one of these at about 5 p.m., we unexpectedly came in sight of a small settlement, beautifully situated high up on a green slope, which here forms the right bank of the river. We found it to be a mission under the guidance of the Rev. Mr. McDonald, of the Established Church, but that gentleman had gone for a few days to Red River Settlement. It consists of five small houses, a chapel, all of wood, and a large portion of land railed in for the purpose of cultivation. Many domestic animals, cows and pigs in good condition, were feeding about the place, and their little crops of wheat, potatoes, turnips, &c., had succeeded most satisfactorily.

Running the rapids.

Strange increase of the needle in declination.

A missionary settlement.

A distant echo.

We only remained here sufficient time to allow of one of the employés at the mission to write a letter, which he asked us to take for him to the Red River Settlement, and, after sailing till 8 p.m., we encamped

on an island in the centre of the river, at a place where it is much expanded. Here, from the woods and at this place, our men called our attention to a remarkably fine distant echo, and the reverberation of a shot which we fired sounded like the roll of distant thunder.

The following are some of the statistics we collected at the Dog Mission to-day:—

May 18. Wheat sown; at this time four inches high, and looking green and close.

October 15. Harvest spring wheat.

May (end of). Potatoes planted. They are now from three to four inches above the ground. Good crops are always obtained.

August (month of). Hay is cut. It grows in abundance. (The natural grass is very fine, but it forms no turf.)

October (middle of). Winter begins. During the winter months the employment is cutting wood. Frost goes to a great depth in the ground, but the soil being sandy, it soon thaws in the spring, and is then easily broken. Snow falls, on an average, to the depth of 3½ feet.

April (end of). Spring commences.

Prevalent winds. From north and south; south being the rainy wind.

The occupants of the establishment are continually taking in extra land, and find little difficulty in doing so, the slight low brush being almost the only obstacle to contend against.

There is a winter road to Red River Settlement, by which they take six days travelling in snow shoes after dog sledges.

July 6th, Monday.—We were off this morning between 3 and 4 a.m., and travelled a very long distance before breakfast. At the island rapids an Indian came off in a canoe begging for medicine for his wife, who was lying sick. Dr. Hector could not make out what was the matter with her, but he gave the poor fellow some simple medicine, which would at least do her no harm. We traded some sturgeon from him, which we found excellent. We stayed for breakfast on a long rocky point in a bend which the river makes to the north. The rock here was studded with garnets, and although some of them were of considerable size, yet none were pure enough to be of value as brilliants. At this place astronomical observations were made, and the variation of the compass found to be still very considerable. At noon we landed on the south shore for the purpose of obtaining a meridian altitude of the sun, after which we pushed on for two hours, when we landed at Jacob's Portage for dinner. The day was excessively hot, and we were amused at the manner in which the voyageurs flung themselves into the water without removing a single article of dress, and after spluttering about for a while resume their paddles, thoroughly soaked from head to foot. While continuing our descent during the afternoon, the usual monotony of our voyage was broken by the appearance of two canoes rapidly advancing up the stream, their crews singing in full chorus. It turned out to be Sir G. Simpson, on his return from the annual meeting of council at Norway House, to attend which he every year makes this long and tedious voyage. Along with him was his secretary, Mr. Hopkins. The second canoe was occupied by three young ladies, daughters of a chief factor in the Hudson Bay Company's service, on their way to Canada.

Garnets.

Local declination of needles still remarkable.

Voyageurs swam with their clothes on.

Meeting Sir George Simpson on his way to Canada.

Sir George had, as usual, made a very rapid journey, and was looking remarkably well. All the men as well as ourselves were delighted to see him.

Among other things the Governor informed me that the horses had been procured for the Expedition, and that they were feeding up rapidly at a fine pasture ground in the neighbourhood of Lower Fort Garry.

The horses for the Expedition were purchased and at Red River.

Shortly after this the river became very broad and beset with many blocks of stone. On one of these one of our canoes ran with sufficient force to fracture the bark, but not so much, however, as to oblige us to unload it until we arrived at the "Three Woody Portages." We remained at the first of these portages in order to gum the canoe, and therefore went no further than the third portage that evening. The falls here are very fine and of considerable height.

Slightly broke our canoe.

July 7th, Tuesday.—The river still continues to traverse a rocky bed, and its banks are well wooded. We soon came to the Seau Falls, at which place the river makes a bend from the south to the west over several ledges of rock of considerable height; the breadth of this fall, and the grouping of the rocks and woods all round, have rendered it deservedly admired by all travellers who have passed through the country. In the afternoon we reached the Seven Portages, where the river by a succession of separate falls makes a considerable descent. From the lowest of these falls the river begins to get broad and the current comparatively sluggish; the banks are low without any rock visible, and consisting of thick stratified deposits of thick calcareous marl mixed with light sand; the vegetation is luxuriant, and on the whole the aspect of that river resembles much that of Rainy River. At nightfall we reached Cap Lake, and here granite rocks reappear, forming rounded masses covered with scanty vegetation. On an island of this formation we encamped for the night.

The Seau Falls.

The Seven Portages.

Cap Lake.

We had in the night rather a violent thunder-storm, attended with some phenomena which may not be unworthy of notice. A remarkably dense cloud approached us from the S.E. with very great rapidity, at a speed far greater than the mild breeze we experienced could account for. As soon, however, as the cloud arrived over our heads, we were assailed with a violent storm of wind, which instantly levelled the tents; down, also, came the rain like a waterspout, peal followed peal of thunder in rapid succession, accompanied with painfully vivid flashes of forked lightning.

An interesting thunder-storm.

Some time after this, although the wind fell, the thunder and lightning continued with unabated violence; the rain also ceased, and, although it was midnight, the heat became intense almost beyond endurance. This state continued for about an hour, when a breeze sprang up now from N.W., gentle at first, but in the course of half an hour reaching a maximum fury, and again laying our tents flat, but this time in the opposite direction. The rain, thunder, and lightning were also as bad as ever. This continued but a short time, when, suddenly, the wind lulled, the rain ceased, the thunder was heard no more, and nothing was left of the storm but the dense cloud now to N.E., and from which the lightning continued to play. This was evidently a circular storm, bearing a column of heated air with great rapidity from the southern parts of the continent towards the north, attended with the consequent violent electric phenomena. Its diameter in time was equal to about 4½ hours.

Its explanation and probable diameter.

July 8th, Wednesday.—Early this morning we arrived at Cap Portage, where the path traverses a beautiful plain, covered with a most luxuriant growth of high grass, mixed with vetches and flowering plants. This plain is the same terrace level through which we passed on the river yesterday, after

The Cap Portage.

making the Seven Portages; and now, from this place, the river traverses a deep valley. By four falls the stream reaches this lower level; and from this place down to Fort Alexander there occur several falls, at only one of which, however, a portage is made. As we approached the lower part of the river the terraces are well marked on the banks, and consist of several levels. They, however, retire from the immediate margin of the stream at many points, and the space thus left is occupied by marshy ground, in which there grows abundance of wild rice. This rice forms an important article of diet among the Chippeway Indians, and is gathered in great quantities all along the rivers and lake borders. These terraced banks which occur here are evidently deposits, formed at a time when Lake Winnipeg covered a much larger area of country than it at present does, and sent ramifications into all the valleys, which are now occupied by the rivers which flow into it. These deposits are the exact counterparts of those which we saw lapping round the eastern flank of the watershed, and skirting the valley of the Kaministaquoiah for a considerable distance above the Kakabeca Falls; but there is this great difference which the eye at once remarks, viz., that while the deposits of Lake Superior consist of coarse sand, and strongly impregnated with red oxide of iron, and appearing to have little if any lime in their composition, those of Lake Winnipeg consist of light coloured sandy clay and mud, with a large proportion of limy matter, but without the trace of any ferruginous colouring matter that can be detected by the eye.

Wild rice.

Deposits here compared with those observed on the Kaministaquoiah.

Fort Alexander.

At 6.15 p.m. we arrived at Fort Alexander, which stands on the left bank of the River Winnipeg, about a mile and a half from its mouth. It is built of wood, and situated on a fine fertile flat, elevated 40 feet above the river, and a wooden pier is built out into the water for loading and discharging the boats. Here Dr. Hector found a great many patients, all suffering more or less from symptoms of intestinal worms, caused by exclusive fish diet. The cat-fish (*silurus felis*) is plentiful here, the liver of which abounds with an oil which might be successfully substituted for cod-liver oil in the treatment of consumption, cases which are very frequent among the half-breed population.

Cat-fish oil a substitute for cod-liver oil.

Lake Winnipeg.

July 10th.—Started from Fort Alexander, and soon got into Lake Winnipeg; had a fresh breeze, before which we sailed at a rapid rate; in time, however, it became a little too strong for our canoes (which crafts were not over well adapted for sailing), and we were glad to put in for shelter behind a projecting point forming a bay. Here we went ashore, drew up the canoes, lighted a fire, and waited for the wind to moderate. This portion of the lake shore is composed of sand-banks, enclosing swampy lakes, but having in its centre a high ridge covered with masses of rock. When Lake Winnipeg is high, canoes pass behind this point, as then a narrow strait exists, cutting it off from the main shore; and at present there is a long island separated from the extremity of the point, which, if the lake waters were depressed only a very few feet, would then make an addition of about six miles in length to this headland. The water here is very shallow; flocks of gulls were busily engaged on the sandy flats seeking for food, and from the great expanse of water horizon the scene had much the appearance of the sea shore. Small flocks of wild pigeons also continually passed over our heads, and afforded us excellent sport. Took astronomical observations for latitude, longitude, and variation of the compass. At 3.40 p.m., the wind having moderated, we continued coasting along, and at nightfall we landed and encamped on a sandy reach. Sand forms by far the most uncomfortable substance on which to encamp. Sleeping on it renders the body fatigued, and causes a sensation of having received many bruises, while the particles that get into the bedding and clothes are productive of great discomfort. The shores of the lake along which we have passed are not elevated more than six or eight feet above the water level, and are rolling and covered with bluffs of stunted wood.

Sand not desirable to make down the bed on.

July 11th.—This morning we made a very early start, in order to get to our journey's end by night. After striking across a bay, we landed for breakfast on a part of the shore composed of splintery fragments of limestone of a light buff colour. Here we were visited by a number of Indians that were encamped in the neighbourhood, and from them we obtained some fresh fish. Took observations for latitude, longitude, and variation of the compass.

Entered Red River.

At 12.15 p.m. we entered Red River, not by the regular channel, but by crossing a flooded marsh and pushing through a dense growth of bulrushes. On entering the stream itself we found it to possess a very swift current, considering the extremely level nature of the country through which it flowed, and we made slow progress against it. For a long distance there is nothing but swamp on either hand, and to it succeeds a narrow strip of land, being a sort of natural levée, higher than either the swamps beyond or the river which it hems in. This increases in extent and height very gradually as the ascent of the river is made, and at our dinner camp on the left bank of the river the swamps disappear, and are replaced by dry land covered with clumps of wood. The opposite side of the river, however, is still swampy. We were at this place about eight miles from the river's mouth. The stream here is pretty wide, and its waters are turbid and of a light chocolate colour. At 6 p.m. we reached the outskirts of the settlement, a few log huts appearing here and there among the trees. The banks now had acquired an elevation of 40 feet, and the country behind seems to be studded with fine clumps of wood, with natural clearings. At 7.30 p.m. we arrived at the Indian settlement, situated on the left bank of the river. A little higher up, and on the opposite side, we came to the Indian mission, formed of rows of whitewashed houses with gardens in front, presenting an appearance of comfort and neatness. These are inhabited by pure natives, who have certainly made a long stride ahead of their brethren on the other side. There is also a very tolerably built church surrounded by trees, to which also a clergyman's house is attached, all of which tended to remind us that we were returning once more into civilization. Continuing up the stream, we arrived at Lower Fort Garry after it was quite dark, and were most kindly welcomed by Mr. Lilly, the gentleman now in charge of that post.

Indian settlement at Red River.

Arrive at the Stone Fort.

Lower Fort Garry.

July 12th, Sunday.—Lower Fort Garry, or, as the inhabitants call it, the "Stone Fort," is a large establishment of the Hudson Bay Company, consisting of a good dwelling-house, together with its stores and other buildings connected with the fur trade, all enclosed within a high stone wall, in the form of a square. The space enclosed is ample, so that the buildings are not crowded, which gives to the fort a light, airy appearance, which contrasts favourably with the crowded wood-built forts which we have hitherto seen. This morning we learnt the destination of the canoes which had been our conveyance to this place. One is to return immediately to Canada, and the other is to proceed to Norway House, at the north end of Lake Winnipeg, with two gentlemen of the Company's service bound for McKenzie River district.

In the forenoon we attended church, situated about four miles up the settlement. On our arrival at the door we observed a great many horses tethered to the railing, all gaily equipped with the usual beaded Indian saddle, so much in use in the colony. On entering the church a very orderly congregation of about 300 attended public worship, and the Rev. Archdeacon Hunter, to whom much praise is due for the arrangement and translation of the Scriptures into the Cree language, officiated. Archdeacon Hunter's church.

In the afternoon we met Mr. Herriott, a retired gentleman from the Company's service, who had spent many years of his life in the Saskatchewan district, and who had been chosen by the Company to take charge of the post formerly established on the Bow River, and known as the old Bow Fort. Mr. Herriott very kindly gave us the benefit of his experience of the Blackfoot country and its resources, and also many hints and much useful information concerning the Blackfoot Indians. Mr. Herriott.

July 13th.—It was not without considerable interest that we watched the departure of our two frail bark canoes, now bravely starting on their return trips to Canada, after having conveyed us over 600 miles of lakes and rivers, and been carried sound and safely across scores of trying portages. Their crews had earned their money well, and by their docility, cheerfulness, and stern endurance had gained golden opinions, and elicited hearty cheers from us all. The canoes return.

I had also previously distributed to each the more substantial benefit of a pair of fustian trousers, and a red flannel shirt.

We found in the neighbourhood of the Stone Fort the band of 20 horses which I had sent out directions (previous to our departure from England) to be purchased for the Expedition; they were still in very bad condition, although greatly improved since they had been first purchased, owing to my protracted delay in England before starting. It had been impossible to procure very good horses, owing to an unusually unfavourable winter, which had caused great loss and consequent scarcity among the horses; and therefore those who were fortunate enough to have very good ones could not be induced to part with them, as they were now looked upon as almost the only means of subsistence in running buffalo at the approaching summer hunt. The horses. Their wretched condition.

After the departure of the canoes, we unpacked our bridles and saddles, mounted some of our horses, and started for Upper Fort Garry, situated at the forks of Red River and the Assineboine, distant about 18 or 19 miles. The road for the first six or eight miles lies through poplar woods, which skirt the back of the settlement, the houses of which are built more immediately upon the river's brink. About half-way we came to open country, which, on our left, was all fenced in, and giving promise of luxuriant crops. On a small creek here we passed a water-mill, which was busily at work. The country to the west is a dead flat, and the eye rests in that direction on nothing but extensive swamps. A heavy thunder-storm came on, from which we took refuge in the house of Mr. Murray, a remarkably fine old man, and one of Lord Selkirk's original settlers. He entertained us with a most interesting account of the troubles through which the colony has passed since its establishment, and from which it has not yet emerged. Start on horseback for the Upper Fort. An original Selkirk settler.

The storm occupied but a short time in passing, and after a half hour's further ride, we reached the Upper Fort, arriving just in time for dinner. We were very kindly received by Mr. Swanston, and invited to join the large party which daily assembled round the mess table. Among these we found Major Seaton, the officer in command of the troops who were then on their way to the settlement. Arrived at Fort Garry.

Mr. Swanston, the officer in charge of the principal post of Hudson Bay Company territory in Rupert's Land, received us with the greatest cordiality. He had been most zealous and unremitting in all his endeavours to forward my views, and had carried out the details of the arrangements which he had so kindly undertaken in the most able and efficient manner. Chief factor Swanston.

No. 2.

From Commencement of Journey on the Plains, 14th July 1857, to Termination of First Exploring Season on 8th October 1857.

July 14th.—Occupied in weighing and considering the best direction to take in order to traverse the country so as to fulfil the objects of the Expedition; also, on this and the several succeeding days, busily employed repairing carts, organizing harness, pack saddles, and various details necessary for a protracted journey across the plains. We did not expect to fall in with buffalo for a considerable time, and therefore, in addition to the luxuries of tea and sugar, were provided with pemican and flour. I learned from all experienced voyageurs in this country a confirmation of the ideas I had formed of it from old experience of my own when on the Missouri, namely, that the whole of Red River and Saskatchewan plains can be travelled in carts. The plan of operations I had now determined on was to push in a southerly direction along the west bank of Red River to the boundary line at Pembina, and thence along the country in the neighbourhood of the boundary line to the Turtle Mountains, well timbered and watered hills, reported of considerable extent, situated on the boundary line; from thence we intended to take a N.W. course for Fort Ellice, on the forks of the Assineboine and Qu'appelle rivers. With this circuitous route in contemplation, it was not necessary to take the whole party, and therefore we determined to detach 11 horses, together with the four heaviest-laden carts, with provisions and articles not wanted for immediate use, and send them under the charge of our second guide, Henry Hallet, directly along the ordinary route to Fort Ellice, with orders to await us there, and with a view also of recruiting the horses as much as possible on the excellent pasture in that neighbourhood. By this means we trusted that, by the time we had finished our more circuitous journey, and had reached Fort Ellice, Hallet's band of horses would be in condition to allow us to avail ourselves of another trip with them to the boundary line in that longitude, while the horses we had taken with us from Fort Garry *viâ* Pembina were in their turn recruiting. Prepare for the commencement of journey over the plains. Our plan of operations for remainder of the season.

Our party altogether amounted to 17 in number, consisting of myself and the three gentlemen who accompanied me, viz., Doctor Hector, Mr. Sullivan, and Mons. Bourgeau, our servant Beads, our guide or head man John Ferguson, and 11 men; we had in all 29 horses, 6 Red River carts, and 2 American waggons. Number of our party.

Red River carts.

The Red River cart is one admirably suited to the exigencies of the country; its peculiarity consists in the total absence of all iron or metal of any kind in its construction, consequently whenever a cart breaks down it can be mended again as long as any timber is to be found in the neighbourhood; even out in the plains, far from all timber, a breakdown is not an irremediable evil, as long as buffalo are not far off. The ever-ready expedient of killing a buffalo bull is then adopted; the broken shaft or wheel is then tightly lashed with green hide, which soon dries with an iron pressure, securing all splinters and other damages; indeed I might almost say that as long as the wood in the body or wheels is not rotten, the cart is never unrepairable. Besides the 6 Red River carts, I purchased 2 American waggons, which had not long since arrived at Red River Settlement from Fort Union on the Missouri; they had been the property of Mr. Denig, an old friend of mine with whom I wintered in 1848, when he was in charge of the establishment. We afterwards found great convenience attending these waggons, by apportioning for their loads such articles as we wanted for daily use, the broad inside area of the waggon enabling you to take and replace what you wanted without any of the unpacking and re-arranging required in disturbing the load in the narrow body of the cart. The average load for a cart is 4 cwt.; 6 cwt. is considered a very heavy load. Our waggons carried 11 cwt. drawn by 2 horses, and our carts, owing to the condition of the horses, also in consideration of the length of the trip, did not carry more than 4 cwt. each. Besides our pemican, flour, tea, and sugar we brought along with us abundance of ammunition, not only for ourselves, but for presents or barter for leather and many things which the casualties of a long journey might render it very necessary to have the means of obtaining from Indians.

Purchase two American waggons from Mr. Denig.

Description of and weight of the loads.

We remained in the settlement of Red River for more than a week previous to our start for the boundary line in that longitude.

Start both the brigades.

July 20th, Monday.—Occupied all day in getting the two brigades under weigh, viz., that under our second guide, Henry Hallet, direct to Fort Ellice, and that which we ourselves took with us to the southward to the boundary line, and thence to the westward to Turtle Mountains. Preparing for the start was a busy scene, and attended with all the innumerable delays which are sure to arise whenever a party leaves a fort. Hallet's departure, however, was more easily accomplished than that of our brigade, since we had to cross over to the right bank of the Assineboine our two waggons, two carts, and 10 horses. We had, however, an excellent ferry, got all the men, horses, and carts across the river before sunset, took them to camp about three miles off to the southward, and then we returned to pass our last night in civilized society at the fort, the last we were likely to enjoy in that manner for a long time.

We left directions with the men to start off the first thing in the morning, make a short spell, rest for three or four hours during the heat of the day, and make another short march to-morrow evening, we ourselves having determined to start before noon from the fort to-morrow morning, and could easily overtake them before camping-time that evening.

The Assineboine River.

The ferry.

The Assineboine is crossed by the road to Pembina quite close to its mouth; it is deep and rapid, with banks composed of soft tenacious clay. Our horses, carts, and waggons, as well as ourselves, were all ferried across on a bâteau, the property of one of the settlers, who makes a fair income from his ferry; there would, however, be no difficulty in erecting an excellent bridge at this place.

We start.

July 21st.—We crossed the Assineboine and commenced our journey, accompanied by Major Seton and Mr. Johnson (the recorder of Red River Settlement); they rode with us for the first ten miles, until we came to Rivière Sale, the first small tributary to Red River. Our course had been south, and we rode through dense thickets of poplars and small oaks.

Rivière Sale.

Rivière Sale joins the Red River from the west; its course being through the level plains long and tortuous; it keeps nearly parallel with the Assineboine, and rises from extensive swamps.

Come up with our brigade.

Camping-time.

Nature of the country.

Light fires of green wood in order to protect the horses from musquitoes.

Nine miles' further ride through coarse rich grass and luxuriant vegetation over a low moist soil brought us up with our men as they were commencing to prepare a camp for the night. During the latter part of our ride the country has been clear of woods, a few clumps of trees only growing along the river banks, which are elevated above the water-level to 40 feet. The view to the west is still a dead flat, marshy and swampy. The spot which our men had chosen abounded in excellent grass for the horses, but the myriads of musquitoes and flies quite prevented their feeding or resting, until we were obliged to light fires, supplied with green wood, in the dense smoke of which they instinctively sought refuge from their tormentors.

July 22nd, Wednesday.—This morning we were up at four o'clock and early on the march. Our party consisted of 13 men in all, two waggons and two carts. Five of our men were mounted, and four drove the waggons and carts, and six horses ran bare as reserves in case any should tire.

Our brigade.

Pralrie fowl.

This forenoon we passed through slightly wooded country with open glades, and we got pretty good shooting at coveys of pheasants, as they are called here, although in reality they are the sharp-tailed grouse of Richardson, and are also called prairie hens, but they are quite distinct from the bird of that name which is found so plentifully in the United States. We also obtained some ducks, but the young ones were very late as compared with them at the same season in England. At 9.30 a.m. we halted for breakfast, and to make up for the restless night passed by our horses delayed our start until 3 p.m.; took observations for latitude.

General sameness in the appearance of the country.

"Points."

The nature of the country is much the same as that passed over yesterday, open prairie to the west, while to the east the bends of the river are marked by clumps of wood, which are known in the country by the name of "points," which applies also to any projecting angle of wood whether it be caused by the bend of a river or not. This distribution of the wood is very uniform, and is as consistent on the Missouri as it is on the smaller rivers which traverse the plains in this part of the country. M. Bourgeau here noticed the following plants:—

Plants.

Lysimachia, *Rudbekia*, *Amorphia*, *Lobelia*, and two species of *Lupinus;* one of the latter is named *Lupinus tuberosus*, being the root which receives the name of the Prairie Turnip by the half-breeds, who, with Indians, use it as food, and sometimes crush it into a kind of flour and make bread from it.

The root is very dry and almost tasteless, and even when boiled for a great length of time does not become soft, and is at best but insipid unnutritious trash.

Scratching River.

At 5.30 p.m. we came to a small swift stream, known as "La Rivière qui grate," or "Scratching River," where we were surprised to find a ferry, kept by an intelligent half-breed, a new settler in this place. He was hard at work clearing land, and had not yet finished his log hut. He told us that he had come

from the American side, by the Lake of the Woods, and that he had crossed from that lake to Red River with a small canoe, passing, for the first 25 miles, through marshy country, over which he was obliged to drag his canoe, and then, having made only a slight rise, he reached Reed Grass River, which he descended without any portages for a distance of 70 miles to the point where its waters join those of Red River, about 9 miles below Pembina. He described Reed Grass river as being swift and small, suitable only for the smallest canoes. After crossing "La Rivière qui grate," we fixed our camp upon its opposite bank, having now travelled 38 miles from Fort Garry.

Saw some mowers from Red River Settlement cutting the natural hay.

July 23rd, Thursday.—This morning I found it necessary to change our plans of early starting, as it is only between the hours of 3 and 7 a.m. that our horses can feed, when the flies ceased their attacks. Accordingly we were not on the march before 9.30 a.m. Our course during the early part of the day was through some splendid meadows of natural hay, and many mowers were busily engaged cutting and saving it. We also saw some newly-built houses. At 1.15 p.m. we stopped for dinner at a lake which has been, at one time, a bend of the river, but which is now converted into a lagoon; found ducks very plentiful, and killed nine brace for dinner. While here, we shot a brace of woodcocks in some alders which skirt the lake. This bird, although very common in Canada, is said to be only a rare visitor in this quarter. After again proceeding on the march we encountered irregular country with many hollows, and traversed by small creeks, thus rendering the road very bad. The heat throughout the day has been excessive, and, towards evening, a cloud of great density appeared in the north-west, and before we could erect our tents a heavy thunder-shower fell. Our encampment afforded excellent feeding for our horses, the grass for some miles around growing far above the knees. Since the shower, millions of insects have infested our tents. The interior of the canvass is literally black with musquitoes, and if we could preserve the many species of moths which our candles have attracted we should have a large collection. Travelling here is more like passing through a tropical country, so numerous and plentiful is insect life. From all accounts no snake, except the common Garter Snake, is met with in this locality. It is beautifully variegated, and, in full size, attains the length of 3 feet, and the thickness of $1\frac{1}{4}$ inches. Its haunts are generally the summits of stony mounds, or in the sides of creeks.

Killed nine brace of ducks, and a brace of woodcocks.

Thunder-storm.

Musquitoes, flies, and moths more numerous and troublesome after rain.

Garter Snake.

July 24th, Friday.—The morning broke fair with the promise of a fine day. Notwithstanding the thunderstorm of last night, the heat at early morning was very great; our thermometer indicated 82°. From our last night's camp, where the river takes a great bend towards the east, we had an extensive view to the south, bounded by the woods in the neighbourhood of Pembina. At 1.15 p.m. we arrived at the small fort, and like all the Hudson Bay Company's trading establishments it is stockaded and possesses the usual stores, trade shop, and small houses for the resident families. It is the smallest we have met with, and is only important as being situated on the American frontier line. There is only a small hut besides the fort, standing on the north side of the boundary line, and the country around, although adapted for agriculture, is still a wild waste, and only awaits the hand of the settler to render it productive and valuable.

Fort Pembina on the boundary line.

Good land.

On proceeding for about half a mile to the south of the fort we came to a post which marks the position of the boundary line, according to the observations of Mr. Nicolett and other American explorers. This is, however, not the original post, as the Indians had destroyed that many years since. The present one, however, was replanted with great care upon the same spot by some gentlemen connected with the Hudson Bay Company. A little further on we observed several groups of settlers' houses, with well situated enclosures of land; but the place seems at one time to have been of much greater size, if we might judge from the standing posts and other remains of former dwellings. We had the usual afternoon thunderstorm to-day.

July 25th, Saturday.—To-day, by observations, we found the boundary line post to be a few yards within the American territory, its latitude being 48° 59′ 46″ N. Observations for longitude and variation of the compass were also made during the afternoon. We also visited the American fort on the River Pembina, where it joins the Red River. It is an insignificant collection of a few wooden huts. It is here that the post-office for the Red River Settlement and other parts of the Hudson Bay Company's territories is established, as the further conveyance of letters from this place is entirely a private act at the expense of the company, and forms no part of any postal system. The arrangements for the safe and speedy delivery of letters did not seem at all suitable to the magnitude of the concerns which are committed to the care of the person in charge.*

Observed for the boundary line.

Post-office.

We found here a Mr. Iddings, surveyor to a land company at Saint Paul's. This gentleman was commissioned by the said company to survey and lay out a town at Pembina River. His plans were completed and shown to us.

Mr. Iddings, St. Paul's Land Company's Surveyor.

In the early part of this evening we examined the banks of the river, and found that they were raised about 42 feet above the surface of the water. The drift timber is lying plentifully upon flats or hollows, at an elevation of 35 feet, which shows the great extent to which this river must be flooded during the spring freshets. Several times the waters have flooded the fort, and a mark on the gate post indicates were the water had reached during the last great flood of the river, and which is at an elevation of 52 feet where the water stood four feet deep in the courtyard of the establishment. The banks of the river are composed of layers of red clay, silt, and calcareous clay, in which are embedded numerous fragments and stumps of trees. The country around is well adapted for agriculture; the soil is light and free, and good natural drainage might everywhere be taken advantage of.

Banks of the river described.

Floods.

Good natural drainage.

Along Pembina River, which is only 10 yards wide, the vegetation is luxuriant, and there is abundance of timber for every purpose. Red River itself is at this time flooded about five feet above its usual level, the depth of water now being 14 or 15 feet. Although it has not a straight course, its bends are long, with gentle curves, and would offer no impediment to navigation by steamboats or other craft of moderate length.

Pembina River.

The plan of the American Land Company alluded to above, is to plant two townships, one on the left bank to be called Pembina Town, while opposite to it there will be another named St. Vincent's.

Plans of the American Land Company.

* The postmaster himself was off to St. Paul's, and the sole charge of attending to postal matters is deputed to his wife, a half-breed woman, who speaks no language but her native Indian. On asking if there were any letters for us, we were answered by having the whole collection of letters given us to look over and examine ourselves.

These are to be connected by a bridge, the probable position of which was pointed out to us. The railway, which is to connect this place with St. Paul's, and for which a legislative Act has been already obtained, binding them to complete it in 10 years, will have its terminal station at St. Vincent's. Mr. Iddings considers that there will be little difficulty in making this line; the main obstacles to be contended with will be creeks and small lakes, over the former of which bridges are necessary. At present the railway is open to within 220 miles of St. Paul's, and the time is not far distant when it will be completed to that place.* There will then remain 350 miles to bring it as far as this; but as the distance from a navigable part of the Mississippi to a similar part of the Red River † is under 200 miles, it is probable that water communication will for a long time be the best method of approaching this place. From 150 miles above Pembina, Red River is said to retain the same character that it has here, but beyond that distance, although it still remains sufficently deep, its course becomes too tortuous to admit of navigation by any but small craft.‡

Aurora borealis.

To-night, for the first time since our arrival in America, we beheld a fine display of the aurora, consisting of an arch of bright convergent pencils of light. They were much brighter than those seen in England, although in a summer month.

July 26th, Sunday.—This forenoon we were occupied completing our despatches to England, and in the afternoon, assisted by Mr. Iddings, we planted a post distant 370 yards due west from that previously erected by the American surveyors, thus establishing the direction of the parallel of 49° of N. latitude.

NOTE of OBSERVATIONS at PEMBINA by CAPT. PALLISER, MR. IDDINGS (U. S. Civil Engineer), and MR. SULLIVAN.

Sextant observations on the boundary of U. S.

An observation taken at the above place by Mr. Nicolett in 1848-9 places a post in lat. 49° N.

A mean of observations taken by Captain Palliser and Mr. Sullivan places the same post in latitude 48° 59′ 49″ N.

Mr. Sullivan ascertained the variation of the compass at place to be 14° 2′ E.

Mr. Iddings, and my secretary, Mr. Sullivan, erected a second post distant from the first 370 yards due east, thus determining the direction of the frontier line.

(Signed) J. PALLISER, Capt., F.R.G.S.,
Commanding B. N. A. Exploring Expedition.
C. W. IDDINGS, C.E. (U. S.).
J. W. SULLIVAN,
Secretary and Astronomical Assistant to Expedition.

Numerous flocks of pigeons were flying over this place during our stay, but they did not appear in such numbers as are seen in the States of America to the south.

Trade at Fort Pembina.

The principal trade at this port of the Hudson Bay Company is with the half-breed hunters, who proceed annually to the plains of the west in search of buffalo, and the returns consist of robes, leather, provisions, with few other furs than wolves' and foxes'.

July 27th, Monday.—Remained at the same place owing to some of the horses straying, which were not recovered till late in the evening.

Slight frosts.

The cold last night was sharp, considering the season of the year, and every night of late there have been slight frosts.

The aneroids again in order.

The aneroid barometer being again in order, we were now able to resume our barometrical observations, which had been suspended since our departure from Sturgeon Lake. The doctor replaced the dial plates, which he found had been shifted, and treated the aneroids most successfully by firmly sewing on their faces with brass wire. The mean of those observations, which he considers reliable since leaving Fort Garry until this time, and which, from the slight change of level may be looked upon as a rough mean for the Red River valley, for 16 days, commencing on the 12th instant, is 29·03, therm. 64°.

Very fine land.

July 28th, Tuesday.—This morning, although all were astir at sunrise, it was 9 a.m. before all the horses were tackled, and a start effected. Our course, after leaving the post, was over fine prairie undulations, covered with luxuriant nutritious grass; we followed the track in the direction of the town of St. Joseph, which we were anxious to visit, being situated not far from the boundary line.

We made for a ridge of small woods slightly higher than the surrounding plain, and being about a couple of points to the south of west, and continued a slight but constant ascent to its level; thence we pushed across another stretch of prairie to the next woods, and passed through several clumps of oak copse; attempted to traverse the next stretch of plain, but finding this traverse too long for our horses,

Salt lakes.

we stopped short of the woods and halted for dinner at some small lakes, the water of which had a bitter saline taste due to the presence of Glauber salts or sulphate of soda. Before starting took observations for longitude and variation of compass.

During our march we could see for a great distance to the southward the thick woods skirting the banks of Pembina River. After dinner our course was more to the southward, and towards a high hill, at

Arrive at St. Joseph.

the base of which the town of St. Joseph is situated, distant from our dinner camp about 15 or 16 miles. We made a forced march and arrived there about an hour and a half after sunset.

What few inhabitants the place possessed were all asleep except an old French half-breed, who invited us to turn our horses into his enclosure, where they would not only have the advantage of hay already cut and stacked there, but we also might let them go without hobbling them, as we should have no difficulty in finding them the following morning, and here also we ourselves encamped for the night. He brought us also some "gold eyes," a species of carp, which are caught in the river here in abundance.

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* Since the above was written the railway has been completed as far as La Crossa on the Mississippi, about 120 miles in a straight line from St. Paul's.

† Steam boats carrying heavy freights and fitted with first-rate accommodation for passengers navigate the Mississippi to St. Paul's from the 25th of March to the latter end of October. Small steamers again ply between St. Paul's and the Sock Rapid, about 75 miles further up the Mississippi; but as yet they are dangerous and insignificant.

‡ Since writing the above I have descended the whole of Red River in a canoe, and do not apprehend much difficulty in steam navigation at certain times of the year.

July 29th, Wednesday.—It rained very heavily during the night, cleared up in the forenoon, but unfortunately came on to rain again about 12 o'clock, thus preventing us from obtaining an observation for latitude at this (comparatively speaking) important place. The harness belonging to our waggons had originally been made for mules, and although we had altered it, it did not yet fit the horses, we therefore remained a day here in order to avail ourselves of the assistance of a professional harness maker, whom we were so fortunate as to find in this primitive town.

Could not obtain any latitude of St. Joseph.

Found a professional harness maker.

St. Joseph's has been established for several years, and consists of numerous detached dwellings, which, however, are well arranged on a regular plan with a view to the after-construction of streets. There is abundance of enclosed land, and the whole is prettily situated at the base of what is known as Pembina Mountain, just where the river of that name issues from it through a large deep valley coming from the west. To the north and east bare plains extend as far as the eye can reach, while to the south thick woods run along the base of the hill and out into the plain to the south of the river, consisting principally of poplars, but with a few oaks and ash intermixed. Altogether the position of this place is well adapted for a settlement, wells sunk anywhere in the neighbourhood yield readily ample supplies of excellent water. The neighbouring prairies are admirably suited for grazing, and from the swamps which skirt the base of the hill plenty of hay can be obtained. The fields are very fertile, and there is no lack of wood for all purposes. Notwithstanding all this favourable concurrence of circumstances for the agriculturist, the inhabitants, who are chiefly Red River half-breeds, were at this time all off to the prairies in search of buffalo, leaving their houses and fields deserted during that season of the year when their labour would be most productive. The timber in the Pembina valley and along the slope of the hill mostly consists of the Populus tremuloides and balsamifera, Quercus, and Fraxinus. Of these Populus tremuloides is by far the most abundant. The shrubs are Viburnum, Ribes, Cerasus, Amelanchier, Cratægus and Salix. Perennial plants are very plentiful in this valley; a very pretty Hedysarum and many species of Compositæ have been observed, which would be valuable for gardens. Dr. Hector, who examined the valley in search of sections, describes it as being the eastern border of a prairie level, which extends to the west without any apparent descent as far as the eye could reach, but here slopes abruptly to the level of the Red River plains by a succession of terrace-like steps. The height of the first summit level above the stream where it issues from the valley is 250 feet, but behind this, by two more gentle slopes, it gains an additional 100 feet of elevation, and as we may add 100 feet for the rise from Lake Winnipeg to the base of this hill, its total altitude above that lake will be 450 feet, or about the same as Rainy Lake. Along the sides of the valley he found enormous landslips, at a very high angle, displaying the structure of this terrace from its summit to its base, consisting almost altogether of coarse loose sand with rounded shingle and gravel. These latter beds are found towards the upper part of the section, and on its summit true boulders occur, presenting all the characters of a shore deposit, and corresponding closely with those which may be observed on the right bank of Rainy River in the neighbourhood of Fort Francis. The materials which compose this terrace level are very distinct from those which form the deposits of the Red River prairie level, which latter are marked by a predominance of calcareous and argilaceous matter. From the summit of the hill, and as far as the eye stretches towards the north-east over the plain below, all minor inequalities seem to disappear. This plain, no doubt, had formed at one time the bed of a sheet of water, and Pembina Hill, consisting of previously-deposited materials, was its western shore.

St. Joseph, description of.

Its capabilities.

The timber and shrubs.

Terrace levels.

This level formerly an ancient lake bottom.

To-day we were visited by an old traveller, one of those who first crossed the mountains in the famous expedition described in Washington Irving's "Astoria." He was, after that, for a long time, a runner with the mails between Pembina and Fort Garry. He is 91 years old, and only last week had walked from Fort Garry to this place, a distance of 70 miles, in two days, driving a young bull. He came to seek the Doctor's advice as to what he should do for his knees, for he did not, as he innocently said, "find them so strong as they used to be." Another patient of the Doctor's was a poor man, who, from the severity of last winter had been frozen out on the plains, and lost parts of both feet in consequence.

An octogenarian voyageur.

The continual haziness of the weather during our stay here has prevented all astronomical observations, but we did not feel justified in remaining on the chance of getting a fine day to-morrow. We accordingly prepared for an early start in the morning.

The day too hazy for astronomical observations.

July 30th, Thursday.—Having obtained all the assistance from the American harness-maker that we required, our cavalcade moved off at 8.35 a.m., and continued in a north-westerly direction till 12.35 p.m. The character of the prairie lands over which we travelled was, in every respect, similar to that described before, possessing numerous fresh and saline marshes, and small lakes abounding in ducks, waders, and other aquatic birds. As we were now approaching a creek, which our guide described as very hard to traverse, two or three riders were sent a-head with a view to seek the best fording-place. As we did not move off again until 4.25 p.m. our horses had a long rest, and the men had sufficient time to choose a ford for the carts and waggons. In about half an hour after we had started we arrived at the creek, and found it, as our guide had described, exceedingly bad. Here the fertility of resource of our prairie voyageurs was well displayed in extemporising a bridge; in a few minutes they had trees felled and a rough bridge constructed, over which our waggons, carts, and horses passed in safety, although crossing the place seemed, at first sight, to be quite impracticable. We traversed the creek near a clump of woods known as "Allard's Point." From this our course was for an hour and a half to the westward, after which we camped at the base of Pembina Hill, along which we have been skirting all day. This hill, from St. Joseph's to the place where we took dinner, preserves the same character of a steep slope, scantily clothed with small wood, the summit forming an even sky line, but further on the slope becomes more gentle, and facing the north ceases to be so marked, appearing like a hill seen from the prairies. The woods also become more plentiful, and of much finer growth, being disposed in very pretty groups upon the long slope into which the escarpment changes. Our encampment was close to a small well, from which, as it is only one foot in diameter, and the only water that can be found in the neighbourhood, we have to draw a supply for our animals, and to prevent them from helping themselves and trampling the place into a puddle. The creek we passed at "Point d'Allard" runs to the N.E., and is said to lose itself in an extensive marsh without communicating its waters to any other stream.

The character of the prairies here.

Construct a bridge.

Pembina Mountain, description of.

A small well the only means of procuring water for the horses as well as ourselves.

July 31st, Friday.—Rose early, but in consideration of the restless night our horses had passed from the attacks of musquitoes, we breakfasted before moving off, thus giving the animals a little time to feed. At 8.15 a.m. we started, and during the first three-quarters of an hour crossed some open ground with a gradual descent, and at the end of that time emerged on a belt of oak wood of very fair growth. From this point the ground rises rapidly and continues to be wooded with irregular clumps. The country here is very fine, and well adapted to agricultural purposes. Saw two small deer, and subsequently through the day several wolves. The woods in this locality formerly abounded in large game, such as elk, moose, and bears, but they have long since become very scarce. Still continuing to rise, we at length reached a very irregular country, the surface of which consists of conical mounds and deep basin-like depressions. On these an immense number of granite and limestone boulders were scattered. In a valley of this kind we rested for dinner at the edge of a small lake. Our general course to this lake has been west, although our track has been necessarily winding and irregular. A very curious hill rises in the neighbourhood, which is known as the Beef Lodge. A fine view of the surrounding country may be obtained from its summit, which rises to the altitude of 50 feet above the adjacent plains. We ascertained that from our encampment of last night to this place there was a rise of about 430 feet, or about equal to the summit of Pembina Hill. That we had now actually gained this level is corroborated by the fact, that the view which we get to the north shows the line of woods which mark the declivity of the hill to stretch away to the right hand of our course in a north-west direction. To the north and south the country presents the same uneven swampy character as that through which we have travelled, but to the west woods are scattered among the irregularities of the surface.

A fertile region of country.

Beef Lodge Hill.

General appearance of the country.

After dinner our course has been very zigzag, winding among the mounds and hollows which have been already noticed ; but as these now became skirted and clothed with green woods, while the grass which covered the open spaces was in full grain, the landscape assumed a rich brown tint, and reminded us of the parks attached to domains in England. We shortly emerged from this kind of country, and commenced to traverse prairie undulations, each rising in succession towards the westward, with their summits clad with poplar thickets, while the intervening hollows were occupied by swampy lakes. At 7 p.m. we encamped on the borders of one of these lakes.

August 1st, Saturday.—We were delayed this morning till 9.15 a.m., and our course at first struck off considerably to the south. The Paquewin, or as it is called by the Indians, the Hill of the Great Medicine Dance, rises in a south-westerly direction at the distance of about 10 or 12 miles from our encampment, and not far from Pembina valley.

Great Medicine Hill.

Pembina River valley.

In about one hour and a quarter we arrived at the brink of the wide valley through which Pembina River runs. The descent to the river margin is very precipitous, but there is a tolerably good road, winding through copse wood, formed by the hunters, who resort annually to the plains beyond. The flat in the bottom of this valley is about one mile wide, and through this, the small stream, not more than 10 yards broad, follows a very circuitous course. Its depth at the ford where we crossed is not great, only rising to the axletrees of our carts, and the only inconvenience we experienced was in ascending the declivity with our laden waggons. The immediate banks are about six feet in height, and are composed of dark-coloured silt arranged in thin layers. The verdure in the base of the valley seemed to be very rich, and the left side especially is well wooded. We have had a long pull in reaching the opposite brink of the valley, and although the road takes advantage of a lateral ravine, the ascent still remains steep. Secondary levels are well marked along both sides of the valley, which here forms a bend towards the south-east, but more especially on the right bank. On gaining the summit of the hill there is still a considerable rise to the west, which might be fairly included as part of the valley bank, only hollowed out in a less abrupt manner from lying in the concavity of a great bend. Including this, the following table shows the various changes of level in passing through the depression.

Dinner Camp.

	Bar.	Therm.	Feet.
East flank of Pembina valley	28·18	75	
River level	28·50	82	
Depth of valley from left brink			310
Secondary level	28·33	48	
Height of secondary above river level			161
West brink of Pembina valley	28·30	83	
Altitude of dinner camp above river level			190
Altitude of slope further west	28·10	80	54
Height of right bank above river level			385
„ left „			310
Difference in favour of right bank			75

Botanical change.

Astronomical observations were made at this place. Botanically speaking, this valley is the limit of a new country, for while the eastern side of it is wooded and irregular, the western side, at a higher level, consists of nothing but bare prairie lands. This distinction is also recognized by the hunters, who consider Pembina valley to be the eastern limits of "la grande prairie."

Grasshoppers.

While encamped for dinner a violent wind sprang up from south-west, bringing with it dense clouds, among which the lightning played vividly, without however producing a regular thunderstorm. Along with this wind came what seemed at first to be a low cloud of a brownish-black colour, but soon we discovered it by aid of a telescope to consist of myriads of grasshoppers. A breeze springing up from the east met this cloud, and suddenly the insects began to fall as thickly as snow. They soon covered the ground, giving everything a greyish aspect from the colour of their bodies. When we started the fall of grasshoppers was still continuing, though to a less amount, but still sufficient to cause us much discomfort from the blows they gave us on the face, as they came down with great rapidity before the wind.

The locust cloud had now passed to south-east, and by the action of the opposing wind had formed into a large massive bank, passing from which we observed several pillars like waterspouts; two of these were especially fine, and one had a curious twist about half way up, as if the centrifugal force was tending

to overcome the columnar shape. There were also some imperfect cones, the points of which directed downwards did not reach to the earth.

This afternoon we continued to proceed towards the west, crossing a high level plain, which is bounded to the north by a line of woods, marking the position of Pembina valley. From information given by our guide, it seems that Pembina River, a few miles above the place where we forded it, has a course from west to east, and expands into five lakes, which are of considerable size, and lie in a depression below the general level of the country, which must be the continuation of Pembina valley. To our south there is a range of low conical hills and broken ground, among which is Paquewin Hill, already alluded to. Before leaving Pembina valley it was necessary to obtain a supply of wood sufficient to last two days. We now had a long traverse of plain to make before we could again obtain wood for fuel, and therefore had to bring along with us sufficient for the cooking of several meals. We did not, however, adopt a direct traverse of the plain, but preferred going round by Long River. Although this somewhat lengthened our route, it enabled us to manage with a smaller supply of wood for cooking than we should otherwise have laden our horses with. Since leaving Pembina River also the plains were plentifully strewn with dry buffalo dung, which by also using as fuel we greatly economized the wood we took with us. This buffalo dung, the glow from which somewhat resembles that from coals, is a great acquisition to a camp fire. Water is also very scarce in this plain, so that, in case we might not meet with any, we filled a cask which we brought for the purpose, taking it along with us. At night, however, we reached and camped by the side of one of several large swamps.

Carry a supply of wood for fuel.

A long traverse of plain.

Dry buffalo dung a good accession to wood as fuel.

Water scarce.

This evening we were amused by one of the many proofs of credulity among the French half-breeds, and subsequently were much entertained by accomplishing its exposure.

Credulity of the French half-breeds.

After dark some of the men came to Bourgeau and requested him to take notice of a very mysterious noise in the swamp. This they asserted to proceed from the "Carrot à moreau" (a species of umbelliferous plant) in consequence of its poisonous and manitou or miraculous attributes. They insisted that this plant, which continuously kept up a muttering noise, invariably became silent at the approach of man! Determined to sift this strange but universal belief among the half-breeds regarding a poisonous plant gifted with a voice, and that voice under its control, Bourgeau set out accompanied by Hector with a dark lantern on their nocturnal search. After frequently failing to reach several spots from which the sounds proceeded, they at last effected a stealthy approach, and quickly turning on the light in the direction of the sound now almost at their feet, they interrupted a noisy little frog in the midst of his croaking. Late in the night the barking of a dog put us all on the alert. We were now close on the country of the Sioux Indians, and began to apprehend attempts to steal our horses. These Indians are wonderful horse thieves, and, in my former experience among them in 1849, I had seen several proofs of their fertility of resource in these depredations.

A slight alarm at night.

If only half the skill and enterprise expended in horse thieving were devoted by them to breeding and rearing young horses, they would become wealthy; but to be esteemed an accomplished horse thief is the summit of their ambition.

There had been Indians, no doubt, in our neighbourhood, as, in addition to the barking dog, we subsequently heard a shot—a blank shot probably fired at some stealing dog trying his chance of finding some food in a neighbouring tent.

August 2nd.—A heavy thunderstorm detained us in camp for several hours; the lightning was very vivid, playing incessantly, and seeming to run along the ground in blinding sheets. At about 9 a.m. the day cleared up, and we started. We took a more northerly course than that in the direction of the Turtle Mountain, in order to touch at various wooded points which advance into the plains from the north along the tributaries of Pembina River. We had now the Paquewin Hill to S.E., and observed another conical hill covered with woods lying to N.N.W., which is known as the Little Paquewin. About noon we came to a shallow creek, when finding some tolerably good water we stopped for dinner, which we cooked using buffalo dung for fuel. Took observations; distance from Pembina River, 24 miles.

Our course not direct for Turtle Mountain.

The wood which we had carried in the carts exhausted.

Since leaving Pembina River the soil has been everywhere very poor, being both sandy and stony, and grass grows only in swampy places; its general scarcity is now further felt by our poor horses in consequence of the plague of grasshoppers which now swarm over the plain. By making the détour to the northward of our course to-day we were enabled to camp at night in the woods of Long River before dark; its valley in the vicinity of our encampment is wide and well wooded, the river itself runs 120 feet below the level of the prairie. The sides of the valley are very irregular, having none of that even embankment-like aspect which characterizes the valley of Pembina River; the course of the stream is very tortuous, and said to flow into the first of the Pembina Lakes at a distance of four or five miles to the north of where we crossed it. The valley is filled with a dense growth of wood, consisting of oak and poplar, which extends also for some distance over the adjacent plains on either side; a few miles higher up the stream these woods cease; the banks become low and the valley changes into a shallow trough cutting through bare plains. Hector found the banks of the valley there to be composed of shale of a light buff-green colour, not occurring in continuous beds but as fissile fragments. The surface of the ground is scattered with detached boulders of fine red granite; many of these are polished by the buffalo, whose numerous tracks have worn trenches about them in consequence of their walking round them in order to scratch themselves. Before dark, numbers of goat-suckers were flying about startling us with their booming call as they swept close by our heads.

The change in the general nature of the soil.

The banks of Pembina River.

Granite boulders polished by buffalo.

Goat-suckers.

August 3rd, Monday.—The morning broke very fine, and throughout the day the sun's rays have been excessively hot. Large numbers of garter snakes have left their retreats and are very numerous on this portion of the prairie. Dr. Hector dissected one and found it to contain 54 young ones in different stages of incubation. Instead of continuing on the march of the main party during the forenoon, Dr. Hector remained to continue the examination of the valley of Long River, accompanied by one of our men; but as we went slowly they came up with us at our dinner encampment.

Garter snakes.

The country through which we have travelled to-day is rolling and irregular, and from the number of small swampy lakes, it presents more the character of moorland than prairie. There is not a vestige of wood, so we are again dependent on buffalo dung for fuel. The lakes abounded in ducks and various kinds of waterfowl, so that our fare was excellent, and although no buffalo or other large game appeared, we enjoyed an ample supply of fresh provision.

About noon halted for dinner, and Mr. Sullivan made observations for longitude and variation of the compass. Here one of our party wounded a wolf, and after a long run succeeded in killing him. It was one of the large prairie wolves, and known in this country as the case wolf, or large "Toganny." It resembles a dog, being of a grey colour, with the tips of the hair on the back of an olive black, the ears are erect and of a dirty red colour, and the tail is bushy and straight; the great distinction which gives the face of this animal a very different appearance from that of a dog is its white nose.

The large Prairie wolf, description of.

During the afternoon the country presented an irregular appearance being broken into knolls, on the summits and sides of which abundance of rounded stones were strewn, some of great size. Our course has been nearly due west, and making for a distant group of woods which we saw thrown up by the *mirage*, we encamped at 7 p.m., but found them to consist of nothing but small poplars. Luckily, however, we found some fragments of a broken cart, which we at once appropriated for fuel. From this point we obtained our first view of Turtle Mountain, which, as seen from here, presents a long blue line bounding the prairie horizon to the S.W.

Turtle Mountain.

The longitude of this place, as well as the variation of the compass, was determined, and the following bearings of the mountain were observed:—

A. (Bearing of) most southerly height of mountain	W. 297° N.
B. Conical hill, called Heart of Mountain	309°
C. Head of the mountain	330°
Bearing of clump of woods in line of route	347°

August 4th, Tuesday.—A short time after our start, and at about the distance of four or five miles, we came to another tributary of Pembina River, known as the White Earth Creek, to traverse which we were obliged to descend into a steep valley depressed 100 feet below the prairie level. The creek is not more than 10 yards across, and at this place flows due north. It is said to fall into the third of the Pembina Lakes. Its bed is very stony, as are also the banks of the valley through which it runs. After crossing it we turned more to the south and shaped our course for a point in Turtle Mountain about one-third from its eastern extremity. We thus passed considerably to the south of the clump of woods which lay directly in our road, and when its bearing this afternoon was W. 81° N., and that of our last night's camp W. 141° N., the bearings of the three points of the mountain were (A.) W. 293° N., (B.) W. 299° N., (C.) W. 337° N., the distance between the two points of observation being 11 or 12 miles. At the place where we dined, which was in the neighbourhood of a small lake, observations for longitude and variation of the compass were obtained.

Our approach to the mountain.

Towards evening we came in close proximity to the outskirts of Turtle Mountain, and encamped at the commencement of a fine rich prairie, studded with clumps of bushes and small poplars at a distance of only four miles from the mountain base.

During the last two days we have effected a considerable rise in our progress westward to our present encampment.

A very violent thunderstorm this evening; it has lasted throughout the night.

August 5th, Wednesday.—The thunderstorm continued this morning, and it has been accompanied by several showers of very large hailstones. A succession of very dense clouds have been passing over us, which are invariably followed by very high wind from S.W. During a lull in the storm we shifted our camp, and after going four miles to the south reached the edge of the thick woods, by which Turtle Mountain is covered. Here we again halted as we intended if the storm abated to make an examination of this part of the country during the afternoon. About noon the sky began to clear, and the storm, which has now lasted almost continuously for 19 hours, passed away to the N.E. Accompanied by our principal guide, I immediately started to skirt the hill towards the N.W., and endeavoured to penetrate the dense forest by which it is covered. Dr. Hector also, accompanied by one of the men, set off with the same view in an opposite direction. As we neared the hill, or mountain as it is called, in common with every little rising ground in this flat prairie country, the altitude which it apparently possessed when viewed from a distance has dwindled away very considerably; and now that we were close under its flank it seemed to be nothing more than a dense forest, covering a gentle swell in the prairie, and which rises from 250 to 300 feet above the general level.

Reach Turtle Mountain.

A protracted thunderstorm.

In the course of our ride this afternoon we encountered nothing but broken ground, covered by impenetrable thicket, and studded with innumerable lakes, which form the breeding-places of many kinds of water fowl,—swans, geese, ducks, coots, divers, &c.

The game on Turtle Mountain and its morasses.

I tracked up and got a shot at a wapite, but missed him. The dense thicket and the absence of all tracks through the woods, so different from the valley of the Missouri, renders the hunting here very arduous. This hill, however, had once a great name as a hunting ground, and abounded with moose, wapite, and bears, but as the buffalo resort here every winter, and bring in their trail numerous camps of Indians and companies of half-breed hunters, the game has been either exterminated or driven away. We have been disappointed by the entire absence of buffalo from the plains in this neighbourhood, where they are so frequently found; but, perhaps, it is as well for us that it is so, as we are now on the confines of the Sioux country, and we shall be less likely to see Indians, or get our horses stolen.

On my return to camp I found that Mr. Sullivan had been able to obtain a meridian altitude of the sun, and curiously enough our camp was pitched within a few seconds of the boundary line, our latitude being 49° 0′ 32″ N. This observation places the greater mass of Turtle Mountain within the United States territory, as a line carried due west from this place would pass obliquely across the hill, cutting off a portion of its northern flank, while if produced to the east it would not meet the hill at all, which from here stretches away for 20 miles considerably to the south of east.

Proximity to the boundary line.

This evening we became enveloped in a singularly dense fog, which is a very unusual occurrence on high prairie lands. It began in the small hollows in which there were lakes, and the effect on the eye was very curious. Looking down from a little height just before sunset, the country seemed as if it were undergoing gradual inundation, for while the upper air was clear, the fog was so dense that it quite resembled water rising gradually, and thus giving the many rounded knolls the appearance of islands. We watched it as it continued to rise, until nothing but the tops of the trees were visible, when, soon becoming enveloped ourselves, we had no small trouble in retracing our steps to the

A beautiful and singular elevation of fog.

encampment. We found the men engaged in making huge fires, as all found this fog to be peculiarly chilling, although, unlike the cold of a sharp frost, it did not free us from our persecutors the musquitoes. During the afternoon observed for longitude, also for variation of the compass, with an interesting local result.

Interesting local declination of needle.

August 6th, Thursday.—This morning the weather was wet. Finding that there was nothing to be seen in this neighbourhood, we determined to pitch* along the base of the hill to the westward, the mass of the party making short stages each day, so as to allow of our exploring the mountain as far as possible. We started accordingly at 9.30 a.m., and went about 6 miles to the north, in order to round a point of dense woods which here projects into the plain. We halted for dinner beside a small creek, wending its way northerly, and seemingly losing itself in the many swamps which cover the plains at this place. We observed from here a ridge at a considerable distance to the north scantily covered with wood, which our guide called the "Montagne de Poile." This elevation seems to continue as a broken ridge, covered with small lakes to the spot where we now are, whence, sweeping round to the west, it becomes merged with the base of Turtle Mountain. Shot two cranes here, one the large white crane, measuring five feet eight inches in height; the other a grey crane, measuring five feet, spread of wings, six feet. Both of these birds are excellent eating and common to this part of the country, but very wild and shy. We also killed a number of bitterns, which rose lazily out of the swamps. They are of a rich hazel-brown colour, with saffron-coloured bills. This bird is seemingly very lean, on account of its lengthy awkward build, but in reality carries a great deal of excellent *moite* fat, and has a delicious flavour. During the afternoon I left the party and rode through the woods, without, however, seeing anything worthy of notice. Just before dark I again rejoined them, where we encamped at a small lake.

Occupied in excursions about Turtle Mountain.

Montagne de Poile.

August 7th, Friday.—At early morning we received a visit from three wapite; they had observed two of our chesnut-coloured horses feeding on the opposite side of the lake, and immediately swam across to where they were grazing. We killed a doe and set to work slicing and drying the meat. This operation delayed us till after mid-day, so that we obtained the latitude and longitude of our camp, and the variation of the compass.

The large red deer.

August 8th, Saturday.—We kept on a due west course until 2 p.m. this day, and having arrived at a deep gully encamped on its eastern side. To our north at the distance of 5 or 6 miles is a large lake, known as the White Lake, and said to be of very recent origin. It lies in a hollow without any outlet, and until five years ago water was never known to lodge permanently in this place. Its bearing 2 miles east from our camp was (E. end of) N. 3° E. (W. end of) N. 291° E. During the afternoon we separated over the hill in different directions. Thunderstorms have visited us daily of late, commencing generally at 2 a.m. and lasting till 6 or 8 p.m., and the night set in with high wind.

A lake of very recent origin.

August 9th, Sunday.—This morning we started at 10 a.m., and travelled about 5 or 6 miles, when we reached a large wide valley with a small stream running through it. The latter issues from the head of Turtle Mountain, a few miles N.E. of our last night's encampment; the west end of White Lake bore N. 310° E., and the east end was not visible. We had discovered several tracks of horses, and consequently were now very careful concealing our own in the bottom of a deep ravine where they had abundance of grass.

After dinner we again set off in different directions to make a last examination of the nature of the hill. We here arrived at the northern extremity of a crescentic notch, which crosses the hill, cutting off a lofty conical summit from the rest of the mass, and known to the half-breeds as the "Tête de Tortue;" thus the hill receives its name from the hunters by their seeing a resemblance in the elliptical mass to the buckler of a turtle, its head being represented by the conical mound standing out from one end. All this part of the hill is comparatively free from wood, the wide notch-like valley spoken of being occupied by bare plains, and the rounded hill only covered with patches which offer no impediments to the rider; but on attempting however to cross right over the summit to the south we soon got involved in the woods. At last, after a long ride, Hector succeeded in gaining the highest point, having avoided some deep gullies by which that part of the mountain is intersected. From the summit he obtained not only an extensive view to the north, but away to the south and west over American territory, where nothing as far as the eye could reach was to be seen but bare and barren prairie stretching in every direction. The hill here rises very abruptly from the plain below to the height of 300 feet above the plateau level, which skirts its base. Its western face is entirely devoid of wood, and has somewhat of a fine bold appearance.

Further examination of Turtle Mountain.

Territory on the American side of the line.

From sections which the ravines afforded, Dr. Hector ascertained the mass of the hill to consist altogether of drift accumulation, and wherever an exposed surface was seen, whether near its summit or towards its base, the materials were always coarse sand and shingle with large boulders. Boulders are also very frequent along its flanks and on steep slopes. They consist of large masses of limestone, which are generally angular, and huge rounded blocks of granite, gneiss, and other azoic rocks. He considers it probable that there may be a rocky nucleus to this hill; but if it is not exposed on its northern and western flanks, where the denuding agencies have evidently been the most violent, it would be useless to look for it in other quarters. The country in the neighbourhood of the mountain is very beautiful, and somewhat like that which we traversed previous to our crossing Pembina River on August 1st.

Turtle Mountain a drift formation probably.

The forests which cover Turtle Mountain are not of much value as regards timber, the principal growth being the two ordinary species of poplar (*balsamifera* and *tremuloides*), several kinds of oak of stunted and crooked growth, a small birch (*Betula pumila*), and, round the skirts of the hill, dense thickets of willows and berry-bearing bushes.

The boundary line passes directly through the summit of the mountain, and somewhere about the part resembling the head of the animal from which the mountain derives its name, and thence passes to the north of another point termed by the half-breeds the heart of the animal.

Boundary line, Tête de Tortue and Cœur de Tortue.

August 10th, Monday.—During last night another dense fog occurred, and this morning everything was completely drenched with moisture.

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* An expression in general use among the half-breeds and Indians applied to travelling slowly with tents.

Leave Turtle Mountain.

We started at 8 a.m., and taking a N.W. course left Turtle Mountain behind us, our visit there having been much less fruitful than we had been led to expect; except, however, as regards M. Bourgeau's department.

We crossed a narrow slip of level plateau, after which we made a rapid descent of about 150 feet, and then commenced to traverse a long expanse of bare plain. At 10 a.m. we came to a small creek which flows towards the east and joins White Lake, and at 11.15 a.m., having made about 10 miles, we halted to rest our horses, the heat being very intense. At 1.30 p.m. we were off again. We saw a caloi, or one of the prairie antelope, and several of our party unsuccessfully attempted to approach it.

The Forcifer Antelope.

This antelope is known by the name of Forcifer. It is very inquisitive, a peculiarity which may sometimes be taken advantage of in hunting it by showing some attractive object, such as a red or white blanket, and then running round to the lee, when the animal will expose itself to the hunters in its endeavour to get the wind of the thing it has perceived.

During the afternoon we made a considerable rise whilst crossing a ridge of broken ground running in a westerly direction, and from its summit we obtained a view of the woods which skirts the Souris River. At 6 p.m. we reached the first bluff of these, situated at about four miles from the river, and halted for the night.

Reach the Souris or Mouse River.

August 11th, Tuesday.—We were off at 8.15 a.m., and reached the banks of the Souris at 9.30 a.m. It is a considerable stream, being 50 yards wide and about four feet deep at the shallowest place we could find to ford it. We were obliged to skirt the river for several miles before making this discovery, and even then a portage was necessary in order to gain the opposite bank. It occupied us till 1 p.m. getting all our baggage and horses across, and we then halted for dinner. At this place there was once a small winter post of the Hudson Bay Company, but it is at present deserted. It corresponds to

Nature of its Banks.

Grant's House in Arrowsmith's map. The country immediately adjacent on the north side of the river consists of numerous conical sand hills, which generally rise to the height of from 60 to 70 feet above the plain, and are composed of very fine sand similar to that which forms the hills on the sea shore. The bed of the river is of a similar composition, and cut through a rich alluvial bottom to the depth of 8 or 10 feet, and, judging from the amount of overflown land on either bank, the river

Natural paper.

itself must be subject to great floods. The land thus inundated is covered with a thick layer of substance not unlike grey packing paper. At some of the river bends high cliffs of the sand hills are exposed.

After dinner we struck off to the N.E., with a view of avoiding the swamp which lies to our north. We did not, however, proceed far, as our horses were fatigued from dragging their loads over the loose sandy soil, and we found it advisable to encamp at the edge of the sand hills. Dr. Hector, who had left the party when we halted for dinner to geologize in the neighbourhood, rejoined us about half an hour after we fixed camp. Fragments of coal were found in the bed of the river at our crossing-place. These are derived from a bed of rounded shingle which underlies the sand hills, or in some cases may have been carried down the stream from an outcrop of lignite which occurs higher up. There is a distinct lake deposit at this place in regular strata of marl, sand, shingle, and iron-shot sand, with fresh water and land shells. The sand hills have doubtless been formed on the shore of this lake. Eight feet below the surface in one section bones protruded in numbers, but they all seemed to belong to the bison, although much mineralized.

August 12th, Wednesday.—As the flies had ceased to disturb our horses during the night, owing to frequent frost after sunset, we commenced starting early every morning so as to allow of a long halt during the oppressive heat of the mid-day sun. Notwithstanding the dense fog which caused our view of the country to be greatly limited, we were off at daylight this morning. At 7 a.m. we came to a large swamp over which we had to pass, but found that we had struck it too much to the westward and consequently required to make a long detour to the east. On reaching the place where it narrows into a sluggish stream of inconsiderable breadth, but of great depth, we halted for dinner while some of the men prepared a corade or boat with willow branches and our oil cloths, which was to convey our luggage

Cross Snake Creek.

across. The latitude of this place is 49° 36′ 0″ N. After dinner we swam across the stream, finding it deeper than the Souris River which we had had only occasion to ford with our horses. The crossing of the party took more than an hour, and while we were congratulating ourselves on getting on our dry clothes again a tremendous thunderstorm, accompanied by heavy rain, came on in the centre of this great swamp where we had no means of sheltering ourselves. The stream we had just traversed is known as Snake Creek, and falls into the Souris River, a few miles to the east of this place, and about 6 or 7 miles from its junction with the Assineboine. Our course lay now a little to the north of west, and our camp at night was also north of the place where we turned to the eastward in the morning.

Fine land and timber.

Immediately adjoining this swamp bluffs of wood occur, which, although they belong to the valley of the Assineboine, are at a distance of 5 or 6 miles from that river. The land in this neighbourhood is rich, and some good wood is to be met with.

August 13th, Thursday.—The morning broke raw and blustering, so much so that on starting at 5.15 a.m. we all preferred walking to riding. We continued to pass through level country with occasional

Fall upon the road from Red River Settlement to Fort Ellice.

groups of sandy hills, having the advantage of a "trail," known as the south road to Fort Ellice from Red River. It is said to be considerably longer than the road on the left bank of the Assineboine, which cuts across from "point" to "point" of the woods marking the course of this river, and although we have never approached sufficiently near to explore it closely, owing to the deep transverse gullies in its neighbourhood, nevertheless we could easily observe it running a little to the south of east. Our horses were now beginning to tire from the length, consequently shortening our days marches. At nightfall we came to a bluff of high poplars, where we camped. The woods which sprinkle the plains in this quarter consist of nothing but poplars.

A cold night.

August 14th, Friday.—Last night was very cold, the water in our kettles being frozen, and the ground at daybreak covered with hoar-frost. Our course was north-west, following a bend which the Assineboine takes from this point. Above this the river runs to the south, while below it follows an easterly direction. The country through which we passed now rose considerably, but otherwise preserves the same features as before. At 10.45 a.m. we arrived at a large gully, which divides into two branches,

Geological exposures.

and is named Fork Creek. Here there is a small stream of water, and at some parts the banks have a cliff structure which exposed fine sections of the same shale which we had seen at Long River on the

2nd of August. Accordingly we halted for dinner to allow Dr. Hector to examine these beds, and we also determined the latitude and longitude of the place. During the afternoon we passed several other creeks, and they all exposed like sections of the Long River shale. The ground, too, is plentifully strewn with large boulders, most of limestone, and one composed of calciferous sandstone measured 9 by 9 by 3 feet.

We passed through a country thickly studded with swampy lakes, and encamped at 6.30 p.m.

August 15th, Saturday.—Some of our party left the carts at starting, intending to proceed to Fort Ellice (half a day's march distant) by the ordinary route, while the others were to pass through the woods, keeping close to the river. After descending into several gullies, which were about 200 ft. deep, with a breadth of half a mile, our guide gave up the idea of reaching the fort in this direction, and again returned to the cart track about 6 miles from where we had left it. The sides of these gullies are very steep, and covered with a small but dense growth of wood. They run only a short distance into the plain, very abruptly losing their depth, and the small streams which flow through them generally emerge from swampy lakes a little distance back.

Failed in making a short cut.

Thus the cart track avoided the ravines without deviating far from the direct course to Fort Ellice, where we arrived about noon.

Arrived at Fort Ellice.

Fort Ellice is situated near the junction of the Assineboine and Qu'appelle rivers, one on the east the other to the north, both distant about two miles. It is built on a steep thickly-wooded bank, at the foot of which flows the Beaver Creek at a depth of about 200 feet. Like most of the Hudson Bay trading posts it is built of wood and surrounded by pickets. Once it was a very lucrative emporium of the fur trade, but now its principal value is derived from its importance as a post for trading provisions; two excellent ferry-boats have been placed one on each of the rivers above mentioned; thus the whole of the trade in the country, both that of the Hudson Bay Company and also of those engaged in opposition, pass by the fort, so that the Hudson Bay Company often obtain indirectly considerable advantage from their rivals in the trade, who are frequently obliged to exchange the furs traded by them from the Indians for the common necessaries of life, which can only be obtained at this fort.

Advantageous position of Fort Ellice.

We found the fort in charge of Mr. McKay who received us in the most friendly manner. The men with the horses and carts which I had despatched from Red River Settlement direct, under the charge of Hallet, had arrived on the 1st of August, and these horses had already considerably improved by the rest and good grass they had been enjoying. The horses which we had taken with us were very much fatigued and greatly in want of rest after what had been to them a severe journey, first on account of their bad condition before starting, and secondly from the severity of the heat accompanied with the incessant attacks of musquitoes and sand flies. I therefore determined to defer any further exploration to the westward until I found the condition of those horses which had accompanied us considerably improved. I further contemplated a branch trip to the boundary line in this longitude with Hallet's band of horses while ours were recruiting themselves on the fine grass here in the rolling country to the west of the Assineboine.

Condition of Hallet's band of horses.

The horses which I had brought require rest.

The valley of the Assineboine is depressed to 250 feet below the prairie level, and is about three-quarters of a mile in breadth. On the eastern side of the river it is marshy with swamp, but on the western side, which is slightly elevated above it at this place, it is dry and produces fine grass for the feeding of cattle. The river banks are composed of sand of a light brown colour, and at this point the river averages 15 feet in depth and is 60 yards across. In the examination of this part of the river we crossed the stream by one of the excellent bateaus above mentioned, and by which all carts and horses are ferried over the Assineboine on the journey to and from Red River Settlement. The Assineboine River was described to me (by several who had descended the river to its mouth at Fort Garry) as deep but winding, and as only interrupted by two rapids which occur about half way between this and Red River Settlement.

The Valley of the Assineboine.

A good ferry here across the river.

The prairie level on either bank is reached by ascending the very steep slopes which are covered with dense wood, and which enclose the river between them; it is a great task for loaded carts to effect this ascent. About five miles above this the river Qu'appelle joins the Assineboine, and from thence we obtained a view of the serpentine character of the former previous to its waters mingling with those of the Assineboine.

Junction of the Qu'appelle River with the Assineboin

The valleys of the two rivers are well wooded, but the timber is of little value.

The soil in the neighbourhood, however, is well fitted for the growth of wheat, barley, potatoes, and other garden vegetables. There is only a very small patch of ground under cultivation at the fort, and potatoes form the chief crop.

A few head of cattle, also, belonging to the Hudson Bay Company, thrive well on the fine pasture they find in the environs of the establishment.

Owing to our protracted stay at Fort Ellice, an opportunity was afforded of making this place one of our astronomical stations, and a series of observations was therefore completed. The means of these, for latitude, longitude, and variation of the compass, are as follow: 50° 24′ 28″ N., 101° 48′ 0″ W., 20° 44′ E. respectively.

Lunar and other astronomical observations made here.

Dr. Hector rode through a good deal of country in this region in search of geological information concerning its structure, and M. Bourgeau botanized in the neighbourhood of the fort. The following are the principal trees of the place: *Populus* (*balsamifera* and *tremuloides*); in less abundance than these *Negundo fraxinifolium*, *Betula pumila*, *Fraxinus sambucifolia*, and the same *Quercus* which we observed at Turtle Mountain. We have observed no specimens of the pine family, the fort being built of poplar.

No trees of the pine family in this region.

While we were staying at this post a party arrived from Fort Colville on the Columbia River, having crossed the Rocky Mountains, and come round by Edmonton, Carlton, and Touchwood Hill Posts, having accomplished the journey in three months and a half. They had formerly been a portion of a large party of emigrants from Red River, under the direction of my late friend Mr. James Sinclair, which had crossed the Rocky Mountains with him in 1855. Subsequently, Sinclair, I understood, was engaged by the Hudson Bay Company, and, along with a party of Americans, was in one of the forts of the American Fur Company's trappers at the Cascade (where the Columbia River cuts through the Cascade range), when a row took place between the Indians and Americans. Firing commenced, and Sinclair, who was well known and liked by the Indians, went out to pacify them. They, however, did not know that he had been in the house at all, and fired before they were near enough to recognize him,

Emigrants returned from the other side of Rocky Mountains.

Their account of the death of my friend Mr. James Sinclair.

killing him on the spot. After this, many of the emigrants became discouraged, the prospects, quality, and extent of the land on the Columbia not being equal to their expectations. The bustling life and active business habits of the Americans with whom they came in contact were too much for them, and finally they determined to set off for Red River again, and had arrived thus far when we saw them. Their party consisted of about seven men, three women, and a few children, one of which had been born on the prairie, and seemed to be doing remarkably well. They had a severe journey, and when in the mountains were so short of provisions that they were obliged to eat one of their horses. They had, fortunately, not fallen in with the Blackfeet, and had been very kindly treated by the Indians on the north branch of the Saskatchewan. Between what they obtained from Indians, and the assistance they got at the Hudson Bay Company's posts, they managed to get on very well as far as Fort Ellice; they said they had taken nine days in crossing the Rocky Mountains, but of these only two had been very severe. They came by the northern Kootanie Pass*, their guide being a Red River Scotch half-breed of the name of Whitford; they remained here a few days to rest themselves and their horses, and afterwards proceeded to Red River. Among other arrivals were some half-breed hunters from the plains, who sold us five horses. Mr. Swanston and family also rejoined us here on their way to Fort Edmonton, that gentleman having been appointed to that post in charge of the Saskatchewan District. Several Indians were encamped about the post, gambling away their guns, ammunition, and blankets, and in short everything they possessed. Next to rum, gambling seemed to us to be their most absorbing excitement.

Return journey of the emigrants.

They had eaten one of their horses.

They cross the mountains by the North Kootanie Pass.

August 17th.—In addition to my wish to visit the country in the neighbourhood of the boundary line in this longitude, Dr. Hector was also anxious to investigate some indications of coal he had already found on the Souris River, still further, in addition to this, we had heard several curious accounts of strange appearances and shapes in some rocks to the southward, involving, perhaps, features of geological interest; now, therefore, that Hallet's band of horses (viz., those that had come direct from Red River, and which had arrived here long previously to ourselves,) were sufficiently rested to start away again, we determined on a branch expedition to the south. Our party consisted of Dr. Hector and myself, Mr. McKay, the gentleman in charge of Fort Ellice, who had kindly consented to accompany us, and four men, and Hallet's band of horses. Mr. Sullivan remained behind to take lunars at Fort Ellice, and Monsieur Bourgeau to classify and preserve his botanical specimens, as well as afterwards to pack and forward them to England. Shortly after noon we started from the fort and rode in a southerly direction along the west bank of Beaver Creek, crossed it where it emerges from a large swamp, and came to a succession of well marked ridges, trending north-west and south-east, whose summits are clothed with poplar, and having creeks and swamps between them. We dined at one of these creeks known as the First Poplar Creek, and camped at night on the summit of the third ridge.

Branch expedition to the boundary line.

Employ Hallet's band while our recently-arrived horses were resting.

Start for the boundary line.

August 18th, Tuesday.—After having gone some distance this morning we were delayed by having to wait some time for one of our men who had forgotten a gun at our last night's camp. At breakfast time we arrived at Pipestone Creek, which is a stream of considerable size, winding through a steep but wide valley with a flat bottom, in which it has again cut a deep channel. This creek is the same as that we crossed on the 12th, but then it was known as the Snake Creek. It rises from the north flank of Moose Mountain, and flows with an easterly course until it joins the Souris River. Its banks here are about 16 feet high, but at a distance of 10 miles below this place it emerges on a flat plain, where it loses itself in swamps of considerable extent, and from which its waters again issue under the name of Snake River above mentioned. There is an eminence on its right bank, known as Hairy Mountain, two miles below where we crossed. It is one of the many rounded eminences scattered over the plain in that direction, rising to an altitude of 160 feet. These hills, as well as the whole thickness of the banks of the valley, as far as we could see, consist of grey sandy drift, plentifully mixed with boulders, principally of limestone.

Pipestone Creek.

Hairy Hill.

During the afternoon we have passed over very swampy ground, and at night camped on a high ridge, from which we can see Moose Mountain in the distance. It presents exactly the appearance of Turtle Mountain, and forms a blue line on the horizon of considerable length.

Moose Mountain.

August 19th, Wednesday.—By breakfast time we reached the eastern tail of the mountain, having passed through country thickly studded with clumps of wood. The distribution of wood upon this hill and its environs is an exact counterpart of that on Turtle Mountain. To the south and west of our present position we look out on a plain of boundless extent, quite unbroken by even a single tree; to the west also is a sharp conical peak, into which the east end of Moose Mountain rises, and which is quite bare.

Similarity to the country about Turtle Mountain.

We now collected some wood for fuel, and again proceeded on the march. The view we got of the south side of Moose Mountain was very different to that of the north, being altogether destitute of wood, and it is said that the south side of Turtle Mountain has the same peculiarity. We dined at Moose Creek, which traverses a valley nearly as deep as that of Pipestone Creek. It flows to south-east, and joins the Souris about 20 miles lower down. Both this and Pipestone Creek are not more than ten yards in breadth. While at dinner, we were aroused by the appearance of two men in the valley where we were camped. After a little hesitation they came towards us, and turned out to be two half-breeds belonging to a party near the Moose Mountain, who were out in search of buffalo. They had not been successful in finding any, but assured us that to-morrow we should fall in with bulls even. This was very welcome news, as we were now some hundreds of miles into the buffalo country without having yet seen any. Camped on the prairie that night, making use of dry buffalo dung for fuel.

Took wood along with us.

Meet two half-breed hunters.

August 20th, Thursday.—This morning we were off at 5 o'clock, and continued to cross the level prairie till, reaching a swamp, we camped for breakfast. The only animals we have met since leaving Fort Ellice up to this point are bands of prairie antelopes, but we had not proceeded far after breakfast when we came in sight of two buffalo bulls, which I killed. As this hunt occasioned a delay of some time, when once again started we pushed on fast in order to reach the Souris River by nightfall. As we approached this river, the ground was so covered with boulders that our cart could hardly get along.

Kill two buffalo bulls.

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* British Kootanie Pass traversed in the year following and mapped by Lieutenant Blakiston in 1858.

A most terrific thunderstorm came on just as we reached the river valley, so that we were forced to camp as speedily as possible on the plain level, not having time to descend into the valley where we would have been much better off.

Discover a camp of Indians in the distance.

August 21st, Friday.—When day broke this morning we discovered on the opposite bank of the river a large camp of Indians, from the glistening of their white tents in the rising sun. Leaving the cart we rode off to examine the river and the banks of the valley through which it runs. We found the valley very extensive: from the level of the plain to that of the alluvial bottom below is 139 feet, and through this the river has cut a channel 30 feet deep. The stream is about 20 yards wide, and has a strong bed with only a little water in it. At the point where we descended into the valley, the bank, which is excessively steep, is as thickly beset with boulders as the plain above. The river here runs in an almost easterly direction, but after proceeding up it for about 1½ miles it takes a great bend, coming much more from the south. At this place the first appearance of beds of rock in the bank of the valley was observed. Hector examined them, and found them sandstone of a very soft and friable nature.

La Roche Percée.

Assineboine Indians.

As we continued riding up the valley slowly, we observed a number of Indians crossing rapidly towards us. From the open manner in which they approached we saw that their intentions were friendly; so we awaited them, choosing, however, a good position for observing them as they neared us. A few had guns, but the majority were armed with bows and arrows. They turned out to be a party of Stoney Indians of the plains (Assineboines) from the camp we had observed in the morning. Mr. McKay who knew most of them went over to their camp on business connected with the trade.

We had frequently heard from the half-breeds that there were in this country, and a little to the south of us, some wonderfully formed rocks, among which the most remarkable was La Roche Percée. Doctor Hector went to visit it, and thus describes the result of its examination:—

In the sides of the valley of the Souris at this place a group of strata is exposed, of which the following is the section: clays, sandstones, thin bedded limestones, and calcareous scinter, and ash-coloured sandy clay with silanite, and the latter containing thin seams of lignite or coal of inferior quality. No trace of fossil remains were found in any of these beds to indicate their age. The coal does not occur in well defined beds, but graduates into the shales on both surfaces. It is not visible until a light ashy deposit is removed from the exposed edges of the bed produced by the soft clay washing down from the strata above. The coal is of several qualities, some having quite the appearance of black cannel coal of fine quality, some like more glistening bituminous coal, friable, and only obtained in small cuboidal fragments, while some can hardly be distinguished from charcoal. A rough analysis of an average specimen of this lignite, made on a small scale, gave the following results:—

Aqueous and volatile matters	40 per cent.
Carbon	50 „
Light orange-coloured ash	10 „

Of the first group an unusually small proportion is formed of tar and gas. It burns in the air with difficulty and without flame. This deposit neither occurs in sufficient quantity or of such quality as ever to be of importance to commerce. The manner in which the sandstones decompose gives rise to curious figures, which the Indians regard with superstitious dread. Hard concretions occur, which resist the action of the atmosphere for a much longer time than the softer portions, and they thus become isolated and perched in natural pillars, which are grouped as if they formed the ruins of ancient buildings. One of these pillars standing out from the side of the valley is perforated by a large hole, and is "La Roche Percée," from which the locality derives its name. The Indians never pass this stone without making some offering to the Manito which to their minds it represents, such as rubbing vermilion on it, or depositing beads, tobacco, or the like in the crevices. It is also covered with rude designs carved with their knives on the soft surface of the stone.

Our Stoney Indian visitors at this place had come from the Grand Coteau, which is half a day's journey to the south of the Souris River. They said that the Mundan Fort is distant two days from this place, almost due south. They were very anxious that we should cross to this camp to trade horses from them, but McKay visited them and found that they were in want of nothing but *rum*. A little Salteau boy, the son of a prisoner, which this tribe had taken or killed, made his escape from their camp, and concealing himself now joined us after we started on our return. Some one named him Pascal, which name he bore with us afterwards. He proved very useful, but was a thorough adept at all sorts of mischief.

August 22nd, Saturday.—We were delayed until 10 o'clock getting a supply of wood from the valley below, as we were to repass the same plain. Although we proceeded in the same direction, we did not fall in with our outward track until we reached the tail of Moose Mountain in two days. We had a second buffalo chase in crossing the plain early in the morning of the 23rd, but only killed bulls.

Moose Mountain examined.

August 23rd, Sunday.—In the afternoon Dr. Hector left us, accompanied by Mr. McKay, for the purpose of ascending the conical peak of Moose Mountain. After considerable difficulty they penetrated the dense woods which surround the base of the mountain, and reaching the summit, got a splendid view of the country around. The hill consists of lofty irregular mounds, densely covered with woods and enclosing hundreds of beautiful lakes, some of which are of considerable size. Like Turtle Mountain, it seems to be composed of nothing but an accumulation of drift, and he found the sides of the conical peak to be thickly strewn with boulders, and composed of sandy gravel, on which there existed only a scanty growth of grass. The altitude of the peak above our dinner camp, which was considerably elevated above the plain, he found to be 340 feet. It was dark before the Doctor rejoined us at our camp, which was within a few hundred yards of where we had slept on the 18th.

August 24th, Monday.—From this place we kept in the same track as that by which we went out, and arrived at the fort at noon.

Found my horses at the fort improved.

August 25th.—Went to see the horses we had left to feed up here during our branch trip to Roche Percée and boundary line, found them looking very much better,—improved, but hardly yet sufficiently recruited to proceed on our western journey to the South Saskatchewan. McKay was also daily expecting a fresh supply of ammunition from the principal post, viz., Fort Pelley, of the Swan River district, of some of which I also stood in need.

August 26th.—It appears that our chief guide and interpreter, Ferguson, on hearing that I wanted to continue our course westward, went round yesterday to the Indians about, and also to the men, to organize some testimony about the impracticability of continuing our course and the necessity of avoiding the south on account of its unfitness for carts to cross the Qu'appelle, and adopt a course through the already known country on the north branch of the Saskatchewan River. Our friend Mr. McKay easily discovered the conspiracy, and immediately informed me of it, telling me how alarmed Ferguson was at the prospects of passing through this country, and that he was endeavouring to influence the men, who even as it was were quite sufficiently alarmed already. I then asked McKay if he would accompany us and interpret for us. He said there was nothing he would enjoy half so much, but that he could not absent himself from the fort under his charge without Mr. Christie's permission. I determined therefore to start a messenger at once to Fort Pelley with a letter to Mr. Christie, the chief officer of the Hudson Bay Company in charge of the Swan River district, requesting him to allow me the services of Mr. McKay as interpreter, as well as also the pleasure of his society during the remainder of our explorations this season; I explained to him how Ferguson was frightened, and had endeavoured to deceive me in order to try and prevent our ascending the South Saskatchewan, and, in short, the great necessity we were in for a trustworthy interpreter.

Alarm of my first guide Ferguson.

Send a letter to ask leave of absence for Mr. James McKay.

Monsugny starts for Fort Pelley.

September 3rd.—Started Monsugny off with my letter to Mr. Christie's, Fort Pelley, distant about 110 miles. On the 6th of September the powder, ball, and shot arrived. McKay supplied us handsomely. I now determined to start the Expedition once more without delay to the Qu'appelle Lakes on a due west course, and remain behind to await the return of my messenger from Fort Pelley with a letter from Mr. Christie letting me know whether he could spare McKay from the trade in order to accompany us.

Send on the Expedition, but I remain behind to wait Mr. Christie's answer.

September 7th.—Got in the horses, arranged the loads, repaired the harness, and all got under weigh at about 3 p.m. in charge of Hector. I remained behind with Beauchamp, Hallet, and six horses, intending to start as soon as Mr. Christie's answer arrived, and to take McKay along with me if he obtained the leave we had applied for; in the meanwhile leaving the Expedition in charge of Doctor Hector, who from this date continued the journal as follows:

Journal of Expedition continued by Dr. Hector.

Start for the Qu'appelle Lakes.

September 7th.—Leaving Fort Ellice at 6 p.m. we went due west for six miles through rich prairie land studded with poplars, and encamped close to a large swamp, which, from its south end, gives rise to Beaver Creek, while from its north end a small tributary issues to the Qu'appelle River called the "Little Scissors Creek." The barometer at sunset 28·21, thermometer 60°.

Our course.

September 8th, Tuesday.—Up at 5 a.m. The morning was dull with drizzly rain, and a high wind had prevailed during the night. Barometer at sunrise 28·26, thermometer 47°. We started after breakfast at 7.30 a.m. In crossing the swamp we met with some delay from the upsetting of one cart and the breakage of the wheel of another. During the forenoon we kept almost due west at four or five miles distance from the Qu'appelle River, but gradually increasing that distance as we proceeded. We crossed a succession of short prairies interrupted by belts of wood, passed by a number of small lakes and ponds,

Structure of the country.

where we killed a great many different kinds of ducks which were very plentiful. During the afternoon we crossed a thickly-wooded ridge having a considerable elevation and running in a south-easterly direction; it is evidently a continuation of one of the parallel ridges we had passed in going to Roche Percée. As we ascended the ridge we found that the soil thrown out from the badgers' holes consisted wholly of comminuted fragments of the cretaceous Long River shales, in examining some of which we

Fossils.

obtained two specimens of fossil fish scales, some of which had been found at Forked Creek. The wood which covers this ridge consists principally of young aspens. The road we followed, though evidently a much used track, was very bad, and sorely tried the strength of our carts. At 5 p.m. we came to a pretty little lake, and as this is the last water we shall see for many miles we encamped for the night.

September 9th, Wednesday.—During last night there was a heavy fall of rain, and this morning we were delayed a considerable time as so dense a fog enveloped us that the horses could not be found; barometer 27·56, thermometer 53°. We continued to traverse the young woods over very irregular ground until 12 a.m., when we stopped for dinner at the commencement of an open and level country. After dinner we crossed several detached plains of considerable size, covered with

Remarkably fine timber.

clumps of very fine poplars, some of them measuring two feet in diameter, and reaching a great altitude. This is the only place on the plains where we have seen wood of any size. As we rode along a large badger was shot as it was walking off among the long grass. This animal runs slowly, but turns with great fierceness on dogs; and as its claws and teeth are very sharp, much resembling those of the bear, it can inflict very severe wounds. At 6 o'clock we halted on the site of some old Indian lodges in the neighbourhood of a large lake; barometer 27·50, thermometer 59° at sunset.

September 10th, Thursday.—During the night it was extremely cold, with high wind. This morning we breakfasted before starting, and after passing for a few miles through woods we emerged

The Weedy Mountains.

on an extensive plain bounded to the south by the "Weedy Mountains," which seem to be nothing but a continuation of Moose Mountains to the west. After crossing this plain for 12 miles, over a surface broken into high abrupt ridges and mounds, and strewn with boulders, we reached a creek of considerable size flowing to the north, and which issues from a marshy lake lying along the northern edge of Moose Mountains, and from which also runs Pipestone Creek flowing to the S.E.

Chief factor Swanston's camp.

About two miles on we came to wood, and stopped for dinner, where a camp had recently been pitched, and from the egg-shells which were scattered about we concluded it to be Mr. Swanston's. After dinner we crossed the tail of Weedy Mountains, which we had now reached, and encamped on the west side after proceeding but a short distance, as our horses were much fatigued from the long spell in the forenoon.

Wolf Skin and Man's Head Mountains.

September 11th, Friday.—Barometer 27·60, thermometer 46°. This morning was cold and raw. During the forenoon we passed over two more of the parallel ridges known as "Wolf-skin Mountain" and "Man's Head Mountain," respectively; they are separated by strips of plain, and seem to terminate, after running a short distance, to the N.W. of our track. After dinner we still kept a westerly though very tortuous course, having to wind round innumerable swamps and marshy lakes.

About 5 o'clock came to a wide ravine 90 feet deep and half a mile across, and through which a small stream had cut a winding channel. The valley seemed to terminate abruptly to the south, as there a bank covered with thick wood seemed to cross it at the distance of two miles. These woods consist of balsam poplars and cherry trees, the latter being laden with a fine ripe crop, which, though slightly astringent, are very pleasant to the taste. There is, however, very little upon them, as the bulk of the cherry is formed by the pip in its centre. We encamped beside a large lake with a stony shore, which was an agreeable change to the eye from the marsh margins which generally surround the lakes. We killed a great deal of wild fowl during the day, and counted as many as 40 ducks, besides several geese, roasting at the same time round our camp fire.

Ripe Cherries.

Ducks and geese.

September 12th, Saturday.—This morning there was a stiff breeze blowing from the S.W., and the water of the lake rose into waves, which dashed on the shore, giving it somewhat the appearance of a sea-beach. Several kinds of birds also were flying over its surface; among these the Avocet (or Recurverostra), which we had not seen before. It has a long delicate bill turned upwards, as if the wrong way, giving the bird a most comical appearance. Several of them were shot, but unfortunately we had no means of preserving them. It is from this lake that the creek which we recrossed last night has its rise, issuing from its S.E. corner and sweeping round to the north, with a sharp angle at the bluff of woods we passed yesterday.

The Avocet or Recurverostra.

The country all round this lake is extremely irregular, rising into high hills without any covering but a scanty growth of grass; boulders are also very abundant. Barometer at sunrise 27·45, thermometer 48°. At about 11 o'clock we began to enter woods again, which were scattered over level plains. At 1 o'clock we reached our destination, a small trading post of the Hudson Bay Company, which from having first been situated at the Qu'appelle Lakes is known by that name. Barometer 27·06, thermometer 60°. As this was the place we were to remain at to await Capt. Palliser's joining us, I employed the time in making a visit to the Qu'appelle Lakes, lying about 18 miles to the north. Having procured a guide and a note from the gentleman in charge to a missionary who lives there, we departed after dinner, intending to return next day. For the first four miles the track, which is almost due north, passes through open woods with large lakes, making a considerable descent. After that, with the exception of a few clumps, we saw no more wood, but crossed a level open plain. We again commenced to descend steadily. It was sunset before we reached the Qu'appelle River, and descended into its profound valley by a dim twilight, which greatly exaggerated its proportions. Riding along the river we soon came to the house of the missionary, guided by the baying of the dogs. We were very hospitably received by Mr. Pratt, who is a missionary of the Church of England from Red River Settlement, and a pure Stoney Indian by birth. He has a very comfortable little house and cultivates an excellent garden, in which he rears among other things hops and Indian corn. The bottom of the valley, which is 240 feet below the plain, is about one mile wide, occupied by a succession of lakes separated by alluvial flats, through which the Qu'appelle River winds. These lakes abound in fish of very fine quality, and are said to be of great depth in some parts. At early morning we were again in the saddle, and, guided by Mr. Pratt, paddled over the river in a skin canoe, by which means we also crossed the horses and rode down the valley for four miles to the lower lakes, where there is a great slide of bank exposed. Here I had hoped to see something of the structure of the plains, but only found red and yellow clays exposed together with sandy drifts. On our return we shot and skinned a pelican out of a flock which were gliding majestically on the lake, and afterwards breakfasted on the fish we had also caught there, and afterwards joined the remainder of the party at the Qu'appelle Fort, about 18 miles distant, and found that Capt. Palliser had arrived and brought Mr. James McKay along with him.

Visit the Qu'appelle Lakes.

Mr. Pratt's mission.

Mr. Pratt's farm.

Examine the structure of the country.

Arrival of Capt. Palliser.

Journal continued by Capt. Palliser.

September 13th, Sunday.—Arrived at Qu'appelle Lakes Fort, after a fast ride of three days over the same ground which the Doctor and Sullivan had travelled; this post is in long. 103° 46′, lat. 50° 20′, var. of compass 24° 30′ E.

We found a large camp of Crees arrived for trading. Mr. Pratt, the missionary, came over and paid us a visit. He is a pure Cree Indian, educated at Red River. He reports the Crees as beginning to apprehend scarcity of buffalo, and many are most anxious to try agriculture. He thinks that if they had agricultural implements, such as spades, hoes, and ploughs, they certainly would commence operations. This opinion I found pretty general among the people of the Hudson Bay Company, and I am persuaded much good could be done by importing the simpler kinds of agricultural implements. Pratt has set the Indians an excellent example himself, and grows capital Indian corn, barley, and potatoes. The Qu'appelle Lakes may be considered the most western part of the territory east of the Rocky Mountains to which the Hudson Bay Company trade; westward of this I may say is unknown, and the whole country in this latitude is untravelled by the white man.

Mr. Pratt the missionary.

Among the Indians that had come to trade was a man with whom Mr. McKay was acquainted. This man was a remarkable exception to the generality of Indians; they call him the "peace-maker," and twice within the last two or three years he pushed his way alone into the Blackfoot country, and walked into the enemy's camp unarmed, with the peace pipe in his hand, exhorting them to peace, and offering them the alternative of killing him. The result, on each occasion, was a treaty of peace to the Crees, and a present of horses to the peace-maker. I engaged this Indian to guide us to the elbow of the South Saskatchewan, for which service I promised him a horse and a suit of clothes.

The peace-maker.

September 14th.—Mr. Pratt gave us a very fine mare in exchange for two wretched horses, one of which is not likely to live long. Started the Expedition at 12 o'clock, camped at Squirrel Hills, where we had good wood, water, and grass. Our road during the early part of to-day was mostly thorough a country moderately well wooded, over good land, well suited to agricultural purposes, where there were also lakes and hay-producing swamps, but towards evening we began to observe symptoms that showed us that we were again nearing the line of desert country, or northern extension of the North American arid basin; towards evening we passed many spots where the soil was poor and stony, and the growth of grass deficient.

Good land.

Arrive on edge of arid desert of Central North America.

September 15th.—Off at 4.30 a.m., and halted for breakfast at 10 o'clock beside a small lake; from this we had an extensive view of the Prairie Coteau, extending away to the north-west. Our Indian guide, the peace-maker, to whom we had given the name of Nichiwa, or friend, counselled us to cut wood and bring it along in our carts, as he said it was the last we should see to-day; there is now no more wood except in the valleys of the rivers. Our course was due west, and as far as the eye can reach nothing but desolate plains meet the view; at noon reached a small creek called "The Creek before where the Bones lie;" here we found water and some little grass, also a few willows and cherry bushes, but no wood fit for fuel. This creek rises from a small lake about 8 miles to the south of the Qu'appelle Lakes, into which it ultimately flows. Two Indian lodges are here, containing an old man with some women and children; the young men are away in all directions in strong parties hunting buffalo. In the evening reached the Creek where the Bones lie, where we found water and very little grass; a few willows also grew here but no wood fit for fuel.

Obliged to carry wood along with us.

The Creek where the Bones lie.

September 16th.—Were detained this morning by a thunderstorm, after which we started; arrived early in the afternoon at Moose Jaw Creek; here, at some distance from our camp, we found a considerable number of Indian tents, inhabited altogether by women and children; the men were all away after buffalo; the women were very communicative, asked leave to come and see our wives, and expressed considerable surprise when we told them that we had none. In the centre of their tents was their large medicine lodge, the exterior of which was covered with hieroglyphical characters, birds and animals of various designs. At Moose Jaw Creek we had both wood, water, and grass.

Moose Jaw Creek.

Its valley.

It is the largest river valley we have seen since we left Qu'appelle Lakes. Its depth is about 300 feet below the prairie level. The sides of the valley are very steep, and composed mostly of fine sand, with boulders thickly strewn over the surface; down near the stream willows and many berry-bearing bushes grow in abundance. Mud turtles are caught here, but we saw none. Moose Jaw Creek has its origin from the same lake as the Mouse River (Rivière à Souris) the course of which after it leaves the lake is N.W. for 20 miles, then turns N.E. until it falls into the Qu'appelle River. Here our Indian, Nichiwa, advised us to bring wood for five nights along in our carts, and told us it was the last we should see between this and the elbow of the South Saskatchewan; we therefore cut it and distributed the additional loads for each waggon and cart to take on next morning.

A very long interval of five days travel without wood.

September 17th.—The Doctor, accompanied by McKay and a small party, left the carts and went off to explore to the southward, intending to fall on the track and camp with the main body that evening. We started not long after, and found it very difficult to find a crossing for our carts and waggons over the Moose Jaw Creek, to effect which we had to travel considerably to the southwards. It was noon before we could cross this insignificant stream, on account of the general steepness of its banks at the water's edge. After dinner resumed our march, and camped early in the evening on one of the numerous small lakes, which generally are partly surrounded by swamp, and where grass was found for the horses. Our course still west, but had made more than three miles southing that morning in searching for a crossing over Moose Jaw Creek. In the evening we crossed a little creek, where there was no timber, called Thunder Mountain Creek, which rises in the Coteau and runs into Moose Jaw Creek. Cooked our supper with buffalo dung, and a portion of the wood we had taken from Moose Jaw Creek. Hector did not arrive that evening.

The Doctor leaves for a short branch trip.

He did not return that evening as he intended.

September 18th.—Started late, as we were in hopes of the Doctor and his party joining us for breakfast. When we halted for dinner we were sufficiently near the Coteau to discover Indian tents, and before dinner was over we were surrounded by Indians. When they first saw us they had mistaken us for a band of buffalo, but on coming nearer discovered us to be a party of whites, and of course rode up. They were Crees. I asked them if they had seen the Doctor, but they said they had not. After dinner resumed our course, hoping the Doctor and his party might be in advance, as they had not been seen by the Indians. About twenty-five of our new friends accompanied us to our camp. I exchanged two horses with them, and would have exchanged more, but for the extreme soreness of their horses' backs. These men told us that we were not more than two days' journey off from plenty of buffalo out westward; but they said they did not like to go so far, as they would then be in the enemy's country. Our latitude at noon was 50° 26′. Camped on a little stream, which takes its rise in a small lake about 14 miles to the south-west, and which, after expanding into two other lakes a little further on, falls into Thunder Mountain Creek.

Visited by Cree Indians.

All their horses' backs were sore.

Report plenty of buffalo to the westward. Would not go there for fear of the Blackfeet.

September 19th, Saturday.—At about 11.30 this morning Dr. Hector and party came up with us, accompanied by a large number of Crees. They had slept last night in one of the Cree lodges, and were very hospitably treated by them, having received many invitations to the festivities of the various tents, but they had been obliged to spend the previous night on the plain without food, fire, or blankets, and had ridden over 70 miles. On the day following they had met a poor Indian travelling on foot, returning from burying the bones of his relations who had died of small-pox last year, and according to custom had thrown away all his clothes to celebrate the event, and as a sort of a sacrifice to the Manito of the prairie; they gave him the only blanket they had. The small-pox is a disease of almost yearly occurrence, and fearfully fatal among these Indians. McKay described to us this evening an awful scene witnessed by himself last year when he was in charge of Fort Ellice. He told us that one-half of those tenting round that establishment had been carried off by small-pox. We heard while at Fort Ellice that small-pox was raging at Fort Carlton, where we intend to pass the winter, but trust that this may not be the case as we only have it from Indian report. The Doctor and his party had failed to find our track on the first evening on which we had separated, owing to all the ground we had lost to the southward in finding a crossing-place on Moose Jaw Creek the day before yesterday. The Doctor had slept in an adjacent Indian camp on the Coteau, in one the tents of which was suspended an Indian scalp, and, amongst other women, the wife of the unfortunate Blackfoot who had been murdered was obliged to dance round her husband's scalp. The whole of this forenoon was occupied in crossing over a succession of ridges or prairie rolls, among which are a number of lakes. These ridges are composed of light yellowish sand of very fine grain, the sides of many of which supported berry-bearing bushes and a few poplars. We passed a second creek, which, like the one we encamped at last night, takes its rise in a small lake to the south, and is tributary to the Thunder Mountain Creek. At noon an observation for latitude was 50° 27′ 59″ N. During the afternoon we were met by a few Indians, some of whom produced certificates, which they

Hector and McKay arrive.

They passed a bad night.

Gave a poor Indian their only blanket.

Fearful ravages from small-pox.

A Blackfoot woman compelled to dance before her husband's scalp.

Description of the country.

Indian certificates of good conduct.

had received from the various trading posts of the Hudson Bay Company, and which were folded and tied carefully in a piece of bark. One of these certificates ran as follows: "This is to certify that "Awaskasoo (the Red Deer) is a good Indian, and a man of some influence in his tribe, and that he "has brought many furs to the Company's establishments; he has once traded with the opposition "traders, but promises never to do so again."

An Indian in pursuit of his wife.

We then met another Indian who informed us that he was in pursuit of his wife, with whom a young man had run away a few days previously. There was also among the party who had accompanied the Doctor an Indian who had been scalped not very long ago when, in an encounter with the Blackfeet, he lay wounded, and when insensible from loss of blood, and left for dead; but after his enemies had departed and his consciousness returned he made his way back to his friends. He wore a handkerchief bound tightly round his head, and did not wish to show it to the Doctor, nor did he like that his misfortune should ever be talked of. Nichiwa told us that he was one of four young men who had escaped from a massacre of his friends by the Blackfeet in a ravine near the elbow of the south branch of the Saskatchewan last spring. It appears that the Crees and Blackfeet had been at peace, and were tenting together, but after the return of the former 25 young Crees formed a horse-stealing party, and having previously constructed rafts succeeded in stealing the Blackfoot horses, and by crossing themselves on the rafts succeeded in leading off the horses swimming in their wake. When the Blackfeet missed their horses they set off in pursuit, and following up the track came to the bank of the river whence they had been taken across. While they were still there one of the young Crees actually had the hardihood to reveal their position by glancing a small looking-glass, and as it were chaffing the Blackfeet. The season being so early (just after the breaking up of the ice), the water was intensely cold, and the river very high, wide, and rapid, so that these young Crees never dreamt of the possibility of the Blackfeet pursuing them without rafts across the South Saskatchewan, and during the time consumed by the Blackfeet in the construction of these they thought they had abundance of time to escape with their stolen horses far beyond the fear of pursuit. The Blackfeet, however, turned about, and departed as if returning to their camp, and then made a detour to a point higher up the river where, concealed by a bend, they swam their horses across. At sunset they fell upon the young Crees, surrounded them in the Coulée in which the men encamped, and killed 17 of them on the spot with bows and arrows, and by rolling large stones on them. A few got away wounded under cover of the night, and only three or four ultimately recovered.

An Indian scalped without being killed.

He was one of the four young men who escaped from an onslaught of Blackfeet.

Nichiwa's account of the affair.

This account corroborated by the other Indians.

Great fear evinced by my men, and difficult to get them to go on to Blackfoot country.

Several old Indians were still in mourning; these were related to some of the young men whose fate I have recorded. An old man who had thrown away almost the whole of his attire, and now only clad with a very old robe, and with his head plastered with mud, implored me not to go further among "these wicked men." They also alarmed my men considerably with various tales, more or less true, concerning the prowess of the Blackfeet. We camped early on a small lake where we killed ducks, and around which was a swamp with grass for the horses. Cooked supper with dry buffalo dung and a portion of the wood we had brought from Moose Jaw Creek, the land we had travelled over not differing from the nature of that which we have been traversing for several days back. Lat. at noon, 50° 28′; long. 106° 30′.

Come in sight of buffalo.

No cows to be seen yet.

Mr. Sullivan kills a buffalo bull.

The neutral ground of the Blackfeet and Crees.

Nichiwa's attempt at an imposing appearance.

Camped on Thunder Mountain Creek.

September 29th, Sunday.—Started early, and not long afterwards came in sight of one or two old buffalo bulls, evidently stragglers; we at once concluded that buffaloes were not far off; we continued our course, and saw bands of bulls, at first small, but increasing in number as we proceeded westwards. Seeing that as yet there was no danger of disturbing any cows in that neighbourhood, I encouraged Mr. Sullivan to mount one of our best horses, and run a band of bulls, in company with Morin, and he acquitted himself very well, rushed in boldly, and bowled over his bull at the first shot. Morin afterwards killed a young bull, of which we were able to eat a little. We were now in hourly expectation of coming upon bands of cows, when we should enjoy fresh meat once more. We were now verging on the neutral ground of the Blackfeet and Crees, and Nichiwa smartened himself up considerably, having obtained from me an old shooting jacket, from the Doctor a pair of corduroys, and from Mr. Sullivan a waistcoat and neckhandkerchief. He never was an imposing or a fine-looking Indian, but now he looked more like a monkey than ever. The country was much the same as we have travelled over since we left the line of woods in the east. We continued to fall in with several bands of bulls, but did not molest them. Rain threatened; camped early; our latitude was 50° 28′, long. 106° 50′. We camped on Thunder Mountain Creek, which rises in two streams from the so named portion of the Coteau; it flows to the east to join Moose Jaw Creek, which runs into the Qu'appelle River.

Send out scouts in search of buffalo.

Start to run buffalo.

Bad ground for running buffalo.

September 21st.—Started early; sent men on in advance to report on the buffalo; passed some bands of bulls. At half-past seven one of the scouts returned to the carts and reported a band of cows not three miles distant. Halted to breakfast at a small swamp, where we took a hurried meal, cooked with some of the fuel still remaining to us out of that which we had taken from Moose Jaw Creek, which wood we used very sparingly, and kept the remainder for the plentiful meal on which we were speculating for the evening. After breakfast McKay and I started to run buffalo, accompanied by Hallet and Morin (two of the best buffalo hunters in Red River Settlement). We found the ground very bad, and full of badger holes, rendering the running of the horses very dangerous, and somewhat similar to riding a steeple chase over a rabbit warren. Our horses were not in very good order, but, of course, I was mounted on the best, my own horse Pharaoh; the next best was given to James McKay; Hallet and Morin completed the hunters. We approached rather close, favoured by some sand hills, and got very near our game. When the race began, the pace was tremendous, because early in the day the cows are far swifter; in less than five minutes we left the bulls floundering in the rear, and were a-head among the cows, Hallet and I riding neck and neck. Seeing a fat one, I ran in, fired, and missed; I slackened, and riding knee to knee with Hallet, asked him for his loaded gun, saying "You cannot come up." He, a little piqued, swerved from me. McKay, who was in the rear, came up and said, "Captain, my horse cannot do it, I shall injure the horse, and do no good; take my loaded gun, give me your empty one." I, who had been reining in, took McKay's gun, and, just as I was again passing Hallet, his horse put his foot into a hole, and horse and rider got a fearful fall. I passed on, got a second shot, and killed a fine cow; slackening again, McKay came up to me a second time, and handed me a loaded gun. I rushed again into the band and got a third shot, but my gun missed fire.

The run.

Hallet gets a bad fall.

I kill a cow.

Beauchamp kills another. Morin had killed another also. Arrive in sight of the South Saskatchewan. The plants. Sage Creek. Swamps abounding in wild fowl. Buffalo and wolves. Great want of grass.

My horse was wonderfully fresh, and I was debating on another race, when Beauchamp, a very good hunter, came riding up. He was a light weight, so I called him, and leaped off my horse; he jumped on, and very soon picked out and brought down another fat cow. Morin also killed a good cow. Our race was westwards, and at its termination we found ourselves in view of the bluffs of the South Saskatchewan. By the time we had cut up our meat the carts had arrived, and we camped on a small stream tributary to the South Saskatchewan, where we found wood, water, and grass. This creek is winding, and depressed considerably below the prairie level, and its sides are strewn with boulders. The plants do not materially differ from those at Moose Jaw Creek. Here we, for the first time, met with the sage (*artemesia tridentifolia*) which is a low shrub, characteristic of the great American deserts. We gave this little tributary of the South Saskatchewan the name of Sage Creek. Although the country throughout was arid and sterile, still muddy swamps very frequently occur, in which are to be found wild fowl in great abundance; out of one of these (a very small swamp) we were surprised at starting a flock of geese, in numbers quite disproportioned to its area. Buffalo were also here in great numbers, as well as their constant attendants the wolves, ever ready to attack a worn-out or wounded straggler, or some stray calf. The abundance of game here is accounted for by its being the neutral ground of the Crees, Assineboines, and Blackfeet; none of these tribes are in the habit of resorting to its neighbourhood except in war parties. The grass in this arid soil, always so scanty, was now actually swept away by the buffalo, who, assisted by the locusts, had left the country as bare as if it had been overrun by fire; even at the edge of Sage Creek we could obtain but very little grass for our horses.

Guarded the horses carefully.

We guarded the horses carefully each night, especially near daylight, the favourite moment for an attempt to steal them. Buffalo sometimes fed close to our horses at night, and bands of wolves howled piteously along the plains above. We could plainly distinguish them passing backwards and forwards by the light of the moon which shone on the bluffs above us.

Breakfast on the banks of the South Saskatchewan. Description of its banks at this place.

September 22nd.—Left Sage Creek early, and breakfasted on the banks of the South Saskatchewan. These are lofty and sandy; the points of the river are slightly wooded with willow, birch, and rough-bark poplar. In the stream itself are sand-bars, supporting a heavy growth of young willows.

On reaching an elevated position on the bank of the river we were enabled to get a view of the stream for a distance of about 10 miles, with all its windings. The valley of the Saskatchewan is about $1\frac{3}{4}$ miles in breadth at some distance above the acute angle which it makes to the north, called the "elbow," but at that place the banks are steeper, and the valley much more narrow. In ascending the valley from the elbow to the Coteau, which meets the river about 16 miles higher up, the valley makes several large sweeps, and the river becomes wider and more obstructed with sand-banks. The river, averaging 600 yards in width, is depressed at the elbow 228 feet below the surface of the plain; but at the base of the Coteau the valley is very much deeper and wider, and the river channel winds through its bottom, leaving large points of dense wood on the left bank, but on the right great deposits of blown sand. The banks are everywhere composed of drift, with immense quantities of boulders, till the Coteau is approached, when soft purple clays with cretaceous fossils occur, and having a slight dip to the north-east, rise from under the drift, which rests on them unconformably. These beds, which are of cretaceous age, form the whole height of the banks. Portions of these soft strata have been formed by the action of the atmosphere into conical mounds, which present an extraordinary appearance. As no grass grows on them, their surface undergoes constant alteration; they are perfectly black, and their outline is broken by lines of iron-stone septaria, which retain the soft strata underneath them. There is a large quantity of gypsum disseminated throughout these beds, occurring as transparent silanite crystals in radiating groups.

The river varies considerably in depth and volume.

From the high level of deposits of drift wood, and the great extent of sand-bars exposed on its banks, the Saskatchewan is evidently subject to a considerable rise above its present level. Numerous sand-banks also rise to the surface of the stream, round which the current sweeps with great velocity. Immediately after breakfast Dr. Hector started with a branch party to explore the country to the east of the elbow, and found a small stream descending to the Saskatchewan from swampy lakes to the eastward. These lakes also send off waters to the Qu'appelle, flowing in the opposite direction; and a very remarkable feature exists here, viz., that the summit level which divides these two streams lies in a valley more than 100 feet deep, and continuous with that of the Qu'appelle, only 90 feet above the Saskatchewan. This valley runs N.N.E. and S.S.W. To the westward is a country covered with sand hills, at the base of which are beds highly impregnated with iron, and containing small land shells.

Remarkable geographical feature.

I killed some good meat. Indians attempt to steal Hector's horses.

September 23rd.—Remained in camp, hunted up the river, killed a fat cow and an antelope "Forcifer." At 4 p.m. the Doctor returned from the exploration just described. It seems he was followed by some Indians with intent to steal his horses, but the party were on the alert, and Nichiwa detected them from hearing their signal, which he described as resembling the chirping of birds. He then gave the alarm, and they abandoned the attempt. In the morning they had seen the tracks of their unknown visitors, and one of the horse cords had been cut.

Recognise some vegetation similar to the Missouri.

September 24th.—Started at 9 a.m., and travelled for three or four hours up the right bank of the Saskatchewan, then descended by a steep track into the valley, and continued our course along the water's edge, and meeting sand dunes very abundantly, besides the poplars so common to the country (viz. *tremuloides* and *balsamifera*), I fell in with and recognized as an old friend the *Populus grandidentata*, with which I had been quite familiar on the Missouri and Yellowstone, and known there under the name of the Cotton Wood. We had met this, however, previously at the Kakabeka Falls on the Kammanistiquoia. The *Negundo fraxinifolium* was also found, but not in plenty. One species of *Fraxinus* and two of *Betula* are also found. The thickwood is composed of a species of *Salix* and *Viburnum*, which have been so common everywhere on our route, and the *Spinous hypophilla* is in great abundance. The *Artemesia*, which I have spoken of as met with on the 21st, grows very abundantly among the sandhills, but at this date was past flower. It attains the height of about two feet. Two other plants are in great abundance here, a small *cactus* and a *stipa*, both of which are sharp and poisonous, causing pain and irritation in the sole of the foot when trodden on.

The artemesia also here. Cactus, or prickly bear.

Some of the party kill a wapite.

After dinner, while our horses were being tackled, some of our party went on in advance, and about a quarter of a mile distance from the camp killed a fine wapite stag. This animal is the red deer

buck of the Red River half-breeds, the wawaskeshu of the Crees, and the elk of the American hunters on the Missouri. This was not a very large specimen, but only a full grown animal of average size:

His dimensions.

Height at shoulder	63 inches.
Length from nose to tail	98 „
Length from nose to occiput	24 „
Girth behind shoulder	72 „
Length of ear	11 „
Girth of neck in front of shoulder	50 „
Length of hind leg from through knee joint	48 „

The last of the flowering plants are now killed by the frosts at night. We kill good meat without hardshiping the horses.

In the afternoon we travelled along the valley of the river, our carts often sinking to their axles in the loose sand. The last of the flowering plants have now been killed by the frosts of the last few nights, and Mons. Bourgeau will have now only the seeds to collect.

September 25th.—We now every day see great herds of buffalo, and have abundant opportunity for killing as much as we require for our consumption among the broken river banks, which afford every facility for approaching them on foot, and obviates the necessity of fatiguing our horses by running buffalo on the plains.

Stormy night.

September 26th.—Blew a gale during the night, tents twice blown down (for the tent pins had a bad hold in the sand), and our blankets were filled with fine blown sand. At about 4 in the morning the wind had partially ceased, and torrents of rain fell, which lasted about two hours, and left our camp in a fearfully dirty state. A very fine day ultimately. A large grizzly bear, tempted perhaps by the warm sun, came out of a clump of willows and lay on the side of a hill on the opposite bank of the river, just near enough to enable us to perceive that it was a bear and not a buffalo. We contented ourselves by viewing him through a telescope; having no means ready by which we could quickly cross the river we did not disturb him. My intention hitherto had been to push on to the westward as far as where the Red Deer River falls into the South Saskatchewan, at the site of an old Blackfoot trading post of the Hudson Bay Company, called Chesterfield House. This proposition of mine was received with universal alarm among the men, who thought that they had done wonders already in having gone as far as we were. They urged that the party was not sufficiently numerous, and that to proceed any further into Blackfoot territory was too dangerous. I was quite aware that the Indians in that district had acquired a very formidable reputation owing to Hudson Bay Company's having established the Chesterfield fort in 1822 by sending up 100 men, and even then they only kept it a few years, during which they lost a considerable number of men shot down by the Blackfeet, and at length abandoned it as too costly and too dangerous. Our friend Mr. McKay was on such intimate terms with us that I did not hesitate to include him in our councils, and I put the question as to the expediency of proceeding to Chesterfield House. He replied, "Captain, if you say the word go, I will say, hurrah, let's go; but if you ask my advice, I will tell you plainly that I think it is too dangerous, and more than this, if you press it, your men will break up, and beyond Beads, John Foulds, and old Hallet I could not say who would stick to you." Most unwillingly and unconvinced I abandoned the project of penetrating any further to the westward, prepared to cross the South Saskatchewan, and direct our course for our winter quarters at Carlton. In the afternoon commenced making preparations for crossing the carts and waggons over to the left or north bank of the South Saskatchewan.*

Saw a grizzly bear.

I modify my plans.

Great fear of the men at prospect of penetrating any further into Blackfoot territory.

Mr. McKay's opinion.

Prepare to return to winter quarters.

September 27th.—By 10 o'clock this morning we had completed our preparations for crossing the river. Having availed ourselves of an island or sand-bank at the opposite side of the deep channel, and about half way across the river; we first took the body of our waggon, which we converted into a skiff by lashing oil-cloths about it, so as to make it as nearly water-tight as possible, we then fastened together all the horse lines and cords, both of leather and hemp, which we could collect, and made them into one long rope, one end of which we fastened on the shore where we stood, and then with the assistance of our waggon skiff paddled over to the sand-bar and secured the other end by means of a strong post firmly driven into the ground, thus establishing a communication by which we crossed the carts in safety. Unfortunately, however, in attempting to take over the waggon our rope at last broke, and it sank in about 20 feet of water in the middle of the channel. We then drove all the horses together into a band, and with long willow sticks drove them into the water, the men and Nichiwa shouting all the while and assailing with sticks and stones any frightened animal that attempted to turn back. The horses at last all crossed the river in safety, although they were carried by its rapid current to a considerable distance down stream before they could get footing on the opposite shore.

How we crossed the South Saskatchewan.

Lost a waggon

How we crossed the horses.

We now had recourse again to the paddle, and succeeded in fishing up and lashing together the broken extremities of our line, and with its assistance crossed all our luggage and instruments to the sand-bar. The remainder of the traverse over the river was now shallow, some of the party waded through, caught the horses, reloaded our carts, and camped on the left bank of the river at 7 p.m., where we had very fair grass for the horses. While our carts were getting ready we observed a grizzly bear wandering slowly along the base of the valley; it was probably the same we had seen yesterday. Some of the party went after him, but only succeeded in driving him into the thick growth of willows on the border of the stream, and then returned to the carts. Our camp is situated near a large marsh, with plenty of good grass in the neighbourhood. Higher up among the sand-hills Artemesia grows very abundantly. Latitude 50° 52′ 30″ N., longitude 107° 41′ W.

Cross our luggage with a line, taking advantage of a sand-bar midway.

September 28th.—Found buffalo plentiful on this side of the river; determined to remain a day or two to rest the horses. We were almost all day busily engaged in endeavouring to raise the sunken waggon; we found it deeply embedded in the sand nearly 20 feet below the surface, and impossible to move.

Endeavour to raise the sunken waggon.

We found a beaver dam here, and after watching some time got a few shots, and succeeded in killing and securing one.

* We abandoned the traverse of this country this season, and again resumed it from the N.W. in 1859, when we thoroughly explored every portion of it.

September 29th.—It was very warm throughout the day, and we were all out about the river banks. In traversing a thicket, I started two grizzly bears, and fired at one without success; they made for the plain, and were followed by the Doctor and Hallet on horseback, over a very bad country. After a hard run Hallet succeeded in killing the female, who turned and showed fight; he deserved great praise, being very badly mounted, and having had a fall during the run. The he bear, which appeared to me much larger and handsomer (being the more grizzled of the two), however, got away. The following are the measurements of the she bear:

Hallet kills a grizzly bear.

Length	92 inches.
„ of head	16 „
Girth behind shoulder	60 „
„ at neck	32 „
Height at shoulder	34 „
Length of claws	$3\frac{3}{4}$ „
Breadth of head from ear to ear	9 „
Girth of fore arm below elbow	17 „
Length of fore foot	10 „
„ hind foot	10 „
Breadth of hind foot	$5\frac{1}{2}$ „

Enjoyed good hunting and shooting.

We were able to carry along all our hunting trophies.

September 30th.—During the last three days several of our party, including Dr. Hector, Mr. Sullivan, Mr. McKay, and myself, enjoyed excellent shooting, and killed some very fine specimens of elk, black tail deer, common deer, and Forcifer antelopes. The finest pair of wapite antlers were the prize of Mr. Sullivan. All the hunting trophies which we killed and collected here, such as wapite horns, skins, and other such spoils, we were able to take with us in our carts to Fort Carlton, whence they were shipped for England.

As any details of hunting and shooting would be quite out of place in the records of a Parliamentary Blue Book, I have not introduced the subject more than was sufficient to enumerate the different animals, and give some idea of the proportion in which they are found in the districts through which we passed. With the exception of two or three bulls, we found no buffalo until we came to within 20 miles of the elbow of the Saskatchewan. In the districts of Red River, Pembina, and San Joseph, we killed nothing but ducks, geese, prairie hens, and cranes. It was not until we came to the west of San Joseph that we found Red Deer (wapite), and then very scarce; and I may here mention that when at Fort Ellice I took a trip for three days' hunting to the south-east, with one of the best hunters of the Red River, I did not see a track; but we saw the largest quantity of game in the region of the elbow of the south branch, and also the greatest variety I have ever seen north of the Missouri.

Where we found most game.

The low ravines and sides of valleys contain good grass.

At 9 o'clock this morning commenced our journey to Fort Carlton; our carts ascended the valley, and struck off in a N.E. direction. We now observed a considerable difference between this bank and that we had left on the other side of the stream. The hills here were composed of drift, and strewn plentifully with boulders, instead of the loose sand which prevailed on the south bank. Here and there we found fair clumps of wood with good patches of grass, varying from half a mile to two miles in extent, and several deep gullies which join the valley present rich and grassy slopes; all on the upper plain is, however, as bare and arid as that on the other side of the Saskatchewan. These ravines are also partially wooded, and in their vicinity cast horns of the different kinds of deer are frequently indicating the existence of a considerable number of these animals in this part of the country. The tracks of bears are also very numerous on the shore and on the sandy islands in the river, which are separated by small narrow channels. These islands are covered with a dense growth of brushwood and some timber, and near the river the berry-bearing bushes, as *Hypoplea* and *Viburnum Adulæ*, are dense and luxuriant. The common garter snake, which we first saw on our route to Pembina, is very numerous. At one spot we counted 17 of full size, and a few smaller specimens, all basking in the heat of the sun. At about mid-day a thunderstorm, accompanied by high wind and rain, put a stop to our march, so we encamped near the river. Killed a large wapite.

The general prairie level worthless.

A fair country for game.

Length	96 inches.
Height at shoulder	64 „
Girth behind shoulder	80 „
Breadth of haunches	36 „
Length of head	$25\frac{1}{2}$ „
Breadth between eyes	9 „
Breadth between horns	$4\frac{1}{2}$ „
Height of antlers	42 „

Sere burns off his whiskers and eyebrows.

October 1st.—This morning we were off before 9 a.m., and the carts going steadily forward some of us dispersed through the valley to hunt. An accident happened to one of the men who had set off to run buffalo with his pipe in his mouth. He had fired and missed, and commenced to reload the gun in the ordinary manner, viz., by pouring out powder from his horn into the palm of the left hand, when a spark fell from his pipe and ignited the powder, the fire of which communicated with the powder-horn and blew it to pieces. The man, however, escaped without even a serious burn, and with the loss of his whiskers, eyebrows, and eyelashes. Our Indian (Nichiwa) ran buffalo also that morning, killed a good cow, but complained of having lost his ramrod, went back some distance to look for it, at length he abandoned his search, and returned to cut up his animal, in the body of which he subsequently found the remains of his ramrod. He called to Mr. McKay and said, "I have been looking for my ramrod, and see where it was all the time." He had loaded with the ramrod, and forgotten to withdraw it before firing.

Nichiwa loses his ramrod and finds it again.

Swamps, the only provision for our horses, fresh and numerous.

Swamps varying in size from 2 or 3 to 30 or 40 acres are numerous, and where these occur there is long grass. Here also are some brushwoods, but containing little timber of any considerable size. All these are traversed by buffalo paths, so that we could ride through it in every direction; the ground here like that south of the river is full of badger holes. We have seen two species of squirrels since leaving Fort Ellice, they are probably the *Arctomys Richardsonii* and *Arctomys*

Hoodii. After leaving our dinner encampment water was very scarce, many of the temporary swamp being quite dried up, and after a long search we were forced to encamp at 7 p.m. at a dirty water hole, from which a band of buffalo cows fled at our appearance. Being at some distance from the river also, our fuel is buffalo dung, of which there is no lack in this part of the country. The soil here is quite arid, and the herbage on the plains nearly worthless.

Water not plenty here.

October 2nd.—Started at 6.30 a.m. and arrived at Red Deer Lakes at 3 p.m. Lat. 51° 20′ N. ; long. 107° 20′ W.

Red Deer (Wappitti) Lakes.

The continuation of the Coteau de Prairie has been constantly in sight, extending in a northerly direction since leaving the river.

The Red Deer Lakes, six or eight in number, extending some 20 miles in a north-westerly direction, are connected with the Saskatchewan by a small stream from their south-eastern extremity, sweeping round in a north-eastern direction to join the river. These lakes, averaging from half a mile to 2½ miles in width, occupy a deep valley thickly strewn with boulders, and here again, in conformity to the general law throughout the country relative to northern and southern exposures, the northern side of the valley is without wood, while the southern slope supports a thick growth of poplars and willows. In the afternoon I went out shooting, and killed some ducks and geese, and also a valuable fox, but the latter was out of season. The men killed a number of the musquash (a species of water-rat), the watchusk of the Crees. This animal is not like our water-rat, it is much larger, and has a flattened tail, not horizontally like the beaver, but like a vertical paddle. He, like the beaver, derives much assistance from it in the construction of his winter dwellings,—dome-shaped edifices about 30 to 40 inches high, and about 20 to 30 inches in diameter, built of mud and reeds with singular strength and tenacity; and they feed upon water-plant roots. Their fur is of inferior quality, but much used in England. They are eaten by the Indians and half-breeds, but I could not recommend it as a delicacy, although far superior to many other kinds of strange food which I have frequently eaten.

Silver fox.

Musquash rats

While in this valley a large band of buffalo ran right across, ahead of our line of carts, and without any exertion we killed three fat cows.

Killed a black-tail deer. This animal is a little larger than the virgeman or common deer, and with larger ears. It has a very rich glossy hair, even at this season, but particularly in winter. We camped on the second of the Red Deer Lakes; buffalo very numerous, and have eaten the grass down considerably, and have not left much for the horses.

Black-tail deer

October 3rd.—Started early, and ascended the northern slope of the valley containing the Red Deer Lakes, and went up once more into the prairie; breakfasted at a swampy lake on the plain. The valley containing Red Deer Lakes resembles in width that of a large river; it is said to cross the Saskatchewan 12 miles below the elbow, and said to run continuously, and to join the valley of the Qu'appelle by the last Mountain Lake. I was assured by the half-breeds that there was hardly any obstruction, beyond that of one short low portage, existing to cut off communication by this route in spring with those lakes which are west of the Qu'appelle River; information which is highly suggestive of a more minute engineering investigation, as to the expense and feasibility of a connexion, by canal or otherwise, with a view of establishing communication between the Assineboine and the Saskatchewan, should the progress or population of the country ever increase sufficiently to warrant the necessary outlay. Lat. at noon, 51° 24′ N.; long. 107° 32′. After breakfast we continued a north-eastern course, and at five camped for the night. We passed during the day many salt lakes, fringed round the edges with thick incrustation of salt, highly indicative of the rapid evaporation that takes place in these arid regions.

Rise again into the plain.

Features of the country connected with the valley of the Red Deer Lakes.

Salt lakes.

The country we have passed over consists of irregular sandy ground covered with low coppice, and here and there rising into hills clad with poplar trees. Many of our horses are beginning to suffer from the worn state of their hoofs, and we endeavour to relieve them by wrapping their feet in dressed buffalo skin; their feet have become so worn, and their hoofs so thin and sore, as to leave signs of blood in their tracks. The loading of the carts and the weight of our horses' packs were considerably increased in consequence of the loss of our waggon in the South Saskatchewan River. From our camp we saw the prairie on fire towards the north and east. In autumn these fires are very common, when the grass is like tinder, and a spark from a pipe may be sufficient to set 200 square miles of prairie in a blaze. The Indians are very careless about the consequences of such an occurrence, and frequently fire the prairie for the most trivial reasons; frequently for signals to telegraph to one another concerning a successful horse-stealing exploit, or in order to proclaim the safe return of a war party. The disastrous effects of these fires consist principally in denuding the land of all useful trees, such as spruce, pine, larch, fir, and all soft-wood timber, which are among the most valuable for settlement, but not reproductive. Another serious misfortune likewise frequently results from these wanton fires, and from which the authors are themselves frequently punished, viz., they cut off the buffalo sometimes from a whole district of country, and thus often are the cause of great privation and distress.

Nature of the country.

The horses hoofs begin to wear out.

Prairie on fire.

Mischief of prairie fires.

October 4th.—Started early, and in an hour and a half reached willows and poplars; at nine breakfasted in a swamp, which we had some difficulty in finding, as water was very scarce. Our fire ran after breakfast, but we quickly extinguished it, beating it back with blankets and saddle-cloths. We now observed a marked change as we proceeded, and were no longer in prairie as before; passed through quantities of scrubby wood and young poplars one and two feet high; passed on to the north of a clump we named Three Tree Point, and camped in the evening, where we found plenty of good water; passed an ancient buffalo pound, where the Indians in winter decoy and drive buffalo to slaughter in great quantities. One of our horses got so weary that we were obliged to leave him behind about three miles from where we camped. At noon, latitude 51° 45′; longitude 107° 38′.

Three Tree Point Clump.

A horse gives out.

October 5th.—Sent back in the morning and recovered our horse; we found all the wolves in the neighbourhood anxiously watching his movements, but we succeeded in bringing him on with difficulty, thanks to Mr. McKay, who undertook the task; travelled only a short way; dense smoke to the north and east from the fire we observed yesterday; camped in a swamp, a favourable situation in case the fire may approach in our direction. At noon, lat. 52° 3′; long. 107° 21′. At 8 o'clock this evening the wind increased to a stiff breeze, and at 10 a storm came on blowing successively from all points of the compass. This is frequently the case in the vicinity of a prairie fire sufficiently large to disturb the equilibrium of the atmosphere. The extent of this fire was very great, and the whole atmosphere glowed from north to east.

Found him well guarded by the wolves.

Camp in a swamp for fear of the prairie fire.

A whirlwind caused by the prairie fire.

The men acquainted with Carlton think themselves within a few miles of the place.

October 6th.—This morning I was surprised to see the men smartening themselves up and putting on their best clothes, and on inquiring the reason, Ferguson told us we were very near Carlton, and would be there before noon. This announcement amazed us, as our observations showed us not within 30 or 40 miles of Carlton. We told them they were wrong, upon which they laughed and said they recognized the hills, features of the country, &c. Started, and had not long to travel before we came into the burned ground, the result of the magnificent fire we had been contemplating last night; we travelled half stifled with heat and dust over about 10 miles of rolling ground, where, however, water was very scarce, and halted for breakfast at a stagnant marsh, the only spot in the neighbourhood where the ground was not burned, and where we could find a little grass for our horses. After breakfast took our latitude observation and obtained 52° 12′. Previous to this I could not help misgivings as to having accidentally read off a wrong degree, but now it was clear that either the men or the fort were altogether out of reckoning.

The sextant proves the men to have made a mistake.

The country still arid.

In the afternoon continued our course over burned ground, and at night encamped on a swampy lake. We have risen considerably in altitude during the day; the country here again relapsed into the nature of that in the neighbourhood of the South Saskatchewan, south of elbow, viz., the loose sand and scanty growth of coarse grasses. A few poplars occasionally occurred, but none of a size sufficient for fuel. Latitude 51° 3′ N.; long. 106° 51′ W. Although I did not camp very early, I had considerable trouble to make the men camp; they still urged that if we travelled on for another hour we should reach the fort. To my reply that they must have patience, and that we should not reach the fort till the day after to-morrow, they actually scoffed, and said, "How can you know, when you were never there?"

The men still insist on their proximity to the fort.

Breakfasted at a well-known lake.

October 7th.—All hands on the alert, impressed with the idea that they were going to breakfast at Carlton, and so got away earlier than usual; travelled till 10, and halted to breakfast at a fine lake, where we enjoyed abundance of pure water, and excellent grass for the horses. Here the men began to discover the mistake they had made as to their distance from the fort; indeed there had been only 2 or 3 that had ever been there, and that very long ago; these however knew this lake, admitted their error, and began to entertain very exalted notions as to the powers of the sextant.

After breakfast passed through occasional clumps of small poplars, and over a very irregular surface of country containing a number of small lakes, most of which were brackish. The recent fire had completely destroyed the trees, and grass, save in the swamps, was totally burnt up.

The horses suffer a good deal from the state of their hoofs.

Our rate of travelling was very slow, owing to the state of our horses' hoofs, now nearly worn down to the quick, and the journey became more painful to them owing to the charred soil over which we were travelling. The whole sky was overcast with a dense canopy of dirty smoke, which made us all as black as sweeps.

We were now travelling between the two branches of the Saskatchewan, which run about parallel here at a distance of 10 to 15 miles. We crossed successive ranges of sand-hills and lines of great limestone boulders, all lying N.W. and S.E. At nightfall we encamped beside a long lake with swampy margin, within two miles of the north branch of the Saskatchewan, the high banks of which could now be seen to the northward.

First fall of snow.

October 8th.—During the night we had a violent thunderstorm, followed by snow; and this morning broke with a heavy fall of sleet, rendering everything around us damp and chill.

This may be looked on as one of the storms announcing the approach of winter, although not its actual arrival, there being generally at this period of the year a short return of genial weather, well known as the Indian summer, and during which we could have still counted on some more days favourable for travelling; nevertheless this storm, preceded as it had been by several mornings and evenings of heavy frosty fog, warned us that it was time our horses should discontinue their hard work; and I was also aware, that if the horses had not a small period of time to feed up and recruit before the actual setting in of winter, they could never withstand its rigours, and, besides this, their hoofs were nearly worn out. We had therefore reason to congratulate ourselves now, that I had not continued our course westward to the junction of Red Deer and Saskatchewan Rivers; for had we done so, before crossing the South Saskatchewan, it would have involved the addition of nearly a fortnight's work on the horses, the consequence of which would very likely have been, first, that we should have left many of them behind us on the plain owing to the state of their hoofs, and secondly, have subsequently lost many others during the winter, in consequence of not having strength enough remaining to resist the intensity of the cold.

A warning to cease from working the tired horses.

Fortunately I did not take the horses further west before retreating to Carlton.

Sun-dogs.

Prepare for arrival at Carlton.

The morning was cold, with a frosty fog, causing very beautiful and striking parahelia, commonly known as "sun-dogs;" a little after 10 the day became very fine. We breakfasted at the Stone Indian Creek about five miles from Fort Carlton. After breakfast we all busied ourselves getting out our best clothes, razors, and in short men and all made as elaborate toilet as possible preparatory to entering the fort.

Great change in the nature of the country.

Our whole ride from the creek to the fort was through rich grassy land of first-rate quality, lightly wooded with clumps of willow and poplar. The fort is not seen until you arrive directly in its vicinity, and close over the south branch of the North Saskatchewan.

Arrive at Fort Carlton.

We were most cordially welcomed, and most hospitably received by Mr. Richard Hardesty, the Hudson Bay Company's officer in charge of that post, who was then making every possible preparation for our accommodation during the ensuing winter.

End of Journey to Carlton, Oct. 8, 1857.

No. 3.

Winter Quarters at Carlton, and the several Journeys, from October 10th, 1857, to June 4th, 1858.

Dismiss the supernumerary men at the end of the season.

October 9th.—We had lost the use of many instruments through sheer work, accidental breakages, and wear and tear from the circumstance that these instruments had frequently to be packed on horses' backs. I determined, therefore, to descend the Saskatchewan from Carlton in a boat along with the greater part of my men, whose services I did not require through the winter, but who I, according to the generality of all agreements in that country, was bound to send back to the place (Red River) from whence I had engaged them. After having made all my preparations, and being ready to start,

the men refused to go down in the boat, and urged that boat service had not been specified in their agreement. I re-examined the contracts drawn up for me by Mr. Swanson, of Red River, and found that the law was in their favour; so had to give way, reverse all my plans, and make, as fast as possible, arrangements to start for Red River Settlement on horseback, myself, and make further arrangements for the men to travel on foot, providing them with dry meat and pemican, two carts, and three horses, to convey their luggage for them to their destination.

They refuse to accompany me in the boats.

October 11th.—Started, accompanied by Mr. James McKay, John Ferguson, Pierre Beauchamp, and a young Indian, who provided us with two horses hired for the trip, as far as Fort Pelley. We started at three, when it was snowing pretty heavily, and reached the south branch after a sharp ride of 20 miles in a south-eastern direction, and camped on the river at six o'clock in the evening.

Start off to Red River.

October 12th.—Crossed the river in a skin canoe at sunrise. At opposite side of the river found some traders of the name of McKay, distant relations to my friend of the same name. We all breakfasted together; started, made 16 miles, rested for about an hour for dinner, and made 14 after, before camping for the night. To-day we have passed through a fine rolling country adapted to sheep-feeding, fairly wooded, not swampy, but well watered.

Pass through a good sheep country.

October 13th.—Saddled up, and started at sunrise; made 12 miles before breakfast, for which we halted for one hour and half; made 10 miles, halted for dinner for another hour and half, rode 15 miles further, and camped. Country the same as yesterday, rich, rolling, and would have been well wooded, but for the fires. We discovered, near camping, the cause of the great fire which had occurred this autumn. It was kindled from the camp fire of Mons. La Combe, the Roman Catholic missionary to the Crees, on his way to Edmonton; this I learned from a notice planted there, in the shape of a post, on which was carved his initials and the date of the encampment in September.

Missionaries set the prairie on fire accidentally.

Wednesday, October 14th.—Cold and fine. Started early, passed some insignificant lakes; after dinner crossed burned ground, and camped in a swamp on account of the horses, the grass having been all burned off the dry ground; had no wood for our fire, save a little brush, that did little more than light our pipes; made in all about 38 miles.

Camp without a fire.

Thursday, October 15th.—Started at half-past 6 a.m., made 12 miles, stopped to breakfast, where we enjoyed a good large fire to make up for last night; after a ride of about nine miles we reached the Touchwood Hills post, a ride from Carlton of about 146 miles. This fort of the Hudson Bay Company was in charge of Mr. Taylor, who received us most hospitably. I immediately started out to shoot and examine the hills, accompanied by a young half-breed who was guarding the horses. The Touchwood Hills, or Montagnes de Tondre, consist of easy undulating hills, in height under 400 feet, well wooded, however, and containing lakes varying in size from about three-quarters to an acre and a quarter in surface. After a good long ramble through them I returned to the post, about an hour after dark, having made a fair bag of Musquash rats and ducks.

Touchwood Hills post.

Shoot musquash ducks.

Friday, October 16th.—Notwithstanding the kind request of Mr. Taylor to remain a day at this post, we started at 8 o'clock next morning and made 22 miles before dinner; started again at 2 p.m. and camped for the night about 6 p.m. in the [*sic*] Hills, after an afternoon ride of 20 miles.

Saturday, October 17th.—Started at half-past 6 a.m., made 11 miles; stopped at 9 a.m. after crossing Mud River. Started at 11 a.m., made 16 miles, and halted for dinner at 2 p.m.; afterwards travelled 13 miles, and camped.

Monday, October 19th.—Started a little after 6 a.m.; first saw pines upon Assineboine Lake; crossed the Assineboine River and stopped to breakfast, having made 16 miles. Started at 12 o'clock, and reached Fort Pelley at a little after 2 p.m., having made 13 miles; latterly we have been in a thickly wooded country. The pine tree against which I leaned back as I sat on the ground at breakfast measured 6 feet 3 inches in circumference.

Reach a pine-bearing country and thick woods.

We were most hospitably received by Mr. Christie, the officer in charge of that post, who persuaded us to remain a day with him. Mr. Christie's post has more the appearance of a commodious shooting lodge, similar to those at home in the highlands of Scotland, than to an Indian fort. An old post was still in existence in a swamp below, which was inconvenient on account of its low damp situation, and consequently abandoned. Mr. Christie's was the only commodious residence that I ever saw in the Indian country unprotected by pickets. At Fort Pelley the Hudson Bay Company have a large number of brood mares, and a very fine breed of domestic horned cattle; these wander wild in the woods, but return to the precincts of the fort to eat the hay provided for them in the winter months.

Fort Pelley, Mr. Christie's post.

Brood mares and domestic horned cattle.

Fort Pelley is the head-quarters of the Swan River district, a country abundantly supplied with timber, and, though swampy and full of lakes, yet containing much land that would be valuable to the agriculturist. It is likewise abundantly supplied with fish; of these the most valuable species are the sturgeon and white fish; they are both the most wholesome and nutritious of all fresh-water fish, and as an article of constant diet equal to any fish in the world, the salt-water fishes not excepted. It is a valuable feature, not only throughout the whole district, but also throughout the whole of the more northern part of the Saskatchewan, that numerous lakes, deserving almost the name of chains of lakes, occur, most of them abounding in white fish. These, even with the rough and imperfect means of fishing in use by the inhabitants, are caught in vast quantities. This would no doubt prove a most important advantage to the settler, because fish is an article of food which he can obtain at far less cost of time and labour than what would be expended in hunting, to say nothing of the skill, only to be acquired by long practice. And if the settler, while bringing his farm into cultivation, had to depend solely on hunting for his support, he would feel great difficulty in finding either time or energy for his agricultural labours.

Swan River district.

The fish.

Monday, October 19th.—Our Indian's time of contract expired, and he did not wish to continue the journey, and go further from his camp. Mr. Christie could not lend us any horses, as they were all out on trips; however, he gave us leave to take two of the brood mares if we could make anything of them. Therefore the whole day was spent training the mares, a troublesome undertaking; but, after a few falls, we finally succeeded, in not only making them carry but pack.

We take two of the wild mares.

Tuesday, October 20th.—Started after breakfast, crossed the Assineboine River, made 14 miles on a south course, dined, travelled about 13 miles further, and camped for the night.

Wednesday, October 21st.—Breakfasted before starting, made 20 miles, dined, made 14 miles afterwards, and camped.

Cross the Qu'appelle River, and pass the night in the swamp.

Thursday, October 22nd.—The days were getting short, so we breakfasted before day, and caught the horses as soon as we had light enough to find them; we travelled about 20 miles, and dined. Arrived at the Qu'appelle River about 3 o'clock; had great difficulty in crossing the river on account of its steep muddy banks, the horses sticking and floundering, and recrossing the river several times before we finally succeeded in getting to the other side. Spent a miserable night in the swamp.

Arrive at Fort Ellis.

Friday, October 23rd.—Arrived at Fort Ellis.

Leave for Fort Garry.

October 25th.—Started for Fort Garry; at 3 o'clock crossed the Assineboine, and camped. Our party consisted of myself, Mr. James McKay, John Ferguson, and Beauchamp, and four pack horses, besides the saddle horses we were riding.

Description of road and timber.

The country between Fort Ellis and the Red River Settlement has been so fully described that it is not necessary to enter into any description here, suffice it to say, there are two tracks so strongly marked by carts as to deserve the name of roads. The country is in some places swampy, but generally good and fertile. There is a good deal of spruce, but willows, birch, and poplars form the principal timber. There is oak, however, on the Assineboine, the whole way, more or less, to Red River. The Assineboine is not so subject to flood as Red River, and contains in the valley much land that would be valuable to the settler. We reached the Manitoka portage on the 30th October.

Archdeacon Cochrane.

October 30th.—Was most hospitably received by Archdeacon Cochrane, one of the oldest, most zealous, and efficient ministers of the Church of England at Red River. Many young fellows, half-breeds, that were educated by him, bore testimony to his abilities as a missionary clergyman, for all agreed in testifying to the untiring zeal and energy of this most estimable clergyman, who I was informed on all sides was competent not only to teach school and preach fine sermons, but to teach his disciples to wield an axe and drive a plough. One of my informants told me he built the Manitoba Church near the school of the same name, in which he himself was one of his pupils; and when school was over he led the young fellows into the adjoining woods with an axe over his shoulder. "He is "close on 70 now," continued he, "and not as young as he was; but I tell you, he is hard to beat at "either chopping or ploughing." He takes the greatest interest in agriculture, and the old man has the pleasure of seeing his bright example followed by the young generation, so many of whom have to thank him for an excellent education.

Mr. Lane's post.

October 31st.—After a long cold wet ride reached the White Horse Plains, and slept at the Hudson Bay Company's post, in charge of Mr. Lane.

Arrive at Fort Garry.

Sunday, Nov. 1st.—Arrived at Fort Garry.

Arrangements for the journey to St. Paul's, in Minesota territory, United States of America.

I remained two or three days at Red River to obtain horses and outfit for my journey to the States. On inquiry, I found horses very dear and difficult to sell at St. Paul's, particularly at the end of a trip, especially when the owner of these horses was obliged to part with them in haste. I therefore adopted the alternate of making an agreement with an intelligent young fellow, named Robert Tate, to supply me with three horses and provisions for the trip, he undertaking all risks, for 60*l*.

The party.

Our party now consisted of Robert Tate, Pierre Beauchamp, and myself, and three horses; one of them was a mare for my own use, one with a small light cart for provisions, kettle, instruments, &c., and the third horse was packed with our bedding.

We started at half-past three p.m. on the 4th of November, and after a sharp ride of about 10 miles up the river, arrived at the house belonging to Pierre's mother, where we slept for the night. On the second day of our journey we travelled about 30 miles, and slept at Klein's.

Klein.

We have already, in the Journal, alluded to Klein as an intelligent settler on Red River: and we now found his house a kind of inn, fairly provided with pork, beans, flour, and coffee, and also with hay for our horses.

Arrive at Pembina.

November 6th.—Started very early, and arrived at Pembina in the afternoon. Robert Tate had brought some barley for the horses, in order to assist them through their journey, as the winter was now advanced: he unfortunately tied my mare to a rail and placed a feed of barley before her; during our absence a starving cow, attracted by the barley, attacked the mare viciously, and gored her so severely that we left her behind giving up all hopes of her recovery. I was therefore obliged, like my companions, to proceed on foot.

My mare gored by a cow.

November 7th.—Started at ten, crossed two tributaries of Red River, camped beyond the second.

Proceed through American territory.

November 8th.—Started at quarter-past 7, dined at 11, camped at quarter-past 5, made 24 miles. As the rest of the journey to St. Paul's was in American territory, and this part of the Red River Valley has been formerly described, I will not continue the diary further than to say that the route was an excellent one. The snow this season was unusually late, and we were all in excellent wind and travelled very fast.

Cross the watershed or dividing ridge between the waters of the Gulf of Mexico and Hudson Bay.

Saturday, Nov. 14th.—We arrived at Ottertail Lake, on the watershed of the Continent, dividing the waters that flow into Hudson Bay from those that descend into the Gulf of Mexico, and which have been ascertained to be 860 feet above the sea level.

Ottertail City.

At the north end of this lake we found an old Scotch settler, with his old half-breed wife and daughters, who received us most hospitably, gave the best of what he had. He had a wooden house with a stable and a cowhouse attached, and this establishment was called Ottertail City. The stable contained a horse, and the cowhouse contained an ox. Our horses were tired, as we had travelled late and early, and had come rather fast, so we remained over Sunday.

Arrive at Crowwing, the most westerly point of civilization.

November 16th.—Started from Ottertail Lake, and on the 18th arrived late on a tremendously cold night, after a run of 45 miles, at the American Indian Agency of Crowwing; thus completing our journey on foot from Red River Settlement, (allowing our Sunday to recruit the horses), to the terminus of civilization on the Mississippi, in 11 days.

At Crowwing I parted with my two voyageurs, Robert Tate and Pierre Beauchamp.

Robert Tate engages to meet me on my return from the States, and cross the country in a canoe.

They were to start back for Red River in a day or two, as soon as the horses were rested. Before taking leave of me, Robert Tate engaged to come down again the following March from Red River, to meet me, and bring along with him another hardy young fellow, to assist me in carrying out my scheme of crossing the watershed of the country by means of a canoe, on my return from the Settlements. I proposed punting up Crowwing River and Leaf River to Leaf Lake, thence to make a portage of about 7 miles to Ottertail Lake, whence the Red River rises, and by this stream to descend to the forks of

the Red River and Assineboine River at Fort Garry. We shook hands, and parted on the mutual understanding that we should meet at Crowwing on the 1st of April 1858.

The winter stage coach.

From Crowwing to St. Paul's an excellent stage runs three times a week, and in the winter months, when the ice no longer permits the Mississippi boats to run up to St. Paul's, the stage waggons run all the way down the Mississippi, with only one crossing place to La Crosse, on the left bank of the river, and on to Prairie Le Chien, the extremity of railway communication, which is about 200 miles to the north-west of Chicago.

End of Return Journey into the States in 1857.

Journey to Head Quarters at Carlton, commencing March 1858.

Chap. 3.

March 21st, 1858.—Until this date I was detained, partly in Canada and partly in the States, by the business of the Expedition, as was explained in the despatches, and I arrived again at Prairie Le Chien on Wednesday, 24th March 1858. I slept on board the steamer, which was about starting on her first trip to St. Paul's.

Reach the steamer and start for St. Paul's.

March 25th.—Many doubts were entertained as to whether the steamer would be able to force her way through the ice on Lake Pippin, a dilation of the Mississippi about 50 miles from St. Paul's. At about day-break in the morning she encountered the ice, and crashed through triumphantly, the engines at every turn drove the paddles against the ice with a noise like thunder.

Break through the ice on Lake Pippin.

At 3 in the afternoon we arrived at the [*sic*] of the city of St. Paul's, cheered by an immense concourse of people tumultuously welcoming the arrival of the first steamer of the season.

March 30th.—Arrived once more at Crowwing, the extremity of civilized, or rather public, modes of conveyance.

Arrive at Crowwing.

On the following day I succeeded in purchasing a tolerable canoe, and looked up my bedding, kettles, &c., and completed various preparations for my canoe journey.

Prepare for canoe journey.

April 1st.—According to promise Robert Tate arrived accompanied by a young Scotch half-breed named William Slater; they had started from Red River on the 11th of March, and accomplished their journey during the severest time of the whole year. In the first place the snow had melted off unusually early, they had to throw away their snow shoes and walk through half-frozen slush from morning till night; the ice had broken up on the rivers shortly afterwards, and they had to wade many of them; when they arrived they looked fearfully worn and haggard, and Slater's feet and legs were awfully swelled. I mention this as one very remarkable instance of the determination of these English and Scotch half-breeds in carrying out what they once undertake; and there is little doubt, if their energies were only rightly directed in pursuit of agriculture, commerce, and trade, they would progress as rapidly as any Anglo-Saxon communities. There is a very remarkable difference between the Scotch half-breed and the Canadian or French half-breed; the former is essentially Scotch, he trades, speculates, works, reads, inquires after and endeavours to obtain the information, and to profit by the advance of civilization in the old country as well as he can. Should his mother or his wife be Indian women, he is kind to them, but they are not his companions.

Robert Tate fulfils his promise.

Tate and Slater's desperate journey.

Striking difference between th Scotch half-breed and the Canadian or French half-breed.

The Canadian or French half-breed, probably on account of an indolent disposition, allied to sociable habits, becomes more and more Indian. If he has energy he is a hunter, and able to beat the Indian in every department of hunting, tracking, running, and shooting. But there his energy ends, his sympathies are all towards his Indian mother, squaw, and especially his (belle mère) mother-in-law.

Before I started from Crowwing a young American told me he was very anxious to ascend the Crowwing River, in order to superintend the cutting and floating of some pines which he had contracted to procure, and intended to seek up the Crowwing River above the mouth of Leaf River, and offered me some money for his passage; I liked the young fellow's appearance and manner, so told him I would not have his money, but would like him to work with me up the stream, as the men were weary after their desperate foot journey. He at once consented, went back to the village, while some squaws were pitching my canoe, and soon returned with a capital cheese and bag of biscuits. When I returned from purchasing ammunition and tobacco at the agency, the women had finished the canoe, and we started up Crowwing River on Good Friday, the 2nd of April. We had not punted more than two hours and a half when we found the canoe leaking, and obliged to put ashore at an old deserted hunting camp on the left bank of the river. We then discovered that the women had not been able to resist the temptation of eating the grease, instead of mixing it with the gum, so it all cracked off again, and we had to occupy ourselves with staunching our canoe for the rest of the evening. Armstrong not only proved an excellent hand in the canoe, but a most entertaining companion in camp; we sat round our fire till a late hour listening to his most entertaining stories of California, where he had been for two years very successfully gold-digging.

Young Armstrong.

Start up the Crowwing River in the canoe.

Women eat the grease for the pitch of the canoe.

The weather was now very warm and the musquitoes troublesome.

April 3rd.—Started at 7 a.m., arrived at mouth of Leaf River at 1 o'clock. Armstrong left us after dinner, and, accompanied by a young Indian whom he hired to carry his pack, started for his lumber camp. We found, at the mouth of Leaf River, a small shanty occupied by two American squatters, who received us most hospitably. The weather threatening and lowering.

Leaf River squatters.

Sunday, April 4th.—A snow storm; could not travel; it cleared up before sunset; I went out and shot three fine mallords. Next day the storm came on again, but we were not able to travel till the afternoon, when we began to ascend Leaf River; here I shot the fattest goose I ever saw. We camped on Leaf River. We were very well provisioned with tea, sugar, flour; our pork was no longer good, on account of the heat a couple of days ago, therefore we threw it away, and trusted to the ducks and geese, which were very numerous and in excellent order.

Plenty of ducks and geese.

Leaf River is a stream so tortuous that we found after working for hours that we had not proceeded more than a mile or two in a straight line. The weather was cold, accompanied by slight falls of snow, and the water froze on the poles, which rendered the punting sometimes painful to the hands.

Weather very cold.

We continued ascending this river till we reached the watershed on the 9th April. At Leaf Lake we found a settler to welcome us, and passed the night at his house.

Reach the watershed.

On the 10th of April we crossed the watershed, a distance of about seven miles, and reached Macdonnel's, leaving our canoe in the settler's care; as soon as we arrived the Miss Macdonnels har-

Walk across the watershead.

nessed their ox, started for Leaf Lake, and brought us our canoe, poles, oars, &c., safe to us at their father's house a little after sunset.

We seek for the commencement of Red River.

The following day was occupied in thoroughly repairing the canoe ; and did not start till the 15th, when we paddled away in search of the commencement of Red River : none of us had ever been this way before. We were overtaken in a snow storm for three days, but made ourselves very comfortable; built a shelter of branches with the canoe at the back.

Find it, and commence to descend its waters.

On the 15th of April found the entrance of Red River, and commenced our descent again to the north.

April 16th.—Navigation bad, a great many rapids, but no portages.

Make a portage.

April 17th.—Had to make one portage of about a quarter of a mile, here we found a settler who had been robbed by the Saultens.

Reach Breckenridge.

April 19th.—Reached Breckenridge, where we met settlers, who treated us most hospitably.

April 26th.—Reached Sand-hill River, heard Indians firing; I had been firing myself at ducks, did not cease doing so, not wishing the Indians to conclude that we were a party so small as to fear them.

Indian depredations.

April. 27th.—Arrival at the Grand Forks, saw houses burned down and smoking; this had been the work of the Indians.

The burned-out American fur traders.

April 28th.—Overtook the party burned out, they were traders employed by Rolette, of the American fur company at Pembina, there were three men, three women, and several children; the Indians had stripped them very bare indeed. They were making their way down stream to Pembina, supporting themselves by fishing. One of the men had a gun, I gave them some ducks and ammunition ; they had plenty of fish and gave me some.

April 30th.—Passed mouth of Snake River.

Arrive at Pembina.

May 1st.—Arrived at Pembina at sunset, slept at the Hudson Bay Company's fort, found my old friend Mr. Murray in charge.

Reach Red River settlement.

May 2nd.—Started at 10 a.m., rowed all day and all night, only halting for meals, and reached Fort Garry, Red River Settlement, at 3 p.m., May 3rd.

I had lost three horses last winter.

Business detained me for several days at Red River: out of five horses which I had left three had died during the winter, notwithstanding my having taken the precaution of retaining Pierre Beauchamp in my service to look after them. I was therefore obliged to purchase two more horses.

Mr. Mc Tanish.

Mr. McTanish, the Hudson Bay Company's officer in charge of Fort Garry, did everything in his power to facilitate my arrangements, allowing me to purchase freely out of the stores for cash orders.

We start on foot for Carlton.

On the 12th of May started from Red River for Fort Ellis : our party consisted of John Ferguson, Pierre Beauchamp, and Johnny Simpson, and myself, with three carts and four horses. I had no riding horse for myself, preferring to reserve the fourth horse in case one of the cart horses should tire.

Appearance of the country in spring.

It would be unnecessary for me to detail each day's proceedings during this return journey to Carlton, and I will merely dwell on the appearance presented by the country in the early spring.

I have no cause to detract from the general inviting aspect of the country to settlers; only the grass, which was beginning to push, was not as far forward as I should have wished for the sake of the horses; the ground was in many parts heavy to travel, and the swamps difficult to pass; still there was much inviting undulating land with a rich deep soil. On the other hand I could not fail to observe very severe night frosts, which checked the progress of vegetation, and no doubt would have injured the progress of introduced crops still more severely. On the 30th and 31st of May we had heavy snow, accompanied with a cold wind.

Early in June we had no snow, and the night frosts were less frequent and less severe; the grass visibly improved. As my journey was in a north-westerly direction it was natural to expect that in proportion as I gained in latitude I should observe the season to retard in progress, but I cannot say that this was the case, and my impression was that there existed great uniformity in the climate. Travelling at that period of the year is attended with difficulty; the new grass is powerfully drastic to the horses that have been accustomed to the dry frozen stuff of the previous season, rendering them incapable of working hard for several days together, notwithstanding that my small stock of horses was recruited successively at Fort Ellis and the Touchwood Hills. It was not without considerable care and trouble that I succeeded in reaching my destination with my whole band. We had no actual necessity for hurrying, for it was too early in the season for this same cause to start with the Expedition, and we had plenty of ducks and geese, besides a capital harvest of eggs, which we gathered in the swamps as we walked along. On the 4th of June I met Doctor Hector and Mr. Hardesty, the Hudson Bay Company's officer in charge of Fort Carlton, they had come out to meet me bringing fresh horses with them ; they turned about, and we all travelled together, and camped in the evening about eight miles from the fort.

Cross the South Saskatchewan.

5th of June, crossed the south branch of the Saskatchewan, and rode to Fort Carlton.

Doctor Hector made all the necessary arrangements previous to commencing the summer exploring season.

On my arrival at Carlton, I found all the gentlemen under my command in good health. Doctor Hector, who had been in charge of the affairs of the Expedition during my absence, had in accordance with my instructions hired men and purchased horses for the explorations of the ensuing summer : to carry out these objects it had been necessary for him to visit the Catholic settlement at Lake St. Ann's, fifty miles west from Edmonton. He therefore with most praiseworthy energy availed himself of this opportunity to lay down the whole of the North Saskatchewan, and visited Forts Pitt, Edmonton, and Rocky Mountain House, and even penetrated the flanking range of the Rocky Mountains during the winter.

Lieut. Blakeston conducted the magnetic observations, assisted by the other gentlemen.

Lieutenant Blakeston had joined the Expedition shortly after my departure from Carlton last October (1857), and I found the magnetic observations under his instructions and conduct ably carried out, assisted by Mr. Sullivan and Mons. Bourgeau.

Mr. Sullivan conducted the astronomical observations.

The numerous astronomical observations of Mr. Sullivan were all carefully recorded and submitted to me, as well as the computations and the results.

Monsieur Bourgeau had already made an extensive collection of early spring plants, which grow in this part of the country.

The Red River men whom I had engaged

When I arrived at Red River last November, I made arrangements for engaging men who were to proceed, in the beginning of March 1858, on foot to Carlton; and on my arrival to this place I learned that these men had arrived on the 7th of April, and were afterwards obliged to go out to the south of

the Eagle Hills, where they supported themselves by hunting the buffalo, there being no provisions to spare at Carlton. These men, twelve in number, had been allowed the use of our horses; and hunted with the hunters of the fort. last November at Fort Garry forming one brigade.

The men and horses which Doctor Hector had procured during the winter, and who we called the St. Ann's Brigade, were likewise unable to be supported at Fort Carlton. They were camped in the Eagle Hills, and the horses purchased in the winter, and likewise supporting themselves by hunting buffalo. This brigade of twelve men and our half-breed Blackfoot guide Paul. The St. Ann's men engaged by Doctor Hector form another brigade.

Buffalo had moved off so far from Fort Carlton, and the hunters of the fort were obliged to go such long distances in search of meat, that the supplies did not even suffice for the inhabitants of the post, who were sent off with their wives and families to winter out. Mr. Hardesty, the gentleman in the Hudson Bay Company's service in charge of the fort, could not be certain of a sufficient amount of food for the gentlemen of the Expedition, and was even obliged to request my secretary, Mr. Sullivan, and our servant James Beads, to leave the fort and join the hunters on one occasion, and on another they joined a party at Jack Fish Lake, where they supported themselves by fishing. Afterwards, on Mr. Sullivan's return, Lieut. Blakiston and Monsieur Bourgeau likewise left for the plains, on the return of Doctor Hector and Mr. Sullivan. Great scarcity of food during the winter.

Immediately before our arrival the supply of meat had greatly increased, owing to the greater facilities of bringing the meat in in the carts, so that all the three gentlemen were residing at Fort Carlton, and continued to do so along with myself until we started again to resume the work of the Expedition. Better off just previous to my arrival.

Journal continued by Dr. Hector after departure of Captain Palliser from Carlton on the 10th of October 1857.

Fort Carlton, 1857, Oct. 11.—At noon Captain Palliser left us for the winter. He has two men and five horses, and is to be accompanied by Mr. James McKay as far as the Red River Settlement, and will continue to travel with horses, if possible, all the way to St. Paul's. Sullivan, with one man, also started for Fort Pitt, to which place he is to travel with horses along with Mr. McMurray, one of the Company's agents.

Despatch the horses to the Company's guard, distant 10 miles down the other side of the river. For the winter Capt. Palliser has retained five men at this place. Beads is to be servant, Hallet, Morin, and Boucher to hunt and look after the horses, and Foulds is to travel with me as servant.

Oct. 12.—Made inventory of the stores, and adjusted the rations so as to make them last for the winter. Without waste we have sufficient of tea and flour, and will be well off if we can only secure a supply of buffalo meat. Lend Foulds to the company for eight days to help them to get up a boat from Fort à la Corne. The Indian hunters who supply the fort with meat arrived to-day to receive payment for the animals they have killed this autumn. The price of a buffalo is 3 gills of rum, and they bring dried meat, grease, skin, cords, &c., which they trade in addition. The whole fort is in a dreadful state of riot from the quantity of liquor which is being consumed, and the noise of Indians drumming, howling, and brawling is incessant at present. I was amused to observe the Indian children playing with tops, a game which must have penetrated from the haunts of civilization.

Morin was sent to-day to the swamp where we left the grey mare, but returned saying she had disappeared; however, he was too short a time absent to have gone the distance, and felt being ordered off from the festivities that are in progress so much that I have no confidence in his report.

Oct. 13.—As the house we are going to occupy is undergoing repair, go off for to-day to shoot grouse and to visit the horses at the guard. The country along both sides of the Saskatchewan in this part of its course, when back from the river bank, forms exceedingly rich pasturage, abounding in vetches, and interspersed with small lakes and clumps of aspen poplar. The distribution of the wood is most beautiful, resembling that of a home park, but, unfortunately, the timber is of no value except as fire-wood. Round the swampy margins of some of the lakes there grows abundance of a species of *equiteitum* or goose grass, on which horses fatten almost as well as on grain. At this season swarms of wild fowl are to be seen, all very fat, but very shy, being passers on their way south. The pintail grouse occurs plentifully, in large coveys, and affords sport somewhat like partridge shooting at home. My pointer dog "Hero," which I got from Mr. Johnston at Fort Garry, is rather spoiled for his proper work, as it has been of more use to us to get him to retrieve water-fowl. I saw great numbers of the case wolf (mischechogonis or togonie) prowling about. This is the wolf proper to the partially wooded country, and is about twice the size of a fox, with a tail shaped like the brush of that animal. The real thick-wood wolf is grey or black, and very much larger. In spring, Hardesty tells me, the latter are often very dangerous, as they go mad, and then do not scruple to attack any one they meet with. Hydrophobia results from their bite, and the Indian cure for it is to sew the patient up in an old buffalo robe and to fling him on a large fire until it is well singed, when he is considered *done*. I should think that if the person survived this, it must produce violent diaphoresis, which, with the fright, may produce a salutary effect on the disease. The Indians are still very drunk to-day.

Oct. 14.—Walk two miles up the river with Bourgeau to see a clump of spruce (abies alba) which grow there,—the only trees besides poplar that are near the fort. Down towards the forks of the two Saskatchewans large forests of pine and spruce occur, from which most of the timber of which the fort is built was procured. Up the river about 30 miles there is a gulley where they get birch for making cart axles, and other purposes for which hard wood is required. Their best timber, however, is brought from Shell Creek, which is sixty miles to the north of this place.

Hardesty told me that last spring he found a duck's nest, with eight eggs, in a tree about 12 feet above the water; he says it had been an old crow's nest, which the duck had appropriated. It was sitting on the eggs when he disturbed it.

Oct. 15.—Snow birds (embrizzia nivalis) are around the fort in immense numbers at present. They are very good eating, although very small.

Oct. 16.—Arrange the thermometer, &c., for meteorological observations, sink metal tube in the soil 34 inches. according to Dr. Hooker's directions for buried thermometer.

Oct. 17.—Walk to the horse guard, and find that some of the horses have picked up wonderfully. Bring back four with me to take on a trip to the Thick-wood Hills. A little snow fell to-day.

Oct. 18.—The river has risen about a foot to-day, and is covered with patches of foam like a mill-stream. After breakfast started on a little piebald pony of Hardesty's, to search for the grey mare myself. Took me five hours and a half to ride back on our track to where we left her, and could find no trace of her. The pony got tired on the way back, so that I took much longer, and did not get home till two hours after dark. It was snowing, and a bitterly cold N.E. wind in my face. The whole distance was 46 miles. I shot a splendid case wolf in prime condition as a fur.

Oct. 19.—The wolves are getting very numerous and destructive about the fort: four nights ago they killed a foal, and last night took a great piece out of its mother.

Oct. 20.—Last night the wolves killed the poor mare outright. It has been very hot this afternoon, the thermometer ranging as high as 65°. Levelled up from the river to the fort to-day, and found the doorstep of the house to be 35 feet above the mean water level. The top of the bank behind the fort I found to be 196 feet above the river, but the proper prairie level is about 50 feet higher. The fort is built on alluvial bottom of about one mile and a half in extent, and a good deal of which has at one time been under cultivation.

Oct. 21.—At 11 a.m. start for the Thick-wood Hills, which are about 25 miles distant to the N.W., taking with me Hallet, Beads, and Morin, as there was nothing for them to do at the fort, and but little to eat. Cross the Saskatchewan, which is 400 yards wide, in a boat, and find the horses waiting for us. On ascending the left bank, which is 200 feet high, we passed to the west through rolling country covered with poplar clumps and small lakes; at one of these we halted, after making eight miles, to eat a goose and some ducks we had killed. We then made for a conical knoll which bore N.W., and at sunset reached a lake about a mile and a half long, which formed one of a chain running N. and S. along the base of the hill. Its water proved to be saturated with salt, however, and on the shores crystals of sulphate of soda were lying heaped up, some of them beautifully formed and of large size. It was not till after dark that we came to a small pool of fresh water, by which we encamped.

Oct. 22.—Morning very cold and sharp. The cart continued into the N.W., making for the highest part of the hills, while I crossed the swamps and ascended the conical hill we were making for yesterday. It is called Manitoe's Rest by the Crees, and is one of the many knolls of the kind that have Indian superstition attached to them, generally about a mythical person called Wee-suk-ee-chack. It rises about 150 feet above its base, and is nearly a perfect cone. It is quite covered with grass to the top, so that its structure could not be observed, but it is probably composed of a patch of cretaceous strata, such as we saw at the elbow of the South Saskatchewan. Indeed the whole eastern slope of the Thick-wood Hills, with its broken country, strewn with boulders, and worn into conical knolls and deep pot-holes, forcibly reminded me of the country where that river intersects the *Couteau des Prairies*. On the top of the Manitoe's Rest is cut out the figure of where the great spirit reclined, which the Indians always touch up every time they visit the place; but if the cutting in the turf be the impression he left, as they say it is, he must have been a most rectangular spirit. By following up the track of the cart I overtook my men encamped by a large clear lake several miles in length, and surrounded by dense pine forests. All round this lake the margin has been encroached upon by a dense growth of *sphagnum* moss, with dwarfed and contorted spruces and larches, for the most part dead, the whole forming what is known as muskeg. This is the favourite habitat for cranberries, and others of the vaccinium tribe, also for the Labrador tea plant (ledum latifolium), from whence its name "muskeg tea," by which it is known in this region. As swampy lakes of this description form the mass of what should be dry land in the district between Lake Winnipeg and Hudson's Bay, they give the name to the Indians who inhabit that region, a sub-tribe of Crees, who are known as Muskegoes or Swampy Indians. The change to the deep rich green of the pine forest, after seeing poplars only for the whole summer since leaving Red River, was quite delightful. Besides the *abies alba*, which is the largest and best timber of this country, I observed a few *larches*, called here "junipers," but they seemed always to die before they reached any great size. We pressed on, and encamped beside an old half-breed, who had long lived and hunted in this part of the country. This afternoon we shot several of the *ruffed grouse*, which is called here the white flesher, its meat being as white as the breast of a fowl, while that of all the other grouse in the country is dark. We also shot a number of musk rats (mus zibethicus) as they swam about in the lake. In early spring numbers of them are killed for their fur, which, however, is of no great value, ten of them being equal to one prime beaver in trading.

Oct. 23.—The country is very broken between the Muskeg Lake and the mountain, and we had very hard work getting along with our cart. Our old half-breed friend had told us that we could not get close to the mountain with the cart, but I was determined to try, and after several upsets and some little chopping through the poplar woods, we at last reached a very secluded valley just at the base of what seemed to be the principal escarpment, which is very steep and densely wooded. Here we cut poles, and put up a leather tent I had, in true Indian fashion: all in great spirits at having succeeded so well. We have seen to-day numerous fresh tracks of bears and elk, and also traces of different fur-bearing animals. Round our camp we found rabbits in great numbers, so that we had no difficulty in procuring our supper.

Oct. 24.—Taking Hallet with me, I rode off at daybreak first to the north, till on arriving at a deep valley which cuts though the mountains to the S. W.; through it we followed up a small stream to its source, where it heads with another stream, said to flow into Redberry Lake. Finding that the valley did not take us to any height, but seemed to have the same depth and dimensions all the way through the hills, we ascended the north bank of it, and fell in a track cut through the woods by some Indian moose-deer hunter. As at several of the old encampments that we passed, we found the remains of several of these animals that had been killed this summer, among which were a magnificent pair of antlers, which I grudgingly had to leave undisturbed. So dense is the thicket of poplar on the summit of these hills, that without some such track as we had now fallen upon it would be impossible to make any progress. On gaining the highest level, I found that the hills are really a lofty table-land, which has an irregular surface, covered with swampy lakes and thickets, and it is only the rugged escarpment to the east which gives them the appearance of a range of distinct hills. As we returned home, on regaining the valley we became enveloped in dense masses of smoke, which rolled in volumes from the west, where the woods seemed to be on fire. As it was impossible to discover whether the

fire was far or near, we made all haste back to our little encampment, the dismal gloom giving rise to a feeling of depression difficult to shake off. On nearing our camp, we got out of the smoke, as the hills then sheltered us from the direct course of the wind, but all night the sky to the south-west was brilliantly illuminated.

October 25th.—This morning ride off to the north with Hallet, keeping along the base of the hills. Soon fall on the fresh trails of Indians, which we follow up, and after riding about 14 miles, overtook them just as they were encamping, as they had killed five elk. They were on their way to Green Lake, and the track that they were following, which was evidently an old one, passing through swamps and along the margins of lakes, must be the same which Sir John Franklin travelled by with dogs when on his way north from Carlton to Great Bear Lake in the winter of 1819. The Indians we met with here were a party of Thick-wood Crees numbering nine tents. They offered us meat, but our horses were so jaded that we dared not load them in the least, as we hoped to return to our camp by dark. After a smart and rough ride we got there about an hour after sunset. A shower of sleet has given a check to the fire, which is not so brilliant to-night.

The Thick-wood Hills rise to the height of 500 to 700 feet above the plains, but a long gradual ascent leads to the foot of the sudden escarpment at which we are encamped, so that it is difficult to judge correctly of their real height, and the dial plate of my aneroid had worked loose, so that I could not trust to the readings I had recorded. The abrupt slope facing to the east follows a curved line to the north-west, and is everywhere strewn with boulders, principally of primitive rocks and angular masses of cherty and magnesian limestone. These hills form the hunting and trapping grounds of Indians, who travel about in small parties, carrying their effects, which are but few, on the backs of horses and dogs. Their principal food is moose deer, elk, and bears, and in the winter they live a good deal on rabbits, and on the Canadian lynx, which is very abundant wherever rabbits are found. They sometimes make short excursions to the plains for buffalo when the herds come north of the Saskatchewan River. They for the most part trade at Fort Carlton, but a great deal of the large quantities of fur which they annually trap has of late years been diverted from the Company by the free traders, parties of whom from Red River spend the winter among the Indians, well supplied with goods, which are furnished to them by the American traders. This rival trading on the whole would be for the good of the Indians, were it not for the wretched poisonous whiskey which is supplied to them. The tract of land between the Saskatchewan at Carlton and the Thick-wood Hills is exceedingly rich and well watered at present, forming magnificent pasture land; immense areas of it might with ease be brought into cultivation. Every variety of soil may be found in this district; light sandy soil in the high grounds, rich loam in the flats, with a considerable thickness of vegetable mould, and extensive meadow lands, affording natural hay of excellent quality. The quantity of useful timber which may be procured along the base of these hills for building and other purposes, gives an additional value to this district; want of timber being the great drawback to most parts of the Saskatchewan Valley, especially close to the river.

October 26.—Finding I was foiled by the want of sections where I expected to find a most interesting field for geology, I determined to return to the fort. On regaining the Muskeg Lake, distant from our camp seven miles, we passed round the north end of it, and came on a party of free traders, who were busy building a rough log shanty in which to winter. There were three families of them, wives, children, and all, and they had left their comfortable homes in the Red River Settlement, and travelled all this distance into the wild country to pass the winter, more I fear from the love of a wandering life than from any hope of bettering their condition by the wretched pittance of profit which they make in their trading as middle-men between the Indians and Americans. We stayed with them and dined on fresh buffalo meat, a stock of which they had just arrived with from the plains, five days' march distant. They were extremely hospitable, and pressed me to stay, as my men were old friends of theirs; but, as they had lots of traders' whiskey with them, I was glad to get away before nightfall for the sake of my men. It was this party, when on their way back from the plains with the meat, had let one of their camp fires run, and caused the great conflagration which was still rapidly advancing over the Thick-wood Hills. By pushing on to the east, our track lying to the north of that by which we approach the hills, we reached an old Indian camping ground, after crossing a large plain in the dark.

October 27.—By travelling fast reached the fort about noon, and in crossing the river found Sullivan and Blackiston both waiting for me on the bank, they having arrived during my absence; Blackiston from England by York Factory on Hudson's Bay, Sullivan from Fort Pitt. Besides letters which Blackiston brought me from England, one had arrived from Captain Palliser, dated Touch-wood Hills, directing me as to my movements during the winter.

As I passed the horse guard in the morning, I found that the horses had suffered from being too closely hobbled—"hobbling" is tying together the fore legs of the horses by a soft leather band to prevent them wandering,—so that I determined to withdraw them from the Company's guard, and keep by themselves under the care of our own men.

October 28.—This forenoon I brought our horses over to the fort side of the Saskatchewan, and sent them to a good feeding ground about five miles off from the river.

Send off Hallet and Morin with three carts along with the fort hunters, to try and get some meat.

October 30.—The fort hunters on their way to the buffalo have set fire to the plains, and the conflagration is now approaching very close to the fort; in consequence every one is out to-day burning the grass round the hay-ricks that stand in the swamps, to prevent their being destroyed.

October 31.—Fire is still running, but has turned off more to the south, as the wind is changed.

Blackiston, Hardesty, and I rode for ten miles down the river to see the pines, and to seek for good feeding places for the horses. After passing over six miles of rich country, enter on a tract of sand-hills, with a gravelly soil supporting a poor growth of grass, but in some parts covered with a dense matting of the smoking weed (*arctostaphylos ura-ursi*), the bright red berries of which afford winter food for large coveys of the prairie hens. On some of these sandy hills we observed a pine which may prove to be new, somewhat resembling the P. inops; it is a taller and stouter tree with much heavier brush. The cones are also different, being broad-based and acute-pointed, with one side more developed than the other, the scales hard and shining, and each furnished with a sharp recurved spine.

At night called to a violent case of hysteria in an Indian girl: some years ago she was shot through the shoulder by the Blackfeet; and since then she has been clairvoyant, her friends having the utmost confidence in her predictions.

November 2.—Kill a male kit fox (*vulpus velox*), an animal very common in the prairies, living in holes, several of which are grouped together on slight knolls. For a short distance it is the swiftest animal on the prairies, its length was 31½ inches, of which the tail formed 12, its height 14½ inches; its fur is a beautiful speckled grey.

November 3.—Found one of our horses killed last night by the wolves; two more are missing.

November 4.—Ground white with snow. Out searching for horses all day.

November 7.—The snow now covers the ground to a considerable depth. Have all the horses driven down the river to a new feeding ground. They are all much improved since they came to this side of the river. We only found 22; 2 being lost, 2 killed by the wolves, and one still at the Company's guard, as it is sick, and could not stand the swimming of the river.

November 8.—Go off to the guard, which is 10 miles distant. Walk home on snow shoes, which is my first experience of them.

November 9.—River nearly blocked with ice, and presents a very rough, hummocky appearance, however it will turn quite smooth in a few days.

November 11.—Go out with Hardesty dog-driving for the first time, and found it delightful. We had four dogs dragging a light sleigh, or "sled" as it is always called, made of two birch planks lashed together by cross bars, and turned up at the point; the whole shaped like a Norwegian snow shoe, but 10 feet long and 14 inches wide. As the dogs were fresh, and had no load, they went very fast, sometimes we ran behind, time about, and when out of breath would jump on for a ride, a feat not very easily accomplished by a beginner, for, as the least unsteadiness in planting your feet on the sled caused it to dodge from under you, a fall headlong among the deep snow on the side of the track was the general consequence, followed by a frantic race to make up with the dogs again, who of course had made off with redoubled speed.

November 12.—The hourly observations for winter commenced to-day, a rough but useful little observatory having been erected under Capt. Blackiston's superintendence. Visit the horses. They have found out a fine feeding ground beside a large lake, about nine miles off.

November 14.—Walk to the five-mile gully, which is up the river from the fort. Spent the day in hunting deer, without success. I saw two bands of deer, in one of which was a splendid buck, with seven does. Returning by the river on the ice, which is now quite set fast, I found the distance to be about seven miles. This was the first of my holidays, under the new arrangement for carrying on the hourly observations, which keep us all prisoners in the fort three days out of four.

November 15.—A man brought in from the buffalo hunt dangerously hurt from having been thrown from his horse, when an old bull charged him; he has burst a blood vessel, and injured his chest very severely. Measured the opposite river bank with the barometer, and found it to be 196 feet, agreeing almost exactly with a previous levelling.

November 18.—Go off with Blackiston and Hardesty to look again for the deer, but without success.

November 21.—When detained in the fort, busy with maps, reports, &c., so that many days afford no remarks worth recording. The hunters returned to-day from the plains, and the fort is the scene of riot and drinking again. Ride out to the guard, and see a black bear. Stay there all night, sleeping in a leather tent in which the horse-keeper lives.

November 22.—Follow the bear for about 10 miles this morning, but he got away from us; but it was easy to follow his track in the snow. We got some shots at deer, however; Boucher wounded one, and has hopes of getting it to-morrow. It was bitterly cold, and we were nearly frozen, riding back to our camp at night.

November 23.—Return to the fort before daybreak to take my watch.

November 24.—This morning some Indians arrived, and with them a young Englishman of the name of Vidler, who has come out to this country for the sake of hunting. He came up from Red River in the autumn along with a party of half-breeds, and has been living for the last two months in an Indian camp at the Moose woods on the south branch of the Saskatchewan. He was dressed in Indian fashion, and seems to have identified himself with their mode of life, and shows great pluck in submitting to all the hardships of his situation. As might be expected, he was at first greatly taken in at all hands from not knowing the language, and is now in rather destitute condition, having parted with most of his outfit, so, accordingly, we fit him out with things to make him more comfortable.

November 26.—Send off Hallet and Boucher to trade dogs from the Indians for my trip to Edmonton, as I intend to start by the middle of next month. All the tripping about the fort is now done with dogs, as the snow is quite permanent, though not very deep.

November 27.—Vidler left us to-day with all his effects on a dog sled he has got from Hardesty, and accompanied by his Indians.

December 5.—Go out every day just now with the dogs that Hallet traded for me. They are very savage, and don't take kindly to their harness at all.

December 10.—The arrangements are nearly completed for my start now, Hardesty having kindly fitted me up a jolly little cariole that will either do for passengers or goods' traffic. This cariole is only a sled with parchment sides, sustained on cords that pass over a back-board standing about a foot from the end; it resembles much a coffin-shaped slipper bath. The harness consists of a collar made of an iron ring, with a pad on it, which passes tightly over the dog's head, but fits his shoulder well; to this is attached two long straps of dressed hide, kept up by a band across the dog's back; to the collar and back band are generally attached rows of bells, the merry jingle of which enlivens the journey, and gives spirit both to the dogs and drivers. Favourite trains of dogs are dressed up in very jaunty style, with ribbons and brightly-coloured saddle cloths. Four dogs are attached to each sled, and they are driven solely by the voice, no reins being used. On a river where there is no decided track it is of course a difficult matter to keep them straight, and then a man generally runs before, whom they follow; but in a track where other sleds have passed, or where snow shoes have been used, there is no difficulty in driving them, as they never have any wish to turn aside the soft deep snow that is on

either hand. Where snow shoes have been used, or where a dog sled, or train, as the whole turn-out is called, has passed over the snow, the track hardens so as to remain all winter, and even where more snow falls, always affording a hard regular bottom much easier to travel upon than it is to beat a fresh track. Some of the dogs are wonderfully sagacious in discovering and keeping on old tracks, so alive are they to the additional ease it gives them in dragging their load.

December 14.—At 5 a.m. I started from Fort Carlton, my party consisting of myself, Foulds, also one of the Company's men, and an Indian lad, with two sets of dogs, one dragging my cariole, while the other dragged the sled with our provisions. As our road was up the river on the ice for some distance, and I had not been in bed all night, I lay in my cariole rolled up in robes, enjoying a snooze until it was broad daylight. When I wakened up I found that we were about 16 miles from the fort, and not far from the point at which we were to leave the pleasant smooth road on the ice and take to the plains. The course of the river is very straight here for a long way, forming what is known as the long view, which extends for about eight miles in a direction about 20° E. of N. At 9.45 a.m. we left the river at a point where it widens out considerably, and when the banks become higher. Those measured by the barometer I found to be 203 feet above the river. The real plain level, however, is about 50 feet higher. The plain is all burnt here, but there was a sufficient quantity of snow to render our progress easy. There are great numbers of immense angular blocks of the magnesian limestone lying at this place, and no other kind of boulder admixed with them. A slight wooded rising ground, in which we halted for breakfast, is known as Enasquinas Hill. The morning was very bright, and although the thermometer stood at 11°, it did not feel at all cold. We breakfasted on the site of a recently deserted tent, where the fort hunters had been staying for some time.

After breakfast our course lay to the westward, leaving the river, which as far as we could see, still held on the same course, coming from the S.W. by S. After passing several small lakes and swamps, and crossing a bare plain, which seemed to be of great extent to the south, we crossed over the southern extremity of the *Minitchenass Watchi*, a hill which forms a conspicuous object from Carlton, but when approached is found to be merely a great roll on the prairie. It is only sparsely wooded, and lies S.W. and N.E., slightly in advance of the Thick-wood Hills, of which it forms a continuation to the south, but without reaching nearly the same height. At sunset we encamped in a hollow, among a thick clump of poplars, just as we came in sight of Redberry Lake, having made 33 miles. This was my first real winter encampment, and I enjoyed the novelty very much. The first step on halting is of course to untackle the dogs, which for to-night were all tied to trees, lest they should return to the fort, as it is no use tying an Indian dog by a cord. The method is, to tie a stick about four feet long close under its neck by one end, while the other is attached to the tree, so as to prevent him gnawing either cord, and so making his escape. One man then busies himself clearing away the snow, and cutting willow twigs on which to lie, which he spreads out in a square space just large enough to hold the party, who lie side by side with their feet to the fire; another employs himself cutting firewood, tree after tree being cut into logs six or eight feet long, the great secret of a comfortable winter camp being to have good firewood and plenty of it. Accordingly a smart look out is always kept as evening approaches for a good camping place, the requisite for which being a bluff of dead wood, whereas in summer it is always water that determines the choice. In travelling in winter water can be procured anywhere by melting the snow as soon as the fire is lighted; in half an hour after the halt the kettles are generally on the fire, and all are busily engaged changing their mocassins, a good voyageur being as particular about damp feet in camp as any anxious mamma could wish her darling boy to be. The penalty of travelling with damp feet next day might be the loss of some of the toes by frost-bite, so that one has good reason to be careful. Besides care on this point, a great secret in making your feet last you on a long trip, especially with snow shoes, is to have large mocassins, and instead of attempting to wear knitted socks, wrap your feet in a square piece of blanket, as is the fashion of the country. Too much covering on the feet only increases the chance of their being injured by pressure, without increasing the warmth, for keeping up which exercise should alone be trusted to. After supper I took an observation of Polaris, and found the latitude to be 52° 42′ N., or 10° S. of Carlton. It was a beautifully clear night, and the stars were intensely brilliant. At sunset the thermometer was at 11°, and during the night fell to 9·4°.

December 15.—Morning broke raw and overcast, with a little snow from the N.W., the thermometer standing at 26° at sunrise. We breakfasted before it was light, and started at 8 o'clock. During the night we heard dogs barking, and concluded that it was a party of traders on their return to the fort. We soon came on their track, and found that they had been encamped beside Redberry Lake, about two miles to the west of us. This lake is about 12 miles long, and 6 broad where we crossed it in a line due west, its greatest length, however, lying N.E. and S.W.; its waters have a strong bitter saline taste, from the presence of sulphate of soda in a large proportion. The ice on it is three to four feet thick, and cut up by cracks, which run for miles in straight lines. The country to the west of the lake is very irregular and thinly wooded, resembling very much that between Fort Ellis and the Qu'appelle Lakes fort. As we travelled along we saw a band of buffalo bulls, but could not approach them from want of shelter. At 11.15 a.m. we reached the eastern limit of a large plain, which is on a level with the highest parts of the broken country over which we had been passing, and only slightly inferior in elevation to the top of the Minitchenass hill. It is not like the real prairie to the south; we have seen none of that since we left the neighbourhood of the elbow of the south branch, but it is broken by small swamps with thick clumps of red topped willows. We had to stop for the day at 12.20, as there is no more wood until we cross this plain, which it takes nearly a whole day to do. We had already gone rather far into it, and had to camp at a most uninviting spot in a clump of small willows. By searching about in the swamps a small supply of wood was got, and although the wind rose, and it was very cold, we were tolerably comfortable on the whole, much more so than I expected we could be on first seeing the place.

December 16.—We were up at 3 a.m., so that we might make an early start, in case of any change in the weather taking place during the day, which would be very dangerous to us while crossing a bare wide plain. Soon after starting we came on a herd of buffalo, but did not follow them, trusting to meet with others towards afternoon. From having come so far into the plain yesterday, we found

that we had only about 17 miles of it to cross to-day, so that we reached the west side early. The country to the west is broken into high irregular hills, which stretch away to the north-east. After crossing through a few miles of this broken ground, quite bare of wood, we came to a small lake, with a thick growth of poplars on one side, where we halted for dinner. We had thus passed safely the only dangerous traverse, from its want of shelter, in the whole journey to Fort Pitt. After dinner we continued passing from lake to lake, some of them of considerable size; the whole group, which lies in a wide valley running from east to west, being known as the White Lakes. At sunset we came to a large camp of Cree Indians, but established our camp at a little distance, in spite of their entreaties that we should sleep in one of their lodges. We traded some meat from them for our dogs, and they came trooping down in great numbers, and stood gazing idly at us while we were busy getting our camp in trim. During the whole evening our fire was surrounded by swarthy faces sitting curiously observing everything that we did. Hearing that I was a medicine man, all my doings were watched with great attention. At 8 o'clock there commenced a magnificent auroral display, forming an arch about 25° high, from which rose streamers of light of bright crimson-lake colour, which, after 15 minutes, were replaced by flashes of pale green light, after which the arch split into three parts and disappeared. (I afterwards found that this aurora had been seen at Jack Fish Lake, Fort Pitt, and Edmonton, at all which places the red colour was remarked.) The Indians say this feature is rare, and is not seen every winter, but Mr. McMurray says that in Mackenzie river, in latitude 61° N., it recurs four or five times every season. The thermometer stood, during the display, at 4°.

December 17th.—Lost some time this morning changing one of my dogs, which I thought too slow, for a nice-looking one belonging to an old squaw, who did not seem to like the bargain much, but at last, by tempting her feminine nature with some bright blue and yellow beads, she was induced to make the exchange. The animal I now got is nearly a pure wolf, of large size, beautiful black and olive-grey colour, and quite as savage as any wild one. The only way of getting his harness on was to watch for a chance, and give him a sharp blow across the nose, which, for a few minutes, produces the same effect as a dose of chloroform. By putting him in the middle of the train, the other dogs, of course, kept him steady, while the whip soon made him glad to haul. Soon after starting we passed a "pound," into which the Indians drive the buffalo to slaughter them; however, they are very hard up this winter, as the mildness of the season has allowed the buffalo to stay much longer than usual out in the plains this year, severe weather always compelling them to seek shelter in the woods. As we went along one of the men shot a willow grouse with a ball. This bird, which is pure white, is very common in the neighbourhood of Hudson's Bay, but very rare in the Saskatchewan. What is known as the White Lakes is a chain of large and small lakes, lying in a long valley, bounded by broken country, sections of which everywhere display immense deposits of drift, ridges of which have been left, intersecting the valley and dividing these lakes from one another. The drift here consists of coarse red and grey sand, but with a great deal of well-marked false bedding. We kept on the south side of this valley, travelling on the top of a level ridge, which tapers away to the west, and from which we got a very extensive view to the south. From the base of the hills on which we were, an immense level plain, coated with willows, stretched to the south for 40 or 50 miles, and is bounded in that direction by the Eagle Hills, which were seen as a long blue line of high ground, having a smooth unbroken outline, only slightly higher towards the eastern extremity. On coming to the western end of the ridge, continuing to the west, we descended 200 feet into the valley, and soon after crossed a stream, which flows from the White Lakes into Jack Fish Lake. Having made 18 miles since morning, we halted for dinner at another Indian camp, the third or fourth we have seen to-day, at all of which there seemed to be one or more buffalo pounds. After dinner we followed down the stream, crossing and recrossing it, as it wends through large frozen marshes for about 8 miles, till, in crossing a neck of high land, we came down on the ice at Jack Fish Lake, the western shore of which we could just barely see in the dim twilight. However, we determined to cross, even in the dark, so as to reach a temporary establishment of the Company's, which has been placed there this winter. Jack Fish or Pike Lake is about 14 miles long and 10 wide, and was covered with beautiful clear ice of immense thickness, from the surface of which the wind had swept the little snow that had fallen, so as to render our progress extremely laborious, as neither man nor dogs could get a proper foot-hold. We kept, for some distance, along the shore of the lake, skirting a promontory that runs into the lake. The banks are about 100 feet high, and very steep, and exhibit sections of the same sandy argillaceous drift that overlaid the cretaceous beds at the elbow. It was quite dark when we reached the middle of the lake, but we held on for a small twinkling light which we saw on the opposite shore, which proved to be the fire of Mr. McMurray's tent. Since his arrival, about a month ago, at this place, he has been doing a large trade with the Indians, in opposition to several free traders from Red River, so that he had not found time to do more than build a little hut for storing his goods in, and was therefore living in a leather lodge, in Indian fashion. It was astonishing how comfortable he had made himself, and we found with him a party of free traders, who were on their way for Red River with their booty, and, notwithstanding the contrary interests, they joined round the tent fire of the Company's trader, and the evening was pleasantly spent, laughing, joking, and playing on the violin, the whole having an evening of it before they parted, so that the opposition seems to be conducted on a very amicable footing. Nevertheless this move of the Company to protect their trade by energetic competition rather than by enforcing their monopoly, seems to have been very successful. Mr. McMurray started from Red River late in the autumn with a boat loaded with goods, and which he brought up the Saskatchewan to nearly opposite this place, when he was stopped on the lowness of the water; he then got horses from Fort Pitt, and carried his goods to the lake here, where the free traders intended to winter; and from which place he has succeeded already in driving them off. He has found a great want of wood at this place, there being nothing but small poplar, so that he has to drag any timber he requires from a lake further to the north. Mr. McMurray tells me that Jack Fish Lake is divided by a narrow strip of land into two portions, but that the whole is about 20 miles long and 12 wide. Its water is slightly saline, but, as it is fed by several large streams, while a large river flows out of it to the Saskatchewan, its waters never become concentrated, like those of Redberry Lake, from which there is said to be no outlet. The lake freezes early in the winter, excepting at the north-east corner, where a large stream enters it, and where it remains open during

the whole season. Here the Indians spear an immense number of pike, as the open water, which is shallow and sedgy, is, during the winter, actually crowded with them. By nets placed under the ice, white fish are taken in considerable numbers, but of inferior quality, along with extremely large pike, perch, and many other species, which form a constant supply of food, so that Indians are always to be found in the neighbourhood of this lake. The slipperiness of the ice, which gave us so much trouble in crossing the lake, was turned to good account the other day by the Indians, as they drove a band of buffalo cows so that they had to go out on the ice of the lake, when of course they fell and stumbled, and could make no progress, while their pursuers, approaching them on foot, with ease killed the whole, to the number of 14.

December 18.—This morning the free traders set off with nine dog-sleds, all seemingly well laden, but the loads, however, might be fictitious, to deceive the Company's people, on the principle of "not to be done." Before starting this morning I engaged several of Mr. McMurray's men for the expedition next summer, as their engagement with the Company terminated in spring. Taking leave of Mr. McMurray we set off for Fort Pitt, which we expected to reach on the third day, as there was a pretty good track beaten in the snow. Our road lay over very irregular ground broken by abrupt ridges, in the hollows of which there were small swampy lakes. On opening one of these to get a drink, the water was found to be crammed with several species of cypris and cyclops ; and the most intolerable stench of decomposing vegetable matter escaped from the hole in the ice, showing that even the severity of the winter, and the exclusion of air by two feet of ice, does not prevent the production of marshy effluvia. Keeping pretty high on one of the ridges to the west, in about three hours we came in sight of a high round hill at a great distance to the south-west. It is said to be the Broken Knife Hill, and lies between Battle River and the Saskatchewan. Right ahead of us to the west we had the Horse Knoll about 16 miles distant. We had with us three extra dogs to-day, which Mr. McMurray had asked me to return to Mr. Simpson at Fort Pitt. We halted for dinner at some sand-hills, which rise from a level plain of considerable extent. The sand is fine, and of a light brown colour, quite the same as those hills which we passed at Rabbit Point in October last, when travelling between the two Saskatchewans. From a camp close beside us the Indians came trooping around, so that to avoid losing things by their petty pilfering, although it was late in the afternoon, I again started, and did not come to another place we could camp at until far on in the night, and then only had a thicket of willows for shelter and firewood. A little snow came down during the night, but the thermometer did not fall below 10°.

December 19.—From starting late yesterday morning we only made about 20 miles, so that to make up for it we were off two hours before daylight this morning. In the dark we lost the track, and went off the proper direction for some time, but soon regained it again. Just at daylight we passed the Horse Knoll, keeping close to the north of it. It is about 200 to 300 feet high; is rather more abrupt to the east, but on the whole has a rounded form. Our course, which hitherto had been only slightly N. of W. now turned very much to the N. across a wide expanded plain, after entering which we crossed Turtle River, a tributary of the Saskatchewan about 40 feet wide. We again passed several groups of sand-hills, and towards noon skirted for half a mile a deep gully which traverses the plain to the S.W. We were now within a short distance from the Saskatchewan River, having for the last $4\frac{1}{2}$ days been cutting across a great bend which it makes to the south. I found the latitude to be 53° 16′ N. at where we halted for dinner, near a clump of pines which grow on the west side of a gully through which English Creek runs. After dinner we crossed English Creek, and followed along the western side of a wide shallow valley through which it flows from its source among low undulating hills which we have observed to the north of us. We were now travelling amongst immense herds of buffalo,—a welcome sight, as our provisions were at a low ebb; and at some distance from the track we saw the smoke of lodges where we supposed the Fort Pitt hunters were encamped. After crossing some high ground we were descending into the valley at the base of the Red Deer hills, when we observed a band of bulls feeding in a swamp where they might easily be approached. As it was near camping time we halted till my half-breed Pewinagous approached and shot one, and then encamped at a neighbouring clump of poplars, so that our dogs for once got a good supper. The night was beautifully clear, and by an observation of Polaris I found the latitude to be 53° 28′ N.

December 20.—We started at daylight, and after a few miles we came to the base of Red Deer Hill, which is an abrupt terraced slope, very much like the eastern face of the Thick-wood Hills. After following round the base of it for a few miles, the track took suddenly right up the slope, which was so steep, that it was with great difficulty we got our sleds up. By the barometer I found the rise to be 240 feet. The top of this hill is a level plain presenting a different aspect to any I have yet seen, being covered with thick low brush, composed principally of rose bushes and small willows, and a few clumps of trees. This plain is traversed by deep, steep gullies, which give us great trouble in crossing. From the number of buffalo tracks in the snow, which is pretty deep, we soon lost our way, continuing to wander about for several hours, until my guide caught sight of a hill which he knew overhung Fort Pitt. Making for this we soon came to the Saskatchewan River, which here runs through a very deep valley with a high range like the Couteau des Prairies bounding it to the west. Red Deer Hill is evidently a detached portion of this high level which has been cut off by the river. Before reaching the brink of the deep valley in which the Saskatchewan runs, a fall of about 100 feet is effected by a long slope. From this point to the river level the descent is extremely steep, and amounts to 430 feet, but the slope is broken by two well-marked terraced levels, at 118 feet and 311 feet above the river respectively; the latter of these corresponds with the general prairie level, from which Red Deer Hill, the Horse Knoll, and others may be considered as rising. On the opposite side of the river outliers are to be seen of what must be again a higher level than that of the top of Red Deer Hill; and high conical hills, the principal of which is the Frenchman's Knoll, were seen to the north, which must also be referred to this higher level. On descending to the river we found it wind round the same large alluvial points as at Carlton, and appearing to be about the same size. Along the shore are numerous boulders of soft grey sandstone, containing fragments of cretaceous fossils. I also found fragments of coal in the sand-banks along the river in considerable quantity. From the water having overflowed, which gave rise to a new thin film of ice, we had considerable difficulty in following it, which we did only for a few miles, when

we ascended the west bank to cut off a long bend which it makes to the north between Fort Pitt and this place. In doing so we had again to climb up 270 feet, and after about six miles we came in sight of Fort Pitt, to reach which place we had again to descend and cross the river, where I was met by Mr. Simpson and the other inhabitants of the place, who all turned out when they saw a strange party crossing the river. Just as the sun was setting I observed a very brilliant meteor, so bright that it was distinctly visible even when close to the sun's disc. At sunset and sunrise for several days past there has been a very remarkable number of meteors. In the evening, by an observation of Polaris and also of Jupiter, I found the latitude to be 53° 34′ N. As the 21st is the Carlton term day for hourly observations I commenced at midnight to take similar observations for the 24 hours following.

I was glad to find that on the 24th Mr. Simpson intended starting for Edmonton, so that I should have the pleasure of his company in the rest of my journey to that place.

December 21.—Fort Pitt stands on the left bank of the river, which runs past it to the north. It is a small fort, at least the place within the palisades is small, but it is one of the best posts for trading quantities of provisions in the whole Saskatchewan district, the buffalo never being far distant even in summer, as the real bare prairies extend very far north in this longitude, almost reaching this place. The total absence of wood within sight of the fort strikes one very much, but there is abundance of timber to be had at a short distance to the N.W. The fort is built upon a flat about 20 feet above the river level, which is of very considerable extent, and merges by a gentle slope into the high lands behind without any steep bank, such as that which rises immediately behind Carlton. This feature, along with the hilly aspect of the country across the river, gives the situation a very open and pleasant look. The Indians who trade here are Crees and Blackfeet, the latter only, however, when there is any peace as at present. Sometimes, when there is war, smart skirmishing goes on close to the fort, and not unfrequently the Blackfeet attack the place itself. On account of the great number of Indians constantly around the fort much agriculture has not been attempted here. Grain is said not to succeed well, but I suspect they have chosen a bad spot for their field, turnips grew well when they were tried, and the place is quite famous for the quality and quantity of potatoes which are raised. At present the stores are quite full of provisions, consisting of dried buffalo meat, pemican, and buffalo grease, which, along with buffalo robes and wolfskins, form the principal returns from this place. A small trade is also done with the more northern Indians who inhabit the thick woods for the finer kinds of fur. However all their trading is stopped for this year, as their goods are quite done, the supply sent never being equal to the demand.

December 22.—With Mr. Chastellain I ascended the hills on the opposite bank of the river, which, as I crossed, I found to be 430 yards wide. From the top of the hill I got a fine view of the surrounding country, my companion telling me the names of all the prominent points, for which I got bearings. By a double set of barometer readings I found the high ground to the south of Fort Pitt and across the river to average 500 feet above the river level, but several points at least rose to 150 feet higher.

December 23.—During my stay at Fort Pitt I was occupied engaging men and making arrangements for having horses supplied to us in the spring. This afternoon we were surprised by a sharp fall of rain, accompanied by a sudden rise in the thermometer for a few hours.

December 24.—This morning at daylight I started for Fort Edmonton, accompanying Mr. Simpson. Our party numbered four sleds including my own one. Our course lay to the west, keeping on the north side of the river, through very broken but pleasant-looking country; and we came to a small lake where we halted for breakfast at the distance of 10 miles from the fort. Five miles further, over very bleak country, brought us again to the Saskatchewan, which, as before, is hemmed in by high and almost precipitous banks. By taking advantage of the bed of a small creek we gained the river level without much difficulty, and continued to travel upon the ice for about 15 miles until we reached the mouth of Vermillion, or Paint River. From this place, to follow up the Saskatchewan to Edmonton would involve an enormous détour to the north, so here we intended to leave the river and take straight across the country to the west, and accordingly encamped for the night before ascending the bank and entering on the plains. As we had come very fast all day, and had made about 33 miles, both dogs and men seemed rather tired; but, as it was Christmas eve, we did all we could to enjoy ourselves under the circumstances. The night was bitterly cold. The thermometer at 4 p.m. (sunset) was 9° below zero.

December 25.—Ascending the left bank of Vermillion River, which flows from the S.W. and is about 60 feet wide, we took a westerly course across a wide stretch of prairie, passing many herds of buffalo on our way. To the west of us we saw a range of hills, which we reached in about four hours, and halted for breakfast just at their base. This range seems to be a continuation of the high ground which hemmed the Saskatchewan closely at Fort Pitt, and then seems to sweep to the south up the valley of Vermillion River, all these prairie levels having a distinct relation to the present river systems. We soon began to ascend rapidly through broken country, and reached an altitude equal to the highest land opposite Fort Pitt. For five or six miles we kept through very broken country on this high level until we came to where the hills seemed to sweep again to the S.W., so that it was necessary for us to make a very rapid descent of about 300 feet, to traverse an extensive plain covered with bluffs of poplar, and which seemed to stretch for 10 or 12 miles, until it is again bounded by the same range of hills sweeping round it, and passing, as if it were a promontory, to the north. We camped early to-day so as to kill a bull for our dogs. To-day there were well marked paraheilia, or sun-dogs as they are called, and at night a magnificent display of aurora.

December 26.—This morning we were off by 4.30 a.m., and had gone a considerable distance, when we saw fresh traces of Indians, and soon heard the bawling and screaming of an immense camp, all in a high state of excitement. Diverging from our path to pay them a visit, we found that they had succeeded in driving a large band of buffalo into their "pound" during the night, and were now engaged in slaughtering them. The scene was more repulsive than pleasant or exciting. The pound is a circular strong fencing, about 50 yards in diameter, made of stakes with boughs interlaced, and into this place were crammed more than 100 buffalos, bulls, cows, and calves. A great number were already killed, and the live ones were tumbling about furiously over the dead bodies of their companions, and I hardly

think the space would have held them all alive without some being on the top of the others, and, in addition, the bottom of the pound was strewn with fragments of carcases left from former slaughters in the same place. It was on a slope, and the upper part of the fencing was increased in height by skins stretched on poles, for the purpose of frightening the buffalo from jumping out. This is not needed at the lower part of the enclosure, as the animals always endeavour to jump up-hill. The entrance to the enclosure is by an inclined plane made of rough logs leading to a gap through which the buffalo have suddenly to jump about six feet into the ring, so that they cannot return. To this entrance converge lines of little heaps of buffalo dung or brush from several miles into the prairies which surround the clump of wood in which the pound is concealed. These lines serve to lead the buffalo in the required direction when they have been driven into the neighbourhood. When first captured and driven into the pound, which difficult matter is effected by stratagem, the buffalo run round and round violently, and the Indians affirm always with the sun. Crouched on the fencing were the Indians, even mere boys and young girls, all busy plying bows and arrows, guns and spears, and even knives, to compass the destruction of the buffalo. After firing their arrows they generally succeeded in extracting them again by a noose on the end of a pole, and some had even the pluck to jump into the area and pull them out with their hands; but if an old bull or a cow happened to observe them they had to be very active in getting out again. The scene was a busy but a bloody one, and has to be carried on until every animal is killed to enable them to get the meat. I helped, by trying the penetrating power of rifle balls on the shaggy skulls of the animals, with invariable success; and it is the least cruel way of killing them, as they drop at once. There are many superstitions connected with the whole business, and the Indians always consider their success in procuring buffalo in this manner to depend on the pleasure of the Manitoe, to whom they always make offerings, which they place under the entrance to the pound, where I saw a collection of Indian valuables, among which were bridles, powder horns, tobacco, beads, and the like, placed there by the believing Indians, only to be stolen by the first scamp in the camp who could manage the theft adroitly. In the centre of the pound, also, there is a tall pole on which they hang offerings. To which piece of idolatry I was in a manner accessory by giving them my pocket handkerchief to convert into a flag. While waiting to watch this scene, Mr. Simpson traded an additional dog for me from the Indians, and after an hour's delay we started again to the west, and soon entered the broken ground which we had seen bounding the plain yesterday. For dinner we halted near a clump of dead pines at the edge of a large swamp, in which I shot one of the oldest bulls I have seen, and only wish I could have carried away the skin of his magnificent shaggy head with battered horns. We soon after dinner came to a large plain, bounded by high hills on every side; those to the south being very high with a narrow strip of pine muskey running along its base. The plain, from the elevation we were on, looked as level as a bowling green, being about 10 miles across, and is evidently the bottom of a drained lake, as in many places water-lined terraces are visible at two different elevations, following up all the little valleys and along many of the hill slopes. On the north-eastern boundary of this plain there was an immense profusion of boulders, such as I have only seen equalled at the Missouri River at the Roche Percée. The whole of the extensive flat was covered with immense herds of buffalo, and as the afternoon was bright and fine, with just enough frost to keep the snow crisp, the scene was very enlivening, reminding one of a huge cattle fair at home. The banks of this ancient lake are very steep and about 150 feet high; their slope is regular like that of an embankment, but is cut up by deep ravines and gullies by the waters pouring off the upper plains in spring, showing that the material of which they are composed is very easily eroded. The lower part of the plain is swampy, and here a large creek takes its rise, which flows into the Saskatchewan. We now entered on a district of country exactly corresponding to the White Lakes that we saw between Fort Pitt and Carlton, forming what is known as the chain of lakes. We camped on the north side of the first lake, which is about six miles long, choosing our camp near where Mr. Simpson, who had gone ahead for that purpose, had killed a fine fat bull. For the last two days we have encountered much heavier snow than before, so as to require some of the men always to go ahead with snow shoes.

December 27th.—Shortly after starting this morning we reached the end of the first lake, which is separated from the second by a swampy track three miles in length. A conical hill forms a prominent object on the shore of the third lake. It is called the Hill with the Horns, from a singular stone on the top of it, and seems to rise about 300 feet above the lake. We halted opposite it for dinner, having gone 13 miles. It is from this lake that the Vermillion River rises, and flowing to the S.E. till far out in the plains, it makes an abrupt turn to the N.N.E. to join the Saskatchewan at the point where we left that river. During the afternoon we left the chain of lakes, and crossed a very hilly country, until we came to an immense swamp, on the further side of which we camped at a clump of poplar on the side of a hill known as La Butte Noir. To the south of this is a place called La Terre, where Mr. Simpson informs me there is a round hole, from which oozes a black unctuous mud, which they have never been able to fathom with the longest pole they could find. Here we met with the track from the Snake Portage, where the Saskatchewan is crossed for Lac La Beiche, a little trading post of the Company's, about 60 miles north of the river. By examination of the trail in the snow, Mr. Simpson concluded that a party had passed that day on their way to Edmonton.

December 28.—This morning we crossed a plain, with long grass, and clumps of red willows, for 14 miles, and passed a good number of buffalos. We then came to poplar clumps, and at last fairly entered the woods. North and west of this there are no plains except of small size, completely surrounded with woods. The track winds through these poplar woods, which seem to be denser in strips running N.E. and S.W., and passing several of these we camped near a clump called Le Jollie Bois.

December 29.—We were off by 5 a.m., and soon came in sight of the Beaver Hills, a low blue line to the S.W. of us, evidently thickly wooded. Making for its north extremity we crossed several creeks which flowed to the Saskatchewan, at one of which, named the Blackfoot Creek, we halted for breakfast at 9.30 a.m. From 11 a.m. to 4 p.m. we continued to the west and a little south, over country that is evidently very swampy at certain seasons, until we rounded the Beaver Hills, when we camped at a clump of pines. We had now only 20 miles to make to get to Edmonton, so that we made up our minds to be there for breakfast next morning. It was drifting snow all the afternoon, and bitterly cold;

but we had an excellent fire of pine wood, which, with the prospect of getting to the fort next morning, put us all in good humour.

December 30.—At 3 a.m. we were again on the move, and as we had now an excellent track, over which large parties with horse sleighs had been passing, we went along at a brisk run in the dark, keeping between S. and S.W. Just at daylight we arrived at a very steep bank, in descending which we came to the Saskatchewan for the first time since leaving it at the mouth of the Vermillion River, and on following it for one bend, we came in sight of Fort Edmonton, standing on a most commanding point, about 100 feet above the river. We were soon up the bank and within the palisades, and enjoying the hospitable welcome of Mr. Swanston, who had been so kind and attentive to us all at Fort Garry, and who since then had been sent up to take charge of the Saskatchewan district. We found quite a large party assembled there, enjoying the festivities of the season, some of them having come as far from the north and west as I had from the east. My journey from Carlton, a distance of 393 miles, had occupied me 13 days' travel, certainly a quicker trip than I could have made if I had been without the companionship of such an experienced traveller with dogs on the worst part of the route, which was after leaving Fort Pitt.

1858, January 9.—Until this date I have been engaged examining the environs, and writing letters for England, which leave to-day by the winter express which the Company send with their accounts at this season to Red River. The weather has been most singular, as, on the 3rd, what must have been a circular storm passed over this place, accompanied by a great rise in the temperature, with heavy rain, followed by extreme cold. The minimum temperature for the 24 hours ending 9 a.m. on the 3rd, was 36°, while on the 6th it was only − 14°. A good deal of snow had fallen, but this recession in the severity of the winter, short as it was, has cleared it nearly all away. All say that there is an unusually small fall this winter.

I have arranged with Mr. Swanston, who has most kindly volunteered his services, to have a meteorological register kept at this place during the spring, the observations to be consecutive with the minimum and air thermometer at least, even when I may be absent.

Edmonton, which is quite as large as Fort Garry, is wholly built of wood, and is furnished with strong bastions and palisades; the latter, however, being rather rotten to be a very sure defence. It stands on a high steep bank immediately overhanging the river, about 100 feet above the water. Along and below this point are large flats of rich land, only 40 to 50 feet higher than the river, which lies at the base of the higher bank. Both of these were at one time under cultivation to a considerable extent; but now the farm attached to the establishment, though the only one in the Saskatchewan, is of very small size, not exceeding 30 acres. On a hill behind the fort stands a windmill, in which the stones were made by splitting a granite boulder that was found near the spot, and these, as may be supposed, are not very serviceable. However, they manage, when they get a gale of wind, to grind some tolerable flour, quite enough to prove that, if the business was properly conducted, it might be a valuable source of support; nine-tenths of the little flour that is consumed in the Saskatchewan is brought either from Red River or all the way from England. As it is here that the boats for navigating the Saskatchewan are mostly built, 10 or 12 new ones being turned out every year, the Company have a larger staff of tradesmen and servants at this place than at any of the other posts of the district. In all they have about 50 employés here, and the usual population within the fort is about 150 souls. These are all fed on buffalo meat, and if there happens to be a good crop they get a certain small allowance of potatoes. The consumption of meat is enormous, amounting to two buffalos a day on the average. It is no easy matter to supply this demand, especially of late years, and the loss of horses from dragging the meat during the severities of the winter, and the number of men employed for this purpose, alone renders it a very expensive mode of feeding the establishment, although the first cost of the buffalo, when killed in the plain, is merely nominal. This year these animals are within a few days of the fort, and it is accordingly well off; but many years there is great scarcity, and even starvation here.

Edmonton must be considered as being in the wooded country, but in the immediate neighbourhood of the fort there is not much valuable timber. That used for the boat-building is brought from 10 miles to the west, and is the wood of the *Abies alba*. Once back from the river banks, which are everywhere high and precipitous, the country is rather flat, and covered with thickets of willow and poplar, and with a much larger proportion of swampy ground than I have seen elsewhere in the Saskatchewan. Seven to ten miles back on either side of the river are the same high grounds that seem to skirt it everywhere, forming as it were banks to an immensely wide valley. Those of the true river valley are 190 to 250 feet high, and at most places densely wooded. Whenever the present water channel sweeps close under the higher bank, however, sections are displayed which exhibit their structure. They are composed of horizontal beds of arinaceous clays, sometimes passing into true sandstone, generally in spherical concretions, and at others into clay shale. Many of these beds are highly charged with nodules of clay ironstone, which, when broken, are found to be full of comminuted fragments of vegetable matter. Included in these beds are various seams of coal or lignite, which seems to be of a very useful quality, as it is used to the exclusion of all other fuel in the forge at the fort. The smith, who is also collier, tells me that its quality differs much, according to the distance from the outcrop, especially if it be acted on by the flood water, which has a very deleterious effect on the beds.

Under the fort there are two seams of about 18 inches each, but on the opposite side of the river, close to the water edge, there is a bed 6 feet thick, and again another of 4 feet a little higher up the bank. In the middle of the 6-foot seam there is a very fine 6-inch parting of greenish magnesian pipe-clay, which works up into a lather, and is used by the women of the fort for washing blankets. At the bend below the fort I was struck by the appearance of the bank, which looked as if broken bricks and tiles had been tumbled over it, and on examination, found that the coal seam had been burnt out, and was represented by a few inches of orange-coloured ash, and that the tile-looking stuff was derived from the beds of clay that had been baked in the vicinity. As my principal object in visiting Edmonton was to engage half-breeds for next season, and hearing that those who lived at Lake St. Anns were at present off in the plains, I have arranged in the meantime to make a trip to the Rocky Mountain

House, which is situated about six days further up the Saskatchewan. With me I am to take my own man Foulds, and two of the Company's, all having dog trains like myself.

January 9.—Having received my provisions from the store, consisting of pemican, a little dried buffalo meat, with a small stock of tea and sugar, we started by crossing the river at 10 a.m. The track at once leaves the Saskatchewan, and does not meet it again till at the mountain fort. After four miles along a track cut through dense thickets, we came to the White Mud Creek, on the west side of which there is a high conical hill of the same name, after passing which we get into more open country, forming a succession of limited openings, clothed with very rich pasturage, in which the vetch grew with great luxuriance. This is a very common feature of the country round here. After making 17 miles, we halted for the night at the side of a gully we had been following for some time.

January 10.—Soon after starting this morning we crossed Ecapotte's Creek, and here, as everywhere in this district, I observed the immense changes which are worked in the appearance of the country by beaver. Wherever there is a hollow in which water could collect, this industrious animal seems to have applied his instinctive ingenuity to create a lake. Some of these beaver's dams are of extraordinary size, stretching for hundreds of yards, and sometimes 6 to 8 feet high. Many parts of the track which is used in summer, is cut through thickets with great trouble, and the manner in which the trail took advantage of every little opening, and then chose the shortest possible line when cutting had to be effected, was truly wonderful. As this was my first experience in really thickly wooded country, I soon got quite bewildered. On entering a long swamp, we suddenly came on a party of travellers, with horses and sleighs (which by the way were made just like dog sleds, only larger), and found it to be Mr. Brazeau, the Bourgeau of the Mountain House, who was on his way to Edmonton. He had been seven days on the journey, and said that they had been living all the time on rabbits, which were in great numbers this year. After a few minutes' conversation, each party proceeded on its way, Mr. Brazeau expecting to reach Edmonton that night. When we halted for dinner at a clump of pines and poplars, I measured one of the latter (*populus tremuloides*), and found it to be of the very unusual size of two feet in diameter. In the afternoon we traversed the Stones Indian Plain, which well deserves its name from being covered with boulders, which are rather rare in general in this district of country. We felt the want of snow a good deal now, many parts where the trail passed being quite bare, so much so that we set fire to the grass, just to say that we had done so, on the 10th of January. After coming in sight of the Pigeon Hills, on the west side of which is the Wesleyan Mission Station, under the care of Mr. Woolsey, whom I had met at Fort Edmonton, we reached the Bad Beaver Dam, near which we encamped for the night. This Bad Beaver Dam, as it is called, is a succession of beaver dams, which form a chain more than a mile long, damming up very extensive swamps. The night was bitterly cold, so much so that we lighted two fires and lay between them, to counteract the keen biting north wind, which continued to blow very hard, although the thermometer fell 20° below zero.

January 11.—This morning, keeping a little more to the west, our course hitherto having been S.S.W., we soon reached a range of hills, over which we had to pass. We entered them along a very abrupt gully, in which runs Weed Creek, called after the smoking weed, which is found in great abundance. Here I again observed the pine, with cones similar to those which I had observed at the Carlton Horse Guard. It seemed to be very plentiful wherever there was loose gravel soil on the ridges. Entering a narrow trail cut through very dense poplar woods, we continued for some hours passing over these hills, till at last by a rapid descent we emerged in a swampy tract of country, bordering a stream, where we halted for dinner. At noon the thermometer stood at −16°; but there was little or no wind now, so it did not feel so keen. Keeping for a few miles to the east of south we crossed Pigeon Creek just where it enters the valley of Battle River. This river, which flows into the Saskatchewan at the Eagle Hills, takes its rise in great swamps and lakes, which lie to the north-west of this place. Its valley here is about 1½ miles wide, but only 100 feet deep. From the willow-covered flat through which the stream winds with a very tortuous course, numerous lagoons show that it must frequently have changed its course, and yet it seems to be very sluggish. It is about 40 feet wide, and the immediate banks are 20 feet high. We crossed this valley very obliquely, and camped at sunset on its western side. The thermometer at sunset was −17°, and to protect us from the cold wind this evening we made a shelter of poles, on which we stretched our sled wrappers. I took a meridian altitude of Jupiter at this place, and found the latitude to be 52° 41′ N., having travelled by the trail 70 miles from Edmonton.

January 12.—We soon came to Beaver River this morning, a stream similar to Battle River, which it joins a few miles below where we crossed it. We then crossed a wooded ridge, and passed to the south of Prince Lake, which also sends a creek to Battle River, and entered on a track of high broken country, from which the timber seems to have been burnt, and, as we broke one of the sleds, had to halt for dinner while it was being mended. Descending from the high ground we came to Gull Lake, which seemed to be a great length to the south, but we merely crossed over its northern extremity. We had now entered the river system of the South Saskatchewan, as the stream from Gull Lake flows into Red Deer River. After crossing the lake we again ascended rapidly, and at dark encamped beside the enormous root of an upturned tree, making the best winter camp I have yet seen, as we had plenty of very large timber for our fire, and lots of pine brush to sleep on. I have observed to-day on crossing all the ridges, which generally run north and south, that while the eastern side is clothed with spruce, their west slope is clothed exclusively with poplar, and that the vegetation has much more variety on the western side. Also, I remarked the number of pendent wasps' nests in the west slope, all of which facts must be connected with the prevalent winds modifying the general climate. This evening, although the wind was from the S.W., the thermometer stood at −16°.

January 13.—Following a very rugged road for about an hour we came to the valley of Blind River, which flows to the south-east to join Red Deer River. It is 25 yards wide, and has a valley exactly like that of Battle River, the upper part of which encloses a lake about the size of Gull Lake, which is seven or eight miles long. We now marched for a range of high hills, having three conspicuous rounded knobs, which are called the Medicine Lodge Hills, from their being a favourite site among the Indians for having their great festivals in spring. These hills are about 500 feet above

the plain, and in passing through them we followed a very singular valley, just as if a river the size of the Saskatchewan had once occupied it, but now without even a creek, only becoming swampy towards its lower end, where it opened out on an extensive plain, along the western border of which runs Medicine River, the largest stream we have seen since leaving the Saskatchewan. It flows south to a place called the Forks, where Red River receives large branches, and after crossing Medicine River we passed over high plains, with no timber, but clothed with a kind of dwarf birch (*B. pumilia*), only about one foot high, which forms a thick low copse like heather. Just before evening, in passing over a high knoll, called Gabriel's Hill, we came in sight of the Rocky Mountains, and I got my first view under rather unfavourable circumstances, as the sun had already set behind them. However, by ascending a hill to the south, while the men were making their camp by a clump of small trees, I was able to see their outline bounding the horizon from south to west by north, but still at a great distance. What struck me most was that all the plains should be so white with snow, but that they seemed black, and only having snow on them in streaks and patches, notwithstanding the season and their great altitude.

January 14.—Being anxious to reach the fort to-day, we started some hours before daybreak, and by sunrise had crossed the East Hill Creek, and were now following a well-beaten track across swampy plains in full view of the mountains. The effect was quite exhilarating as they became lighted up rapidly by the pinky hue of morning, and then I found that the black appearance which they presented the evening before arose from the immense proportions of abrupt cliffs which they present, on which the snow cannot rest. We got quite excited with the view, and went on without halting for about 30 miles, when my men said we were about seven miles from the fort, and they must halt and wash; so they made a fire and spent fully an hour dandifying themselves to appear before their friends. Crossing several large muskeg lakes, and then passing through a belt of heavy timber, we reached the Saskatchewan an hour before sunset, descending to it by a rugged gully that led down the side of Sandstone precipice. We followed up the river about two miles, upon beautiful clear ice, but which is full of open holes from the rapidity of the current, at one of which, caused by a rapid, we had to leave the river and pass through the woods, when we emerged in a large plain on which stood the fort. It is a roughly constructed group of log huts, consisting of a dwelling house, stores, and workshops, and all surrounded by a palisade. The woodwork is very old and rotten, and the whole place is tumbling to pieces. I established myself in one of the rooms in the dwelling house, while the men found quarters for themselves in the huts. There were many Indians camped round the fort, waiting for the return of Mr. Brazeau, who had promised to bring up a further supply of rum with him from Edmonton. The residents here, which at this time were principally the women only, were badly off for food, the store of dried meat being nearly exhausted, so that we had all to live on what was little better than the sweepings of the stores.

January 15.—After breakfast set off to a hill about two miles to the west, in order to get a view of the mountains.

After passing into the woods behind the fort, the trail led through a large frozen "muskeg," in which was a heavy growth of spruce and larch. The terrace level on which the fort stands is 20 feet above the river, and in proceeding back a slight descent is made to the "muskegs," which lie along the base of a second terrace like the first, composed of shingle, made up of fragments of quartzite gneiss, and of a deep blue and also light fawn-coloured limestone. This second terrace is covered with pines, and being free from underwood presents a fine open glade, easily passed through, quite a contrast to the woods of spruce, which are almost impenetrable. On reaching the hill I found it to rise about 80 feet above the second terrace level, and nearly 150 feet above the river, and as the timber had been all burnt from its surface it afforded a commanding view. The surrounding country presented a rolling irregular surface, everywhere densely clothed with dark green pine forest, and having the south-west horizon bounded by the abrupt and bold outline of the Rocky Mountains. I made a careful sketch of their outline, and took bearings of the different peaks. The view of the range occupies 84 degrees of the horizon, from N. 192° E. to N. 276° E. The greatest angle subtended by any one was 32 minutes. In front of the main range, that seemed to be about 45 miles distant, there is a lower but well marked range, which is wooded to the top and only about 25 miles off. The point where the Saskatchewan cuts through the near range is due west from this, and is much further distant, owing to the north-west trend of the mountains. On returning to the fort I found that a number of Blackfoot Indians had arrived, and a group of them had been watching me from the distance very curiously, as they thought I had gone up the hill to have a "medicine dance."

Three hundred yards below the fort there is a rapid in the river channel, and a fall of three feet, caused by ledges of greenish sandstone that cross the stream. A few hundred yards below this the river receives a large tributary, called Clear-water River, on the banks of which, as well as on those of the main stream, high sections of the strata are exposed. At the height of 60 feet above the stream beds of shingle gravel and sand occur, overlying all the other beds, and clearly forming the remains of a freshwater deposit similar to the terraces which occupy the valley of the river. The layers of pure sand which occur in this deposit contain fragments of the stems of sedge-like plants. The irregularities in the denuded surface of the underlying beds often form deep depressions like the "pot-holes" found in the chalk, and which are filled by the shingle deposit.

Judging from mineral composition alone, there are three groups of beds exposed in the sections in this neighbourhood.

1st. Massive cliffs of coarse-grained sandstone, composed of angular grains of quartz, cemented by calcareous matter in small quantity. Just below the ravine, where the Edmonton track comes down on the river, there is a cliff of this sandstone 90 feet in height. The lines of stratification are very obscure in this deposit, being confused by joints and false bedding.

2nd. The next group is that exposed at the rapid, and is composed of a green argillaceous sandstone, which by weathering always gives rise to sloping banks, from which concretionary masses protrude. These beds are generally horizontal, but sometimes have a rapid dip. They seem to pass into the last group, and sometimes to fill depressions in it.

3rd. This consists first of 10 to 12 feet of hard blue shale, with ironstone bands and concretions.

Under this shale lies a bed of soft argillaceous sandstone, with concretions, somewhat resembling group 2nd. Under this bed is found the lignite, with shales, and except close to it, where these shales are carbonaceous, their colour is of a light greenish grey. In the shales are found plant-impressions, among which is the "*Taxites.*" At some points there are two beds of coal, but they are very variable and local. The lignite found here is better adapted for fuel than that obtained at Edmonton.

January 16th.—With a train of dogs borrowed from the fort, as my own were too tired, I started up Clear-water River, travelling on the ice for about 12 miles. The banks of the river were high and steep, and present sections of the argillaceous sandstone, sometimes forming very picturesque and ruinous cliffs, which peep out from among the dark green pines. The timber is good everywhere, but never of a large size. On the high grounds I observed here what I think must be the *Pinus resinosa*, although all the pines are termed by the Company's servants *le Cyprés*, which, however, is more properly the *Pinus Banksiana*. The tree which I suppose to be P. resinosa I have never seen lower down than the Saskatchewan. It rises with a beautiful straight trunk, with light branches, to the height of 70 feet, its trunk being often 16 inches in diameter, and finely tapered like a mast. The cones and foliage are somewhat like another pine, which grows abundantly on the shingle terraces. This tree answers nearly to the *Pinus inops*, or New Jersey scrub pine, but it presents a more sturdy habit, and also several peculiar characters. It is the same that was noticed at the "Horse Guard," near Carlton; but from that point it was not again seen along the Saskatchewan till after leaving Fort Edmonton, and never in any quantity till near the Mountain House. It seems to grow only on loose sandy soil, and prefers the surface of the terraces. Besides these pines, I observed here, for the first time since leaving the canoe route, the silver spruce (*Abies balsamea*) or Le Sapine of the voyageurs, with its beautiful foliage, dark green above and silver below. It is not a common tree here, however, the mass of the forest being still made up of the white spruce, canoe birch, and poplars, along with the pines before mentioned.

On returning to the fort at dark I found more Blackfoot Indians had arrived to trade, so that the Company's people were now much relieved, as they were almost out of provisions. As the buffalo were far out in the plains, owing to the open winter, the Indians were themselves badly off for provisions, as in coming to the fort they had nearly consumed their store, owing to the length of the journey. The desire for rum, however, soon induced them to part with some of their scanty supply, and now the environs of the fort presented a dreadful scene of riot and disorder. The Blackfoot Indians are more easily rendered violent by the liquor than the Crees, so that it is always well watered for them, even being diluted to the extent of 11 of water to 1 of spirit; and yet the trade is always one of great trouble and even danger to the Company's servants.

January 17th.—To-day I travelled up the Saskatchewan River for about eight miles, till stopped by the broken hollow ice which had formed, owing to the great rapidity of the current. As the ice in the river was still open in many places it was very dangerous, especially in the neighbourhood of the high cliffs, where there are generally strong eddies. The river opposite the fort is 130 yards wide, and when it is lowest is from two to three feet deep. At every bend fine sections were exposed of the lignite group. The river seems to be winding about in what had been an immense valley cut through these strata, and then filled up with beds of shingle, which had again been scooped out and formed into terraces, and, finally, the present river valley had been formed, cutting through not only these terraces but also the underlying strata in some cases. Thus the shingle terrace facing the bank of the river is seen to inclose patches of the lignite shales, in which have been worn deep furrows prior to the deposit of the shingle. Some sections show the remarkable manner in which the passage takes place in the mineral structure of the beds. On the left bank of the river we have the bank 80 feet high, and consisting of—

Drift with boulders.	Lignite, variable.
Shingle.	Indurated shale (Taxites).
Iron shales.	Lignite, 1 foot.
Lignite, a few inches.	Ironstone shale.
Indurated shales.	Lignite, very irregular, but compact.
Lignite, a few inches.	Concretionary sandstone, thick bedded.
Sandy clay.	River level.

200 yards below this, in the same cliff, nothing but hard blue shales are exposed, and 50 yards further on these pass into the soft concretionary sandstone, and then again into the mixed beds. There are a few dislocations in the strata, but these do not affect the beds more than a few feet. Six miles above the fort the banks are again formed of high cliffs of the coarse-grained sandstone, group 1, after which they are again low, and the surrounding country is flat. When I got back to the fort I found that Mr. Brazeau had arrived, having ridden the last 110 miles, all alone, in two days.

January 18th.—Rode to the White Mud Hill, so called because here they have a pit from which they dig the white calcareous mud used at all the Company's posts at the Saskatchewan as whitewash, and for which purpose a large quantity is taken down in the boats every spring. I found this deposit to rest on the top of the sandstone beds which form the high cliffs I saw yesterday six miles up the river, and seems to form a local mineral variety in the shingle deposits. The country is very beautiful along the north bank of the river, the heavier timber being often replaced by dense thickets of poplar. In one of these we observed the young trees, some of them several inches in diameter, bent and pulled about in all directions, and from the scratchings on the bark I was inclined to believe my guide, who said that it is done by the young grizzly bears. He said that they do this in play; and certainly they could have nothing to seek in pulling down poplars which yield them no sort of food.

There is very little known of this part of the country during the summer months, as the fort is abandoned every spring until the following autumn. When the Company's people first arrive, which is generally in October, they get plenty of Wappiti and other kinds of deer round the fort, and not far distant moose and rein-deer are always to be found.

The prairie antelope only comes near this place in spring, when it seeks shelter in the woods from the wolves during the breeding season on its return from its southern migration.

The Indians say there is a greater display of wild flowers in this neighbourhood than in any other part of the Saskatchewan, and that butterflies and other gaudy insects are very abundant, whereas in other parts of the country we have found them unduly rare. Sometimes before abandoning the fort in the spring, the Company's servants have planted potatoes, and sown barley and turnips; and what was left by the Indians of the resulting crop until their return in the autumn, was sufficient to prove that the soil and climate are very favourable to agriculture: and several other circumstances lead me to think that the latter is even more favourable than that at Edmonton, notwithstanding that place having 800 feet less elevation. Every day we had here soft winds from the west, which cause a rise in the thermometer, sometimes even to above the freezing point, and the winter is said to be always much milder, and the spring earlier, than places further to the eastward.

January 19th.—This morning I held a palaver with the chiefs of the Blackfoot bands, who are trading at the fort. Rumour travels quickly through the Indian country, and they had already heard of our Expedition, and were surmising the most absurd reasons for our intended visit to their country next year; so I thought it right to give some account of ourselves, and thus to gain the good-will of the chiefs by allowing them to have the information to distribute to their people. Only a few of them came, however, the rest being still the worse for their debauch. When the Blackfoot Indians come to a fort, one chief always remains sober, to keep the peace, and in return receives a gratuity of rum to take away with him, so that on returning to his camp he may make up for his temperance. Without this very sensible precaution there might often be bloodshed, either among the Indians themselves, or between them and the people of the fort. The sober chief of this band, called Pee-to-pe, or the Perched Eagle, seems to be a fine fellow, and insists on sleeping on the floor in my room, partly as a compliment to me, but more because he will consider it an honour to brag of among the others afterwards. At night one of the chiefs I spoke to in the morning harangued the other Indians from the palisades of the fort, upon the necessity of their good behaviour to us white men, reminding them that they get nothing but good at our hands, and not to confound us with the "Big Knives," as they term the Americans, who, he said, do not treat them well, but are deceitful. This was alluding to the Missouri traders, where the great competition of rival companies places the poor Indians on a very false footing. He then repeated to them all I had said about the Expedition.

January 20th.—Early this morning, 10 or 12 of the principal Indians, having now recovered themselves, came crowding into my little room, to hear what I had to say, and to receive papers, which, by the advice of Mr. Brazeau, who has had great experience among the Blackfeet, I had prepared for the different chiefs. These papers merely mentioned the name of each, and stated that he had promised to aid us in every way in passing through their country; but the main benefit we would derive is from each having a note of the character that particular Indian bore among the traders at the fort, so that we might be better able to judge which to trust to as guides, and also that we might at once recognize the real chiefs on meeting them in the plains, which is not always an easy matter, and to mistake is sure to give offence. With these papers I also gave to each a little present of tobacco and trinkets, and also sent by the hands of the others copies to some of the principal chiefs that were not present, trusting to Mr. Brazeau and his interpreter, Felix Monro, who is related to the Blackfoot tribe, to discriminate the proper persons.

The following is a list of those who got papers:—

A-coo-on-nistam - - - The Main Tent-pole.
Pee-to-Pe - - - - The Perched Eagle.
O-nis-teh-ta-mi-soo - - - The White Calf that ran up the hill.
Ma-coo-yeh-o-mabi-kan - - The Swift Wolf.
A Ca-oo-mah-ca-ye - - - The Old Swan.
Natoos-a-pee - - - - The Ancient Sun.

These two latter are the principal chiefs of the tribe.

Natoos - - - - - The Sun.

This also means the medicine man, and was the name always given to me by the tribe.

O-nis-teh-in-na - - - The White Calf.
Cut-teh-saks-se - - - The one that sits in the tent and never goes out.
Ki-en-och-in-ass - - - The Bear's Hip-bone.
Ne nēs ta coo - - - - The Chief Mountain.

The above are Blackfoot chiefs.
Also to one Sarcee chief,

In-nux-in-na - - - - The Little Chief.

To one Peagan,

A-pah-mah-can - - - The Swift Ermine.

And to one Blood Indian,

Mee-ta-schō-ta - - - The Great Rain.

Pee-to-Pe then made a speech of the usual kind, lauding up their nation, and abusing the Crees as always being the aggressors in their quarrels. He is considered a great war chief of the tribe; and I have promised that, if he can join us, he will be accepted as guide. His address, which was long, was translated to me after each sentence by the interpreter. He commenced by saying that his tribe saw so little of the whites, that they might not know how to behave so well as other Indians, but that when we come among them, we will find them a great people with singleness of heart. That there were no doubt some of the young men who would do us harm if they could, and steal our horses; but that the chiefs would prevent them, as with them the chiefs were not like those of the Crees, but had power over their young men. Then followed a long abuse of the Crees, to the effect that, although they had lived for a long time among the white men, they did not seem to have profited much, as they were just like wild dogs, that sought to bite whenever you turned your head, and that only fear kept them from doing harm; but that his people were more noble, and had large hearts that could show hospitality.

The Blackfeet appear, from those I have seen, to be finer and more powerful men than the Crees

their women also, as a rule, are much prettier, or less repulsive, I should rather say. They are very fond of fine dresses trimmed with the fur of the ermine and otter; but I had no opportunity of seeing them in their finery, as they make it a rule when they come to a fort, of dressing as meanly as possible.

In-nux-ina, the Sarcee chief, is a very quiet Indian, having lived a great deal among the half-breed trappers. He is much respected by all the Slave Indians, which is the name given to the Blackfoot tribes by the Crees, viz., Blackfeet, Blood Indians, Fall Indians, Peakuns, Little Blankets, &c. The Sarcees are also grouped by the traders along with the Slave Indians, but they are really a branch of the Athabascan Indians, who live far to the north.

January 22nd.—I made a trip into the forest to the west, and remained out two nights looking for a Stoney Indian that is said to know the Rocky Mountains well. We saw traces of him, but missed him. On returning to the fort, however, we found he had arrived with the news that he had killed two moose-deer. I could not manage to pronounce his name, which means "the one with a thumb like a blunt arrow," but he is said to be the best hunter among the "Stoneys," and once, in a single season, to have killed 57 moose-deer. He promised to meet me next summer in the mountains, and act as my guide.

January 26th.—As there was so little snow on the prairies I resolved to return upon the ice of the river, although the distance is of course very much greater. Brazeau asked my men to take some spare dogs down to Edmonton, so that on starting we found ourselves with a train of four dogs each, or 16 in all. The resources of the fort were so low, however, that we only could get three days' provisions for ourselves, consisting of 20lbs. dried buffalo meat, and a small quantity of the store sweepings and scraps of parchment for the dogs, only enough for one meal for them. We therefore felt that there must be no loitering, as we had very slight hope of getting game, and the distance is over 200 miles.

Starting at nine o'clock this morning we found the ice smooth and sound, excepting at the sharp bends of the river, so that we were able to travel at between four and five miles an hour. As the views, or straight portions of the river valley between each bend, are of good length, and the angles they make with one another are decided, I had no difficulty in mapping the river with the compass as I went along. During the first 20 miles we passed frequent sections of the sandstone and clay strata with lignite, but gradually the main valley got wider, and the immediate *silt* banks increased in elevation till they were 50 feet above the river, and formed extensive well-wooded flats.

In the afternoon the coal group, with the same characters as at the Rocky Mountain House, were seen, dipping with a considerable angle to the N.E. A section of these one mile in length, showed the group of sandstones and shales to have a thickness of 300 to 400 feet.

Before camping we passed the mouth of Baptiste's River, which is a large tributary from the S.W., the course of the river all day having been northerly. It is very irregular in its width, at times wide and studded with alluvial islands, and at others contracted to 158 to 200 feet, and confined by high banks. We halted at 6 p.m., having made 37 miles. The thermometer at nightfall was 25°.

January 27th, Wednesday.—Started at 6.30 a.m., the thermometer being 19°. Pass a number of sandstone cliffs, with ledges that cause rapids, so that the ice is much broken and unsafe, and our progress is in consequence often very tedious. These sandstones have a slight dip to the S.W., and after ten miles we again came to the lignite or coal group. These were exposed in a cliff 140 feet high, the upper 50 feet being of light yellow sandstone without any lines of bedding. Below this a group of shales and earthy green sandstone, the latter predominating more towards the lower part. The lowest 50 feet is entirely concretionary sandstone.

We halted at noon, after making 20 miles upon an enormous island of driftwood, one of many that block up the centre of the channel, and which we set fire to, which raised such a conflagration that we were glad to escape from the heat. Five miles further on the river became hemmed in by lofty precipices of sandstones, about 150 feet high, and which I called "Abram's Gates," after my guide, who had been talking of this wonderful place ever since we started. The sandstone is coarse-grained, in thick strata that present much false bedding. Two miles further brought us to the junction of the North Fork, or Brazeau's River, a stream 140 yards wide at its mouth, and which is said to rise in the Rocky Mountains. In the sections along the river banks the sandstones are getting more rare, and the strata are more frequently composed of clay shales. We also began to see large boulders in the bed of the stream. We passed the site of an old trading port called Biguireil Fort, which had stood on a rich alluvial flat that is now covered with a heavy growth of timber.

We had a good deal of trouble getting past several great rapids, where there was much false ice, through which our dogs broke several times.

We camped at 6 p.m., having made 41 miles during the day. At nightfall there was a little snow, and the thermometer stood at 18°.

January 27th.—We started with a fine clear morning, the thermometer being at 1° at 6 a.m. The river now changes its main direction from a northerly to an easterly direction. On the sloping banks there is now a good deal of poplar mixed with the pine forest which has hitherto predominated. Before halting in the middle of the day we passed a sloping bank of white marlites that had been cut by ravines into a succession of pyramids. By night we had made a distance of 51 miles, having continued travelling for several hours after sunset.

Our camp was on Goose Island, where the brigade of boats generally halts, the night before reaching Edmonton, when running down stream in spring.

Our dogs were now like a pack of wolves from hunger, so that we had to tie up some of the worst of them to stakes to prevent them tearing one another. The thermometer at sunset was 3°, and at sunrise 5°.

January 28th.—We travelled very fast all this day. Soon the high valley banks retired to a distance from the river, and the immediate river banks became low and swampy, and the tortuous course of the channel made it appear as if we were traversing an ancient estuary or lake bottom. At noon, when we halted, the thermometer was 28°. Soon after again resuming our march, we passed the old White Earth Fort, the chimneys of which are still standing. The country is very beautiful here, and it is a

favourite place for the half-breeds sending their horses to spend the winter, on account of the fine pasturage. The river below this point takes a small bend to the south-east, and suddenly becomes confined in a narrow valley with banks 200 to 300 feet in height, and exhibiting sections of the same nature as those at Edmonton. There are coal and shale in the upper part, with ironstone bands; then concretionary sandstone. At one point in this bed occurred a seam of very fine compact coal, three to four feet thick, which was traced for a considerable distance. By nightfall we had again made the same distance as yesterday, namely 50 miles, but as we had nothing to eat, and our dogs would only get worse by delay, we resolved to halt only for a few hours and then travel on all night. We started at 9 p.m., and found that, from the river being so closely hemmed by high banks the snow was so deep that we had to use our snow shoes for the first time. There was a curious haze in the air, and about 3 a.m., there was a magnificent display of lunar parahelia, there being three distinct bands of light: first, the ordinary fog ring round the moon; second, a horizontal zone intersecting the first ring at the position of the mock moons, and completely girdling the sky parallel with the horizon; and third, a band of light passing through the zenith, which where it intersected the horizontal band also produced mock moons.

January 29th.—At 7.30 this morning we reached Edmonton, having in the last 26 hours travelled 90 miles from the Goose Island, making in all 212 miles from the Rocky Mountain House.

We were all very much knocked up, of course, but hunger and fatigue soon disappeared under the kind attention of Mr. Swanston, who is an old and experienced traveller, and knows the proper mode of treating such cases.

February 6th, Saturday, Fort Edmonton.—The weather has been very changeable at this place throughout the winter. On Monday last and during the following night there was a heavy fall of snow, which only lay a few hours, when rain and warm wind from the south-west succeeded and cleared it away completely. To-day, however, it is again cold and dry, with a north-east wind. Influenza is very prevalent among the people of the fort; there have only been two deaths in the community, however, viz., a Norwegian who died in a fit of drunkenness at Christmas time, and an infant from hæmorrhage. Mr. Swanston kindly gave me the following census of the population of the fort, which contains as a curious item the quantity of buffalo meat that is served out each day.

Statement of the Daily Expenditure of Buffalo Meat at Edmonton House.

	Inhabitants in each House.			Total number of Persons.	lbs. of fresh Meat for each Family per diem.
	Men.	Women.	Children.		
Galiman's House	1	1	–	2	12
Short's „	2	1	3	6	26
Raymond's „	2	3	4	9	40
Cameron's „	2	2	1	5	26
Cunningham's „	–	1	4	5	12
Finlay's „	1	1	5	7	18
Laderoute's „	2	1	5	8	40
Dumar's „	2	2	6	10	36
Savard's „	–	2	5	7	18
Salois'	1	3	6	10	32
Cartouche's	1	1	5	7	22
Hudson's	3	1	4	8	44
Norwegians, 1st	4	–	–	4	32
Norwegians, 2nd	6	–	–	6	48
	27	19	48	94	406
Absent in the plains	15	—	—	15	120
	—	—	—	109	526

Edmonton House, 2nd February 1858.

Goître is very prevalent among the residents here and at the Rocky Mountain House, but in a modified form, and I have only seen one case where there is any approach to cretinism. I tabulated the details of 50 or 60 cases, but have not discovered any one condition of habit of life that is common to all who suffer from this complaint. The only curious feature seems to be that children born at one fort are never attacked till removed to the other, and it again disappears on their return to their native place.

The fort assumed a lively appearance this afternoon from the arrival of the hunters from the plain with 40 horse sleighs loaded with buffalo meat. There were 18 men, and the horses were all half-broken animals that had been brought from the mountains at Jaspar House the previous summer.

February 12th.—The weather is now extremely cold, the thermometer ranging 20 to 30 degrees below zero. As I wished to see the mission at Lake St. Anns, I seized the opportunity of accompanying Sinclair, who was going there on business of the Company's. The track runs nearly due west from Edmonton through low willow and poplar copse and occasional pine woods for 50 miles. We travelled with a horse sleigh and slept one night on the road. This was the coldest night I ever camped out, the thermometer at Edmonton falling to —47°, and the one I had with me, being a mercuried one, was quite frozen.

At Carlton, 400 miles to the east, Lieut. Blackiston, I have since found, considered that the temperature fell that night to 54°.

February 13th.—The morning was very bitterly cold, and before we reached the mission we had to cross the lake, which is six miles wide, and in the course of doing so both Sinclair and myself got our faces frozen.

We found the priests, M. Le Combe and his coadjutor nearly alone, the population of the settlement being absent in the plains hunting buffalo. There are two villages, each with 30 to 40 houses, but there is very little ground under cultivation. Barley, potatoes, and turnips are the crops that succeed best, and wheat has never been raised. There is some fine land round the mission station, which is on the west shore of the lake. The great supply of food is from the white fish that swam in the lake (Coregonus albus). These fish, which are delicious eating, are of an average size of 4 lbs., and are obtained in the autumn and during the winter in vast numbers. Two years ago the quantity caught and stored by being frozen at the commencement of winter was 40,000, and these were caught in five days. The stream and lakes around this place abound with beaver, and the woods with martens, musk, fisher, lynx, and other fur-bearing animals.

February 14th.—This being Sunday we attended the little chapel attached to the mission, which is neatly built of wood, with a spire and bell. The attendance was small, and, the thermometer being at −20°, it was bitterly cold work, so that the priests had to officiate in their great coats and mittens. In the afternoon I explored the shores of the lake, which has a superficial extent of 30 to 40 miles, travelling in fine style over the smooth ice with M. Le Combe's train of dogs.

February 15th.—Taking leave of the kind and hospitable priests, we returned to Edmonton, and by changing our horse at the guard as we passed made the whole distance in one day.

February 19th.—This is the first day the thermometer has been above zero since the 7th, but it is only 2°.

February 25th.—The weather has been broken and stormy for some days, but now it is unnaturally warm. We are sitting this evening with the windows open and our coats off, and were without a fire even at breakfast time. The thermometer at 2 p.m. was 65°. The snow has all disappeared, several small streams of water running, and the ground is thawed to a depth of six inches.

Some Indians arrived to-day from the Beaver Hills, where they have killed six moose-deer within 10 to 20 miles from the fort. At one time they were very common in this district, and formed a sure source of food for the traders, but for many years they have almost disappeared.

March 3rd.—At this time I took a series of observations of the depth to which the soil is frozen, and which are published separately along with the other meteorological observations.

March 6th.—Have been taking advantage of the open weather to examine the section of the lignite strata which are exposed along the river. The thermometer in the sun, but freely exposed to air, reached 70°, which is very unnatural for this climate so early in the season, and cannot fail to do much damage by prematurely forcing the vegetation.

March 7th.—This morning I started with a guide, and Peter Erasmus, the Rev. Mr. Woolsey's interpreter, to endeavour to engage men for the Expedition from among the band of "freemen" that are at present travelling in from the plains to Lake St. Ann's settlement. We travelled with horses, having a spare one to carry our blankets and kettles. Although the snow has almost entirely disappeared from the country, and in the afternoon the ground became slushy and wet, still in the early part of the day the tracks are very bad for the horses, as the pools of water and the trodden snow is then hard frozen. After crossing the Saskatchewan River on the ice, our course was at first easterly over the Beaver Hills, which are covered with willows and poplar, but do not rise to any great height. After 10 miles we turned to the south-east, and commenced to traverse very inviting country, more so indeed than any I have seen since leaving Carlton. Hitherto we had passed over swampy ground, but now the surface was dry and undulating, and in the hollows are lakes, some of which are of good size.

Judging from the dry stubble of last year's plants, the vegetation in summer must be very luxuriant, and all the elements of good pasture abound. In the afternoon we got into some open country, and travelling briskly reached the tents of the freemen's camp about an hour after dark, having travelled 40 miles from the fort. The tents were pitched beside Hay Lake, which is a few miles in extent and within four hours' ride of Battle River. Only half of the party had got thus far on their return, as they were heavily loaded with the proceeds of their hunt, but the rest were expected to pass this place next day, so we resolved to wait before beginning negotiations. However I did business so far as to engage one man named Plant, who very kindly gave us tent-room for the night.

March 8th.—About 11 o'clock the rest of the band arrived, forming a motley troop with loaded horses and dogs, and travelling in a style hardly different from Indians. The rest of the day was spent in winning the good will of their old chief Gabriel Dumont, who has repeatedly crossed the Rocky Mountains, and can also talk Blackfoot; and further when I succeeded in getting him to consent to act as guide for the Expedition, I had no difficulty in filling up my complement from among the young men. He gave me much information about the country to the south, and about the mountains, which I noted at the time, and which proved of much use to us in organizing our plans, but has of course been superseded by our own observations.

We remained with the camp till the 10th morning, a few miles nearer home each day, when we left them, and by a smart ride of seven hours we reached the fort. I had got a list of 19 men who were willing to go, and from which I only wished to choose 12, after consulting with Mr. Swanston, who knew all their characters. They all seemed to consider the service as a dangerous one, and were very particular in stipulating that the party would be sufficiently numerous and well supplied with ammunition.

The band was about 200 in number, including women and children. There were 40 tents, which were merely Indian wigwams of buffalo skins sewed together and stretched over poles.

Their habits differ very little from those of the natives, except that their dress is all of European manufacture. Many of the men could talk French, but all prefer to talk the Cree language. The men are generally handsome, well-made fellows, but very few of the women are even comely. They were

very hospitable, and we had many feasts of the finest buffalo meat, but the great delicacy that was at this time in season was the musk rat, which they were spearing in numbers through holes in the ice on the lakes. I found them rather oily and mousey-flavoured for my taste, but not much more so than the flesh of the beaver, which has always been much lauded.

March 15th.—I started this morning on my return to Carlton, intending to continue down the river on the ice for the whole distance, if possible. Besides my own man, Foulds, I had the services of one of the Company's men, who was returning to Fort Pitt, and each of us drove a train of dogs. The ice was very smooth and free from snow, and in anticipation of this I had borrowed a pair of skates before starting, so that while my companions were slipping and tumbling, I got along with great ease. The coal was still seen cropping out in the river banks for five bends below Edmonton, associated with the shales and green sandstone as before. The river has a northerly course for 35 miles below Edmonton, which was the distance we made before nightfall, when we encamped at the mouth of Sturgeon River, which rises from Lake St. Anns.

March 16th.—A good deal of snow had fallen during the night, so that I could no longer use the skates. In the forenoon we passed a party of "freemen" who were encamped beside the river. They said that we should see buffalo in the course of the day, as there were large herds not far distant, on the plains above. The Saskatchewan in this part of its course receives several tributaries from the north-west, where there are many large lakes scattered along the watershed which divides it from the Mississippi or English River. All these lakes abound in "white fish" (*Coregonus albus*), and, in consequence, that part of the country is the favourite camping ground of the more industrious fur-hunting portion of the Indian population. At one of their lakes, called "Lac la Beiche," which lies 70 miles north of the Saskatchewan, and sends its waters by a river of the same name to the Athabasca, the Hudson's Bay Company have a small trading port, and there is also a settlement of freemen, and two mission stations, Roman Catholic and Wesleyan. As we were travelling along in the snow-drift we met the Wesleyan missionary, Mr. Steinshaw, accompanied by one man, and travelling with dogs to Edmonton, to meet Mr. Woolsey, his fellow-labourer at that place.

Mr. Woolsey's mission station is properly out at Pigeon Lake, 50 miles south-west of Edmonton, where the Thickwood Crees and Stoneys have made a few attempts at agriculture; but the Company's officers always invite both him and also the Roman Catholic missionaries to spend as much of their time as they can at the fort for the benefit of their own employés.

March 18th.—The snow still continues to fall, and is now a foot deep on the ice, so that our progress is slow from the difficulty which the dogs experience in dragging the sleds. For the two last days the river valley has been narrow, with precipitous banks 200 feet in height. Occasionally, sections of clay and sandstones, with ironstone nodules, have been exposed, but the stormy weather has prevented my observing them closely. This afternoon the weather began to clear just as we arrived at the Snake Portage, which is the point on the river where they unload the boats of the goods for the Lac la Beiche station. The country bordering the river in this part of its course is very beautiful, as the high banks retire and form, by combining with a still higher table-land, undulating hills that rise to the height of 300 to 400 feet. On the north side are thus formed the Snake Hills, which are free from wood except in the ravines. Below the Snake Hills the banks of the river valley are generally not more than 70 feet in height, and are no longer timbered. The river still is rather narrower also than above the Snake Portage, where at one place I found it to be 350 yards from side to side of the channel. We have passed several places where the ice is broken and irregular, and where there is even open water marking the position of rapids in the channel. We observed two large trails ascending the north bank of the river, about four miles apart, the higher being the Edmonton trail to Lac la Beiche, and the other, where there was an old boat lying, being the proper portage track. The goods are carried for 70 miles north of this point packed on horses' backs. Ledges of sandstone, mineralogically the same as those at the Mountain House, were seen cropping out along the banks near the upper portage trail, and associated with chocolate-coloured clay shale, with septaria containing fragments of shells. By ascending the bank I got a view of the Black Hill, which is a marked object on the direct trail from Fort Pitt to Edmonton, and which bore W. 230° N., at a distance of about 20 miles. At this part of its course the Saskatchewan is further north than at any other, being in latitude 54° 5′ N. From this it makes a great sweep to the south, as far as latitude 52° 20′, and then by an abrupt change in its course regains latitude 54° at Cumberland House.

March 19th.—Clear sharp morning, so that on first starting at 5 a.m. we got along very well; but as the sun acquired power the snow got so soft and wet that we had to give it up and wait till nightfall, when the cold would again set in and freeze the snow. The banks of the river where we halted had again become high and ruinous, exposing sections of septaria clays, like those at the elbow of the South Saskatchewan. I spent the afternoon searching for fossils without success till I wandered several miles along the river. As I returned across the plain, to avoid the deep snow in the valley, I fell on a fresh buffalo track, and following it up shot an old bull, and carried a load of fresh meat back to camp. We started again at 6 o'clock, and plodded on during the night, which was very dark, only halting for two hours, from 3 to 5 a.m.

March 20th.—At 7 a.m. the snow began to get moist again, so that we halted. Seeing a track of a person walking with snow shoes, I followed it till I arrived at two Indian tents, about a mile north of the river. I persuaded them to trade some provisions and a pair of snow shoes for a little tobacco and ammunition, and then returned to my party. On starting from Edmonton there was so little snow on the ground that we had not thought of carrying snow shoes, so that it was a great catch to get even one pair to beat down the track for the dogs. With them we were able to go a few hours longer before stopping for the day. Where we made our *day* encampment was near the mouth of Dogrump Creek, and a few miles below a range of cliffs of light blue calcareous clay charged with selenite crystals and ironstone septaria. At all other points the banks seemed to be composed of drift clay with boulders. Finding that I could not follow my men's example of sleeping in the bright sunshine, I went off to the north following some deer tracks. The ground on bare knolls is thawed into a plastic condition to the depth of eight inches, but on the level ground the snow is eight to ten inches deep, and in hollows three

to four feet. On the ice of the river it averages 12 inches. At 7 p.m. the snow was sufficiently hard for us to start. I took the first turn ahead with the snow shoes, and found it so easy after the plunging in the snow we had been accustomed to for some days back, that I held on till 2 a.m., when we arrived at "Soyer's Rapid," where the ice was full of holes, and had overflown the proper thick ice to the depth of several feet, and we required to travel on the thin skin of ice that had again formed. The dogs were often popping through, and we only avoided it by lying on our sleds, which presented enough surface to bear up our weight. I had fallen asleep in this fashion when we were passing the mouth of Moose Creek, where there was again much false ice. I was going first, and my companions thinking I was keeping a look-out, followed boldly, running behind me in the dark, till the ice gave way; and on their cries arousing me I found on looking back that I had escaped sharing a ducking with them. The water over the sound ice was only about four feet deep, so there was no great danger, and with a little scrambling both men and dogs soon got out again, when a big fire and a few hours halt put them all to rights again.

March 21st.—At daybreak we reached the mouth of Vermillion River, where we encamped our first night from Fort Pitt on Christmas eve. We only halted for an hour, about six miles below this point, when, as we had only 22 miles of our journey remaining, we again started. At 11 a.m. we ascended the left bank and followed the trail across the great bend, and arrived at Fort Pitt an hour after sundown. The whole distance, by the route we had followed from Edmonton, I estimated to be 251 miles, and the journey had occupied us seven days besides our travelling during the night.

March 29th, Fort Pitt.—I found on arriving here that some letters of importance for me had been sent on by an Indian to Edmonton, and that they must have passed me on the road, so that I have waited a few days on the chance of their being sent back again. During the interval I have been bargaining for horses with Mr. Simpson, and have succeeded in getting 17 for the use of the Expedition. They will remain here until the end of May, at which time the men I engaged at Edmonton will arrive at this place, as Mr. Swanston has kindly offered to allow them to work their passage down to Carlton in the Company's boat when the ice breaks up.

The weather continues very changeable, but now there are decided signs of approaching spring. On the 29th the first goose arrived, flying *down* the river, and to-day Indians have arrived at the fort, having already seen some ducks flying over the plains.

March 30th.—The ice on the river was now so rotten and unsafe that I had to give up all idea of following it further for the present, so, along with my man Foulds, I started to return to Carlton by the trail. Besides the two trains of dogs, I had a young horse I had purchased; he was a beautiful animal, but not perfectly broken, having been brought across the mountains from the Kootanie Indians last summer by Mr. Simpson's brother. We got along slowly, as the ground is very wet and slushy, and all the ice on the swamps and creeks is rotten. The snow failed us altogether on the afternoon of the second day, so that we had to fling away the dog sleds, and make the dogs carry the things on their backs. On the 1st of April we reached Jack Fish Lake, having followed the same trail that I travelled by in December last. Here I found Mr. Sullivan living with Mr. McMurray, and learned that he and Beads had been obliged to leave Carlton in the winter, as there was a very short supply of provisions since I passed in December. Mr. McMurray and his companion Mr. McGillarray have had a comfortable little house of two rooms built on the site of the tent where I spent such a merry evening with them. As they had used green poplar in the construction of the roof the warmth indoors had developed the buds, so that the inside was in full leaf.

April 4th.—I have got Indian "travails" for the dogs, consisting of two poles joined together at an acute angle, which rests on the dog's neck, while the ends trail on the ground ten feet behind him, and kept apart by a few cross bars close behind his tail, on which the load is strapped. With 10 dogs accoutred in this fashion we continued our journey to Carlton, accompanied now by Mr. Sullivan and Beads. Mr. Sullivan and I had horses, but the rest were walking as before. The snow was quite gone from the ground now, but the lake was still covered with ice. Crossing it in many directions I observed high ridges where the ice had been raised into a crest, eight to ten feet high in some cases, then occupying the position of some of the great cracks which were open in winter, and which I suppose must have been formed and kept open by the continued shrinking of the ice as the cold increased; but as they ultimately fill up, on the ice expanding with the returning warmth of spring, the sheet breaks upwards at the old lines of fracture, and is squeezed up into thin ridges.

We had only gone about four miles when my young horse became restive, and throwing me over its head got away from us. Every effort to recover him was useless, and he was soon out of sight. I sent back and told Mr. McMurray of my loss, and he employed Indians to search for him. He was not recovered however for some weeks, when an Indian found him about 40 miles from Jack Fish Lake, and brought him to Fort Pitt, when he was recovered for me by paying 20 skins.

April 5th.—We resumed our march this morning, but leaving the track which I had travelled by in the winter to our right, I followed the coast trail. It led us behind a range of high hills, and along the border of a chain of lakes, the largest of which is called Scent Grass Lake. The valley which these lakes occupy is continuous with the valley of the White Lakes. We made about 25 miles each day, and on the morning of the 8th we reached Carlton. The track keeps so far to the north as to pass over the south end of the Thick-wood Hills, and well to the north of Redberry Lake and the Minitonass Hill.

On reaching the Saskatchewan, at Carlton, we found the ice so rotten that it was ticklish work getting across. We found Lieut. Blackiston and M. Bourgeau well and tolerably hearty, considering the short commons and hard work they had been having all winter and spring, they having alone been left to continue the hourly magnetical observations for the last six weeks.

May 25th.—Until this date I have been employed at Carlton in various ways, and making short excursions in the neighbourhood. However, as provisions are very scarce here, and the Edmonton brigade of men will soon be arriving, I thought the better plan would be to stop them at Fort Pitt, and arrange for their proceeding directly to the plains, and wait where there are buffalos till joined by the rest of the expedition. I therefore started again for Fort Pitt, taking one man with me, each having a good strong horse. We made the trip in three days, and I arrived just a few hours before the first boat of

the brigade arrived down the river from Edmonton. As soon as they had all arrived at Fort Pitt, I sent them off with all the expedition horses to encamp south of the Saskatchewan, at the Eagle Hills, and as near to Carlton as they could procure buffalo. I then descended the river with the boats to Carlton, which, owing to the prevalence of winds up the river, occupied us eight days. I have thus been able to see and map the river the whole distance from the Rocky Mountain House to Carlton. The valley, which is nearly 300 feet deep at Fort Pitt, continues to have high abrupt banks for 70 miles, when those on the left side became low and sloping. There are many beautiful spots, and the scenery in early spring, when the poplars were unfolding their bright green foliage, was exquisite. The most beautiful part of the river is near the mouth of Battle River. At the Eagle Hills the banks on the right side are very high, but when not wooded the soil is covered with an efflorescence of sulphate of soda and lime in large quantities, often resembling a sprinkling of snow. In this part of its course the river is very wide and shallow, and the channel is obstructed with islands. The want of snow during the winter on the prairies had made the usual flood very late, and the water as we descended was still as low as in the previous autumn, so that the navigation, even with barges, was difficult. The barges are built at Edmonton of the wood of the white spruce, 30 feet long, and, when loaded, carrying 70 to 80 pieces of 90 lbs. weight each, drawing two to two-and-a-half feet of water, and requiring, at least when ascending the river, to be manned by a crew of eight men. The trip down the river in these boats, with such pleasant companions as Mr. Swanston and Mr. McMurray, and the other gentlemen of the Company's service, was more like a picnic than hard travelling in a wild country. In fact, excepting the women and children, and even not all of them are left, the brigade every spring carries off nearly the whole civilized population of the Saskatchewan.

June 2nd.—The bustle of mustering the Company's brigade, and the starting of the boats, 30 in number, down the river, has occupied the attention of every one for the last few days, but now the fort has again assumed its dull aspect. Mr. Hardesty, the gentleman left in charge, having offered to make a short trip with me to the south-east along the Red River trail, in order to meet Captain Palliser, whose arrival we now expected daily, we started this morning, taking spare horses with us, as those of the Captain's party are likely to be tired out with their long journey in spring, which is the worst season for travelling with horses. Twenty miles through beautiful park-like country, dotted with woods and lakes swarming with wild-fowl, brought us within four miles of the South Saskatchewan, where we encamped.

June 3rd.—Early this morning we reached the river, and found that it was much more in flood than the North Saskatchewan. It is a very rapid stream, 230 yards in width, with a steep channel. The valley makes long bends or reaches, but within there are a succession of points closely studded with boulders so as to resemble artificially paved landing places, and which, every 400 yards, throw the stream with a slight ripple, not amounting to a rapid, from side to side of the channel. We constructed a rough skin canoe to carry our saddles and blankets, and then swam across with our horses.

We rode 16 miles further that afternoon, still in the same direction, and through equally fine country, where we encamped. However, the lakes which fill the hollows are nearly all salt, and even as early as this season of the year the soil is whitened with salty efflorescence.

To the east of our camp is a high hill, also called, like that west of Carlton, the Minetonass, or the "Hill by itself." These conical hills are the outliers of cretaceous and superficial deposits, that remain to attest the vast denudation which the surface of this country has undergone in recent geological time.

June 4th.—Ten miles further this morning, still to the south-east, brought us to where the trail strikes off to Fort la Come, the next lowest fort on the Saskatchewan, and, while halting to rest our horses, Captain Palliser suddenly walked in upon us, silently as an Indian. He was walking in advance of his party, as the horses had all broken down, and they were bringing them slowly on, while he kept ahead in order to have a better chance of killing game, on which they were dependent, having no stock of provision with them. They had travelled pretty much in this style all the way from Red River, a distance of 550 miles. Leaving the rest of the party to come on slowly, Palliser, Hardesty, and myself, with the advantages of the fresh horses I had brought, almost reached the South Saskatchewan again before night, and swimming it at daylight reached Fort Carlton early next forenoon.

No. 4.

From Commencement of Journey between Saskatchewan Rivers to termination of 2nd Exploring Season on September 20th, 1858.

The commencement of the second season's explorations.

Lieut. Blackiston to proceed to Pitt and Edmonton, and thence to join us at forks of Medicine and Red Deer rivers.

June 15th, 1858, Tuesday.—To-day all preliminary arrangements being completed, the Expedition left winter quarters at 3 p.m., and proceeded on the beaten track towards the south of the Stone Indian Knoll, a conspicuous landmark on the right bank of the North Saskatchewan River. It was agreed on, previous to starting, that Lieutenant Blackiston should proceed with a small party to Fort Edmonton, obtain a guide at that place, and again join the main body at the forks of the Medicine Lodge and Red Deer rivers. By this arrangement, I trusted that Lieutenant Blackiston's chain of magnetical observations would have been further extended to the westward; and again, I was anxious to receive some supplies ordered the year before from Norway House, and now shortly expected up the river. During the delay at Forts Pitt and Edmonton, attendant on the observations, I hoped for the arrival of the goods, which Lieutenant Blackiston was afterwards to take along to meet us at the above rendezvous.

As we had started late from Carlton, we made only five miles before encamping for the night at "Five Mile Gully."

Nichewa comes over to see us.

June 16th, Wednesday.—At 7 a.m. we continued our course along the right bank of the river, passing over the Stone Indian Knoll, until we arrived at a poplar ridge, where we encamped for dinner. Here we were overtaken by our old Cree guide "Nichewa," who had conducted us the last season from the Qu'appelle Lakes to the elbow of the south branch of the Saskatchewan. He had been tenting among the buffalo at the Eagle Hills, and had ridden to the fort the previous evening, in order to see us.

I tried to induce him to accompany me to the forks of Red Deer River, but could not succeed, and, indeed, I hardly expected he would venture any more into the Blackfoot country, as war had again broken out, and his own people had been the aggressors. At 3·15 p.m. we again moved off, and kept on a S.S.W. course for 12 miles, when we encamped for the night near the "Birch Gully." The pasture was very poor this spring, in consequence of the recent fires in this part of the country. The Stone Indian Knoll, around the base of which the river sweeps, is entirely without wood. Opposite to it, on the left bank of the river, at the distance of 15 miles, rises the Minetonass.

Is afraid to venture into their country.

Stone Indian Knoll.

From the poplar ridge to Birch Gully we passed over a fine level stretch of prairie, 210 feet above the surface of the river. As soon as we had fixed our camp, M. Bourgeau began botanizing in the neighbourhood, and found the amelanchier, viburnum, and prunus in abundance. In the gully and along the points of the river, there are plenty of poplar and of birch.

Birch Gully.

June 17th, Thursday.—Started late, to allow of M. Bourgeau drying and preserving the botanical specimens he had obtained. The delay was beneficial to the horses, which in the spring of the year had found great difficulty in getting sufficient grass, and especially here, where the vegetation is so backward.

Scanty supply of grass.

After continuing our course S.S.W. for 12 miles, we struck the elbow of the North Saskatchewan. The weather since we left Carlton has been too cloudy to allow of astronomical observations. The valley here is far from luxuriant, the only tree being the aspen poplar; the entire absence of the other species here is remarkable, but M. Bourgeau obtained here several different species of astragalus. The channel of the North Saskatchewan for some way above this place is beset by sandbanks, which at low water form great obstacles to the navigation of even the small bateaus used in the fur trade. From this point we made for the Crop Woods, where we arrived at 6·30 p.m. and encamped, passing over irregular country, where the stunted willow still remained, after all other trees had been destroyed by fire. Thus large tracts of country now prairie lands have at one time grown valuable forests, and their present absence is the result of the repeated ravages of fire. Where a scattered and stunted growth of willows is found, as a general rule, was ancient forest land, which, when dug to a sufficient depth, still discloses numerous roots of destroyed timber. The Crop Woods at which we encamped are the same as those among which we arrived on October 3rd, 1857, before reaching Fort Carlton. There are a few clumps of poplars found in a range of sand-hills; the latter rise to the height of 80 to 100 feet, and form part of a narrow belt of sandy country, parallel to the Eagle Hills.

Birch Gully.

Valuable timber destroyed by fire.

From Mr. Sullivan's Journal.

June 18th, Friday.—The men engaged by Dr. Hector from the free half-breeds at Lake St. Anns had descended in the spring of the year to Fort Pitt by the boats of the Company's brigade for Lake Winipeg with the furs of the Saskatchewan district. He had then dispatched them from that place with a supply of ammunition to live among the buffalo until such time as their services were required by the Expedition, and they had encamped somewhere in the vicinity of the Eagle Hills. Accordingly Captain Palliser, accompanied by one of their party who had ridden over for orders a day or two ago, started at daybreak to bring them to join the rest of the Expedition. About two hours after his departure our carts moved off, and at five miles distance from the encampment we came to the Eagle Hill Creek, which takes it rise from one of the many Manito Lakes at the base of the Eagle Hills, and flows, at first eastward and then northward to the Saskatchewan. At our crossing place, which is six miles from the point where the creek unites with the river, the south end of the Eagle Hills bore N. 222° E., and the north end N. 292° E., and a conspicuous hill on the north side of the river bore N. 332° E. by compass. Our descent from the prairie level into the valley of the stream, for upwards of 130 feet, was by a precipitous road, made by the buffalos as they came down to the creek to drink. The valley possesses but little wood, the smaller kind of birch (*Betula pumila*) being the most plentiful, along with poplars and berry-bearing bushes. In many parts the stream was dammed up with the most consummate skill by the indefatigable labours of the beaver. We had scarcely managed to cross the stream before the sky, which had long threatened rain, at length poured down in torrents, and seeing no probability of its cessation, we encamped and protected ourselves as well as we could under the circumstances. The rain was incessant up to midnight, when it was followed by high wind. It will be remembered that it was this time last year that we were delayed at the Kakibeca Falls on the Kaministoquoiah River by the same cause.

Lake St. Anns men lived on buffalo at Eagle Hills.

Capt. Palliser goes over to bring them on to join the Expedition.

Eagle Hill Creek.

Rain on the anniversary of the wet period at Kakibeka Falls last year.

June 19th, Saturday.—Fifteen miles in a W. by S. direction over undulating prairie with numerous salt lakes brought us this morning to the base of the Eagle Hills, or as they are called by the Crees, "Mikashoe Watchee." We remained here for two hours, and then commenced the ascent, which was steep and winding. We obtained excellent sport among the ducks and geese on the numerous lakes along which we passed during the afternoon march. At 6 p.m. we had gained the summit and fixed our encampment near to the Lizard Lake, the place appointed by Capt. Palliser previous to starting on the 18th, having made an ascent of 600 feet. We here saw some herons' nests on the tops of high trees, which our party soon climbed, but they found the eggs were too far hatched to be eatable. Here we got a good view of the prairie stretching for miles at our feet, but our telescopes detected only a few timid antelopes with an occasional wolf as we anxiously kept a look-out for buffalo. This was unfortunate, as we were now in great need of an addition to our stock of provisions.

Ducks and geese in Lizard Lake.

Game scarce.

A little time after encamping the Doctor started to erect a signal which might guide the Captain to the Lizard Lake. In his absence a Cree Indian with his squaw and child arrived. The man was entirely naked, except a piece of buffalo robe wrapped loosely around him. His wife told us that he had gambled away his gun and clothes at the Indian camp, and that now, armed only with his bow and arrows, he was on his road to the south branch of the Saskatchewan in search of buffalo. The whole of their possessions were carried by two miserable dogs, which eat up all the cords and pieces of leather they could manage to steal as soon as they were relieved of their burdens. The Indian informed us that the peace between the Blackfoot and his own nation had been violated, and that a very large war-party of the former was on the road to the Cree country. The cause of rupture as

An Indian pigeoned.

Cree agressions on the Blackfeet.

usual, was horse-stealing. The Crees are invariably the first offenders, and, comparatively speaking, the Blackfeet exercise great forbearance towards them in return. They say to the former, "We do not give ourselves the trouble to come to your country for horses; you Crees have not a horse in your possession worth stealing." This is in a great measure true, for the Crees do not devote themselves to the rearing of horses like the Blackfoot.

Indian wars favourable to the fur trade.

The Indian warfare is advantageous rather than otherwise to the fur traders on the Saskatchewan. In the first place they get more horses in trade from the Indians, and in the second the Indians hunt very little in time of peace, as then the different tribes tent together, and live in ease and content; but in war time every Indian works for ammunition and supplies of all kinds.

Capt. Palliser joins with the St. Anns brigade.

June 20th, Sunday.—Still encamped at the same place. In the evening Captain Palliser joined us, followed by our St. Anns brigade. From daybreak to 3 p.m. the rain has been incessant, falling in torrents, with thunder and vivid lightning.

June 21st, Monday.—This morning we made our observations for latitude and longitude (lat. 52° 17′ 59″ N.; long. 107° 28′ 15″ W., at 10 a.m.), and the whole party moved off. From a knoll close to encampment a conspicuous hill bore by compass, north end of, N. 150° E., and south end of, N. 147° E.

The line of woods.

The extremities of the line of woods bore as follows: commencement of woods N. 96° E., and north end of, N. 320° E. At 2 p.m. we stopped for dinner at the Stoney Lake or "Mih-chet Assini Sahkiahgun," as it is called by the Crees, from the numerous stones scattered on the shores. It is three miles by two, and lies five miles off another lake of equal size extending in the same direction. At the Stoney Lake, with assumed latitude 52° 14′ N., the longitude was found to be 107° 35′ 4″ W. At 4 p.m. we again started, and at about ten miles from the lake we met a Cree chief, who confirmed the statement

Cree and Blackfeet fighting commenced.

concerning the Blackfoot and Cree tribes being about to commence hostilities. He had just returned from the Blackfoot country, and had been near the spot where one of his tribe had been killed by a Blackfoot. After exchanging news, and giving a little present of tobacco, he left us. As we recede from the Eagle Hills, we observe that although our ascent of them was steep and difficult, yet the descent of their western flank is scarcely perceptible; in fact their high points, seen from the western

We continue our course along bare plains.

side, appear only as the usual "bales" so often met while travelling the prairies. Since leaving our last night's encampment, we saw not a particle of wood, and the pasturage was the worst that we have seen. At 7 we encamped, having an hour before fallen in with a band of five buffalo bulls, two of which our hunters succeeded in killing. They had scarcely got the meat to camp, before the clouds, which had been long lowering in the south-west, poured down upon us, and a cold high wind followed. We had supplied ourselves, however, with a large quantity of buffalo bones and dung, before the latter became wet, so that we had the comfort of a good fire.

June 23rd, Wednesday.—At our dinner camp of this day the latitude was fouud to be 52° 14′ 37″ N., and longitude 108° 11′ 33″ W. The country continues entirely barren, with very poor pasturage, and a scanty supply of water, the latter being found only in small swamps and stagnant marshes. Buffalos have been seen in large numbers about 15 miles from our stopping place. At noon we came to a large coulée of about 500 yards broad, extending to the north-west and south-east, and at a level of 90 feet below the prairie level. We had expected to find wood here, but not a shrub was to be seen. The water in the lake too was so intensely saline that we were obliged to abandon it and seek a camp

Bad grass.

elsewhere; after riding for some time in different directions, we found only a swamp containing miserable herbage which had been cropped bare by the buffalos, and afforded but very scanty pasture

Salt water.

for our horses, and a draught of water here was like a dose of salts.

The Crees wish to visit our camp.

On our route to-day, we were informed by a Cree that his tribe had been anxiously awaiting our arrival among them, having prepared a deputation to wait on us; and to ensure an interview with our party they had moved their camp to a place where they would be likely to intercept us. They were going to demand presents of all kinds, among which a little *ishcoley wapoe* (fire-water) stood prominent. As we had always made it a rule, however, never to carry the latter article on the plains, there was no

We avoid them.

chance of their getting that; and to pass their camp and escape their numerous demands, we altered our direction slightly. Succeeding in this, we encamped for dinner in the old camp, which they had abandoned, with the view of crossing our original line of route. With assumed latitude 52° 14′ N., the longitude at this place was 108° 27′ 27″ W., and ten miles off a range of low hills extends in a N. by W. and S. by E. direction, known to the Crees as the *Olowakiatinahk*, or Ear Hills. It was noon before we

Killed buffalo.

reached these hills, and, as we were in want of meat, some of us ran a band of buffalo, while the rest of the party halted near a lake, about three miles long, at their base. From this point we struck off in a W.N.W. course, passing over a succession of ridges similar in character to the Ear Hills, and lying parallel to that range. Between these ridges were prairie flats, marked with the same barrenness that we have previously remarked. We had seen those ridges from a considerable distance to the eastward, and had fancied that they were well wooded; but a nearer approach convinced us that what appeared from afar to be large trees were the small bushes, *Symphoricarpos racimosus* and (*Shepherdia*) *Ostea argentea* neither of which exceeded three feet in height. The latter was in full flower, and smelt deliciously. At 5.30 p.m. we encamped, and many of our party strolled off to hunt buffalo among the hills about the coulée. The longitude of our encampment, with assumed latitude 52° 21′ N., was determined to be 108° 44′ 25″ W.

June 25th, Friday.—It was 9·15 a.m. before we got on the march, as our horses had wandered a good distance in search of grass. Three miles to the westward we descended into a valley containing a

Cratægus, a hard wood.

large lake, fringed with a scanty growth of aspen and cratægus. This latter wood is of the hardest in the country, and is used by the half-breeds for pegs in carts, and other articles in which strength is an object. A section of the strata composing the prairies was exposed to view. From this point up to our present encampment in the *Wiguahinou* valley, the country is very irregular, made up of rounded mamelons of almost pure sand, and dotted here and there by numerous saline lakes. The soil and

A barren unfavourable country.

vegetation are very inferior, and the country is probably of the same character up to the valley of the Battle River. At 3 p.m. commenced a heavy storm of rain, which lasted the rest of the day, accompanied by a perfect gale of wind. We had just finished running buffalo when the gale commenced, and in the

We lose a fine horse.

midst of its fury we had the misfortune to lose one of our finest horses. As is usual, after a hunter has killed his animal, his horse is attached to the dead animal's horn, while the man cuts up the meat.

One of our party appearing on the knoll with a load of brushwood, the attached horse took fright, snapped his halter, and dashed off across the plains. Instantly four of our smartest men started in pursuit, and, as the horse had gone against the storm, it was a matter of considerable difficulty to track it. They continued to follow it till dark, but in vain, and they passed the night on the broad prairie, without a shrub even to shelter them from the storm. As soon as day dawned they mounted again, took up the horse's track, and recommenced pursuit. All their exertions to gain the lost horse, however, were in vain.

The men endeavour to follow him in the rain.

June 26th, Saturday.—The latitude obtained here was 52° 28′ 39″ N., and the longitude 108° 51′ 47″ W. The men returned from the fruitless pursuit of the lost horse so cold and drenched that we did not start to-day.

The men return without the horse.

June 27th, Sunday.—We remained in camp, and Divine service was read both in English and Cree. One of our men having been seized with acute inflammation of the lungs, resulting from his exposure to the storm on the night of the 25th while in pursuit of our lost horse, we delayed here for several days.

Antoine Shaw attacked with inflammation of the lungs.

June 28th, Monday.—Moved camp further down the valley for the sake of pasturage.

June 29th, Tuesday.—Remained at camp; sick man better.

June 30th, Wednesday.—Remained at camp. Weather very stormy, a heavy gale having prevailed from south-west since break of day.

July 1st, Thursday.—Remained at camp. Sick man better. Our stay at this place is advantageous to M. Bourgeau for botanical researches. The valley of the Wiguatinon, extending north-east and south-west, sinks upwards of 200 feet below the prairie level, and, like the numerous valleys we have met with the last week, is dotted with saline lakes. The north end of this valley is clothed principally by aspens; *Negundo fraxinifolium* (a kind of sugar maple), and *Betula papyracea*, although found, are only in small quantities; while the side which faces the south supports only a low growth of willows, and in many places is quite bare. The aspens are the finest specimens of the species we have seen in the country. At the south end of the valley, three miles distant from the camp, was a large grove of the ash-leaved maple, at which were the remains of an Indian camp, showing that a party had been here in the spring for the purpose of making sugar. The scenery in the neighbourhood of the Wiguatinon is very beautiful and diversified. Fine bluffs of wood and open glades, hills with bold outlines, rising sometimes 450 feet above the level of the valley, abrupt escarpments of white chalky strata with ferruginous streaks, desolate wastes of blown sand, and beautiful lakes with clear limpid water, are all combined within a small compass in this neighbourhood. There are a few spots where the soil is rich, but as a rule this region is barren and desolate. The difference in the luxuriance of vegetation in northern and southern exposures is not peculiar to the Wiguatinon valley; on the contrary, it seems to be general everywhere in this country.

Valley of Wiguatinon. Its botany.

The whole country to the north presents the same irregular features; the soil is for the most part sandy, and to the south and west lies a flat expanse of prairie, extending to the very horizon.

To night one of the scouts sent out to scour the neighbourhood of our camp reported that he had heard shots to the south, so the whole party were served out with ammunition and remained on the alert. There was evidently some party near, for the buffalo all appeared in motion as if they had been hunted. This morning the sick man had so far recovered as to allow of our starting.

An alarm.

At 9.40 a.m. we crossed the Wiguatinon, rounding the northern extremity of the two salt lakes in its south-western arm, and made for a conical knoll bearing about eight miles in a W. by N. direction, where we stopped for dinner. It had been used a little time before by a large band of Indians, as a site for their wigwams, and the debris of their fire was quite fresh. Here the longitude was found, with assumed latitude 52° 30′, to be 109° 2′ 30″ W.

July 2nd, Friday.—We moved on here about eight miles, and encamped in a delightful valley of about 10 square miles in extent, with a soil of an excellent quality, composed of a rich black vegetable mould, 2½ feet deep, over a layer of very fine yellow sand. Among the luxuriant growth of shepperdia which covered the bottom of this valley some 2,000 buffalo were lying and grazing, and with very little trouble we were enabled to kill several. One very fat cow, which we had killed, was found to be diseased. We were assured by our half-breed hunters that the disorder, which resembled the pleuropneumonia is common among the buffalo at certain seasons, but that it never prevents either Indians or half-breeds from making use of the animal for food, and that no bad consequences result from it. However, as we were well supplied with provisions at the time, we did not try the experiment. We sank a thermometer in the soil at this place to the depth of 3 feet; its indication, together with other thermometrical observations of like nature at different places, are tabulated elsewhere.

We arrive at a fertile valley.

July 3rd, Saturday.—At dawn our horses were harnessed, and about a mile from our encampment we crossed a small tributary of the Battle River, running due north. It is called Ambush Coulée from the following circumstance:—Many years ago a small camp of Cree Indians in search of buffalo made a temporary stay at this place. A war party of the Blackfoot tribe discovered the Cree trail, and cautiously followed it up until they heard the Cree squaws cutting wood for their evening fires. It was a dark night, so that the Blackfeet easily concealed themselves along the woody border of the stream, until all was silent in the Cree camp. Coming out then from their lurking-place, and stealing noiselessly towards the Crees, they rushed with one loud yell on their sleeping enemies, killing all but one very old man, and they returned in triumph. Ever since this event this part of the country has been known to the Crees as *Kanipa Kisiskoototohk*, "or the place where we were surprised while sleeping." At 1 P.M. we stopped for dinner at the base of a high hill, after traversing sand-hills for most of the forenoon, and one of our men succeeded in killing an elk doe, which he had stalked in the poplar woods. Passing over a succession of poplar-covered ridges, from the summits of which we got a fine view of the irregular country to the north and north-west, we were obliged to encamp at an early hour, owing to a storm of thunder and hail. Our horses became restless, as the hail-stones hit very hard. We were fortunate, however, in obtaining an excellent camp on the side of a small rivulet, with a good supply of wood. We noted here the two kinds of poplar, some fine specimens of the negundo fraxinifolium the shepherdia, and numerous berry-bearing bushes. It was evident that no Indians had visited this locality for some time, as the negundo (the sugar tree of the Crees) had not been tapped.

Ambush Coulée or Kanipa Kisiskoototohk.

Unfrequented portion of country.

This valley is bounded to the north-west by a range of hills, called the High Hills. To the south and west, after an abrupt ascent of 240 feet, a fine level prairie stretches away to the south as far as the eye can reach. The sheet lightning continued playing in the northern sky, while the fire-fly, with its feeble efforts, lit up the surrounding coppice.

Fire-flies.

This little insect is an object of superstitious veneration with all the tribes of North America that we have seen. They regard them as the spirits of their departed friends holding their great feast on the plain, when the nights are quiet and warm and the buffalo are in the best condition.

Avoids an Indian war party.

July 4th, Sunday.—Remained encamped. Latitude and longitude obtained, 52° 34′ 25″ N., and 109° 23′ 40″ W. The Doctor started at early morning to the northward, accompanied by two men, and did not return until 8 p.m. He had fallen on the trail of a recent war party, and discovered that they had encamped near to us on the 25th of June, against the heavy rains of that date, by interlacing the branches of poplar in the shape of a sweating house, and their fires were very small. The smart hail-storm of yesterday has completely stripped most of the trees of their foliage.

Came in sight of the Neutral Hills, or boundary between Crees and Blackfeet.

July 5th, Monday.—The heat in the early part of the day was oppressive, and the musquitoes very troublesome, but the afternoon, on a sudden, became unusually cold, with overcast sky that predicted more wet weather. We had not long been on the march when a drizzling rain commenced, and before we could get under shelter we were all wet to the skin. We had only made 15 miles, in a W. by N. direction, when thus obliged to camp. From this place, the "Neutral Hills," to our south, at a distance of 20 miles, bore, north end N. 350° E., and south end N. 317° E. They are the recognized boundary of the Cree and Blackfoot tribes.

Nose Creek. Good soil on old forest land

July 6th, Tuesday.—We were delayed from making further progress until 11 a.m., owing to the unsettled state of the weather. At nine miles from this place we crossed a muddy creek only two feet in depth, which takes its rise in the Nose Hill, and, flowing northward to join the Battle River, is styled Nose Creek. Our course through these nine miles, as well as in the afternoon, lay through what was once forest land, but is now dotted with small poplar clumps and several salt lakes. The soil, consisting in many parts of a foot of black vegetable mould, supports an excellent crop of nutritious grasses, and we have observed numerous plants which are seldom found except in woods and forests. The debris of large trees alone is sufficient proof that we are passing over what was once forest land. The greater part of the country with these features is fit for immediate settlement, and wants but little culture to yield splendid fruits. The state of the flowering plants at this date shows that spring is early, and our notes on the weather prove that the summer here is not too dry. As we were now rapidly nearing the Battle River, we had to decide as to the course which we should pursue. As the stream here takes a sweep into the plain, thus making our road to the forks of the Medicine and Red Deer River longer and more tedious if we followed along its south side, our guides recommended that we should cross the river, keep along its northern side, cut off the bend, and recross the stream at the point where we should again meet it. As the buffalos were very numerous, regulations were made to economize our ammunition, and to prevent the useless killing of animals. Besides, it is dangerous to the parties to let the men stray away from the main body to hunt. The latitude, by account, 52° 36′ N.; the longitude, by observation, 110° 23′ 45″ W.

We cut across a large bend of Battle River.

The poplar shoots all frozen this season.

July 7th, Wednesday.—After making a rapid ascent at this point over a poplar ridge, we descended into a valley filled with rounded sand-knolls and small lakes, the margins of which were clothed with poplars and willows. The tops of the poplars hereabouts seem to have been all frozen in spring. While passing through this valley we discovered a fresh moose track; Captain Palliser and one of the hunters followed up the track into the woods; shortly afterwards we heard a shot from Captain Palliser's rifle, and the moose came out with a broken leg: all hands now rode to head him before he reached a clump of wood at the end of the plain. At last he turned to bay, terrifying the horses (some of which threw their riders and ran off), but surrounded on all sides he at length fell, gallantly facing his enemies and riddled with balls and arrows. We halted in the neighbourhood to enjoy a feast of moose meat, moofle, and gut sausage, dishes which our hunters and half-breeds prepared with great skill; the animal was in the prime of life, seven years old, and in splendid condition. His proportions, measured with a tape by Dr. Hector, were as follows: length, 8 feet 6 inches; length of head, 2 feet 6 inches; length from its nose to inner antlers, 1 foot 5 inches; girth of neck, 3 feet 6 inches; girth behind shoulders, 7 feet 4 inches; girth of belly, 7 feet 8 inches; height of shoulder, 6 feet 4 inches; height of rump, 6 feet; antlers, palmated with four prongs, 1 foot 8 inches long, but as yet not quite developed, being in the velvet, and quite soft. At 6 p.m. we arrived at the site of a great medicine lodge of the Blackfeet, where we could see the Battle River at a distance of only two miles. There is a great ceremony at these lodges. A tree in the midst of a rude fencing was decorated with curious characters painted on pieces of bark, and other offerings to the Manito. The tree is chosen by the woman who is selected by the majority of the voices of her own sex as the most virtuous in the camp. From hence we descended about 150 feet into the swampy valley of the Battle River; by following the buffalo roads we escaped getting mired, and crossed the stream, which is about 50 yards broad, and averages only four feet in depth. The country around is rich, and very suitable for agriculture. Its fine growth of woods appearing higher up the stream, chiefly poplar, with a few spruce firs, contained a large quantity of game in former years, but the incessant hunting of Indians and half-breeds there has made it at present a poor hunting-ground. We encamped in the valley just in time to save ourselves from a sharp shower.

Capt. Palliser kills a moose.

His measurement.

Offerings on the Manito tree.

The hunting of wood animals greatly injured of late years.

Battle River.

July 8th, Thursday.—Dr. Hector proceeded with two men and a pack-horse to examine the bend of the river, while the main party struck across the country to save distance, all of us intending to recross the Battle River and continue our course towards the west. Previous, however, to leaving, the latitude and longitude of our first crossing was obtained: latitude 52° 35′ 39″ N., and longitude 110° 50′ 7″ W. Ascending the steep and sheltered bank of the river, above a valley of the richest vegetation, we returned westward at the distance of 10 miles from the river, and reached the base of a very conspicuous landmark, called by the Crees *Hiskiwaornis Kahkohtake*, or the flag-hanging hill. From the top of this hill (which is elevated 400 or 450 feet above the plain) the Nose Hills bore as follows:—North end, N. 104° E.; south end, N. 113° E., 1st division; and north end, N. 122° E.; south end, N. 127° E., 2nd division. The Flag-hanging Hill commands an extensive view of the undulating country, with patches

of poplar and small lakes. The Surcee tribe of Indians use it as a place of assembly, and it is very rarely deserted by that people. Although we did not meet any Surcees in passing the hill, we were assured that they were somewhere in the neighbourhood, as we found a dead buffalo cow, yet quite warm, with an arrow through the heart. The Surcees have been for many years allies of the Blackfeet, but were originally of the stock of the Beaver Indians, a tribe inhabiting that portion of land which lies immediately to the north of Lesser Slave Lake. Although they frequently tent among the Blackfeet, yet the latter tribe do not speak their guttural language, while every Surcee speaks fluently the Blackfoot tongue, in spite of its great dissimilarity to their own. The Surcees appear to have a natural facility for acquiring different languages. Cree is common among them, and we have heard the young men make very excellent attempts at French. Being prairie Indians, their life and occupations are the same with those of the Cree and Blackfoot tribes. It is curious to remark that the goître sometimes seen among the Crees, though very rare among the Blackfeet, is so general among the Surcees, that it is a matter of considerable difficulty to find a Surcee without a goître* well developed. The tribe does not number more than 200 or 250 tents, or about 1,400 souls. In the proper place we shall speak at a fuller length of this people, as well as the other nations among whom our travels led us. We encamped about three miles from the base of the hill at a beautiful pasture ground which our horses seemed thoroughly to enjoy.

The Surcee Indians.

They are good linguists.

The goître.

July 9th, Friday.—At 7.30 p.m. we encamped again in the valley of Battle River. Many curious sections of soft sandstone and clay strata were here exposed, and thick beds of fossil shells were found by Dr. Hector extending in the same direction. The northern exposure of the river valley, as usual, was the wooded side, containing poplar, spruce, fir, ash-leaved maple, and birch, while the side of the valley by which we approached it was almost entirely bare of wood. The river here flows through a deep valley with a wide bottom: the sides of the valley are white and chalky from the easy erosion of the strata, but the banks of the river throughout its tortuous course are often covered with pretty patches of green wood. In the bed of the stream we found pieces of coal, and some of our party observed it in beds farther up the stream. As night advanced we saw two riders at full speed coming in the direction of our camp; and as they neared us we knew by the yell which they gave at intervals of a few minutes that they were not of the Doctor's party. They were two Surcees, who told us that the Doctor and his party had spent the previous night at the Surcee camp, and that he was now on the road with some Indians to join us. A large party of Pieguns and blood Indians, they said, had recently started from this place to the Red Deer River, and having killed a Cree Indian were desirous of reaching a safe encampment, as no doubt a war party of Crees would be on their trail. Soon the Doctor arrived with 20 of the Surcees, who formed an advanced party of a large deputation that they intended to send to us next day.

The northern exposures generally the wooded ones.

Two Surcee Indians ride into our camp.

Dr. Hector returned.

July 10th, Saturday.—The latitude of this second crossing-place of Battle River was found to be 52° 28′ 25″ N., and longitude 111° 29′ 45″ W. We remain at camp, and send word to the Surcee camp that we are desirous of exchanging horses.

July 11th, Sunday.—We were visited by a body of about 70 of the Surcee tribe, headed by the chiefs richly attired in dresses ornamented with porcupines' quills, and trimmed with ermine. We invited them to sit down and smoke. The chiefs were pleased with their reception, and inquired all about the purposes of our journey; they remained with us the whole night. We observed that several of them had lost a joint of one of their fingers. This we learnt was the consequence of a custom common to them with many other kindred tribes, of biting off the joint of a finger when unsuccessful in the performance of a vow. Among their women also, as among those of the Blackfeet, it is not uncommon to find many without a nose, or minus an ear, bitten off by their husbands in a fit of jealousy.

Custom of biting off their fingers.

Punishment of their women.

July 12th, Monday.—Occupied till 11 o'clock in exchanging horses with the Surcees; they proved troublesome, and seemed as if they meant mischief, but thought us too strong and well armed for even their large party. We got rid of them as well as we could, and travelled a long distance before camping for the night in a tributary creek of Battle River. While travelling in the valley of Battle River, the musquitos there were wonderfully troublesome; and although we were all tolerably well used to their attacks, nevertheless we all and also our half-breed voyageurs suffered severely. The soil here was very rich, and the vegetation luxuriant. This small creek falls into the Battle River about four miles above where we crossed, and along its banks we found only the grey willow, with a few small poplars.

Surcees inclined to be troublesome.

July 13th, Tuesday.—The rain has been incessant up to this time, and as there were some appearances of a cessation towards noon, we moved on and arrived at a second creek. Our provisions were getting low, and Captain Palliser, with two hunters, were out in search of buffalo, while some of us that remained behind went off in quest of beaver. Numerous beaver dams had been observed in the small streams, and in former years, when beaver was prized as the finest of furs, this portion of country supplied a very large number to the ports of the Upper Saskatchewan. In the afternoon one of the hunters returned for pack-horses for the meat of six cows which Captain Palliser and the hunters had killed.

A good supply of fresh meat.

July 14th, Wednesday.—Eight miles from this place we encamped for two or three days to collect and dry provisions. We have named the camp "Dried Meat Camp;" its latitude was 52° 24′ 30″ N., longitude 112° 14′ 35″ W., by lunar. Captain Palliser started for Bull Lake, and our hunters set off to the south in hopes of meeting buffalo.

July 15th, Thursday.—At noon our party of hunters returned, bringing with them 11 animals, and we immediately set to work to slice them and dry the meat. By nightfall we had finished, and arranged it on poles, with small fires around it, in order to keep off clouds of bull-dog flies, which, for the first time this season, attacked our party. Hundreds of wolves, attracted by the scent, held themselves in câche at a respectable distance from us. We killed a few; but their skins at this time of year are not worth the ammunition expended. It is only in the month of January that the Indians hunt them, as at that time their skins are considered prime.

Wolves seen.

July 16th, Friday.—Captain Palliser, who yesterday returned from the Bull Lake, set off to Red Deer River: a second party of hunters was dispatched to the south for buffalo, and arrived at nightfall

* Probably the result of intermarriage with relations.

with seven. They had been 15 miles to the south without seeing those animals, and had experienced great difficulty in running, from the marshy character of the land, as they killed them on the borders of a lake 10 miles long and six broad, extending E. by N. and W. by S. Its waters are beautifully clear, and not in the least saline, and surrounded by a fine pebbly margin; and it was covered by large quantities of ducks, geese, gulls, and other aquatic birds.

July 17, Saturday.—At 3 p.m. we were again on the march for Red Deer River, and at 7 p.m. encamped. From the Battle River up to the present position the country is of the same character as that we first entered on July 6th, perhaps a little more irregular, but equally advantageous for the purposes of the agriculturist, and possessing excellent pasturage. The absence of fine timber, however, has been remarked, though in past years some good trees must have grown here. We had great difficulty in finding fresh water, the numerous swamps and small lakes being all brackish. Sometimes we have remarked several miles of country studded with these saline lakes; when the lakes and swamps which succeed are sweet and fresh we find the mosquitos a horrid torment.

July 18th, Sunday.—Remain at camp. Lat. 52° 23′ 24″ N.; long. 112° 34′ W. Heat very oppressive; see thermometer in shade of this date (75°).

July 19th, Monday.—At seven miles from this encampment we arrived at the small stream which issues from the Bull Lake, and after a south-easterly course for four miles falls into the Red River.

The La Queue and the Bull Lake.

This stream is known among the half-breeds as the "La Queue." The Bull Lake, or as it is called by the Crees, "Musloos Satikiegun," is so styled from the resemblance of its outline to a buffalo hide stretched out for the purpose of being dressed; the small stream, La Queue, representing the tail of the animal. The country about the Bull Lake is desirable for cultivation, but unfortunately no large timber is found. At the junction of the Red Deer and Medicine Rivers, however, fine timber is in abundance; and if ever a settlement should be established at that place, nothing would be easier than to raft timber on the Red Deer River down to within a few miles off. We hear from our engagés that the Rev. Pere Lacombe, the catholic missionary at Lac St. Ann's, has long contemplated removing to this locality, and we are of opinion that few places in the Saskatchewan could be found that offer greater facilities to settlers. In the valley of La Queue a few specimens of the Abies alba appeared, but the mass of the vegetation consisted chiefly of poplars. Crossing the stream we entered a curious valley, two miles long and one broad, the sides of which exposed sections of a light yellow sand, having mixed with it large pebbles of a chalky whiteness. The bottom of the valley, at this time perfectly dry, was covered by drift timber, and a limey sediment had formed on its surface. Close to this valley is a poplar ridge rising above it to the height of 200 feet in a north and south direction; while ascending its slanting side we came upon the trail of a large party of Indians going in the direction of the Rocky Mountain House; they were undoubtedly a Blackfoot war party, and had passed here only two or three days previously. On gaining the summit of the ridge our attention was attracted by smoke in the direction of Red Deer River, which we did not answer for fear of bringing a large party of Indians to our encampment. We were, however, inclined at first to do so, as Dr. Hector, who had started in the morning, had not yet come up with the main party, and we were apprehensive that he had lost himself, and that the signal fires were made by him to our party. But as Isidore, who is almost a pure Indian and an excellent hunter, had accompanied him, we came to the conclusion that there was no probability of his being at fault. Accordingly at 2.30 p.m. we moved off, passing numerous small lakes, and after crossing a second poplar ridge, which takes the same direction as the first, we

Dead Man's Creek.

reached a small creek, called by the Indians Dead Man's Creek. At this place spruce appear in fair abundance, and there is luxuriant vegetation in the low valley of the creek, which is hemmed in to the south and west by an elevated ridge. The vegetation is young, but the remnants of large trees, partially destroyed by fire, sufficiently indicate the extent to which this element has ravaged the country in this part also. At the Dead Man's Creek we again met the captain. He had fallen in and hunted with a small party of Rocky Mountain Stoneys or Assineboines, who were camped at this

The Rocky Mountain Stoneys.

place. The Stoneys are a small tribe of Thickwood Indians, whose hunting grounds lie along the base and in the valley of the Rocky Mountains. They are very poor, and go about almost naked, and suffer great misery through want of food. Occasionally they make excursions into the plains after the buffalo, but as a rule they confine themselves to the thick woods, hunting moose, elk, long-tail and short-tail deer, the big-horned sheep, and bears. They are very expert hunters. They are sprung from the same stock as the Plain Stoneys, and their language differs only as a provincial dialect from that of their kinsfolk of the plains. Unlike that nation, however, who possess all the vices common to the prairie tribes, the Rocky Mountain Stoneys are peaceful and inoffensive. They have been converted to the Christian religion, and are unusually attentive to the truths which have been taught them by the missionaries. Every morning and evening they devote a short space of time to religious duties, and make it a rule to rest from the labours of the chase and travel on the Sunday. The sacred music which has been taught them is most characteristic, and when singing in one of the solitary valleys of the Rocky Mountains, their chant sounds intensely wild. In former years they numbered far more tents than at present: now we believe there are only 35, or about 250 souls. There is a tribe

The Thickwood Stoneys.

of the same stock as the Rocky Mountain Stoneys, called the Thickwood Stoneys, whose hunting grounds are in the thick woods between the north branch of the Saskatchewan and the Athabasca River, and who are never found dwelling in the Rocky Mountains. The produce of their chase is brought to Fort Assineboine, while that of the Rocky Mountain Stoneys is bartered at the Rocky Mountain House. The "Thickwood Stoneys" are a larger tribe than the "Rocky Mountain Stoneys." They extend as far to the east as Fort Pitt, where they are replaced by the "Thickwood Crees," a tribe more allied to the true Cree of the plains than the "Swampy or Muscago Crees." We encamped at Dead Man's Creek. Paul's and Joseph's families arrive.

Spontaneous combustion of coal.

July 20th, Tuesday.—We remained at this encampment to-day to visit the coal beds, which were reported to have been on fire. It was found to be as the Indians had asserted, and far along the banks of the Red Deer River, where the coal appeared, the spontaneous fire was in activity. The Indians say that as long as they can remember this has been the case. Latitude observed 52° 19′ 25″ N.; longitude 113° 3′ W. by lunar.

July 21st, Wednesday.—At 8 a.m. we moved camp, and winding our way 8 miles through irregular and wooded country descended into a valley of Red Deer River. Our first experiment was to ascer-

tain if the river was fordable, but finding that it had a deep channel and swift current, we commenced to construct rafts for ourselves and baggage. This being accomplished without losses of any kind, we encamped on the right bank of the Red Deer River to allow of observations being made in the river valley. The depth of the valley is upwards of 200 feet, while the river averages 130 yards in breadth. On both banks the coal strata are seen, in many places 15 feet thick; but the quality of the coal is not superior to that found at Fort Edmonton on the north branch of the Saskatchewan River. On testing its value, it was found that the coal burns without any flame, but when once set on fire it burns for a considerable time. A few small pieces lit at night keep the fire alive till morning. The ash which it leaves resembles the ash of wood, and it gives out a good heat. There is a fair growth of wood in the valley of Red Deer River, and the further we proceed up towards its source the more plentiful that article becomes. Speaking from report, the river is navigable from this point down to where it joins the south branch or Bow River. The Bow River in like manner is said to be entirely free from rapids and other obstacles from this point down to where it unites with the north branch of the Saskatchewan.

Coal seen in the valley.

July 22nd, Thursday.—A rainy morning which turned out fine. We ascended the steep side of the river valley, and Dr. Hector followed up the course of the Red Deer River, while the main party kept more to the south to avoid the ravines and gullies on its right bank. At 1 p.m. we stopped for dinner, and were delayed in our further march till 5 p.m. owing to a thunder-storm. At 7 p.m. torrents of rain forced us to encamp for the night, and shortly after Dr. Hector arrived. He followed up the river's course for a considerable distance, and found the coal strata to disappear about 2 miles above our crossing-place, where it is succeeded by bold sandstone cliffs rising picturesquely from 160 to 200 feet. Some very fine specimens of the spruce fir, measuring from 1 to 1½ feet in diameter, were met with on the banks of the river, and numerous gullies, which add their water to the main river, displayed a fine growth of timber. We have remarked for the last three or four days that the grass and smaller plants have been beaten to the earth over a large space, probably by trail.

July 23rd, Friday.—After a march of two hours over swampy and uneven ground, rendered more tedious by a dense growth of willows and small poplars, we arrived at 8 a.m. at the "Nick Hills." An observation for latitude gave 52° 12′ 52″ north, and for longitude 113° 39′ 25″ west. Here we obtained our first view of the magnificent Rocky Mountain chain, which to the northward appeared like a blue line on the far-off horizon, while to the south they seemed more high and massive, their summits clad in snow, which glittered at intervals like silver crowns. Great excitement prevailed among our party at this sudden and unexpected sight, and we all looked to the Rocky Mountains as the long desired object which was to relieve us from the monotony of prairie life. From the "Nick Hills," which afforded us an excellent station for bearings, a low flat prairie extends far away to the north and west, the wooded borders of the Red Deer River being the only line of vegetation to relieve its barren surface. The three Medicine Lodges Hills bore from us N. 182° E. at the distance of about 35 miles, while the Antler Hill, towards which we bent our course, bore N. 114° E. at a distance of 9 miles. We arrived at this place at 1 p.m. and encamped for dinner. M. Bourgeau obtained some excellent plant specimens during our stay, which was only for two hours, when we directed our course towards the great prairies to our south. At 6 p.m. we encamped near a small stream, which, taking a N.W. course, falls into the Red Deer River, having passed over some undulating country with here and there clumps of fine balsam poplars entirely destroyed by the ravages of fire. It is most lamentable to see so often such masses of valuable timber destroyed, almost invariably by wanton carelessness and mischief. The most trivial signal of one Indian to another has often lost hundreds of acres of forest trees which might have brought wealth and comfort to the future settler, while it has brought starvation and misery to the Indian tribes themselves by spoiling their hunting grounds. The Indians, however, never taught by experience, still use "signal fires" to the same extent as in former years, driving the animals from their retreats and marring the fair face of nature for the future colonist.

The Nick Hills.

First sight of Rocky Mountains.

Prairie grounds burnt.

July 24th, Saturday.—At noon, in longitude 114° west, the observations gave latitude 51° 55′ 43″, and the bearing of the Devil's Head in the Rocky Mountains was observed by compass to be N. 210° E. In two hours' travel from this place we arrived at the edge of the great prairie, and encamped. Several of our party strolled off in search of buffalo, as our provisions were getting very low. Arrived now at the edge of the woods, it is necessary to give a general description of the country passed over since we entered upon the Wiguatinou Valley; and to do this let us imagine a line drawn from 60 miles south of Fort Carlton, which is on the verge of the great prairies, to the Wiguatinou, and thence produced to the site of old Bow Fort. This line marks the boundary of two natural divisions of the country, viz., the ancient forest lands and the true prairie district. To the north of this line generally there is timber, a good soil for agricultural purposes up to 54° north latitude, and superior pasturage; to the south there is no timber, the soil is sandy, with little or no admixture of earthy matter, and the pasture is inferior. Exceptions of course may be found, as for example in the neighbourhood of swamps and gullies, where the soil and pasture are better. The entire absence of wood on the prairie lands is felt by the Plain Indians during the severe months of winter. During the summer they use as fuel the bones and dung of the buffalo, but in the winter they are obliged to retreat to the borders of rivers where they can obtain wood.

Arrival at the Great Prairie. Its description.

Description.

July 25th, Sunday.—Latitude, obtained by a reduction to the meridian altitude of sun, and subsequently by meridian altitude of moon, 51° 52′ 50″ north, and longitude by lunar discs 114° 10′ 15″ west. No animals to be got in the neighbourhood; the Rocky Mountain Stoneys having tented here a long time. No news of Lieut. Blackiston; Dr. Hector started to the Forks to bury a letter for him.

July 29th, Thursday.—Remained at this camp, "Caché Camp," until the morning of the 29th July. We were then so driven for provisions that we were obliged to move off for the south. Our hunters had returned, but no buffalo were to be seen, consequently we determined on striking straight for the Bow River, as we stood more chance of getting provisions in that direction. One of the Stoneys, whom we engaged at the "Caché Camp" had some days before killed a moose, and the poor fellow very hospitably gave us half the meat. Previous to starting, however, we made a caché of all our bulky articles, so that we might travel unincumbered while in the mountains, and we left directions for Lieut. Blackiston to follow our cart track, as we had been forced to leave the Caché Camp. We had encamped for dinner when Lieut. Blackiston with his guide came on in advance of his party and made

up with the main body. After dinner we made seven miles and encamped on the banks of a small stream about three miles S.S.E. of our caché encampment.

Captain Palliser's Journal.

July 30th, Friday.—Lieut. Blackiston's carts came up, and soon after we all started together; our course was a little to the east of south. Camped early; made about 23 miles. We were now almost without provisions, but saw at a great distance two buffalo bulls. I sent out two light weights wel mounted with directions to reconnoitre to the south-east, and ascertain if any cows were to be seen, but on no account to run them if they found any, but to return straight to our camp. We then continued on our course for another hour and camped; late in the evening the two men I had despatched arrived in camp reporting buffalo in great quantities about 10 miles to the eastward.

The country which we have passed over since leaving Caché Camp is poor pasturage, the soil sandy, with a proportion of white earth. The nights of late have been remarkably cold for the season of the year; the thermometer indicated half a degree below freezing point two or three nights ago. The same curious fogs which we observed at Turtle Mount in July 1857, are of nightly occurrence here also. They commence in the hollows between the prairie undulations just after sunset and gradually increase in density till they spread over the whole plains, giving them the appearance of a sea.

It is singular that we do not observe this phenomenon at the surface of small lakes and swamps, but only where no water exists.

July 31st.—Started before daylight; arrived early in the direction of the buffalo seen the evening before; halted for breakfast; the morning was cold and stormy. I allowed the men to wait until noon, by which time the buffalo would begin to lie down after feeding. They are then not so swift as if they were pursued early in the morning. We were now more than two miles' distance from the buffalo, who were not in sight, as we had taken care to take up such a position as that they could neither see us or get our wind; they were in such numbers that their peculiar grunt sounded like the roar of distant rapids in a large river, and causing a vibration also something like a trembling in the ground.

Buffalo hunt.

We had scouted the animals pretty well, so that all that remained for us was to eat our breakfast and make for the point of attack. Breakfast finished, our "runners" saddled and mounted, the whole party moved slowly on, the carts following in the rear of the "runners." Having ascended the slightly elevated ridge we then beheld our game, four or five thousand buffalo, some lying down, some grazing with the old bulls in the outskirts. At our appearance the wolves, who almost invariably accompany bands of buffalo, sneaked about and around, eagerly watching our movements, and perfectly aware that the events about to come off were to terminate in an abundant meal after the field was left to themselves. A few antelope were gracefully moving near the buffalo, and over the heads of all noisily soared some crows and ravens, and appeared quite aware that something was in the wind. Soon after seeing us the buffalo were in motion at a steady lope, crowding gradually into a thick black mass, and now the hunters came on at a steady canter increasing with the speed of the buffalo into a hand gallop; the old bulls were soon left in the rear as the pace improved, some stood blown and staring after they had made ineffectual attempts at charging the hunters on their headlong way after the swift cows. The run was magnificent, and there was considerable emulation between my Saskatchewan and my Red River men. We killed 17 cows, generally speaking in good condition, and were now not only sufficiently provided with meat for our present wants, but also enough to dry and preserve for the expeditions contemplated in the mountains. Several of the party got apparently very severe falls owing to the badger holes, but none were seriously hurt. In the evening we had fixed our camp and cut up and drawn in our meat.

Our camp, which we have called Slaughter Camp, is situated on the banks of a small tributary to the South Saskatchewan, in latitude 51° 21′; longitude 113° 50′. Here we enjoyed a magnificent view of the Rocky Mountains as the sun set behind their snowy peaks.

August 1st.—Men occupied in slicing and drying the meat and I in organizing the different branch expeditions. Remained here until the 3rd of August.

August 3rd.—Being unwilling to cross the mountains without previously knowing something further of the British territory to the south, and also being anxious to see what kind of land or what the quality of the land was in the neighbourhood of the international line from the base of the Rocky Mountains towards the east, I determined to make a rapid journey to the boundary line, distant about 170 miles. I arranged that Dr. Hector should ascend into the mountains in any direction which he thought most conducive to the interests of geological and geographical science; that Captain Blackiston should explore the two passes generally used by the Coutanies, crossing the mountains by the more northerly pass and returning by the more southerly one. I gave Mons. Bourgeau instructions to penetrate into the mountains as far as he thought conducive to the interests of botanical science. And to myself I resumed the exploration of a pass, the existence of which I had heard of when in the American Indian country in the year 1848, from Mr. James Sinclair, a very intelligent half-breed, well known and deeply regretted.*

Having made the above arrangements, I purposed, when I had visited the country in the neighbourhood of the boundary line, to return to the northward, and to meet the men and horses not appointed for the several branch trips. I had ordered these men to await Mons. Bourgeau's return from the mountains and also my return from the boundary line, our place of meeting to be the Old Bow Fort, situated in latitude 51° 9′; longitude 115° 4′. From this neighbourhood the buffalo were then not far off (as we had met them at Slaughter Camp), and I desired the hunters to kill, cut up, dry meat, and make "cachés" for each party, who would find their shares buried for them as they arrived in succession from the mountain branch, with the several branch parties under their command. I well knew that none of us would find much game in the mountains, and each would be glad to avail himself of the provisions by-and-bye which I was then organizing for them.

* He was shot unintentionally in an Indian row with the Americans at the Cascades on the Columbia River.

Having made the best arrangements in my power for fitting out and providing for the several branch parties, conducted severally by Dr. Hector, Lieut. (now Captain) Blackiston, and Monsieur Bourgeau, I prepared for my trip to the western extremity of the English boundary line, accompanied by my secretary Mr. Sullivan, our servant James Beads, Batiste Gabriel, and two more men, and 13 horses in all.

Branch expedition to the boundary line.

We started from the Slaughter Camp, in long. 113° 50′, lat. 51° 21′, at noon. On the 3rd of August our course was due south. We knew we had but arid plain to cross, with little hopes of water, save what a chance swamp might afford, until we fell on the South Saskatchewan River. Rode fast, and at about 6 p.m. arrived on the borders of a lake about two miles long, and more than a quarter of a mile wide. Found its waters salt, rested the horses for a short while, and, resuming once more our southern course, travelled till long after dark; camped without either wood or water.

August 4th.—When we awoke this morning we found ourselves about two miles distant from the river, saddled up and hurried down there as fast as possible. The river banks were about 120 feet high, and the river valley about one mile in breadth, bearing a fair growth of willow poplar, and berry-bearing bushes. One rough bark poplar there measured 9 ft. 7 in. in circumference, and we saw a fine hummock of spruce fir about two miles higher up the stream. We found the river about 200 yards wide, and its channel deep. Latitude where we crossed 50° 55′. Crossed our saddles, guns, and other effects, which were neither numerous nor heavy, in the leather tent, folding it up in a round shape, and wrapping the edges round a rope which confined it all round. We swam the horses across, and hauled our tent leather boat after us by cords attached to it, and found the stream bitterly cold, owing to our proximity to the mountains, in consequence of which the temperature of the water was not much higher than that of the glacier from which it emanated. On resuming our course to the southward, we found ourselves once more within the fertile belt; the land was good, and rolling in character, though frequently covered with boulders, which impeded our progress. The feeders to the south branch contained considerable growths of timber of a fair size. The valley and the country adjoining, which was undulating, contained fertile land and willow and poplar brush on its northern exposures. We crossed Pine Creek and Sheep River; the latter was a stream about 90 yards wide, and three feet deep, its valley about half a mile wide and well wooded, and here we camped for the night, after having travelled about 17 miles on a south course.

August 5th.—Had a very heavy thunderstorm and rain during the night, and in the morning we found that snow had fallen on the mountains, which now presented quite a wintry aspect. It was cold and wet, we did not get off till eight o'clock. Stopped to breakfast at 11.15, made 12 miles, easy travelling. The coulées were not so abrupt as yesterday, the timber was better generally, although none of it could be called valuable. Measured a balsam poplar, 9½ feet in girth at the height of my shoulder. Saw plenty of spruce fir on two insignificant tributaries which we crossed. I could not obtain a noon observation, but guessed the latitude of where we crossed the second creek and breakfasted, to be 50° 30′. Started off again at 1, and soon after saw a single buffalo cow. Changed my saddle on to Pharaoh, who was running light. He took me a long run to the east, almost to the edge of the plains. Again I carried off as much meat as I could stow away, and came up at seven in the evening with the rest of my party at the north-west extremity of a high hill. This hill I climbed, and found a spring near the top, from which trickled a beautifully clear spring, half choked with buffalo bones; these lay in masses around. Probably a large band had perished there, rolled one over the other in a snow drift. Got lat. Polaris 50° 6′.

August 6th.—Started at seven, found we were now riding along the western flank of the Porcupine Hills. Crossed a tributary to Bow River of considerable size, name unknown. Proposed to the men to call it Arrow River, as it belonged to Bow River. The proposition was highly approved of, and this stream is now Rivière de la Flêche. Arrived at Montagne des Porque épique, or Porcupine Hills, and camped at a considerable elevation. Saw some very old stunted cedars; was disappointed at the timber. The whole place was more or less destroyed by fires.

August 7th.—Started early from Porcupine Hills, preserving still (as much as the inequalities of the ground permitted) a south course; arrived at 11½ at Little Belly River, crossed it in lat. 49° 32′. During the whole of the forenoon travelled over poor flinty and sandy country; during our ride this afternoon the land greatly improved in character, and was, in some places, rich; travelled about 14 miles since noon.

August 8th.—Started at 9, travelled till 11½, took observation, lat. 49° 5′, and camped about six miles. and in full view of the Chief Mountain, thus accomplishing our journey of over 180 miles in five days.

Leaving Mr. Sullivan in charge of the camp, about 5 miles from the boundary line, I took with me Batiste Gabriel, a first rate rider and smart little hunter. We were both mounted on the best buffalo runners, and started for the boundary line in a E.S.E. direction; these horses had done no work, but had been trotting free during our journey from Slaughter Camp, so that I had means for getting over a good deal of ground, and making the best use of my time on the only day I could spare for examining the western extremity of the British boundary line on the eastern side of the Rocky Mountains. I was, most probably, the only white man that had ever been there. After a sharp ride of about 15 miles we ascended a conical hill, about 16 or 18 hundred feet above the plain, which I called Observation Mountain, situated from Chief Mountain a little to the north of east. This hill is a portion of a range of rocky spur running at right angles from the chain of which Chief Mountain forms so prominent a feature. Ascending Observation Hill we rode through forest to a considerable height; before emerging from the trees the hill became grassy and very steep. Dismounting, we attached our horses to two trees and climbed to the top of the hill. The very great extent of view from this high hill top well rewarded the exertion. I could now trace the feeders of the South Saskatchewan by their fringes of poplar and willow, or by their banks along the sandy waste, as they rose from their reservoirs in the mountains, taking first an eastern course, and then bending away to the northward. In the N.E., almost at our feet, lay the Gros Ventre Lake, from which I could trace the Belly River running to the eastward, and finally sweeping away to the north, to pour its waters into the South Saskatchewan. I saw, however, no tributary from that point of observation likely to prove a feeder to the Missouri; all waters after running a few miles to the eastward bore away to the northward. As far as the eye could reach to the north and east was an apparently boundless sandy plain. The sun set gloriously behind the Chief Mountain just as I would have given anything for one half-hour's longer

light.* A splendid moose then stepped out of the woods about three-quarters of a mile below us, displaying his gigantic though somewhat grotesque proportions. Batiste lamented the approach of night, on account of the proximity of the moose. But we had no time to lose, we had a long ride before us, so hurried down to our horses, and reached the plains as twilight ceased ; we then started for our camp, but what with the numerous lakes, and the quantity of woods through which we had to force our way, we had to give it up, unsaddle and hobble the horses, lighted a fire, and waited till day-break.

August 9th.—We found the horses at daylight, and found ourselves not more than three miles from camp, rode in and found them all asleep, got breakfast, rested, and got away on our journey north again at 2½ p.m.

August 10th.—Started early, travelled along the track we had made on our way to the boundary line, passed our camp where we had slept on the night of the 7th, breakfasted where we had breakfasted on the morning of the 7th; after breakfast diverged from our former track, as we were bound for the Old Bow Fort, which was both considerably to the westward and southward of Slaughter Camp, from whence we had started, we therefore crossed Belly River a little nearer the mountains, in lat. 49° 34′; here were exposed some remarkably fine sections of sandstone on the banks of the river, some of them nearly 200 feet high and in curious fantastic shapes, and varying in their colour, which sometimes was that of rusty iron, and in other places bright red.

August 11th.—Our provisions quite exhausted. Stopped at 11; while in the act of dismounting a deer jumped out of the bush quite close to me and I shot it. Took latitude 49° 57′.

In the afternoon fell on an Indian trail, which took us along a narrow ledge of land elevated some 20 or 30 feet from the lands on our west, and more than 200 feet higher than the prairie which dipped suddenly into a great basin. The plateau we were riding along was never more than 200 yards wide, and in some places not more than half that number of feet across; this singular strip of table-land extended for four miles, due north and south, and in the bottom of the basin were three long lakes divided the one from the other by narrow rushy swamps, indeed the third lake was more a swamp than a lake. Batiste and I descended the plateau into the basin with great difficulty, on account of its steepness, in order to hunt an elk at the west side of the swamp, in which we were uncommonly near leaving our horses, who sank to their bellies; we had considerable trouble to get them out, and had to climb the plateau again, along the top of which we had to continue, and after dark caught sight of my party's camp fire.

August 12th.—We now were over persuaded by Batiste, and very foolishly left the Kootanie trail and pushed on more directly to the westward for the Bow Fort. Here we for a long time pushed our way through spruce fir and small pines, and at last got stuck in the fallen timber, and obliged to try back to the east again.

August 13th.—Travelled through woods in a north direction, crossed two or three little creeks, could not obtain any observation. Beads killed a deer, very opportunely, for we were nearly out of provisions.

August 14th.—Started at five; came in sight of the South Saskatchewan about nine o'clock. Batiste ascended a grassy patch of high land, from whence he descried the large white tent of my men, on the north bank of the river. Near this the Kananaskis River joins the main stream; we crossed the Kananaskis River in order to follow higher up the South Saskatchewan, to find an easy crossing. Some of my men now came down to the river and shouted and beckoned to ride higher up.

We rode about five miles higher up. We saw both in the banks of Kananaskis River and those of Bow River curious horizontal sections of variegated marls, of purple, blue, red, and yellow colours, some not more than two inches in width, and none over nine inches of thickness.

Continuing our ride along the south bank of the South Saskatchewan or Bow River, we passed three successive falls of the river; these falls, like the whole surrounding scene, were wild and beautiful. We were now right in the mountains, which towered majestically above us. Above the third fall we crossed the Bow River easily, descended the opposite bank of the river again for about four miles, and reached my hunters' camp before two o'clock, situated close to the ruins of the Hudson Bay Company's Old Bow Fort.

On my arrival at Bow Fort Camp I found that the hunters had not been very successful; they had not fallen in with buffalo in that neighbourhood, and had found the elk and deer very scarce, so that they had not procured much spare meat. I found them also in great dread of the Blackfeet and Blood Indians. This is now nearly the time, too, when these Indians commence to arrive from the plains in the south-east, for the buffalo in winter approach the edge of the woods, and so also do the Indians, seeking fuel and thickwood animals, in case of the buffalo failing them during the winter. I now ordered the hunters only to wait for the return of Mons. Bourgeau from the mountains, and then start with him, and proceed as far as the forks of Red Deer and Medicine Rivers, where they would not be likely to be molested by the Blackfeet, and there they were to await Mr. Sullivan's return.

My plan would have been to have proceeded westward to Vancouver's Island after crossing the mountains, and leave the men and horses to return to the eastern slope and thence to Edmonton, under charge of Mr. Sullivan. I was aware that Captain (now Colonel) Hawkins of the Engineers was engaged in laying down the boundary line from the Gulph of Georgia towards the Rocky Mountains, and a Government despatch received by me last spring expressed a desire that I should communicate with Col. Hawkins. Doctor Hector and Lieut. (now Capt.) Blakiston had each started on their several branch expeditions two or three days previous to my arrival here; I also found that Mons. Bourgeau had left on his botanical tour.

August 16th.—The wife of one of my hunters was taken very ill with inflammation ; I feared she would have died. I blistered her severely, and gave her a great deal of medicine. I was occupied in making arrangements with the men who are to return to Edmonton. I retain Mathison and Ballenden throughout the winter; they are to commence cutting hay the moment they arrive at Edmonton, to help the horses through the latter part of winter and commencement of spring.

August 17th.—Busy making cachés and burying dry meat for Blakiston's and for Hector's parties, in case they should get short, and not be able to support themselves in the mountains. Wrote to the

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* My view to the southward was limited by high broken land jutting into the plain behind me as I stood facing the north.

gentleman in charge of Fort Edmonton, respecting my disposition of the men. Joseph's wife's face broken out; I am sure it is small-pox, but do not like to tell them so. She appeared to be better and free from pain, but very weak.

Took a lunar to obtain longitude of the Old Bow Fort at about four o'clock in the afternoon; result almost the same as one of two taken by Sullivan. The Old Bow Fort, close to which we were now encamped, is situated in latitude 51° 9′ north; longitude (by a mean of two sets of lunar observations) 115° 4′ 22″, and its elevation above the level of the sea (by boiling-point thermometer) 3,963 feet; the only portion remaining of this building are the stone chimneys; the rest of the fort, which was only of wood, has long since been burnt by the Indians. The scenery around is mild and beautiful. Its site is at the base of the Rocky Mountains, which tower above it to the height of 3,000 or 4,000 feet, the white summits of which, from a sprinkling of snow that had recently fallen, formed a pretty contrast with the dense sombre forests at their feet. The Bow River flows by in all the wildness of mountain character, foaming at intervals over ledges of rock in its valley, and then rushing onwards between high banks, clad with luxuriant vegetation. The Bow Fort was established by the Hudson's Bay Company, for the purpose of trade with the Slave Indians, a name applied by the Crees to the Blackfeet, Piegan, and Blood Indians. These tribes are considered by all who know them as the wildest and most dangerous of the aborigines in British territory. The fort was ultimately abandoned by the Company, owing to the expenses involved in keeping a sufficient staff of men for its protection. The barter was chiefly for provisions and buffalo robes, and very few of the fine furs were obtained, so that by the time the goods were transported, and the few furs sent to Lake Winnipeg, very little profit resulted. Besides frequent attacks were made on them by the Blackfeet, and several of the Company's servants lost their lives in defending the establishment.

The establishment of the Hudson's Bay Company, and subsequent abandonment.

Although my hunters had not been as successful as I could have wished during my absence, yet they had managed to save some meat for myself and the party I was obliged to take with me across the mountains, by some contemplated pass. This pass I have called Kananaskis pass, after the name of an Indian, of whom there is a legend, giving an account of his most wonderful recovery from the blow of an axe, which had stunned but had failed to kill him, and the river which flows through this gorge also bears his name. Of the existence of this pass I had learned from my friend, the late Mr. James Sinclair, a half-breed gentleman, formerly resident in Red River; this gentleman had informed me of this pass so long ago as the year 1848, and told me that he intended to try it the next time he made a trip across the mountains. Mr. Sinclair did cross the mountains since that period, and most likely did adopt that pass; this was not, however, the route adopted by Sir George Simpson, in his journey across the continent of America. Sir George Simpson's pass branched off from the Vermilion pass, and it was shown to Doctor Hector by one of his men, James Richards, a half breed, who had accompanied Sir George Simpson when he crossed the mountains. Dr. Hector did not follow up that pass, as it was hardly deserving of the name of a pass, because it involved the crossing of three heights of land, but nevertheless is a most direct route.

August 18th.—At noon we had completed the preparations for our departure, and, with a party of four men and nine horses, commenced our journey across the Rocky Mountains. Ascending the Bow River for about five miles, we forded the stream at the distance of about half a mile above where the Kananaskis River joins it. Making for an opening in the mountains, through woods of cypress (*Abies alba*) and fine poplar, with a dense undergrowth, we at length fell on an old track, much encumbered by masses of fallen timber lying in all directions, the result of fires in former years. A few skeleton tents, that is to say, poles arranged in the shape of an Indian wigwam, told us that we were following a hunting track made by the Indians evidently a very long time ago. We soon met the River Kananaskis, and crossed it. Here it was flowing in an easterly direction, but its course before reaching the Bow River is northerly. Our course to this point has been south by west, and our distance from the entry to the pass about six miles. We now had a magnificent view of the valley of the Kananaskis River, hemmed in on either side by an unbroken wall of mountains, the sides of which, for about 1,000 feet, are richly clad with pines. After a short halt for dinner, we followed up the course of the Kananaskis till 6 p.m., when we encamped for the night. If it were not for the density of the woods, and the obstructions caused by the fallen timber, there would be no great difficulty in taking carts as far as this point. Our Stone Indian hunter shot a black tail deer to-day.

We start on our journey across the Rocky Mountains.

August 19th, Thursday.—Shortly after moving off this morning old Paul shot a second black tail deer. At noon the mountains were capped with clouds, and a little rain fell. We were not prevented, however, from obtaining an observation for latitude, and found ourselves in 50° 54′ north. From this point we kept on a general S.S.W. course, and were all very much fatigued when we encamped for the night, having worked hard with the axe in clearing the fallen timber almost all day long. Here I observed a very satisfactory proof that lightning in the mountains must frequently be the cause of fires, and that all forests are not destroyed by the hand of man, for we saw whole masses of forest, isolated in mountain cliffs, fallen by fire, the mountain trees burnt in places so precipitous that no human hand could ever have reached them. The obstacle which a burnt forest presents to the traveller is of all others the most arduous; sometimes we were in a network of trees, lying at all angles the one to the other, and requiring no small amount of skill to choose which should be removed first. It was extraordinary to observe the great care taken by our horses in extricating their feet and legs from dangerous places. The poor brutes seemed to be very expert at this kind of work, and even when caught they would evince the utmost patience, and free themselves as gently as possible. We have passed many bears' lairs on our march to-day, and within 20 feet of our camp fire a grizzly bear had taken up his lodgings only a very short time previous to our arrival. Some of these grizzly bears are of an enormous size; they are fond of the turpentine of the pines, and are capable, when standing on their hind legs, of reaching up the stems of the trees, and stripping off their bark to the height of nine or ten feet, in order to obtain the turpentine that oozes out; but although black bears are great climbers, the grizzly bears are never known to ascend trees.

August 20th, Friday.—Keeping almost a southerly course till noon, we arrived at a patch of prairie land, which offered good feeding for our horses, and, as such places are rare, we encamped for dinner, and obtained a latitude observation, 50° 45′ north. About four miles south of this place, there is another similar patch of sward, and at its western extremity the wild and beautiful Kananaskis river leaps over

a ledge of rock in its valley from the height of 20 feet, and rushes on its way through a dense forest of pines. Piles of drift timber, carried down by the spring floods, lay here and there in sheltered bays along this part of the river, including pine trees, with their roots encumbered by masses of rock and gravel, swept down by the spring floods. At about four o'clock in the afternoon the Indian pointed out two elks. We turned aside to hunt them ; I was fortunate enough to kill them both. We camped early, and cut up and secured our meat, as this would most probably prove the last spot where we could find game before again leaving the mountains. Two very conspicuous mountains at a distance of about 12 miles to the south of us flank the height of land across which we shall have to pass to gain the western side of the watershed. From a lake at the base of the more southerly mountain a large tributary of the Kootanie has its source; and after an almost due southerly course it joins the main stream near the 49th parallel of north latitude. This river is hemmed in on either side by mountains, the sides of which rise almost perpendicularly from its surface.

August 21st, Saturday.—By noon we had arrived at the base of the two high mountains alluded to above, an observation for latitude gave 50° 37′ north. We remained here for about two hours, to take our observations. We were in a level meadow, hemmed on all sides by a dense forest of pines, which stretched far away up the mountain sides. Higher up the valley is the glacier, which forms the source of the Kananaskis River. This glacier sends off the mountain sides hundreds of small streams, which, under the sun's rays, had the appearance of silver threads. The mountain goats higher up, which looked like small white spots in slow motion, seemed to eye us as intruders. At our feet the river, which above this place spreads out into two lakes, flows through a contracted channel with great rapidity. From it we obtained some splendid trout; we got two kinds; the flesh of one was of a bright salmon colour, and of a fine flavour, far superior to the other, which was white. Crossing one of the lakes which forms part of Kananaskis River, and continuing our course to the point where we intended to make our ascent, we came on a magnificent lake, hemmed in by mountains, and studded by numerous islets, very thickly wooded. This lake, about 4 miles long and 1½ miles wide, receives the waters from the glacier above, and is a favourite place of resort to the Kootanie Indians. They cross the height of land from the west, and go off in canoes to the islets in the lake, for the purpose of hunting the elk, an animal which seems to prefer these wooded islands to the denser forests on the shore. While going round the edge of this sheet of water, where the fallen timber greatly embarrassed us, one of our horses, strangely enough, adopted the other alternative of swimming across the lake. This effort of intelligence caused us serious misfortune and dismay, as his pack contained our only luxuries, our tea, our sugar, and our bedding. For about a mile from this lake our course was difficult to the horses, on account of the broken rocky character of the country. In some places large blocks of the limestone, which composes the mountains in this part, were lying all broken and heaped in a singularly artificial manner. A few grouse have been killed, but we shot very few of any other kind of birds, excepting owls. We camped close to the Kananaskis River, at the base of the most northerly of the two high mountains noticed above. Here the river was flowing rapidly over a steep incline to the lake we had left, and above us the lofty cone-shaped mountain reared its apex to a great height, the passing clouds sometimes hiding its summit from our view. We now arrived at the termination of the lateral valley, through which the Kananaskis River follows to join the Bow River; the only serious obstacle we have met with arises from fallen timber, otherwise the course is practicable enough and almost devoid of swamp. The rise also from Bow River is inconsiderable.

August 22nd, Sunday.—We started from our encampment at half-past seven, and travelled till 10 a.m., when we reached the edge of the pine woods at the base of the height of land, took an observation for longitude, 115° 27′, then breakfasted, and at noon took observation for latitude, 50° 37′ 40″. Started again at half-past twelve on our ascent, which we found much easier than we had anticipated. At two we had nearly reached the height of land. We then stopped at a spring to rest the horses, after which we completed our ascent in a few minutes, having gained the height. Our course was circuitous, owing to the rocky nature of the summit level, which was not altogether devoid of timber. At about half-past four p.m. we camped at a small lake, about half an acre in area, where there was some tolerable grass for the horses. From this lake flow the first waters we had seen which descend to the Pacific Ocean. With these waters we supplied our tea kettle, while our scanty supper of tough elk meat was boiling in the waters of the Saskatchewan. The altitude of the summit level was by barometric measurement 731 feet above the valley of the Kananaskis River. The readings at the eastern base and at summit level are—

At base.	At summit.	D. of level.
24·52	23·76	731 feet.
·36	·77	
·33	·76	
	·74	
	·72	
	·70	
	·69	
24·403	25·736	

Very little vegetation appears along the summit of the watershed, which is overspread with masses of stones and rocks, and the only animal which we have seen is the siffleur, whose shrill whistle we heard for the first time close to our encampment of to night. It inhabits crevices in the rock, and when full sized is not larger than the common badger of the plains. It is excellent eating when fat. There are two species of this animal, but one only was seen there by us. Its fur is of a mottled grizzly brown colour, but of little value to the trader ; the fur of the other species is black, tinged with brown. The Sposshewass Indians make robes of siffleur skins; and these are almost the only clothing they possess. Towards dark the summits of the mountains became wrapped in misty clouds; this, combined with our proximity to the glaciers on either side, and the scarcity of wood for our camp fire, caused us to pass a chill and uncomfortable night.

August 23rd, Monday.—Started after breakfast, rode along the southern border of our little tea-kettle lake, and commenced our descent of the western slope of the Rocky Mountains. Following the stream that issued from the lake we observed it grow larger and larger as it received innumerable little tributaries, until it at last became a broad and rapid, although shallow, stream, and assumed the dimensions of a considerable river. The first 300 feet of our descent was very steep for the horses, as well as rocky and covered with loose shingle, but as we descended the valley the slope became less formidable; at the base of this slope in the valley of this river (which the men ever afterwards called Palliser's River, to distinguish it from the other branch of the Kootanie River) we took readings, which may thus be compared with those taken in the valley of the Kananaskis at the other side of the height of land: Descent of the western slope.

Mean Kananaskis River.	Mean Valley of Palliser's fork.
24·403	24·845

Thus showing the valley of the western stream 465 feet lower than that on the eastern side of the height of land.

The rain was continuous up to 10.30 a.m., when a bright hot sun dispelled the clouds which hung over the mountains. We took shelter under some splendid trees on the left bank of the river till the rain passed, and then continued our river course along the river valley; passing here, as on the other side of the watershed previous to our ascent, immense debachals of broken limestone. At noon we encamped for dinner on the right bank of the river, in latitude 50° 38′ 55″ north. A remarkable change was observable here in the increased luxuriance of the vegetation, and also in the appearance of shrubs that we had not seen on the eastern side of the mountains. Amongst others, a species of raspberry with a remarkably wide leaf grew abundantly. At 1.30 p.m. we again got under weigh, and kept a S.W. by S. course till 5 p.m., when we encamped for the night on one of the many islands in the stream. We continued our march during the latter part of the day alternately along either side of the stream, crossing the river frequently, and for the sake of convenience sometimes riding in the river itself, in order to avoid the fallen timber. Its valley is of great breadth, and the mountains which form its sides retire to a good distance on either hand.

August 24th, Tuesday.—The latitude obtained at noon was 50° 30′ 14″ north, and our general course since noon of yesterday has been S.S.W. In the afternoon we encountered more fallen timber, and at one point in the river, where it is shut in on either side by mountains, which rise from its surface almost perpendicularly, we made a considerable ascent, thus cutting off a sweeping bend. The mountains in this part changed their geological formation, being composed of clay slate instead of the limestone, which characterizes the outer range of the Rocky Mountain chain. Towards nightfall we were almost entirely stopped by the fallen timber, piled in some places to the height of 5 or 6 feet, and rendered still more impracticable by a dense growth of young pines which crowded themselves above the fallen wood. A bright moonlight assisted us in hewing our road, and it was nearly midnight before we could obtain water and a scanty herbage for our jaded horses. Palliser's River at this place is a wild stream, contracting its channel gradually until it discharges its waters through a gorge in the mountains measuring only a few feet across. The sections of clay slate are very fine at this point, and the beds are nearly horizontal.

August 25th, Wednesday.—Seeing our difficulties increase we sent two axemen ahead to cut a road for the horses before we left our encampment; about 10 p.m. they returned, and we got under weigh and started. Our course lay along the side of the mountains on the right bank of the river, where the slate strata appeared to incline to N.E. The softness of this rock is very remarkable. It can be broken by the slightest pressure of the foot, and is easily dug out from its stratified position by the hand. We observed numerous berry-bearing bushes all along the mountain sides, facing the south. The raspberry and blueberry were by far the most plentiful. This latter attains a much larger size on the west than on the east of the Rocky Mountains, and when dried formed an excellent addition to our tough elk meat. The soil in which these bushes grew was of a light yellow sandy mud, which lay in large deposits between the hollows of the mountains, and also formed the immediate banks of the river.

August 26th, Thursday.—We came upon a few recently deserted tents of the Kootanie Indians; these, unlike the buffalo skin lodges of Indians on the eastern side of the Rocky Mountains, are formed of flat boughs of the cyprée and prushe, and are covered with birch bark. At noon we arrived on the main stream, in lat. 50° 27′ 21″ N., long. 115° 43. In the valley of this river we still found the white chalky deposit forming a remarkable feature, which frequently assumes the appearance of grotesque figures and ancient castles, and here also we found poplars for the first time west of the Rocky Mountains. We may now be considered as having terminated our descent, and although our observations made with aneroid barometers are not so accurate as we might wish, yet the following results have been obtained by a careful comparison of them, and may be considered a fair approximation. Meteorological observations.

	feet.
Considering the Bow Fort at an elevation of	4,100
Above the level of the sea, the rise of Kananaskis River to the eastern base of the height of land, was estimated at	950
Immediate rise to the height of land	750
Total ascent of the height of land	5,800
The first steep descent to the west	350
Further descent to the west base of height of land	850
Further descent to junction of Palliser and Kootanie Rivers	950
Total descent of the height of land	2,150
Subtracting these, we get the altitude of the Kootanie above the sea, which agrees with observations of Doctor Hector taken independently higher up the river	3,650

From the forks of the Kootanie there is a track to the Columbia Lakes, but so overlaid with fallen timber that we could afford neither time nor provisions to pursue it. Crossing the stream we followed the Kootanie tract on the left bank of the river, with nothing to impede our progress, and encamped after going ten miles in a south by east direction in the valley of the river. We found many small squirrels there, as in fact we did generally all through the mountains.

August 27th, Friday.—We crossed a small tributary of the Kootanie River, and had not gone far before we were stopped altogether by the precipitous character of the mountains on either side. It was decided that we should cross the stream, to ascertain whether any track existed along its right bank. Rafts were constructed and our horses swam the river. The temperature of the water was low, and the current very strong ; we were carried a considerable distance down stream before reaching the other bank. It was noon before we could again start, and therefore obtained our latitude, 50° 19′ 24″ north. In the neighbourhood of our crossing place a few birch and a large quantity of cedar of beautiful growth covered the mountain sides. In the numerous ravines and gullies along our afternoon's track we found several sorts of berry-bearing bushes, among them the mooseberry, the moosoonima of the Crees, and the raspberry with the large leaf already noticed. The silver-berry willow also was in great abundance. The track to-day has been very bad, passing along a series of ravines, rocks, and gullies.

August 28th. Saturday.—From 5.30 a.m. to 11 a.m. the road we traversed was as bad as that of yesterday. We passed through groves of poplars, and the remnants of fine red pine timber show that at one time this tree must have grown here in great quantities. At noon we were in lat. 50° 10′ 12″ north; longitude by acct. 115° 50′ west. Captain Palliser, accompanied by our Stoney guide, ascended one of the mountains to obtain a view of the Columbia River, while the remainder of the party with Mr. Sullivan started to fix a conspicuous camp, and await his return. At three miles to the S. by W. of our dinner camp, we were opposite to the first of the Columbia Lakes, which at this point is only two miles distant from the Kootanie River. Towards evening we had a violent thunder storm and torrents of rain. The Captain, who had started without coat or waistcoat, remained out all night, and we ourselves were not much better off, being soaked through even in our encampment, without a tent, and with but two or three oil cloths to shelter us.

August 29th, Sunday.—At early morning the Captain arrived, having passed a pretty hard night; the lightning however had enabled him to descend the mountain and reach our camp very early in the morning. At 9 a.m. we recrossed the Kootanie River, and, continuing a south by east course till 11.30, stopped for dinner nine miles to the north of the point where a large tributary joins the main stream from the east. Our latitude here was 50° 1′ 14″ N. The river banks here display yellowish sandy mud, and the valley is composed of the same material. A few salt lakes are found on the left bank of the river, and we saw large quantities of bushes bearing small cherries, which are very extensively used as the principal food of the Kootanie Indians. Throughout the tobacco plains these cherries are very abundant, the sandy soil being suited to their growth. Encamped on the left bank of Kootanie River.

August 30th, Monday.—An accident here deprived us of all further use of our barometer. Our latitude was 49° 42′ 4″ N., and longitude 115° 33′ W. Just as we were about to encamp, a Kootanie Indian, the first human being we had seen on the west side of the mountains, made his appearance. A slight difference was observable in the cast of his features to that of the tribes we had previously been among. He informed us by signs that his camp was quite close by, and although not one of our party could speak a word of his extraordinary chuckling language, he nevertheless succeeded in informing us that he had seen Lieutenant Blackiston's party, that they had passed five days previous, that no traders had come to the Kootanie fort yet, that the Colville Indians had plundered them of their goods, and a wonderful amount of news besides, all by means of certain signs intelligible enough to our Indians and half-breeds.

While we were taking dinner the Indian returned to his camp, and told his people of our arrival; the latter at once mounted and came to meet us. We soon descried in the distance about 20 riders coming at full speed towards us. When we met them we were struck with the miserable appearance of the tribe; most of them were entirely naked except a cloth round the middle; they had neither bridles nor saddles, but guided their horses by a long hide fastened round the lower jaw. On arriving at their encampment their misery was more conspicuous; they were living on the berries which are so abundant on the Kootanie plains, and were possessed of absolutely no utensils for cooking. They had, however, numerous plates and dishes of basket work, which they are in the habit of making from the roots of the pine. In spite, however, of their great poverty in this respect, they are very rich in horses. Among the 11 tents we observed a band of at least 500, some of which were very fine animals. They possessed also a few domestic cattle, which they had obtained at Fort Colville. Among these Indians we found an old man that spoke very fair Cree, and he informed us that Fort Colville is nine days' journey from their camp, and the track to it not very bad. Through him we also inquired of them if it were possible to descend the Kootanie River from the point to the fort, and were told that the river becomes full of rapids and falls a little lower down, so that it would not be practicable, without a great number of severe portages. Captain Palliser, in accordance with the instructions he had received from Her Majesty's Government, relative to communication with Colonel Hawkins, was desirous of going on to Colville, but in spite of the most liberal offers to any Indian who would guide him to the establishment, not one would undertake the task. We were much surprised at the silence with which his appeal was received, but we subsequently learnt that the Colville tribe and the Kootanies were then at war with one another; but the Kootanies did not wish to tell us this, as they were apprehensive we should carry the information to their missionaries, who appear to exercise considerable influence among the tribe, and do a great deal of good. This, together with other important reasons, deterred Captain Palliser from then endeavouring to reach Colville. As our horses were so fatigued as to be almost useless for the return journey across the mountains, we managed to exchange them with the Kootanies by giving some blankets, cloth, ammunition, and tobacco out of the stock we had taken across the mountains for this purpose.

We begin to recross the Mountains.

September 1st, Wednesday.—Having completed our exchanges of horses, we started on our journey to recross the mountains to the Saskatchewân once more. Following a N.E. course we made for an opening which we had observed in the hills skirting the river, and through which we thought we had

a chance of reaching the western base of the height of land. After desperate climbing and two days very hard work in the burnt woods we found that the mountains presented one unbroken wall skirting the Kootanie plain; we were therefore compelled to retire. Being now in the centre of a vast system of mountains, where not a single animal nor even a track was to be seen, and having a long journey before us, we decided on adopting the North Kootanie pass; viz, the one entrusted previously to Lieut. Blackiston, thus being enabled to return by the Kootanie camp, and endeavouring to exchange a horse for one of their domestic cattle. We had been for some days on short allowance, eating chiefly berries, which gave the greater part of us an attack of sickness.

September 4th, Friday.—We arrived early at the Kootanie Indian camp, from which we had started on the 1st of September, and at once asked for the two-year-old ox they had in their possession; and although the old chief was most unwilling to part with him, yet he at last agreed and we killed the animal on the spot. Fearing lest a feast would be expected from us the horses were saddled while the meat was being cut up, and we started without any delay, still continuing our course down the left bank of the Kootanie River, S.S.E. for 14 miles, when we encamped. We passed an uncomfortable night, owing to heavy rain accompanied by thunder and lightning. Passed to-day a large pine that had been recently split by lightning.

September 5th, Saturday.—Eight miles from our encampment we crossed the tributary of the Kootanie River, about 150 yards in breadth, which issues from a narrow valley to the east.

September 5th, Sunday.—Travelled in a southerly direction, and camped near Elk River. My old hunter and I interrogated a young Kootanie who had found our party, and who also had a considerable knowledge of the Cree language. Being away from his companions he now became more communicative, and admitted that he had turned one of a war party against the Flat Bow Indians, with whom they had previously been at peace, stole their horses, and shot two of them without any previous provocation. He also told me that the horses I had received in exchange for my tired ones were virtually the property of the Flat Bows, and I considered this as additional reason why I should not have been wise in going further into their country at that time.

September 6th, Monday.—Came early to Elk River at its junction with the Kootanie. At this place I was obliged with great reluctance to change some of the meat of the young ox I had traded the day before yesterday, because neither my half-breed nor my Indian hunters would touch it. I persuaded the young Indian to taste it, but he immediately spit it out again in great disgust. We crossed the river at 1 o'clock, and began our first ascent, which we found very bad and steep. We could have pursued an easier course by crossing the river higher up, but I was dissuaded from doing so by the river being deep at that spot. Camped on the Wigan Creek.

September 7th, Tuesday.—Started very early, had easy travelling from half-past 6 to 10, making about [*sic*] miles from 10 to 12; the climbing was very severe both for men and horses. We now were on the height of land of the continent once more. We remained a short time in contemplating the mountains from a height of about 6,000 feet: I cannot speak accurately, as our barometer had been broken. We then commenced our descent, and stopped for dinner at the first spring we arrived at. We were now once more upon the waters which flowed into the Saskatchewan.

September 8th, Wednesday.—Started a little after 7, and stopped at the base of the Curtain or flanking range of the Rocky Mountains, after a descent of about 1,400 feet.

Here we dived into a swampy valley between the watershed and the Curtain range we were about to ascend; the weather was threatening and lowering. We did not stop long for dinner but hurried off, and had hardly commenced our ascent of the Curtain range when it came on to blow from the north, accompanied with such heavy snow that I was very fearful of losing the track. After a severe climbing of about an hour and a half we arrived at the top of the flanking range, having ascended out of the valley about 900 or 1,000 feet. The descent of this Curtain range was very severe on account of the rocky nature of the ground. On reaching the end of it we fell on a tributary to the Belly River, where we found the partial shelter of the wood very grateful from the cold north wind; by half-past six o'clock, however, we had left wind and snow behind us, and were comfortably encamped again, after a descent to the N.E. of about 1,500 feet.

September 9th, Thursday.—Enjoyed fine warm weather again. We were now out of the mountains, also out of provisions. We travelled till 11 o'clock. I started after a moose and was unsuccessful, but I killed a deer; the Indian killed a swan; Paul caught a fine dish of mottled trout.

September 10th, Friday.—At noon reached latitude 49° 47′ in sight of Windigo Mountain.

September 11th, Saturday.—Travelled for five hours; breakfasted in latitude 50° 12′; made a long spell in the evening, and camped on High Wood River.

We killed two grizzly bears yesterday, but to-day two other bears defeated us; they frightened the Indian by springing at his horse and tearing some of the hair out of his tail. I was too far back at first, and in the end fairly distanced.

September 12th, Sunday.—Started after breakfast; took latitude at noon, 50° 35′; found we had made 26 miles since noon yesterday. For the last three days we have been travelling through fertile undulating lands, the soil of which was particularly rich in the hollows.

September 13th, Monday.—Travelled slowly, the Indian and I hunting away off the track; found the deer very wild; killed nothing. The nature of the country is similar to that we had been travelling through for the last few days; in the afternoon we arrived at Bow River.

September 14th, Tuesday.—Paul and I rode out, one up, the other down the river, to find a good crossing place, then returned to breakfast on a very short allowance of fish which the others had caught meanwhile. After breakfast crossed; took latitude of crossing, 50° 55′. Saw buffalo to the east, struck off our course to follow them; came up with them about two; ran them and killed three; two of them very good. We have meat now for the whole way to Edmonton, though our tea and sugar are gone long ago.

September 15th, Wednesday.—Started after breakfast, and resumed our northern course. Our run after buffalo had taken us so far to the east, that we were beyond the line of fertile country which skirts the mountains. We made a long day, and camped about 30 miles distance from the edge of the woods, and nearly due south of our old Caché Camp, which had been our quarters at the end of July last.

September 16th, Thursday.—Arrived at the edge of the woods in the neighbourhood of the old Caché Camp. We came in sight of two tents of the Blackfeet; not knowing what humour these Indians might have been in, and having nothing in the way of tobacco or ammunition to give them, I forbad the rest of the men to go to the tents, except old Paul, who was half a Blackfoot, and whom I allowed to go and visit them; he returned to our camp very late at night with accounts that made me congratulate myself on my determination to conceal my whereabouts, and holding no communication with them. They had had war with Crees and Stoneys, and had killed Paul's brother-in-law. It was with difficulty he could get away in the night to reach my camp. I had driven in the horses, and guarded them closely all night.

September 18th, Saturday.—Started early, and left the Bear Hills; the country was now swampy and covered with willows. Camped very late at night. Old Paul took a fresh horse of his own, and started off in the night for Edmonton.

September 19th, Sunday.—Very wet day; started a little after seven, and travelled till half-past one. While we were at dinner, two of my men arrived from Edmonton. Old Paul, who arrived early in the morning, after travelling all night, brought the news that I was on my way. The men immediately started, and brought us a supply of tea, sugar, and flour. They were mounted on my two best buffalo runners, and so joined us in less than four hours. After dinner we started again, and camped about six miles from White Earth River.

September 20th, Monday.—Arrived early at Edmonton.

No. 5.

Hector's Branch Expeditions, commencing August 3rd, 1858, to May 26th, 1859.

August 3rd.—Slaughter Camp. After Captain Palliser and his party for the boundary line left us this morning, we continued our course westward towards the base of the Rocky Mountains, which were now in constant view, bounding the horizon from S. to W. by N. The prairie's surface rises into undulations which increase in decision and altitude, till at length, where we encamped for the night, they formed a low broken range of hills. We camped early, in order that the hunters might make a final onslaught on the herds of buffalo, through which we were still passing, but not in such numbers as previously.

August 4th.—This forenoon we crossed a succession of plateaus divided by wide shallow valleys, trending to the S.E. On one of these plateaus there rests a group of large granite boulders, some of them 12 feet in height, of an angular shape, and split into several pieces that have been separated by narrow fissures, wide enough, however, to allow of a man passing through them. The blocks appeared to be scattered over the plain, in a line also N.E. and S.W.

At noon we halted by a swampy lake, and on starting again commenced to rise rapidly, skirting a deep chasm with almost perpendicular sides. We encamped beside this valley where a little ravine sheltered a few poplars and willows, which was the first wood we had seen since leaving the Caché Camp. The valley I found to be 225 feet deep, and from its sides horizontal strata of calcareous sandstone and marlite cropped out, but in which I could find no fossils. In the bottom of the valley, which was a flat a quarter of a mile in width, and covered with good grass, a small stream, not larger than an ordinary drain, flowed to the eastward.

August 5th.—Continued travelling to-day over broken rolling country, with occasional outcrops of indurated micaous sandstone. There is a very marked increase in the variety and luxuriance of the flowering plants, and the pasture is abundant and well mixed. Encamped in Rock Gully, so named from the ledges of sandstone which protrude from its banks. There is a clump of large poplar trees close to our camp, so that the men can procure poles with which to construct stages for drying our buffalo meat in the sun.

August 6th.—We delayed our start till noon to take advantage of the clear powerful sun for drying the meat. We then traversed a magnificent plateau traversed by rocky gullies and glowing with a rich profusion of brightly-coloured flowering plants. The snow of the mountains with the foreground sharply lined by projecting ledges of rock was quite exhilarating, after the dreary monotony of the arid plains. Leaving the carts to move slowly on I struck off to the south, and by descending 600 feet over a succession of rolling hills reached Bow River after six miles. At this place it is a swift, rocky stream, with clear water. There is little or no wood on its banks, and the pasture is poor compared with that at the higher level. Sections of shale and sandstone, with seams of coal, occur along the banks, much disturbed and forming flexures, the strike of which is N.W. and S.E. A succession of hill ranges are thus formed by those beds, which lie parallel with the mountains, and rise 600 to 1,000 feet above the river level, and meeting its course at right angles. I got some fine trout from the river, caught by some Indians that I met, and at night joined the carts just before encamping under Dream Hill. Our camp was in a most picturesque position surrounded by well timbered hills except to the west, in which direction a level plain seemed to sweep up to the base of the mountains, foremost among which rose the craggy knob called the "Devil's Head."

August 7th.—Half an hour after starting this morning we came to Deadman's River, and found that the plain we had been admiring the previous evening was really the valley of that river, which rises near the "Devil's Head," and the level appearance is due to the manner in which the valley has been filled up by deposits of rounded shingle, obliterating all irregularities and only crossed by terraces that hem the river channel into very close limits. To cross this river we were obliged to seek a shallow rapid at where it joins Bow River, and it was only with the greatest care and trouble that we were able to get the carts down the steep bank and pass this point. We then skirted along the left bank of Bow River during the forenoon, travelling on level terraces which also skirt its valley. As we travelled along we were met by a number of Stoney Indians who continued to accompany us during day. At noon the valley commenced to become contracted and rocky, and we were much delayed by the carts getting repeatedly upset. Where we halted the river is hemmed in closely by rocks and forms a succession of rapids, and as the lands are well wooded the scenery has assumed quite an alpine character.

In the afternoon the road was very bad at some places, but with the help of the Indians, who were very well disposed, we reached the site of the Old Bow Fort at sunset, and encamped on a fine level shelf a few hundred yards up a creek that joins Bow River at this point and elevated 90 feet above the water. As we were to be here for some days and to make our arrangements for travelling in the mountains without the carts, we induced our Stoney Indian friends to camp beside us in order to get them to trade leather and pack saddles with us for tobacco and ammunition. We had seen a good many deer as we came along and just before encamping a young black bear was started and shot by Lieut. Blackiston.

We remained here busily engaged in preparing for our work in the mountains, and in examining the surrounding country, making observations and obtaining corrections for instruments until the 11th of August, when the expedition broke up into the branch parties.

August 11th.—Having placed the horses and supplies for Captain Palliser under the care of "old Paul," his guide, at 4.30, I started at the same time with M. Bourgeau, who also wished to follow up the valley of Bow River. We both chose this route as it allowed of our entering the mountains at once without travelling further in the open country, which yields little of interest either to the geologist or the botanist.

My party consisted of Peter Erasmus, Sutherland, and Brown, all Red River men, and also my Stone Indian friend, who had promised the previous winter to serve as my guide in the mountains, and who had just turned up in time to keep his word. As he is known to be one of the best hunters in the tribe, and his Indian name, which signifies "*the one with the thumb like a blunt arrow*," is so unpronounceable, I called him *Nimrod*, which name has stuck to him ever since. I had with me eight horses, three of which served to carry all the little baggage I cared to take, consisting principally of instruments, bedding, ammunition, and tobacco; for as I was assured that in the part of the mountains I intended to explore, there was abundance of game, I did not take any provisions excepting a little tea and a few pounds of grease.

Crossing the deep ravine, beside which the expedition had been encamped for the last five days, we skirted the left bank of Bow River, and soon the valley became hemmed in by the precipitous cliffs of limestone that form the mountains of the outer range. In the ravine, shales were exposed of a purple colour, slaty fracture, with a good deal of iron in cross seams, but not so soft and earthy in their texture as the clay shales I had seen overlying the grits ten miles down the river. These I again saw, however, shortly after starting, exposed in a second ravine, which we had to cross, and through which the track is steep and bad. After three miles we saw the track leading to the ford by which Bow River is crossed to reach Kananaskis Pass. Up to this point our trail passed through fine open woods of young pine, over high level terraces. On reaching the first point where the valley narrowed, we had to cross over heaps of loose rounded stones that had been swept down by the torrents, so that we got on very slowly; our horses with their tender feet being quite unfit for such rough ground. We had, indeed, fixed light plate shoes on some of their feet, but these only seemed to increase their discomfort. Above the contracted part of the valley we plunged into a labyrinth of dense forest, some of the black spruce trees being of great size, and struggled on through fallen timber till we reached the rocky spur of the mountain on our right, which above the torrent hems in the river so closely that we had to make a considerable ascent in order to pass over it. In the group thus formed there has been a great accumulation of shingle, not of the kind that forms the terraces, but of larger and more angular fragments. This damming back the river has given rise to several large lakes (*Lacs des arcs*) that occupy the width of the valley, excepting the channel of the river, with which they only communicate at flood season. The scene that opened to us on crossing the point was very striking.

Just beyond a second spur like that we were upon we had a peep into a valley so wide and extensive that it appeared to us, hemmed in as we were by precipices several thousand feet in height, that we were looking right through the range into comparatively open country. The peaks on either hand were of bold grotesque shapes, caused by the varying power of resistance which the contorted strata composing the mountains present to the atmosphere. They are formed of thick bedded limestone, with fragments of encrinite stems, sometimes blue and crystalline, at others dark, earthy, and bituminous. Alternating with these are groups of earthy shales, which are only preserved high up in the mountains, so that I had not an opportunity of examining them.

(Section 23) gives a sketch of the plications of this first range, as seen along the south side of the valley. On the north side there are but two subsidiary ranges that abut on Bow River, while on the opposite side there are five. It was quite dark before we descended into the valley by a faint trail leading through burnt woods to an open rocky spot beside one of the lakes, where we encamped.

Bourgeau has named the lakes *Lacs des Arcs*, and the peak opposite Pigeon Mount, the one behind our camp, Grotto Mountain, and a high peak to the west, on which the clouds were gathering and curling about Windy Mountain. During the night the thermometer fell to the freezing point, but at six a.m. it stood at 40°

August 12th.—At dawn started with Bourgeau to ascend Grotto Mountain. Passed over rugged ledges of deep blue limestone, which weathers to a light blue colour, and is traversed by veins of calc spar. The surface of these beds is very rough, and masses of chert are left protruding by the action of the weather. After ascending 500 feet we get out of the timber, but more by getting on to rugged surfaces of rock, as large trees were growing at least 800 feet higher in favourable situations. At this point Bourgeau began to get alpine plants in abundance, among which was a saxifrage with a denticulate leaf. We followed up the bed of a torrent till our progress was stopped at a point where the stream commences by a trickling fall, several hundred feet in height, into a clear pool with green mossy banks, and in which we performed our morning ablutions. On one side of this little valley is a great deposit of angular blocks of rock, mixed with calcareous clay, forming the sides to the height of 150 feet. In this deposit we found a large cave, with a high arched roof and narrow mouth, and like Robinson Crusoe's, with its old goat for a tenant, but in this case he had long been dead. The floor was quite battered hard by the tracks of sheep and goats.

Turning from this point, which was 1,000 feet above our camp, we descended by another spur of the mountain to breakfast. I did not start till noon, when I got the latitude 51° 1′ 44″ N., and having

taken leave of Bourgeau, who did not intend to proceed much further up the valley but to cross to Windy Mountain, I continued on with my own party. Our track led over the spur of Grotto Mountain, from the limestone of which I procured some fossil shells (Productus, &c.) We then entered the great valley, which runs N.W. and is several miles in width. We kept for several miles high up on the side of it, skirting along high banks of the terraced deposits which had been preserved from erosion by the spur we had just crossed. We passed some singular masses of the concrete that forms the terraces left standing like spars and chimneys on the sloping face of the deposit. At dark we camped by some old Indian wigwams where the valley is wide and flat, and with fine patches of level prairie along the river for our horses. Just opposite to our camp there is a mountain with three peaks which form a striking group, while a little further up the valley there is a cross valley or nick bounded by a very lofty precipice. Being right in the middle of the valley we were about 1½ miles from the mountains on either hand. To the S.E. this valley seemed to be continued by a depression in the mountains caused by the absence of hard beds to protect the strata of soft shales which here form a beautiful syncline.

The regularity of these beds is very wonderful. Hitherto, with few exceptions, they have always dipped to the W.S.W. or towards the mountains, but such is the baldness of the upper part of the mountain that there is no difficulty in discovering that the beds have been so completely overthrown as to give the whole flexure this general dip.

August 13th.—Wishing to give Nimrod a chance to get us some meat, of which we already stood in need, I did not move our camp to-day, but ascended the range to the east, and found it to be composed of the same limestone beds as before, dipping at a very high angle to the W.S.W. I got more fossils and found one bed of limestone that was quite full of the encrinite stems and corals. I also got Productus and Spirifer, so that the limestones are either of carboniferous or devonian age. The Indian killed an Apicee-Moosus or black-tailed deer. It was a large buck, and its head looked different to me from those of the prairies. Length of head from occiput to nose 13¾ inches; ditto from inner cantlers 7 inches; width between base of antlers 3¼; ears 10½ inches long; he had also wounded a large moose deer, but it escaped across the river.

August 14th.—The thermometer during the night only fell to 40° and at noon was nearly 70°. After getting the meridian altitude we travelled for a few miles further up the valley.

August 15th.—Started early this morning, and soon reached the point where the river turns from the W.S.W. to enter the wide longitudinal valley. Here the shingle deposits were again greatly developed, and travelling on the terraces we kept well from the river till we reached a beautiful little prairie at the base of the "Mountain where the water falls," as the Indian name has it, or the Cascade Mountain.

It rises on the left side of the valley, where it becomes contracted and cuts through the second mountain range. Having still a few hours of daylight I measured a base line on the little plain in order to ascertain the height of the mountain, which is extremely vertical. I found that its summit was in view at a horizontal distance of 2,200 yards, and its height above the plain at the base to be 4,521 feet. It is composed of strata which have a general dip of 30° to the S.W., and form precipices which rise round the south-eastern face of the mountains, towering one above the other to that height. Although it appears from that side to be a detached mountain, it is really the south end of a range of cliffs that continue the first longitudinal valley to the N.W.

An old Stoney, from the Indian camp we had left at the Bow Fort, joined us this evening, having come through the first range by a pass to the south of the "Devil's Head," in which he says there is a lake the length of half a day's march, where they catch the finest trout and white fish in the country. At the upper end of the lake which sends a stream into Bow River just below where we are camped, he says there is a "height of land" to be crossed, and from the other side of which rises Deadman's River.

This old "Stoney" told me that he once guided Mr. Rundel, the missionary, to this place, and that he lived here for many days camped in the little prairie.

There is only one way of getting up Cascade Mountain, and that requires a very long round. The Indians often get the white goat on it and the grey sheep is common. Once a white goat was wounded and got on to a ledge beside the waterfall, and stood there for seven days, and then it fell down over the precipice, when they found that it had been shot in five different places. The Indians say they are the hardest to kill of all animals.

August 16th. The track was so bad ahead, according to Nimrod, who was off before daylight this morning, and returned early having killed two sheep, that we required to halt to-day and let the men go on and clear it out.

At 8 I started up the mountain. For the first 300 feet I climbed up through dense woods and then came to an escarpment of limestone beds, among which is a bed of a buff colour about 80 feet thick, without fossils; over this lie beds of the same blue cherty limestone as on Grotto Mountain, and having the same fossils. I got up about 1,000 feet (by the sympiesometer), when I got clear of the woods, or merely found small stunted brushwood; but a precipice formed of grey limestone with veins of calc spar compelled me to turn more round the north face of the mountain, but still allowing me to ascend rapidly. While resting here a humming bird, blown by a strong west gale, flew against my face, but I did not succeed in capturing it. This is the first I have seen since leaving Red River settlement, and it certainly seemed quite out of place among the alpine vegetation. In the shales along with the limestones that contain the cyathophyllum I found a fragment of a conularia, and it is probable that we have them represented in the coal measures among those disturbed beds.

Following the base of the precipice soon led me to a point beyond which I could not pass without descending into an immense corrie, from which I started a large band of sheep. These animals are singularly matched by nature with the colour of the grey limestone rocks, so long as they are looking towards the observer, when it requires a very skilful eye to detect them; but the moment they turn to flee they become very conspicuous, as every part of their body as seen from behind is pure white. It is often quite startling in ascending a mountain and gazing as you suppose at nothing but the grey rocks, when suddenly a flock of white objects appear fleeing away from you, and as suddenly they seem to vanish when their inquisitive habits make them wheel in a mass to have another look.

The bottom of the corrie was filled with large angular blocks of rock, and patches of snow remained almost converted into ice, but not worthy of being termed glaciers. Among the blocks of rock the sifleurs or mountain marmots kept whistling in a very loud shrill note answering one another, and I also heard the squeaking note of the little Pica or tailless hare, which is very common here. This is one of the most comical animals I have seen. It is about the size of a small rat, but made exactly like any other rabbit, excepting that it has round open ears. It sits up on its hind legs and calls its note in the most impudent fashion faster and faster as you approach, but always ready to pop out of sight so quickly that you can hardly shoot them, at least with a flint gun.

The sifleur generally plays the same trick, but he is not impudent, and does not allow you to come so close before he dives among the rocks. Round a little lake that is fed by the frozen snow, there was a beautiful emerald-green carpet of alpine plants, many of which looked like old friends in the Scotch mountains.

From this point I made a long and steep descent of about 2,000 feet into the valley to the north. The highest trees are *Abies alba*, which has a short thick stem, only one or two feet high, while the branches are long and recumbent, spreading over the face of the declivity like thatch, so that I found it easier to slide down over the tops of the trees (such as they were!) than to push my way through the diminutive forest. Below this, for 500 feet, the forest is composed of the *Abies balsamea* of good growth, and then followed the ordinary trees of the mountain valleys, of which the *Abies alba* and *niger* are the largest, along with birch, and sometimes the *Prusche*, which is the large species of spruce fir that was first seen at the Bow Fort, which somewhat resembles the hemlock spruce of Canada. The point where the thick underbrush with flowering plants commences, of which the *Delphinium* is the most striking, is 300 feet above the valley.

August 17th.—We started early this morning, the thermometer shortly after sunrise being at 56°. The men with the pack-horses followed the track which they had cleared the previous day, while with Nimrod I set off to see a fine fall on the river, which lay about three miles out of the direct course. A high hill stands out in the centre of the valley, and it is in breaking past this that the river is compressed into a very narrow spout-like channel, and then leaps over a ledge of rocks about 40 feet in height. As we returned from the visit to the falls we saw a band of ewes, and succeeded in killing two of them. Above the rocky contraction of the channel the river is dilated and sluggish, and the valley is filled up with large swampy lakes, just like those in the cañon through the first range. This obliged us to keep along the side of the hills, where the fallen timber forms a much greater impediment than on flat ground. The second range is made up of three subsidiary ranges. The Terrace Mountain, which overhangs the first longitudinal valley, corresponding to Cascade Mountain on the other side of the river, is composed of the same limestones and shales dipping at 50° W.S.W.

This direction of the dip prevails throughout the range, but it is probable that the limestones which are thrown up almost vertically on its western flank are the lowest beds, the whole group forming one synclinal trough, that has been completely overthrown.

Looking up the valley to the W.S.W. we had before us a truncated mountain, evidently composed of massive horizontal strata, and which I named Mount Bourgeau. The pass that Sir George Simpson crossed the Rocky Mountains by in his journey round the world lies to the south of this mountain, and I half thought of crossing the river and following it, but we found so much "white water" in the streams from the south, showing that they were in flood, that the old Indian who still travelled with us said we would fail in getting through that way, as the valley is so bad at one place as to require travelling actually in the stream, between perpendicular walls of rock, for half a day, and if it is flooded this becomes impossible. I, therefore, determined to continue up the same side of Bow River, until opposite an old neglected pass that used to be used by Cree war parties, and known as the Vermilion Pass. Shortly after noon we came up with the pack-horses just at the turn of the river, where it enters the second range. Here we halted and cooked some of the mountain sheep. The meat was in fine order, and had no particular flavour, yet it made not only myself but also other two of the party very sick. This, however, was the only time I ever saw this kind of meat disagree with the stomach, so it may have been due to some ailment in that particular animal, as we all soon came to consider the wild mutton of the grey sheep as the finest food we could get.

After a halt for two hours during the most intense heat, we again started and crossed over a low point of rocks, close to the river, where we entered the second great valley, which is of magnificent proportions. Along the eastern side runs a wall of vertical beds, of light grey limestone, the serrated edges of which at once suggested the name of Sawback Range for them.

The valley is three to four miles wide, and on the west side we have quite a change in the features of the mountains. The strata which compose them are nearly horizontal, and the mountains form cubical blocks or ranges of battlement-like precipices, while super-imposed masses resemble towers and bastions.

Through this valley we turned to the N.W. by W., and found the bottom of it occupied by an extensive morass overgrown with scrubby pines, and the *Labrador Tea plant*. At considerable expense of our horses' strength we got across this quagmire, which might have been avoided, but only by cutting a road through the fallen timber along the mountain side; we reached a spot with very rich pasture, where we camped for the night, having made 17 miles, with seven hours' travelling, which is a fair day's work in the mountains. There are many caves in the limestone precipices of the Sawback range, some of them at a great altitude above the valley. Seeming to stand out in the centre of the valley is a very remarkable mountain, still at the distance of 12 miles, which looks exactly like a gigantic castle.

August 18th.—Soon after starting this morning we came to a hill, about 400 feet high, from which I took a set of bearings, and got a fine view of the mountains. Through a deep valley to the south-west is a very massive mountain, completely snow capped. To the S.E., down the valley, there is also a snow-capped mountain, but up the valley there is quite a number of peaks, none of them very prominent, but all glittering with white. Castle Mountain I now saw to be connected with the east side of the valley. "Nimrod," who had been seeing many wapite tracks yesterday, was a-head of the party to-day hunting, and after travelling three hours we saw him on a hill at a distance, making

signs. On joining him I found that he had tracked up a moose deer, and got one shot, and had hit it in the rump. In chasing it he had fallen on his knife, which was stuck in his girdle, and broken it, and one of the pieces had hurt his back severely. Notwithstanding this he had tracked up the moose for about four miles, and now knowing where it was hidden the Indian wished me to have a shot. When wounded these animals generally run for some miles, and then seek to hide in a thicket. However, even in summer, when the ground is hard and baked, an Indian can follow their track as easily as we could follow a footpath. And so Nimrod had done in this instance, for a wary turn through the woods for half a mile brought us to the game, and advancing against the wind without disturbing a branch we got within 40 yards of him, standing with his long nose straight out, and his antlers laid back on his flanks. I gave him the benefit of both my rifle barrels, which was the first notice he had of our proximity. After that he only bounded about 70 yards before he fell. When we approached him, however, he showed fight, and got up again, but it would not do, as he was fast going.

He was a fine buck, Nimrod thought about seven years old; his dimensions were as follows:—

	ft.	in.
Height at the shoulders - - -	6	2½
Length, rump to nose - - - -	8	4
Girth behind the shoulder - - -	12	0
Length of head - - - -	2	4
Width between bases of antlers - -	0	7

The antlers were in velvet, and not full grown.

We lost some time getting two of the pack horses, which, with our riding horses, were able to carry the meat a few miles on to a creek, where we halted, and where I got an observation for latitude. The heat is very intense every day between 12 and 2, much more so than we ever experienced on the plains. It is cold in a corresponding degree at night, however, and although every morning the higher mountains are enveloped in fog, it has yet been always clear in the valleys.

During the afternoon we got entangled in fallen woods that lay breast high to our horses, and gave us a great deal of trouble. After three hours work we had only made five miles, which brought us to the place where we cross Bow River for the Vermilion Pass. We camped by the side of a small clear stream, and for the first time put up the little leather wigwam I had traded from the "Stoneys," as I intended to remain here a couple of nights and prepare the moose meat. Peter Erasmus, who had gone off hunting yesterday afternoon, lost himself, and slept out in the mountains, without even his coat, as it was hot when he started, and he had left it with his horse.

August 19th.—Our camp was right opposite to Castle Mountain, so that early this morning, taking Sutherland with me, I started to ascend it. We had a tedious walk through woods for five miles before we made much of an ascent, but then we began to rise very rapidly. At 1,000 feet above the valley, before we had got quite out of the woods, we came to a cliff, about 80 feet high, composed of quartzite and indurated sandstone of a pinkish hue; the beds were nearly horizontal, and as they seem to continue so all the way to the top of the mountain, which is at least 3,000 feet higher, these quartzites must be the lowest beds I saw. On this cliff we first heard the call of the sifleur. Above the point is a grassy slope, having an inclination of 33°, and so slippery that it was only with great trouble that we got over it; it would seem to indicate the occurrence of some soft beds that have weathered into the slope. After this we reached the first of the cliff ranges that are so conspicuous from the valley below; it was composed of quartzite, passing into a conglomerate of pebbles of milk quartz and other rocks. When 2,000 feet above the valley we passed round to the N. side of the mountain, and found that a deep valley separated it from a lower spur composed of splintery shale of a dull red colour. The mass of the mountain, which yet rose more than 2,000 feet above us, seemed to be composed of thick bedded limestones, and these breaking away as the soft shales below them have been destroyed has given rise to the castellated appearance. We saw several bands of sheep, but did not get a shot; however, we killed two of the marmots or sifleurs. It is the size of a badger, with coarse short hair and no proper fur. It has large incisor teeth like those of the beaver; it lives among the rocks, and has a large nest, in which it lays up stores of provisions for winter, during which season it never comes abroad; but whether it hybernates or not the Indians do not know. It returns to its hole late in September, at which time it is very fat, and quite as good eating as the beaver, having the same rat flavour. It was 8 p.m. when we got back to camp, having had 12 hours hard walking.

August 20th.—The moose meat having been sliced and partially smoked, we started to cross the river at 9 a.m., having spent the morning searching for a ford. The place where we crossed the river is only 60 yards wide, but very rapid, and taking our horses above the girth if they kept the oblique line of the ford we had discovered, but some of them that turned to go more directly were obliged to swim. The stream was in average summer water, neither high nor low. The little Vermilion Creek, which comes down from the height of land, joins Bow River below the fort, so that we did not see it. At first we had a tough climb up the face of a terrace of loose shingle for 150 feet, but by going a little round we might have ascended it where less steep. We at first followed the brink of a valley, which the creek has cut through these superficial deposits. We then struck through the wood to the south-west, which clothe the gentle sloping and wide valley that leads to the height of land. Finding the lowest ground of the valley to be rather soft, although we were away from the creek a considerable distance, I kept up more on the mountain side, so that we had to make a descent to the real watershed, the position of which so near to Bow River and so slightly elevated, took me quite by surprise.

We had been travelling six hours through the woods when we came to the height of land, but had not made more than 12 miles. Excepting once, when going along the mountain side to the west, which was quite unnecessary except to save cutting fallen timber, we had not passed over any rocky ground, and indeed, were yet far within the limits of the woods, the trees being even larger and finer than in the valley of Bow River. By repeated observations with the aneroid and sympiesometer I found the highest ground we had passed over to be 800 feet above Bow River; but the height of land where we encamped is only 540 feet above the same point.

The valley at this point is several miles wide, and the mountains on either hand are still wooded a long way up the slope. The source of the stream flowing to the east is from a deep lake with rocky margins, composed of quartz rock, in thick strata, dipping 20° W.S.W. A stream of muddy water, about 12 feet broad, descends from the north-west, and when within 300 yards of this lake turns off to the south-west, forming the first water we had seen flowing to the Pacific. We encamped beside this stream, and I levelled across through the woods to the lake for curiosity, and found that the lake is the lowest by 17 feet. I then ascended the mountain to the east for 1,000 feet above our camp, reaching the limit of the woods after 500 feet. The mountain is composed of quartzite almost passing into gneiss in some beds, and is a mere spur from a large central mass of snow-capped mountains to the south-east, which I named Mount Ball, after the Under-Secretary of State for the Colonies (in 1857). On the opposite side of the valley I saw that the Vermilion River rises from a glacier of small size in a high valley of Mount Lefroy. The small quantity of water flowing from the mountains hitherto has astonished me, being a great hardship in climbing them, as it is almost impossible to get a drink except now and then from a trickling stream in a fissure, which disappears before it reaches the valley. The shingle deposits which line the valleys also absorb the few torrents that would otherwise be tributaries to the main stream; but now, on what is the commencement of the western slope, every little valley and ravine has its torrent. We got a shot at a white goat, being the first we had seen, and wounded it, but it escaped by its better knowledge of the rocks. They are very large animals and walk in a deliberate manner, picking their steps over the rocks as if their feet were tender. It was long after dark before we got back to camp, and we had some difficulty in getting down the mountain.

August 21st.—Heavy soaking mist this morning, which soon wetted everything we had, for the first time since entering the mountains. Nimrod had been absent all night, as he went off yesterday while we were ascending to the height of land, upon a fresh moose track. It was a buck, and he followed him back all the way to Bow River, and killed it in the evening, but too far from where he expected us to camp to bring any of the meat, so he slept beside it and ate what he could. We descended the valley of Vermilion River for four hours to the south-west, making equal to six miles in a straight line. The valley is tolerably open, and the descent is uniform. The dense woods often compelled us to cross and recross the stream, it being so much easier to travel on the shingle in the channel than chop our way through the forest; but there is no want of level land on both sides of the stream along which a trail might be cut, which might be followed in any state of the stream. Several small streams come from both sides of the valley, so that the river increases rapidly in size. At one tributary, larger than the others from the north-west, we halted at noon in lat. 51° 6′ north. A mile further on we arrived at a sudden bend which the river makes to the south-east, changing its course at right angles. Here, in the corner of the valley on the right side, is the Vermilion Plain, which is about a mile in extent, with a small stream flowing through it. Its surface is entirely covered with yellow ochre, washed down from the ferruginous shales in the mountains. The Kootanie Indians come to this place sometimes, and we found the remains of a camp and of a large fire which they had used to convert the ochre into the red oxide which they take away to trade to the Indians of the low country, and also to the Blackfeet as a pigment, calling it vermilion. We found horse tracks here, but evidently of a band that had been there the previous summer.

In a valley facing us, as we turned to the south, is a glacier of fair size, which comes lower down than any ice I have seen in this district of the mountains. We now kept along the left bank of the stream on a fine level shelf 60 or 80 feet above the water. The valley is now quite open on this side, but on the other the mountains slope up rather suddenly, but not precipitously, while the woods have all been burnt, giving it a naked bald look. The fire must have "run" several times, as even the fallen trees had been burnt, which allowed us to pass along freely. We camped on a flat, with good pasture close to the stream, but 50 feet above the level. The banks are rocky, exposing slates of grey blue colour, dipping to the W.S.W., at a very high angle. The mountains opposite to us are, however, composed of the blue limestones, which are much less inclined. We found raspberries and small fruit of different kinds very abundant near our camp, but as yet there is no marked difference in the vegetation from the east slope of the mountains. Among the burnt woods the whole surface is covered with a vigorous growth of epilobium angustifolium, with bright pink flowers and ragged seed-pods, scattering hairy seeds.

August 22nd.—Three hours march this morning brought us to a large tributary from the north, taking its rise from Mount Ball, the pyramidal top of which, completely snow-clad, had a very imposing appearance from this side. We halted in lat. 51° 2′ 45″. The valley is again well wooded, and the river becomes confined in a narrow ravine of white arenaceous slate, dipping at 60° W.S.W. The valley is not the least confined at this point, however, only the river channel. Just below this place we were embarrassed with fallen timber, and, as it looked better on the opposite side of the river, we forded it, but were soon compelled to ascend the bank, still in the fruitless search for an easy road. However, matters got worse instead of better, as we got involved in a forest of cedar (*thuja*) the first I had seen since leaving Lake Winipeg, and which was almost impassable. Night overtook us, so that we had to camp in a little swampy "opening," tying up several of our horses, as they might be inclined to start off in the night to seek for food. During the night we had a thunder storm and heavy rain.

August 23rd.—Being determined to make no more blind attempts at seeking for an easy trail, at daybreak we re-descended to the river, and kept along its margin as well as we could. As every bush and tree was loaded with moisture, it soon did not matter much whether we went into the river or not, so that we frequently saved a difficult turn by accepting a ducking. After four miles we came to where the river again changes its course to the S., and receives a large stream from the N.E. This is perhaps the stream from the Simpson's pass to the east of Mount Bourgeau. In the afternoon the valley became much contracted, by the approach to two lofty mountains on either hand, but still there was ample space on each side of the river to carry a good trail. Just before entering the "gorge," we passed high banks of white gritty calcareous marl, having a chalk-like texture. This deposit is 150 feet thick, and at many places the banks showed the marks of teeth, where the white goats had been gnawing it, and their wool was plentiful on the bushes all round. This deposit is a local variety in the

shingle, gravel, and sand that everywhere skirts the valleys of the mountains, and has been moulded into terraces in the most regular manner. After passing through "the gorge," we encamped on a meadow where the valley of the Vermilion led into a very wide valley lying N.W. and S.E. In descending the Vermilion River valley, the strata observed were as follows:—First, the mountains at the "height of land," composed of quartzite, were succeeded by a group of hard and soft beds, each about 50 feet thick, and seven or eight of such alternations occurring in plications with a westerly dip. These soft beds are highly ferruginous, and contain nodules of clay ironstone, and from these the ochre of the Vermilion Plain is derived. Then follow heavy beds of limestone with a gentle dip, while on the south side of the valley where it is directed to the S.E., the mountains are composed of horizontal strata of blue slate rock, closely banded with red stripes. The tops of the mountains form conical and pyramidal masses, marked as if ruled with parallel lines. But in the bottom of the valley the river first cuts through grey slaty rock not cleaved, and then through soft white sandy slates, all of which dip at a very high angle to the W.S.W. The men, by Nimrod's advice, carried away pieces of this soft slate, and at night they were all busy manufacturing pipes from it. At "the gorge" we again have the deep blue limestone as at Grotto Mountain, containing the same fossils.

August 24th.—This morning Nimrod, who had set off early to hunt, returned shortly as white as it is possible for a red Indian to be with fear. He had been chasing a deer, and had suddenly come on a panther, but further than saying that he had wounded him, we could get him to tell us nothing. The panther is not very common in the mountains, but the Indians generally kill a few every year about Red Deer River or along Bow River, and in spring they are sometimes met with by the Blackfeet Indians out on the plains, when they run them with horses like buffalos. From seeing them so seldom the Indians are much more afraid of them than they are of grizzly bears, although there is no comparison between the ferocity of the two animals.

We now left the trail which we had seen very distinctly in passing through "the gorge," and turned to the right in a west course through dense woods. We ascended a good deal and travelled on terraces of shingle, where the timber consisted of pines, as is usual in such soil. At noon we halted in latitude 50° 52′ N., being still in woods so thick that we were travelling for no advantage. I therefore camped, and sent off Peter and Nimrod to spy out the land, and as everything was soaking with wet they adopted the Indian plan of stripping to their shirts, so as to go lighter through the woods, and in this garb they were absent the whole day. They had crossed the Kootanie river, in the valley of which we were encamped, and returned with great accounts of the size of the timber where they had been. They had also found a faint trail leading up the valley.

August 25th.—Keeping along the high level terraces on the left side of the Kootanie valley, we continued to the W.N.W. In crossing a creek from the north, I again observed the white slaty rock still dipping at a high angle S.W. After three hours we descended 300 feet to the bottom of the valley, and crossed the Kootanie river, which is at this place only a small stream, much blocked with fallen timber, having a tortuous course through a wide flat bottom, occupied by large swampy meadows. The valley is two to three miles wide, and the timber is very fine on its slopes, especially that to the south. After a short halt we continued up the valley, keeping by the edge of the stream, in hopes of getting a shot at a beaver, which animals are very numerous, judging from their tracks, which were like beaten pathways all along the bank. We saw where they had been cutting up trees five and six inches in thickness into short billets, to use in constructing their houses and dams. Shortly after passing two streams, one from each side of the valley, we encamped in some burnt woods by the side of a morass. As we were encamping, we heard the cries of a panther, which are exactly like those of an infant. Nimrod says that they call in this manner when they come on the tracks of men or horses, and he seemed to think it might come close, or even into our camp during the night; so when he lay down to sleep, he kept his "dagare," or big Indian knife, close to his hand.

August 26th.—Without much actual rain, every morning since gaining the western slope of the mountains has been wet, and this proved no exception. The constant moisture has had a bad effect on our moose meat, which, although well enough prepared to keep in the dry climate of the east slope, has within the last few days completely rotted. This is the more serious, as we now seldom see any tracks of game. Nimrod yesterday saw tracks about a week old of a moose and two young ones; but they seemed to have been travelling. He then got a shot at a black bear, but missed it, and saw no other tracks.

This morning we passed an old pemican caché, which must have been very old, and probably belonged to some horse-stealing party that had visited the Kootanie country, and had hid the provision for their return in this place. It was made of heavy rough logs, built up in the form of a square hut, about 10 feet every way. Yesterday, we passed the remains of a very old encampment that must have been inhabited in winter, as the trees round it had been cut down on snow shoes, the stumps being six feet high, showing the snow to have been four to five feet deep. We saw signs of this being a very fine fur country, for marten and other tracks were very abundant, but the absence of game, which is very unaccountable, prevents the Indians tenting up this way to trap. At noon we arrived at two lakes, each several miles in extent. They occupy the bottom of the valley, which still retains the same dimensions, but their margins are formed of terraces 100 to 150 feet high, composed of the white mud and gravel beds. The day had cleared up, and the scene where we encamped on the margin of the upper lake was fresh and charming. Its shallow waters were thrown into waves by a stiff westerly breeze, and plashed on a shore of pure white sand; but when we entered the lake to bathe, we found that a few yards from the shore it had a muddy bottom that was almost unfathomable. There were a number of kingfishers flitting over these lakes, grabbing at the swarms of young trout. Also several flocks of a small tern, and a bird like a curlew, and on the shore the delicate little *Avocet* with its recurved bill dabbled in the mud in numbers. I now began to see many plants I had not before noticed; among them the Western Barberry (Mahonia), a large-leafed plant bearing a fruit like a flat raspberry; a Vaccinium, with a very large blue berry, and several ferns (*Botrychium*, *Osmunda*, and others), which I had not seen in the mountains before this. There was also a great deal of small maple shrubbery, and the trunks of some large cedars were lying about, all of the fine timber having been burnt. Besides the *Abies alba*, which reaches a great size, is the other *Abies* we saw at the Bow Fort.

It grows to a great size in the valley, often four and five feet in diameter. It is not a lofty tree, however, but has very stout heavy branches. It is much like the hemlock of Canada in the foliage. Its bark is so exactly like that of the rough-barked poplar (*P. balsamifera*), that where they have been growing together, it was only by carrying the eye up to the foliage that I was able to distinguish which was the pine trunk. Its cone is about two inches long, large-scaled and tumid.

The mountains along the south-west side of the Kootanie Valley in its upper part are very steep, but not so high as those on the opposite side, being wooded nearly to the top. They are composed of strata inclined at a high angle, and run as an unbroken wall.

The Kootanie River rises from the lakes at this place, and, without any break in the continuity of the valley, the waters of Beaverfoot River flow in the opposite direction to the north-west. The terraces rising above the highest level of the water have thus evidently nothing to do with the present watercourses in the mountains. I was so anxious to keep to the west, as I knew the mountains to the south were being explored by Captain Palliser, that in place of following down the Kootanie River, I had turned up to the north-west in the hope of finding some transverse valley about its source, by which to reach the Columbia proper, and have been much disappointed when I find it runs on continuously.

The valley in which we were now encamped, and which to all appearance is as spacious to the south as to the north, has been reached from the eastern plains without any difficulty excepting fallen timber; and by the route I have followed very little grading would be required to make a good passable road. The distance from the Bow Fort to the crossing-place for the Vermilion River, including for all the turns in our trail, was 57 miles, and the rise of the river between the two points I estimated at 300 feet. The only places where there would be the slightest difficulty in carrying a road throughout this distance, might be at the rocky point just below the *Lacs des Arcs*, and again for a few hundred yards at the angle of Grotto Mountain. At all places grading of the most easy description, with a few bridges over some narrow ravines, would be all that is necessary beyond the clearing of the timber. Excepting at these two rocky places, the road would everywhere pass over the superficial deposits, which are hard and firm for long distances. After crossing Bow River, the distance to the height of land is less than nine miles, our course in gaining it not having been direct. It is a steady slope leading from a wide notch in the mountains to the west of Bow River, at a point where the valley is of its widest dimensions. The rise, which is certainly not more than 550 feet from Bow River, might be accomplished very easily in making a road, and there is nothing like a narrow valley to limit the choice of ground for its construction. From the height of land down the Vermilion River to the valley of the Kootanie River, the aneroid observations, compared with estimates made on the spot, show a descent equal to 1,400 feet in a course of 35 to 40 miles by the windings of our trail. For the first six miles, where the valley is directly to the south-west, it is somewhat narrow and confined, but yet there is an ample margin along either side of the stream, to allow of the construction of a road. From the angle of the valley at the Vermilion Plain, the road would require to be carried along the left bank of the river until near where it receives the large tributary from the north-east, before turning south to pass through the "Gorge." In ordinary water there would be no difficulty in fording the river at many points in its course. On reaching the valley of the Kootanie River, the road could be carried either by the north-west or south-east with equal facility.

The source of the Kootanie River, where we encamped on this date is in latitude 51° 0′ 37″ and probably 300 feet below the level of the old Bow Ford.

August 27th.—During this forenoon we followed along the north-west, which has now become the right side of the valley, as we are travelling down stream. For the first few miles the bottom of the valley is occupied by a mossy swamp, with small deep lakes, crowded with the gaudy flowers of the *Nuphar lutea;* the narrow mossy streams were full of trout of two different kinds, common on the mountains. At noon we reached a large torrent from the north-east, which takes its rise in the glaciers of Mount Vaux, which were glittering in the sun on the right side of the valley. The shingle terraces are here replaced by an enormous deposit of moist grey sand, stratified with beds of gravel, and containing fragments of silicified wood. This deposit is several hundred feet in thickness. The mountains on either hand are composed of quartzite and slate, but the central and higher portions of those to the north were plainly seen with a glass to be composed of stratified rocks resting almost horizontally. In the bottom of the valley we passed several masses of true gneiss, and one or two greenstone dykes. In the afternoon we passed two large streams, in the valleys of which grew quantities of raspberries, which were very welcome, as we had almost no provisions left. We had great difficulty in making progress all day, as the valley deposits no longer presented regular terraces, but formed a rugged slope cut by deep ravines, encumbered with fallen timber. We encamped on an open spot by the river, and endeavoured, without success, to catch some trout for our supper.

August 28th.—Soon after starting this morning, Nimrod said he recognized a mountain which he knew to be upon the North Saskatchewan, and accordingly said we were descending a branch of that river. I however thought that hardly possible, as the vegetation was too luxuriant for the east side of the mountains, and we were already at too low an elevation for the rapid stream that we were upon to be any feeder of the Saskatchewan. At noon we reached latitude 59° 30′, after four hours of very hard work, chopping our way through the fallen timber. We had only gone two hours beyond this point when a violent storm compelled us to camp for the night close to the river, among fallen woods.

August 29th.—For the last few days, since leaving the lakes, our horses have fared badly, as there is no fine grass in the valley excepting in the swampy bottom, but there it is too soft for them to feed. Their legs are also getting very badly cut by the constant leaping and scrambling over the fallen timber, so that on the whole they have their tempers and patience tried a good deal. We had travelled a few miles when we came to a large flat, where the wide valley terminated, dividing into two branch valleys, one from the north-west and the other to the south-west. Here we met a very large stream, equal in size to Bow River where we crossed it. This river descends the valley from the north-west, and, on entering the wide valley of Beaverfoot River, turns back on its course at a sharp angle, receives that river as a tributary, and flows off to the south-west through the other valley. Just above the angle there is a fall about 40 feet in height, where the channel is contracted by perpendicular rocks.

A little way above this fall, one of our pack horses, to escape the fallen timber, plunged into the stream, luckily where it formed an eddy, but the banks were so steep that we had great difficulty in

getting him out. In attempting to recatch my own horse, which had strayed off while we were engaged with the one in the water, he kicked me in the chest, but I had luckily got close to him before he struck out, so that I did not get the full force of the blow. However, it knocked me down and rendered me senseless for some time. This was unfortunate, as we had seen no tracks of game in the neighbourhood, and were now without food; but I was so hurt that we could not proceed further that day at least. My men covered me up under a tree, and I sent them all off to try and raise something to eat. Peter I sent up the mountain in the angle of the valley, to take bearings, and to see what the mountains were like to the west. He ascended 3,500 feet by the aneroid, but did not get to the highest part of the mountain, which is quite a low one compared to those north of the valley. It is composed of the grey limestone, and splintery iron shale, all dipping 35° to the E.N.E. The mountains seen to the N.W. were high and snow-clad, but beyond those forming the side of the valley there were more seen to the S.E. The men all returned at night without having killed anything. Nimrod had tracked some wapiti, but there were traces of Indians having been in the neighbourhood in spring, probably Shouswaps or Kootanies, and they found a very bad trail leading down the valley to the S.W. Nimrod, who had been that way, found the river soon became hemmed in by high rocks, so that the trail had to go high up over the mountain. There had only been two trails, with very few horses, and they appear to have returned from this post by the same road they came. At one of these camps he found wool of the mount goat, and also wapiti hair. The deer tracks he had seen were leading up the valley to the N.W., and were not fresh. This evening we saw several flocks of geese flying down the valley to the S.W.

August 30th.—I was so much better by noon, that I took a meridian altitude, and found the latitude to be 51° 10′ N. The men were again hunting to-day, and Peter and Brown found a large flock of white goats, but the only one they shot managed to get to the edge of a precipice and fell over, so that they got none of the meat.

Nimrod went a long distance after the deer, and came back quite lame, having run a sharp spike into his foot. He had seen the wapiti and missed a fine buck. We were now in a bad way, as, although I had kept a private *caché* of about five pounds of pemican, which I now produced, it was only enough for one meal for us all. I intended however to make it last for three days, by which time we should, from the look of the stream which I intended to ascend, be able to reach the height of land, and get back to the east slope of the mountains where we would be sure to find game.

August 31st.—Every morning just now we have dense fogs, that generally last till nine or ten o'clock, but the evenings are fine and clear. After travelling a mile along the left bank of the river from the N.W., which because of the accident the men had named Kicking Horse River, we crossed to the opposite side. It was 90 to 100 yards wide, and almost too deep to ford. The motion on horseback gave me great pain, but we managed to get along slowly till noon. We left the river a considerable distance to our right, following notched trees that Nimrod had marked the day before when out hunting in order to show us the best way, as an Indian soon finds out the right direction to carry a trail in.

At nightfall we again struck the river, where it passes through a narrow defile, and through which we found a well-marked trail. This is generally the case whenever the valleys are narrow, as there, whenever Indians have passed in former times, they have been limited to the same track; while in wider parts of the valley they hunt about in search of game, without leaving distinct traces of where they pass.

The deposits of red and grey sand, with clay and gravel, are at least 600 feet thick in the valley. Our course had changed almost to due north, and we passed over the grey slate strata, dipping first to the N.E. at 5°, and then changing to a high angle in the same direction. Where we encamped the river is hemmed by high precipices of blue limestone. The river is very muddy, and with the imperfect tackle we have, consisting of some large cod hooks and twine, we cannot catch any trout.

September 1st.—Started early, sending Nimrod and Peter ahead to hunt. The valley soon after starting got very wide, with extensive swampy flats and clumps of fine timber. The willows fringing the margins of these grassy swamps exactly resembled hedgerows enclosing green fields.

Halt at noon, in latitude 51° 16′ 30″ N., a little way below where the river receives two large tributaries, one from the east and the other from the N.W.

Above this point the main stream makes a large bend to the east, to avoid which we crossed a high rocky spur of the mountain, and again met the river by descending into a magnificent cañon, where we encamped.

The higher portions of the mountains we passed this day are capped with a great thickness of slate rock with ferruginous bands. The valley or cañon in which we encamped is about half a mile wide, enclosed by rocky walls, that often rise nearly perpendicularly 4,000 to 5,000 feet. They are composed of the white slate rock, on which rests unconformably enormous beds of limestone, much dislocated; while the banded slate rock and ferruginous shales form the higher parts of the mountains.

September 2nd.—Started very early, as our only hope of getting any game was by reaching the east side of the mountain. Nimrod had indeed again seen wapiti yesterday, but the fallen woods were so difficult to hunt in, that with his lame foot he only got a long shot, which he missed. We travelled on the shingle flat, which occupies the full width of the valley, crossing and recrossing the river, which must during the spring floods cover the whole valley bottom. After five miles the valley terminated in a sudden slope, covered with heavy pine forests. Entering these we began to ascend rapidly, but loitered a good deal to eat large blueberries, that grew in abundance, and which we were very glad to get, although not very substantial food, when we had been fasting altogether for the past day, and living on only very short allowance for the previous five. After gaining a considerable height, we found it necessary to cross the stream, which was boiling and leaping through a narrow channel of pink quartzose rock. It was with much difficulty that we effected a crossing, and then we had much climbing over moss-covered rocks, our horses often sliding and falling. One, an old grey, that was always more clumsy than the others, lost his balance in passing along a ledge, which overhung a precipitous slope about 150 feet in height, and down he went, luckily catching sometimes on the trees; at last he came to a temporary pause by falling right on his back, the pack acting as a fender; however, in his endeavours to get up he started down hill again, and at last slid on a dead tree that stuck out at right angles to the slope, balancing himself with his legs dangling on either side of the trunk of the tree in a most comical manner. It was only by making a round of a mile that we succeeded in getting him back, all battered and

bruised, to the rest of the horses. In the lower part of the ascent we passed much cedar and birch, but as we rose we got into forests exclusively composed of spruce fir. We travelled eight hours before camping, the last two being over fine level ground through open forest. We passed many small lakes, and at last reached a small stream flowing to the east, and were again on the Saskatchewan slope of the mountains. The large stream we had been ascending takes its rise from a glacier to the east of the valley through which we had passed. We encamped in a beautiful spot beside a lake, with excellent pasture for the horses. I had killed a grouse, and we were glad to boil it up with some ends of candles and odd pieces of grease, to make something like a supper for the five of us after a very hard day's work. We were now 1,275 feet above our encampment of last night, and the cold was very sharp, and we felt it more severely in our famished state.

September 3rd.—This morning all the swamps were covered with ice. As I was now nearly recovered from the accident, I started with Nimrod at daylight to hunt, leaving the men and horses to follow a prescribed course to the east. We took our horses with us, and after a few miles we came to a large stream from the west, up the valley of which we saw a great glacier. Following it down, we came after five miles to a large river, which Nimrod at once recognized as Bow River, and then I began to recognize the mountains down the valley, 15 or 20 miles to the east, as the Castle Mountains. The descent from our camp at the height of land of the pass which we had just traversed is very slight to Bow River, and cannot amount to more than 100 feet. We crossed Bow River, and leaving our horses tethered in a swamp, set off to hunt on foot. We saw several fresh moose tracks, and followed one for more than two hours, but failed in coming up with it. Towards noon, on coming to the river, I found our party had crossed, so I made for them in order to get the latitude. Nimrod soon started again into the woods, and had not been long gone, when we heard most furious firing, and in a short time he returned in a high state of glee, having shot a moose. We at once moved our camp to where it lay, about one mile distant, in a thicket of willows. It was a doe, and very lean, but, notwithstanding, we soon set about cooking and eating to make up for our long fast. It was not till we got the food that we all found out how depressed and weak we were, as desperation had been keeping us up. I had three days before promised that if nothing was killed by to-day I would kill one of the horses, and this evening, if Nimrod had not killed the moose, the old grey that fell over the cliff would have been sacrificed. I had refrained from killing a horse sooner, as I have been warned by experienced travellers that once the first horse is killed for food many more are sure to follow, as the flesh of a horse out of condition is so inferior as merely to create a craving for large quantities of it, without giving the strength or vigour to induce the hunters to exert themselves to kill other game. The prospect of starving is then looked on with indifference, as they know it will be avoided by killing another horse, until at last too few are left to carry the necessaries for the party, who then undergo great sufferings, and, as in the case of several American expeditions, some may even perish.

September 4th.—This morning, as we were still cooking the tit-bits of the moose, a Stoney Indian suddenly popped on our camp, having smelt our fire a long way off. He said there was a camp of eight tents six miles further west, so slinging our moose meat on the horses we set off to join them. It was snowing nearly the whole day, this being the first of the season. We kept N. W., leaving the Bow River to our left. The valley is very wide here, the mountains appearing quite distant when we got a glimpse of them through the forest. Immediately on our arrival at the camp, which was in a pretty secluded spot, by the side of a mossy lake, the squaws took the whole management of our affairs,—unpacked the horses, put up the tent, lined it beautifully with pine foliage, lighted a fire, and cut wood into most conveniently sized billets, and piled them up ready to hand. They then set about cooking us all sorts of Indian delicacies,—moose nose and entrails, boiled blood and roast kidneys, &c. They had only been encamped here two days, having arrived from the North Saskatchewan. They had reached this valley, like ourselves, starving, but already there had been killed in the last two days seven moose deer, including Nimrod's one. It seems that this place, being far in the mountains, is only seldom visited, and, as the valley is wide and thickly wooded, moose deer are always found plentifully. The country that animal likes is exactly the kind which now surrounds us. The ground is irregular, the risings covered with a moderately open growth of spruce forest, while in the hollows are long openings occupied by firm mossy swamps and lakes, or muskegs as they are called, and which support an abundant growth of a slender delicate-branched willow about 4 to 5 feet high, the tender terminal shoots of which form the principal food of the moose. The Indians in hunting are very observant of the cropping of the willow tops, and there was something quite exciting in the significant gleam of Nimrod's eye as he pointed out where the willow tops were yet wet with the saliva of the animal, or when, in walking rapidly through the woods, he would stop suddenly and pick up a morsel of half chewed leaf which it had dropped, and when he found that it had stopped to take several bites from one bush, then he pulled off his gun cover and looked to his priming. The moose walks right on the points of its toes, so that its track consists, on hard ground, of dots, in pairs, at a distance of 3 to 4 feet. In soft ground its foot-prints are of course more evident, and like those of wapiti or buffalo, but they have always a deep punctured look, which at once distinguishes them. In hunting this animal the Indian never follows its track directly, as it always, before it lies down, or even stops to feed in one place, goes for some distance against the wind, and then doubles back nearly in its own track, so that any one following it would be sure to pass its hiding-place, and taint the wind that was blowing towards it, when it would at once break away. To overcome this instinct of the animal is the highest test of the hunter's skill. When he comes on the track of a moose that has been travelling leisurely along, and has evidently not been disturbed or chased, he at once leaves it and makes a great circuit, to cut the track again about half a mile further on. Moving swiftly and silently through the forest, he trusts to his keen eye to detect the line of these little dots as he crosses it at right angles, and feeling almost by instinct where the moose should have passed, if he does not find its track, he at once concludes he has doubled round the animal. He then returns by the circuit to where he started from, and works up by a succession of lesser circuits, against the wind, till he sees a place where his experience tells him the moose is most likely to be. Then, if the ground is hard and the branches of the trees dry and likely to crackle, he strips off all his clothes, and glides like a snake through the forest, peering and prying to catch the first glimpse of the animal. At last he sees him, but all the trouble and fatigue is not to be

wasted on a miss, so he patiently works up close to the animal, who, if at rest, is generally buried in a thicket, and perhaps only visible to the keen Indian's eye by the lazy flap of his large ear. They generally get within 20 yards before they fire, and then often comes a most difficult piece of judgment, to determine from the position of the ears or the tips of the antlers as to how its body lies, and where to fire so as to hit it mortally. Then a quiet deliberate shot into the thicket, without seeing the spot of the animal to be hit is followed by a crash and a whiz through the brake, and the Indian at once dashes off to head the fugitive, in which he generally succeeds, as this animal, even when not hit, always halts a few seconds when about 60 yards from where he was disturbed. But if he fails in this attempt to come up with him, he coolly examines the track, and perhaps goes back to where he fired from, and to the lair of the moose, and reasons out the effect of the shot, looking for the ball-mark on the bushes and trees, because he knows that the animal will now run a distance proportional to the wound it has received, and will only stop short of a 5 or 6 hours' flight from mere weakness. He then follows the track, and in nine out of ten cases the moose is found dying or dead within half a mile. Sometimes, of course, it is shot dead, and never rushes off at all, or only goes a few yards.

At evening a half-breed arrived, who was tenting with these Stoneys. He was a brother of Paul, our chief guide, and whom I had left at the Bow Fort to go with Captain Palliser. He was very glad to see us, and get all the news, and made me a present of a fine buck moose; he had just come in from hunting, and offered to go with my men for the meat to-morrow. Other Indians also returned, and altogether they had killed three more moose to-day. They had, however, gone long distances.

During the night the great pine tree by which our tent was pitched caught, from a roaring fire we had lighted against its root, and neglected to put out when we turned into our blankets, trusting to its being green. But the fire caught the dry grey lichens which drooped in festoons from the branches, and which, being highly charged with turpentine, gave out a magnificent blaze, the roar of which luckily wakened me up, and, without waiting to see how much was burning of the forest, I caught our powder and my trowsers and bolted right into the swamp. It did not communicate with the other trees, however, but after brilliantly illuminating the forest for half an hour, and having consumed the foliage and resinous bark, it died out, leaving the charred trunk and branches as sturdy as ever. The glare of light which this fire threw on the dark forest and swarthy faces of the Indians, who gathered round to watch its progress, was very striking.

September 5th.—This being Sunday we were wakened at an early hour by the hymns of our Stoney Indian friends, who join in worship every morning and evening, but several times upon this day. None of them went hunting, as it was Sunday, but Paul's brother and two of my men went for the meat of the moose that had been given to us.

September 6th.—This morning we got our female friends to slice and dry the meat over fires. All of it was very lean, and we could not get any fat or grease to trade from the Indians, which was a bad look out, as it is nearly as hard to live on the dried meat of a lean animal alone without grease, as it is to starve altogether.

September 7th.—The snow storm still continues, but the fall is very slight. There has been thunder every evening to the south of us. This evening, the meat being dried, I gave a few presents to the squaws, principally needles and thread, and a few buttons, fire-steel, and flints.

Paul's brother told me that I could follow up Bow River to its source, and that I would see great valleys filled with ice, and that then I would come on the North Saskatchewan; but he said we would get nothing but white goats that way, and at this season they were not fit to be eaten. However I determined to try that route, and trust to our stock of dried meat lasting us till we got to the eastern ranges, where there are plenty of grey sheep. A young orphan boy in the camp, who wished to join some friends at a camp on the North Saskatchewan, I allowed to join our party, as he will be useful. I also got rid of our old friend "the grey" horse with the bruised countenance, and by giving a little "to boot," got a very good animal in exchange.

September 8th.—Leaving our Indian friends, we struck through the woods till we met Bow River, but after two hours a snow storm came on, of such violence that we had to halt till it passed. By noon it had quite cleared, and I found the latitude to be 51° 28′ N. Starting again, as there were now only occasional showers of snow, at three we passed a tributary from the S.W. The valley now became contracted a good deal, the mountains on the south and north sides having the same aspect of masses of alternate horizontal strata, and then a grassy slope between the base of the precipitous portion and the upper limit of the forest. Right before us Goat Mountain stood out at right angles from the western range, causing us to bend to the east. In the angle thus formed is a large lake, from which flows the tributary just mentioned, and at its head a glacier, of small size, nearly reaches the water level. Bow River was now a stream of very small size, but very rapid. We soon crossed to its left bank, and after passing round Goat Mountain the valley became much expanded. It was bitterly cold all the afternoon, and the night was clear, with sharp frost. We did not put up our tent, which, when pitching in a regular manner, we generally flung over a shed of poles, but this night we made a regular winter encampment with pine foliage under us. The mountains to the north of our camp had a very curious outline, the men saying that they were like an old woman's jaw.

September 9th.—We got on pretty fast this morning, as the timber was small and open. We are getting very high now, the barometer reaching less than 24 inches. The stream is now shallow, and flows over a clear rocky bottom. Our Stoney boy shot several trout as we came along with his arrows; and I saw also for the first time how to catch the tree grouse with a snare. He took a short piece of sinew twine and made a nooze, which he fastened on a slender pole, and advancing slowly to the bird gently passed the nooze over its head, and pulled it off the tree. The grouse did not seem frightened in the least, but sat gravely looking at him all the time, and actually when the nooze was close dodged its head into it. We often adopted this plan of catching them afterwards, and I never found much difficulty in effecting it where the forest was dense. There are four kinds of grouse in the mountains, the pintail grouse or common pheasant of the plains (*Titrao phaseanellis*), the white flesher or ruffed grouse (*Titrao umbillus*) which has light grey plumage. The first of these is found in patches of open prairie, and the second in the cypress or poplar woods. The third kind is the Spence grouse (*Titrao Canadensis*), and is smaller than either of the others. Its plumage is very dark, but richly coloured, and it is always

found inthe dense forests of spruce fir. The fourth kind of grouse is only to be seen by ascending the mountains to the upper limit of the woods, except in winter, when it is said to descend into the valleys. It is much larger than any of the others; the male is almost black, with a small crest of reflexed feathers; the female is dusky grey. They make a loud booming noise when flying, and are easy to shoot when they are once within range, but, unlike the other kinds, this large grouse is a very shy bird. It is *Titrao obscuris*. The half-breeds in the country always call the prairie grouse pheasants, and the tree grouse partridges, but both are misnomers.

An hour's ride brought us to where Bow River dilates to form a narrow lake, the water of which was of a bright green colour. Two miles further we reached a second and larger lake, being two miles long and one broad. Along its western shore the mountains rise precipitously, except at one point where a narrow valley allows a short glacier to reach the water's edge, being fed from the perpetual ice and snow that mantle the mountains in that direction. We kept along the east shore of the lake till it was terminated by an open prairie with a considerable slope, the surface of which is mossy, with many springs, from which the first waters of the Bow River rise. Ascending this prairie slope, we reached some open spruce woods, which clothe the valley, and halted just before the valley begins to descend to the north-west in lat 51° 40′ N. The altitude of this point is about 6,350 feet above the sea, being much higher than the height of land either of the Vermilion or Kicking Horse passes.

On starting after noon a few hundred yards brought us to a stream, at first small, but soon increased by many branches which flow to the North Saskatchewan. The view from this point was very fine. The descent to the valley below, unlike that we had ascended, is very sudden, and the angles of the mountain on either hand jutting in successively from the sides of the valley formed a vista for at least 25 miles. We did not at once commence the descent of the slope, but kept along the right or east side the valley for fully a mile, and then took down a break-neck trail that winds through the woods to its bottom.

When we reached the river we had made a descent of 900 feet. Following it down we still decreased our elevation rapidly, and after three miles, or six in all from the height of land, reached a beautiful lake, three miles long and two broad, and there encamped. This lake is closely wooded on all sides to the water's edge, except at one point on the west shore, where a spout-like glacier reaches through the woods almost to the shore. The surface of this glacier is very steep, as it descends at a very high angle from the ice-fields, which are 2,000 feet above it. It is a perfect ice cascade, and is broken at several points by fissures both longitudinal and transverse. The lower end of it is much attenuated, and there were signs of a great avalanche at no distant period, as there was an immensely broad belt of the forest swept away and buried up in the ruins. This lake, with its shores clothed with deep green pines, while back from these rise the precipitous mountains for 6,000 to 7,000 feet, contrasted with the beautiful tint of the fissures in the ice cascade. The strata are here composed of quartzite limestones and shales that dip away from the valley on either hand, the river flowing through a grand anticlinal fracture.

September 10th.—Keeping along the "Little Fork" of the North Saskatchewan we passed two shallow lakes, into which it dilates. These have been caused by the heaping of detritus or moraine matter across the valley; and these accumulations, along with distinctly scratched and smoothed surfaces of the sides of the valley where rock surfaces obtrude, all point to a time when the glaciers which now only occupy the higher valleys were more extended. The moraine matter is easily distinguished from the deposits of shingle which fill up the lower valleys, as the fragments are angular, and much larger than those of the terraces, which are invariably smooth and oval. After halting for a time in the middle of the day, while Nimrod endeavoured to find some wapiti, of which we saw the recent tracks, we continued down the left side of the valley, and at one place, where there had been a great slide of stones, which had swept a broad tract of the forest from the side of the mountain, we had to make a considerable ascent. We then struck through dense woods, from which we did not emerge until we reached the North Saskatchewan at nightfall. Along this river we found at this place a very distinct trail, much more so than any we had seen in any other part of the mountains. This evening, September 10th, after we encamped, we observed the comet for the first time, as hitherto our view to the westward had been blocked by mountains. It bore, at 8 h. 35 m., W. 25° N., and was 55° 17′ from the Polestar, and 31° 4′ from the first star in Ursa Major.

September 11th.—The channel of the North Saskatchewan, opposite to our camp, was 150 yards wide, but a little higher up the stream is cut up into several channels by large shingle flats. It is a large river even so near its source as this point, being deep and swift. The valley is very spacious, its sides densely wooded, sloping gradually back to the base of the mountains, which has the effect of dwarfing their really great height, the appearance of which is yet further reduced by the sheer precipitous cliff which they present. During the night we heard a great noise, like distant thunder, at intervals, which Nimrod said was caused by ice falling in the mountains.

On the opposite side of the valley from our camp, the mountains are not so high, and are composed of beds of quartzose sandstone and earthy shale, having a very slight dip to the north-east. Along the water's edge the sandstone ledges that crop out are quite soft and unaltered.

We followed up the track for a few miles, when at last it quite disappeared, as the higher bank along which it ran had been washed away by the river. We therefore took to the shingle flats, which were covered with a carpet of Alpine plants, the seeds of which are carried down by the spring floods to situations much lower than their natural habitats. The most plentiful of these are the *Dryas Drummondi* and the *Epilobium alpinum*. The former of these I have traced down the North Saskatchewan for 50 miles below where it leaves the mountains.

After six miles we reached a point where the river receives a large feeder from the west, the main valley turning to the south. Here we crossed to the left side of the stream, and ascending a slope of 150 feet, wholly composed of white glistening calcareous mud like that on the Vermilion River, plunged into one of the most dense forest growths we have encountered. The fallen trees were numerous, but all moss-grown and rotten, so that they did not impede us so much as in those woods where there had been recent fires.

As it approached noon we came to an opening where a slide of rocks had swept down the forest. The latitude here was 51° 54′ N. While halting here, a big-horn sheep came down the mountain almost

close to us, but seeing us first, made off without our getting a shot. Nimrod says this is the only place where these are to be seen so far in the mountains. A little way further through the woods brought us to a large lake, which occupied the full width of the valley excepting a narrow margin along its north shore, and which was very much encumbered with fallen timber. As we were chopping our way along, the same horse that played that frolic once before again plunged into the water, and swam off into the lake. We had to leave him alone, lest our endeavours to get hold of him should only start him for the other shore of the lake, which was a mile wide. After a time he turned to land again, but his pack was so soaked that we had to halt for the night where we were. To occupy the remaining daylight I sent two men on to cut out a track, while I tried to dry and save the few skins and plants I had collected, and which had been unfortunately packed on this horse.

Our camp was the most curious I have seen, as the fallen trees on the slope of the hill were so large and so interlocked that it was with difficulty we found places to stretch ourselves here and there among them. We fished, and set lines in the lake, but without success. It appears to be very deep, and the south shore is almost precipitous. In the afternoon violent gusts of wind occasionally blew down the valley, raising the water into large waves; but the evening was calm, and the reflection of the opposite mountains was wonderfully clear. Trying to shoot some bats that were flitting in numbers over the water, we found that the noise was echoed in a most wonderful manner by the successive points from side to side of the lake, the report being thus repeated in a sharp distinct manner six or eight times.

September 12th.—Two hours, with the aid of the track the men had hewn, brought us to the west end of the lake, where there is a few miles' extent of open grassy plain, fringed with woods, intervening between the foot of the great glacier and the water's edge. Encamping on this plain, I found the latitude to be 51° 52′ 16″ N. Reserving the ascent of the glacier for next day, I ascended the south side of the valley, and found it to be composed of deep blue limestone, full of iron pyrites in nodules. The mountain was very precipitous, and almost wholly without wood, as the slope is too great. On the north side of the valley, which is one to two miles wide, the quartzose beds form the highest parts of the mountains, and they have a very cuboidal fracture, giving rise to mock battlements and towers, as the soft shales weather from below them. The perpendicular cliff thus formed is 1,000 to 2,000 feet in height, and from its base to the bottom of the valley a slope covered with forest, and through which occasionally peep vertical cliffs, occupies the remaining 2,500 feet of the full height.

September 13th.—Start at sunrise to ascend the glacier, accompanied by Sutherland. The other men I sent off to hunt for sheep or deer, of which we found a few tracks. I wished Nimrod to go with me, but he would not venture on the ice, but told all sorts of stories of sad disasters that had befallen those Indians that ever did so; how that, if they did not get lost in a crevasse, they were at least sure to be unlucky afterwards in their hunting. After crossing shingle flats for about a mile, we reached a high moraine of perfectly loose and unconsolidated materials, which completely occupies the breadth of the valley, about 100 yards in advance of the glacier. Scrambling to the top of this, we found that to our left a narrow chasm, with perpendicular walls, brought down a stream from a glacier, descending by a lateral valley from the south, but that the greater bulk of the water that formed the river issued from ice caves, that were hollowed beneath the great glacier of the main valley. By rough triangulation, I found that the width of the terminal portion of the glacier in view from this point was 550 yards. This portion of it terminates in a slope of 22°, but after a few attempts, we found it was too much cut up by transverse crevasses to allow of our ascending it. These crevasses radiate from an angle in the perpendicular confining wall of the glacier along its southern border, the squeezing of the glacier round which, without doubt, gives rise to these fractures. After taking a series of bearings from this point, we followed round the lower end of the glacier, having to wade through several streams issuing from below the ice, till we found the surface forming a uniform slope unbroken by crevasses. This was immediately beyond a point where a great longitudinal fissure seemed to divide the glacier into two halves up the centre of the valley; that portion to our left being pure ice much crevassed, but free from dirt on its surface; while to our right the surface we now ascended was less steep, smooth, and unbroken, but so discoloured by foreign matters, that at a little distance it might have passed for a talus of rocky fragments. It was very cold work for our feet, as we merely wore mocassins, without socks of any kind. The mocassins, however, gave us one advantage, which was the securing of a sure foothold. Toiling on, the slope gradually became less steep, and at last we seemed to reach the average level of the glacier, getting a splendid view over its surface up the valley. By the aneroid, I found this point to be 1,500 feet above the terminal moraine. I now saw that the glacier I was upon was a mere extension of a great mass of ice, that enveloped the higher mountains to the west, being supplied partly through a narrow spout-like ice cascade in the upper part of the valley, and partly by the *resolidifying* of the fragments of the upper *Mer de Glace*, falling over a precipice several hundred feet in height, to the brink of which it is gradually pushed forward. A longitudinal crack divides the glacier throughout nearly its entire length, sharply defining the ice that has squeezed through the narrow chasm, from that portion of the glacier that has been formed from the fallen fragments, the former being clear and pure, while the latter is fouled by much débris resting on its surface, and mixed in its substance. The more rapid melting of the dirty portion of the glacier gives it a smooth undulating surface, which is much lower than the adjoining surface of the pure ice, which besides is much cut by crevasses and ice valleys, through which flow considerable streams, that often disappear into profound chasms. We had to go a great way round to avoid one of these rents, and at last had to jump it when about four feet wide, and, as I found, by timing the fall of stones, 160 feet deep. The ice was beautifully veined in some parts, and the streaks were often contorted in a manner exactly like the foliation in metamorphic rocks. The precipice at the head of the valley stretches for more than two-thirds of its width; the remainder is occupied by the ice cascade. The blue pinnacles of ice, tottering over the edge of the cliff, were very striking, and it was the noise of these falling which we had mistaken for thunder a few days before when many miles down the valley. On coming fairly in view of the precipice, when about two miles from the fort of the glacier, I found, by watching the fall of these pinnacles, and observing the interval till the crash was heard, that I was a little over four miles distant, so that the lower part of the glacier is about six miles in length. After examining the surface of the glacier, and arriving at its upper end close to the precipice, we struck off to the north side of the valley, to ascend a peak that looked more

accessible than the others. With some difficulty we got off the edge of the glacier, and climbing through some scrubby pines of low stature, soon came to a surface of naked rock. Here we found traces of where a bear had been digging roots of alpine plants. The mountain was almost precipitous, and formed of nearly vertical beds of soft white slate and quartzose rock. We started an old goat, and got quite close to him, but not having a gun could do him no harm. However, we forced him along a ledge between the mountain and glacier, and tried without effect to get him to jump on to the ice, by rolling stones on him from above. We reached the top of the mountain at three o'clock. My aneroid had ceased to work some time before reaching its summit, its lowest reading being 22·11 inches. We were probably about 4,000 feet above our camp at the foot of the glacier. The summit consisted of a narrow ridge sloping to the S.W., at an angle of 40 to 50 degrees, while, to the N.E., it presented a sheer precipice more than 1,000 feet in height. We only got along by crawling at some points, while sometimes an abrupt nick in the knife-like edge had to be passed by dangerous climbing.

We had a splendid view over the *Mer de Glace* to the south and west, the mountain valleys being quite obliterated, and the peaks and ridges standing out like islands through the icy mantle. The valley below us is really fed by three great glaciers, but only the one we had crossed fairly descends into and occupies it. One behind the mountain on which we stood descends from the same ice-field, but by a lateral valley to the north, and it terminates about a mile short of where it would join the great glacier, and at a much greater elevation.

The mountains to the north are very rugged, but not so high as those to the south of the valley. In that direction there is one peak which has a pyramidal top completely wrapped in snow, and at least double the height of where I stood above the valley. Descending again to the glacier in the midst of a snow storm, with a cold wind from the N.E., we skirted along the north edge, passing where the stream from the northern glacier passes under the great glacier by an immense cavern, the floor of which sloped at an angle of 30°. At one point we thought at first we should require to turn back, and gain the surface of the glacier, as we came to a precipice that was closely hemmed in between a wall of ice and one of rock. However, by knotting our leather shirts together, and taking off our mocassins, which were now frozen, we managed to get past the difficulty, and pushing on rapidly reached our camp at eight o'clock. The hunters had been unsuccessful, and we were now limited to the dry lean moose meat, which has not much more nourishment in it than chips of parchment. During the night we saw a great glare of flame down the valley at the lower end of the lake, and we rightly conjectured that the fire we left at our halting place among the fallen woods had set the forest on fire.

September 14th.—At seven started down the margin of the lake, and in two hours reached the lower end, and found that the fire had already destroyed a large area of the forest. The wind was luckily from the west, so that by keeping close to the stream, and going in the water whenever practicable, we got along; but, as sometimes we were forced to pass over the smouldering ground, our horses' legs suffered a good deal. When a forest of green and rotten timber, such as this was, burns, the fire progresses in a different manner from among dry woods. The layer of dried foliage, often a foot deep, smoulders away slowly, and when a dry tree is met with, or one braided with the turpentine lichen, then a sudden blaze takes place. The first passage of the fire is rapid, but it often remains smouldering for months in spots.

On regaining the main valley of the North Saskatchewan, I struck up the "Middle Fork" for a few miles. Being struck with the height of the almost perpendicular mountains, our having the valley to the west, I measured a base line on the shingle, and taking a well-marked point found it to be 6,000 feet above the eye. This point is only a spur from the high mountain seen to the south of the glacier, and which must be several thousand feet higher.

Return down the valley, and camp among some sand-hills on the right bank, a little above our camp of the 10th. Nimrod and the Indian boy were absent all night, having crossed the river to hunt. Near our camp we found some old buffalo dung, and the Indians told us that not many years ago there were many of these animals along the valley of the North Saskatchewan, within the mountains. Eleven years ago, they say, there were great fires all through the mountains, and in the woods along their eastern base; and after that a disease broke out among all the animals, so that they used to find wapiti, moose, and other deer, as well as buffalo, lying dead in numbers. Before that time (somewhere about 1847 or 1848) there was abundance of game in all parts of the country; but since then there has been great scarcity of animals, and only the best hunters can make sure of killing. I have heard the same description of the sudden change that took place in the abundance of game from half-breed hunters in different parts of the country; so there is little doubt that there is some foundation for the account given by the Indians.

September 15th.—This forenoon we kept along the north bank of the river, following an excellent trail for some miles, when we lost it, as it seemed to cross the stream at a point where it was too deep for us to ford it. The two Indians hailed us from the other side, having killed some goats, so I sent Erasmus over with horses for them to fetch the meat. At noon halted at a point where the valley turns about due east, and were joined by the hunters. We tried to eat the goat meat, which was that of a fine young kid, and was fat and exceedingly good-looking, but in spite of our hunger none of us could retain it on our stomachs, as the rank musky flavour gave rise to intense nausea.

In the afternoon we found a ford, and crossed to the left or north bank of the valley, where we again fell on the trail. We went very fast, and after 12 miles we crossed a rocky point where the river abruptly changes its course to the north, entering a wide valley that is prolonged through the mountains to the S.S.E. The shingle terraces, which are developed extensively throughout the valley, here expand to form an extensive plain free from timber and covered with "bunch grass."

We traversed the plain for 6 miles, and then encamped at a little distance from the river beside some old Indian tents.

This plain, which is 7 or 8 miles long, and 2 to 3 wide, is called the Kootanie Plain, as at the time that the Kootanie Indians exchanged their furs with the traders of the Saskatchewan forts, before there was any communication with them from the Pacific coast, an annual mart was held at this place, to which the Kootanie Indians crossed the mountain, while the traders came from the Mountain House. This accounts for the well-beaten track which runs along the valley.

September 16th.—While Nimrod, the Indian boy, and Erasmus went to hunt sheep, I returned alone on our track to the rocky point, to examine some pines I had noticed there. They grow on sand-hills, and have much the appearance of Scotch firs, the trunks and branches being twisted, and of a red colour. The cone is large, and covered with a fragrant balsam.

Ascending the spur which forms the rocky point of the valley (Pine Point) I found that it was composed of 200 feet of quartzite, overlaid by shales and limestones, and thin bedded sandstones composed of coarse grains of quartz with specks of green colouring matter. These sandstones exhibit much false bedding, and are not unlike what we might expect the sandstones at the Rocky Mountain House to be like if much altered and disturbed. The terraces along the edges of the Kootanie Plain are beautifully marked, rising successively many hundred feet above the river. The surfaces of the higher ones are covered with cypress pines of sturdy growth, but free from underwood. The widest terraces are quite free from timber of any kind, excepting only in the ravines, where there are poplars and small cherry trees. The leaves of the poplars were now quite yellow, and the vegetation began to show the advance of autumn.

In the evening the hunters returned. They had seen a large band of rams, and had killed four that were in excellent condition, but they could only carry very little of the meat down the mountain, so I determined to wait here another day to get it.

September 17th.—Taking three of the horses, as Nimrod said that we could take them close under where he had killed the sheep, we started up a rocky gully to the west of Kootanie Plain. After scrambling through a rocky chasm for a few miles, we ascended for 900 feet by a slope so steep that the horses could hardly obtain a footing.

Not wishing to test my horses by Nimrod's idea of their capabilities, I would not take them further, as I saw it was merely to save the trouble of dragging the meat down that the horses were wanted so far up the mountain. Unencumbered by the horses, it did not take us long to reach the point where the sheep were lying, and leaving the men to cut up and carry off the meat, I continued to climb to the top of the mountain. It was very steep, and I left my rifle with them, as I had not my sling with it, but after getting clear of the woods I regretted having done so, for while sitting on the rocks a flock of at least a hundred rams rushed close past me, so close, indeed, that I hit them with stones. Even when frightened and fleeing they keep to well-beaten paths, and move with wonderful rapidity. I did not observe any ewes in the flock, which quite agrees with the Indian's account of their habit of living separate for many months in the year, the rams keeping high up in the mountains after the lambs are of good size, while the ewes are found by the ravines and crags along the rivers. This mountain consists of strata with almost a vertical dip, and its summit was a long ridge composed of,—*a*, dark sandy shale; *b*, light grey fissile sandstone, being almost pure sand; *c*, splintery sandstone in thin beds; *d*, light buff sandstone, hardly consolidated, and weathering with great facility; *e*, white limestone and shale that weathers to bright vermilion colour, and traversed by veins of calc-spar. Each of these groups of strata are about 100 feet thick. *f*, cherty limestone, weathering red, 200 feet; *g*, same as *c*, 80 feet; *h*, white cherty limestone; *i*, buff marlite easily acted on by the weather; *k*, quartzose rock, being the lowest bed visible. Continuing along the coast of the ridge the same beds again occur in the reverse order, and the highest part being formed of black calcareous shale, with flattened nodulated masses of sandstone that resist the action of the weather. On starting from camp my aneroid read 25.27 inches; at the point where we left the horses 23.25; some time before reaching the top it came to its old limit of 21.20, as it has invariably done on ascending high enough; but on returning to camp in the evening, it again read 25.25, showing that the instrument suffers no derangement by being carried beyond the range of its index. The highest point I reached was about 4,300 feet above our camp at the Kootanie Plain. Although snow was lying in sheltered spots far below this altitude, yet there were no true glaciers, which shows the most remarkable difference, at which I have always been astonished, between the altitude of the snow line in the eastern portion of the range from those valleys that communicate with the western slope.

September 18th.—During our stay at the Kootanie Plain, the Stoney boy caught several fine trout in the river. The banks are in general 100 feet high, and ledges of quartzose sandstone cross the stream at intervals, giving rise to rapids. The terraces are composed of large pebbles of the quartzite and limestone, and often of heavy deposits of gravel and pure sand, which is moist and incoherent. At 8 o'clock we started down the valley, which for 14 miles lies almost due north. At where it turns to the E.N.E. the river receives a large tributary from the N.W., called Wapa teehk or White Goat River. Through this valley Nimrod said a trail runs to Jaspar House, known as "Old Cline's" trail. Cline was a trader that every summer travelled through the mountains from Jaspar House to the Kootanie Plain, and then returned through the woods by their eastern base, collecting, during this tour, enough provision to support him at the trading post of Jaspar House during the winter.

Two miles below Wapateehk River we halted in latitude 52° 18′ N. The valley of the North Saskatchewan is much wider and more open than that of Bow River, and its course through the mountains from its source is also much more direct. The same succession of longitudinal valleys may be remarked however. Thus the Kootanie Plain is bounded to the east by the Saw Back range, which presents the same wall-like character. To the west of the great valley the mountains have the same massive character as in the relative position on Bow River. In descending the "Little Fork" from the height of land of Bow River, we got occasional peeps of a lofty peak to the east, which I named Mount Murchison, occupying, however, such a central position among other high and precipitous mountains that we saw it only at intervals. The Indians say this is the highest mountain they know of, and, if a rough triangulation that I made of what I supposed to be the same peak from the Kootanie Plain is to be trusted, it must be 8,000 to 9,000 feet above that point, or 13,000 to 14,000 feet above the sea.

The average altitude of the mountains is 11,000 to 12,000 feet above the sea, and I do not place much reliance on estimates of altitudes greater than that, as there is a striking appearance of uniformity in the altitude of the mountains. However, their shape, always partaking of a craggy nature, is very deceiving, and whenever I have been able to get any measurement, I always found that I had underrated the true height.

The valley of Wapateehk River corresponds with the first longitudinal valley, and it is continued to the south by the valley of a small stream that heads with the northmost of two branches which join to form Red Deer River, while the other one flows in the same valley from the south from a divide that gives off the stream that joins Bow River at the Cascade Mount.

Still keeping along the left bank of the river, after 8 miles we passed out of the mountains at 4 o'clock, being just 38 days since the time we entered them at the old Bow Fort. The outer range consists of the same blue limestones and soft earthy shales, arranged in gigantic plications, as seen along Bow River at "*Lacs des Arcs.*" In crossing the last rocky point we started a band of ewes, and killed two of them.

The largest, which Nimrod says is of average size, as follows:—

Height (shoulder)	36 inches.
Length	51 „
Height (rump)	39 „
Girth behind shoulder	43 „
Length of head	12 „
Scimiter-shaped horns, length	5 „
Inner cantlins to tip of nose	6½ „

Covered with tubular hair like the prairie antelope. Face very like a sheep's, and of light ash grey. Back of brownish grey colour. Front of legs dark slate colour. Back of legs and rump pine white. Tail, 3 inches long and black. Udder with two teats full of milk.

The river after leaving the mountains turns a good deal to the north, and quite suddenly the country becomes comparatively level on either hand, still, however, at a little distance back forming hills 800 to 1,000 feet above the river. The outer, or Brazeau's range, formed a line of lower mountains 15 or 20 miles to the east, and the space between forms a wide valley, the irregularities of which are nearly obliterated by the magnificent development of the shingle terraces. A few miles from where we killed the sheep these terraces form the banks of the river to the height of 200 feet, the pebbles being cemented into a hard conglomerate, and seem to rest on the upturned edges of grits and clays, with lignite like that at the Mountain House. The conglomerate is evidently formed from the underlying beds, and fills up the inequalities of the eroded surface. Remaining to examine the sections, I fell some distance behind the party, who had pushed on to avoid a great storm of thunder and hail that now commenced. The fall of rain and hail was so severe that the horse tracks were quite obliterated, and I was pushing on very fast in doubt of whether I had passed them or not, when suddenly my horse shyed at a bush, and immediately out sprang a splendid panther. I did all I could to pull off the leather cover from my rifle, but it was so soaked with the rain that I found it immoveable. He stood a few seconds within 12 feet of me, lashing his tail, and as if in doubt whether to spring, while my horse danced about in a state of disquietude, till at last he made off into the brushwood again. He was of a browny red colour, and I had only time to remark the great width of his face, and the length of his tail. This is the only one I have seen in the mountains, although in some localities his easily-distinguished track is not unfrequent. After some time I was led to where my men had encamped, by shots which they fired as signals. From the trend of the mountains and the difference of latitude, the point where the North Saskatchewan leaves the mountains must be nearly two degrees of longitude west of the Old River Fort.

September 19th.—By Nimrod's account it was only six miles to Big-horn Creek, where, as he said, there was fine food for the horses. I meant to stay a few days to let them recruit for the long journey that yet remained for us before reaching Edmonton. As it was too wet to start early in the day, I set off alone, with directions that the rest should come on, and camp if the weather cleared. As the day cleared we found that the mountains were quite white with the snow that had been falling while we were getting heavy rain.

The country in the great valley between Brazeau's ranges and the mountains proper, is very beautiful. The timber is a good deal cleared away by fire, but still large bluffs remain, while, in the openings on the high grounds, there is rich pasture, and poplar and willow brakes. The occurrence of low cliffs, by the outcrop of the strata of pink quartzose sandstone, gives a freshness and variety to the scene that is wholly wanting in the plains.

Sheep River is a tributary from the north-west, and rises near the source of McLeod's River. Its banks are quite precipitous, and from 200 to 300 feet in height, exposing sections of dark shale, with coal and ironstone. Along with them are beds of quartzose sandstone and grit, either of a pink or buff colour, and sometimes with the green tint of the beds at the Mountain House. The whole are much disturbed and indurated, but at this point have no high dips. These strata have a medium character between the lignite group of the Mountain House and the strata that I examined in the mountains west of the Kootanie Plain. I thought at the time they were all of the same age.

Riding on for a mile beyond the creek I chose a good camping place, and waited till the rest came up. Nimrod arrived first, and just as he was getting off his horse he spied three brown bears that were digging roots in the swamp, within 200 yards of where I was sitting, but being on foot I had been too low to observe them. We both fired, but missed, and then had a long fruitless chase after them towards the river.

September 20th.—At daylight I set off to visit a hill about 1,500 feet high, lying four or five miles north of our camp. It consists of heavy beds of carboniferous limestone, full of encrinite stems and corals, and resting on it unconformably are the grits and shales of Big-horn River. Retiring at noon, I found the latitude of our camp to be 52° 24′ N. I then revisited Big-horn valley, but several miles above the point where we crossed. The strata have much the same character, but are more disturbed as the limestones are approached, which seem to have been thrust through them as if an intrusive rock. The shales sometimes pass into soapy clay, containing fragments of sandstone. There are also thin-bedded dark grey micaceous sandstones, much ripple-marked, and grey carbonaceous sandstones, in beds from 1 to 6 feet in thickness, with partings of carbonaceous shales, passing into true coal in some places. Also seams of clay ironstone and clay shale.

The Stoney boy killed one of the large grouse near the top of the detached hill I visited in the

forenoon. It was a hen. Length, 18$\frac{7}{8}$th inches; tip of beak to inner angle of eye 1$\frac{5}{16}$th inches; stretch of wings from tip to tip, 24 inches. Its colour was grey, but more dusky than the grey prairie hen; the eyes red; the feet very small and yellow; tail black, with five feathers on each side (the central ones were wanting). The upper mandible was more hooked than in other kinds of grouse.

September 21st.—Engaged preparing skeletons of the big-horn sheep. A party of Stoney Indians join us, they have been north tenting in the woods, and are on their way south, to the Bow Fort. They pitch their tents beside us, and we all become great friends. Nimrod was out hunting all day, and as he returned unsuccessful after dark, he saw close to our camp what at first he took for a horse, but discovered it to be a wapiti, by its antlers showing against the sky, he fired, and thinks he hit it.

September 22nd.—At daybreak I set off with Nimrod to look for the deer, and soon found him not yet dead, but lying within 300 yards of our camp. It was a splendid buck, with large antlers, and measured 5 feet 7 inches in height at the shoulders. He was not in good condition, however, and as we had plenty of good mutton, we handed him over to our Stoney friends, to convert into "pounded meat" for us, reserving only the marrow bones, which we discussed raw after the Indian fashion.

The Indians had made up a party to hunt sheep on the south side of the Saskatchewan, and asked me to join them; so at 8 o'clock, taking Erasmus with me, we started down Big-horn River, but after three miles, in the course of which we descended a succession of terrace levels, we reached the river, and crossed it without difficulty, as the Indians knew a good ford that only reached to the horses' girths. The south bank ascends rapidly, and we soon gained a considerable altitude, when, leaving our horses in a secluded dell, we split into two parties, each six or seven in number, keeping on opposite sides of a deep precipitous ravine of great depth. This is a famous place for sheep at this season, and when the Indians can find a flock grazing on the side of the ravine they drive them to the bottom, where they are met by another party of hunters, and as they try to escape up the other slope their habit is to huddle together, so that they become an easy mark for the hunters stationed above them. Luckily for the sheep, but unluckily for our sport, there was some misunderstanding, owing to which the other party of hunters started the game while we were yet toiling up through the fallen timber, so that a flock came rushing right past us, but going at such a speed through the woods that it was difficult to get a shot. However, Nimrod, who was just before me, killed two with his common flint gun, while I only killed one with my double rifle. Nimrod then set off through the woods, running like a deer, loading and firing all the while, and killed two more. Erasmus, who was with the party on the other side of the creek, kept up the honour of the party by killing a ewe and a lamb. We followed up the gully for some time, but only got a few straggling shots. There were 12 in our party altogether, being myself, Erasmus, and Nimrod, and 9 Stoneys from the camp, and at the end of the day we found there had been 10 sheep killed, of which Nimrod killed five, Erasmus two, myself one, and the Stoneys only three among them. That it may not seem like butchery, I may mention that from their habits the Rocky Mountain sheep is quite as difficult to hunt as any deer, while the grey colour renders them a less easy object to aim at. All that were killed were ewes or year olds, and I saw no large horned rams among them, this being the season that they keep separate.

The perpendicular sides of the ravine were 250 to 400 feet deep, and formed of dark sandy shale, with flakes of mica. Their strata were covered with an aluminous efflorescence, and in one place I got abundance of a small species of ostrea, but badly pruned. Lower down the ravine the grits appear, but the section is not continuous, so I could not determine their relative position.

As we returned I observed that there is a deposit of freshwater or river silt over the lower shingle terraces, and that in some places the higher terraces, especially along the sides of ravines, are covered by a deposit like the drift of the lower plains, consisting of coarse sandy clay with large sub-angular boulders derived exclusively from the neighbouring rocks. Nimrod was the great man among the Indians on returning to camp, as a good hunter is always held in the highest estimation. He does nothing but idle and smoke in camp, and may lord it over the rest as he pleases, as they are all afraid to offend him.

There is great regularity in the changes of the wind at this place. Thus all day it blows gently from the S.W. till about 3 p.m., when it freshens to a gale. At 6 p.m. the lower stratum changes to a N.E. wind, the upper clouds still continuing to move from the S.W. for an hour or two later. The north-east wind generally blows pretty fresh, and brings fog and low clouds; but two hours after sunset it clears up, and a light wind sets in from the S. or S.E., which falls to calm towards morning.

September 25th.—Our horses are improving rapidly, as it was merely food and rest for a few days that they required, with the exception of one that had been severely burnt in passing through the fire at the Glacier Lakes. I managed to exchange him with the Stoneys, however, for another that was sound, though perhaps not so fine a horse otherwise. I examined the banks of a ravine about five miles east from camp to-day, and found much the same strata displayed as on Big-horn Creek. A coarse sandstone, in beds from six to ten feet thick, and composed of white and pink grains of quartz, with very little cementing matter, and in some beds a good deal of a green mineral in small specks, and in others minute flakes of mica and specks of carbon. The shales are much indurated, and contain abundant but obscure impressions of plants. With these shales are beds of very rich ironstone. The dip varies much, and the strata are traversed by great faults. The sandstones often form lenticular beds, and the shales in one case I observed to occupy a hollow in the sandstone, so that the overlying beds of sandstone appeared unconformable. This confirms me in the idea that these are the same strata which occur at the Mountain House, only differing in their being much disturbed and indurated.

September 26th.—I had a long walk this day to reach the N. aspect of the limestone hill. It is composed of beds dipping at 35° to W.S.W., and to the N.E. presents a perpendicular cliff about 1,000 feet high, with about one third of its height concealed by a talus of broken fragments: the section is as follows:—

Crystalline limestone of light blue colour, with corals and encrinites -	300	feet.
Dark arenaceous beds - - - - - -	100	„
Splintery compact limestone, very dark coloured - - -	400	„
Soft subcrystalline and cherty limestone, with a good deal of bituminous matter and encrinite stems - - - - - -	300	„

Round the base of the hill the grits and sandstone are found always dipping from it, so that those to the west appear almost conformable, while those to the east dip exactly in the opposite direction.

The masses of limestone tilted at a considerable angle seem to have formed islands at the time that the grits, sandstone, and clays, were being deposited, and then a further disturbance increased the dip of the limestones, thrusting them through the later beds, which acquired a radiating dip.

September 27th.—This morning, after giving away everything we could spare as presents to our Indian friends, and leaving with them the boy that had accompanied us from Bow River, we started to continue our journey to Edmonton. The seven days' rest had greatly improved the horses, and without it I doubt if we should ever have got them to winter quarters.

The Saskatchewan turns to the S.E. from this point to cut through Brazeau's range, but we kept on due east for a more northerly depression through the same hills. After a few miles of open timber we got into thick spruce forest as we approached the hills. We passed several large lakes and streams, and found the ground very soft. After 15 miles we reached the valley through the range, and encamped by the source of a stream that flows to the E. North and south of us, were lofty bluffs of limestone rock, the beds of which dip to the west at a high angle.

September 28th.—Follow down Miry Creek, and at noon cross it by a rude Indian bridge, and, halting, find the latitude to be 52° 30′ N. In crossing a swampy "opening" during the afternoon we got a view of the range through which we have just passed, and find that it looks much higher from this side than from the west. Now that we were out of the mountains we found many plants still in flower, such as delphinium and rhynanthus.

During the afternoon we continue to follow the creek till we again reach the Saskatchewan, to which we require to make a descent of 270 feet through a rocky gully, the sides of which are formed of the sandstones and iron clay shales, as at the Rocky Mountain House, only here they are tilted at an angle 15° to the south. The shingle terraces were now found along the river valley, or on the high table-lands back from the river, the intervening bit of country being soft and swampy. Finding it tedious following the long bends of the river, we again ascended the bank, and at nightfall camped by a spruce swamp. We began now to see larch in the low grounds, that tree not being common in the mountains. The night was clear, with sharp frost.

September 29th.—We had travelled about two hours this morning, when we came to the fresh tracks of a band of wapiti. By a careful search we soon found them, but the wood was so dense that, although one at least was wounded, they all escaped.

Before starting again I found the latitude to be 52° 26′ N.

We again descended to the river, and found the valley much wider than before, with extensive alluvial flats. Passed several sections of soft coarse sandstone, with clay partings, but no coal. The timber is very fine on the flats, some of the balsam poplars and white spruce trees being of great size. We found a trail leading along the river, through a succession of small prairies with rich pasture, so that we got along rapidly, and made fully 20 miles before we encamped.

September 30th.—The valley has now expanded till the high lands are represented only by rounded hills at a considerable distance, while in its descent the river has acquired secondary banks 60 to 70 feet in height. At where we halted in the middle of the day, strata of earthy shale with concretionary masses of sandstone dip to the S.W. at 10°, and overlaid unconformably by soft buff-coloured sandstone, with clay partings. The upper strata are quite horizontal, and evidently fill up hollows in the lower beds.

This evening we reached the Rocky Mountain House, but found that the traders had not yet arrived from Edmonton. The place had a deserted look, the parchment windows being torn, the doors standing ajar, and the court-yard choked with weeds. We established our camp in the kitchen, and tearing down some of the half-rotten pickets, soon made a blazing fire, but I did not feel nearly so comfortable as if we had been encamped as usual. Our supply of sheep pemican that we had made was now finished, and on looking for the bag of dried meat the Stoney Indians had prepared for us, we found that it had dropped out from the pack, so we were left without any provisions, and had still 180 miles to travel. During the night there was much thunder, followed by snow, being exactly the same kind of storm that ushered in the previous winter, and which we encountered on the 6th of October before reaching Carlton.

October 1st.—Ground white with snow. In the prairie behind the fort we soon killed some grouse for our breakfast. The horse we had got from the Indians at Big-horn Creek strayed off into the woods, leading astray several of the others, and we were detained all day searching for them.

October 2nd.—The snow has all disappeared this morning, but it is a very hard frost. Crossing first the Saskatchewan and the Clear-water River, we kept to the E.S.E., and at noon were in latitude 52° 23′ 30″ N. At night we reached the "Last Hill Creek," and fell on the track I had travelled the previous winter. We encamped an hour before dark, to leave time to shoot rabbits for our supper.

October 3rd.—The wind was bitterly cold to-day from the N.E. We travelled along briskly, and made 23 miles by nightfall, when we reached Blind River. Just as we were going to encamp we heard a dog bark a little to the north, and as it was an object to fall in with Indians, with whom we might get some provisions, we turned off in that direction, and found a little camp of Pigeon Lake Indians hid among the trees. There were six tents, some of the families being of Stoney Indians, and others of Thick-wood Crees. I gave them our leather tent, which we had carried all through the mountains, in exchange for some wapiti venison. They told us that these deer have already commenced to go in large bands, which is a sign of an early winter. Snow began to fall at dark, and in the morning there was five or six inches on the ground.

October 4th.—Push on all day in spite of the drifting snow, and made 28 miles, but in the course of the afternoon, when we had crossed Beaver River, the storm increased to such violence that we had to halt and make a regular winter encampment, building a shelter of pine foliage.

October 5th.—The snow continued to fall during the night, and this morning we were quite covered over, as the wind had changed, and our shelter had only produced a heavy drift. On the open plain the snow was nearly two feet deep, and as our horses were in a miserable place, where they could get no grass, we drove them to a swamp, and let them feed till mid-day. As it was very cold, I tore up my

blanket for the general good, to make wrappers for our feet. In the afternoon the snow ceased, and we crossed Battle River and Pigeon Creek. The latter stream, although only about 20 feet wide, was so deep that we had to swim it, plunging through it by a rapid dash on horseback, without taking off our clothes. The effect of the plunge on our worn-out horses was, that a few miles after, they began to give out, so that we could hardly get them along.

October 6th.—We travelled on slowly, all on foot, driving the jaded horses through the deep snow, and at noon reached the Bad Beaver Dam, where I found the latitude 53° 5′ N. At night we had only reached the "Stoney Plain," and were still 25 miles from Edmonton.

October 7th.—A sharp frost during the night had "set" the snow, so that it did not impede the horses so much, besides it seems as if so much had not fallen in this district as further to the S.W. At noon we reached the White Mud Creek, and halted to wash our faces before arriving at the fort. At 4 we reached the river, and soon attracted the attention of the inhabitants of the fort, and I had the satisfaction of distinguishing Captain Palliser and the rest of our party awaiting me on the other bank. The swimming of the horses was a troublesome work, as some of them were very weak.

Captain Palliser's Journal.

Shortly after my arrival at Edmonton our party was increased by that of my friend Captain Brisco, and his companion Mr. Mitchell, another English gentleman, who had come out to the far west in search of adventure and heavy game. The fort was then in charge of Mr. Brazeau, an American gentleman, in the service of the Hudson's Bay Company, generally in charge of the Rocky Mountain House during the winter, but who comes down to the head quarters of the trade at Edmonton during the absence in summer of the chief factor, who leaves to attend the council at Norway House, Lake Winipeg. Fort Edmonton, the largest fort of the Saskatchewan, is built altogether of wood, consisting of one good-sized house, two stories high, the habitation of the officer in charge of the post; it also contained ourselves afterwards, and some visitors. Adjoining the house are the storehouses of the Company, containing their goods and furs, besides the log-houses inhabited by the men engaged by the Company, together with their wives and families; the whole is surrounded by wooden pickets or piles firmly driven into the ground close together, and about 20 feet high.

In shape it is an irregular hexagon, about 100 yards long, and 70 wide; and contains a population of about 40 men, 30 women, and 80 children, almost entirely supported on buffalo meat, the hauling of which, for sometimes upwards of 250 miles across the plains, is the source of great and most fruitless expense. Indeed the labour and difficulty of providing for a consumption of 700lbs. of buffalo meat daily, and from so great a distance, would frequently become very precarious, were it not for an abundant supply of fish from Lake St. Ann, about 50 miles to the west of the fort, whence they are capable of hauling 30,000 or 40,000 in a season; these are a fine wholesome white fish, averaging four pounds weight each. Besides this, great quantities of provisions are traded here, it is the principal depôt for provisions, as the several brigades of boats are most supplied from this place. Few fine furs are traded here, those which are obtained being chiefly from half-breeds belonging to the settlement at Lake St. Ann's, where there is a Roman Catholic mission, under the direction of two French priests, who have induced the half-breeds to cultivate the ground, and sometimes they realize very fair crops of barley and potatoes. Little agriculture is carried on about Fort Edmonton, owing partly to the want of acquaintance with even the leading principles of agriculture, and principally from the disinclination of both the men and women to work steadily at any agricultural occupation.

On the 1st of October Lieutenant Blackiston arrived from his expedition to the Kootanie Passes over the Rocky Mountains, and on the 7th of the month Doctor Hector arrived from his branch expedition, and on the same evening Mr. Christie (whose acquaintance I had made at Fort Pelley) reached the fort in advance of his brigade, which he had left at Fort Pitt. He was now the Hudson's Bay officer, promoted from Fort Pelley to take charge of the Saskatchewan district, and the hearty welcome he gave us made us feel quite at home in our winter quarters.

Our first care, now that we were established in our winter quarters, was to provide, as well as we could, in order that our horses, who were now very much the worse for all the fatigue that they had undergone during the exploring season, should be protected, as well as circumstances would permit, against the severity of winter. I had already, when at the base of the Rocky Mountains, sent on two men to Edmonton, to cut a good supply of hay for their winter use, and these men (Todd and Ballenden) worked so well, that they had already 17 stacks, averaging four loads apiece, cut and saved before my arrival. My next care was to pay off the greater portion of the men, retaining only those necessary to guard the horses during the winter. As I mentioned already, these were in two brigades, viz., the Red River brigade, and the St. Ann's brigade.

In order to pay them their wages, it was necessary for me to await the arrival of the boats up the Saskatchewan from Norway House, with the outfit I had ordered the year before. All payments in this country being made in kind, adds considerably to the trouble of paying wages, which are first calculated in skins, and then paid in kind. The value of the skin differs in different parts of the country, thus, a skin in Swan River district is about 2*s.*, and in the Upper Saskatchewan it is about 2*s.* 3*d.* Again, at Forts Shepherd and Colville, where the influence of the gold begins to be felt, it is 8*s.* 4*d.* Our having to conform to the habit of the country in paying many of our men, occasioned a great loss to Government, as, counting by skins, the better class of articles have only a small nominal value, the Company balancing the loss on them against the high nominal value they put on other articles, especially rum.

Mr. Christie, who understood the pricing and value of the articles, very kindly undertook the payment of the men, which is thus conducted:—Mr. Sullivan made out account of wages due to them, deducting advances, &c. I then signed this, and each man presented it to Mr. Christie, who sat in my shop in the fort, surrounded by ready-made clothes, blankets, beds, axes, knives, files, kettles, tea, sugar, tobacco, &c., and the man kept taking what he wanted till Mr. Christie called out "assez," upon which the account closed.

Frequently Mr. Christie would say, "Now you have but half a skin left," when his customer would

immediately turn to the ribbons or beads for an equivalent of the difference. I did not pay any men of my Red River brigade until all the St. Ann's men were settled with, because they were returning to Red River, where they could get what they wanted on better terms there. The freight up the Saskatchewan was necessarily heavy, all which was taken into wages account at the time of their agreement. Nevertheless, like children at the sight of toys, it was difficult to deter them from purchasing, and I had considerable trouble in laughing them out of the idea of buying an expensive article, in order to carry it back to the place it came from at considerable trouble and inconvenience.

About the 12th of October I took leave of my Red River men, who started down in the boats, which also conveyed Lieutenant Blackiston on his way home.

The two brigades were now paid off, and had started for their general destinations. There remained now of the Expedition but those who were necessary for the protection and care of the horses; these were removed about 11 miles off on the Big Lake, and went with the horses of the fort: my men retained to attend them were Pierre Beauchamp, Sam Ballenden, and Baptiste La Graisse, all three from Red River.

Before the departure of the boats, our servant, James Beads, received a letter from below (Red River) to say that his brother had been killed that summer on his way from St. Paul's by the Salteaus; he therefore asked my leave to return in the boats. I hesitated for some time before granting this leave, but recollecting that I should require a special mail next year, in order to receive my commands from Her Majesty's Government, I gave him permission to go, at the same time providing despatches which should organize means for his return, with my instructions from the Colonial Office for next year.

Our time was now pretty nearly at our disposal; from time to time we rode over to look after the horses, worked up observations, and enjoyed a considerable period of repose and good food, of which we stood much in need.

On the 22nd October Dr. Hector started, with one man and two horses, on a geological trip to Fort Pitt, and returned on the 1st of November.

On the 6th of November I started with an Indian to hunt over the country to the south of Fort Edmonton. We remained out for a fortnight. I was enabled to see a good deal of the country during the first week, before the snow fell. I found the soil rich, and fairly wooded, chiefly with clumps of poplar and birch; vetches grew luxuriantly, and also succulent grasses; the whole country afforded fine feed for horses; in many parts it was swampy, but these swamps were now frozen hard, forming fine feeding places. We fell in with Thick-wood Crees on Beaver Lake, and killed some deer, elk, moose, and black bears. I returned to Fort Edmonton about the 4th of December, after having seen a good deal of the country and lakes south of the North Saskatchewan River.

While we were at Edmonton we were frequently visited by the French priests of the Catholic mission at Lake St. Ann's. Mons. La Combe, the head of the order, was a most excellent benevolent gentleman, possessing many estimable qualities most valuable in a missionary. He spoke Cree well, and had obtained a good deal of influence, not so much, however, among the Indians as among the half-breeds.

The merit of introducing a Christian influence among the Indian tribes in this part of the country is principally due to the efforts of the Wesleyan missionaries. Mr. Rundle, who must have been a very able and influential man, is spoken of among them with reverence and enthusiasm to this day. Mr. Woolsey also, the present missionary, is a most excellent benevolent person.

The Indians which I consider to have thus benefited by Christian precept and example, are the Thick-wood Crees and Rocky Mountain Stoneys, who, being remote from civilization, are not so liable to be corrupted by the baneful proximity of the white population.

At Christmas the festivities of the season were celebrated, in imitation of the manners and the customs of the old country. The catholic missionaries from Lake St. Ann's perform mass, and Mr. Woolsey conducted the Church of England service in the principal room of the fort.

On several occasions during the winter at Edmonton was visited by Blackfeet, and I told them that next year it was my intention to travel right through the heart of their country. They told me if I went to Rocky Mountain House I would see them. I therefore determined to go there and make friends with their chiefs, with a view to facilitate the progress of the Expedition through their country in the following season.

Captain Brisco and Mr. Mitchell were also anxious to hunt, and to see the country; and having a fair lot of horses they determined to try the trip, although rather a bad time of year for travelling on horseback. I accompanied them, with two dog sleighs and Sam Ballenden. Ours was a pleasant trip; we fell in with plenty of buffalo; travelled very slowly on account of the horses, who had often very deep snow to struggle through, and reached Rocky Mountain House early in the month of February.

My old friend, Mr. Brazeau, received us all with a very hearty welcome. He complained of loneliness up at his post, and assured us over and over that our visit conferred a great benefit upon him, being naturally very sociable; he was also most entertaining.

Mr. Brazeau had been for many years in the American Indian fur trade; was a wonderful Indian linguist, and spoke Stoney, Sioux, Salteau, Cree, Blackfoot, and Crow,—six languages, five of which are totally distinct from one another. Being of an old Spanish family, and educated in the United States, he also spoke English, French, and Spanish fluently. He carried on a very brisk trade with the Blackfeet, but seemed to be most wretchedly supplied with goods for the trade, and latterly had to send away bands of Blackfeet, 80 and 100 strong, well laden with buffalo robes, bear skins, wolf skins, and other less valuable furs.

While at Rocky Mountain House I frequently made hunting excursions, thereby affording myself opportunities of getting acquainted with the Blackfeet and their chiefs on Red Deer River. I was visited by all the chiefs to whom Dr. Hector had given papers, considered by them as valuable documents, and, after reading them and granting more, made them some presents of ammunition, tobacco, cloth, &c., which I had brought from Edmonton for that pnrpose. Rocky Mountain House is a small post, in a very shaky condition, nevertheless the business of the Company is briskly conducted, and work seems much more the order of the day than at Edmonton, where the half-breeds in the service of the Company appear very idle, lazy, and impudent.

There are several kinds of employés of the Hudson's Bay Company, now diminishing very much throughout these portions of their district, viz.,—the old Canadian voyageur, a hardy, jovial, respectful, and well-conducted man; also the old hands which used to be engaged from the Orkney Islands and other parts of Scotland; their places are now fast supplied by lazy French half-breeds from Lake St. Ann's, who, if they are desired to work or ordered to do anything they dislike, may go away as soon as they have received their advances, and join the Indians out on the prairies.

During the latter part of winter and commencement of spring the boat-building progressed rapidly, 13 fine Mackmow boats were turned out before the 1st of May, about 35 feet long, and capable of carrying 75 pieces of 90 lb. each. Mr. Brazeau also ordered a small skiff for us, in which Capt. Brisco, Mr. Mitchell, and I started with our two men, George Daniel and Sam Ballenden, and hunted down the river; we were, however, overtaken by the large boats, and completed our journey to Edmonton in one of them with Mr. Brazeau and his family.

Sunday, May 9th.—Arrived at Edmonton early in the morning. Mr. Christie was preparing for his start down the Saskatchewan with boats, and thence to Norway House and head of Lake Winipeg.

1859, May 12th.—A detachment of boats started. After this period the greater part of our time was taken up with looking after the horses and making arrangements for starting again on a third season's explorations, in case that we should receive orders from the Government to that effect.

May 23rd.—The last detachment of boats started from Edmonton under the charge of Mr. Christie, the gentleman in charge of the district, on his way to Norway House. During the whole winter of 1858–9, Mr. Christie showed us great attention, and was most anxious to do all in his power to give us every accommodation. His arrangements in order to effect this object caused him considerable inconvenience; and his disposition of our trading goods, and the kind manner in which he undertook the payment of the men at the close of their engagements last year, deserve our warmest thanks.

Our botanist, M. Bourgeau, also availed himself of this opportunity to return home *viâ* Red River, in order to fulfil engagements made prior to the formation of our Expedition, when Her Majesty's Government did not contemplate its extension beyond 1858. We were very sorry ind eed to lose our friend, who was a great favourite with us all. In addition to his acquirements as a botanist, he united the most sociable jovial disposition, ever ready not only to do his own work, but assist anyone else who asked him. He also possesses the most untiring energy in camp, and no fatigue ever deterred him from immediate attention to the securing and preservation of his specimens, as his collections sent home abundantly prove.

Dr. Hector's Journal—continued.

Friday, 22nd October 1858.—Since arriving at Edmonton have been engaged preparing maps and reports, and making arrangements for regular meteorological observations being taken throughout the winter. As the first snow had now disappeared, and the Indian summer had commenced, I took advantage of the open weather to make a trip down the Saskatchewan as far as the Snake Portage. I was accompanied by Ballenden, and each of us had a horse, and one to carry our blankets and kettles. We were absent for nine days, and supported ourselves on ducks and rabbits. Keeping along the Fort Pitt track to the Black Hill, we then struck off to the north, and passing through broken country by the La Bêche trail, reached the Saskatchewan at the lower crossing-place. The banks are here formed of sandstone and clay shale with ironstone seams, like the beds at the Mountain House. I then skirted the Saskatchewan for 40 miles above the point, and then struck off to the west-south-west, in direct line for Edmonton. This took me through quite a new country, and one that is seldom travelled by any but Indians. I crossed the Egg Hills, which are 300 feet above the plain, and to the south-west of which lies a large lake of the same name. Its margins are very swampy, and it was swarming with ducks, geese, swans, and other wild fowl at this season. From the north end of the lake we struck through dense poplar thickets, which continue all the way to the north-west angle of the Beaver Hills, where we again fell on the Edmonton track. I was much struck with the admirable pasture which is to be found even at this season all over this extensive tract of country, and of that kind which is most valuable for the support of animals during the winter. The poplar thickets affording shelter surround and enclose limited prairies that yield a rich growth of vetches and nutritious grass of sufficient growth to bear up the snow and keep it loose, so that horses and cattle can scrape their food from under it at least until the later spring months, when, in some winters, the crust might be a serious obstacle. On the hills, such as the Egg Hills, and on the larger tracts of open land, there is a good close growth of grass that is admirably adapted for sheep, which might easily be left to themselves excepting during a few weeks in the months of March and April, so far as climate is concerned, but the hordes of wolves that at present occupy the country would be a fearful tax on the rearing of this kind of stock. Spots where there is a deep rich soil admirably adapted to agriculture, are to be found in every direction throughout this district. By the river there is abundance of that kind of timber which the Hudson's Bay Company find fitted for the construction of the forts, boat-building, and other purposes, and, although of quality that would not be much esteemed in Canada or the United States, or even at the Red River settlement, yet it is not to be despised. The poplar groves will yield abundance of firewood, and if it is cut green during the winter, when it splits with great facility, and stacked till the ensuing season, it makes a clear-burning fire, without sparks, and gives out a good heat. We returned to Fort Edmonton on the 31st of October; and, as the results of this journey are of a kind more easily collected by inspection of the maps, I have not extended my journal in detail.

November 26th.—Fort Edmonton.—The rivers were now frozen over, and the permanent snow covered the ground in sufficient quantity to permit of travelling with dogs; so with three dog sleighs, and accompanied by Erasmus and Richards, and a Cree Indian I had engaged, known as the "Fox," I started to visit the mountains in the neighbourhood of the "Devil's Head," as it was necessary to learn something of the nature of the country along their base beyond the mere valleys of the great rivers.

Started from the south side of the river at 10 o'clock, and reached the White Mud Creek at 12. We then followed the middle Blackfoot trail, and at nightfall camped in a bluff of large poplars. To-day, and indeed for the last week, the air has been filled with crystals of ice, causing a dazzling haze, and

which fall steadily, the air being dead calm, and cover the ground and the branches of the trees with a beautiful efflorescence. The haze gives rise to well-developed parahelia, or sun-dogs as they are called, almost every day towards noon.

November 27th.—The steady weather is threatening to break, as it is not so cold, and a little snow has fallen. In the forenoon rain fell, and then set in, and it became very heavy work for the dogs to drag the sleds over the moist snow. We were travelling through a wide shallow valley that lies between the Beaver Hills and the Woodpecker Hills that overhang Pigeon Lake, and had been following up a branch of White Mud Creek, but in the afternoon fell on a stream flowing to the south to join Battle River. The country is thinly wooded, and abounds in rich pasture, the grass showing well above the snow, which is six inches deep. We encamped in a bluff of pines, and during the night we had rain, and high wind from the S.W., the thermometer rising several degrees above the freezing point.

November 28th.—The Blackfoot track continues to the S.S.E., but we now left it and turned off to the S.S.W., making for the south end of a low wooded hill called the *Musquachis* or Bear's Hill. Cold weather again set in during the afternoon. We now found the snow to be much deeper than about Edmonton. Before encamping at the south end of the Musquachis, we crossed a plain about nine miles wide.

November 29th.—Very clear and cold. Till noon we passed through poplar thickets, and saw many elk tracks. On reaching some Stoney Indian tents, four miles north of Battle River, I found the latitude to be 52° 46′ 26″. We thence continued along the north bank of Battle River, which here runs to the east, and encamp beside a small lake. Even with the snow covering it, we observed traces of the cart track that lead to the old Bow Fort, and that is always used by travellers who cross the mountains.

November 30th.—Snow falling heavily all day. We crossed Battle River, and followed what is known as the Wolf's Trail, through a range of low hills, and encamped a good deal to the right of our proper course, as there is little or no timber to be found for long distances in this part of the country. Yet it is not true plain country, as it is covered with a small growth of willows and alders. Even at this season, much of this district looks inviting. Our camp was beside a lake, surrounded by hills 200 feet in height, in a bluff of poplars, that were sheltered in a ravine. The thermometer continued to fall rapidly, and during the night reached −23°.

December 1st.—After four hours we reached Red Deer River, just below the mouth of Pas-co-pee or Blind Man River, which rises to the north, near to the Saskatchewan. The latitude of this point I found to be 52° 18′ 13″ N. The banks of Red Deer River are 170 feet high, and very ruinous. They exhibit sections of nodular argillaceous sandstone, with ironstone bands overlaid by marlites. Fragments of silicified wood were common along the foot of the bank, but none were observed *in situ*. The concretionary nodules are of a greenish buff colour. The bedding is very distinct, and, on following down the river for a few miles, thin strata were seen to rest unconformably on the sandstone of the Nick Hills, which cross the river below this point. The Nick itself was about 15 miles to the south-east; and it seems as if the sandstone, which last season we found to overlie the lignite group, forms the basin of a large river, in which thin bedded marlites and buff concretionary argillaceous sandstones had been deposited. The outline of this basin is very distinctly marked by a succession of headlands on either side of the valley, which gradually increases in width to the west. The evening was very clear and calm, but intensely cold, the thermometer falling to −37°. We had a splendid camp around dry pine woods, and kept up a roaring fire all night, generally having six logs on at a time, each about one foot in diameter and eight feet long. The stars were wonderfully clear, and, when Jupiter was near the meridian, we distinctly saw, as it were, two irregularities on its margin with the naked eye, and which, with a common field glass were clearly defined as two of the satellites. For several days at this time, even with the small sextant telescope, two large spots were observed on the sun's disk. This phenomenon may have had something to do with the production of the sudden extreme of cold which occurred at this time, and which I have since learned was felt all over the central portion of the continent.

December 4th.—For the last three days there has been little variety, as we have been ascending Red Deer River, travelling on the ice. The banks preserve much the same height, excepting where the river sweeps close under the Hunt Hill, then the south side of the valley is 500 feet above the water level. Near this place I saw a section that shows the marlites and buff sandstone to rest unconformably on chocolate-coloured clays, with ironstone septaria, and grey sandstone, with lignite and carbonaceous shales. This forenoon we reached the point where the cart trail from Fort Edmonton crosses the river, and where Lieutenant Blackiston crossed it the previous summer. The banks here are only 40 to 50 feet high, and on both sides of the river there are fine level plains, covered with rose bushes and small shrubs. A little way above this point the main river is joined by Little Red Deer River from the S.W., and a mile higher by Medicine River from the N.W. In the low expansion of the valley at the confluence of these streams, which locality is always talked of as the "Forks," there are large forests of spruce firs of large size. It is at this point that the Indians are so anxious to have a fort established at which they might trade, instead of travelling all the way to the Mountain House from the plains. I should think it much to the Company's advantage to comply with this wish, as the goods could be transported with great ease overland by carts to this point from Fort Edmonton, and with much less toil and expense than it takes under the present arrangement to drag the boats up the very rapid portion of the Saskatchewan between Fort Edmonton and the Mountain House.

The materials for boat-building exist at the Forks in abundance, and the returns could be taken down by the South Saskatchewan, and join the rest of the brigade at Fort La Corne. The complement of boats usually built at the Mountain House for the Edmonton returns, could still be built by a detached party of men, at the same place or even lower down the river. The great advantage would be that at Red Deer River the traders would be close to the buffalo, and so secure provisions with greater ease and certainty, also that the establishment would get its outfit much earlier in the season.

At the crossing place at "The Forks," the river can be forded with pack-horses when not too high, but the line of shallow water is oblique, and difficult to follow without a guide. The river is more rapid above this point, and we began to find many open holes in the ice. These are not dangerous however,

as the ice is quite thick close to their edges. Where we encamped at night we killed a fine porcupine, which was very fat, and made an excellent supper. Its length was 27 inches; length of head, 4 inches; length of tail, 7½ inches; and its girth, 16½ inches. The quills are about two inches in length, and when not erected are almost hidden in long yellow hair. The Indian preserved them, as they are used in embroidering mocassins and leather shirts. He extracted them by a very ingenious process, taking advantage of their barbed points. He took his leather gun-cover, and flapping it against the porcupine, then withdrew it with a jerk, which pulled most of the quills out, and left them standing in the leather, and then there was no difficulty in grasping them by their blunt soft roots, and so obtaining them in handfuls.

December 5th.—The thermometer is keeping steadily about zero, and during last night a little more snow fell. The river banks are very high, and densely covered with pines. Much of the river stills remains open, but as yet we have no difficulty in getting along on the sound ice. I went off to hunt in the high level during the afternoon, and, although I saw plenty of deer, the excessive cold spoiled my shooting, so that I returned empty handed.

Upon the ice we have found the remains of several deer that have evidently been chased and killed by bands of wolves, and strangely enough these have always been full-grown bucks with fine antlers. We came on one carcass and drove off the wolves before they had finished their meal, so that we were able to secure a hearty supper of fresh meat at least for our dogs, which, like ourselves, were getting tired of the simple pemican fare. This buck had been obliged to swim an open place in the river, for we found his hair covered with a complete coat of ice, and this had probably impeded his flight and aided the pursuing wolves.

December 6th.—After going a few miles this morning we all fell through the ice, but managed to get out again in safety. However, wet clothes are not to be trifled with when the thermometer is at −20°, so we got to land, made a big fire, and dried ourselves. Before starting again, I found the latitude to be 51° 50′ 28″ N. In the afternoon a bend of the river to the S.W. allowed us to have a view of the Rocky Mountains, which look comparatively close to us now. The bearing of the Devil's Head from this point was S.W. ½ S. The banks of the river are so densely wooded that sections cannot be frequently observed, but they appear to be formed of chocolate-coloured clay shales, with ironstone nodules in their strata, that are dipping at a gentle angle to the E. They look very like the beds at the Snake Portage, in the North Saskatchewan. I found no fossils in these strata, but in those at the forks of Medicine River I found, in calcareous concretions among the marlites, masses of concrete, composed of paludina, planorbis, and other freshwater shells.

December 7th.—The ice became more open as we proceeded up the river, so that when, within about 40 miles of the mountains, we fell in an Indian track which crossed the valley, I determined to turn off to the south. It was with great difficulty and labour that we got the "sleds" up the bank, which was 240 feet high, and not only very steep, but much encumbered by fallen timber. We found the upper country comparatively level, and thinly wooded with poplar and large willows. After six miles we began to ascend a series of dry, sandy, and shingle terraces, covered with the cypress pine (*P. Saskatchewensis*).

The Indians' trail was only a day old, so we pushed on and reached their camp at nightfall. I found it was the camp of my friend Samson, the same with whom we had encamped so long by Big-horn River in the end of September. He had been pitching slowly along the base of the mountains since then, and was now bound for the "Edge of the Woods," as he heard that the buffalo were close and the Blackfeet far. Samson said that he was at the Kootanie Plain in the first week of October, when we had the great snow storm before reaching Edmonton, but that in the mountains no snow fell there. He says I did right in leaving Red Deer River, as its channel gets very rocky and the stream rapid when near the mountains, so that it does not freeze till late in the season.

One of the Indians came in from hunting after we arrived, having shot a splendid buck with an arrow. He had stalked it, and got so close that he drove the arrow 14 inches into the deer. This shows that although they nearly all use guns, yet the Indian has not yet forgotten the use of their ancient weapon.

December 8th.—I engaged an Indian from this camp to accompany us, as the "Fox" did not know much of this part of the country. He was the same Stoney Indian that we had seen near Bull Lake the previous summer, and from whom Sullivan had traded a horse.

After a few miles we descended rapidly from the terraces, and skirted the valley of Little Red Deer River, keeping a south-west course.

There is much fine pasture in this valley and abundance of good timber. We saw a good number of small deer, but the country is too open to hunt them successfully without losing much time.

At night we descended to the river, and camped among splendid pines. The banks of the valley are from 360 to 400 feet in height, so that we feel as if we were in the mountains again.

The stream is only 20 to 30 yards across, and does not appear to be very rapid. We found plenty of tracks of all kinds of game in this valley and along the ice; otters seem to have made regular beaten trails.

December 9th.—Ascend the river on the ice all day, the sides of the valley getting more mountainous as we enter the outer range. The sections at first consist of the soft argillaceous sandstones, with clay partings, almost horizontal. These gradually become tilted up and much indurated, and at last, along with a great thickness of shales and thin-bedded sandstones, are formed into great flexures. The valley then becomes very narrow, with precipitous sides. At noon we were in latitude 51° 29′ 28″ N. Passed a section where the beds of clay ironstone had been over and fractured so as to resemble an arch of brickwork. The shales are much glazed, and often have a steatitic look. Round the open holes of the ice we saw flocks of small birds of a dusky grey colour, and having loose plumage like the Canadian jay, but being only half the size of that bird. They dip into the open water in search of food, and those that we shot had their wings tipped with icicles in consequence. The Stoney Indian says they only come to the mountains during the winter, and that they are then very common. It was bitterly cold this afternoon, and as the Stoney was thinly clad he began to freeze, so that I had to unlash my sled and give him one of my blankets. However, as we were going against the wind he did

not recover at once, and lest he might be severely injured we encamped and made a large fire. The Indians, when the weather is very severe, seldom go out from their tents, at least they do not continue travelling all day as we were doing. His clothing, till I gave the blanket, consisted only of a thin deer-skin shirt and leggings, and a small worn-out blanket coat. As I had a large buffalo robe, I let him make his newly-acquired blanket into a coat with a cowl, and gave him my second blanket to sleep with.

December 10th.—The aurora is much less frequent this winter than last, but towards daylight there was a beautiful display of green and red streamers, that occurred in the N.E., and wakened us too early, as we mistook it for dawn. The thermometer was then −17°. A few hours after, when day broke, it had risen to −4°, and the sky was clouded owing to a change in the wind.

Early in the day we got through the outer range, and then turning to the south reached the source of Little Red Deer River at noon, in lat. 51° 21′ 40″. It rises in a wide valley that spreads out south into the "Prairie la Graisse," a favourite camping-ground for the "Stoneys" and which is one of the places mentioned by Sir George Simpson in his "*Overland Journey*." It is curious that, although only 20 years have elapsed, we find it almost impossible to learn, even when on the spot, the exact route by which he traversed the mountains, and his own description is very indefinite. However, it was shortly after he passed the "Prairie la Graisse" that he entered the mountains, so it was probably by a pass known to exist close by the Devil's Head Mountain, which would lead him to Bow River at the Cascade Mountain, after which point I have previously described his route.

As the snow was not deep, and pretty firm, we travelled rapidly, and after 27 miles reached the Dream Hills, among which we encamped the previous summer, the night before reaching the Bow Fort. Turning a little towards the mountains we fell on Waiparous Creek, and had to make a descent of 400 feet to reach the stream beside which we encamped. In effecting this descent, which was exceedingly steep, we untackled the dogs, and each held on by the "tail line" of his "sled" and, sitting in the snow, dragged behind to prevent its acquiring an impetus. I was going down in fine style after this fashion, when a young pine tree got between my legs and pulled me up short, the jerk broke the line; and the sled with the instruments and kettles, slid off like a shot. As the slope terminated by a perpendicular cliff of 90 feet, over which I could just see the tops of the tall pines growing up from below, I thought there was no hope, but when just on the brink it struck a rock that whirled it round, so that it buried itself in the snow without further damage.

December 11th.—On waking this morning we found that we were quite snowed up by a heavy storm during the night. I happened to be first up, and the effect was very curious, as there was not the slightest trace of our camp,—men, dogs, sleds, and fire all being covered by unbroken snow. When this occurs I always notice that the additional warmth, and perhaps the knowledge of the extra work on rising, makes us always much later in starting. The dogs also make the most of it, as no whistling or calling will make them reveal themselves, and the "knowing ones" are only to be found by walking round the camp in every direction, till you tramp on them.

On ascending the opposite or right bank of the stream, we crossed a wide level plain, wholly formed of rounded shingle, being an expansion of one of the valley terraces up the valley of Dead Man's River. On reaching that river we found it still quite open, only having small masses of ice floating in it. The temperature of water was 30·4° Fah.

Being thus deprived of the only route by which we could hope to get further into mountains with the dogs, as everywhere here the country is covered with dense forest, we turned back for a mile and encamped at a small lake; however, during the afternoon and next day I made a long excursion to the N.W. along the base of the mountains, in search of a line of junction between the sandstones and shales and the limestones of the mountains, without success. From below the shingle terrace, and from the rocks along the river, I found many springs escaping, the waters from which deposit a rusty sediment, and have a temperature of 35°.

The Virginian deer is very abundant in this district, and we are continually starting them, but seldom get a shot. However there is one killed nearly every day by some of us. The does are fat at present, and very good eating: in size the deer is between that of the Scotch red deer, and the fallow deer. We have not noticed any of the black-tail deer running with the Virginian deer, as they are more fond of keeping in low coverts along the rivers. The Virginian deer can be distinguished at any distance, from its bounding motion, and its conspicuous broad white tail, which it carries erect. The latitude of our camp at the lake is 51° 14′ 2″ N.

In the steep ravine of Waiparous Creek, below our camp of the 10th, strata of hard indurated sandstones, with black carbonaceous streaks, are seen dipping to the west. The thickness exposed is about 1,500 feet in the course of four miles, but they are repeated several times. In the shales I found fragments of ferns like "*Pecopteris*" but they unfortunately crumbled to pieces before I got back to Edmonton. This group of strata seems to form the nuclei to the flexures of the softer shales and sandstones that contain so much clay ironstone.

December 13th.—Start on our return to Edmonton, at first taking to the south till we fall on Bow River, at the foot of "Dead Man's Hill" (Chi-pei-watchi.) There was once a great battle fought here, and there is a grave built in the wood on the top of the hill, in which the slain were buried.

On passing Dream Hill we entered a wide valley, and as we travelled along rapidly among the broken ground, we started band after band of deer, just as if we were passing through a deer park. This is the only time that I have ever seen game in such plenty in the country, excepting of course buffalo herds.

December 14th.—Early this forenoon we reached Rock Creek, and after crossing it came on a small band of buffalo. We killed two, and encamped to enjoy the marrow-bones, for which we had a keen relish after faring so long on lean venison.

December 15th.—After going two hours this morning, we fell on a fresh trail, and soon arrived at a camp of Stoneys, who where overjoyed when we told them that we had seen buffalo the day before, as they had come out to the plains in search of them, and were now starving.

The latitude at the camp was 51° 25′ 24″ N. We are now on the edge of the woods, to the east being bare undulating prairie, while to the west the country is more or less wooded all the way to the mountains. The land we were upon is high, so that I got a fine view of the mountains and also of the plain

country. The latter, with its snowy surface and the dark well-defined margin of wooded country, looked like a great frozen sea. The Indians showed us where the summer track lay, and with a little difficulty we were able to follow it along the edge of the woods till nightfall.

December 16th.—Continued all day following the track, but towards evening we came to a considerable stream called "Edge Creek." We then followed it, and as we were all fresh, and the night was clear, did not halt till near midnight, when we reached Little Red Deer River at where Edge Creek joins it. We encamped in a bluff of pines, and found the ruins of an Indian stockade which had at one time been thrown up by some war party when they were pursued. It consisted of conical lodges of heavy trees piled in such numbers as to resist shot, and surrounded by a breastwork of logs that communicated with a large enclosed space where the horses had been concealed. It was well adapted for defence, and yet in so secluded a spot that a large party might lie there in concealment.

December 17th.—Leaving Little Red Deer River, we crossed a range of high ground that is continuous with the hills about the "Caché Camp;" got a fine view of the mountains, and took bearings of all the points I know, also of the *Ki-hi-watchis*, or Hawk's Hill, a prominent conical land-mark lying in the angle between the two Red Deer Rivers.

About noon we killed a fine old bull to obtain meat for the dogs. At dark we again struck Little Red Deer River, and followed the ice for some time. As we went along, after it was pitch dark, something stirred in the thicket in the side of the river, and Richards at once fired in the direction, and shot a young bull dead. Three hours after dark we came to where the ice was much overflown, so that we were obliged to camp. Both our Indians (the "Fox" and the "Stoney") are beginning to tire. The "Stoney" especially seems to be a soft walker, and has been but little used to snow-shoe work. Although the Indians can do great feats, and go long distances when hunting, they do not stand the daily travelling so well as the half-breeds.

December 18th.—Leaving the men and dogs to follow the river, I started with the Indian to make straight for Red Deer River, at the crossing place. On getting up to the plain we saw a large band of buffalo, and approached them by crawling in the snow, by which I got the best view I ever had of the animals when quietly feeding. The snow was about 12 inches deep on the open ground, and in feeding I saw that they used their noses like pigs to plough it up, and did not scrape like horses with their fore feet. We easily got within 50 yards before we fired, but the frost had so weakened the lock of the Indian's flint gun that it would not go off, so we only killed one, and a very lean one it was. Away out towards the "Caché Camp" we saw the plains quite covered with them, so not wishing to disturb the herds we turned north to the river, and had a camp prepared by the time the others arrived. They had killed a deer as they came along. We were now at our track where we passed on the 4th, and on measuring I found that 9 inches of snow had fallen on it since we passed.

December 19th.—I sent "the Fox" and Erasmus with a dog-sled to get some meat. They were off from daylight till after midnight. They saw great bands of buffalo, and killed six, and brought back a load of choice meat.

In the marlstones along the river at this place I found concretionary masses of limestone filled with freshwater shells.

December 20th.—Before starting this morning one of the dogs, that is a notorious thief, actually poked his nose into the kettle as it was boiling on the fire, and took out a piece of meat.

Crossing Red Deer River we kept to the N.N.W., and as the snow was deep two of us always required to go before the dogs to beat the track. Notwithstanding we made very long journeys each day on that course till the 23rd, when we again struck the Blackfoot track north of the Musquachis. The same afternoon, after crossing the hills north of Weedy Creek, we were obliged to halt, as we could not run against the north wind that blew very strongly in our faces, with the thermometer about —9°. We therefore camped in some willows, but being anxious to reach Edmonton we started as soon as the wind lulled, at 3 a.m.

December 24th.—There was a magnificent auroral display as we travelled along, consisting of streams of all colours, which was so bright that it continued visible until it was quite light and the sun had almost risen. Towards daybreak the cold wind again sprung up, and the "Stoney," as before, was the first to freeze. In the afternoon we reached Fort Edmonton just in time to join in the fun of Christmas Eve. This trip occupied 29 days; and the distance we walked, excluding side trips, was 536 miles.

1859, January 12th.—The winter express having now left with our reports and letters for England, I started to-day for the Rocky Mountains at Jasper House. I had with me Erasmus, Richards, and a Company's voyageur named Louison. Each of us had a dog-train, and as we required to take pemican for 28 days we were heavily loaded, each sled having about 350 lbs., including bedding, instruments, &c. It was beautiful weather, although cold, so Mr. Christie got up a party to go and camp the first night with me at the "horse-guard," about 25 miles from the fort on the track I was to follow.

They had two horse carioles and several dog-sleds with provision for the pic-nic. As the track was hard, we reach the "horse-guard" in about 4½ hours, and spent the afternoon visiting the horses; those belonging to the Company and also to the Expedition being kept at a place where there is fine feeding and shelter on the large tracts of prairie along the Sturgeon River. The horse-keeper gave up his log hut for our use, and we passed a very merry evening. To show what a good train of dogs can do, provided they have a hardy and expert driver, I may mention the following circumstance. Mr. Christie found on arriving at the "guard" that he had forgotten a letter he wished me to take to Jasper House. He at once sent back his clerk, Mr. Sinclair, to the fort with his dogs, although that gentleman had just driven them the 25 miles out to this place. Sinclair got to the fort before midnight, and sent back a man with the same dogs, who arrived with the letter for us before we were up in the morning, the dogs having thus run 75 miles in a good deal under the 24 hours.

However, M. Lecombe, the Roman Catholic priest, has been frequently driven from the mission at Lac St. Ann's to the fort in his dog cariole, a distance of 50 miles; after which his man Alexis, one of the best runners in the country, has loaded the shed with 400 lbs. of meat, and returned to the mission before next morning.

January 13th.—At the same time that the pic-nic party started for the fort, we commenced our

journey westwards, and for four miles had the benefit of the track to Lac St. Ann's. We then turned off to the N.N.W., and after crossing Sturgeon River reached the Sandy Lakes at noon. We soon found it necessary to use our snow shoes, as, although a party for Slave Lake had passed a few days before, the track was not hard enough to bear our weight. We kept along small lakes as much as possible, for although there is a trail cut through the woods all the way to Fort Assineboine, it is much obstructed with fallen timber.

January 14th.—This afternoon we crossed Pembina River, which is about 80 yards wide. It has a large valley and some fine patches of open land along its banks. The timber is much finer all over the country we are now passing through than any in the neighbourhood of Edmonton. Pembina River is the most southerly stream of the prairies that flows to the Arctic Ocean, but does not run from the mountains.

January 16th.—The trail all this forenoon, as we approached the Athabasca, was very much obstructed by fallen timber, and the work of pulling the heavily loaded sleds over the trees was excessively fatiguing.

At 2 o'clock we reached the valley of the Athabasca, which is a river rather larger than the Saskatchewan at Edmonton, and, in proportion to its size, with a much wider and deeper valley than that river. By a long and steep descent we got to the level of the stream, and travelling up it on the ice, after seven miles we reached Fort Assineboine, a deserted post of the Hudson's Bay Company. It consists merely of a few ruinous log huts on the left bank built on a beautiful level prairie several miles in extent, and elevated 30 feet above the river. Behind the fort the higher banks rise, but not very abruptly, to the height of 180 feet, and beyond the country seems to be level, but very heavily timbered. Along this portion of the river there is, however, much fine and partially open land reminding me of the district around Fort Carlton. There seems to have been several acres under cultivation round the post at one time, but only the fences and a dense growth of weeds now remained to mark the fields. Opposite to the fort there is an island in the stream covered with very large timber, and on the south side of the valley the forest is dense and the trees seem to be of good size. In passing through the woods south of this place, we have seen many birch trees of large size, and sometimes on the rising grounds the forest is wholly composed of this tree, which is the only hard wood the country produces, and therefore of great value.

We took possession of the kitchen of the fort, and by cutting down some of the old palisades soon got plenty of fire-wood.

January 17th.—I waited here till noon, when I found the latitude to be 45° 31′ 4″ N. Before starting we pulled up the floor of a room in the hut and buried a bag of pemican as a *caché* to serve to take us back from this place to the fort on our return from the mountains.

The snow was very deep on the river, and required that two of us should always take it in turn to walk ahead while the other two drove the dogs.

January 18th.—This morning we passed several high cliffs of sandstone, and below these the river is generally very rapid and the ice full of open holes. The river seems to be much more swift than the Saskatchewan when at the same distance from the mountains. We saw several otters, and wherever open holes occur in the ice their tracks are very numerous. In the morning the thermometer was 14°, but during the day it rose very rapidly, with a great storm of wind from the S.W. When we encamped this wind was at its height, and was bringing down the trees all around us. It came in great gusts, sometimes with a few drops of rain. At 4 p.m. the thermometer was 31°, barometer 26·90; at 6 p.m. thermometer 38°, barometer 26·96; and at 7 p.m. thermometer 40°, barometer 27·02. About 10 p.m. the storm ceased, the sky cleared, and the thermometer at once fell to 1°, and the barometer rose to 27·47. This fluctuation of the barometer, although small compared to what occurs at the sea level, is extreme for this country.

January 19th.—Passed a great deal of rough ice to-day. In the forenoon saw coal for the first time in this river. It occurs in a cliff of sandstone, 110 feet high, as a wedge-shaped mass, three to five feet thick, running for several hundred yards, and perhaps more. The sandstone is softer than that at the Rocky Mountain House, and contains large concretions of clay ironstone, but no clay strata. There is an extensive stratified deposit over these beds, filling up hollows in the eroded surfaces, that is of much more recent date. It consists of gravel and sand in well marked strata, the sand often being as coherent as the older deposit on which it rests. At one point this newer deposit seemed to pass into marlites, like those on Red Deer River, at the mouth of Blind River. The older deposit often has a slight dip, but the newer deposit remains horizontal in all cases, and, as it is high above the river level, it does not appear to be a valley deposit.

Snow fell heavily all day, and it is becoming very hard work with the snow shoes. Where we encamped there were some very fine trees: birch 2 feet in diameter; silver pine (*Abies balsamea*) 2 feet 6 in.; and the rough-barked poplar (*Populus balsamifera*) 4 to 5 feet in diameter.

January 21st.—Continued snowing during the night, and the thermometer fell to 10° out in the centre of the river. Where the snow has neither drifted nor been swept away by the wind, it ranges from 35 to 40 inches in depth, but only 20 inches of this is new soft snow. However, this is enough to make it very hard working, and some three of us going before the dogs does not render the track firm enough to bear them up, until the first sled has passed over it also. After two miles, we passed the mouth of "McLeod's River," a large tributary from the south-west. The main river is cut up with many channels in this part of its course, and seems to be very sluggish. After having cut off a large alluvial point by crossing through the woods, in descending a steep bank of about 12 feet to gain the ice again, Louison stupidly smashed his sled, so that we had to put the load on the other sleds, and leave it behind. Two of my dogs, that I had only bought before starting, and were quite wild, had made their escape within a few days after we started, but still continued to follow us, skulking behind like wolves, and only joining their companions at night. We tried every plan to capture them, but only once caught one of them in a snare, but he cut it through with his teeth before we could secure him.

January 22nd.—At noon to-day we halted to cache another bag of pemican, which we did by building logs over it, carefully fitting them together by notches. The great danger to a caché is from the wolverine, a small rough-haired animal, like a miniature bear, but much stronger in proportion to his

size than any other animal in the country. He is possessed of great cunning also, and it is very difficult to defeat his marauding propensities. Their Indian name is *ker-kes-shu*, and many wonderful yarns are told about them round the camp fire. For instance, that a man once left his gun, with the leather cover on, leaning against a tree, while he went to skin a deer he had killed, on his return his gun was gone, and no trace of anything to be seen in the snow excepting the track of a wolverine, that seemed to have gone to where the gun had been left. Following the animal's track, he found after more than 300 yards, the mark of his gun trailing in the snow as the animal had dragged it along, but for this distance it must have carried it clear of the ground, a matter of some difficulty to a little beast not higher than a fox.

January 23rd.—The river banks are still densely wooded. This evening we camped at where we found the trees notched, and names cut out on them. Among them I found Jeffrey's name, a botanist, who crossed the mountains in 1852, and was afterwards killed in Mexico.

January 24th.—The banks of the river are now becoming high and rocky, formed of ledges of sandstone, with a sprinkling of cypress pines growing in the cliffs. On the south side, where we encamped, the bank appeared to be 300 feet high, and very steep. The snow is still very deep, but by going steadily we generally make 18 miles a day.

January 26th.—The valley of the river has widened considerably, as if we had passed through the sandstone country, and the timber is again very fine, some of the birch trees being of good size. In the afternoon we passed "Baptiste's River," a tributary from the west, which is 90 yards wide. In continuing to ascend the Athabasca our course turned more to the south above this point. We seem to be passing through a range of hills, but although I ascended the bank for 250 feet, I could see nothing of the surrounding country, on account of the dense woods.

January 28th.—After going six miles this morning we fell on the track of Indians, who must have passed within the last two days. They had come down on the river from the south, and after following it a short way, had struck off to the north. I sent one of the men to follow the trail, while we went on slowly till camping time, after which he rejoined us, bringing several of the Indians with him. They were Assineboines, that live in the thick woods, and trade at Lac St. Ann's. They wore crosses, and had a most miserable appearance. They have been starving most of this winter, and very anxious to get ammunition in exchange for furs. Their tents, seven in number, were about five miles to the north of our camp in the woods. I got them to change two pairs of snow shoes with us, as ours were getting rather worn out, and one of the men was beginning to suffer from *mal du raquette*, or inflammation of the tendons of the foot in consequence.

January 29th.—The snow was light to-day, but yet it remained very cold, so that at noon, when I halted to find the latitude, the thermometer stood at $-25°$ in the shade. To-day we passed Dead Man's Rapid, which is a very dangerous place for the boats to pass when ascending to Jasper House. A few miles above this we passed Old Man River, a small stream from the S.W. The banks now became low and covered with spruce, with large swampy flats at a little distance back from the river.

On the morning of the 30th we came in sight of the mountains, and began to find the snow much less deep than before, so that we travelled rapidly, and by evening had made 27 miles. As we were preparing to encamp we observed a smoke rising out of the woods, and ascending the bank found a camp, four tents of Iroquois half-breeds. We brought our dogs up the bank, and encamped beside them. They were badly off for provisions, and living altogether on the little hare, but which they said is very scarce this year in the woods. These Iroquois were originally trappers in the service of the N.W. Company, and on the junction of that company with the Hudson Bay Company, they turned "freemen," as those are termed in the country who are not in the service of the Company, and have since tented about like Indians, trading the skins and furs they procure at Jasper House. There are only about 30 tents of them, and they all talk the Cree language besides their own, and have latterly intermarried a good deal with the Cree half-breeds of Lac St. Ann's.

At the place where we encamped the river valley is very wide, and the lands rise into hills on either hand. In the bottom of the valley there are large alluvial flats, one of which is known as "Le Grand Bas-fond." These are bounded by successive terraces of shingle, such as were seen in the rivers further to the south. With the aneroid I found that there were three better marked than the others, at 15, 100, and 210 feet above the alluvial bottom of the valley. Our camp was on the highest of these, and above it in some places there rose a yet higher terrace, that reached 370 feet. The moulding of these terraces is very perfect, and everywhere they support a growth of cypress and pines, that like dry gravelly soil.

January 31st.—Before we descended to the river this morning we got a splendid view of the mountains, which present a bolder outline here than I have seen elsewhere. Miette's Rock is a bold object, bounding the valley of the Athabasca to the south, and resembling the "Devil's Head," which lies to the north of Bow River. I wished to get to the fort to-day, a distance of 40 miles, so we started early, and went very fast, as there was no snow on the ice to require us to use our snow shoes, which we felt to be a great relief, having been constantly walking with them for 17 days. The river is very rapid in this part of its course, and hemmed in by cliffs of sandstones and shales, lying at high angles.

At three o'clock we reached the point where the Athabasca emerges from "Lac à brulé," which lies at the base of the mountains, which rise from its western shore at least 3,000 feet. This lake was swept by such a violent wind from the south that we could hardly make way against it over the smooth ice. Its eastern shore is formed of immense sand-hills; and as we reached its upper part we found the ice so covered with the same material that the dogs could hardly pull the sleds.

Above the lake, which is seven miles long from north to south, we entered a wide valley in the mountains; but finding that the river was so open that we could not follow on the ice, we left it to our right, and kept along a track through dense woods. It was quite dark when we reached the base of Miette's Rock, where a spur of the mountain from the south compelled us again to seek the river, which we now found to be a rapid stream, without more than a mere fringe of ice about its margins. After searching about for a crossing place in the dark without success, we took the most shallow place we could find, where the river was very rapid, and without taking the harness off the dogs, unfastened them from the sleds, and pitching them into the water, pelted them with pieces of ice, so that they swam for

the other side of the river. We then got off the edge of the ice ourselves, and found the water took us above the waist, and getting the sleds, loads and all, on our shoulders, waded through the rapid, which was about 100 yards wide, and so reached the left bank. The wind, which had changed at sunset to N.E., was bitterly cold, so that the plunge into the water felt rather warm at first, but on re-emerging we at once stiffened into a mass of ice, for, as I found half an hour afterwards, the thermometer stood at $-15°$. In this state we again tackled the dogs, that were all frozen into a lump with their harness, and after a run of two miles through the woods, we reached Jasper House at 10 p.m. This is a small post of the Hudson's Bay Company which had been abandoned for some years, but was this winter again occupied, and placed under the charge of Mr. Moberly, who received us most kindly.

Immediately on arriving I set up the thermometer, in a good position facing the north, for the purpose of taking regular observations to compare with those being taken at Edmonton; and, as I had arranged with Sullivan to take hourly observations on the 1st of February at that place, I commenced at midnight to do the same here, and, with Moberly's assistance, continued them for the 24 hours following.

Jasper House is beautifully situated on an open plain, about six miles in extent, within the first range of the mountains. As the valley makes a bend above and below, it appears to be completely encircled by mountains, which rise from 4,000 to 5,000 feet, with bold craggy outlines; the little group of buildings which form the "fort" have been constructed, in keeping with their picturesque situation, after the Swiss style, with overhanging roofs and trellised porticos. The dwelling-house and two stores form three sides of a square, and these, with a little detached hut, form the whole of this remote establishment. The general direction of the valley of the Athabasca through the mountains seems to be from south to north, with a very little easting. Four miles below the fort the Athabasca receives a large tributary from the W.N.W., which is known either as the Assineboine or the Snake Indian River. Opposite to the fort, from the opposite direction, comes Rocky River, and these two streams, with the Athabasca, define four great mountain masses. Thus, on the east side of the main river there is the Roche Miette, which, although really some miles distant, seems to overhang the fort. Higher up the valley is Roche Jacque, and on the west side of the valley, and opposite to these two, we have the Roché de Smelt and Roche Ronde. These names were given long ago to the mountains, at a time when a great number travelled by this route across the mountains. As late as 1853 there was communication at two seasons by this post with the Columbia district. In March, when the snow had acquired a crust, the express, with letters and accounts, started from Edmonton by the route I had just followed, and continued on to the boat encampment, to which place, by the time they arrived, owing to the earlier spring on the west side of the mountain, the brigade of boats had ascended from Vancouver. The mail from the western department was then exchanged, and taken back to Edmonton, and thence to Norway House, along with the Jasper House furs.

The second time of communication was in autumn, after the Saskatchewan brigade returned to Edmonton in the beginning of September, upon which the officers and men bound for the western department, taking with them the subsidy of otter skins that the Company annually paid the Russian Government for the rent of the N.W. coast, crossed the portage to Fort Assineboine, then ascended the Athabasca in boats to Jasper House with pack-horses, reached the boat encampment, and then descended the Columbia to Vancouver, where they arrived generally about the 1st of November. The journey from York Factory or Hudson's Bay to the Pacific coast by this route generally occupied three and a half months, and involved an amount of hardship and toil that cannot be appreciated by those who have not seen boat travelling in these territories. Above the fort the river dilates into large shallow lakes, along the shores of which are piled great sand-hills. The wind generally blows in this valley with great violence, and often in the course of a few hours everything is covered many inches deep with sand. This prevents any gardening in the neighbourhood of the fort, and gives the plain it stands on a sterile aspect. However, at the site of an old fort just without the mountains at the Lac à brulé, vegetables and barley grow well. The winds have only two prevalent directions, from north or from south, that is up or down the valley. The first is a cold wind which brings snow, but which is at once melted again under the influence of the mild wind from the south. As the result of this there is never any depth of snow in this valley, or indeed in any of the eastern parts of the range. During the whole winter the hunters climb the mountains in search of the big-horn sheep, and only rarely have to use snow shoes, although they generally carry a small strong-made pair to use in crossing drifts. The big-horn is very plentiful in this part of the mountains, and forms the principal food of the people here, who are often put to great straits, as it has to be hunted from day to day. There are two or three Iroquois hunters attached to the trading post, and they are sent off every morning before daybreak, and seldom return till late in the afternoon. Early in the morning the sheep descend the mountains to the "*Salinas*" or salt lakes, and if the hunter can succeed in intercepting them in the woods before they regain the bald part of the mountains they fall an easy prey, but otherwise, to get a shot at them involves a great deal of hard and often dangerous climbing. The hunters generally use dogs, which are beautifully trained to turn the sheep as they rush up the mountain to reach the most inaccessible precipices.

In the forenoon we could always see bands of the sheep on the mountains round the fort with the aid of a good glass, and once in this manner I watched the progress of a hunt upon the Roche de Smelt. When the sheep are killed the hardest work yet remains, of carrying the meat down the mountain. The hunter seldom does this, however, but returns home, and next day another man is sent for the carcase, which he carries on his back with a strap across his forehead, in the same manner as they carry "*pieces*" over a portage. At one time there were many moose deer in the valleys of the mountains, in the neighbourhood, but they have latterly become very scarce. This winter the hunters have only killed two, but they know where another has his feeding ground, and do not intend to kill him till spring. The perfection to which the Iroquois carry moose-hunting may be judged from the fact that one of them has visited this moose several times during the winter, and seen him once, yet without disturbing him.

Another article of food on which Moberly has been feeding his people this winter is the wild cat or Canadian lynx. Up to this date they have killed 83, more than half of them having been shot by Moberly himself, as he has a splendid dog that hunts them till they climb a tree, and then watches them till his master comes with the gun. The wild cats are about the size of a small greyhound, and

their flesh is excellent eating when fat. As the mountain mutton was very lean at this season, while the cats were fat, we used to combine them by stuffing the cat with minced mutton, and roasting it whole, this made a very savoury dish.

For the first few days of the month I was occupied taking observations for latitude and variation of compass; also correcting my aneroid barometer by the boiling point of water, and taking meteorological observations, which are elsewhere tabulated. The latitude of Jasper House is 53° 12′ 15″ N.; variation of compass 25° 31′ E.; both results being derived by the means of several sets of observations. On the morning after I arrived at this place, I lost one of my best dogs in an unfortunate manner. They have recently been in the habit of killing foxes and wolves with baits poisoned with strychnine, and the head of a fox that had been thus killed last November, and lain frozen in the trodden snow of the court yard ever since, was scraped up by my dog, and after he gnawed it for a few minutes he fell down in a fit and died. To prevent further accidents of this kind, I got an old horse from Moberly, and killed him to feed the dogs with. In former days, the people residing at this place used to subsist during the greater part of the spring on horseflesh, as there were large bands of these animals running about almost wild in the lower part of the valley. Their numbers have, however, been much reduced of late years, by large bands having been driven down to Edmonton. It is found, however, that these mountain-bred horses will not thrive in the plain country, but die in the course of a few years. This is either owing to the greater severity of the winter, or to the change in the nature of the pasture.

February 2nd.—This afternoon I accompanied Moberly on one of his lynx-hunting expeditions up the valley of the Snake Indian River, and found splendid sections of the strata. This river flows to the E.N.E., between high perpendicular banks of sandstone and shales, which form a succession of anticlines and synclines, having a W.N.W. strike. These plications are well marked, and the strata appear to be the same as those observed on Waiparous Creek, near the Bow Fort.

These strata seen consisted of,—

(*a.*) Black carbonaceous shales within coal partings.
(*b.*) Cherty dark blue limestone.
(*c.*) Dark brown earthy shales, with ironstone bands.
(*d.*) Buff-coloured marlstone; weathers to a bright vermilion.
(*e.*) Dark grey sandstone.
(*f.*) Flagstones, dark purple and grey-coloured.

These beds are a minor plication of the upper group of strata, that form the mountains on either side. The great masses of mountain limestone have been so completely overthrown, that they apparently dip uniformly to the S.S.W., while these mixed strata are seen to be much disturbed, and, as in the case of this valley of the Snake Indian River, to occupy fractures in the greater plications. We left the river after ascending it for six miles, and then struck off to the south, skirting the base of the mountains on that side of the valley. A trail through this valley leads to Smoking River, a branch of Peace River, but it is said to be very rugged. Ten or twelve miles up the river there are splendid waterfalls, and beyond that point the valley is at a very high level, and the woods that occupy are favourite haunts of large bands of cariboo or mountain reindeer. Smoking River is about two days journey to the N.W., and along its valley there are extensive prairies, of which the Iroquois hunters speak in high terms as the finest land in the country. They say that the winter there is very open, and the pasture always good. In autumn wild fruit is plentiful, and in consequence it is a famous place for both black and grizzly bears. The Iroquois have several times grown turnips, potatoes, and barley there with great success, but only as an experiment. Until a few years ago, these prairies supported large bands of buffalo and elk.

When we compare the description given by Sir Alexander McKenzie of the prairie country along Peace River, with its vast herds of buffalo and elks, when he passed in 1793, with the present northern limit of the large herds of these animals, at least three degrees of latitude further south, the change is very striking; and still more so if it is true, as the hunters say, that the disappearance of the large quantities of game has only taken place within the last 20 years. The country along Smoking River is occupied by the *Beaver Indians* and the *Chickanees*, which are two branch tribes of the Athabascan Indians.

There was once a little tribe of Indians known as the Snakes, that lived in the country to the north of Jasper House, but which, during the time of the North West Fur Company, was treacherously exterminated by the Assineboines. They were invited to a peace feast by the latter Indians, when they were to settle all their disputes, and neither party was to bring any weapons. It was held about three miles below the present site of Jasper House, but the Assineboines being all secretly armed, fell on the poor Snakes in the midst of the revelry, and killed them all. Such was the story I heard from the hunters here.

February 3rd.—A pack of thick-wood wolves have been killing a number of the horses belonging to the Company during the winter, and the hunter having found a fine young mare just freshly killed the other day, salted the carcass well with strychnine, and this morning we set off to observe the effect. Crossing the lake we walked about two miles through the woods, when we fell on the track of the poor mare and her pursuers. She had been hard pressed by three of them, one on each side, cutting off the bends she made, while the others followed close behind, and at last had seized her haunch and thrown himself down, so that he left a broad track where he had dragged through the snow. On reaching the carcass we found that the strychnine had done its work, for there lay four enormous wolves, besides five or six of a smaller species, while about a score of large ravens were lying about, either dead or in different states of paralysis, some lying on their backs with only power to croak, and others wading about in the snow in a most solemn manner, with their wings trailing behind them. The large wolves, who were the real offenders, were splendid brutes. The two youngest were nearly black, while the old ones were grizzled grey, like Scotch stag-hounds. The largest measured two and a half feet at the shoulder, and was five feet eight inches in length. The hunters say there is yet another of the family, and that the survivor is well known by his track, as he has only three feet, for having once been caught in a steel trap, he freed himself by gnawing off the foot he was held by.

As we returned to the fort, with Moberly's assistance I roughly measured a base line across the

valley, of 3,762 feet, by which to get the positions of the mountains, and also the approximate altitude. By this means I found that the Roche Miette, which seemed almost to overhang the fort, is nearly at a distance of four and a half miles, while its summit is elevated 5,800 feet.

February 4th.—The weather continues more like spring than winter, but they say that this will be succeeded by cold weather in a few days. The warm wind is very local, however, as one of the men who was sent off for a sheep that had been killed in one of the side valleys, returned with his feet frozen, having, in consequence of the warm weather round the fort, worn no socks under his mocassins. The wind is very violent, with occasional lulls for one or two hours towards evening. The fort is sheltered by wood to some degree, but a little higher up the valley the air is darkened by clouds of sand, which is carried to great heights by the whirlwinds.

At 9 a.m. I started with Moberly to ascend the Roche Miette, and as we had to follow down the valley for some miles and cross the river, we took horses with us for so far. I now saw where we had forded the river the other night in the dark, and it certainly looked an ugly place, and if we had only seen where we were going, we might have hesitated to attempt it. Having ridden about six miles from the fort, we left our horses, and commenced the ascent of the mountain, carrying with us a small pair of snow shoes, with which to cross any bad places we might come to; but as we found the snow was everywhere hard, with a glassy surface that supported our weight, we soon left them behind. Indeed it was only at intervals that we required to cross patches of snow, for we followed a ridge or "*crate*," as they call it, from which it had been swept by the violent wind of the last few days. After a long and steep climb, we reached a sharp peak far above any vegetation, and which, as measured by the aneroid, is 3,500 feet above the valley. The great cubical block which forms the top of the mountain, still towered above us for 2,000 feet, but it is quite inaccessible from this side at least, and is said to have been only once ascended from the south side by a hunter named Miette, after whom it was named.

This mountain is formed of a mass of strata which have at one time formed the trough of a huge plication.

		ft.
a.	Hard compact blue limestone and shale, with nodules of iron pyrites	2,000
b.	Fossil shales almost black	300
c.	Hard grey sandstone	100
d.	Shales towards the upper part, with green and red blotches The lower part rust-coloured.	500
e.	Cherty limestone and coarse sandstone obscured by timber	2,000

The ridge we had ascended is formed of the cherty limestone and capped by yellow shales, with beds of black sandstone forming the highest point. Between the peak we were on and the face of the high cliff above us there was a gully 150 feet deep, which had been worn out of the soft shales that underlie the blue limestone. I crossed this gully, and scrambled up the opposite side in search of fossils, but only found a few obscure impressions in the friable shales. I observed a remarkable fact here, which shows how local the open weather is in this region of the mountains. The wind, which blew freshly from the N.E. in the bottom of the gully, was so intensely cold that I got quite benumbed, being but lightly clad and heated with the long climb. At the same time, however, Moberly was sitting at a greater altitude on the top of the peak, smoking, and enjoying a comparatively balmy breeze blowing from the S.W.

Seven hundred feet below the highest point we gained, or about 6,600 feet above the sea, the woods commence by stunted trees not more than a foot high, and only growing in sheltered situations; but this limit is determined not by the altitude but by the exposure to wind. A considerable distance below this point, where the forest commences, we halted for some time to enjoy the view and to take bearings of the different mountains. We had a very extended prospect of the country to the east of the mountains, which is completely covered with pine forests, through which we could follow the winding course of the Athabasca River to the N.N.E. for 40 or 50 miles. The range of hills through which it breaks, above where it is joined by Baptiste River, we now saw to be of considerable altitude, and to form an outer range running N.W. and S.E.

To the east of the Roche Miette is a range of mountains known as the Fiddle Mountains, and separated from it by a creek of the same name. Overhanging Lac à brulé is Bullrush Mountain, and between it and Roche Ronde, which is next furthest to the west, Moose River flows to the S.E. through a wide and thickly-wooded valley, which seemed to extend for 25 miles to the N.W. by W.

The valley of the Athabasca at this place is about two and a half miles wide, and below us we observed where it receives the Snake Indian River. With my telescope I made out the general arrangement of the strata on the opposite side of the valley, and afterwards corrected it by a visit to the spot. It was six o'clock before we returned to the fort, by which time we were in capital trim to enjoy a supper of the big-horn sheep's head and trotters.

February 5th.—Although the weather still remains mild and open here, it is evidently snowing outside of the mountains to the east. In the forenoon a duck was shot in the river before the fort, and a man at once jumped into the water, and swam for it. When we remember that in the prairies the rivers will remain ice-bound for three months from this date, a circumstance like this shows the contrast very forcibly between the climate of the eastern base of the mountains and that further to the S.E.

February 6th.—The weather is much colder to-day. In the valley the wind was S.W., and the mountains capped with clouds. By noon the wind had changed to N., but the upper stratum of air still moved from the S.W., giving rise to dense fog. At sunset the north wind was blowing strongly, the thermometer dropped to 15°, and snow fell heavily, showing the extreme simplicity of the meteorological phenomena at this place. During the night the thermometer registered 3°.

When arriving at the fort I had taken care that we had enough pemican left to take us down the river again to the first caché, so that we would only have to draw on Moberly's slender stock for provisions while we remained at his post. To-day I found out that my three men, not liking the lean mutton that all the rest of us were eating, had taken our bag of pemican out of the store, and completely

finished it. As such a misdemeanour was not to be passed over, I determined to send them back at once to Edmonton, and leave them to get as best they could down to the first caché, rather than having them hanging about Jasper House, while I was absent on a trip I intended to make into the mountains.

February 7th.—This morning the men started for Edmonton, taking with them my sled and load, as I intend to return through the woods direct to that place, and will not be able to get the sled along. I, however, retained three of my dogs for the trip into the mountains.

February 8th.—The weather is now bitterly cold, and I occupy myself with taking additional observations for latitude, variation of compass, and the boiling point. In the afternoon some "freemen" arrive from the Lac à brulé. They have brought a few skins and furs to trade for ammunition, but have been nearly starved during the early part of the winter, the game being so scarce. There is a rule at Jasper House that no freemen are to hunt within 30 miles of the post, and as Moberly had an eye for the moose that his hunter was keeping in caché till spring, we determined to pay them a visit next morning, and see what they were about, taking the hunter with us, so that if there was any chance of the freemen or their dogs disturbing the moose, it might be secured for the fort at once. It is a very anxious task to provide for the little community at Jasper House, as they only arrive there in the beginning of November from Edmonton, by a fatiguing journey with pack-horses through the woods, which last "fall" occupied 19 days. From the time of their arrival they require to live on till next spring from hand to mouth. In order to save the game around the fort until the depth of winter, Moberly had abandoned it on his first arrival, and for two months they all lived in a camp about 20 miles up the valley, at a place where there are plenty of big-horn sheep. Until a few years ago this trading post was not altogether abandoned during the summer, but the person in charge made a hunting tour for several months to accumulate provisions for next winter's support, and during these trips as many as 30 to 40 moose deer would be killed and several hundred big-horn sheep. In addition he always returned in time to secure a stock of fish before the frost set in and closed the mountain lakes, which abound in "white fish" and trout.

February 9th.—We had a very cold ride for 10 miles down the left side of the valley to reach the freemen's camp, as the thermometer stood at —14° when we started, and did not rise above —7° all day. We found them living on the banks of Moose River, in huts built of the branches of pine trees. Along with the Iroquois there was an old Canadian, named François, who is famous for the well-trained hunting dogs he possesses, and which, by their wonderful abilities, keep him supplied with food when much better hunters are starving. We engaged "Tekarra," one of the Iroquois hunters, to accompany us on our trip towards the source of the Athabasca, and afterwards to guide me through the woods to Lac St. Ann's. The trail by which we reached the freemen's camp first led through fine open woods to the Snake Indian River, which we crossed upon the ice with some difficulty. We then followed along the base of the mountains by a very bad trail. As we returned, our new guide, Tekarra, fell with his horse in crossing a creek, and bruised his foot, which is a bad beginning for the snow-shoe trip he has before him.

February 10th.—We started this morning up the Athabasca, our party consisting of Moberly and myself, with Tekarra and a Canadian named Arkand, Moberly driving the dogs by the river and lakes, into which it dilates above this point, while we travelled along the right side of the valley with horses; but as the thermometer stood at —20° he had decidedly the best of it. We travelled for nine miles over sand-hills, which occupy the bottom of the valley, but which are mostly covered with well-grown trees. We encamped just above a slight bend which the valley makes, changing its direction from N. by W. to N. by E., and at which we crossed the river. The valley was now bounded to the east by Colin's Range, which is composed of vertical beds of limestone that at once reminded me of the Sawback Range further to the south. On the west side of the river a tributary of good size joins it, called Snaring River, after a tribe of Indians that at one time lived here, dwelling in holes dug in the ground, and subsisting on animals which they captured with snares of green hide, in which manner they used to kill the big-horn, small deer, and even moose. On the hills opposite our camp we saw several bands of the big-horn, and notwithstanding his sore foot Tekarra managed to kill a young ram.

On the 11th we reached a point opposite to Miette's House, where there was once a trading post, at the point where the track branches up the Caledonian Valley to Fraser River, from that which leads by the boat encampment to the Columbia.

The valley was now more open, and occupied by low hills of gneissoid rock, which seemed to form a floor on which the limestones rest.

We had now crossed the river three times, and were camped on the right bank above the mouth of Bad River, by the valley of which there is a pass to the North Saskatchewan at the Kootanie Plain. We saw much fine timber to-day, and our progress was much impeded by the trunks of the *Prusche*, which is the species of spruce fir that resembles the hemlock, but with a different cone. After we encamped, Moberly joined us, having shot a fine young ram.

February 12th.—The river above our encampment makes a great bend to the west, so this morning, to avoid following it, we crossed a high ridge. We reached the highest point at noon, where I found the lat. 52° 55′ 50″ N. From this point I had a fine view up the Caledonian Valley, which is to all appearance wide and level, and runs without interruption for at least 30 or 40 miles. It used to take six days to travel from this point to Fraser River, at a point where boats could ascend to. That was when a good trail existed through the woods, but now that the route has been abandoned for so many years it would take a much longer time.

The valley of the Athabasca, above Miette's House, is very wide, and is bounded to the east by a long mountain composed of the earthy shales, with only a few detached masses of the more massive strata capping them. We now descended to the south, and passed the *Campment du roches*, where we found many signs of former travellers, and among others our friend Hardesty's name, written on a tree last summer as he returned from the boat encampment, where he had been sent to meet Mr. Dallas. We then reached the *Prairie des Vaches*, where we encamped, intending to take our horses no further, as beyond this point there is little or no pasture at any season, but especially in winter.

February 13th.—Tekarra's foot is so much inflamed with his hunting exertions, that he will not be able to guide us up the valley to the Committee's Punch Bowl, so I changed my plan and followed up

the main stream of the Athabasca instead. At noon we reached the mouth of Whirlpool River, which is the stream that descends from the Committee's Punch Bowl, and I found the latitude 52° 46′ 54″. Leaving the rest to follow up the Athabasca, I ascended a mountain opposite to the valley of Whirlpool River, and had a fine view up it towards the boat encampment. Having been directed by Tekarra, I easily recognised Mount Brown and Mount Hooker, which are much like the mountains towards the source of the North Saskatchewan. They seemed distant 30 miles to the S. by W. At nightfall we encamped where high rocky banks began to hem in the river.

February 14th.—Allowing Tekarra and Arkand to return, Moberly and I continued to follow up the river, having now to use our snow shoes for the first time since leaving Jasper House. We saw some white goats, but did not get within shot of them. As we were halting for a rest a wolverine came wabolling down the river on the ice. We remained still till he got quite close without seeing us, when Moberly fired and put the ball right through him, so that his blood spouted out on the snow. He at first rolled over, but on our approaching him he started up and ran off, staining the snow with blood. We followed on our snow shoes, and pressed him hard, so that he ran up the bank and made for the mountain, where, getting into a clift of the rock, he escaped us. The distance he ran while losing so much blood, surprised us very much, as at first we thought he was killed outright. After following up the river for 10 miles we found it became quite a mountain torrent, hemmed in by lofty and rugged mountains, two of which, that were very prominent, I named after my friends, Mr. Christie of Edmonton, and Moberly. We now returned down the river to overtake Tekarra, and just at nightfall, and about four miles short of our camp at the *Prairie des Vaches*, we found the tracks of nine reindeer that had come down on the river since Tekarra passed in the morning. We followed them for some distance, but it was now too dark, so we continued to the camp, and arrived at eight o'clock, after a walk of 36 miles; and as none of us had killed anything this day, we had to lie down to sleep without supper.

February 15th.—As I was anxious to see the part of the river we had avoided while on our way up the valley, I took the dogs with me and followed it alone, while Tekarra and Arkand crossed the valley by the track with the horses, and Moberly returned to have another look for the reindeer. For six or eight miles I got on splendidly, the ice being smooth and sound, but beyond that the river became rapid, and was not frozen over, and besides was so hemmed in by rocky precipices that it was difficult to get along at all. At last I reached Miette's House, where I was able to get into the woods for a few miles, and so avoid the worst part of the river. However, as the snow was deep my dogs would not drive through it, and I had to walk on and beat a track for a few hundred yards at a time, and then return and drive them on to where I had reached. This process was so slow that I did not reach our appointed camp till nightfall, although the distance was only 16 miles from where I started in the morning.

The stream from the Caledonian Valley is about half the size of the Athabasca. It flows from the W. by N., rising from Cow-dung Lake, and is said to be very rapid, with several fine falls in its course. The rocky point which obstructs the Athabasca above Miette's House, consists of vertical strata of gneiss, which form ledges across the stream. If there is any gold washed down by this river it will be intercepted here, as these ledges will act like the bars of a rocker. At night Moberly joined us again, having been unsuccessful in getting a shot at the cariboo, although he had seen them.

February 16th.—Twenty miles further down the valley this morning brought us to Jasper House again. We found that during our absence, Moberly's fine dog, which he had left behind in charge of one of the hunters to assist in killing sheep, had eaten a poisoned bait and died, which is the second valuable victim to strychnine since my arrival here.

This evening one of the hunters brought in a splendid ram, which he had caught by setting a snare in a path leading to a "salt-lick." Judging by the marks on his horns, he must be nine years old. His head and horns weighed 45 lbs.; the height of the head, 15½ inches; of the horn, 3 feet, and its circumference at the root, 14½ inches.

The angles subtended by some of the surrounding mountains, measured by the sextant, were as follows:—

					°	′
Roche Miette, distant about	4	miles	-	-	14	30
Roche de Suett	„ 6	„	-	-	7	40
Roche Ronde	„ 7	„	-	-	6	20
Pyramid Mountain	„ 14	„	-	-	3	45
R. Jacque	„ 5	„	-	-	7	25

To-day I was busy making preparations to start on my return to Edmonton, and, as I was unable to carry all my instruments, I left them under Moberly's care, to be brought down with the boat in the spring. I also ruled a register for him, in which he undertook to enter the thermometer and barometer readings regularly until May. As he wished Tekarra to return at once from Edmonton, and bring back a supply of ammunition, he sent with us a young lad named Louis Cardinal to accompany him back, it being a rule in the service never to let a man take a long journey alone.

Tekarra expects that we will take 12 days to reach Edmonton, but thinks that as we will see plenty of rabbits, and perhaps large game, we need not carry more than a few days' provision.

February 19th, Saturday.—Leaving Moberly again to his solitary life, we started at 10 a.m., and as there are horses to be sent as far as Le Grand Bas-fond, we get the benefit of them for that distance, one of us taking it in turns to drive my three dogs, which dragged an old sled that I intended to take as far as the trail would permit. It was not till the evening of the second day that we reached the point of the river where we camped the night before we arrived at Jasper House, and where we were now to leave the river and strike direct through the forest for Lake St. Ann's.

February 21st.—We left the sled this morning, and tying a little of the load on the two strongest dogs, carried the remainder on our own backs. Our supply of provisions only consisted of 18 lbs. of pemican, 2 lbs. of flour, a little tea and sugar. Each of us had a blanket and a few extra pairs of mocassins and blanket socks. My papers, books, and sextants, with two kettles, an axe, and a gun, completed the luggage we required to carry. Following the river a few miles we ascended the right bank.

After a little searching we found the blazings on the trees that marked where the track runs, and

following these we marched steadily on to the E. by S. Although the snow on the river at where we left it was not more than 10 inches deep, in the woods it was accumulated to about 2½ feet, so that with our snow shoes we walked smoothly over the fallen logs. It was very soft and loose however, especially in the swampy places, where there is a growth of low willows, so that it was heavy work for the one whose turn it was to walk first. In the course of the forenoon we found that the loaded dogs could not keep up with us, so we had to carry everything ourselves. By evening, we had only seen and shot one rabbit, which rather alarmed us, so that we at once reduced ourselves to short allowance of pemican, our stock of which, by itself, was only sufficient for three days' rations.

After going 31 miles to the S.E. from where we left the Athabasca at noon on the 22nd, we struck McLeod's River, where it flows to the N.E. It is a stream of considerable size, with a wide deep valley, on the sides of which were displayed sections of the sandstone and lignite strata. We followed it till evening, and encamped at where it changes its course to take a great bend to the south.

On the 23rd we crossed this bend, leaving the river to our right for a distance of 23 miles on a E.N.E. course. The country is much more open than I expected, the timber having been removed from large tracts by fire. Before camping, we found a covey of wood grouse, five in number, and killed them all, which saved our pemican to-night.

February 24th.—Followed along McLeod's River for 17 miles. The banks are very high, and the snow lies very deep on the ice, and in many places is converted into slosh by the overflowing of the river.

February 25th.—By the evening of this day, we reached the point where we leave McLeod's River, as its course turns almost due north to join the Athabasca. Our pemican is now finished, as we have killed nothing since we shot the grouse the other night.

February 26th.—On leaving McLeod's River this morning, we travelled to the E. by S., through forest very like that we saw on the portage route to Fort Assineboine, consisting of fine large trees of pine and birch. In the forest we saw fresh tracks of the moose-deer, which Tekarra followed, while Louis and I waited with much anxiety for the result. In a short time he returned, having got quite close to them, but a sudden change of the wind gave them the alarm, so that he did not get a shot. Much disheartened, we walked moodily on till evening, when we began, after making 20 miles, to get into pretty open country, and encamped among poplars. After hearing so much of the bad country between Edmonton and the mountains, I have been much surprised at the great extent of fine land and open wooded country. There is no doubt that there must be much swamp in summer, but the surface of the country is rolling, and a great deal of it is occupied by high dry lands.

February 27th.—After starting this morning, we fell on a creek flowing to the east, and as the timber is quite burnt off this part of the country, we got a fine view, which included a few distant peaks of the Rocky Mountains. The fallen trees rendered walking very laborious, however, as our snow shoes frequently caught in the knots and made us fall, which was very trying to our tempers, already much soured by starvation. At noon we arrived at a little swampy valley, where the snow was trodden down as if by the tracks of a large band of buffalo. However, Tekarra after looking around said, it was only the place where three moose-deers had been feeding all winter, and with wonderful quickness he picked out their most recent tracks, and told us to go on steadily and only to halt if he fired three shots, which was to be a sign he had killed one of them. We had only gone a mile when we heard a shot, and immediately after two others. This at once banished our fatigue, and regardless of the deep snow and fallen timber, we made off in the direction of the firing. Here we found Tekarra busy cutting up a fine three-year-old moose, which was the youngest of two he had seen. We at once made a fire by the carcase, which lay among fallen timber where the snow was about four feet deep. Our appetite was tremendous, so that, although the flesh of the animal was so lean that at other times we would not have eaten it, we continued cooking, eating, and sleeping the remainder of that day, and the whole of the next, by which time there was little left of the moose but the coarser parts of the meat. Our three dogs also, who had eaten nothing but the bones of the grouse and our cast-off mocassins since leaving Jasper House, enjoyed themselves to the full; indeed both the dogs and masters conducted themselves more like wolves than was altogether seemly, excepting under such circumstances.

March 1st.—This morning we started quite refreshed, each carrying a load of cooked meat to last us several days. The weather was now warm, and the sun very powerful during the day, which made the snow very wet and heavy for the snow shoes.

On the evening of the 2nd, after making 37 miles from our "Moose Camp," we reached "Buffalo Chip" Lake, which is about 18 miles long, and 5 in breadth. We struck it about half way from its south end, and camped on its margin.

March 3rd.—This morning we travelled on the ice of the lake for 10 miles, the snow on its surface though deep being crisp and hard. This lake is bounded to the N. by a range of hills that rise about 400 feet and have a N.E. trend. At the south end of the lake we found a stream 40 yards in width, along which we skirted till evening, making in all 30 miles to-day. The country we passed through to the south of the lake is very fine, resembling the best spots around Edmonton.

March 4.—Five miles this morning brought us to Pembina River, which at this point flows to the N.E., in a valley 170 feet deep, the banks of which are very high and ruinous, and at the water's edge is a section, displaying a bed of impure bituminous shale 10 feet thick. A little above this point the coal has been on fire for many years, just as on Red Deer River. Ten miles after crossing Pembina River, having passed over a ridge of land that forms the watershed of the Saskatchewan, and which is within a few miles of Pembina River, we reached a series of large lakes, on the ice of which we travelled very fast. The largest of these, *Lac des Isles*, is 13 miles long from east to west. After reaching the east end of it, we passed for 7 miles through the woods, and at dark reached the N.W. corner of Lac St. Ann's, having made in all 35 miles to-day.

March 5th.—Starting at daylight, after 10 miles we reached the mission station of Lac St. Ann's, and were kindly welcomed by the priests. They had heard from my men, who got back safely to Edmonton in 12 days from Jasper House, that I intended to return direct through the woods: and as the priests knew from the half-breed hunters of the scarcity of game this year in that direction, they had great fears for my safety, and, at Mr. Christie's desire, were next day to have despatched a party to relieve me. I had told Erasmus that he was to meet me at Lac St. Ann's on the 5th or 6th of March

with a fresh train of dogs, and I had just arrived at the very time, and found him waiting for me; so I only took advantage of M. Le Combe's hospitality till night, when, leaving Tekarra and Louis to come on next day, I started with Erasmus about 10 p.m., and having a good track and fresh dogs we ran the remaining 50 miles of the journey to Edmonton in 10 hours, arriving there to breakfast in the morning.

Edmonton, March 20th.—News having been received from Fort Pitt that Mr. Chastellan, a clerk at that place, was very ill, at Mr. Christie's request, and accompanied by him, I made a journey there with dogs. As we followed the winter road, which I have already described, it is not necessary that I should give my notes of this trip in detail. As the sun was now powerful during the day, we intended to travel only at night, and accordingly started from Edmonton at 10 p.m. on this date, and continued travelling till the sun had acquired power, next morning at 9 a.m., when we reached the Blackfoot Creek, a distance of 40 miles from the fort. We slept there all day till 6 p.m., when we again started, and by the morning of the 22nd reached the edge of the plain at the Egg Lakes. At this time, however, the weather, hitherto fine with clear frosty nights, began to change for the worse, and as the quantity of snow had also increased, and we had no track, we required to use our snow shoes constantly, which rendered our progress slower. However, by the forenoon of the 23rd we had reached the east end of the Chain of Lakes, which is more than half the journey. We met here with some trappers, who advised us to leave the ordinary route and keep more to the south, as by that means we should fall on the track leading to Fort Pitt, on which they had been hauling meat from a buffalo "pound" during the winter. We unfortunately took their advice, and struck out into the bare rolling plains along Vermilion River, but had not gone many miles from the woods when a great snow storm set in, so that we could not distinguish objects 100 yards in advance. Nevertheless, that evening we reached the "Pound" by mere chance, but it was quite deserted, and we only found in the neighbourhood one old Indian and his wife suffering from snow-blindness, and consequently starvation, from not being able to hunt. Thinking that next day would bring us to Fort Pitt, we gave them nearly all our provisions. On the morning of the 24th the snow storm continued as violent as before, and the wind had so swept and drifted on the plains that we could not find a trace of where the track lay. To make matters worse, I found that, owing to an oversight, I had left my compass, so that we had to take our chance as to the direction we were going in, having no assistance from the sun or any object, excepting that occasionally we passed low hills, on one side of which there always grew a few stunted poplars and willows, and that side I knew from experience must face to somewhere between north and east. By the middle of the day, on consulting, we found that each of our party (five in all,) had different ideas as to where the north lay, which was a sure proof that we were lost. We travelled on rapidly for two days in this state of uncertainty, the sky still continuing to be overcast; and now having got among partially wooded country, we lost even the feeble help from the position of the bluffs, as they grew on all exposures. At last, after we had gone a distance more than sufficient to take us to Fort Pitt, we fell on a fresh trail, and, following it up, reached an Indian camp. On hearing where we were bound for, the Indians would hardly believe us, for we had turned completely round, crossed the ordinary winter road, and were now within a few miles of the Saskatchewan, at the Snake Portage, and were travelling on the trail leading from that place to Edmonton; or, in other words, we were already half way back to our starting place. We at once turned right about, and, as the weather cleared up, we reached Fort Pitt in two days, arriving at 6 o'clock on the morning of the 28th, well starved, and some of us quite snow-blind. We had thus taken eight days and a night to make the trip; but all the while had travelled at a rate that, without losing ourselves, would have brought us to Fort Pitt in four days and a half, having, instead of 195 miles, travelled more than 300. This unfortunate expedition, which luckily was attended with no serious consequences, only shows how even the best equipped parties must run a risk in winter when travelling in this country. Chief factor Christie, himself an experienced traveller, being the bourgeois of the whole district, of course had two of the best men he could get. I had in addition Erasmus, whose qualities as a traveller I had well ascertained in several hard trips, and who moreover had travelled by this very route to Fort Pitt in the beginning of the winter; and yet, in spite of all this, and of my own knowledge of the country, which I had already mapped, without doubt we fairly lost ourselves, wore out our dogs with hunger and fatigue, and only escaped great privation and risk by mere accident.

On arriving at Fort Pitt we found that besides Mr. Chastellan many other persons were labouring under a kind of low fever, so that I had at once quite a large practice. But in another respect our visit was rendered very opportune by a most unfortunate circumstance that had occurred two days previously, which required Mr. Christie to exercise his functions as a magistrate. It seems that a second party of Americans, eleven in number, had started from St. Paul's to attempt to reach the gold mines on Fraser River, at the same time, in the spring of 1858, with the party that passed Fort Edmonton, and crossed the mountains last October. The second party, however, only reached the Moose Woods on the South Saskatchewan when the winter set in, then had continued travelling as far as this place on the snow, and were now working for the Hudson's Bay Company, making nets, harness, &c., for which they were to receive provisions to enable them to continue their journey in spring, besides their rations for the present. As might be expected, a party of independent men, without a leader or discipline, had not made the long journey, and suffered the many privations they had endured, without a certain amount of jealousy and discord among some of the members. A quarrel of this sort had unfortunately come to a head only a few days before our arrival, which proved fatal to one of the party. The immediate altercation was about some trifling matter between two of them in a log house within the fort, that had been given to them to live in, and in their anger, and in presence of some of their companions, they drew their revolvers, and fired six shots at one another, at a distance of only a few yards. The one that first drew his weapon was mortally wounded, and so rendered unsteady by the first shot fired at him, which accounts for the escape of his antagonist from this murderous style of encounter, with only one ball lodged in his hand. Three balls lodged in the body of the aggressor, so that he only survived a few hours. As the occurrence took place within a Company's fort, Mr. Christie thought it his duty to investigate the whole case, and, examining the witnesses on oath, drew up a full statement in triplicate, one copy for the Council at Norway House, a second to be taken by the Americans in spring when they crossed the mountains, and to be produced if any proceedings were instituted against the survivor, and

the third he retained himself. As the evidence clearly showed that the man who lost his life was the first to draw and fire his revolver, and even that he had previously borrowed it for the purpose from one of his companions, the position of the survivor in reference to the affair was not such as to warrant Mr. Christie interfering directly, or to detain him for further trial in a country where there is neither law nor government, so that he merely advised that his companions should see that he surrendered himself, on reaching the Pacific coast, to the proper authorities, and by standing a trial there be freed from future imputation.

After two days Mr. Christie returned to Edmonton, leaving me to remain at Fort Pitt until the snow had disappeared, as, besides my being useful to the sick people at this place, I could then have an opportunity of seeing the important district between it and Edmonton under the aspect of early spring. He took with him two men from Fort Pitt, as there were things to be sent down from Edmonton; and I seized the opportunity of having my instruments and other working gear forwarded to me, as when I started I had anticipated returning immediately. The men were only gone seven days, Mr. Christie having reached Edmonton on the fourth day; and without resting, the two men returned with their dog sleds, heavily loaded, in three days; and, as the distance there and back is 380 miles, both by estimate and as measured by the odometer, they thus had run 48 miles per diem when going, and as they returned 62 miles per diem. Yet such is the zest for travelling with dogs in this country, that no one considered it at all a wonderful feat.

The spring is much more advanced at Edmonton than at Fort Pitt; for here the snow is deep, and every day brings a storm that adds to it, while at the former place it has nearly disappeared, and they have genial weather with mild S.W. wind.

I remained at Fort Pitt until the 26th of April (the guest of Mr. James Simpson, the gentleman in charge, and my old travelling companion during the previous winter), and during that time I made several short trips in various directions. The time passed very pleasantly, as some of the Americans were very superior fellows, and had already travelled through most of the western states and California. Mr. Louch, an English amateur hunter, also returned from the plains, where he had been hunting buffalo with the Indians.

Immense flocks of the little snow-bunting (*Embrizza nivalis*) assemble round the forts at this season. They are only numerous at Fort Carlton and Fort Pitt at this time and late in autumn, but at Fort Edmonton they remain throughout the winter.

The snow continued to be two to three feet deep until the night of the 17th of the month, when it began to melt very suddenly, and on the 18th the first geese and ring-necked plovers arrived. On the 20th the ice began to break in the river, but only by the weight of water that overflowed it from the melting of the snow.

On the 26th I got horses from Mr. Simpson, and with a light cart that had been made for me, and to which I attached the odometer, I crossed on the ice, and started for Edmonton. Not many hours after we crossed, the river suddenly rose nine feet, and bursting away the ice cleared the stream next day. It will be seen by referring to my notes of the previous winter, that the ice was so rotten on the 27th of March that I could not travel on it, and that it broke up on the 7th of April, so that the spring was thus nearly a month later than this year. Yet this does not show the full difference, for the warm weather commenced early in the spring of 1858, and the thaw was very gradual, while in 1859 it has continued cold and stormy until within seven days of the final breaking up of the ice.

In returning to Edmonton, besides my man Erasmus, I was accompanied by some of the Company's servants that were bound for that place to help to bring down the brigade of boats with the furs. We had a good deal of trouble in crossing many of the streams, as they were much flooded. As every stream in the plains flows in a deep trough, a flood adds to their depth without increasing their width, so that we had repeatedly to go through the whole business of swimming and rafting in the icy waters of creeks not more than 15 to 20 yards across, and which in summer are only dry gullies. The rapidity with which grass springs up when the snow clears off the ground is very astonishing. Places where fire had consumed the grass in the previous autumn, after that season's growth had ceased, now became green in the course of a few days, as the snow always disappears from these spots first. On the last two days of the month there was much warm rain, and at night vivid lightning, but without our hearing any thunder. On the 3rd of May we reached Edmonton, having occupied six days in the journey, which was considered a fast trip for horses to make in the spring. The distance corrected from the odometer readings is 195 miles by the track.

May 5th.—Farming operations are now well advanced around the fort, and it was with much interest that I heard Mr. Christie's plans for improving this post, and establishing agriculture on such a scale as to make the Company more independent of their half-breed employés, who are such a thorn in the side of whoever has charge of this district. On the 9th the boats arrived from the Rocky Mountain House, and with them came Palliser, Brisco, and Mitchell, so that we were once more altogether again, for the first time since Christmas. During this month, until the boats left on the 26th, our great employment, besides writing and mapping, was doing all we could to get our horses into order for the summer's work, by shifting their feeding ground, exercising the buffalo runners, and physicking the sick, of which there were several in the band. The number of Indians loitering about the fort, waiting till the boats should start, compelled us however to have our horses guarded about 35 miles distant to the west on the beautiful prairies along Sturgeon River. Although there was still frost at night, yet the weather was this month mild and genial, and, considering the latitude and continental position, the vegetation was wondrously vigorous. Although this season is considered to be later by nearly a month than is usual, yet everything was much further advanced by the beginning of May, than we found it in the middle of June 1857, around Lake Superior, which is five degrees of latitude further south. The fort was now very lively, as all were busy preparing for the great annual voyage to the coast of Hudson's Bay, which occupies the whole summer. Besides the brigade from the Rocky Mountain House, Mr. Fraser's brigade from Lesser Slave Lake and the Athabasca, and Moberly's Brigade from Jasper House, both arrived; and the repacking of their furs, the launching and loading of the boats, and all the necessary preparation, gave the inside of the fort an air of business and mercantile activity that looked more civilized than anything we had before seen in the Saskatchewan. Outside the fort, however, the large motley

encampments of Indians, voyageurs, and Lac St. Ann half breeds, with all their women and children, dogs, and horses, at once destroyed the illusion, the crowds of loiterers showing that the lazy population still maintained that proportion usual in this country to the number of those that work.

The chief factor's work at this juncture is no sinecure. He has all the surrounding population condensed on his hands, and just at the time when every scrap of food acquires tenfold value. Those that start down the stream have not only to carry food for themselves, but also for the brigades to many other parts of the country, while in the fort are to be left the women and children with perhaps only two or three men, and if the buffalo are distant they will certainly suffer a summer of great privation. But the crews of the boats bring their families to loiter round the fort and to see them off, and great trouble and anxiety arises from endeavouring to escape feeding these, and yet without offending the hot-tempered half-breed voyageurs, who have generally received advances, or are in debt to the Company, and would gladly seize any excuse for deserting.

On the 25th the last of the brigade of boats started with Mr. and Mrs. Christie, and with them went our friend and colleague Bourgeau, very much to our regret, for the Expedition will feel quite incomplete in the plains without his methodical habits and quaint drollery.

On the 26th I was left alone at the fort, only retaining Erasmus, while all the rest of the Expedition started for the plains.

On the 6th the Americans arrived from Fort Pitt, and I engaged one of them, Burnham, who had been a California miner, as I had found at Fort Pitt that he was very handy and thoroughly to be trusted. On the 7th Beads arrived with the letters from Red River, and along with him *Vital*, a half-breed from Red River, who was bound for a trip across the mountains to see some relations at Colville. On the 10th of June I started to join Capt. Palliser, and from this time till leaving him again at the Cypress Hills it is not necessary for me to give my journal, as the substance of it is incorporated with that of the Expedition for that period.

No. 6.

From Edmonton, 24th May 1859, to the Forks of South Saskatchewan and Red Deer Rivers; thence to Camp of the United States Commissioners from the Gulf of Georgia.

Capt. Palliser's Journal, continued.

May 24th.—Occupied engaging men, and paying small bills to the women for needlework, washing, &c.

May 25th.—The scarcity of provisions at Edmonton now became very serious: it was evident that we must all go out to the plains and look for meat. I was in expectation of letters from the Government, with orders either to return home, or continue the Expedition. My party was however too large to be supported in the fort, where every ounce of provisions was of the last importance. Under these circumstances I had nothing for it, but to make a start in search of food, leaving Dr. Hector at the fort to await the arrival of letters and orders from the Colonial Office.

We had now been two years carrying out our explorations to the westward in British North America, the greater portion of the time in the field. As the advancing winters had rendered each season no longer available for horses, we still prolonged our endeavours, and extended our researches by the ordinary means of travelling in snow shoes, accompanied by trains of dogs. We had now carried on the explorations from the valley of Red River westward along the boundary line, examined all the country drained by the Assineboine and Qu'appelle River, explored and laid down the whole valley of the North Saskatchewan to its glaciers in the Rocky Mountains, and also the lower portion of the South Saskatchewan, to beyond the elbow, up to 109° of longitude. Traversed in several directions that region of country between Fort Ellice and Fort Carlton, and containing the Touchwood Hills, Swan River, Fort Pelley, and the lake districts.

We had also travelled the piece of country between the two Saskatchewans, examining and laying down Battle River.

Again from Fort Assineboine, in lat. 54½°, long. 114½°, through the belt of woods at the base of the Rocky Mountains to Jasper House, in long. 118°, and altogether extending to the southward, by various journeys, our examination of that rich belt of country, along the base of the Rocky Mountains, to the boundary line at the Chief Mountain. And notwithstanding that, in addition to all this exploration of territory, the Rocky Mountains had been crossed and recrossed, and several passes discovered available for horses, yet a glance at our chart showed us that a great block of country in the neighbourhood of the boundary line, viz., from long. 109° to long. 113°, still remained unexamined, as well as the greater part of the South Saskatchewan (commonly called Bow River), which still remained unexplored. Under these circumstances, I had written to her Majesty's Government, by the winter mail, acquainting them of what still remained to be done in order thoroughly to explore, completely to report on the country, and in short to exhaust the subject of those regions of North British America as far as the western slope of the Rocky Mountains, also requesting that we should be allowed not only to complete this work, but also afterwards to return home westwards, instead of recrossing the plains of the Saskatchewan.

Owing to the few opportunities afforded in the country for postal communication, I had ordered our servant Beads (whom I had permitted to return in October, to Red River to visit his parents after the murder of his brother by the Sioux) to await in early spring for the Government Despatches; and by also having written directions by him to enable him to hire a companion and engage horses, I thus contemplated receiving an extra mail so early in the year as to enable us to avail ourselves of the whole season of 1859, to continue our explorations, intending to resume them from Edmonton, in a S.E. direction, to that point nearly where we had terminated in September 1857, and thence to resume them through the Blackfoot, Pigeon, and Blood Indian country, along the boundary line once more to the Rocky Mountains.

May 26th.—Started for Bull Lake accompanied by Captain Brisco and Mr. Mitchell, five carts, and 47 horses, including those belonging to my friends, and some few the property of the men. Our stores consisted of ammunition, tobacco, blankets, calico, knives, cloth, &c., for Indian presents, or for the

barter of horses for the whole season: our supply of provisions was very small, but we hoped with care and the assistance of some chance ducks, that we might shoot on the way, to be enabled to reach Buffalo. Our party was now of a very motley description, comprising Scotch and French half-breeds, Americans, Indians and squaws, one Dutchman, and a negro. I had considerable difficulty in forming a party at all, in order to enter a country so very little known, and considered very dangerous; so dangerous that this portion of territory has not been traded in by the Hudson Bay Company since they were compelled to abandon their forts on the Lower Saskatchewan, or Bow River; and when they did penetrate the country it was up the Bow River, with a brigade of 100 men and the outlay of 10,000*l*.

I am sure I should not have succeeded in traversing the country I contemplated to explore, but for the large preponderance of the Anglo-Saxon element among our forces, which were thus constituted:—Gentlemen,—Mr. Sullivan (my secretary), Captain Brisco, and Mr. Mitchell. Scotch half-breeds,—Samuel Ballenden, James Todd, George Daniel, Felix Munroe, and Oliver Munroe. French half-breeds,—my old hunter of last year Paul Cayenne. Canadian,—Oliver Larose. Americans,—Maxwell, M'Lauren, Cook, and one coloured man, Dan Williams. These Americans were some from a party who had made an unsuccessful attempt to cross the mountains last season, and being anxious to make their way to the diggings across the mountains, requested me to take them into my service, at any wages I thought proper; wages were no object to them, as all they wanted was to be enabled to travel across to the gold regions. Although these men were not as effective voyageurs as the half-breeds, yet I could perfectly depend on them in case of a panic and desire to return among some of the men, who all more or less feared the country we were now attempting. Doctor Hector by my directions remained at Edmonton to await the arrival of our servant James Beads, now almost daily expected from Red River with my letters and instructions from the Colonial Office. In addition to the party above mentioned, were several women and children, who begged to accompany us in hopes of food. These consisted of Felix Munroe and Paul Cayenne's wives and children, along with some three or four Indian women and several children, belonging to my Blackfoot guide Pelope and Dr. Hector's hunter of last season, Stoney Nimrod, now in Captain Brisco's pay. I may as well mention that I strongly objected to this man being brought along with us, anticipating difficulties with the Pigeons and Blood Indians as we advanced; but my poor friend Capt. Brisco was so impressed with his great powers in hunting, and so anxious to obtain his assistance, that he requested me so strongly to allow him to come along with him, that I reluctantly consented. Our first start did not augur well; after crossing the river we found that none of the horses would pull; had to take the carts up the steep bank of Saskatchewan opposite the fort, about a height of 200 feet: fastening leaders by their tails to the shafts we succeeded in surmounting the difficulty, and went as far as White Mud Lake, where we camped.

May 27th.—We crossed White Mud Creek about seven miles from Edmonton; lost two horses. Hector advised me to abandon them, and leave him to find them, and take along with him when he came to join us at Bull Lake. After breakfast he returned to the fort, and we continued our journey along swamps for some miles, through willows and along lakes. Killed a few ducks.

May 28th.—Continued along the Blackfoot trail over more hilly ground than yesterday. We are following a wide shallow valley between the Beaver Hills and the Woodpecker Hills, and towards evening we struck Weedy Creek, a small stream flowing to Battle River, beside which we encamped. We here dug up some small beaver dams, but were unsuccessful: our stock of provisions was now very low, although we had made it go a little further by killing ducks; but these were, strange to say, notwithstanding the favourable appearance of the country, very scarce.

May 29th.—Leaving Weedy Creek we went over some hills; saw the last of the pines, which we observed on the way to the plains, with the exception of a few on Red Deer Lake. Our track all day lay over a rich plane country, free from swamp, intersected by lakes with firm banks, a valuable piece of land. We made a long day, and camped after crossing Battle River.

May 30th.—Traversed a hilly country; left the Blackfoot track on our left; our direction was now S.W. Arrived at Elk Lake, about six miles long and two miles in its widest part; travelled round its western shore; turned off due east, and camped on the south end of the lake.

May 31st.—Travelled easterly, and soon after resumed our general S.E. track. Our Stoney hunter here advised us to send off in a western direction, a rapid journey of about 40 miles, to some tents of his tribe, and trade some meat. I dispatched him along with Mr. Sullivan and one of the men, and furnished them with a little tobacco and ammunition to trade meat.

June 1st.—Finished our provisions, along with a few ducks which I had killed, and arrived at Bull Lake.

June 2nd.—Felix Munroe killed a young red deer most opportunely; it was, however, very lean and tough. We travelled to the eastward, and fell upon Eagle Creek, where we had passed the year before. Here some of us started off to hunt, leaving the main party to go on and camp again at Bull Lake.

June 3rd.—Captain Brisco, Felix, and Paul killed four beavers; Mr. Mitchell and I a few ducks; the whole was eaten that night, together with the last of the red deer Felix had killed the day before.

June 4th.—To-day is Saturday. Old Paul and Felix dislike hunting to-day, being persuaded it is Sunday, but, strange to say, have no objection to the far more laborious expedient of digging up the beaver dams, turning off the water; to effect both of which objects they must remain for hours working up to their middles in very cold water. The result was a failure; we got nothing, the creek being too deep to drain, and I, with great regret, was obliged to serve out rations of flour, a luxury only kept for Sundays and in cases of sickness.

June 5th.—Started early, continuing a southern course. Left Bull Lake altogether. This lake is so called from resembling the shape of the skin of that animal when taken off and spread on the ground. Served out rations of flour in the middle of the day. In the evening Felix returned with the meat of a very lean cow he had killed. He told us, when in pursuit of a bull, which he espied a long way off, two Indians appeared to spring from the earth, as it were, ran the bull, and killed him with arrows. Guarded the horses very carefully all night.

June 6th.—Started early; soon arrived at the edge of the woods; cut and carried small loads of wood in each of the carts for use on the prairie course south. Came in sight of buffalo. Felix Petope (our Blackfoot guide), Brisco, and I, killed four buffalo; not one of them was good, although Petope

hardshipped my best horse terribly searching the band before firing. The prairie was so hard and [*sic*] that I began to fear, in case rain might fall, that the Doctor might not find our track after a few days. Sent back to edge of woods; buried a letter, and dried meat for him, which we also buried. Two young fellows, Sircees (allies of the Blackfeet), came into camp; told us the Indians we had seen running the bull a day or two ago, were from their camp not very far off.

June 8th.—Travelled on rather fast; at noon found a lost horse, evidently must have belonged to the Sircees. Petope claimed the horse, according to prairie law, and having seen him first; I resisted the claim, would not allow any one to have the horse. Petope left, in consequence, in a rage. I allowed him to go, but afterwards sent after him when he was cool, and speechified him into acquiescence of my conduct, explaining to him the difference between prairie law, which was to seize all you could, and the Queen's law, which was to endeavour to do your best always to restore property to its rightful owner.

June 9th.—Sent on to search for buffalo; found Brisco and Mitchell, Felix and Piscan. Killed five cows, of which Mitchell's was the best. Felix got a bad fall, and broke a gun. I desired them not to bring the meat home, but to seek for the nearest water; and we shifted camp to where the meat was, fortunately finding water not far off.

June 10th.—Started very early, and before noon arrived to where the hunters were guarding the meat; loaded the carts very heavily, and pressed on, in order to get to the Hand Hills the following day as early as possible.

June 11th.—Reached the Hand Hills, where I determined to make a permanent camp. We commanded an extensive view of the country, on account of their considerable elevation over the mountain plain, which enabled us to see any buffaloes which might traverse the plains: we were also enabled to recruit the horses, and get them into condition for the long journey before them, and bled some of them, which made them feed better afterwards. We also killed a good many buffalo, and lived on fresh meat every day, slicing and drying provisions with the overplus, to take along with us through the country, where we had not so good a chance of finding game. Lat. 51° 33′; long. 111° 30′.

June 12th, Sunday.—Read the prayers of the Church of England, Ballenden translating the most important ones into Cree, also first and second lessons. A wet day.

June 13th.—A wet morning, cleared up after noon. The women continued to make dry meat, which they were all obliged to turn over again, as it had got wet in spite of all our efforts to shelter it. Much has been spoiled. Bled more of the horses. Dispatch Felix to report on the extent to which the rain had obliterated our track, as I feared that the Doctor would find it difficult to find it, and consequently it might be necessary for me to send to meet him, in order that he might fall in with the cachés of meat I had buried for him at different intervals on our track. Nimrod's wife has for some time been anxious to go back to her friends; her husband proposes to take her back, and to return to us. I endeavoured to dissuade them, however, fearing the danger they would have incurred from the Blackfeet. They have again renewed their requests, and I was not sorry to let them go: having represented the danger to them they still insist upon leaving me, and must therefore take the consequences. Came on to rain again in the evening.

June 14th.—Our track across the arid country, between this and the woods, is nearly obliterated; I have therefore started Oliver and Todd, with three horses, back to Bull's Lake, with orders to bury directions for Hector in order to find us. Sent him back also meat and grease. They ought to be back in four days without forcing the horses. Brisco and Petope went to hunt on Red Deer River.

June 15th.—We were visited by a war party of Blackfeet, about 42 in number. I knew them, having seen two of them when hunting last winter. Invited them to sit down; made them a feast; gave them a smoke. Made them a speech, in which I told them they would be sure to have tribulation if they went to war against the Crees. They replied that they were maddened by the manner in which the Crees had stolen their horses; and I replied, that I would use my influence in persuading the Crees to restore the horses; upon which I made them a few presents of ammunition and tobacco, and they turned back. Two of their allies, the Sircees, joined them. One of them I recognized to be my old friend, the little chief, who took my view of the war question, and spoke against an attack on the Crees. In the evening Nimrod, the Stoney hunter, and his wife came running into camp, carrying their little child. They had been pursued by Blackfeet, who had shot their dogs, robbed them of all they possessed, *i.e.*, the payments received from me in ammunition, cotton, and blankets: they were fired at, and had a very narrow escape with their lives. Proposed a race for a flannel shirt. Fifteen champions stripped ready to start. Although among my half-breeds were several splendid runners, I could not persuade any of them to enter the lists. Felix, however, whom I pressed very hard to contend for the prize, remonstrated, saying that he was an old married man, with 5 children, and that it was unreasonable of me to ask him to run; finally he exclaimed, "I will not run unless you order me, in which case, of course, I "cannot help myself." I replied, "I order you to run." With a shrug of his shoulders, and a glance of satisfaction he could hardly conceal, he walked to the starting post. The distance was 200 yards down a gentle slope, and thence up a more rapidly rising ground. Felix and the 15 youths made an excellent start. The race was well contested for the first 120 yards, but as they ascended the rising ground, Felix, who was slightly in the rear when in the valley, began to gain at every stride, passed the three foremost, and came in the winner by three yards, and carried off the red flannel shirt. I then handed a white one to the young Indian who came in second. Late at night the war party returned, broken up, back to their camp.

June 16th.—The Blackfeet chiefs paid us a visit, accompanied by their soldiers. They were very troublesome, and alarmed my men considerably, telling my interpreters that their time was come to die, and other threats of a similar nature. Previous to their arrival, however, I had ordered the fire-arms to be disposed in such a way, that, on a given signal from me, each man could arm himself at once. I preferred this arrangement to that of receiving my visitors armed, as I always wished to convey to them the idea of an attack upon us being an act of folly on their part; for besides the fearful consequences of a present resistance, a terrible vengeance would remain in store for them from the swords and cannons of the soldiers which would surely be sent out to revenge us. I found that Petope had been the author of the mischief, by representing to them that we had sent tobacco and ammunition by my secretary, Mr. Sullivan, some time ago to the Thick-wood Stoneys, and that now we were denying them the

tobacco they begged for. They offered to trade horses, made a few overtures, then backed out, by which I perceived that their object was merely to ascertain the extent of our stock of goods, which I always kept covered. I firmly refused to trade any more after exchanging one horse with a sore back for a sound one.

By the exercise of patience, firmness, and speech-making, I managed to pacify my troublesome customers. Some of the young men made overtures to the Stoney hunter, Nimrod, and told him they regretted extremely that some of their people had stolen his horses; but that if he and his wife would accompany them to their camp, they would not only restore all his lost property, but make him a present of a horse in the bargain. Contrary to Felix's advice the foolish fellow and his wife were induced to go along with four or five young Blackfeet soldiers. The result of that evening's journey was very nearly the death of the Stoney, and the abduction of his wife. But fortunately Mitchell and Sullivan, who were out hunting, were attracted by the gleam of a gun barrel, saw the party disappear in a coulée without reappearing again on the other side; their suspicions were roused, and they galloped up on the height. Seeing how matters stood they rode to their assistance, and the Blackfeet ran away.

June 17th.—Ran buffalo; killed a hen; none fat; the buffalo in this region very lean, and poor eating.

June 18th.—Olivier and Todd returned to camp. We have not been troubled by the Blackfeet for two days; keep strict guard on the horses night and day.

June 19th.—Doctor Hector arrived in camp with our servant Beads; bringing the required news from the Colonial Office, directing the continuance of the Expedition through the remainder of the as yet unknown country in the neighbourhood of the boundary line, and also granting us permission to return home *viâ* Columbia River and Vancouver's Island. After leaving us on the 27th of May, in order to await Beads' arrival from Red River, he engaged a Blackfoot Indian (married to a Cree wife), who had been trading at Edmonton, to look after the horses, and to go with him as guide into the Blackfoot country. After this period he described great hardship for want of provisions at the fort, the supply of ducks obtained not being nearly sufficient for the consumption of even the few people that remained there after our departure and that of the boats, and making up with the deficiency in eggs and rats. At last, on the 4th of June, Brazeau was obliged to kill one of the domestic cows: this was, he said, the first he had tasted since he left Fort Garry in June 1857; the difference in the coarse taste of the fat, after the lighter and more digestible flavour of the buffalo, made him feel quite uncomfortable. On the 6th several Americans arrived from Fort Pitt, and on the 7th of June at 4 p.m. our servant Beads arrived with the English mail; he had made a most wonderful rapid journey, having accomplished a distance of about 1,000 miles on horseback in 34 days. It will be remembered that I previously stated in this journal that, in consequence of this young man's brother having been killed in the summer of 1858 by the Sioux, in the summer route between Red River and St. Paul's, I permitted him to go down by the fall boats from Edmonton to visit his parents at Red River, and availed myself of his engagement to return to organize a mail by which I could receive letters from England in answer to mine of last autumn, sufficiently early to avail myself of the season of 1859; and well he accomplished his mission. He started with a companion from Red River, who turned back after a week or 10 days; then performed the greater part of the journey to Fort Pitt alone; where he succeeded in obtaining a companion, a French half-breed of the name of Vital; and finally completed his arduous journey of [*sic*] miles; arriving at Edmonton on the 34th day after his departure from the Red River settlement: he was obliged, however, to abandon one horse on the road, but exchanged his horse for a fresh one at the several trading posts on his journey. The Doctor's journal, which I shall now transcribe in substance, up to the period of his joining me at the Hand Hills, as I have above related, was as follows:—

June 8th.—Engaged Burnham, one of the Americans from Fort Pitt, who arrived here to-day.

June 9th.—Delayed, in order to provide clothes for Beads, who had lost his in swimming with the despatches across the Saskatchewan.

June 10th.—Got in the horses from the guards. I had found Palliser's lost horses on the other side of the river, and this evening I crossed the band of 23, which I had to take out to the plains, and along with them the baggage. Took the boiling-point observations in order to correct the aneroids, and distributed and balanced my instruments in two cases for one horse to carry in the mountains.

June 11th.—Started from Edmonton; crossed to Saskatchewan; had great difficulty in collecting the horses, two of whom had strayed away through the thick brushwood. Besides pack-horses, I had the light cart I brought from Fort Pitt, to the wheel of which the odometer was attached. Camped on White Mud Creek. Weather stormy; stiff S.W. gale. Thermometer at sunset 57°; barometer 27·44. Party consisted of Erasmus, Beads, Burnham, Boucher, and Vital, with Amoxapeta and his wife.

June 12th.—Camped at Windy Creek; found where Palliser and his party had been breaking up the beaver dams. Burnham put a new axle-tree in the cart.

June 13th.—A party of Americans, now only nine in number, the rest having engaged with Palliser, were camped here. I desired Peter Erasmus to continue our course by the Blackfoot track, while I went with the Americans to put them on the trail for the Old Bow Fort, whence they intended, without a guide, to cross the Rocky Mountains by the pass which Palliser laid down. Dined with them at noon, and, leaving with them a map of Kannanaskis Pass, I struck off to the eastward, and again fell on the trail of my men near Battle River. Crossed that river by a good sound ford, where it was 90 yards wide and 2½ feet deep, and the banks 120 feet high, and very steep. The rain so heavy that night that we could not keep up our fire this evening.

June 14th.—Leaving the men and horses to follow the Blackfoot trail, I started off with Amoxapeta along the shore of Elk Lake. Killed four ducks, and collected 55 eggs (principally water-hen's), and enjoyed the first full meal we have come across now for several days.

June 15th.—Passed over broken ground, but a rich alluvial soil towards the west; came on Palliser's track, which we judged about 10 days old, consequently concluded he had pushed straight through the woods for the plains. We camped at the edge of the woods.

June 16th.—Sent Peter on the trail to try and come up with the Captain. We crossed a belt of prairie about 10 miles wide, and then came into the last woods. We were now so badly off for food and so hungry that I was obliged, although very reluctantly, to broach one of the flour bags, two of which I was carrying along with us. We now passed out into the arid plains, and shortly found two letters buried

in the track by Captain Palliser. Vital and I rode on for nearly 20 miles after buffalo tracks, and at length, from a slight rise in the plain, descried a band of bulls, which we ran, and out of which killed two. Returned about midnight to where the rest were camped, bringing them some of the meat, but they had fallen in with a band of cows, and Beads had killed two. The buffalo dung, which was our only fuel, was however so wet that we could not make any fire worth speaking of, and had to eat our meat nearly raw.

June 17th.—Peter returned, having followed the trail of the carts until he arrived at high hills, from which he could neither see buffalo nor woods; he consequently thought it more prudent to return, as he was hard up for food, and his horse too tired to face the plain. We camped at the foot of these hills, but have seen no wood since we left Bull Lake; the grass everywhere parched and stunted, and, excepting the rain pools, all the water is nauseous. Large bands of buffalo passed our camp in the night, travelling to the N.E.

June 18th.—Crossed the high hills (the Squirrel Hills), and travelled over a wide, level, arid plain, interspersed with salt lakes, in sight of a range of very marked hills, with an abrupt escarpment to the west. Where we found a large creek, flowing to the north-east, we encamped.

June 19th.—A few hours travelling brought us to the Hand Hills; we ascended the north face, which is long and steep; it becomes then a table-land, which we crossed, following along the Captain's trail to the west brink, when we suddenly came in sight of his camp in a valley that opens to the west.

The Hand Hills are a plateau, with rugged and steep sides to the north-west and south, while to the east it slopes gradually. The slope is much furrowed and worn; the plain all round the base of the hills is bare and arid, but the high level of the hill bears a very fair and almost rich pasture, being 680 feet higher than the plain; it also contains lakes of pure fresh water, and gullies with a small growth of poplar.

June 20th.—Read over my despatches carefully; we sent for Paul, Felix, and my most trustworthy men, Beads (our servant), Ballenden, Erasmus, and Daniel, also for all my Americans. Explained to them that I intended to pursue our course to the S.E., cross Red Deer River, and explore the country to the forks of Red Deer and Bow Rivers, from thence pursue a western course to the Pigeon and Blood Indian territory to the Rocky Mountains. I addressed myself first to the Americans, and asked if they were prepared to follow me throughout; they replied that they would stand fast by me, no matter where the country or what the danger. Beads, Ballenden, Erasmus, and Daniel, likewise declared their determination to go on. I next addressed myself to Paul, who replied, "It is all very well for those who do not know the country to be brave about it, but speak to any of the old ones who know, and who have experience of the country; take me, for instance, who have had my clothes pierced with bullets, and had my relations killed; ask if there is one of us who have not had some of their brothers, or brothers-in-law killed by these Indians. The country is too dangerous, and I have spoken."

Felix replied that the country was dangerous, and even as far only as we had yet gone the Blackfeet were sulky, and had threatened him and his brothers, as I myself must know, having used such expressions as that "their time was come for to die," and such like threats; and concluded by saying that he, for his part, would go on; but that the party was too small, and that the women and children had better return.

I did not like to lose old Paul, and feared the alarm which would more or less be caused by the retreat of such an experienced veteran as my old hunter, who had followed me through not only the whole of the last season, but also through the greater part of the winter of 1858–59. I also thought that a little additional force would give Felix more confidence, and render the traverse of the country less objectionable to the others, and I finally persuaded old Paul to promise to go on, if we increased our party by four more half-breeds; and finally, I arranged that Felix should start for Edmonton with letters to Mr. Brazeau, to engage not more than six or less than four good hands, engaged at the wages of the Expedition. Besides the reasons above stated, I had a far more important one. I perceived that the Blackfeet were very much disappointed at our small presents of tobacco. I had not reckoned on a sufficient quantity for the exigencies of the country, and I wrote to my friend, Mr. Brazeau, to let us have back again a bale of tobacco, which had been returned at the urgent request of Mr. Christie, as the Company was very short of that article. I urged my friend very strongly, feeling confident he knew even better than I did the importance of the article to any party situated as we were; and I felt confident that however greatly he might be in want of the tobacco himself, he would waive his claims in favour of our far greater emergency. Ballenden, who wished to leave one of his horses at Edmonton, was sent by me to accompany Felix. We organized a start, and sent them along with a plentiful supply of meat, for the journey there and back again. My directions were to leave half the meat buried north of Battle River, to be taken up again when they repassed on their way from Edmonton back to the camp. The party started in the evening. Petope also departed with his wives back to his camp. We were not sorry to get rid of such a troublesome nuisance, although he has carried off one of our trade guns with him.

June 21st.—We now formed a party of 5 gentlemen and 15 men, which I formed into five watches to guard the horses day and night Spent the rest of the day calculating and taking lunars.

June 22nd, 23rd, and 24th.—Running buffalo, and slicing and drying meat, in case of their ceasing to pass. We killed three grizzly bears, but no one could claim them.

June 25th.—Shifted camp about five miles S. $\frac{1}{2}$ E. to a small swamp on the top of the hill. Red Deer River sweeps round the base of these hills through a level plain at a distance of from seven to ten miles. Its immediate valley is a depression varying from 240 to 300 feet in depth; plains extend in all directions, where there is no grass and no fresh water; even in the river valley there is very little wood, and no grass.

June 27th.—Some Blackfoot chiefs arrived. Doctor Hector rode to Red Deer River to examine the strata, intending to follow it up a considerable distance, and remain out from camp two days, accompanied by Captain Brisco, who was hunting, attended by two of the men. The chiefs behaved very well. I gave them tea, and made bread for them; they had a good smoke, and I gave them some tobacco before they started.

June 29th.—The Doctor returned on the third day, describing interesting appearances in the strata along the banks of Red Deer River, which is 130 feet wide, and flows through a valley averaging 1,200 yards across. The hunters had been unsuccessful, but they caught some round-bodied carp and gold-eyes, which were similar to those found in the Saskatchewan at Carlton. He found both the cactus and sage bushes in large quantities; the former was in flower.

July 1st.—Burnham proposed to try if he could find any gold in Red Deer River. I replied that I feared the geology of the country would not admit of its being there; but I not only encouraged him to go, but accompanied him myself; old Paul came along too. We washed and panned a considerable time; found no gold. I killed a beaver, which we eat for dinner, along with a couple of gold-eyes (fish) supplied by Paul. The river valley was similar to where the Doctor had visited it.

July 3rd, Sunday.—Read prayers. Served out tea, tobacco, and flour, as usual.

July 4th.—Felix and Ballenden returned, bringing with them four additional men, Brother Piscan Munroe (brother to Felix), and three French half-breeds, Anos, Wapishoo, and La Douceur; they arrived in a sad plight, not having eaten anything for four days. Their eyes were wild with hunger; they described a sad state of things at Edmonton; Brazeau obliged to kill the working cattle. Such was the fearful state to which the inhabitants of the fort were reduced for want of food, that they persuaded the men to tell them where they had cached the meat provided by me for their return journey from Edmonton to my camp. One of them went back, brought it in, and distributed it among the women and children in the fort.

July 5th.—A Cree war party of about 24 young fellows on a horse-stealing expedition, visited us to-day. I made them a speech, and turned them back by the accounts we gave them of the strength of the Blackfeet. Sent out the hunters after buffalo; remained in camp to look after the Crees.

July 6th.—I find, on sending back to look for a tired horse left by Felix at a swamp about five miles off, the day before yesterday, that he had been stolen by our friends the Crees.

July 7th.—Visited by a troublesome party of Blackfeet; they begged a great deal, but, on the whole, were not ill-behaved; they had plenty of provisions and robes, neither of which we wanted. We gave them some tobacco, and their chiefs some tea and bread. We also handed them some tobacco, purporting it to be a present to them from Brazeau, and begged them to go and trade their surplus provisions at the fort. Prepared to start the expedition once more; very great unwillingness on the part of the French half-breeds to move. Old Paul came to me and declared off, saying he was exceedingly sorry to leave me, pleading the commands of his "mother-in-law" as an excuse, but, in fact, terrified at the prospects of travelling through the heart of the Blackfoot country. I remonstrated in vain, and at last had nothing for it but to give him leave to go; no sooner was that the case than all the other French half-breeds commenced to signify their intentions of turning back also. I replied that I granted leave to Paul on account of his family, and on account of his long previous services to the expedition; also to his nephew Moise, to accompany him, because he could not well get on without him; but that I would not allow anyone else to leave the camp: a slight murmur of disapprobation then arose concerning this decision, and before they had time to get together or combine, I exclaimed, "who " is the first man who will say that he will turn back?" upon which, one bolder than the rest stood up, and exclaimed, "I will go back." I rushed right at him, and seized him by the throat, and shook him, and then catching him by the collar, kicked him out of the camp. I called out then to know if any other wished also to go back, but, fortunately, the retrograde movement extended no further. Started at once for Bull Pond Creek.

July 9th.—The Old Swan, an old chief of a very great age, came to see me. I had met him before at Edmonton, also at the Rocky Mountain House, where he called me his grandson, and professed a great regard for me. He requested me to come and visit the Blackfoot camp, now no more than ten or twelve miles off, at the south side of Red Deer River. Doctor Hector and I, accompanied by Peter, Erasmus, and Olivier, started for the camp, taking with us a little ammunition, tobacco, and calico. This very large camp was in many ways a novel sight, even to us who had seen so many Indian camps. We now found the Blackfeet here numbering about 400 tents; they had originally been 500, but 100 tents of these had pitched away further up the river. The Blackfeet tents are not only much larger than those of the Crees, but much better provided with internal accommodation, such as leather curtains to protect them from draughts, bedding, kettles, tin plates, and porringers, and in a great many cases with forks and spoons; the tents of the chiefs are about 20 or 22 feet in diameter; but there are some medium tents, or tents where the chiefs assemble in council, that are nearly 30 feet in diameter; some of their ceremonial dresses are peculiar, and the manner in which they perform their singular dances is very energetic and wild. As we entered the camp, men and children of all sizes flocked around us, but the chiefs kept back the crowd every now and then by one word, or even by only a very slight gesture. They came forward, and took all our baggage in charge, and also our horses. There were several cases of sickness in the camp, not of a very severe kind. The Doctor had brought his medicines with him, and relieved several, especially one or two children, and his success with these rendered him very popular. We were in great want of leather to repair harness, renew hobbles, and various lashings; our trade went on briskly, but we did not do much in the horse trading, and, as usual, found these (like all other Indians east of the mountains), very unwilling to part with their horses; they are also very keen judges in horseflesh.

July 10th, Sunday.—Could not get away from the Blackfoot camp last night; did not get back to our camp till 8 o'clock at night, and we were accompanied by Old Swan and two or three other chiefs and their soldiers. Ours is now a very good camp. In the creek was good grass and fine water. Mr. Sullivan had shifted it while I was away, we were about 20 miles from the Blackfoot camp. Latitude 50° 53′.

July 13th.—Petope returned to us; I had rather have done without him, but could not well be ungracious to the fellow; he brought back the horse, but gave away the gun; however, I told him I would deduct it from his payment, which made him sulky once more. Amoxepeta and I also had a row, but I saw he wanted a pretext to leave us; we learned that he had been married to a Pigeon wife, and had shot her dead in a fit of jealousy, and now feared to meet her relations, in the direction of whose camp

we were travelling. We now bid fair for continuing without Blackfoot guides at all, which, after all, is not of much consequence, save for affording a greater facility in finding water, which will become very scarce by-and-by.

The Blackfeet are very troublesome, and require some exercise of caution and sternness to repress an inclination to be too familiar. Arms ranged along the carts, which are so disposed as to make a parapet shelter, but the arms are concealed under a curtain of tent-leather placed apparently for the protection of the goods and pemican.

July 14th.—Arrived at noon on Berry Creek, the largest river valley of the tributaries to Red Deer River which we have yet seen, but its waters are now nothing more than a chain of disconnected pools. After dinner pushed on to Red Deer River. Served out a little flour, this is a luxury we now seldom indulge in. A wretched soil everywhere; the horses miserably off for grass.

July 15th.—Finding it difficult to follow the river valley, we turned back into the plain again to the north, passed over very broken ground, and shortly after noon came to the brink of a wide valley from the north, which again compelled us to descend. This valley, which was five or six miles wide, was full of buffalo. Six of us set off to run (Mitchell, Sullivan, Hector, Peter, Felix, and Vital), killed 10 in all, the buffalo ran right for us, some making their way between the carts, where we shot several of them. There are some fine spots for pasture near our camp, together with many acres of grassy plain in the valley.

July 16th.—Travelled several miles along the river, and found a place to ford about 250 yards wide, with a good firm bottom and water up to the axletrees. A difficult ascent up the right bank of the river; followed along the south side of the river, and halted for dinner among some large poplars. In the afternoon passed some fine wooded bluffs along the river and saw several wappiti; Brisco killed one.

July 17th.—Ascended out of the valley on to a high plain covered with boulders. Saw a good deal of buffalo and many antelopes; also five grizzly bears, two old and three young ones, at which there was much firing and only one killed; obliged to descend again at the end of our day's journey to camp on the river for water; saw many buffalo.

July 18th.—We ascertained from Petope and Amoxepeta that the most favourable place to cross the Bow River was higher up. I therefore determined not to take the carts and party to the forks of Red Deer and Bow Rivers, but to ride on with one or two others to the spot where the old Chesterfield Fort of the Hudson's Bay Company once stood; neither of the guides wished to accompany me, but Amoxepeta was at last shamed into it. He and I and Beads and Bouché started there after breakfast: rode over an arid plain for about nine or ten miles, when we crossed a steep ravine tributary to Red Deer River, and at about six miles further came upon Bow River. I arrived considerably before sunset, and contemplated the view with some satisfaction, having now penetrated to that region from the west in July 1859, which we had reached from the east in September 1857, before we turned off to the north to winter quarters at Carlton. Viewing the two river valleys from the high lands at the junction, they presented a considerable difference in appearance. Red Deer River was a serpentine stream with broad alluvial promontories containing willows and rough-bark poplars; while Bow River, as far as I could see down stream, was between high precipitous banks, and where the tops of a few willows were seen appearing out of heaps of sand. From our position we descried a party of five men on horseback, who stood a short time to contemplate us and then fled away, although on the opposite side of Bow River, the crossing of which would have presented a very serious obstacle to us, even if we had been inclined to pursue them. Amoxepeta became very much alarmed and wanted me to return to our camp, an idea I would not listen to after the long distance we had ridden our horses. Seeing, however, I could not persuade him to remain, I allowed him to turn about, a permission he was not slow in availing himself of. After sunset we descended into a valley of Red Deer River, to where we had noticed some good grass for the horses; we unsaddled and hobbled our horses, lighted our fire, and camped for the night

July 19th.—Left at daylight; found the horses all safe; went out hunting along the woods on Red Deer River; on our way back saw several small deer, killed one; stopped to breakfast, and afterwards had a very long ride to catch up our party, who had started this morning to southwards of their camp for a crossing on Bow River. We came up with them at three o'clock in the afternoon; we had hardly joined them when a number of Indians from the Blood Indian camp, south of Bow River, came up; they had heard of our course from their allies the Blackfeet; started off, crossed the river, and came up with us; they were accompanied by one Blackfoot. A short time previous to these Indians coming in sight, one of our carts broke down in going over a succession of sand-hills; one of my French half-breeds (Wapishoo) was dining, I told him to wait where he was, and that I would send him back help to lash the wheel together, and take the cart into camp, which I intended should be close by. Before I had time to reach the head of the line of march, the cowardly fellow saw the Indians coming, took his horse out of the cart, and ran away. The Blood Indians rode up and shook hands with me; they had all come unarmed in compliment to us. We camped, invited the chiefs to smoke, prepared something to eat: meanwhile the Blackfoot Indian rifled the cart abandoned by Wapishoo; stole three guns and a blanket. I spoke to the Indians, who replied that he was not one of their tribe, and the chiefs were not accountable for him. I answered, that although he was not of their tribe, yet he was their guest, and I held them accountable; they remained silent a little time, and then the chiefs despatched two young men after him, who returned the guns next morning; they said that he had cached the guns, intending to return to take them, but had taken the blanket across the river with him. I thought it better to be satisfied with this partial recovery of the property than to fail in an attempt to recover the blanket, particularly as they promised to make restitution whenever I should visit them in their camp. We were now halted on a salt lake, the only water we could find. The Doctor had had a severe spell with the carts in the sand-hills; he killed a grizzly bear. We drank a little water by digging a pit, and drinking through a silk handkerchief; the men and horses were in great want of water, and the heat was very great while travelling through miles of burning sand. In the evening left the high broken country and descended into a valley running north and south, which was the direction in which Amoxepeta ought to have taken them, *i.e.* in a direct line and avoiding the sand-hills, which had been all but impassable to the carts, and fearfully severe on the horses.

July 20th.—Continued our journey; found the ground very much broken, and the travelling very severe for the horses. Soil worthless. Found a human skull on the plain. Two Blood Indian chiefs, very fine young men, with noble carriage and intelligent countenances, rode up, followed by other Indians; they promised to give me a horse each if I would dress them. I gave them coats, and desired Amoxapeta's wife to make the cloth into leggings, and in short we dressed them completely. They thought themselves very fine, but to anyone observing their awkward constrained appearance now, contrasted with the easy dignity with which they made up to greet us clothed in their own apparel a short while previous, would indeed have considered the change one for the worse. We camped on a swamp, where we killed several rattle-snakes.

July 21st.—Arrived at Bow River and camped in the only bluff of woods we could see in the valley. The valley of Bow River here is far more expanded than below the forks of Red Deer River; the banks also are very lofty. We started three grizzly bears, which made for the woods. The Doctor, Mitchell, Stoney, Felix, and I came up with the hindmost, poured a volley into him, but no one could claim him. Vital, who was on horseback, came up unexpectedly on the old female bear; she turned on him and frightened him off.

July 22nd.—Occupied constructing a raft to cross the luggage. The Doctor engaged measuring the breadth of the river, 250 yards wide and from five to eight feet deep. Mr. Laren, who was on the river bank holding the staff, was suddenly disturbed by the appearance of a grizzly bear coming in his direction, he flung down the staff and rushed down to the bank of the river ready to jump in in case of his charging. All hands were speedily after the bear, and he soon fell covered with wounds; no one could claim him.

July 23rd.—This place seems quite a favourite haunt of the bears; two of them rushed out of a thicket behind our camp, some of the men headed them on horseback, Hector, Brisco, the Stoney, and I were on foot; the bear got out to an opening, where he slackened his speed to stand up and look about him; we all four fired, the bear fell, I awarded him to the Doctor, who was nearest and fired first. The other bear charged the men who were chopping, and who in their haste to rush through the bushes, jumped over one another and broke a gun.

There was not timber enough to make a second raft, more than the half of the one we had made was built with drift-wood, and consequently very clumsy; besides the raft we constructed a kind of boat with the leather tent, which we wrapped about it, and then gathering the edges of the tent round the cord which encircled it; and so managed not only to cross a considerable quantity of luggage, but also the four women; viz., the Stoney's wife, Amoxapeta's wife, and both Petope's wives. The last thing was to swim the horses over; we all undressed, each jumped on a horse, and swam with the animal, twisting a lock of his mane in the forefinger of the left hand, and striking out with the feet and right hand, thus obtaining full assistance without in the least distressing the animal, who merely partially drew his man through the water without having to support any of his weight; the raft and the leather tent boat were also drawn by the men, holding with one hand on to the horses' tails and hauling a rope attached with the other. The horses who had no riders were driven into the stream, and urged forward by shouts and stones thrown at them till they were forced out of their depth, when they continued to swim steadily across; some of them, however, got into a bad eddy very far below down stream, and were nearly lost. The work was very hard on the men, some of whom swam nine times across the river. Several Indians from the Blood Indian camp came up where we had crossed to the south side and invited us to their camp. At about eight miles distance on our way there, we met a number of young men riding at full speed up the river to a point where a fearful accident was just reported to have occurred. Some women had been gathering berries there and came upon a bear, he at once seized one of them and dragged her into the bushes, one of the women having jumped upon a horse returned to the camp with the news. The young men succeeded in killing the bear, but reported the woman not only dead, but frightfully mangled. We continued our ride to the camp, and sat with the chiefs for some time. While we were in one of the tents a sick child was brought in to the Doctor, who made some mixture for it out of medicines he had taken with him to the camp; before, however, he had time to give the child anything, one of the medicine men of the tribe, accompanied by his satellites with their drums, rushed into the tent, snatched the child out of the Doctor's hands, and commenced drumming and howling. The Doctor told them through Felix, who had interpreted for us, that he would not answer for the child, which soon afterwards died. We returned to our camp late in the evening, accompanied by fourteen or fifteen of the Blood Indians, who brought horses with them which they wished to exchange.

July 24th.—Our Blackfoot guides, Amoxapeta and Petope, are getting frightened, especially the former, and talk of returning, which I am rather glad of, for they are both expensive and useless. Shifted our camp nearer to the Indians, about 240 feet above the level of the river, where there is fresh water and better grass. The Indians told us there was now a great deal of sickness among them, and they requested me to come into camp and pray for them, that the sickness might be removed. I complied, and read the general confession and the Lord's prayer, which Felix translated into Blackfoot after me. A woman brought a child to the Doctor, which was in a fit, and while he was occupied in making up some medicine for it, the medicine man, who had interferred yesterday, came in in a similar manner, and attempted to take away the child. The mother of the child, however, aware of the result of the medicine man's exertions in the case of the child, which occurred yesterday, flew like a tigress on the medicine man, and effectually prevented all interference with Hector. The child recovered.

July 25th.—The Indians are very troublesome. Our horses are strictly guarded; nevertheless young scamps are continually prowling about them. Start early on our journey, but the Indians follow us, and come up with us at noon. Amoxapeta's wife gave birth to a child. Only for the condition she had been in, Amoxapeta would have left long since; but to all his injunctions of turning back she refused compliance; said he might go back if he chose; but that she was far too comfortable and well treated; and she called him a coward on one occasion. He then struck her. She told him to beat away; but that he was a coward still. She had gained her point, which was not to leave the expedition until the birth of her child. We now left them behind. Petope, who had left one of his wives in the Blackfoot camp at Red Deer River, now went off, accompanied by the other. He had not signified to

us his intention of leaving us that day, and it was not until his protracted absence in the evening from camp made us conclude that he was really gone. He took away a horse with him. It would have been a difficult task to follow him. I should have been obliged to send Mr. Sullivan with a party to recross the Saskatchewan; they would very likely have had a collision, and, in the end, most probably would have failed in recovering the horse. In the afternoon we reached a coulée, with hills and plains formed of blown sand. The Indians came up with us. The chief invited me to a feast. I went over, accompanied by Mr. Sullivan and some of the men. More attempts to steal the horses during the night. When we were seated in the old man's tent, he told me he wanted to give me advice that I should not go further into the country, for that we should certainly get into trouble; that only two white men had ever crossed the country between the Cypress Mountains and the forks of Red Deer and Bow Rivers; and that now we were approaching the country of the Assineboines of the plains, of whom he gave such an account that the men were very much frightened, so much so that at the time these interpretations were going on my secretary laughingly directed me to observe the paleness of Vital's countenance, while listening to the old chief's arguments on the dangers of the country. This night one of their young men died of sickness in the Indian camp. I could not but feel a little uneasy for fear the idea of the sickness being coupled with our presence should enter their imaginations. Returned to camp; remained up all night; more young fellows prowling about the horses.

July 26th.—Hoping to shake off our troublesome neighbours we started at daylight, and it was most amusing to see the hurry and confusion in a camp of 300 tents, endeavouring to get away as rapidly as possible, hurrying down their tents and packing up their traps as rapidly as possible, while we were defiling past their camp. We had now a good start, and halted for noon about six miles S.E. of the river, and in sight of the Cypress Mountains. We remained about two hours here, and had hardly again got under way when the Indians came in; they tried to persuade us to stop, assuring us that we could not possibly reach water before nightfall; nevertheless, we pushed on; they will now hardly travel further to the southward in this longitude, on account of the Assineboines. We made a very long spell, and found middling water, although it was a little brackish; we camped on a dry water-course in the outskirts of the Cypress Mountains, finding water in a few detached pools.

A young Indian and his wife had been out two or three days on an unsuccessful hunt; they came on our track, and followed us up, arriving very late and half-starved in the evening.

July 27th.—Started very early, and made a long spell through a most desolate-looking country, without either grass or water. Make straight for the Cypress Hills, which form a blue line to the south-east of considerable height. Halt for noon in a rocky gully. The men most unwilling to approach any nearer to these hills, which are in the Assineboine country. Felix, who does not know the way well, explored in front of the carts, keeping too much to the westward. The Doctor, instead of going to his dinner, rode up a very high peak flanking the gully to the south-east, to obtain a view, and came up to us late in the afternoon, confirming me in my opinion that we were actually shirking the Cypress Mountains, and in a fair way to leave the country without visiting them at all. Our latitude was now 49° 44′. We were now several miles out of our course, and camped in a gully, where we found a good deal of maple.

July 28th.—Gave general orders to return due east this morning, much to the distress of the men. Mr. Mitchell and the Stoney (Nimrod) ran a grizzly bear on horseback and killed him. Lat. of dinner camp, 49° 45′. An old Indian chief "Father of all" had come all the way from Fort Benton on the Missouri, and taken up the body of his son, who had died and been buried not far from this about seven months ago. He was actually taking him back all the way to Fort Benton. But I dissuaded him, by telling him that it was his duty to think of all the young men of his people, like as if he was a father to them, and how could he think of bringing a partially decomposed body into a camp where they were suffering already from sickness? such a course would only be fatal to more of his children. After a long pause he said, "You have irons for digging: desire your men to dig me a place; I will bury him: you are wise, "and I will do as you bid me." The men then took the spade and shovel and dug the son's grave. The father and his soldiers buried him.

Started again in the afternoon, resuming our eastern course, but unfortunately fell in once more with our troublesome friends the Indians. Camped early at a small lake at the commencement of the ascent of the Cypress Hills, where there was excellent grass but no wood. The Indians were camped to the eastward of us about three miles. Sullivan, Brisco, and Mitchell remained in camp with the men, to guard the horses and look after the stores, &c. Hector ascended a detached hill 1,600 feet above our camp. I went to hunt with Bouchi. On our return we saw Hector telegraphing to us; we rode over and joined him; he had seen a bear, but we could not find him: it was getting late when we returned to camp together. The Cypress Mountains formed indeed a great contrast to the level country through which we have been travelling; they are covered with timber, much of which is very valuable for building purposes, the soil is rich, and the supply of water abundant. These hills are a perfect oasis in the desert we have travelled, they form a part of Cateau, and connect with the high hills near the elbow of the south branch of the Saskatchewan, but at this point they terminate to the west, and are separated from the Rocky Mountains by a wide tract of arid country. I did not see the Rocky Mountains from any point to which I ascended, this may, however, be partially caused by circumstances connected with the atmosphere, as they were quite visible from the Hand Hills. But I clearly saw three volcanic peaks called Les Trois Buttes, which are many miles south of the boundary line. On our return to our camp we found the Indians becoming very troublesome, and Felix told me they were planning the murder of the Stoney. Poor Nimrod seemed fully aware of their intentions before we warned him, and was very much alarmed: we desired him to creep into our little tent, where he lay between two of the men that had got in there; once or twice the Indians wanted to peer into the tent, but Hector, Mitchell, and Sullivan prevented them. We were all now armed, on the plea of guarding the horses; most of the Indians were also armed, one of them who was previously unarmed I now saw cocking and uncocking one of our own guns. I desired Daniel, who was in the tent along with the Stoney, to tell him quietly in Cree not to attempt to run, that we would protect him, and shoot the first man dead who pointed a gun at the tent. I sat on the ground at the tent door with my rifle across my knees, and Brisco kept a sharp look-out on the Indian beside me; I then desired Hector to give up his gun to one of the men, and to pretend

afterwards as if he were looking for his own gun, and finally to take our gun from the Indian who had armed himself with it. Doctor Hector after taking successively one or two guns from the men, and returning them, at last came to the Indian, took his gun, looked at it, and went away with it towards the horses for a few minutes, and returned to us. Olivier Munroe, brother to Felix, whom we had all looked on previous to this period as a fool, now began to talk to them in their own language, much to their astonishment, saying, "You do not know these men; they think as much of that Stoney as they think of "me; they think as much of the smallest man of the whole party as if he was one of themselves. "You want to kill the Stoney: well, kill him; but think well! for you will have to kill every one of us; "and as to 'him' (meaning me), he will be the first to fire." Felix translated his brother's words to me in French, and I appeared not to be interested, called for tobacco, and passed the pipe round. All this time the horses were saddled, and fastened close at hand, which meant mischief. At a little after midnight, however, they all rose with one accord, jumped on their horses, and galloped off.

July 29th.—Started on a south-east course, ascending into the heart of the Cypress Mountains; encamped in a magnificent valley running through them. In this valley is a height of land from which waters shed off into the Missouri and into the Saskatchewan. We were now well supplied with wood, water, and grass, a rare combination of happy circumstances in our experience of this season's explorations. From this I now dispatched Mr. Sullivan, accompanied by our servant Beads and Olivier Munroe, to the boundary line, determined to wait here for his return, hunt, and make provisions for our final journey to the westward again. Our longitude 110° 35′; latitude 49° 38′; altitude of camp 3,261 feet.

July 30th.—I sent out the hunters at daylight this morning to hunt for elk and deer; Mitchell and the Stoney (Nimrod) also went off, but in another direction, at about 8 o'clock. Ten or twelve shots were heard fired in rapid succession. Shortly afterwards some Indians galloped into our camp, and told us that our hunters had been surprised and killed by the Plain Assineboines. This I did not believe. Brisco, however, suggested that these Indians might themselves have shot the Stoney, and come to give me a false account of the matter in order to deceive me for awhile. Meanwhile we saw the Indians striking their tents and packing off to the northward as fast as they could. I did not exactly concur in either supposition, and yet could hardly conceive that the firing at a band of red deer could have frightened them so effectually, nor that they had not endeavoured to discover the cause of the firing. Yet, nevertheless, so it was, for about two hours afterwards Felix came into camp to bring out pack-horses and take home the meat, and he told us that he and the other two hunters had come on a band of red deer, fired a good many shots, and killed four. The Indians on hearing the firing never stopped to discover the cause; some of the young men rode down to give me the version stated above, and the rest of the camp got under way for the north again as fast as ever they could, imagining that their enemies, the Plain Assineboines, were upon them. I rejoice to say we saw no more of our friends the Blood Indians.

July 31st, Sunday.—Read prayers; occupied ourselves slicing and drying our red-deer meat.

August 1st.—Descried buffalo; started off to run them; we killed a considerable number, and among them were several in very fair condition. Commenced making pemican in the evening.

August 2nd.—We had now a fine supply of very fair meat, so threw away our tough elk meat; continued making pemican. The Doctor was making preparations previous to starting on his most arduous branch expedition, viz., a journey *viâ* Belly River, Bow River, by the Old Bow Fort; thence crossing the mountains in about latitude 52° he was to endeavour to make his way to the forks of Fraser and Thompson's Rivers, avoiding the valley of the Columbia.

Peter Erasmus, always considered heretofore the Doctor's own man, having been instructed by the latter in the use of those instruments which rendered him very useful as a surveyor's assistant, now, at the last moment, backed out, he, Peter, declaring the journey too desperate to undertake considering the condition of the horses, the rivers that would have to be crossed, and the prospects of food on such a journey. Our servant, James Beads, however, at my suggestion (not by my orders), in the most praiseworthy manner volunteered to go in his place. We were now about to break up our party, and this was the last night we were to spend altogether on the eastern plains: we celebrated this event by the addition of the luxuries of tea and bread for supper at the Doctor's expense, taken out of the scanty little store I had allotted to him for his trip in the mountains.

INSTRUCTIONS from Captain PALLISER to Dr. HECTOR.

DEAR HECTOR, Cypress Hills, August 1st, 1860.

1. You will proceed from this to the Old Bow Fort, enter the mountains again by the pass you explored last year, and endeavour to explore a route practicable for horses to the westward, as far as ever it lies in your power, proceeding by the valleys of Fraser and Thompson's Rivers, and avoiding the valley of the Columbia.

2. You will bear in mind however, that you are to run no unwarrantable risks, or jeopardize the safety of your horses, companions, or yourself.

3. Should the work be too severe for your horses to endure (for they are even now very far from being in as fit condition for such a trip as I would wish), you are immediately to turn back, and to make the best of your way to Fort Colvile, where you will receive further instructions from me on your arrival.

4. In case, however, you do succeed in effecting your western route, you will proceed to the forks of Fraser and Thompson's Rivers, where I shall endeavour to have instructions also awaiting you.

5. In the event, however, of these instructions failing to reach you, you will proceed onward to Fort Langley.

6. In the event of your requiring to purchase horses or any necessary supplies, I now furnish you with a few bills of exchange upon the Paymaster-General, with the clear understanding, however, that you are not to avail yourself of them in any purchases you might make from the Hudson Bay Company or any of their servants.

I am, &c.

J. Hector, Esq., M.D.,
Geologist, &c.

JOHN PALLISER, Captain Commanding British North American Exploring Expedition.

(Doctor Hector's Journal, continued.)

With the above instructions I started on this date for the Rocky Mountains at the Old Bow Fort, my party consisting of Beads, Burnham, McLaurn, Oliver Vanesse, and the Stone Indian Nimrod, my hunter of the previous summer's trip in the mountains, and who had stuck to us through all the Blackfoot country, and brought his wife and child with him, principally that he might again accompany me. I had 18 horses, nine of which carried packs, and my supply of provision, which I meant not to touch till I was well into the mountains, but rather, if possible, to add to them, consisted of 240 lbs. of pemican, 80 lbs. of flour, 50 lbs. of sugar, and a good stock of ammunition. This is about 20 days' provision for the five of the party that are to continue the journey, after Nimrod leaves us in the mountains.

I left the Cypress Hills with much regret, as it promised to be one of the most interesting spots in the country for observing the relations of the cretaceous strata. Returning on the track of the expedition to the N.W., we reached the gully where we were encamped on the 28th. Seeing a large band of cows towards evening, I sent Beads with my best horse to run them; but he foolishly took him among stones at full speed, and got a bad fall, breaking his gun to pieces. Water only occurs as pools in the beds of the creeks in the district N. of the Cypress Hills, and is of very bad quality.

August 4th.—Start ahead of the rest along with Beads, and cross a creek flowing to N., where we came on two buffalo, killed them both, and waited till the others joined us. As we were again starting, we saw a large band of cows, and as we were seeing very few bands of buffaloes now, I wished to secure good loads of meat. As the day was hot, and the animals were lazy, I managed to kill a fine cow, with one of the spare horses, and so saved our better runners that had already done duty this morning. We continued travelling till 6 p.m., crossing a range of hills that run to the N.E., and among which we crossed a deep ravine, in which however there was no water. We then passed over high rolling plains, and had a fine view of *Les Trois Butes*, which, seven miles before reaching our encampment, bore N. 175° E. Although the grass on these high plains is a little better than that on the chalky soil we had travelled over during the forenoon, we could see no traces of water, and were just thinking of camping without it on account of a thunder-storm that was approaching, when we came to a little swampy pool with good grass round its edge. During the night it rained heavily, with thunder and lightning, and our horses got startled and set off, so that we had to turn out and follow them for a long distance, and at last only found them by the light of the vivid flashes.

August 5th.—We did not get off this morning till nine, as the packing is troublesome work, and the men are not yet used to it. After making 14 miles to the W.N.W., instead of meeting Belly River, as I had expected from Felix Monroe's directions, we struck a large river, which I had no doubt was still Bow River. The banks were very steep and 210 feet high, and although we had a view for many miles we only saw one small clump of poplars along its margin. In the afternoon we followed up the river for seven miles, and found that the banks became steeper; but along the river there are large flats, on one of which we encamped. The banks are composed of the banded clays covered with drift and boulders. Nimrod seemed uneasy about some tracks we had passed to-day, so we tied up our horses all night, and kept guard.

August 6th.—This morning we again ascended the bank, in order to avoid following the bends of the valley. On a prominent point of the plain, above the river, we found a great pile of stones, which no doubt marks the site of some Indian battle, and forms a very conspicuous land-mark. We then crossed some sand-hills, and at noon reached the point where Belly River joins Bow River. I had understood from Felix that we should have some difficulty in crossing Belly River, and was much surprised when I found we could ford it with great ease. This is the more curious, as I afterwards learned that on the very next day Captain Palliser and his party crossed it 40 miles higher up, and had to swim their horses and make rafts. The place where we crossed is about two miles from its mouth, where the banks are very high and steep, and there is a large bluff of poplars on the right bank. The stream is 90 yards wide, and the water only comes to the horses' girths, but was very rapid. At where Bow River receives Belly River it makes a sudden bend, changing from a S.S.E. to a N.E. course, which latter is also the direction in which Belly River flows.

As to follow up Bow River would take us to the north of a direct course for the Bow Fort, judging from the latitude and longitude of the two places, I determined to take our chance for water, and travel right to the N.W. across the plains. Leaving Belly River we ascended rapidly, and, after 11 miles without any signs of water, we hit on a little shallow pool just at camping time. Almost every evening at present we had a thunder-storm, with enough rain to wet the buffalo dung, and, as we had never had wood to burn since leaving the Cypress Hills, our camp fire was always very miserable.

August 7th.—After all we had killed, we had not carried enough meat along with us, for we are out of it already; and as the pemican is not to be touched we started this morning without breakfast. At noon, however, by great luck we saw a young bull, and soon had his marrow-bones on the fire. This forenoon the horizon was extremely clear, and we got the first view of the Rocky Mountains, distant about 90 miles, in an air line, and at the same time saw *Les Trois Butes*, bearing N. 145° E., and distant about 70 miles. Only the peaks were seen of any of the mountains, rising clear and sharp above the horizon line, their lower portion being invisible only from the curvature of the earth's surface. In the afternoon we came suddenly on an Indian, as he was cutting up a buffalo he had just killed. He could not speak Cree or Stoney, but by signs and knowing a few Blackfoot words we found out that he was a Piegans, and belonged to a very large camp that was somewhere near. I tried to get him to stay all night with us, as I knew that if he got to his camp we should have a whole troop of them bothering us next day. However, his desire to tell the news was too great, so just as we were going to encamp he rode off in a great hurry. I let him get out of sight, and then we started again, and went as hard as we could till it was quite dark. There seemed to be no water anywhere in this part of the country, excepting a few small pools of the rain-water that had fallen in the forenoon. At one of these, not more than three feet across, we encamped, making no fire and keeping the horses close.

August 8th.—Being anxious to avoid the Indians, we started when it was dawn. We had not gone more than two miles when we saw a long line of black objects, which at first we took for buffalo. I soon made them out with the glass, however, to be the Indians, travelling to the N.W.; and as Indians

never usually start so early, we guessed at once that they knew of our approach, and trusting to our having encamped where our friend had left us last night, had already shifted into our track, and were going on most likely to where they expected we would encamp next. At once, therefore, before they could have seen us well, I changed our course, so as to appear as if we were travelling to the S.W., and so to cut across their track; and had hardly effected this manœuvre when about 40 of them came up with us from behind, along with our friend of the previous evening, and who, judging from their foaming horses, must have led them all the way back to where he supposed we were encamped. They looked rather surprised when they found that we had gone on so far last night, and yet were off again so early this morning. Some of them that now joined us could talk Cree, so, with Beads to interpret, I soon found out all about them. They were a camp of Piegans, numbering 300 lodges, belonging to the American territories; and having heard through the Blackfeet of our party, and of all the presents of tobacco, &c., that had been given to them, they now thought that they had struck the "lode," and would get their share of the good things also. Luckily before starting, I had put a few pounds of tobacco in my holsters, so, without halting, I was able to carry on the palaver, and give the customary little pieces of "Pas-tah-lan" (tobacco) to all the principal men. However, they soon began to troop from the camp towards us, till at last we had a cavalcade of several hundred around us, but luckily including some of their big chiefs. They did all they could to persuade me to stop, and camp with them, and trade horses, and give the tobacco, and so on. But as my horses were all picked animals, I was not likely to get better from them. My principal reason for refusing to stay, however, was seeing the evident wish of some of the young men to do Nimrod a mischief. They tried all they could to edge him away from the party, but I made him stick close by me, while we kept steadily on at a jog trot, driving the pack-horses in a band before us. At last, after a couple of miles with this rabble at our heels, when they found that I could or would give no more tobacco, they began to drop off, and the only ones I regretted to part with were the chiefs, as there still remained behind a horrid rascally-looking set. Beads, however, had struck up an acquaintance with one that had been a great deal among the Crees, and I got him to hold on with us by the promise that when all the rest had gone he would get a large piece of tobacco. All his anxiety was now to get rid of the tail that continued to follow us. He harangued them, but with no effect on any but the well-disposed, as the 20 or 30 scamps that were among them were not to be so easily guided. He then advised me to stop and have a smoke, so after talking to my men I said I would, if they would all stop with me. I only kept Beads, however, and when we had got off our horses and sat down in a ring, as is usual, according to arrangement, Burnham, McLaurn, Oliver, and the Stoney began slowly to drive on the horses again, without attracting attention. I explained this to the Indian by saying that the horses were tired, and would go slowly till I came up with them, and then told them all about the Captain being behind me with lots of tobacco and presents for them, if they would only wait till they saw him, but that I was only sent on ahead, and had nothing for them. While talking 8 or 10 of the scamps jumped on their horses and followed my men. I heard afterwards that on coming up they tried by signs to make Burnham understand that I wished them to turn back, but he was far too wide-awake to do that. One of them then seized McLaurn's knife from his belt, and was rather surprised by having a revolver clapped to his head, so he returned it. They then caught hold of the pack-horses, and one of them jumped off his horse, and commenced to undo the pack cords; but Nimrod pulled off his gun cover, and cocked the gun, and, as the scamps are generally cowards among the Indians, this made him change his mind. After riding for about 10 minutes, trying all they could to provoke the three men, who, with Nimrod and his wife, were coolly driving along the loaded horses before them, they turned back and rejoined the party where I still remained with Beads, and commenced talking in a loud and excited manner. Our Cree friend at once told us that they were not pleased, and that we should be off. After a little time I prepared to go, and told Beads to tighten our girths, when the scamps now began to press round us, wanting to look at every thing we had, and tried to fire off our guns. However, I had put the caps in my mouth, and made Beads do the same, so that was no go. One of them then plunged his hand into my shot pouch, and took all my ball out, but laughing all the while I made him give them back, for although I felt as ill at ease as ever I did in my life I knew that the only chance was to look unconcerned. At last we got free from them, and being well mounted told our Cree-speaking friend to make a turn and join us beyond some hills that we were just going to enter, and then set off at such a sharp pace that the Indians only followed us a little way, when seeing they were getting far from their own people, who all this time had been moving in the opposite direction, they began to drop off and turn back. When the last of them had gone, we drew rein, and waited for the Indian that had done us such good service, and made him a very handsome present. He told us not to go straight, nor to stop till late, as he heard that some of the young men were going to try and steal our horses in the night. We soon rejoined the horses, and found Nimrod and his wife still of a kind of ashy-grey colour from fear; but like the rest of us in a high flow of spirits from the sense of relief. We went 24 miles without stopping, and then halted to rest the horses, but without water. As night came on we made seven miles more, and then having got among hills where there was short grass that did not show the horse tracks so well as the dry dusty plains, we finished by making a great turn and camping beside some excellent water, but without daring to make a fire. Of course we kept the horses close, and watched them all night, but they were so tired with their long march without rest or water, that they gave no trouble. Our Piegan friends, if they did come after us, must have lost our track, for we saw nothing more of them.

The country we had passed through since leaving Belly River has been very arid, and yet we have had a good deal of rain, but it is quite lost on the hard-baked clay soil, as it at once evaporates when the shower passes.

At Belly River sections showed the sandstone clays, with lignite, resting on dark brown sandy clays. The hills at which we arrived after leaving the Indian, and in which we encamped that evening, seemed to be formed of the banded clays, as their chalky surfaces and white muddy flats are exactly the same as those to the north of the Hand Hills. It was noon when we halted, and I found the latitude to be 50° 13′ 5″ N. To reach where we encamped we made an ascent of 600 feet, and the hills seem to rise about 200 feet more.

August 9th.—In the morning I had a fine view from the top of one of the hills. At their base lay a flat valley, four miles wide, with large swamps, and the channel of a stream winding through it. To the west, this valley was bounded by a range of hills, similar to those we were now upon, and over them appeared the tops of the Rocky Mountains, still looking very distant. We have been in fact rather travelling parallel with them than approaching them directly. A descent of 600 feet brought us to the bottom of the valley, where there was some good grass, and in the swamps ducks and geese. There was no timber, however, excepting a few low willows. At noon we halted, upon entering the western range of hills, at a small lake, with ledges of sandstone cropping out along its margin. The latitude here was 50° 23′ 39″ N.

In the afternoon we crossed the hills, and descended to the west to extensive plains, seeing Bow River in the distance. As we went along we saw another bull, which I killed. The pasture is now much finer than before, but still there is no wood. At night we reached a considerable stream, flowing to the north, and through a pleasant-looking valley, with good grass, but no wood. The nights are very cold now, and the ground every morning covered with hoar-frost.

August 10th.—After 11 miles to the north-west we again struck Bow River. The pasture, though still poor, is much improved on the plain; but the change is most marked in the valley of the river, which is now rocky, with high cliffs of sandstone, like the upper part of the North Saskatchewan, and with a good growth of pines and large poplars. The valley is wide, with large wooded flats, but the river itself is narrow and rapid, and the channel occupied with shingle islands. The water is beautifully clear, and of a light green tint, which shows that we are now to the west of all the soft cretaceous clays which render the river so turbid in the lower part of its course. Along the banks there is great profusion of wild fruit; and during two hours that we halted, where we struck the river to rest the horses, and to bathe and refresh ourselves with the gooseberries, cherries, and service berries, we saw in the woods, on the opposite side of the river, seven wapiti, one grizzly bear, and several bands of small deer, and in the afternoon Nimrod shot a Virginian deer, and saw another bear, so that this part of the country must abound in game.

In the afternoon we kept along the top of the bank, which is nearly 300 feet high, and composed throughout of sandstone, with beds of clay and carbonaceous streaks, like the strata at the Rocky Mountain House, and on the upper part of all the river, indeed, as the mountains are approached. As we travelled along we saw two Indians on the opposite side of the river, and, lying close, watched them with a glass. Suddenly Nimrod, when he had looked attentively for some time, gave a great shout, and, in a high state of excitement, told us they were Stoneys of his own tribe. Making signals to them, he and I descended through a dense thicket of berry bushes to the river, and had a long talk with them. They were from a camp about ten miles up the river on the same side with us. We encamped in a most beautiful spot by the river, among large trees. When exploring the woods round our camp we came to a wigwam, carefully closed, and having logs laid up against it for security. Slashing a hole in it with my knife, I found that it contained a corpse, supported in a sitting position, just as if alive. The inside of the tent was in great order, and filled with offerings of buffalo robes, and other furs, tobacco, paint, dresses, and other Indian valuables. It was probably the remains of some great Blackfoot chief, as the Indian bags, mocassins, and other worked articles were those of that tribe.

August 11th, Thursday.—A few miles brought us to the "Stoney Indian" camp, which was situated in one of the prettiest spots I have seen in the country, at the mouth of "Ispasquehow," or "Highwood" River. There were only 35 tents, which, though a small number compared to the camps we had seen on the plains, was a much larger band than is usually seen of the Rocky Mountain Stoneys. They had been travelling south along the base of the mountains to meet the Kootanies, when they crossed to the plains; and as they returned they had come so far out of their way in the hopes of seeing buffalo, and as they were close to the Blackfoot country, they therefore formed a large party for protection.

Their wigwams were pitched in a grove of large poplar trees, at the base of high rocky banks. The Ispasquehow River is a clear stream, 40 yards in width, rising in the Rocky Mountains, and flowing N.N.E., to the point where it joins Bow River. Like Bow River it has a valley depressed 200 feet below the prairie level. A little above its mouth there is a place where Bow River can be forded in low water; the depth at this time being only 2½ feet. The latitude at the Stoney camp was 50° 43′ N. As I wished to change some horses with the Indians, who had many good animals in their band, which they had just obtained from Kootanies, and were, therefore, likely to be better suited for the work in the mountains than some of mine, I remained with them two nights. I had seen most of these Indians before in different parts of the country, and as they all looked on me as an old friend, I had no difficulty in effecting six good exchanges. I wished Nimrod to leave his wife here, but as he said that we were going so far into the mountains that he would not be able to rejoin this band alone, I agreed rather to let him not only take her, but also engaged another capital Indian named *William*, who was also to take his wife; but on the condition that they were never to expect me to broach the stock of pemican under any circumstances, but were to trust altogether to hunting as long as they were with us.

The "Stoneys" were much disappointed when they heard from us that there are no buffalo for many days to the eastward, and were, therefore, off every day hunting along the river valleys for deer and bears. At nightfall on the 12th, a party of 19 hunters that had started in the morning were still absent, and the camp was much alarmed for their safety, as some one had seen fresh horse tracks, and it was also said strange Indians, at a few miles to the south. We therefore spent the first part of the night on the alert, but about two o'clock most of the hunters returned, loaded with elk and bears' meat. They had killed three grizzly bears, and one of the party had been wounded in the encounter, so that he had to remain behind with three of his companions to take care of him. They said he was not badly hurt, only very stiff and sore from his wounds.

I had a long talk with the chiefs about what was likely to become of them and the other Indian tribes. They said that every year they find it more difficult to keep from starving, and that even the buffalo cannot be depended upon as before, because being now only in large bands, when one tribe of Indians are hunting then the other tribes have to go without until the band migrates into their country. The Stoneys are all Christians, and some of them can read and write in their own language, using the Cree syllabic characters, which were invented by the Wesleyan missionaries. They are very

very desirous of having tools and a few simple agricultural implements; and, as they are very steady, I have no doubt that if they were supplied with these, and direction given to their efforts, the best part of them would soon settle down, and leave their vagrant mode of life. Their chiefs at least seem to be quite in earnest about the matter.

August 13th.—We started at noon to-day; our party now increased to nine in number, including the two squaws. At the same time the whole camp started, and as the long straggling train of men, women, and children, ditto the loaded horses and drags, wound up the zigzag trail that leads from this pretty little valley to the level of the plain above, the scene was very picturesque. We made about 15 miles before we encamped, still keeping along the right bank of the river. The pasture is now very fine everywhere, and timber plentiful in many places, as we have now entered the belt of fine country that skirts the base of the mountains. Three miles before we encamped Beads recognized the place where Captain Palliser and his party had camped the Bow River on his trip to the boundary line the previous summer. As the evening was dull and overcast, and the river looked favourable, some of us tried fishing with the very rough tackle we possessed, which consisted only of some common twine and a few large unmounted cod-hooks, without gut, hair, line, rod, or any of the civilized appliances. Nevertheless, in one and a half hours we had caught altogether 36 trout, none of which were less than three-quarters of a pound weight, and most of them from one to one and a half pounds. They were of two kinds, the one with silvery scales and with firm salmon-tinted flesh; the other brightly speckled, but the flesh white, soft, and watery. In Ispasquehow River we had seen a third species, the shape of which was different.

August 14th.—It rained so heavily the whole of this day that we did not resume our march. We killed an antelope within a mile of our camp.

August 15th.—The morning was very cold and raw, but it cleared up about nine o'clock, when we started. After a few miles we reached Swift-water Creek, and as Bow River between the Old Fort and this place makes a great bend to the north, we left it to our right, and followed up the valley of the creek in full sight of the mountains, which were completely covered up with the snow of the recent storms. The country is here exceedingly beautiful, having a rich black soil supporting good pasture, with a large proportion of vetches, while the low hills are covered with clumps of wood which have almost the appearance of artificial plantations; among these we saw many bands of the Virginian deer, but did not succeed in killing any. It is almost no exaggeration to say that the bands of small deer are as plentiful in this part of the country as in a deer park, but they are very wild. By evening we had reached a high plateau covered with long grass and willows, and where we encamped beside a small lake.

August 16th.—The night was very cold, and in the morning the water was frozen over, and the ground quite white with hoar-frost, reminding us of the mornings in October near Fort Carlton. We started at eight o'clock, and after two miles reached Dent Creek, which flows to the north, and the banks of which were composed of the same dark shales, with ironstone nodules, that were seen on the North Saskatchewan. The country now became very broken, and we had to cross several lofty ridges. After 13 miles we reached White Earth Lake, where I found the latitude 51° 8′. We then struck to the north, and making a rapid descent for about 800 feet, struck the Bow River, where we found a capital ford, after crossing which, by following up the left bank for several miles, we reached the old Bow Fort. Here we found that a party of Americans had started only the day before from this place to cross the mountains by Kananaskis Pass. Before starting they had broken up their carts and waggons, and we found the ground strewn with the fragments, some of which we applied to repairing of our pack-saddles. Before arriving here "William" took me about two miles to the north of the river, and showed me a garden, which he and another Stoney had made that summer, in which some very fair turnips were growing. It was very small, and surrounded by a rude fence; he pulled up a few to take to the camp, and I was amused at his blazing a tree, and writing on it with charcoal the number and out of whose rows he had taken them.

August 17th.—I spent this forenoon making observations on the boiling point, and arranging the packs so as to suit them better for carriage in the mountains. At two o'clock we started, following the same track by which I had entered the mountains the previous August. At night we encamped by the Bow Lakes at the same place as before, and as we went along Nimrod killed a fat buck.

August 18th.—After four and a half hours this morning we reached the large prairies to the west of Grotto Mountain. Hitherto we had been making a drink like tea from the twigs of the Missasktomina, or service-berry bush, but that had now failed us, so we tried the tops of spruce trees instead. This afternoon "William" killed a black-tailed deer, and I killed a Virginian deer, and had a shot at a black bear. I intended to camp here all next day in order to ascend the mountains to the north.

August 19th.—I started alone at six a.m., three miles through the woods to the N.E. brought me to the base of the mountains, which I found to be very steep. I climbed slowly, examining the strata as I went along, and reached the top at one o'clock. The mountain is formed of successive beds of limestone, which are almost vertical, but have a slight dip to the W.S.W. The first bed was of cream-coloured limestone with cherty nodules and obscure encrinite stems. The next group of beds were of blue crystalline limestone, without fossils, followed by a compact earthy limestone, with veins of calcspar, and three kinds of fossil coral in great abundance, of cyathophyllum, favorites, &c.

The top of the mountain forms a sharp ridge, quite precipitous for about 1,000 feet to the north-east, and in the opposite direction presenting a slope of 35°. It did not rise more than two-thirds of the height of the mountains on the opposite side of the valley, and I estimated the ascent I made from our camp to the top at a little over 3,000 feet. The scene from the summit was very remarkable, the great distinctness with which the eye was able to follow the gigantic and complex plications giving it more the look of a magnified geological model than a natural view. There would not be the slightest difficulty, with time and provisions, in working out completely the structure of this portion of the Rocky Mountains, and, perhaps, from the clear manner in which the enormous faults and foldings of the strata are displayed, obtaining most valuable inductions for application to the general principles of geological science. We have indeed in these mountains a perfect desertion of the complicated disturbances, the nature of which, in other regions, the practical geologist has to grasp and picture in his mind from detatched and superficial observations. Their structure is not here at least obscured by outbursts and intrusions of igneous rocks,

which in other mountain chains renders the study of their structure so hopelessly difficult. When preparing to descend, I wounded a white goat that had two kids with it, but of different sizes, but, as usual, they took refuge in an inaccessible place. I also saw a large band of big-horns, but did not follow them. It was nearly seven o'clock in the evening before I got back to camp, and the mountain was so steep and smooth that I found the descent more fatiguing than the climb.

August 20th.—This day we got to the Cascade Mountain, but by a different route from that which we followed last year. We kept along the river on the slope of the shingle terraces, instead of going to the little prairie; encamped by a small stream a few miles higher up the valley, crossing the stream from the Big Lake, at its mouth. The shingle deposits here attain a very great thickness, and contain a larger proportion of calcareous matter than I thought from what I saw of them last summer. The wonderful mass of rock which forms the Cascade Mountain appeared even more striking than it did on the first visit; and I found that in the year's interval my recollection of the heights and distances had grown less than the reality.

The correction for my aneroid barometer, as obtained by the boiling point, still amounts to very little, being about −0·5 inches, where the reading is 26·08, so that, when approximate results are only looked for, I consider the readings I obtained both this year and last are, to some extent, reliable, but as they have been grouped and discussed in a special report, it is not necessary to notice any but exceptional cases in this journal. Likewise, the bearings of the different mountains which were taken have been only detailed in the itinerary as data for the construction of the map.

August 21st.—The weather we have is very regular, the heat being very great during the day, but at night the thermometer always falling below the freezing point. This morning the minimum thermometer registered 19°, and at sunrise stood at 23°; barometer reading 25·72.

In the forenoon we reached the angle of the valley where we also halted last year. To the right of the trail I observed some warm mineral springs which deposited iron and sulphur, and seemed to escape from beds of limestone.

The mountains which compose the second range form three parallel groups, the most easterly of which is craggy and bald; the central one wooded nearly to the summit; while the third forms the "Sawback Range," which has a very rugged cast, and presents a smooth, naked, and almost perpendicular escarpment to the west. The strata on the south or right side of the valley include a great thickness of soft earthy shales, but on the opposite side they appear to consist wholly of limestones. The strike is also different, those to the south having a S.S.E. trend, while those on the north trend N. and S., so that this transverse valley is probably a line of cross fracture. The change in our course on entering the second great longitudinal valley, which is bounded to the east by the "Sawback" range, and to the west by the massive cubical mountains, included an angle of 30°. The nature of the junction, which is marked by the position of this valley, I did not clearly see, but it is continued to the S.W. by a depression of the mountains, in which were seen masses of strata dipping at 40° to the E.N.E., and as it were lying up against the edges of the horizontal strata to the west. The valley, probably, marks a great line of dislocation between the limestone and quartzose formations; but as Bow River passes through it obliquely, it crosses it so as to pass to the west of Castle Mountain, which really belongs to the west side of the second great valley, although situate on the left or east side of the river valley. We encamped after passing the Long Muskeg, where we got a supply of the muskeg tea (*Ledum palustre*), which makes a capital beverage in absence of a better.

August 22nd.—Morning clear and sharp. Minimum thermometer, 22°; thermometer at sunrise, 25°; barometer, 25·52. The mountains looked very beautiful, and soon after starting we crossed a hill about 400 feet high, from which we had a splendid view; among others I saw the top of Mount Ball peeping through a valley to the south-west, and shaped like a truncate pyramid, with a low cone of snow resting on it. All the mountains to the west were snow-clad, and we saw right through the Vermilion Nick. About two p.m. we reached my crossing-place for the Vermilion Pass, and halted to hold a council with the Indians. With the exception of one meal which I had been forced to serve out, the night we spent at the old Bow Fort, our stock of pemican was still intact, but, as yet, we had done nothing to increase our stores. Now, if I followed the Vermilion Pass, my experience of the want of game last year would make me leave the Indians here; but as my object was to keep as much as possible to the north-west, I thought that I might as well keep along the east side of the watershed for as far as I intended to go north, and trust to finding a pass from the bend of the North Saskatchewan, which would allow me still to take the hunters, and besides saving the pemican perhaps be able to add to it. William said that if we left the Bow River and went by Pipe Stone Pass, which is more to the east, and leads from Bow River to the North Saskatchewan, at the Kootanie Plain we should get plenty of sheep, and besides have a better trail; so I determined to adopt that route. I knew that if I could get across the watershed to the west slope before the 10th of September, I should not meet with snow for a month later at least, and, indeed, from what I have seen and heard, I doubt if there would be any great difficulty for good travellers to cross safely with horses until the end of January. Along the eastern slope of the mountains, further north than this, there is very little snow, so that last winter, in February, I took horses up almost to the divide from Jasper House. Then again, in Wide Valley of the Kootanie River large bands of horses are kept without the slightest danger from the snow throughout the whole winter. It seems, from the best information I could gather, that it is only for the first part of the descent of the western slope, in the narrow and confined valleys, that the snow attains any great depth, and where it is described as 15 to 20 feet deep, that only applies to the actual heights of land, such as at the Committee's Punchbowl, where the greatest condensation of moist air of course takes place, and falls among dense woods that preserve it throughout the winter.

As the amount of snow will depend on the condensation of the moisture carried from the westerly winds, we can to a great extent judge of the probable localities where it will be deposited in greatest abundance by observing the vegetation, which the same cause favours at other seasons. Now the great luxuriance of the shrubs and plants, which has been so often remarked by travellers across the mountains, does not extend far down the western slope (except to the north, where I suspect that the mountainous region is much broader), but on reaching the Kootanie valley, all the rank vegetation has disappeared, and is replaced by the flora of a more arid region, characterized by bunch-grass, sage, and large pine

trees. Excepting in exceptional spots, this character prevails all the way west until the west slope of the Cascade Mountains is reached, when the rank vegetation and the spruce forest again cover the country, but in this case extend continuously to the sea-coast. And so also it must be with the snow-fall, which is found to be much deeper on the Cascade Mountains than on the Rocky Mountains; for as the mean altitude of the two ranges is nearly the same, the second produces condensation of the moisture of the previously cooled wind only at its summit level, and that to a comparatively small amount. We therefore continued to follow the left bank of Bow River, and camped opposite to the north end of Castle Mountain.

August 23rd.—Min. ther. 30°; ther. at sunrise 35°; barom. 25·30. Our encampment was in a small opening in dense woods, and during the night our horses wandered off, so that we had trouble in finding them. At noon we reached a large tract of burnt woods, and, as the position of the moon was favourable, I camped here in order to get a lunar distance for longitude; but shortly after I got the latitude at noon, 51° 19′ 5″ N., it became overcast. After taking a boiling-point observation, I ascended the mountain to the N. for about 2,000 feet. I first passed over masses of rock, which have been derived by a great slide from the cliffs above. They consisted principally of a blue gritty limestone, with a very angular fracture, and without fossils. At 1,500 feet above the bottom of the valley, I found patches of a skirting deposit of shingle and calcareous mud; and the south side of the valley, which is densely wooded to the height of 2,000 feet, presents a smooth slope probably formed of the same material. From the elevation I gained, I saw the pass by which I returned from the west side of the mountains last year; and I now saw that the distance between it and the Vermillion Pass is not more than 15 miles along the valley of the river. We had a sharp fall of snow in the afternoon, which however did not lie in the valley.

August 24th.—Min. ther. 27°; ther. at sunrise 31°; bar. 25·20. The morning fine and clear, with a light west wind blowing down the valley.

At noon reached lat. 51° 22′ 20″, being five miles E. of where Nimrod killed the moose last year, and where we met in with the "Stoney Indian camp." Nimrod and William are both off hunting, and, as this is the place we are to turn up a side valley to the right, we are detained all afternoon waiting for them. They returned, having wounded a moose, but he escaped across the river from them.

August 25th.—Min. ther. 26°; ther. at sunrise 31°; bar. 25·16. A few miles after starting we crossed Pipe Stone Creek, and then struck into the woods for eight miles, when we again met the stream where it becomes hemmed in by a rocky valley, but still with a wide flat bottom, along which we had no difficulty in following by a well-beaten trail. We ascended very rapidly, so that the woods became spare, and the vegetation assumed an alpine aspect. After making 21 miles, we encamped opposite to a very wide valley leading to the west, and on one side of which is a very singularly shaped mountain formed of a large block of the limestone or quartzite strata, which remain perched on the softer shales, and so much resembling a large tooth that we named it Mount Molar. All the mountains in this district have more or less the character arising from the same cause. William killed a young moose to-day.

August 26th.—Min. ther. 29°; ther. at sunrise 31°; bar. 24·15. The valley now narrowed rapidly, and the bottom occupied by morasses. The sides were still well wooded for at least 1,000 feet above us, but long stripes of bright green grassy slopes marked where the forest had been swept away by land-slips. The summits of the mountains are precipitous; but between the upper limit of the woods and the foot of the steep rocks there is generally a fine grassy slope of 600 or 800 feet, on which we saw herds of the white goat. Seeing five of them very low down the mountain, I went with William to get a shot, and we succeeded in killing them all. There were three old ones and two kids. The kids we carried off bodily, but of the old ones we only took the skins and fat. At noon we reached within a few miles of the "divide" we had to cross, and camped opposite to a waterfall which forms the source of Pipe Stone Creek, and where the stream leaps and rushes down a gutter-like channel, from a height of 450 feet. The latitude here is 51° 38′ 5″ N. A series of boiling-point observations gave the barometer reading as 23·69 inches, and I found that the aneroid only required a correction of −0·19 inches to be applied. I ascended the mountains to the right of the valley to a height of 2,800 feet above our camp, or about 9,400 above the sea level, and reached the level to which I saw several small glaciers descending. I collected about 50 species of plants, noting the altitude of each as given in the list elsewhere. The highest plant I saw was saxifrage (*S. dahurica*), a delicate-looking plant which grew among the loose blocks of rock. The mountains are composed of limestones and shales, from which I obtained orthis, lingula, euomphalus, and lithostrotion. I also killed three of the large marmots, one of which was the biggest I have seen, and of a fine grizzled gray colour, but the hair is coarse, and worthless as a fur, although largely used by the Shouswass Indians for making robes. In the forest as I descended I saw a solitary larch fir, which was easily distinguished by the light green tint of its leaves. I have not elsewhere remarked it on the slope of the east side of the mountains: near the Rocky Mountain House it is abundant, but there it grows in low moist places. This may perhaps be a different species, which has straggled from the west side of the mountains, but the specimens which I took of it have been lost. William told us at night that two years ago he killed a buffalo cow at this place, and that he saw at the time a band of seven,—two bulls, four cows, and a calf. They were of the thick-wood variety, which are larger and blacker, and with more spreading horns, than those of the prairies. They run swiftly through the woods, and are quite as wary and difficult to hunt as the moose deer.

August 27th.—Very cold this morning. Min. ther. 14°; ther. at sunrise 18°; bar. 23·61. The ground was quite white with hoar-frost when we started to ascend to the height of land by a steep rocky path that led at some places close by snow that was still lying from last winter. After five miles we got above the woods, and passed over a fine sloping prairie, with high bald mountains on either side. Plants with esculent roots were very abundant here, and many parts of the sward looked as if it had been ploughed, where the bears had been rooting them up like pigs. One spot on this prairie was found quite covered with a large species of onion in full flower (*Allium Schœnoprasum*, L.) the stem of which grows here to a height of 18 inches, with a root the size of a walnut. Two miles further we passed over a bleak bare "divide,"-where there was no vegetation, and elevated about 2,000 feet above last night's encampment; but the aneroid had reached its old limit at 21·20 inches, and refused to indicate a further rise. We saw a large band of big-horns as we were ascending to the divide, and following them led me fully 1,000 feet above the highest point over which the horses passed, and there I found the

range overhanging the valley, of which I reached one of the highest points, is very much lower than another which lies further to the west, and separated from where I stood by a shallow valley. The mountains in that direction have the valleys all filled with snow, and contain several fine glaciers. A very high peak that I saw, must, I think, be the same that I saw from the west last summer, and which I named after Sir Roderick Murchison. It did not strike me as being so much higher than those around it, as when viewed from that direction, but this may be due to the craggy aspect the mountains present to the east.

However, I am inclined to think that none of the Rocky Mountains rise above 13,000 or 13,500 feet, and that my estimate of the height of Mount Murchison, which I made last year, is too great. (Outline No. 32 gives the appearance of Mount Murchison as seen from above yesterday's encampment.)

After crossing the highest point, we made a gentle descent for five miles over a bleak moorland, in which "Sifleur" River, a tributary to the North Saskatchewan, takes its rise to flow to the N.

We then came to the brink of a densely wooded valley, through which the same stream continued to flow, and to reach its bank we had to make an abrupt descent through the woods, but over very rocky ground, for 900 feet, which exactly resembles the nature of the other divide that I crossed last year from Bow River to the North Saskatchewan. The rocks at the height of land consisted of purple and green shales, with beds of fine quartzose conglomerate that sometimes at first sight looked like a coarse feebly-cemented granite; to the west, the mountain's great quartzite and limestone cliffs all snow-clad; and to the east, the shelving rocks of the Sawback range, consisting of pale blue limestone with soft shales, all dipping at a very high angle to the W.S.W.

Close to our camp I found a fresh buffalo track, but was not able to follow it in the rocky ground myself, and both the Indians were off hunting sheep. They returned at night, having killed a very large he-goat, the skin of which I got the squaws to procure for me. (Now in the Edinburgh University Museum.)

August 28th.—Minimum thermometer 19°; thermometer at sunrise 21°; barometer 23·70. During the day descend along Sifleur River, which is a very rapid stream. We are travelling by a path cut through dense woods; we see nothing of what is around us. At nightfall, after crossing to the left bank of the river, passing a large tributary from the S.W., we reached the wide open valley of the North Saskatchewan opposite to the Kootanie Plain, but still many miles distant from that river itself. Just as we were encamping we started two moose deer, that at once swam the stream and escaped us. We had seen many tracks to-day of moose, wapiti, and bears.

August 29th.—Minimum thermometer 17°; thermometer at sunrise 25°; barometer 25·02. While the men were loading the horses, I made a rough measurement of a remarkable precipice that seemed to overhang our camp, and found it to be 3,300 feet high and almost perpendicular. The woods straggled up it clinging in the cliffs to the height of 2,300 feet. Although it seemed to be quite close to us, yet its base I found to be more than a mile distant, and the men had been guessing its height at from 800 to 1,000 feet. It took us 4½ hours' march to reach the Saskatchewan; at first through very tangled woods, but for the last five miles over the shingle terraces, which ranged step above step to the height of 500 feet, and where the great difficulty arose from the rapid descents and the difficulty the pack-horses had of obtaining a footing on the loose surfaces of the slopes. The terraces are here covered with a beautiful pine tree, the foliage of which has a slender tufty appearance and a light grey-green colour. It has a tall slender trunk, and grows to about double the height of the so-called cypress with the spinous cone. It is also quite different from the pine which I observed on the opposite side of this valley last year, which is very sturdy, with rough contorted branches and coarse foliage. I saw no cones on these slender pines.

When we arrived at the river we saw several large bands of the big-horn sheep feeding on the Kootanie Plain, but they soon winded us, and set off up the mountain. After we encamped Nimrod returned, having wounded a moose deer and killed three sheep, having come on a band of several hundred a little way up the river

August 30th.—Minimum thermometer 25°; at sunrise 29°; barometer 25·80. In two hours this morning we reached the plain where Nimrod had killed the sheep, just opposite to Pine Point. The latitude at this place is 51° 58′; and the longitude from reckoning I found to be nearly the same as I made it last year, viz., 117° 2′ W. The Indians went off hunting again to-day, and not only killed the moose that had been wounded, but also an elk and two more sheep. A band of sheep also came to the rocky cliff beside which we were encamped, and we managed to kill two of them, so we were now well stocked with meat, which we set about drying and preparing for carriage, as I now meant to leave the Indians and go on alone.

August 31st.—Minimum thermometer 25°; thermometer at sunrise 31°; barometer 25·62.

September 1st.—Minimum thermometer 25°; thermometer at sunrise 33°; at 2 p.m. 72°; and in the sun 90°; at sunset 65°; mean of barometer for the day 25·61. By this evening we had made two small bags of pemican, one wholly of sheeps' meat and fat, and the other of the dried moose meat and the fat of white goats. The Indians were away hunting all day, and saw a good deal of game, but killed nothing. They tracked a large bear to within 50 yards of our camp, where he must have passed during last night.

September 2nd.—Minimum thermometer 29°; thermometer at sunrise 39°; barometer 25·68. This morning we moved five miles further up the river in search of better pasture for the horses. This evening we had a slight fall of snow.

September 3rd.—Minimum thermometer 30°; thermometer at sunrise 30°; barometer 25·62. Continues cold and raining all forenoon. I now gave the Indians a supply of ammunition, and by giving them some of the horses paid them in part for their services, and for the rest I gave them an order on the Company's post at the Rocky Mountain House or Edmonton. I also wrote letters by them to the latter place.

As Nimrod said he knew the commencement of the pass leading from the bend of the North Saskatchewan, I persuaded him to leave his wife with William, and to come on alone with us for a couple of days to show it to us, and at two o'clock our party, thus diminished in number, started, still ascending the right bank of the Saskatchewan.

We had no trail, but nevertheless got along the margin of the river without much difficulty, excepting at one place where there was a good deal of fallen timber, and one of our pack-horses in trying to get round a bog fell into the current, which was deep and swift, and nearly got drowned. Going along I shot 4½ brace of spruce grouse, which are abundant here.

We also started a black bear, and saw the fresh track of a second, also the fresh tracks of six different moose and of various wapiti and small kinds of deer; so that this district of the mountain seems to deserve the reputation as a hunting-ground that it has among the Indians. On reaching the place where I crossed to the left bank of the river last year in descending the valley, we were preparing to camp, when Nimrod started after a couple of moose, and in about 20 minutes tracked them up, and fired two shots, but had only wounded one when it became so dark that he had to return. Nimrod was very dull and sulky this evening, so that I suspected that he did not like the idea of going further with us with the prospect of returning alone.

September 4th.—Minimum thermometer 19°; thermometer at sunrise 25°; barometer 25·58. Instead of going with us, Nimrod said that, as I knew the trail, he would go to hunt, and meet us at night at the mouth of the glacier branch of the river. He only took his gun with him, and went on foot, and somehow when he left I could not help thinking that we had seen the last of him. So it proved, for although at night we encamped at the appointed place, he never again joined us. I have since heard of after movements from the Earl of Southesk, who met him ten days afterwards in the mountains on Bow River. Lord Southesk came out to the country to enjoy the hunting, and early in the previous summer had started with a party of men from Red River, and, travelling by the Saskatchewan and Fort Edmonton, and then through the thick wood country to the west, entered the Rocky Mountains by McLeod's River to the south of Jasper House. He then turned to the S.E., following the valley of Walpatheek River, where he had excellent sport among the big-horn sheep, until he struck the Saskatchewan at the north end of the Kootanie Plain. Here he crossed the river and travelled to the south by Pipe Stone Pass, following the same trail that I had done coming north. He observed a date and latitude-mark I had placed on a tree at one of my encampments, and found that I had passed only ten days before.

It is rather curious that the only two travellers, excepting Indians and a few employés of the fur companies, that have ever been in this district of the mountains, should have so nearly met, and without the least knowledge of each others' proximity.

Through the improvidence of his men, Lord Southesk's party had run out of provisions when he reached Pipe Stone Pass, and had to hurry on and traverse it in a violent snow-storm. When he reached Bow River he met with William and Nimrod, who had got this far on their return, after leaving me. He then engaged them as guides and hunters, and following down Bow River left the mountains at the Old Fort, and returned by the cart trail to Fort Edmonton, and reached Carlton before the winter set in. From thence he travelled on the snow to Red River and St. Paul's, and reached England in March 1861, having been absent only a year, but having performed a very arduous journey with a rapidity that vies even with those of the late Sir George Simpson, who was remarkable for the speedy trips he made through these territories, of which he was governor for more than 40 years.

September 5th.—We were encamped on the middle fork of the Saskatchewan, opposite to the mouth of the river that rises from the glacier I visited last year.

Min. ther. 25°; ther. at sunrise, 30°; bar. 20·10. We were now wholly dependent on ourselves for obtaining any food beyond what we carried, which consisted in all of about 320 lbs. of pemican, 90 lbs. of which, being made with goat's fat, we only carried along as a last resource. Our party now consisted of myself and the four men, each of whom had his horse to ride and two to drive, while my duty was to go before and act as guide; so that I was now not only the directing, but also the actual explorer of the country; and it needed all the little experience I had picked up of the Indian's tact in threading through forest country in a given direction: and I daresay that, without knowing it, we often followed a roundabout and bad line of route, when a better existed.

After going nine miles on shingle flats, which occupy the full width of the bottom of the valley, the sides of which are almost perpendicular mountains, rising for 5,000 to 6,000 feet, we reached a point where the river is formed by the joining of three large branches. The question now was, by which of these was the pass to the Columbia we were in search of. Leaving the horses to feed on a fine meadow of the "Prèle" or goose-grass (a species of Equisetum), of which they are very fond, I started to explore the valley to the west, while I sent Beads up that which led to the south. We returned in about two hours, both having found "blazed trees," showing that some one had passed, but no regular trail. As my valley looked the most likely of the two, and led in the direction we wished to go, we determined to try it first, and after a good deal of hewing and climbing through dense woods, we made four miles by sunset, when we encamped about 700 feet above a roaring torrent, upon a narrow strip from which the forest had been cleared by a land-slip, and where our horses could manage to pick a little; but among the angular blocks of rocks we found it by no means easy to find a place to stretch ourselves.

September 6th.—Min. ther. 20°; ther. at sunrise, 32°; bar. 24·47. At daylight I started with Beads, to see where the valley leads to, and after five miles through very thick woods, we suddenly emerged at the foot of a great glacier which completely fills the valley, and showed us that there was no hope of getting through with the horses by this route. We ascended over the moraines, and had a slippery climb for a long way to reach the surface of the ice, and then found that it was a more narrow but longer glacier than the one I visited the previous summer. The upper part of the valley which it occupies expands considerably, and is bounded to the west by a row of high conical peaks that are completely snow-clad. We walked over the surface of the ice for four miles, and did not meet with many great fissures. Its surface was also remarkably pure, and clear from detritus, but a row of large angular blocks followed nearly down its centre. Its length I estimated at seven miles, and its width at one and a half to two miles. We got back to the horses by noon, and I found the latitude 51° 46′ N. The sides of the glacier valley were formed in part of deep blue limestone, from which I obtained specimens of *Atrypa reticulasis*, a characteristic Devonian fossil. By 3 p.m. we had returned to our halting-place of yesterday, and now proceeded to try Beads' valley.

For three miles we followed up the stream to the south, till we found that it suddenly rose from a

glacier in a high valley to our right. However, as the valley before us continued to look wide and spacious, with a flat level bottom covered with dense forest, we left the river and continued a southerly course, sometimes seeing little swampy streams, which showed that the water was still flowing to the Saskatchewan. After three miles we observed a small creek issuing from a number of springs, to flow in the direction in which we were travelling; but we could hardly believe it to be a branch of the Columbia, and that we were now on the west slope of the mountains, seeing that we had made no appreciable ascent since leaving the main Saskatchewan, and had encountered nothing like a height of land. We camped here beside a small lake and beautiful open woods, where the timber is of very fine quality. Both here, and also up towards the glacier we had visited in the morning, I had noticed a number of the plants of the western slope, such as the large blaeberry, the barberry or Oregon grape, the cedar, &c.

September 7th.—Min. ther. 14°; ther. at sunrise 18°; bar. 24·92. At daylight I took Beads with me to search for a trail, and had a hard walk through the woods, during which our attention was much divided between our work and the blueberries and raspberries, which grow in the greatest abundance. These blueberries grow on bushes about two feet in height, and exactly resemble in appearance and flavour those in Scotland, excepting that they are about the size of small musket-balls. Having notched the line for the track for some miles, we returned to the horses, and again started by 10 a.m. The valley now begins to descend rapidly, and very soon finding that the timber was too dense, I kept along the slope of the west or right side, without seeing very well where we were going to. At noon, however, we emerged on an open strip, and found that we were about 700 feet above the bottom of the valley, and just on the brink of a deep rocky chasm, through which boiled and leapt a large stream issuing from a glacier above us. We were thus forced to descend, and as the clearing on the side of the mountain had been quite choked up by a growth of alder (*Alnus viridis*) eight to ten feet in height, we found this no easy task. At last, with much sliding and tumbling, we reached the river at three o'clock, having had our horses a good deal bruised and cut in the descent. We found that at this place the stream from the height of land is joined by one from each side of the valley, and thus becomes a river of good size, flowing in a violent current through a rocky channel. Not a vestige of grass, or anything that horses could eat was to be seen, although the vegetation was very luxuriant. The woods were formed of large trees of several kinds, and had a dense under-bush of young cedar or blaeberry bushes. We followed down the stream as fast as we could in search of a more hospitable spot till nightfall, when we were at last obliged to camp on a small gravel bar of the river, on which grew a few shoots of goose-grass (Equisetum), which our horses cropped in a few minutes, and was all they had to eat that night; to make matters worse it rained all night, and the river rose so that our limited camping-ground was still further reduced in size, and in the morning some of our horses had crossed to the other side of the river, and the rest were so cramped for space, that during the night they were stepping over us as we lay on the ground.

September 8th.—Min. ther. 42°; ther. at sunrise, 48°; bar. 25·58. After the cold weather we had been accustomed to on the east slope, this morning felt stifling until we crawled out of our blankets, and then the continued rain and raw damp air made us feel actually colder than we did yesterday morning, when the thermometer was 30 degrees lower, and we were at 1,000 feet greater elevation.

During last night we had a storm of thunder and lightning, and a break in the clouds for a few minutes enabled us to see that the higher mountains were quite covered with a fresh fall of snow down to within 600 or 800 feet of our level. The dense watery clouds did not appear to form a thick stratum, but above there was clear sky, with light fleecy clouds drifting to the S.W.

Our general course was now a good deal to the east of south, and at noon a short glimpse of sunshine enabled me to get the latitude, 51° 40′ N. Besides the lofty mountains on either side of the valley, there are low crags of quartzite and gneissoid slates, dipping to the N.N.E. at a high angle, which form the floor upon which the strata that form the mountain rest. The weathering of these strata sometimes gives singular forms to the tops of the mountains. For instance, that which the previous summer I named Mount Balfour, from this side presented two peaks, one of which resembles a lofty irregular obelisk.

In the afternoon we passed a large stream from a glacier to the right of the valley. This glacier is very steep, and descends lower than I have ever seen any other in the mountain, as it reaches to within 500 feet of the bottom of the valley, which I estimate is about 3,800 feet above the sea. We encamped on a fine level flat, where at last our horses got something to eat. I now began to observe traces of the terraced deposits, but the valley of this river is too contracted and rugged for them to have been well preserved.

September 9th.—Minimum thermometer 25°; thermometer at sunrise 27°; barometer 25·89. Sending off two of the men to cut out a trail, I crossed the river, and with Burnham ascended the side of the valley to the west for 1,500 feet. It was very steep, and we had to scramble up a cleft in the slate rocks; but, after all our trouble, we got no view, owing to the dense fog, which even prevented my seeing for how much further the woods extended. The mountains are composed of blue limestone and white cherty slates with quartz veins. At night the two men returned, having cut their way to the best place where there was pasture for the horses.

September 10th.—Minimum thermometer 22°; thermometer at sunrise 25°; barometer 26·18. In five hours and a half to-day we made only five miles, even with the help of the previous chopping. In the evening I went 800 feet up the mountains, and found that they rise about 3,500 feet above the valley, and are wooded almost to the top, excepting where craggy. All the rocks I passed over, where too steep to bear heavy vegetation, were covered with a close compost of moss, which shows the difference from the climate of the east side of the mountains, where it is very rare to see any moss at all on the rocks.

The trees are now very fine, some of the cedars and pines reaching a height of 120 feet. The under-growth is very dense, consisting of cedar, white maple, and alder. The depth of decomposed vegetable mould is also great, and the forest had evidently remained undisturbed for ages. The half-rotten trunks of fallen trees are the favourite spots where seedlings of the surrounding trees take root, and I observed them in all stages, and sometimes even the young tree had grown to the diameter of six or seven inches,

and thrown root stems into the ground, grasping round the body of its nurse, before the old trunk had altogether decayed away.

September 11th.—We finished our first bag of pemican this morning, and I found that our consumption had been about 9 lbs. a day for the five of us.

After three miles this morning, we passed through a narrow chasm, and emerged in a wide valley, running to the south-east, the north-west end of which is closed by a large glacier. We now got along on the shingle flats of the river more rapidly, and in all made 16 miles this day, and camped where the river commenced to leave this wide valley, and break through its west wall, which again made the road very bad.

In the woods behind our camp the mooseberry (*Viburnum*), blueberry of three kinds, the large-leafed raspberry, and several others; also a plant with large broad leaves at the top of a thin prickly stalk, which grows in moist places to the height of three to four feet (*Panax horridum*). Besides the *Abies alba* and *balsamea*, there is a third spruce, which has the foliage silvery beneath, but has a rough coarse bark (*A Douglassii*?). There is also a good deal of hard wood now, principally maple and mountain ash.

September 12th.—Minimum thermometer 28°; thermometer at sunrise 31°; barometer 25·75. Go very slowly all day, and after crossing a high ridge, get entangled in the heavy woods of a low flat bottom along the river margin. At evening reach an open space, where the timber is principally small pine. We saw a horse-track to-day that is not older than last summer. We had seen no tracks or signs of game since crossing the height of land.

September 13th.—Leaving the men to come on with the horses, I started alone to see where the valley was leading us to. I carried nothing but my gun, so as to pass easily through the woods, and to avoid a round, struck right across a high rocky point, composed of feruginous shales and quartzose beds, traversed by quartzose veins. The fallen timber was very bad, but of course formed only a slight impediment, as I had no horse. Some of the fallen trunks were of large size, being four and five feet in diameter, and I saw, for the first time, some specimens of a pine, the cones of which were nine inches in length (*Pinus Lambertiana?*). By wading the river several times I got on pretty fast, and, after 16 miles, seemed at length to get out of the mountains, but in reality had only reached a very wide valley, running to the north-west, while the mountains that had hitherto bounded the narrow valley of Blueberry River (as we called it), now retired to a considerable distance.

Passing a large and boisterous tributary from the east, in the bed of which were numerous fragments of milk quartz, I came to where the river spread out into many channels, among white mud and shingle flats, on either side of which rise the terraces, covered with low pine woods. I saw a great number of fresh panther tracks, and a few of small deer. After 22 miles I reached a low range of hills, which lies in the centre of the wide valley, and through which the river escapes in a narrow cañon. From here I saw that the western side of the great valley was distant six miles, and seemed quite unbroken; so I concluded that I was at last in the valley of the Columbia, and commenced my return to the men. I had only retraced my steps about four miles when night came on, so I made a fire, and roasted a couple of grouse I had shot, and waited till morning.

September 14th.—It was a very thick fog, and I wakened up wet through, stiff and sore, and started when it was grey. In four hours I met the men with the horses, and found that they had come about six miles the day before and that morning. Turning with them, we reached a large stream I had crossed yesterday. Where we encamped were some large juniper trees (*Juniperus Virginiana*), which grow 25 feet high and 10 inches in diameter.

September 15th.—This afternoon we reached the cañon where I turned from two days before, and all set off in various directions to find a track.

Some days ago our goat pemican got so rotten that we had to fling it away; and to-day, when we opened our remaining bag, which was buffalo pemican that had been made at the Hand Hills, we were horrified to find, that, although it had been well enough prepared to keep in the dry prairie country, the damp weather which prevails on the west slope had already destroyed the greater part of it; and, instead of the 90 lbs., there was only a mere shell, amounting to about 40 lbs., that it was at all possible to eat, the central part of the mass being perfectly rotten. On half rations this would last us nine days. We shot several grouse to-day of darker plumage than those I had seen before; they sat so close that I killed one as it sat on the ground by hitting it with a stick.

September 16th.—As the men are off cutting the track, we do not start till I get the latitude at noon, 51° 30′, so that in our tortuous course down this valley we have taken nine days to make 16 miles of latitude, and without altering our longitude much.

We only made three miles in the afternoon, when we were again at fault; and as we were at a good feeding-place for the horses, we encamped rather than run a risk of causing them to pass the night without food by going further. The hills we passed over this day are composed of white talcose slate, limestone, and quartz veins. Burnham says it is just like the California gold rock, so some of us hunt gold, and the rest seek for a track to the Columbia River. We got a few specks of what was thought to be gold, but I had my doubts on the subject. The others returned, having found that we were within two miles of the Columbia River, so that they were in great glee at being at last out of our difficulties as we supposed.

September 17th.—Early this morning we reached the Columbia, and followed down for a few miles to a good feeding-place. We found here plenty of horse-tracks, but no sign of a trail; and immediately beyond this the river winds close under wooded hills, where the forest is on fire, and there is so much fallen wood that we would not be able to make two miles a day. The valley is from four to six miles wide, and the mountains to the west are very steep, but do not appear to be higher than 3,000 feet. The river opposite to our camp is divided by a large island into two channels, each 180 yards wide, very deep and sluggish. Along the banks we found a good many dead salmon, which had, no doubt, been worn out by their long ascent from the sea.

We afterwards saw them all the way to the source of the Columbia at the two lakes, or at a distance from the mouth of the river of 1,100 to 1,200 miles, and at an altitude of 2,600 feet above the sea.

The latitude here was 51° 25′ N., longitude by account 117° 30′ W. The barometer reading from

the mean of boiling-point observation for two days was 27·41, and I estimate the altitude at 2,300 feet above the sea level, which also has been our descent from the height of land at the source of the North Saskatchewan.

We now had almost constant rain, with only short glimpses of sunshine. The temperature was much lower than I should have expected, generally falling below the freezing point every night; but my thermometer had become deranged, and a few days after this I broke it in attempting its repair, so that I have no more records.

September 18th.—Having now only half rations of pemican for six days, and most of our horses being tired and feeble, I saw it would be useless to attempt to push our way through such dense woods to the boat encampment, where the main part of the exploration for this year would only commence, which was to find a route for horses between the Columbia and Frazer Rivers. The only thing I could have done, was to abandon the horses, or send them by three of the men to meet Captain Palliser at Colville, and with one man to descend the Columbia, if we could find a canoe of any kind, as far as the boat encampment, and then to make the traverse to Frazer River on foot. I seriously thought of this plan, but, had I adopted it, I should have settled nothing, as the Shonswap Indians, I know, could leave Thompson River, and by some such route reach Jasper House, carrying heavy loads, in 14 days; whereas, the great object I sought to effect, was to pass with horses, there being but few places in the Rocky Mountains where an active and determined man cannot pass on foot. The alternative was to follow up the Columbia, although the woods looked about as bad in that direction, but then I knew that after I reached its source, the country is open and inhabited by the Kootanie Indians, who, having large bands of horse, would be sure to have good trails. With great reluctance, therefore, we started for the south, which we all felt was very much like a retreat. Recrossing Blaeberry River at its mouth, we passed through dense woods till we reached a chain of great swamps, which occupy the whole width of the valley, excepting the river channel. The river, which is deep and sluggish, winds very much, and in the present state of the water is contained by high banks, like natural levées, covered with a dense growth of willows, and behind which are the low flats, and which, no doubt, during floods, are fed by back-water from the river. These swamps also have their edging of willow thicket, and from these the side of the valley rises at once clothed with dense forest. The choice of road was thus between scrambling and log-hopping along the rocky hill-side; cutting, hewing, and squeezing through the willows; or plunging and splashing through the swamps. We tried them all in turns during the following ten days, and could hardly tell which was worst. As we went along to-day we killed several grouse and a skunk, which animal Beads prepared for supper in a most skilful manner, so that it was really very good eating.

After we encamped we heard some one calling out down by the river, and found that a couple of Shonswap Indians had heard us firing and had come up the river in a rough "dug out" wooden canoe, in search of us. We were very fortunate, as it proved to be Capôt Blanc, the chief, who was for a long time the Jasper House guide for crossing the mountains. The other Indian was his son, and they looked the most miserable dirty pair of Indians I had seen. They staid with us all night, and in exchange for some tobacco and ammunition gave us some of the flesh of a black bear they had just killed on the bank of the river as he was feeding on the dead salmon. We also got some dried sifleurs and goat's flesh, but which was of no use to us, as it was rather high flavoured for any stomach but a Shonswap Indian's. Capôt Blanc, who spoke a mixture of French, Cree, and English, said that it would take three days to go down stream in a canoe to the boat encampment, and that from there he knows a road by which he thinks horses could be taken to the head of Thompson's River (Kamloops, he called it), but that it was so bad with fallen woods, that it could not be done this season before the snow. He told us that we would sleep six times before we reached the Columbia Lakes, where we were now bound for, and that the road was bad, and it might take us longer, as no one ever passes it with loaded horses. The Shonswaps have a few horses, which they sometimes bring as far down the river as where we turned from, but they drive their horses through the woods like deer, and carry all their things in canoes by water.

September 19th.—Constant rain. Only make six and a half miles to-day, and camp on an island in the river covered with pines, birch, cedar, hemlock, spruce, juniper, cherry, and service-berry trees. Some of the timber is of large size. The rain continued so heavy and the fog so dense all the 20th that we did not move from camp.

September 21st.—Still rainy, but not so bad as yesterday. Leaving the river, we ascended for 600 feet, and gained a level shingle terrace, along which we passed a little more freely, till after five miles we reached Kicking-horse River, which here joins the Columbia from the N.E., I suppose about 15 miles below the point where I struck it last year at the mouth of Beaufort River. We found it deep and difficult to ford, and the current was so strong that it swept down one of the horses for a long distance before he managed to get ashore in safety.

The terraces were well marked along the sides of the valley at this place, and I observed a section, which shows that the material composing them consisted of stratified beds of white calcareous mud, moist sand, and gravel, which had been disturbed and tilted at an angle before they were moulded into the horizontal terraces. The underlying rocks are slates. We saw in several large lakes in the valley, to-day, geese, swans, and other wild fowl, but could not get a shot at them. Every evening large flocks of geese pass on their way south through the valley.

The strata which form the mountains to the west of the valley seem to be very little disturbed, but otherwise resemble much those of the eastern part of the mountains. Each day's march up the valley of the Columbia was much the same until the 29th, when we reached what old Capôt Blanc had expressly described as a "rub-a-dub" track, which meant, so good that the horses could trot.

On the 23rd our latitude was 51° 9′ N., and on the 25th 51° 2′ N., and as our course was to the S.E., it may be judged from this how slow our progress was. We generally travelled all day, but, perhaps, might have gone a little faster, only the rotten pemican and the constant wading in the swamps made some of us ill for a few days, and, as we were attacked with boils, walking was hard, and riding impossible.

The features of the valley remained the same, the sides being rugged and furrowed by deep channels worn in the shingle deposits, which had nearly destroyed their terraced form. The timber also con-

tinued dense, with a predominance of spruce-fir, and underwood of plants of a northern type. Gradually the forest was less dense, however, as we approached the slight angle which the valley makes about latitude 51°, changing its direction from N.N.W. to N.W. On passing this point, in the forenoon of the 29th, the change was very marked. The wide swampy bottom of the valley was now occupied by dry level terraces, which supported a growth of pine, free from underwood, and gave the horses a hard firm footing, so that we got along at a good pace. We soon came to a group of old lodge poles, which, with the well-beaten track, showed that we were now in the country of the Kootanie Indians. We camped in a small clump of spruce, which grew around some calcareous springs.

September 30th.—Two Shonswaps joined us this morning, having seen us from the river the previous day. They made us understand that their camp was some days' travel further up the river yet. They rode on with us till noon, and, as they were riding good fast horses, I made a bargain with them, and changed three of ours that were very tired for the two fresh ones. The latitude here was 50° 47′.

The open appearance of the country was very pleasant to us, and even seemed to put new life into the horses. The ground was dusty, and the bunch-grass is more sparse than turf, but in other respects it was like riding through the open glades of a deer park, and if we had only been supplied with a sufficiency of good food at the time, there are few spots in the country that would have left a pleasanter impression than the upper part of the Columbia Valley. The trees are principally the same kind of rough-bark spruce-fir that we first saw at the Bow Fort, and known as the prushe, although it is not the real hemlock of Canada, but has a larger cone, and falcate leaves. The mountains are composed of limestone, from which I obtained carboniferous fossils. They do not rise more than 1,500 to 2,000 feet above the valley. Those to the west are only very little higher, and are wooded nearly to the top, but they present an almost unbroken wall. During the afternoon we crossed several creeks, which had wide deep valleys cut through the shingle deposits. The sage (*Artemisia tridentifolia*) now became very common, being the first time we had seen it almost since leaving the Cypress Hills. Elk or wapiti must at one time have been very numerous in this district, as we saw a great many antlers lying on the ground, and sometimes the Indians had piled them in heaps of 50 or 60 together; but the open nature of the woods, and the limited range, excepting up and down the valley, must have made them an easy prey to the Indians as soon as they acquired firearms. We have not seen a single track of an elk yet in the valley, and but only a few of the smaller deer.

October 1st.—We are now having splendid weather, with clear hot sunshine all day. The terraces are composed here almost entirely of the calcareous mud, and it has frequently given way below the surface, and the water finding its way through cracks, has produced large caves. Sometimes a cliff 200 feet high bounds the river, and some of the chalky material is hard enough to withstand erosion, and so give rise to pinnacles and grotesque forms.

We passed for some miles close along the river margin this morning, and I was surprised to see it still of such large size, but with only a current of about one and a half miles an hour. We saw a number of the great fishing eagles perched on the tops of dead trees that overhang the river watching for salmon. By carefully approaching through thickets I got two shots within the distance of a mile, and killed both birds. They were nearly of the same size, five and a half feet stretch of the extended wings, and two feet nine inches from beak to tail, but the one had a white crest on the head and a white band on its tail, while the head of the other was brown and the tail black. Both were males, and the difference in plumage must have been due to the age.

At noon we reached a succession of open prairies, and passed the end of the trail from the Vermillion Pass, in latitude 50° 29′ N.

There are some large specimens of the "prushe" here, but the thickets are formed of the silver spruce.

We found in the evening that we had passed the Lower Columbia Lake, where there is a Shonswap camp, without observing it, owing to the woods. The trail now resembled a well-beaten cart road, the parallel horse tracks forming deep ruts like those produced by wheels.

October 2nd.—Early this morning we reached the Upper Columbia Lake, and to pass along its eastern shore required us to ascend about 400 feet above its waters, and wind along the face of the precipice of cherty carboniferous limestone resting on slate, both dipping to the N.E., but the latter at a very high angle, by a rocky and different path. The opposite side of the lake, however, is low and flat for a considerable distance, and a wide valley branches off to the S.S.W., thus cutting through the mountains which bound it in that direction. The stream which leaves the lake is of good size, and is the source of a mighty river that has to flow about 1,200 miles before it reaches the sea. The lake is six or eight miles in length, and on reaching the upper end of it, which is the real source of the Columbia, I found the latitude to be 50° 7′ 35″ N., and the converted temperature of the boiling-point of water 27·219 inches. The valley in which we have been travelling S.E. by S. for so many days does not terminate here, but is continuous with that of the Kootanie River, which flows in the opposite direction to the Columbia, and is separated from the upper lake by a level tract two miles broad covered with open timber, the trees being of a kind of pine I had not before observed, and which proved to be the *Pinus ponderosa* of Douglas. The Kootanie River breaks into the wide valley from the N.E. through a rocky gorge, and, where we met it, is a swift stream of 100 yards in width. We found two families of Kootanie Indians here drying salmon, which they had caught in the Columbia Lakes, there being none in the Kootanie River, as they cannot pass the great falls that occur close to where it joins the Columbia.

A few miles after fording the Kootanie River, we encamped in a forest of noble trees, principally of the pine I have mentioned, and of a gigantic larch (*Larix occidentalis*). I measured one of the former of average size, and found it to be 120 feet in height, and 11 feet in girth at the height of four feet, but the sturdiness of the trunk and branches gives it a much more massive look than their proportions convey the idea of. Its bark is dull red, and divided into oblong plates of large size separated by deep fissures. This bark is four to five inches thick, and makes splendid fuel, as it contains much resin. It is indeed almost the only fuel to be got in travelling through forests of this pine, as there is rarely any smaller wood, and were it not for the great sheets of bark lying about the traveller would often have to go without a fire, although in the midst of a forest. The leaves are in threes, with long silky sheaths; the cones three to four inches in length; the scales closely packed at the base, at the apex large and

open. The larch is a taller and more slender tree, but some I saw were five feet in diameter. The bark is smooth and of a light red colour. We also saw groves of the cypress.

October 3rd.—We were now following a well-beaten trail, the same as that travelled on by Captain Palliser the previous summer. It leaves the river, and passes to the east of a rocky hill that rises in the centre of the valley. At noon our latitude was 49° 50′ N.

In the afternoon we made up with a family of Kootanie Indians, one of whom talked Cree fluently ; his name was Alick, and he was the same Indian who guided Blackiston through the South Kootanie Pass last year. He had just been up at the Vermillion Plain, and told us that he saw my horse-tracks and our encampment of the previous summer. The Indians camped with us, and we had a long talk with Alick about the best way of getting down to Colville. He says there are two roads, the shortest of which, if it were not for the fallen woods, could be travelled in seven days. The other has a good clear trail all the way, but is rocky, and so circuitous that it takes five days longer.

Alick knows the country to the west of the Columbia, and has gone from the boat encampment to Thompson's River, and thinks that there would be no difficulty in taking horses excepting from the fallen timber. There once was a good trail from the Columbia Lakes to the west, but no one has travelled it for many years, and he thinks it must now be blocked up with fallen trees. He knows of no snowy mountains to the west of this excepting up towards the boat encampment; all those south of that point being wooded hills, but which are steep and high. During the night we had very hard frost.

October 4th.—Eight miles further down the valley brought us to a Kootanie camp of 20 tents, where we met the old chief Mitchell, who traded the young ox to Captain Palliser's party. They were just starting to pitch their tents six miles further down the valley, so we continued on, and encamped with them. They had a band of about 500 horses, many of them being beautiful animals and as wild as deer. They have also 10 or 12 cows, and in the evening we got them to lasso one for us to milk. The encampment was prettily situated, at a considerable elevation above the river, in an open pine forest; and as soon as the tents were pitched the women crouched round us to give us meat and berries in exchange for some needles, thread, awls, and small trinkets I had with me. Their principal food consists of cherries and service-berries, which they beat up into a paste, and then dry in cakes. They had also some fine dried flesh of the moose and buffalo, which they had procured on the east side of the mountains, from whence they had only just returned. We soon got a good stock of provisions from them, enough, at least, for six or eight days; only it consisted of rather an excessive proportion of the dried berries, which did not look a very inviting kind of food.

These Kootanies are very fine Indians, being remarkably free from all the usual bad qualities of the race. The women are rather comely, and the men, though small, are well built. However, they were in good condition, having plenty of food at present; for Captain Palliser described them as being last summer the most miserable tribe he had seen. They are all very religious, having been converted by the Roman Catholic priests. Frequently, and at stated times, a bell is rung in the camp, and all who are within hearing at once go down on their knees and pray. This well-meant custom had rather a ludicrous effect on us once, for, in the evening, when a couple of Indians were holding a cow they had lassoed for us, and Beads was busy milking it in spite of its kicks and struggles, the little bell was heard, and down popped the Indians on their knees, letting go their hold of the cow without any warning to poor Beads, who was, of course, doubled up in a twinkling, but without any damage beyond the loss of the milk.

We were now opposite to the ford for the short trail to Colvile by Chos-coos Creek, and at first I got Alick to promise to go so far with us as guide, for both he and Mitchell said that the first day's journey was much blocked by timber, and we would require to make a round, and fall on the track further on, and this we could not do very well alone, without a risk of again getting entangled in woods, and that neither the present condition of our horses or larder would warrant us doing. However, Alick drew off from his promise, and strongly advised us to follow the trail by the Kootanie trading post, so I thought it as well to take his advice. I was sorry for this afterwards, as, if I had gone by the short trail I would have completed the little piece which Sullivan left untravelled, and would have exactly met him on the height of land of that stream, where he encamped on the 6th, while I was only 20 miles to the east of him.

October 5th.—We went for two hours to-day, still accompanying the Indians down the valley, and again encamped with them, as I was negotiating for a change of some of our horses. There is very fine pasture in some parts of this valley, and they say that there is hardly any snow on these prairies in the winter, although the cold is severe, so that the horses do not lose their condition even in spring.

October 6th.—Leave the Indians, and travel rapidly, having got two fresh horses in place of them that were tired and footsore. At noon, in latitude 49° 24′ N. Our friend Alick stuck with us most of the day, but we got about five miles beyond where he encamped by evening.

October 7th.—After going an hour this morning we crossed Elk River, close by where it joins the Kootanie. We then passed through fine open forest land, growing on the shingle terraces, which are cut up by ravines. At where I thought the 49th parallel must cross the valley it is rather contracted, and we passed along the slide of an abrupt slope to our left. We then reached a second wide expanse of prairies, the first being where we left Mitchell camp. Crossing them at 1.30 we reached the Kootanie post. It is merely a little log cabin, and we found Mr. Linklater, the Company's clerk, who is here alone, in charge of this place, being in a canvas tent. He only arrived with his goods from Colvile 10 days ago, having taken 19 days to make the trip, as his horses were in bad condition. The goods are brought here, packed on horses, in the end of summer, and distributed to the Kootanie Indians, who bring in their furs in return by the beginning of March, and then before the snow melts they are conveyed down to Colvile in the manner the goods were brought. The return trip at so early a season is justly considered one of the hardest and most fatal to horses that is made in the country; but if it is not effected before the floods commence, the rise of the rivers and lakes is so enormous that the country becomes quite impassable until the end of July. The furs got at this post are of good quality, and generally amount to 200 bears (principally black and brown), 600 martens, 300 beaver, &c.

Linklater was glad to see us, and very kindly supplied us with a few luxuries, which I am afraid he could ill spare from his slender supplies. Among these was tea, which we now tasted for the first time

for more than two months, during which we had tried a variety of abominable substitutes for that best of luxuries to the traveller.

October 8th.—The latitude of the Kootanie Post I found to be 48° 55′ N., or five miles south of the b undary line. Its altitude above the sea is about 2,300 feet, or nearly the same as the plains next Fort Edmonton.

Linklater told me about the party of Americans who so unwisely started in the beginning of last October from Edmonton, to cross the mountains by the Kootanie Pass. They arrived in a sad plight at this place in December, one of their number having slid over a precipice on a snow bank and been killed, and several of the others having lost parts of their feet, and been otherwise injured by frost-bite. Those of the party in this state remained with Linklater till spring, and the rest tried to push on to Colvile on snow shoes, but only two of them got there, and not till long afterwards. The rest, four or five in number, straggled about the different Indian camps they met with in a dreadful state of privation, living even on the bark of trees. At least one more of the party died, but it is thought that the rest got down to the settlements. The disastrous consequences of this fool-hardy journey, which they attempted in opposition to the advice we gave them at Edmonton, did not arise from any great difficulty which they encountered more than is incident to all winter travelling, which no one used to the country is mad enough to attempt without a suitable equipment, but with which they were totally unprovided. From what I have heard and seen of the country, I believe it would be no great feat to travel from Fort Edmonton to Fort Colvile by the Kootanie Pass in 30 days, using dogs and snow shoes, but any possible display of pluck and energy would not take through a party of travellers inexperienced in the ways of the country and encumbered with horses. However, I do not think that the party of Americans got any of their horses as far as the Kootanie Post.

Just as we were starting this afternoon, an Indian arrived with a foaming horse, bringing the news that a party of eight Americans were crossing by the south Kootanie Pass, having come by Fort Benton on the Missouri. He said that their horses were tired out, and their provisions had failed, so he had come to get food and fresh horses for them.

Gold has been worked from the bed of the Kootanie River at this place, but as yet not in large quantities, the experiment having just been made from curiosity.

The great valley through which we had followed the Columbia to its source, and then down the Kootanie River to this place, appears to be continued to the south-east by extensive prairies, and in following down the left bank of the Kootanie River, we now, with a course to the south, broke through its eastern boundary. The trail, which has been long used by the Hudson Bay Company, though well marked, is rocky and bad, passing through a very confined valley We therefore got on very slowly, compared with the rate we had been travelling for the last few days On the 10th, at noon, we were in lat. 48° 40′, and here we met a party of Lower Kootanie Indians, paddling up stream. Their canoes were of a most singular shape, somewhat resembling the recently proposed "sugar boat." They are made of a large sheet of the bark from a particular kind of spruce-fir, which is sewn up at both ends, but sloping outwards at each end, so as to form a conical point. The length of the bottom is, therefore, about 10 feet, while the space within the gunwales is only seven feet. They are sewn and gummed together, and have light gunwales and ribs of split willow. They carry a fair load for their size, and are most easily paddled by only one person, who, sitting at the extreme end, sinks one conical point that acts as a tail, while the other is canted out of the water. The round smooth surface then presents the smallest possible resistance to the water. The point, being strongly bound with wattles, will stand a severe blow, and therefore acts like a beak to ward off the rocks in running rapids. From their shape they are, of course, more easily upset than any other kind of canoe; but in skilful hands are well adapted to the work. As I knew that we would have to cross to the right bank of the river next day, I tried to engage one of the Indians to return down the river in his canoe to the crossing-place to save us making a raft, but they got sulky and refused, because I would not make some ruinous bargain of horses which they proposed, for, besides those in the canoes, there was also a party travelling by land. However at night after we were encamped, the old chief "John" and his wife overtook us, and said that they would cross us at the right place next day, at the same time making us understand that they were ashamed of the conduct of the young men in refusing to help us.

October 11th.—Twelve miles further to the south brought us to the crossing-place, where the river abruptly changes its course to the W.N.W. It is very deep, but with a feeble current. With the Indians' assistance we soon got all our things over, and, as the whole of the timber and grass had been burnt from the valley, we were obliged to go on for nine miles further. The vegetation in this narrow valley was again very like that of Blaeberry River, showing that it is not the elevation, but the climatal condition, which causes the marked difference in the flora of different parts of the mountains. The sides of the valley rise into wooded ranges of hills to the height of 1,500 to 2,000 feet, and these ranges, rising in S.S.E. direction, are successively broken through by the river valley. They are composed of dark argillaceous and cherts, with quartz veins, thrown into flexures parallel with the mountains. In the wide valleys, between the different ranges, there is some fine land, but, as it consists of terrace levels, it is always light and gravelly. In passing through the cañons the track is always very bad. At noon on the 12th, the latitude was 48° 30′ N., when we halted in the first of the wide valleys. The weather was very cold now, and we had a good deal of snow, which, however, only lay on the mountains, and not in the valleys. On the 13th we passed through a second cañon, in which there occurs a fine fall, where the river ripples over a shelving rocky channel, and then plunges into a deep chasm, bounded by perpendicular rocks, where the water seems to lose all motion. In the bed of the stream I found some fragments of coal, but we were hurrying on too fast to enable me to make any examination of the country.

On the 14th we turned to the north-west, and followed a wide valley, where the terraces are finely developed to the height of 400 or 500 feet above the river. We had in consequence much trouble in crossing the gullies which joined the valley, and where the spring floods had generally cut through the soft shingle to a depth of 700 feet.

On the 15th we came to more open country, where the valleys are occupied by extensive swamps, like those of the Columbia. In the afternoon we reached the Paddler Lakes, which are swampy lakes of this description that do not communicate with the river. As the Kootanie River turns about directly north from this point, we again required to cross to its left bank, and by good luck we found a party of

Indians here, who for a little tobacco soon ferried us over. The river is 160 yards wide at this place, deep, with a steady current of about three miles an hour.

From this place we struck to the south, and following up the right bank of a small stream to its source, and then descending along another which flows to the south, on our third day we reached Kallespeline Lake, all the way passing over good hard country, with fir timber. One night only, being caught by a snow storm in a dense forest, we were obliged to camp without any grass for the horses. Some of the timber we passed through was of great size, the cedars sometimes reaching eight feet in diameter. On the 18th, when we reached the lake, the snow was four inches deep, but it disappeared again in the course of the day. Kallespeline Lake is said to be 45 miles in length, and, excepting the north-west shore, along which we skirted, is closely hemmed by rounded mountains of granite. The extraordinary height of the spring floods is shown by a clearly-marked white line on all the trees and rocks that border the lake, 11 feet above the present level of its waters, which is an enormous rise for a lake which has a superficial area of 80 to 100 miles. We passed over some fine meadow land which skirts the lake, but it must all be deeply overflown in spring, at which time the lake communicates with extensive swamps and morasses in the forest, so that the country is perfectly impassable till the water recedes, and allows a passage along the shore.

The facility for navigation upon this river and lake has been pointed out by Dr. Suckley, in his report. (Pac. Rail., vol. 1, p. 292.) That explorer in 1853 made a most remarkable trip, starting from St. Mary's, on the Bitter Root River, with three men in a skin canoe, which, when it rotted, he changed for a more substantial craft. In 53 days he reached Fort Vancouver, a distance of 1,049 miles by the river. In this distance he only required to make three important portages, one above Kalispilin Lake, of 1,300 paces, one at the Dulles, of 800 paces, and one at the cascades, where there is a wooden tramway, of 1½ miles.

We followed down Clark's Fork, which flows from the Kalispilin Lake for 12 miles, when we were again so fortunate as to meet with Indians, who ferried us across in their canoes. The river is sluggish and deep thus far, and is said to continue all the way to St. Ignatius Mission, which is 20 miles lower down. We here met in with some travellers from Fort Colville, bound for the Flat-head country, and they advised us to go round by the Spokane Plain, as there was snow on the Kalispilin mountains, over which the ordinary and shortest road passes.

On the 20th we rode hard all day to try to reach the Cour d'Alem River, where there is a farm where we expected to get some provisions. The trail leads through beautiful level open wooded country, till we reached the Spokane Plain, which is evidently an ancient lake-bottom. We skirted along its western margin, where it is bounded by rounded hills of gneiss, and when night overtook us had to camp without water for the horses, or supper for ourselves.

Ten miles further, next morning, brought us to Plant's Farm, where we obtained some flour, and a little further on we met with some Indians, from whom we got a fine dried salmon. Our course now turned to the N.W. over great lava-flows, which form the mass of the country to the south of the Kalispilin Mountains.

On the 23rd we struck the American Military Road, 66 miles from Colvile; and, leaving my men to follow slowly, I rode on alone, and reached that place on the same evening, and found Captain Palliser and Sullivan both there, and just dispatching letters for England. My men arrived two days after me, and were paid off, with the exception of Beads, and they at once started for the Smillcomen Gold Mines, which are about five days' journey to the N.W. I found all the arrangements made for descending the Columbia to the sea, a description of which journey is given in the general journal.

Captain Palliser's Journal, continued.

August 3rd.—On this day our party broke up: Captain Brisco and Mr. Mitchell started for the south, en route to Fort Benton on the Upper Missouri. Doctor Hector shortly afterwards started for the Old Bow Fort, accompanied by our servant Beads, Burnham, M'L and Oliver, and the Stoney hunter. Dr. Hector's object was to connect the passes which he had previously explored across the Rocky Mountains with the Forks of Frazer's and Thompson's Rivers in British Columbia by a northerly route, avoiding the valley of the Columbia.

August 4th.—Travelled along a sandy plain, interspersed by a few insignificant swamps and pools, most of which were salt. Passed to the northward of the three remarkable American hills, known in the maps by the name of "Trois Buttes:" they were about 40 miles to our south. Owing to the level nature of the intervening country and the detached structure of these hills, they appeared like the tops of three distinct rocks seen over a sea horizon. Here our well-worn carts, so often previously patched up, began to give way altogether, and the first total smash occurred; the cart was actually crushed beyond hope or any efforts to repair. Made about 24 miles. In the night we had heavy rain, and consequently enjoyed good water.

August 5th.—Started early, pursuing our course along the boundary line. Another cart broke down, and we had to distribute its load among the others; we were now reduced to five carts. I cut off the shafts, and took away other portions which might prove useful in repairing future accidents. At noon we came upon a large perfectly dry river-bed, about 500 or 600 yards across; my Blackfoot half-breed assured me there had been no water in it since the time of the flood, and it was in consequence of a different order of things, that the Missouri now flowed instead. I did not argue the point, but agreed with him that the waters from this singular river once flowed into the Missouri. We had great difficulty to descend into this ravine, and had to follow along the crest of the left bank for several miles, before we could effect a descent, where the general height of the banks was from 180 to 240 feet. We travelled along this river-bed back to the southward. Found a cluster of small springs, containing excellent water. Breakfasted a little before 12, in latitude 49° 25′ N.: made 17 miles.

August 6th.—Made 12 miles before breakfast over an arid plain. A violent thunderstorm came on, which lasted till 1.30 p.m. After this it cleared up, and we still saw the "Trois Buttes" bearing to the E. of S. of us, looking wonderfully clear considering their great distance. We were travelling over an arid prairie, so level as to be devoid of any points by which we could continue our direction unvaried. The sun became overcast, and we had frequent recourse to our compasses. The day was

very cold, accompanied by wind. We camped without water, but it fortunately came on to rain in the night.

August 7th.—We were in sight of the Rocky Mountains. We now guarded the horses no more; from the point where we all separated the dangers arising from horse-thieves were daily diminishing as we progressed to the westward. Started a little after 6; stopped at 11, where there was a little water, both brackish and sulphureous. Killed an antelope while the others were camping, not expecting to find water; the pursuit of the animal took Felix and me over some miles of country, in crossing which we came upon a fresh-water swamp. Felix returned to camp to apprise the men, who came up with me a little after dark. Latitude 49° 47′ N.

August 8th.—Started at 7; made 10 miles; arrived at Belly River and had some difficulty in finding a crossing-place; the men had proposed deferring the crossing till to-morrow, as it was now late, I overruled this however, and promised to serve out tea and sugar if the crossing was effected that evening. All worked hard, we rolled up the tents into the form of bowls, used them as boats to transport the baggage, and swam the horses across. I preferred doing this late in the evening, as we not only gained time, but were enabled to go into the water at a higher temperature than if we had waited till morning. Our tea and sugar were now rare luxuries, which we enjoyed only on Sundays and particular occasions.

August 9th.—Started for the Porcupine Hills, which we had visited about this time last year, when on our branch trip from Slaughter Camp to the boundary line. We had now traversed the level and plain through which the 49th parallel runs, and had suffered a good deal from scarcity of good water and grass. The few small swamps and marshes on which we were forced to depend, were all more or less impregnated with sulphates, and the grass in their neighbourhood scarcely sufficed to feed our horses. In the evening of this date we arrived on a tributary of Belly River, where we killed some deer. Lat. at noon, 49° 44′ N.

August 10th.—We began to shape our course to the northward, in order to strike the entrance of the Kootanie Pass. The ground was much burned, probably by a party of Kootanies on their return to their country west of the mountains after their summer hunt. Lat. at noon, 49° 37′ N.

August 11th.—Occupied the greater part of the day in hunting; killed two deer, providing food for crossing the mountains.

August 12th.—Hunted all day; killed some ducks and two grizzly bears. The country was rich, undulating, and grassy. We were now in the mountains, the carts had arrived at the last point which was practicable for them to reach. The berries at this altitude, of about 800 feet, were still eatable, although past the season below. Lat. 49° 36′ N.

August 13th.—Laid out our luggage and property into two lots; one to take on with us across the mountains, containing our provisions, bedding, and some articles with which to give boot in exchanging tired horses; the other lot to go back in carts to Edmonton. We then made a present of the two best carts to the men, to take their things and also our own useless baggage back to Edmonton. We then proceeded to break up the other carts, and make pack-saddles out of the wood they supplied, and the raw hides of the animals we had killed. Late at night my hunters returned unsuccessful.

August 14th.—Settled accounts with the men, who returned to Edmonton, paying them in horses, and in orders on the Hudson's Bay Company's store at Edmonton. Shortly after, we started with 20 horses for the height of land. We made about eight miles, when it came on to rain, and we encamped for the night.

August 15th.—Fell on the Kootanie track on the left bank of a small stream, tributary to Moocoman River. On each side of us were steep thickly-wooded mountains, the undergrowth very dense. Here we lost one of our horses. After a laborious search, and much delay, we abandoned the animal. About this time we met a band of Kootanie Indians upon the trail, on their way to the plains to hunt buffalo. Started again in the afternoon, and travelled three hours and a half, crossing the flanking, or Curtain range of the Rocky Mountains, about 2,000 feet above the level of the plains, and descended to a swampy well-wooded valley, and camped on one of the numerous little tributaries of Bow River. I have already given a description of this, the British Kootanie Pass, having recrossed the Rocky Mountains in the beginning of September 1858 by that Pass on my return to Edmonton from my exploration of the Kinnonaskis Rocky Mountain Pass.

August 16th.—Before we had started in the morning an Indian came into camp, driving before him the horse we had lost the day before. He had seen his track beyond the entrance of the pass, when the animal had been returning to the plains, he had followed him up, and recovered him. Subsequently he learned from the Indians, from whom he had separated in order to hunt that morning, that the horse had been lost by our party; and the man immediately started off, travelled all night, crossed the Curtain Range, and overtook us before starting. The horse was a valuable one, and the poor fellow could easily have taken possession of him without my ever having discovered the thief, and had undertaken an arduous and somewhat dangerous night journey to restore the animal. I, therefore, rewarded him very handsomely, giving him a blanket and 50 rounds of ammunition. We now started, and for the first three and a half hours pursued our way through wood and swamp, and stopped to breakfast at the base of the last and most lofty ascent, that which I conceive to be the watershed of the continent. Our path was a zigzag through woods, which became stunted as we obtained an increased altitude, and a little before sunset we reached the height of land, whence we saw the waters which descend to the Pacific. Here the view of the mountains, especially to the northward, was magnificent; we were now on a mass of mountain more than 6,000 feet above the level of the sea, contemplating snow-clad masses in the north-west horizon of more than double that altitude.

August 17th.—Started after an early breakfast, and after a very severe day for the horses came out of the mountains along the left bank of Wigman River; did not halt for noon, and camped at six. There was not much obstruction from fallen timber; the wood was dense, consisting of several kinds of pines and fir, also larch in the hollows.

August 18th.—Started early, and arrived at two Kootanie tents. These people possessed cows, as well as oxen and horses, and had milk in abundance. We exchanged some tired horses with them, and traded a very lean young bullock, as our provisions were nearly exhausted; remained in camp the whole of the 18th and 19th, making inquiries concerning the different modes of proceeding to Colville,

and exchanging some tired horses, giving boot in ammunition, clothing, tobacco, or anything else we could spare. We learned that there was a trail direct to the Paddlers' Lakes, but we were dissuaded from trying it, and concluded to follow instead the Hudson's Bay Company's trail, following the valley of the Kootanie River. The description of this route was very discouraging. Old Joseph told us we should follow the left banks of the river for four days, and then cross on to the right bank, and follow on to the Paddlers' Lake, which would take four days more, and from thence to Colville eight days more. My intention had been from this place to have turned to the northward, followed up the Kootanie River to the entrance of the new "pass," which I established the year before, and thence to have endeavoured to cross the country, keeping north of the 49th parallel as far as the Columbia River; but we learnt that there were no Indians then fishing on or near the source of the Columbia, nor to the northward of us on the Kootanie River, as they had gone to the Columbia Lakes; so not having sufficient provisions, nor seeing any probability of getting a supply, I determined on taking the Hudson's Bay Company's trail, through the United States' territory, to Colville, there to change horses, lay in a stock of provisions, flour and pork, and renew the explorations from thence.

August 21st.—Travelled all day from sunrise till a little after 11 o'clock, when we stopped to breakfast, then travelled on till sunset, and camped. Made about 22 miles. The track was very bad indeed.

August 22nd.—Started at seven; travelled till noon over a very bad piece of track; started again at four, and travelled till six; made about 18 miles. Both these days we have been travelling in thick pine woods, without much undergrowth, and the soil rather good, but light and sandy. The banks of the river were tremendous; we literally passed between chains of mountains. These have been the highest river banks I have yet seen. It rained in the night.

Arrived at the crossing-place on the Kootanie River; latitude 48° 28′; longitude 105° 5′. Made a boat of the tent, and constructed a raft besides with logs of wood and horse lines, the river was very deep, and water icy cold. Rained in the night.

August 24th.—Travelled till 12; stopped to breakfast. Started again at 3. The track, which had hitherto been very bad, was now much improved. Camped a little before six; made 12 miles. Where we breakfasted we saw some elder bushes of great luxuriance, exhibiting shoots of this year's growth nearly 12 feet long. The banks of the river still mountains, and last year's snow lying on them in some places.

August 25th.—Lost a great deal of time hunting up the horses, which had strayed very far; the track was very bad indeed. Our horse which carried the ammunition fell over the cliff into the river and was drowned; we fished him up however, and recovered the ammunition. Shortly before camping passed a magnificent succession of falls on the Kootanie, a rapid bend in the river causing it to assume the appearance of issuing from an alpine height at the back of the scene, while in the foreground the water roared through two spaces compressed by a triangular island rock. Track very bad all day.

August 26th.—Started early. Here again I had the misfortune to lose another horse, once the finest of my whole band, my own horse Carlo, brought by me from Red River in my spring trip of 1858. He was now unable to go any further, and unable any longer to make his way across the rocky precipitous track we were following. We tried hard to force him onwards to where the poor animal could stay in a spot where there was grass, but could not succeed. I therefore left him behind, and sent back two of my men to shoot him, considering that as being a more merciful way of terminating the faithful old animal's existence than leaving him to endure the more protracted agonies of starvation. We stopped to breakfast at 10 a.m.; made about four miles of desperate climbing. As we were at breakfast an Indian and his family came up; he seemed an intelligent fellow, and did a little business for the H. B. Company. We started again at three, and travelled till after six o'clock.

August 27th.—Started early, and stopped to breakfast; after breakfast the track was far better, and we made a good day.

August 29th.—Had considerable trouble in finding the horses; arrived at Paddlers' Lakes. These Indians were encamped there; they are quite amphibious; spend the greater part of their lives in their small canoes, which, unlike the generality of canoes, are longer at the bottom than the top; they are very frail little crafts, skilfully put together, though far inferior to the birch-bark canoes of the Canadian voyageurs. As soon as we arrived at the river bank several canoes put off and took us and our baggage across.

The canoes are generally paddled by two Indians, who both paddle on the same side, first giving a few strokes on the right, then changing to the left side at the same time. They live principally on fish, which seems to agree with them, particularly the women, who are remarkable for their comeliness, clear complexion, and the symmetry of their limbs. At this point of our journey I determined to purchase a canoe, and proceed to Colville by Kootanie River and Flat Bow Lakes to the junction with the Columbia, and thence down Columbia River to Colville. I traded a canoe on credit, promising to send back, by the two Indians that accompanied me, a sufficiency of calico to dress his wife and two children, and a little ammunition for himself.

Leaving Mr. Sullivan in charge of the men and horses to go round by land, I started with my two Indians in the canoe; our course was N.W. In the evening camped along with two Indians, who, with their wives, were fishing. I killed some ducks on the river.

August 30th.—Started after breakfast; found myself at noon in latitude 49° 18′; about three hours after arrived at the portage; in about the same latitude got into a wide rushy lake after sunset, with quantities of wild fowl and very beautiful orange water-lilies. Traversed this lake, and arrived at a very ingeniously constructed fish weir, at which a large number of Flat Bow Indians were encamped.

August 31st.—Remained almost all day at the Indians' camp; was quite unable to induce my two Indians, who, by the way, were only intelligible to me by signs, to proceed on our journey. Latitude of the weir 49·15 S.; we had nothing more to eat but a few berries.

September 1st.—Our course was north for two hours through a dense fog; when fog cleared we made westwards; sun cleared just in time for me at noon to take our latitude, 49° 36′. Here we eat a meal of pemican, which I had preserved all along, for fear of illness from eating berries. Started again on a west course, and arrived at the western extremity of Flat Bow Lake at four o'clock; here we found

another camp of Indians, where my men eat so voraciously of fresh fish that they were unable to stir for the rest of the day.

September 3rd.—Again on the Kootanie River; made two severe portages across the rocks, one of which was about two miles long; halted for a dinner on berries; took observations for latitude, rubbed out. After dinner made a short portage, and made a few miles down the river; commenced a long portage; made half of it, something under two miles; camped in the wood. I killed a duck and a goose, and we finished the whole at supper.

September 4th.—Finished our portage, reloaded canoe, and travelled steadily; met Indians returning from Columbia River; had a fine feast of salmon, for which I exchanged a shirt for two salmon, one four feet, the other four feet four inches long. Made a long day, and camped not far from the entrance of the Columbia River.

Started before sunrise, and soon turned into the Columbia River. Arrived at Fort Shepherd, near the mouth of the Pendoreilla River, and saw where miners had been working for gold, both on the Columbia and on the Pendoreilla Rivers. Fort Shepherd is a very well built establishment of the Hudson's Bay Company, but unprotected by pickets. I took an observation here in latitude about 49° 1′, and the mouth of Pendoreilla River is about three-quarters of a mile within the British territories. While I was observing, a circle of Scotchmen, Americans, and Indians, surrounded me, anxiously awaiting my decision as to whether the diggings were in the American territory or not; strange to say the Americans were quite as much pleased at my pronouncing in favour of Her Majesty, as the Scotchmen; and the Indians began cheering for King George. In the afternoon I started again down the Columbia for Fort Colville; in the evening stopped at the Horse Guards, about 12 miles from the fort.

September 5th.—Arrived at Fort Colville. I found Mr. Sullivan had arrived here the day before; they had suffered a good deal from want of provisions, and had been for several days compelled to live on nothing but berries. They were looking ill, and assured me that they had been suffering greatly from dysentery, when, fortunately, they arrived in the settlement of the Colville Valley, where they were most hospitably received by Mr. , a Scotch settler there, whose hospitable treatment soon recovered them from the pernicious effects of the berries.

It will be remembered that on the 18th of August, or about three weeks before this time, when we had just finished our western descent of the main chain of the Rocky Mountains, I had been obliged to abandon my project of continuing my western course through British territory, on account of want of provisions in a country almost without game, and also on account of the absence of all the Indians, who were then fishing on the large Columbia Lakes; had we persevered then, we should have left ourselves without any means of procuring any fish or exchanging our tired horses. I was therefore anxious to lose as little time as possible in renewing our explorations, with a view of ascertaining the practicability of a route over the country westward of the main chain of the Rocky Mountains, and through British America, as far to the westward as the season would permit. With that view I fitted out a branch expedition, which I entrusted to Mr. Sullivan, with directions to ascend the Columbia to Fort Shepherd, and then to force his way as he best could to the eastward, until he arrived at the western exit of Kannenaskis Pass; and reserved for myself the task of exploring to the westward; also making Fort Shepherd a starting-point from whence to force my way towards the Pacific as far as the lateness of the season would permit.

The following is a detailed account of the branch expedition under the charge of Mr. Sullivan, in a letter written to me after his return, and already printed in the "Further Papers relative to the Exploration of British North America" in the Parliamentary Blue Book of 1860.

Mr. Sullivan's Despatch.

To Captain Palliser. Fort Colville,

Sir, October 1859.

Your instructions of 8th September 1859, directing me to start from Fort Shepherd, and explore the region of country to the northward of the 49th parallel of north latitude, and to the eastward of the fort, have been carried out, and I am rejoiced to say with a result far more satisfactory than at first sight I was led to anticipate. I beg to submit for your information the following detailed account of my branch expedition; also a sketch map showing the route we pursued.

On September 11th I started from Fort Colvile, lat. 48° 37′ 46″ North, and arrived at Fort Shepherd on the evening of the 13th. At this place I engaged three Sanihk Indians, and despatched two more of the same tribe in search of the only Indian who was said to know the country that I was about to explore. Previous to starting also I obtained observations for latitude, and found the fort to be three-quarters of a mile to the north of the frontier line; consequently, the point at which the Pendoreilla joins the Columbia River is in British territory. Having crossed the Columbia on the 15th, we then proceeded up the valley of the Pendoreilla for twelve miles, and encamped to await the arrival of our Indian guide. An observation at this place gave latitude 49° 0′ 36″ North. Six miles still further up the valley, and we struck the mouth of Salmon River, a small tributary of the Pendoreilla. Up to this point the whole of the river valley is in British dominion, but beyond the Pendoreilla is in American soil. The gold mines on this river are at present confined to this small portion of the valley, and the miners are engaged in mining the flats and bars of the river only. They realize from 15*s.* to 20*s.* per day with the rocker, and from 35*s.* to 40*s.* with sluices. They are prevented from reaping rich harvests, owing to the quantity of water in the stream, as well as the absence of capital for the purposes of ditching and carrying water to advantageous places in the neighbouring mountains.

Every prospect is in favour of the country being auriferous; the gold becomes coarser the further the miners advance into the bed of the stream, and the adjacent mountains possess every indication of containing gold. The bed rock on the Pendoreilles, as well as that on the Columbia, between Colvile and Fort Shepherd, is a blue slate, with a large admixture of quartz veins. The immediately overlying

rock is a very hard grey granite. In many places, mica is in great abundance, and up the Salmon River especially, mica is largely distributed. On our arrival at this river, I "prospected" myself in the stream, and washed out $2½ in one pan of dirt, and $2 in another. One of my Indians, more fortunate than I, picked up in the crevice of the rock a piece of gold which valued 15*s.* 6*d.* Here our party experienced great difficulty in pushing through the masses of fallen timber and dense undergrowth, which latter was so tightly interlaced as almost to defy the power of the axe altogether.

My Indians were in favour of returning to the fort. I told them that it was my determination to advance, and at once packed the horses with all the articles that were not absolutely necessary for the journey, including about half the provisions with which we had left Fort Colvile, and sent them back to Fort Shepherd under the charge of a half-breed, who was mining at the mouth of the Salmon River. Then, dividing the remainder of our provisions and baggage into as many parcels as there were people in the party, I told the Indians that both Mr. Margary and I intended to carry the same weight as they, so that the sooner we started the sooner the journey would be done. Mr. Margary, the gentleman belonging to the Hudson's Bay Company's service, whom Mr. Blenkinsop had desired should accompany me, was of great assistance on this as well as on many subsequent occasions; he explained to the Indians my determinations, and took to his pack as cheerfully as he would have done to a more pleasant occupation. It was with reluctance, at very best, that the Indians followed our examples; at length, all our loads strapped, we forced our way through the woods, and enjoyed a good supper and a most comfortable night's rest at the forks of Salmon River. It would be needless to journal the account of each day's march here, and it will suffice to inform you, that in five days from this point, by following the more easternly branch of the Salmon River, we had attained the summit of the dividing ridge, between the Columbia and the Kootanie, or Flat Bow River, at an elevation of 1,500 feet above Fort Shepherd. An observation for latitude here assured us that we were still in British territory, it being 49° 5′ 24″ N.; and judging from our course, I consider that we did not dip to the south of the 49th parallel throughout the whole of the distance from Fort Shepherd to the height of land. The ascent to reach this highest point of the dividing ridge is very gentle, and there is not the slightest obstacle to prevent the accomplishment of an excellent road. The descent, on the contrary, to the stream which is tributary to the Kootanie or Flat Bow River, is rather abrupt; but, fortunately, it is only for about 300 feet, when the river valley is reached. At the height of land I was in hopes that we had struck an Indian trail, when suddenly our guide informed me that we had been travelling for the last half hour, not upon an Indian, but a carribœuf road, and that now we were forced to leave it. Carribœufs frequent this part of the country in large numbers, as the woods are traversed by their beaten tracks. They are induced to visit this tract of country in order to feed upon a very large leaf, which grows in great abundance on the moist lands high up in the mountains. From this place a most extensive view of the country was obtained; the rugged mountains to the south-eastward, which border the right bank of the Pendoreilles, in the American territory, rising to an elevation of about 2,500 feet, and clothed to their summits by dense pine forests, seemed to bid no hopes to strangers passing there; while the gentler undulations from the Columbia valley up to this point, offered no impediments but those resulting from decaying masses of vegetation, the young scrub pines which had risen on their ruins, and the stunted undergrowth, obstacles which disappear entirely before the woodman's axe. On September 24th, we made a very long and tedious journey in our descent towards the Flat Bow Lake, crossing and recrossing the stream to avoid fallen timber, and such obstacles as could be avoided at the expense of a little wetting, which, considering the quantity of rain that fell for a few days previous, was productive of little inconvenience. At nightfall of this date, the rain commenced in earnest. We were very comfortable, however, having constructed an excellent shelter with the branches of the cedar, and being provided with as much wood as we were disposed to burn.

On the 26th September we arrived at the Flat Bow Lake, and an observation showed us to be in lat. 49° 13′ 7″ N., or 15 miles to the north of the boundary line. We were all glad to have come to the end of our journey, (as far as walking was concerned), for we were all more or less fatigued, and needed mocassins. I should remark here, that that piece of country extending from the summit of the dividing ridge to the shores of the Flat Bow Lake, presents much greater difficulties than the slope towards the west; but at the same time I consider that with a sufficient number of men for the purpose of clearing, and the time necessary for such an undertaking, I might have succeeded in making a very practicable trail for my horses. The greatest obstacles throughout the road from Fort Shepherd, eastward to the Flat Bow Lake, is fallen timber; and great advantages for a road exists, since the traverse of this piece of country was effected, by the valleys of two rivers, the whole of the way. The land to the southward of the Flat Bow Lake is flat and swampy, and preserves this character to the distance of 25 miles to the south-eastward of its southern extremity, where a range of mountains extend along the course of the Kootanie River, and prevent its continuation. The river itself has no current in this part of its course, and on either bank there are numerous sloughs and swamps teeming with wild ducks, geese, and other aquatic birds, that make these marshy lands a special rendezvous in the fall of the year, when they desert the less genial climate of the north. From these swamps also, the Kootanie Indians obtain the klusquis, or thick reed, which is the only article that serves them in the construction of their lodges, and the klusquis is an article of barter with them to the other tribes, whose lands do not produce this necessary. As soon as we arrived at the lake, we were met by the Kootanies, and treated very hospitably. They inquired as to the object of our visit, and furnished me with a large amount of information relative to the country to the eastward. By referring to the sketch map accompanying my letter you will observe that I have laid down a road as "Kootanie trail to the Columbia Lakes (abandoned)." This road has been for many years out of use, it is altogether in British territory; but according to the accounts of the Indians, two very precipitious mountains have to be crossed before arriving at the origin of the Columbia River. I expressed a desire to travel this road, and was assured that at present it is entirely impracticable for horses. The Kootanie chief said, "If "you take all the young men of my tribe and furnish them with axes, they will cut through but "a very small piece in a day, your camp fire of one night will be in sight of your camp fire the "night following; the fallen timber is too bad; the trail that once was clear is now blocked up by "reason of the fires." The next road laid down, and which I have called "Mr. Sullivan's trail," is the one which the Indians described as very practicable, and which, for many reasons, was the one

adopted. I made a few presents to the chiefs and principal men, and obtained from them the loan of four horses, and the services of two young men as guides. Our Sanihk Indians we left at the Flat Bow Lake, and supplied them with ammunition, with which to support themselves during our absence. Our provisions were very small, consisting of 30 lbs. of flour, (all my meat had been consumed,) 15 lbs. of which I turned over to the two Kootanies, and retained 15 lbs. for Mr. Margary and myself. At noon of September 30th, we left Flat Bow Lake, and keeping a south-easterly course for a few miles, crossed the Kootanie River, in lat. 49° 3′ 6″ N. by observation, and encamped here for a whole day, having lost one of the horses. Pursuing our south-easterly course for about nine miles, we struck the road laid down in the sketch map as "Mr. Sullivan's trail," and after making an ascent of 500 feet, we descended, and encamped at nightfall in a small prairie affording excellent water and grass for our horses. The following morning our horses had strayed backwards on the track towards the Kootanie camp. We were accordingly delayed from starting till 2 p.m. The day was cloudy, so that I was prevented from obtaining the latitude, but from my dead reckoning I consider that our encampment was about one or two miles to the north of the 49th parallel. By reference again to the sketch map, you will observe that there is a tract of country indicated by "Practicable trail." I wish to remark that this trail is not really in existence, but from the nature of the country, I am inclined to believe that a road may be made in that direction with no degree of trouble, and which would have the material advantage of throwing the whole road altogether into British dominion, as well as the secondary advantage of escaping the ascent of 500 feet alluded to above; indeed, the mountains here may be penetrated in many directions; they do not assume impracticable shapes, the highest does not exceed 2,000 feet, many do not attain the altitude deserving the appellation mountain, and their gently sloping sides with wide valleys between, seem to offer facilities for roads in many ways. On the evening of the 4th of October we struck a tributary to the Kootanie River; going off to the south, and proceeding a little distance up the stream, we encamped on a fine prairie close to its right bank. October 5th, we were off before sunrise, and followed up the stream through a most beautiful valley, offering no obstacles whatever to our progress, water and fine grass everywhere, and we passed the best camping-places that I have seen to the west of the Rocky Mountains. The Kootanie Indians resort to this part in search of beaver and carribœufs; and from the indications at their old camps, a large party of them had preceded us by about four or five days. An observation for latitude showed us that we were keeping to the north of the frontier line, being lat. 49° 6′ 48″ N. October 6th, we reached the highest point since leaving the Flat Bow Lake. At noon an observation for latitude was 49° 15′ 14″ N.; and at our night camp of this date we were at least 10 miles still further to the northward, for we made a very long journey from our dinner camp. Here we had arrived at the most easterly of the two small lakes from which the tributary stream issues to join the Kootanie or Flat Bow River. I estimate the elevation to be 3,300 feet above Fort Shepherd. Our Kootanie guides now gave us the welcome intelligence that we were only one day's journey from the crossing-place on the Kootanie River, where the Indians traverse the stream on their road to trade at the small Kootanie Post, situated near the western base of the Rocky Mountains, and at the distance of five miles to the south of the 49th parallel. I ascended a mountain, and saw the heights which border the right bank of the Kootanie River, and I estimated the distance at 12 miles, to which point a broad open valley extends without any obstruction. Up to this point, since leaving the Flat Bow Lake, we had travelled a most practicable piece of country; a good horse trail exists, and with the greatest ease a waggon road may be accomplished. Indeed, in the event of the requirements of commerce, as far as my experience of the mountains is concerned, I could not point out so extensive a tract of country where a railway may be brought with comparatively so small expense. There is no one place on the whole of the trail between the Flat Bow Lake and the borders of the Kootanie or Flat Bow River where a sudden ascent of 150 feet is requisite.

The whole ascent of the lakes is small and very gradual, and the valley of the tributary river is wide, open, and flat. Our provisions were entirely exhausted on our arrival at these two lakes, and the Indians told us that, for the next day's journey on to the Kootanie River, a large quantity of burnt timber was lying across the road, and there was a possibility on this account that we should require two days to cut our way through; but they assured me at the same time that it was only timber that would be troublesome to us, nothing besides lay in our way. Great dependence, as you are aware, can be placed on the word of an Indian of this tribe: the Kootanies never steal, rarely lie, and are decidedly the best converts to Christianity of all the Indian tribes among whom our travels have led us. I was very reluctant to abandon this 12 miles of country, but under the circumstances there remained but one alternative, viz., to retrace our steps. We had been living on two meals a day on the upward journey, and as our Indians were certainly gifted with most extraordinary appetites, their small supply of flour was soon consumed, and they made demands on our own little store, which we could have easily managed without their assistance. So now we were entirely dependent on the few small pheasants which chance might throw in our way. I should certainly not have returned were it not that I was thoroughly convinced of the entire practicability of a road from that point on the Kootanie River, where the Expedition penetrated in September 1858, right up to Fort Shepherd in the valley of the Columbia, more than three-fourths of which might be rendered available for a railway; and considering the stupendous triumphs of engineering art in modern times, I should be sorry to add that the remaining fourth is beyond the bounds of practicability. We returned to the Flat Bow Lake on the 10th of October, very hungry, having fasted two days, and found our Sanihk Indians anxiously awaiting us. The following day I hired two bark canoes, crossed the Flat Bow Lake, descended the Kootanie River, from thence into the Columbia, and arrived at Fort Colville on the 15th October.

In conclusion, I beg to express my sincere thanks to Mr. Margary for his most friendly society and cheerful assistance throughout a trip which I shall ever remember with unspeakable pleasure; and I trust that hereafter, I may hear of him occupying a high position in the service of the Hudson's Bay Company, for which by his intelligence, energy, and management of Indians he is eminently fitted.

I have, &c.

(Signed) JOHN W. SULLIVAN,
Secretary.

Captain J. Palliser,
Commanding Exploring Expedition, &c. &c. &c.

Having given Mr. Sullivan's account of his explorations from Fort Shepherd to the eastward, connecting that post which is north of the boundary line with the western extremity of the Kannanaskis Pass, I will resume the account of my explorations from Fort Shepherd to the westward, continuing my way north of the boundary line until I arrived within 13 miles of the Okanagan Lakes, or at the point from which the Hudson's Bay trail between Colville and Fort Hope bears to the N.W., and entirely within the British territories.

September 14th.—Started for Fort Shepherd, there to recommence on the 49th parallel, and endeavour to make my way to the westward until I fell on the trail of the Hudson's Bay Company, which bears to the northward, passing over the Cascade range at Manson's Mountain. I secured the services of an old Blackfoot half-breed hunter, together with two of his own horses, which were in much better condition for the severe journey I was undertaking than mine; and was accompanied also by an Indian: we three started on horseback, and carred our provisions on two pack-horses.

On the 17th September we left Fort Shepherd, crossing a country of wooded hills, the first three ranges of which we crossed without much difficulty. I could not ascertain their exact height, having no barometer, but they probably averaged between 800 and 1,100 feet. We then camped on the edge of a small lake of an insignificant size, and where we had a sufficiency of water. To reach this lake I had to cross the 49° N. about half a mile to the south. Distance made, seven miles.

September 18th.—Started at 7 a.m. After breakfast returned a little to the northward and pursued a western course through the hills. Latitude at noon 49° 0′ 15″ N. After this we had to cut our way with axes through a country which, although not impassable to horses, presented great difficulties in the accomplishment of a road. We worked till 6 p.m., when we camped, having found water, but no grass for the horses. Made three miles.

September 19th.—Breakfast early; started at 7 a.m.; the chopping and climbing very severe; day cloudy; could not take the latitude, which, from our course, was to the northward of last night's camp. We continued alternately chopping through 20 or 30 yards, then jumping and driving up the horses, but, before we arrived to where there was grass, the Indian's horse failed, and could proceed no further; but soon after this we came to a small swamp, where, by great exertion, we brought and left him. In the afternoon one of the mares rolled down a precipice, pack and all; we climbed down and carried up her load, and, by taking a circuitous route, brought her up again. Here the Indian declared he could not stand the work longer; took off his coat and shirt (payment made in advance for the trip), threw them back to me, and departed. We allowed the horses to feed for a short time, then descended a deep ravine, where we found no grass for the horses. Here we camped, having made four miles.

September 20th.—We breakfasted before sunrise, commenced to chop through the fallen timber, which was terrible; we had to ascend a mountain about 1,200 feet high, which was both steep, rocky, and densely piled with fallen timber; we reached the summit a little after five; came down an easy descent and along a valley, and camped about 8 p.m. Made five miles, finding both grass and water. Here our Indian returned to us; I received him kindly, restored his property, and he continued faithful to me throughout.

September 21st.—Rained hard all night. The horses suffered so much from want of food that I determined to remain there a day to recruit them. Lat. 49° 3′ 10″ N.

September 22nd.—Our labours not so severe; the mountains not so steep, and the fallen timber not so heavy as heretofore. Passed the horses over one very bad place, across a face of rock. This place at first appeared impassable for horses, but by availing ourselves of the slate shingle, which we levelled with our hands, building it up in some parts, and rolling it over the precipice in others, we made a causeway, and passed triumphantly. Camped on a little tributary to the Columbia, called Sheep River. Made seven miles.

September 23rd.—We had some difficulty in crossing Sheep River; after which very heavy timber to cut through. Found grass at noon. Camped; made one mile; but proceeded to chop for to-morrow's journey. Lat. 49° 2′ 44″ N.

September 24th.—Crossed the second fork of Sheep River; ascended about 1,100 feet of mountain, very grassy in many places; rode along the crest of the hill in a north-westerly direction, afterwards in a westerly. Made nine miles, and camped at half-past 4 p.m. Here there was grass, but no water. Lat. 49° 5′ 19″ N.

September 25th.—A good deal of chopping and climbing in the latter part of the day, but evidently the worst of the journey was then over. Made about nine miles.

September 26th.—Started very early. It had rained all night; made more than three miles before breakfast. Our course continued to wind through a valley considerably to the north of west, and then to ascend a grassy hill to the height of about 900 feet. Proceeding along the crest of this hill for several miles, we at length came in sight of a lake, called by the Indians Lake Nichilaam, to which they repair to fish late in the autumn from the south, and to which an Indian trail forks off from the Colville road. My companions were greatly rejoiced to find themselves once more within a mile or two of a known piece of country. My two mares here broke down for want of food, want of water, and the constant jumping over the fallen timber. One of them from the first start was not previously in sufficiently good condition for the trip, the other, unfortunately, owing to the constant jumping, flung her foal; we were obliged to abandon them. We had now but Pichena's two horses remaining, and we endeavoured to descend the mountain to the lake that evening. Not being able to accomplish this, we were obliged to camp in the cliffs without water, and consequently without anything to eat; having nothing but flour we could not cook it. Made 11 miles.

September 27th.—It rained very hard last night, and we rose very wet and miserable, the mountains above us were covered with snow. We continued our descent of the high grounds about Lake Nichilaam, and reached its southern extremity at about 8 a.m., when we cooked and finished the last of our flour. I could not obtain the latitude at noon, owing to the cloudy state of the weather. This lake (Nichilaam) is about seven or eight miles long, and from two to three and a quarter wide, surrounded by mountains rising above its surface from 700 to 1,000 feet in height.

After breakfast struck on an Indian trail leading south, which we rightly guessed would take us to

the Colville track, at about 50 miles distant from the fork. We had now been compelled to abandon two horses, and the two which remained we allowed to run loose with the light packs, now only consisting of a couple of blankets and buffalo robes, axe and kettle, sextant, &c., while we walked, driving the horses before us on the track. Travelled for about eight miles in a south-east direction; stopped near the junction of the Indian trail and the Colville track. Took observation of pole star, and found ourselves about four miles south of the lake in lat. 48° 58′ N. I had been fortunate enough to discover a fine caché (concealed store) of dried salmon, that an Indian had made for the subsistence of himself and family during the winter. I broke into it, and took out enough for supper for us three, and also for breakfast to-morrow morning, and leaving my black silk handkerchief, and a dozen charges of gunpowder, with a handful of duckshot, I carefully reclosed the Indian's caché.

September 28th.—Started very early, walking hard and driving the horses before us. Met an Indian with his wife and two children, travelling, as I rightly guessed, with the object of taking up his caché, that I had supped from the night before. I invited him and his family to a part of our breakfast, which he partook of, but evidently suspected where it came from. At last I told him the salmon was his own, that I had taken it, and also what I had left to replace it. He said, "I wish I always had you for to "steal from me." I engaged him for a reward to try and recover the two mares, which he undertook very unwillingly, on account of the desperate nature of the country. He ultimately succeeded in recovering one of them, about a month afterwards. After breakfast started again, and in the evening camped within four miles of Colville.

September 29th.—Started early, swam the horses across the river with the assistance of the skiff, and arrived to breakfast at Colville.

October 5th.—Started in order again to return to my explorations from Lake Nichilaam to the westward. I took with me Vital, one of my half-breeds, who had joined the Expedition, and come up with our servant James Beads from Red River in the spring. I was likewise accompanied by another half-breed of the name of Gadois, together with the Indian who had recently been travelling with me. We had swum the horses, crossed the river, and proceeded about five miles, when I met Lieut. Palmer, of the Engineers, who had travelled from Fort Hope with Mr. McDonnell, the officer who had been in charge of that post, and was on his way to relieve Mr. Blenkinsop at Fort Colville. They had travelled the Hudson's Bay Company's trail over Manson's Mountain, and Lieut. Palmer made a reconnaissance of the route, and confirmed me in my belief that, from the camp of the Americans now stationed at Little Okanagan Lakes, the Hudson's Bay Company's road is altogether within the British territory. Leaving the men and horses, with directions to camp soon, I walked back with them to the fort, where we dined together; and Lieut. Palmer, at my request, presented me with a sketch of the route he had travelled, from the Okanagan Lakes to the eastward, part of which was in British and part in American territory. In the evening crossed the river in the skiff, and started to join my men, whom I found easily from the bright fire they had lighted, about eight miles up the Columbia, and on Colville River.

On the 7th October again reached the southern portion of Lake Nichilaam, where I had left for Colville on the 27th. I had not been able to observe at noon on that day, but now I had a chance on a clear night by pole star, and found ourselves in lat. 49° 4′ 30″.

October 8th.—Started on foot to ascend the hills on the west of the lake, carrying with us a couple of days' provisions, and sending the horses round by the trail (which diverges to the south of west) to meet us at a point north of the 49th parallel, and on the north fork of the Colville or Ohailpitku River. My reasons in sending the horses round were not because I deemed the section of country with which I was engaged impracticable for horses; but the fallen timber was very dense, and required more time to chop it through than I at that time thought I could spare. We had a great deal of scrambling through this timber, and passed along a valley in direction W.N.W., and at 4 p.m. reached a height of land commanding a fine view of prairie country, affording a choice for continuing a road in several directions. Slept in a ravine after coming in view from the heights above of the north fork of the Colville River.

October 9th.—Started almost without sufficient light to pick our steps through the broken and fallen timber, and by nine o'clock descended to the Ohailpitku, a little below the north fork of the river. About two hours afterwards the horses, which I had sent round with Vital the day before, arrived, and sufficiently early to enable me to take the observation at noon for latitude, 49° 2′ 20″.

October 11th.—Started early, pursuing our western course again along the river, and shortly after caught sight of a soldier in American uniform in pursuit of some wild ducks on the river. He informed me that the surveying party of the United States' Government, in connexion with that of the British Government, under Colonel Hawkins, were not more than two miles further, in a S.W. direction. A little further on, and I came in sight of the observatory, containing the zenith telescope,* used by the Commission for laying down the boundary line. On riding into their camp I was most hospitably received by the scientific gentlemen employed on the survey, and invited to pass the day with them, an invitation which I gladly availed myself of. There are three parties on the American boundary survey; each party consists of an observer, computer, and topographer, protected by an officer and company of regular soldiers. The scientific gentlemen of the party that I had the pleasure of visiting were civilians, and Mr. Harris, the gentleman in charge, was an able and experienced man. Messrs. Hudson and Major were his assistants and his topographers.

October 12th.—Mr. Harris very kindly prevailed on me to spend another day with their party, and told me the chief commissioner, Mr. Campbell, was expected; and in the afternoon that gentleman arrived, accompanied by his secretary, Mr. Warren, Lieutenant Parke, of the United States, topographical engineer, sextant observer, and Mr. Gibbs, topographer to the reconnaissance party.

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* The zenith telescope is an American invention, used in observing pairs of stars, one north, one south of zenith, but of nearly the same declination. A far greater number of results can be obtained in a given period than by means of the transit instrument formerly in use for obtaining very accurate latitudes. This instrument can determine to an accuracy of 12 feet.

No. 7.

Itineraries.

Itinerary 1. July 18.

Date.	Distᵉ.	Course.	Time.	Remarks.
1857.				
July 21	18	S. by E.	12 to 6	Started from Upper Fort Garry, crossed the Assineboine River, and proceeded up the left bank of Red River, through dense thickets of small poplar and scrub oak for 10 miles, whence we emerged on country clear of woods, and continued our march eight miles further.
„ 22	10	S.	6.15 to 9.30	During the march passed through slightly wooded country, with occasional patches of pasture land. At 5.30 we crossed La Rivière Graté.
„ „	10	„	3 to 6	
„ 23	12	S. by E.	9.30 to 1	Twelve miles of splendid meadows of natural hay, and at 1.15 we struck a lagoon near the river.
		S.	4.15 to 7.30	
„ 24	9	S. by E.	10 to 1	Arrived at the Hudson Bay Company's post "Pembina." The land in the neighbourhood of this place is peculiarly fitted for agriculture.
„ 28	18	W. by S.	9 to 3.30	Halt at a saline lake.
„ „	14	SW.	5.40 to 8.40	Arrived at St. Joseph, after passing over prairie land through oak copse, and again over prairie with salt lakes.
„ 30	14	NNW.	8.30 to 12.30	Country much the same as that described yesterday.
„ „	10	W. by NW.	4.30 to 7.40	Towards evening we crossed a creek at Point d'Allard.
„ 31	4	S. by W.	9 to 11	Two miles of open country, and then through a belt of oak copse. To this succeeds a stretch of land covered with conical mounds and deep pot-like depressions; also numerous boulders of limestone and granite.
„ „	9	W.	3 to 5.30	
August 1	4	S. by W.	9 to 11	Reach Pembina valley, depth 247 feet.
„ „	9	W.	3 to 5.30	Eastern boundary of what the half-breed hunters call "La Grande Prairie."
„ 2	10	„	9 to 12	Passing over bare prairie struck the valley of Long River.
„ „	5	SW.	4 to 5.50	This stream runs north to the first of the Pembina lakes.
„ 3	10	W.	10.45 to 2	From this camp the three principal points of Turtle Mount bore as follows:—
„ „	6	„	5 to 7	A. (Bearing of) most southerly W. 297° N. B. Head of mountain - „ 230° „ C. Heart of „ - „ 347° „
„ 4	15	SW.	8.15 to 12.40	Cross the White Earth River valley, 100 feet below the prairie: flows N., and is tributary to Pembina River.
„ „	9	„	4 to 7	Struck a fine wooded prairie on the outskirts of Turtle Mount, now four miles distant.
„ 5	3	„	6.30 to 7.30	Arrived at Turtle Mount. Nothing more than a dense forest, covering a great swell in the prairie, from 250 to 300 feet above the general level.
„ 6	8	NW.	9.30 to 12	At noon arrived at a small creek running to the north and losing itself in swamp.
„ „	4	WNW.	4.30 to 6.30	
„ 8	14	W.	9.45 to 2.30	Arrived at a deep gully, on the east side of which we encamped. Six miles to our north is the White Lake. Its bearing from two miles east of our camp: E. end of, N. 3° E.; W. end of, N. 291° E.
„ 9	6	„	10 to 12.15	Reach a large valley, through which flows a small stream.
„ 10	10	NW.	8 to 11.15	Crossed a narrow slip of level plateau, and then made a rapid descent of 150 feet, traversed a bare plain; four miles from last night's camp crossed a small creek, which flows easterly, and falls into White Lake. Here we made a considerable rise, so as to pass over a broken ridge which runs in a westerly direction. The woods which skirt the Souri River visible from this point, and on reaching the first bluff of these we halted.
„ „	12	„	1.30 to 6	
„ 11	3	„	8.15 to 9.30	Skirted the Souri for some miles to find a fording place.
„ „	2	NE.	9.45 to 10	The shallowest part of river here was four feet. The country to north of this river is covered with conical sand-hills, from 60 to 70 feet in height.
„ „	5	N.	4.30 to 6.15	
„ 12	13	E. by N.	5.30 to 9.45	Cross a swamp which forms Snake River that falls into the Souri River a few miles to the east of this place, and six miles from the mouth of that river, where it joins the Assineboine. We were now five or six miles from the valley of the Assineboine, passing through bluffs of wood which belong to this valley.
„ „	13	NW.	3 to 6	
„ 13	16	W.N.W.	6.15 to 11.15	Since leaving the Snake Creek we have had the advantage of the Hudson Bay Company's trail to Fort Ellice, which cuts from "point" to "point" of poplar woods. No other tree grows here.
„ „	10	NW.	3 to 6	

Date.	Distᵉ.	Course.	Time.	Remarks.
1857.				
Aug. 14	12	W. by N.	7.15 to 10.45	At 10.45 struck Forked Gully.
„ „	12	WNW.	3 to 6.30	
„ 15	24	NNW.	7.30 to 2	Arrived at Fort Ellice, after crossing several gullies depressed 200 feet below the prairies, and having the breadth of half a mile. A dense growth of small wood is sheltered in these localities. The Assineboine valley here is 250 feet below the plains, and is at least three-quarters of a mile wide. About five miles above the fort the river Qu'appelle joins the Assineboine. The Assineboine at this point averages 10 feet in depth, and is 60 yards across.
				The expedition remained here till August 25th, but a branch expedition proceeded to "La roche percée."
„ 17	10	SSW.	12.30 to 2.45	Kept along the west side of Beaver Creek, crossed it at
„ „	10	„	4.15 to 7	the point where it issues from a marsh. We then came to a succession of well-marked ridges, trending N.W. and S.E., whose summits were clothed with poplars, and having creeks and swamps between them. At the third poplar ridge we stopped for the night.
„ 18	9	„	5.25 to 6.10 6.40 to 8	Crossed Pipe-stone creek, as it is called here, but it is the same as Snake River or Creek, which we crossed on 12th.
„ „	13	„	10.45 to 2	It rises from the north flank of Moose mount, and flows
„ „	10	„	4.30 to 7	easterly till it joins the Souri. Its banks here are 160 feet high, and 10 miles below this point it emerges on a flat plain, where it loses itself in enormous swamps, and from which it again issues under the name of Snake River. Arrived at Moose Mount, where we camped in poplar clumps.
„ 19	9	SW.	5.40 to 8	During this day we passed Moose Mount, and entered on
„ „	13	SSW.	10.45 to 2	extensive prairie with no wood. Dined at Moose Mount
„ „	10	SW.	4.15 to 6.40	Creek, which flows S.E., and joins the Souri about 20 miles lower down.
„ 20	- -	- -	5.5 to 8.25	
„ „	- -	- -	11.30 to 4	Reached Souri River.
„ 21	- -	- -	10 to 12	The valley is 170 feet deep, and the stream is 20 yards wide.
„ 22	15	N.	10.10 to 1.35	
„ „	12	NNE.	3.55 to 6.40	Camp on prairie.
„ 23	8	„	5.15 to 7.15	
„ „	18	„	10.10 to 2.45	
„ „	11	„	4.65 to 7.15	Near camp of 18th.
„ 24	10	NE.	5.15 to 7.25	
„ „	14	NNE.	10 to 1.20	
„ „	13	NE.	4 to 6.45	Five miles to N. of camp of 17th.
„ 25	15	N. by E.	5.45 to 11	Again arrived at Fort Ellice.
Sept. 7	6	W.	6 to 7.30	Camp at swamp source of Scizzors Creek.
„ 8	12	„	7.30 to 12	Through poplar woods. Good pasture and small lakes.
„ „	6	„	3 to 5	Long Lake in thickly wooded hilly ground.
„ 9	9	W. by S.	9 to 12	Cross high wooded ridge. Road very bad.
„ „	10	„	3 to 6	Small lake. Still in the woods.
„ 10	18	W.	8 to 1	Cross a broken country without wood. Pass a creek flowing to the N. after 13 miles, and reach the Weed Hills.
„ „	8	SW.	4 to 6.30	West of Weed Hills.
„ 11	10	W.	7.30 to 11	Pass Wolf Hills, five miles to our left.
„ „	12	„	2 to 6	Bare plains. Cross a deep ravine, and camp at Stoney Lake.
„ 12	12	„	8 to 1	Through broken wooded country, ascend rapidly, and reach Qu'appelle post, 16 miles S. of the Qu'appelle lakes at the Mission.
„ 14	11	„	1 to 5	Squirrel Hill. Winding among poplar bluffs.
„ 15	5	W. by N.	6 to 8	
„ „	8	W.	10 to 1	Camp at last point of woods.
„ „	9	„	3 to 6	
„ 16	10	W. by N.	6 to 8.30	Cross bare plains, halting first at a small swamp, and then
„ „	12	„	11 to 2	at Manybone Creek which flows to the N.
„ „	13	„	3.30 to 6.15	Reach Moose-jaw Creek, and turn a little to the S. before camping.
„ 17	5	S.	10 to 6.30	Swamp in the bare plains N. of the Coteau.
„ „	17	W.		
„ 18	14	„	6 to 10	Plains, lat. 50° 26′.
„ „	10	„	2.30 to 6	Sand-hills N. of the Coteau.
„ 19	10	„	7 to 11	Plains N. of the Coteau, lat. 50° 28′.
„ „	14	NW. by W.	1 to 6	Small swamp six miles N. of Coteau.
„ 20	10	NW. by N.	5 to 9	Swamp in broken ground.
„ 21	7	„	6 to 8	Tail of Eyebrow Hills.
„ „	23	N. by W.	10 to 5	Sage Creek. Elbow of S. Saskatchewan.

Date.	Distᵉ.	Course.	Time.	Remarks.
1857.				
Sept. 24	13	W. by S.	9 to 1	Crossing place of S. Saskatchewan.
„ „	3	SW.	5 to 6.30	
„ 29	10	NE.	- - -	Follow down left bank of river.
October 1	6	N.	4 to 6	Dirty water swamp.
„ 2	7	„	6 to 8	Reach Red Deer lakes, depressed 150 feet, with a creek flowing to the E.
„ „	8	„	10 to 1	
„ „	5	„	3 to 6	
„ 3	7	„	6 to 8	S. Saskatchewan, lat. 51° 24′.
„ „	16	„	12 to 4	Reach the woods. Old Buffalo Pound.
„ 4	11	„	6 to 9.30	Rabbit Point, lat. 51° 46′.
„ „	13	N. by E.	12.30 to 4	Cross woods.
„ 5	8	NE. by N.	8 to 11	Swamp, lat. 52° 3′.
„ „	2	„	2 to 3	Small lake.
„ 6	13	NE.	8 to 12	Over burnt ground.
„ „	6	N. by E.	3 to 5	Poplar bluff.
„ 7	13	„	6 to 10	"Duck Lakes."
„ „	9	N. by W.	12 to 3	
„ 8	8	„	7 to 9	Five Mile Gully.
„ „	6	N.	12 to 2	Fort Carlton.

Date.	Distᵉ.	Course.	Lat. and Long.	Place.
1857.				
Dec. 14	20	10° W. of S.	- - -	Enasquinas Hill.
„ „	13	W. 13° N.	52° 42′	West end of Minitchenass Hill.
„ 15	15	W.	- - -	East side of the Big Plain.
„ 16	16	„	- - -	Small Lake. Commencement of White Lake.
„ „	14	WNW.	- - -	Indian camp. White Lake.
„ 17	18	W. by N.	- - -	West side of Pike Creek.
„ „	17	W.	- - -	McMurray's post, Pike Lake.
„ 18	14	„	- - -	Indian camp at Sand Hills.
„ „	4	„	- - -	Six miles east of Horse Knoll.
„ 19	25	NW.	53° 16′	East side of English Creek.
„ „	16	NNW.	53° 28′	East side of Red Deer Hill.
„ 20	25·5	NW. SW. NW.	- - -	River Saskatchewan.
„ „	14	„	53° 34′ N. 109° 8′ W.	Fort Pitt.
	Total off 12 miles=199.			
Dec. 24	10	W.	- - -	Christies' Lake.
„ „	20	W.	- - -	Vermillion River.
„ 25	12	W. by S.	- - -	N.E. of Vermillion River.
„ „	10	W. by N.	- - -	West side of hills near Indian pond.
„ 26	7	„	- - -	Indian Camp Point.
„ „	12	„	- - -	Dead Pine Lake.
„ „	12	„	- - -	First lake of the chain.
„ 27	13	W.	- - -	Source of Vermillion River.
„ „	12·5	NW.	- - -	Le Bubi Noir.
„ 28	12	W.	- - -	West side of plain.
„ „	17·5	W. by N.	- - -	Le Jolli Bois.
„ 29	14	„	- - -	Blackfoot Creek, Beaver Hill.
„ „	20	WSW.	- - -	The Pines, Beaver Hill.
„ 30	19·5	SW.	53° 30′ N. 112° 52′ W.	Fort Edmonton.
	Total 191 miles.			
1858.				
Jan. 9	11	- - -	- - -	White Mud Creek.
„ „	6	S. by W.	- - -	„
„ 10	13	„	- - -	Clump of pines.
„ „	13	W.	- - -	Bad Beaver Dam.
„ 11	17	„	- - -	Woodpecker Creek.
„ „	10	S. by W.	52° 41′	West side of Battle River.
„ 12	20	S. by E. W.	- - -	East of Gull Lake.
„ „	6	„	- - -	Two miles west of Gull Lake.
„ 13	22·5	W. by S.	- - -	Medicine River.
„ „	8	SW.	- - -	Cabriers' Hill.
„ 14	26	„ W. by N.	- - - - - -	Muskeg Lake.
„ „	5	W.	52° 29′	Rocky Mountain House.
	Total 157 miles.			

Date.	Distᵉ.	Course.	Lat. and Long.	Place.
1858.				
Jan. 26	15	N.	- - -	Saskatchewan River.
„ „	12·5	„	- - -	„
„ 27	20	„	- - -	„
„ „	21	„	- - -	„
„ 28	21	N. by E.	- - -	„
„ „	30	E. by N.	- - -	„ Goose camp.
„ 29	21	„	- - -	„
„ „	30	E.	- - -	„
„ „	24	„	- - -	„
„ 30	15	NE.	- - -	„
„ „	2	N.	- - -	Fort Edmonton.
	Total 211·5			
Mar. 15	17	NE. by N.	- - -	Saskatchewan River.
„ „	11	„	- - -	„ Freeman's crossing place.
„ 16	14	N. by E.	- - -	„
„ „	16	ENE.	- - -	„ Near Vermillion Creek.
„ 17	16	E.	- - -	„ Near Snake Creek.
„ „	15	„	- - -	„ White Clay Creek.
„ 18	17	„	- - -	„ Above Upper Snake Portage.
„ „	18	„	- - -	„ Below the Bout Portage.
„ 19	19	„	- - -	„
„ „	3	„	- - -	„
„ „	18	„	- - -	„
„ 20	18	E. by S.	- - -	„
„ „	5	„	- - -	„ Dog Rump Creek.
„ „	22	E. by N.	- - -	„ Middle Creek.
„ 21	20	SE. by S.	- - -	„ Vermillion River Island.
„ „	4	SE.	- - -	„ Commencement of the Trail.
„ „	18	E. by S.	- - -	Fort Pitt.
	Total 251 miles.			
„ 30	8	E.	- - -	Mouth of Red Deer Creek.
	3·5	SE.	- - -	
„ „	12	ESE.	- - -	Bull Swamp.
„ 31	14	N. 110° E.	53° 16′	English Creek.
„ „	13	„ 93° „	- - -	Horse Knoll.
April 1	16	„ 93° „	- - -	Fine View Hill.
„ „	7	„ 70° „	- - -	Jack Fish Lake.
„ 4	10	„ 315° „	- - -	S.E. end of Jack Fish Lake.
„ 5	12	„ 80° „	- - -	N. of Jack Fish Lake.
„ „	12	„ 70° „	- - -	Clump at E. end of Hills.
„ 6	13	„ 65° „	- - -	The Springs.
„ „	13	„ 65° „	- - -	W. of Bear Lake.
„ 7	10	„ 110° „	- - -	Red Berry Creek.
„ „	13	„ 280° „	Bk.	Salt Lake.
„ 8	13	„ 259° „	Bk.	Horse Guard.
„ „	5	ESE.	- - -	Fort Carlton.

To Jack Fish Lake - - - - - 73 miles
To Carlton from Jack Fish Lake - - - - 101 „

Total Distance - - - 174 „

ITINERARY: SEASON 1858. From FORT CARLTON.

Date.	Distᵉ.	Course.	Time.	Remarks.
1858.				
June 15	5	SW.		Five Mile Gully.
„ 16	12	„	10.30 to 12	Pass over stone, Indian Knoll, and to west of swamp where we camped before reaching Carlton in October last. Halt among high broken hills in a line with first poplar ridge. Bearings—Stone, Indian Knoll - - N. 25° E. „ Top of Minitchenass - - „ 285° „ „ North end of ditto - - „ 300° „
„ „	15	SSW.	2.10 to 6	Skirt the river. Camp at Birch Gully. Prairie covered with immense limestone boulders. Prairie level at camp 248 feet above river. Gully quarter of a mile long; ends abruptly. Bearings—Top of Minitchenass - N. 327° E. „ Redberry Lake Hills - „ 270° „
„ 17	10	S. by W.	8.45 to 12	Elbow of N. Saskatchewan. Kept half a mile from river, to avoid gullies. River very straight; course N. 190° E. to elbow; here with a sweep of four miles it changes its course 90°. Valley wide, sloping, well wooded. Bearings—Down the river - - - N. 10° E. „ Up ditto - - - - „ 275° „

Date.	Distc.	Course.	Time.	Remarks.
1858.				
June 17	6	SW. by W.	3.15 to 6.20	Pass over poor soil, very bare plain, and camped at Cross Woods among immense hills of blown sand. Gentle slope to the river; distant 3½ miles; banks only 12 feet high. Course up river 255°, down 65°.
„ „	6	W. by S.		Bearing—North end of Eagle Hill - N. 275° E.
„ 18	5.5	„	7.50 to 9.20	Pass over high ground to Eagle Hill Creek, which is 10 yards wide, and shallow, flowing through a rugged valley three-quarters of a mile wide and 180 feet deep. It enters the Saskatchewan three miles to the N.
				Bearings—Eagle Hill, N. end - - N. 292° E.
				„ Ditto S. end - - „ 222° „
„ 19	14	„	8.45 to 1	Ascend gradually the eastern slope of the Eagle Hills, over very stony ground with numerous salt lakes. Halt four miles from the Bear's Head, a prominent hill.
„ „	6	SW.	3.30 to 6	Ascend rapidly to the west hill; gaining the top of the hills we turned to the north, through wooded country, with numerous fresh-water lakes. Camp at one of these which is two miles long and a half broad, Eagle Hills, an irregular plateau, abrupt to the east, sloping gently to the west, their crest covered with poplar clumps. Many spots of rich fine land, but no good timber.
„ „	3	NNW.		Camp at lake. Lat. 52° 17′ 59″ N. Long. 107° 28′ 15″ W.
„ 22	9	WSW.	9 to 12	After two miles reached south end of Lizard Lake, from which place we have to carry wood. Two miles of hilly country, then four of level plain bounded to the N. by hills, which again sweep across our track when we halt at Stony Lake. Lat. 52° 14′ N. Long. 107° 35′ 4″ W.
				Bearings—South end of Eagle Hill woods N. 96° E.
				„ North end of ditto - - - „ 320° „
„ „	12	„	3.50 to 8	Pass over level, poor prairie, and cross a small creek flowing to the south. After six miles camp at a small swamp.
„ 23	11	„	5 to 8.15	Cross a succession of level plains, separated by ridges running N. and S. Soil and pasturage everywhere poor. Camp at a swamp within two miles of a salt lake, about four miles in circumference.
„ „	17	WNW.	12 to 5.45	Pass over an extensive plain bounded by hills to the N. At five miles came to a swampy creek; four miles farther to two small lakes; and after 16 miles reached a deep ravine, like a rent in the prairie, a quarter of a mile wide, with steep banks 110 feet high, the bottom being occupied by deep salt lakes, some of them several miles in length. Camped at a small swamp in the prairie to the west; wretched water and miserable grass.
				At noon. Lat. 52° 14′ 37″ N.
				At 9 a.m. Long. 108° 11′ 33″ W.
„ 24	10	W. by N.	8.45 to 12	Made for a range of hills, and after six miles began to ascend rapidly, and then came to a valley four miles wide and lying at the base of the Ear Hills, where we halted.
„ „	7	WNW.	3.15 to 5.15	Pass over hilly ground to a considerable elevation. Plain covered with oleaster copse, and several new plants found (*e.g.* Arnica ——?) Camp at a stream running to the N.
				At 7 a.m. Lat. 52° 16′ N. Long. 108° 27′ 27″ W.
„ 25	10	„	9 to 3.30	Pass over arid plains intersected by deep gullies generally containing salt lakes. These ravines ramify in every direction and are generally about a mile wide and 110 feet deep, with precipitous banks, the northern exposures being clothed with small poplar. In one of these, called the Wich-que-tin-a-su or Grand Coulée, we encamped at springs at the base of the high banks. Besides poplar, a few clumps of maple at this place. To the S.W., six miles distant, a hill 440 feet high, from which Bearings—
				Ear Hills - - - - - N. 95° E.
				Long Wooded Hill - - - „ 305° „
				Lat. 52° 28′ 39″ N. Long. 108° 52′ 10″ W.
July 2	9	W.	9.45 to 1	Passed over very broken ground, round bare hills, intersected by deep gullies, the general depression of which is 170 feet, while some of the hills rise to 450 feet. Halt at an old Indian camp.
„ „	6	WNW.	5 to 6.30	Passed through a belt of woods bounding a rich alluvial tract about two miles wide, and covered with a white-berried oleaster, and through which Ambush Creek runs N.E. to flow into Manitoe Lake.

Date.	Distᶜ.	Course.	Time.	Remarks.
1858.				
July 3	17	WNW.	6.45 to 12	Crossing the creek, passed through wooded country among sand-hills, then entered an irregular plain dotted with salt lakes, halted at the foot of a high hill densely wooded on its eastern slope.
„ „	8	NW.	3 to 3.30	Crossing the point of the hill entered a rich but small valley, and camped at Eyebrow Creek. From this camp 10 miles N. broken wooded country, then Eye Hill Creek flowing to the N.E., and bounded to the N. by the Pass Hills, from which Bearings—Eye Hill, 20 m. dist. - - N. 225° E. „ Moose Hills north of Battle River - - - - „ 335° „ „ Mouth of Eye Hill Creek - „ 10° „ „ Wolf Hills - - - „ 20° „ Distance of Battle River, 18 miles. At noon lat. 52° 34′ 25″ N. ; long. 109° 23′ 45″ W.
„ 5	15	W.	8.30 to 1.30	Cross rolling plain, and camp in woods at the side of a high hill, from which Bearings—Course back - - - N. 65° E. „ Low Blue Hill, 25 m. dist. - „ 140° „ „ Neutral Hills, 20 m. dist. - „ 170° „ „ „ west end - „ 210° „ „ Eye Hills, south end - - „ 320° „ „ „ north end - - „ 355° „ „ Poplar Hills, north point - „ 20° „
„ 6	12	„	11.30 to 6	Pass over sparsely wooded plain, and after 10 miles
„ „	9	W. by N.		reached Nose Hill Creek, which is 25 feet wide, and flows through a miry flat. Camp in poplar wood beside small lake.
„ 7	11	„	8.30 to 12	Pass through a valley filled with sand-hills, and after crossing a chain of small lakes lying N.W. and S.E., at 11 a.m., ascend rapidly over broken ground, and halt near where we kill a moose deer.
„ „	9	„		Continue over irregular country, thickly clothed with poplar. After five miles reach Battle River, which flows through a valley two miles wide, and depressed 270 feet. Cross the river, which is 40 yards wide and two to three feet deep, with a soft muddy bottom, and not very swift. Sides of valley well wooded with poplar. After ascending left bank, camp at a small lake. Have a view down the valley for seven miles to N.N.E., and up the valley for 3½ miles S. by E. Bearings—Flag Staff Hill - - - N. 220° E.
„ 8	13	WNW.	3 to 6.15	Pass over undulating prairie with clumps of poplar, and after 10 miles reached north flank of Flagstaff Hill, which rises as a cone 380 feet above the prairie, and three miles further on encamp by a small lake. Bearings from Flagstaff Hill of two lakes to N. W. end - N. 322° E. „ „ E. end - „ 21° „ „ E. Nose Hills (Neutral Hills ?) „ 109° „ „ W. „ „ „ 125° „
„ 9	10½	W. by S.		After five miles, from near a lake, Flagstaff Hill bore N. 53° E.
„ „	12	WSW.	4 to 7.30	Reach Battle River, and encamp on left bank. From this point Battle River runs with large bends to SE. by E., and after nine miles receives a large tributary from the S.W. called Vermillion Creek, which is said to rise near Bull Lake ; and 14 miles further, where it receives Ribstone Creek from the south in lat. 52° 17′ N., it turns sharply to N. by E. ; which direction it preserves for 22 miles with five large bends to reach our crossing-place of the 7th. As far as the elbow its banks are very ruinous and barren, displaying sections of tertiary and cretaceous strata. Bearings from the Elbow : „ Neutral Hills - - - N. 105° E. „ Minetonas Hill - - - „ 205° „ „ Flagstaff Hill - - - „ 340° „ Bearing from camp Flagstaff Hill - „ 105° „ Depression of valley at this place, 155 feet.
„ 12	16	„	11 to 4	Cross Battle River for the second time, and make for a range of blue hills to the W. through willow copse. Camp at Lost Eagle Creek, which runs to N.E. to Battle River.
„ 13	5	SW.	1.30 to 3 p.m.	Camp at Beaver Dam Creek, which flows to N. to Battle River.

Date.	Distᵉ.	Course.	Time.	Remarks.
1858. July 14	8	WSW.	8 to 10.30	Through poplar clumps over sandy hills, having to our south bare prairies as far as the eye can reach; to the north hills surrounding Bull Lake, and rising to about 200 feet. Reach "Dried Meat Camp." Bearings from a high hill (*a*) three miles from camp :— „ Camp - - - - N. 290° E. „ N. end Bull Lake - - „ 300° „ „ S. „ - - „ 270° „ 20 miles south of the encampment, a large lake, nine miles by five, lies E. by N., surrounded by flat marshy country, with good pasturage, but no timber. Bull Lake is of quadrilateral form, with long tortuous arms from each corner; it is surrounded by high hills and is 12 miles across. From a conical hill 150 feet high, one mile from S.E. shore (*b*) Bearings—(*a*) Hill above mentioned - N. 79° E. „ E. corner Bull Lake - - „ 11° „ „ N. „ - - „ 337° „ „ W. „ - - „ 292° „ „ S.W. „ - - „ 236° „ From a hill nine miles from camp of 17th, one mile S.W. of lake, (*c*) Bearings—Camp - - - - N. 90° E. „ (*b*) Hill - - - - „ 30° „ „ Island in lake - - - „ 10° „
„ 17	14	W. by S.	3 to 7.30	Encamped S.W. of Bull Lake.
„ 19	13	„	9 to 12.45	Through broken country and across Tail Creek, which flows into Red Deer River at one mile to the south of the track. Pass N. flank of a high hill overhanging Red Deer River, and by which the Blackfoot trail leads out to the prairie. From this hill (*d*) Bearings—(*c*) Conical hill - - N. 30° E. „ (*a*) „ - - „ 20° „ „ W. margin Bull Lake - „ 15° „ „ E. „ - „ 25° „ Red Deer River flows from the south-west with large bends. The reach to the south of the hill is due east for two miles, when the valley changes its course at right angles, and the river flows towards the south. To the S.W. is a range of hills at some distance across Red Deer River, called the Nick Hills, of which Bearings—S. end - - - - N. 210° E. „ The Nick - - - - „ 225° „ „ N. end - - - - „ 233° „
„ 20	8	SW. by W.	3 to 5.30	Pass over a range of low hills with small lakes and poplar thicket. Encamp at Dead Man's Creek, one and a half miles from where it joins Red Deer River. The country to the west of the Dead Man's Creek is very irregular. From a hill 10 miles W.S.W. of camp Bearings—Mouth of Dead Man's Creek N. 34° E. „ (*d*) Hill (W. side of Tail Creek) - - - - „ 45° „ „ Nick Hills (S. end of) - „ 203° „ „ „ (N. end of) - „ 248° „ „ Tho Nick - - - - „ 236° „ „ Two conical hills - - „ 270° „
„ 21	„	SSW.	8 to 11.30	Traverse the Dead Man's Creek and reach the Red Deer River three "points" above, where we cross to the S. side. River deep and swift, immediate banks 120 feet high. Breadth of river at crossing-place, 130 yards.
„ 22	17	W. by S.	10.30 to 4.15	Keep along at the top of the second level of the river at a distance of one mile from the stream. The river banks are 120 to 160 feet high, and on the south side form a high mural precipice of sandstone, which weathers into fantastic forms, with a sparse growth of spruce fir clinging in the crevices. Leaving the river to our right we ascend considerably, and encamp at a small swamp at the base of the Nick Hills.
„ 23	14	SW.	7.15 to 11.15	Make for the Nick, and gaining it by a rapid descent of 310 feet, find it to open into a wide flat valley of great extent, through which flows Red Deer River. To the north it is bounded by the Medicine Lodge Hills, distant 30 miles, and to the south by a high table-land, sending spurs to the north, the most prominent of which is the

Date.	Distᵉ.	Course.	Time.	Remarks.
1858.				
July 23	14	SW.	7.15 to 11.15	Antler Hills. First view of Rocky Mountains, which range from N. 205° E. to N. 245° E. The highest mass subtends an angle of 11′ from its apparent base to its summit. The Nick Hills run N.W. and S.E., and are cut through by Red Deer River four miles N. of the Nick. Cross 10 miles of swampy ground, and halt at Antler Hill.
„ „	9	„	4 to 6.30	Descend a swampy plain, and camp at foot of Hunter's Hill, which forms a high conical mass to N.W.
, 24	16	„	7.45 to 11.15 and 4 to 5.30	Pass over Hunter's Hill and across a bare prairie, through which winds a deep valley, till we reach the "edge of the woods." Encamped, "Câche Camp."
„ 26				12 miles to N.W., with a considerable descent, leads to Red Deer River, at where it receives Little Red Deer River from S.W., and, 2½ miles further up, Medicine River from N.W. Red Deer River can be forded at this place, and its banks are low, with very rich pasturage. The trail from Edmonton to Bow Fort, crosses it at this place. Country in this neighbourhood exceedingly rich and well timbered along the rivers. From a hill four miles from camp Bearings.—Camp - - - - N. 74° E. „ Rocky Mountains (S. end of) „ 182° „ „ Devil's Head - - - „ 213° „ Apparent angle subtended by Devil's Head Mountain 21′. "Câche Camp," lat. 51° 52′ 50″, N. long. 114° 10′ 15″ W.
„ 29	15	SE. by S.	9 to 1.30	After passing through willows for a few miles, emerge on the Great Prairies ; grass tolerably good ; halt at a small lake without wood.
„ „	7	„	4.30 to 6.30	Encamp at Stoney Coulée, where there is very little wood, and a small creek flowing to E.
„ 30	16	„	12.30 to 6	Over level praries, broken by slightly elevated ridges. Encamp at a creek flowing to E., having a well-marked hill 5 miles to our N.E.
„ 31	15	S. by W.	5.30 to 7.30 to 12	Course very irregular, owing to a buffalo hunt. Camp at a small creek flowing to E., and said to join Red Deer River; no timber whatever. "Slaughter Camp," 51° 20′ 47″ N., long. 113° 50′ W.
Aug. 3	15	WSW.	10.15 to 4.30	Cross the creek, and continue over bare prairie with undulations rising 200 feet. Camp at a swamp.
„ 4	13	WNW.	8 to 12	Reach a large swampy lake at the foot of a range of hills.
„ „	7	„	3.10 to 5.30	Ascend rapidly, after crossing a small stream which issues from the lake and flows northward, and encamp beside a rocky ravine, which winds through the hills. Depth of this ravine 224 feet. A few rough-bark poplars at this place.
„ 5	4	„	11.5 to 2.5	Over very broken country, having to cross several high ranges of hills ; halt at a small lake.
„ „	7	SW.		
„ „	7	WSW.	5.20 to 7.40	Reach a wide valley with a stream going to N.W., where there is a hummock of woods known as the "Point of Woods," lat. 51° 21′ N.
„ 6	13	WSW.	2.30 to 7.20	Cross an elevated plateau for five miles, when we come in sight of Bow River ; then traverse two deep valleys, separated by ranges of hills, running parallel to the Rocky Mountains, and rising to the altitude of from 600 to 800 feet. By a deep gorge we then pass through a third range, and encamp at the foot of Dream Hill.
„ 7	10	SW. by W.	7.30 to 12	After 3 miles arrive at Dead Man's River, which we cross at the point at which it joins Bow River. Great difficulty in getting the carts along. Follow left bank of Bow River, the valley of which is wide, and occupied by gravel terraces.
„ „	7	„	3 to 6	Continue to follow up the river by a very bad trail for the carts, owing to the numerous steep creeks we encounter. Camp near the site of the Old Bow Fort. Lat. 51° 8′ 46″ N., long. 115° 4′ 30″ W. Abandon the carts.

Start from Bow Fort, August 11th, 1858.

„ 11	6	SSW.	4.30 to 8.45	Follow up left bank of Bow River, and camp at *Lac des Arcs*.
„ „	2	W. by S.		In the 1st range, lat. 51° 1′ 44″ N.
„ 12	3	„	4 to 6.40	Pass over the "Crate," from Grotto Mountain, and enter the first longitudinal valley. Camp opposite to the "Three Peaks." Lat. 51° 2′ 26″ N.
„ „	4	NW.		

Date.	Distᵉ.	Course.	Time.	Remarks.
1858.				
Aug. 14	13	NW.	2.15 to 7.15	Keep along the shingle terraces, and camp at Cascade Mountain, where the valley breaks through the 2nd range. Lat. 51° 9′ 18″ N.
„ 17	9	WSW.	9 to 1	The valley is narrow, and the trail confined by rocks at some points. Halt at the angle, where we again reach a wide longitudinal valley.
„ „	8	NW.	4 to 7	Valley much expanded, with the Saw Back range to the east. Cross much soft "muskeg." Camp by the river; good grass.
„ 18	7	WNW.	8 to 11	Through burnt wood. Trail level, and otherwise good. "Moose Camp."
„ „	5	„	4 to 6.30	Trail much blocked with timber. Camp at a small creek under Castle Mount, and opposite to Vermillion Creek.
„ 20	12	SW.	9 to 3	Cross Bow River, 60 yards wide, and up to one's girths; Ascend a steep bank, the piece of a shingle terrace, and then through dense timber, over ground sometimes rather soft, to the height of land, Vermillion Creek being to our left, at first in a deep valley with steep banks of the shingle deposits, but rising from a small clear lake, at the west end of which is a divide of a few hundred yards from the source of the West Vermillion River.
„ 21	6	SW. by W.	8 to 12	Descend the valley of Vermillion River, which is moderately open, but the forest compelling us to cross and recross the stream. Come to where a creek joins it from the west. Halt in lat. 51° 6′ N.
„ „	5	SE.	- - -	Pass the Vermillion plain, about two miles in extent, being in an angle of the valley. Its surface is without grass and wholly composed of yellow ochre. After two miles reach the junction of a large stream from a glacier to the S.W. where the course of the valley changes to S.E. Camp on left bank of river.
„ 22	6	„	8 to 11	Halt at a large stream from the snow mountain to our left (Mount Ball), in lat. 51° 2′ 45″ N.
„ „	8	„	2.30 to 8	Valley gets a little rocky, and much fallen timber, so that after two miles cross the stream to the right bank. Ascend the slope and get into heavy cedar forest. Camp in an "opening."
„ 23	4	SE. by S.	8.30 to 10	Descend again to the river level, as we find we made a mistake in leaving it. Valley opens out very much, and receives a large stream from the N.E. (Simpson's Pass ?) The river then changes its course again to S.
„ „	8	SSW.	2.30 to 6.30	High waters of limestone here in the valley at this point forming "The Gorge," but not so closely as to make any difficulty in passing. Beyond this point enter a very wide thickly-wooded valley running N.W. and S.E. Camp at a swamp.
„ 24	4	„	10 to 12	Turn up the wide valley of the Kootanie River, which is wide and spacious, and keep along high terraced levels of shingle. Timber very dense. Lat. 50° 52′ N.
„ 25	8	W. by N.	10.30 to 1.45	Keep up the valley on the high level for some miles, and then descend 300 feet by three different steps to the Kootanie, which is a small sluggish stream winding through a wide bottom of green morass with bluffs of wood. Halt at one of these on south side of river.
„ „	7	WNW.	4.15 to 7	Recross the stream, and pass a large tributary from the N. Camp in burnt woods near a large "muskeg."
„ 26	8	„	9 to 12	Reach two large white mud lakes, very shallow and several miles in extent, from which the Kootanie River takes its rise. Lat. 51° 0′ 37″.
„ 27	6	NW.	9 to 12	The bottom of the valley occupied with soft muskeg, with clear deep lakes and small streams that run in opposite directions. Terraces give way to more irregular slopes on the sides of the valley. Halt at a large creek from a glacier to the N.E. (in Mount Gordier.) Great deposits of moist sand and gravel. Descent of the valley to the N. W. very rapid.
„ „	5	NW. by W.	2.30 to 6	Very rugged. The bottom of the valley too soft, and the side much blocked with fallen timber of large size and lying on the slope. Very hard on the horses. Camp on a beautiful green meadow by the river (Beaver Fort River) which is now large and very swift.
„ 28	4	NW.	9 to 11.30	Halt at a muskeg. Fallen timber very bad; try ascending the side of the mountain to avoid it without success. The terrace deposits much furrowed. Lat. 51° 9′ 30″.

Date.	Distᵉ.	Course.	Time.	Remarks.
1858.				
Aug. 28	2	W. by S.	2 to 4	With great difficulty descend to the river, and camp in a labyrinth of fallen trees by the river.
„ 29	3	NW.	10 to 11.30	Reach a very large stream from the north, above where it joins Beaver Fort, making an angle almost back on its previous course, with a fine fall of 40 feet. Mountains high and precipitous on either side. Down the valley of the combined rivers seems to be confined and rocky. (Kicking Horse River.)
„ 31	3	N. by W.	10 to 1	Cross Kicking Horse River and follow up its right bank.
„ „	2	N. by E.	3 to 4.30	Camp under a high cliff in a cañon like "The Gorge" on Vermillion River.
Sept. 1	6	N.	8 to 12	Valley wide and expanded receives four large branches. Lat. 51° 16′ 30″ N.
„ „	6	NE.	2 to 6	Cross a large branch from the north, and then over a high rocky point, when we enter a profound cañon, the sides of which are nearly perpendicular, and 4,000 to 5,000 feet in height. Camp on the shingle flat that occupies its whole width.
„ 2	3	N.	9 to 10	Follow up the stream over the shingle flats through the cañon to where it ends in a steep heavily-timbered slope.
„ „	7	ENE.	10 to 5	Ascend very rapidly by a rugged trail. In one mile rising 1,000 feet. The stream descends by a series of cascades; very rocky and dangerous for the horses. At last reach more level ground, and passing through open woods camp at the height of land, where there are two small lakes. To the right and left mountains covered with glaciers.
„ 3	6	E.	10 to 12	Through fine open woods in a wide flat valley till reaching a large stream from the west (Noores Creek), which follow down to the Bow River, which we cross. In sight of Castle Mountain opposite the entrance to Vermillion Pass. Lat. 51° 22′ 40″ N.
„ „	2	N.	3 to 4	Pass back into the woods to where we had killed a moose, to save carrying the meat.
„ 4	5	NW.	- - -	Move to the "Stoney" Camp at the base of the mountains on the north side of the valley.
„ 8	6	W.	9 to 11	Return to Bow River opposite to Goat Mount, where there is a large branch issuing from a lake fed by a glacier. Lat. 51° 28′ N.
„ „	6	NW.	1 to 5	Ascend the right bank of Bow River. Stream very small now. Pass round east flank of Goat Mount, and camp on the west side of it.
„ 9	5	„	8.15 to 11.15	Follow up the valley, which rises very fast. Trees soon get stunted and the aspect alpine. After five miles the valley changes its direction. The mountains become higher and more overhanging, and the river dilates into two lakes. Much moraine matter scattered in the bottom of the valley, over which it is difficult to pass. The first lake is small, and has been caused by these accumulations. The second is two miles long, and is closely bounded by precipices along its western shore, except at one point, where a glacier descends through a rugged valley reaching the water's edge. The east shore is flat, and along it we passed to a fine open plain that slopes up from the head of the lake to the height of land. Down this slope a small stream winds, having its origin in mossy springs, the source of the South Saskatchewan. Lat. 51° 40′ N.
„ „	4	N. by W.		
„ „	6	NW.	2.15 to 5.30	The descent to the west very rapid. Keep along the right side of the valley, and then with difficulty reach the bottom by a descent of 1,000 feet, and keep along a large stream (The Little Fork) till it reaches a lake under the mountains on the west side, where we camp. Lake fed by a glacier.
„ 10	8	„	9.45 to 1	Pass two lakes and cross the river three times.
„ „	8	„	2.45 to 7	Keep along the left side of the valley, crossing many debachles of angular breccia, and then cross a heavily wooded point to reach the North Saskatchewan, where we encamp on striking a large pitching trail.
„ 11	6	W. by S.	7.30 to 9	Follow up the right bank of the North Saskatchewan. Channel very wide with large flats of shingle. Reach a point where the river is divided into two branches. After an hour lost in seeking for a trail, follow up the left branch by passing over a high point through dense wood. Halt in an "opening." Lat. 51° 54′ N.
„ „	2	W.		
„ „	2	„	2 to 4	Reached a large lake that completely fills the valley. Had to camp on account of the fallen timber.

Date.	Distᵉ.	Course.	Time.	Remarks.
1858. Sept. 12	5	W.	9 to 10.45	Keep along the lake, and at its west end find a flat plain with good grass, where we camp about one mile from the foot of a great glacier which fills the upper part of the valley. Mountains on each side form precipices about 2,000 feet high. Lat. 57° 52′ 16″ N.
				Spend two days on the glacier.
„ 14	8	E. by N.	7 to 9.40	Return to the North Saskatchewan down the glacier lake valley. Then ride four miles up the middle on shingle flats, and back to white mud camp on the main stream, two miles above our camp of the 10th. Lat. 51° 56′ 30″ N.
„ 15	11	„	8 to 11	Keep along right bank of N. Saskatchewan, and find the trail pretty good throughout. After three miles cross the Little Fork at its mouth. Halt at where the valley, which is wide, makes a bend, in order to look for a ford.
„ „	14	E.	2 to 6	Cross the river, which is 130 yards wide and almost too deep to ford. Go very fast along the left side of a very wide valley, through dense woods, till on reaching "Pine Point," where we crossed over a rocky promontory and turned sharply to the north and west four miles along the river on the Kootanie Plain. Valley very much expanded. Saw Back range to the east. Large branch seems to come from the south.
„ 18	14	NNE.	8 to 11.30	Follow the left bank of the river, and after ten miles cross a large branch from the N.N.W. (Wapektelek River), and then we turn down to the E. to cut through the first and second ranges. Lat. 52° 18′ N.
„ „	10	NE.	2 to 5.30	At 4 o'clock, having crossed a rocky point, pass out of the mountains, having been in them 38 days. Follow down the left bank of the river, and camp at a creek from the N.
„ 19	6	„	1 to 3	Pass over broken ground, and reach "Bighorn Creek," where we encamp for seven days. Lat. 52° 23′ 45″ N., mean of four observations. This stream and one from the south drain the valley between the main range and "Brazeau's range."
„ 27	10	E. by N.	10.30 to 1.40	Leave the North Saskatchewan River to our right, and pass over high ground thickly wooded, making for a valley through Brazeau's range, more to the N. than that by which the river passes it, which is very rugged. Reach a very deep clear lake, two miles long and one broad. Halt at its east end.
„ „	5	E.	3 to 4.30	Pass through soft muskegs with light timber, and camp in the valley of the outer or Brazeau's range, where there is a fine prairie, and a small stream commences to flow to the E. (Miry Creek.)
„ 28	10	„	8 to 11.30	Keep along the creek, which increases rapidly in size. Cross it several times. Halt in Lat. 52° 30′ N., when we are again in the open country, but still well wooded.
„ „	13	„	1.15 to 5.45	Follow the creek through dense forest, till after five miles we again strike the river, to reach which we descend 270 feet through a rugged valley, in which "Miry Creek" flows. Follow the river for two miles, and and again strike up the bank into the woods to avoid the bends. Camp at a pine swamp.
„ 29	5	E. by S.	7.30 to 9.35	Through dense woods and long "muskegs" high above the river level. Halt in lat. 52° 26′ N.
„ „	20	E.	12.30 to 5.30	Descend again to the river and keep along it, cutting across the large bends through poplar woods and small prairies. Camp at one of them, where there were old Indian tents.
„ 30	18	E. by S.	9 to 1	Forest much burnt, so that our progress is impeded by the fallen timber. Still keep along the river through a rich flat country.
„ „	17	E.	1.20 to 6	Pass through fallen timber for a few miles, and then reach the fine prairies and poplar bluffs that extend all the way to the Mountain House, which we reached, and encamped in one of the deserted rooms. Lat. - - - - 52° 22′ N. Long. - - - - 115° 10′ W.
Oct. 2	16	E. by S.	- - -	Cross the Saskatchewan and then Clear Water River, and follow the Blackfoot track to Last Hill Creek, where we fell on the Winter track.
„ 3	15	NE.	9 to 11.30	Cross Gabriel's Hill, and halt at the lake of the same name.
„ „	23	E. by N.	1 to 6	Cross Medicine River and Blind River, and camp on the high ground to the east of the latter with some Indians. Dress mow.

Date.	Distᵉ.	Course.	Time.	Remarks.
1858.				
Oct. 4	20	E. by N.	9 to 1	Pass Gull Lake, and halt at Prince Lake. Great storm.
„ „	8	„	2.15 to 4	Pass over the hills and descend to Beaver River, after crossing which we are obliged to camp.
„ 5	20	NNE.	1.30 to 5	Cross Battle River and Pigeon Creek, which latter we had to swim. Cross the Pigeon Hills, and camp at "Weid Creek."
„ 6	10	N. by E.	8.45 to 11.30	Reach the "Bad Beaver Dam," and get the lat. 53° 5′ N.
„ „	10	„	1 to 6	Horses quite tired with the snow. Camp at north end of "Stoney Plain."
„ 7	20	„	7 to 1	Reach the White Mud Creek.
„ „	5	„	2.30 to 4	Reach the Saskatchewan and swim the horses across to Edmonton, having been in the field three months and twenty-six days.
Start from Edmonton, with two men, an Indian, and three dog sleighs.				
Nov. 26	7	S. by E.	10 to 12	Along the Blackfoot track to White Mud Creek.
„ „	11	„	1 to 3.30	Cross the little plain, and camp in poplars.
„ 27	10	„	7.45 to 10.15	Snow very soft and wet. Halt near the Long Lake. The snow is deeper here than near Edmonton. Pigeon Lake Hills bear W. by S.
„ „	14	„	12 to 4	The swamps and small lakes which we pass at last form a creek, which flows to the south to Battle River, through the wide fertile valley between the Beaver Hills and the high grounds to our right. We now reached a second creek on our right, which rises from Long Lake and flows S.E. also to Battle River. Camp among pines to the west of the track. Broken hilly ground in all directions excepting towards the S.E., where there is an extensive plain.
„ 28	8	S.	8.45 to 11	Follow the west branch of the Blackfoot track over the broken ground. From the top of a high hill over which the track passes— Bearings—N. end of Musquachis Hill - N. 200° E. „ South do. - „ 170° „ „ Direction of Blackfoot track „ 130° „ „ Course back - - - „ 315° „
„ „	13	S. ½ W.	12.45 to 4	Leave the track and strike across the plain to the south end of the Musquachis, where we encamp in thick poplar woods. The grass on the plain very long, which has kept the snow loose, so that it is very difficult to walk upon.
„ 29	10	S. by W.	8.15 to 11.45	Pass through dense thicket, with short openings that are probably swamps in summer, and then descend a good deal into fine prairies with clumps of wood. Halt at some Indian tents (Stoneys). Lat. 52° 46′ 26″ N.
„ „	8	SW.	1.30 to 3.45	Descend by a gentle slope through most inviting country, with long rich pasture standing above the snow till we reach Battle River. In cutting off a bend it makes to the south, cross some broken country, and camp on the north side of a lake that is about one mile in length.
„ 30	10	S. by W.	8.15 to 10.45	After two miles reach Battle River, which is 30 yards wide. Crossing it on the ice, we followed a shallow valley to the S., having Wolf Creek on our right. To the S.E. are hills heavily wooded with poplar, and to the west also high grounds, but which are almost free from wood. Rise rapidly, and halt at the last bluff of wood that we see on our track in the direction we follow. We are following the "Wolf's Track."
„ „	10	„	12.15 to 3.30	Not finding wood on the trail, we struck to the west, and encamped in a bluff sheltered among high hills beside some good sized lakes. From the high grounds can now see the Wick Hills, and the banks of the Red Deer River.
Dec. 1	10	„	7.45 to 11.45	Over high broken ground, and strike Red Deer River just below the mouth of Blind Man River. A stream of good size from the N.W. The bank of Red Deer River 220 feet high, but sloping. Halt in burnt woods close to the stream on the south side. Lat. 52° 18′ 13″ N. Thermometer falls to 37° Fahr.
„ 2	9	SW.	8.45 to 11	Follow along Red Deer River on the ice, which is rough and open at many places from the rapidity of the current. Halt in a splendid "point" of pines on the right bank. Lat. 52° 12′ 36″ N.
„ „	10	W. by S.	12.45 to 3	Still follow the river. Banks now abrupt and very high, and well wooded. Camp at a small creek from the N. From the high ground behind the camp the Antler Hills bear S. E. by S.

Date.	Distᵉ.	Course.	Time.	Remarks.
1858.				
Dec. 3	16	SW.	9 to 12.45	Ice very good. Banks of the river retire, and are more sloping again. Pass the track of a large camp of Indians, who must have passed to the Mountain House a few days before.
„ „	6	W. by W.	7.45 to 3.30	Reach the usual crossing place, just below the mouth of Little Red Deer River; camping about two miles short of where the cart trail comes down on the river.
„ 4	10	W.	7.45 to 10.30	Pass the Edmonton trail, the mouth of Little Red Deer River from the S.W., and two miles further on Medicine River from the north. Fine pine timber along the river; open rich "points" and luxuriant pasture. The snow not very deep here. Lat. 52° 26′ N.
„ „	6	SW.	1.30 to 3.30	River valley much contracted and gloomy-looking from the dark pine woods. Banks commence to exhibit terraces. "Porcupine Camp."
„ 5	9	WSW.	8.30 to 11.15	The river valley is now much wider, and the stream makes large bends, which we frequently cut off by passing through the woods.
„ „	9	WSW.	12.45 to 3.15	The river makes longer reaches now, and we sometimes get a view of the mountains to the West Camp in pines on left bank. Birch trees seen.
„ 6	6	W.	8.45 to 10.15	Many open holes. Fell into the water, so that we had to halt early to make a fire. Lat. 51° 50′ 28″ N.
„ „	13	W. by S.	12.15 to 3.30	Valley open, and river very wide, with many large islands. At 2.30, bearing of "Devil's Head" N. 192° E.
„ 7	4	W.	9 to 10	The river is rising, and bursting the ice at many places, owing to a partial thaw for the last few days. Reach an Indian track from the south, crossing the river. The water is over the ice so much that we leave the river.
„ „	8	S. by W.	10.45 to 1	Very hard work getting up the bank of the river, which is 250 feet high, and heavily wooded, without a proper track for our sleds to pass on. On gaining the high level, pass through open country, with only clumps of brushwood. Follow the track, and come up with a party of "Stoneys" on their way to a camp on Little Red Deer River.
„ „	9	„	2.45 to 5	Came to high grounds capped with shingle terraces covered with pines. The trail then becomes good. Reach the "Stoney" camp (*Chief Samoon's*). Sleep in the tents.
„ 8	5	SE.	9.15 to 11.30	Descend rapidly to the south through fine open timbered country, till reaching the valley of Little Red Deer River which we turn up.
„ „	4	E.		
„ „	11	W. by S.	1.15 to 4.15	Reach Little Red Deer River, and descend on to the ice, when we camp in pines on the right bank.
„ 9	10	WSW.	8.30 to 11.30	Little Red Deer River is here a very small stream, not more than 10 yards across, flowing through a narrow but profound valley, with steep and often precipitous banks, from 200 to 600 feet in height. Halt in lat. 51° 29′ 28″ N.
„ „	8	„	1.15 to 3.30	Pass a large branch from the west, and camp in pines on the right bank.
„ 10	6	„	9 to 4.15	Reach the source of Little Red Deer River by a short turn to the south. It is in lat. 51° 21′ 40″ N. We then entered a wide valley, with several large lakes and extensive swamps. Soon we came to streams flowing to the south, of which we crossed several. The pasture is rich, but wood only grows on the hill sides, which now may be called mountains. The outer range through which we had passed on Little Red Deer River, is about 2,000 feet above the plain which occupies this valley (called Too-mamaske-tai-oo, or Greasy Plain).
	3	S.	Noon.	
	6	S.		
	6	WSW.		
	6	W.		
				Pass through a valley in a range to the west, north of Dream Hill, and reach War-par-oo's Creek, a tributary of Dead Man's River. With great difficulty descend into its valley, and camp. Valley 300 feet deep, but total descent from the mountain valley 700 feet. Our course has been very varied.
„ 11	4	WSW.	9 to 10	Ascend out of the valley, and crossed a flat wooded plain to a small lake near Dead Man's River. Ascended the river for some miles into the mountains without the dogs.
„ 12	5	ENE.	- - -	Return to War-par-oo's Creek, but lower down.
„ 13	10	SE.	9.30 to 4.30	Follow down the stream on the ice for four miles, and then by an ascent of 300 feet gain the plain that extends to the base of Dream Hill, where, after six miles, we fall on the expedition track in the previous summer at the
„ „	6	NE.		
„ „	8	N.		

Date.	Distᵉ.	Course.	Time.	Remarks.
1858.				
Dec. 13				last camp, before reaching the old Bow Fort. Pass through the valley along the coast trail, which shewed a little in spite of the snow, and then struck North Cut through one of the wide valleys between the parallel ranges, crossing it obliquely so as to gain a ridge, with poplar woods to the east. Camped in these woods.
,, 14	9	N. by E.	9 to 11	Descend rapidly, and come to pine forest, and fall on a track that has been cut through it, wide enough for carts. On reaching Rock Creek, about 10 miles N.W. of the expedition camp on it, camped.
„ 15	7	NNE.	9 to 11	Follow an Indian track, and halt at a large "Stoney" camp. In lat. 51° 25′ 24″ N. Bearings—"Devil's Head" - N. 230° E. „ Valley of Bow river - „ 215° „ „ Dead Man's River - „ 252° „
„ „	8	N. by E.	1.30 to 3.30	After two miles fall on the Edmonton track, which follows the edge of the woods. Camp in a bluff of poplars.
„ 16	12	N.	8.30 to 12.30	Follow the track, which runs along the west side of Edge Creek.
„ „	16	„	- - -	Go on the ice of Edge Creek, which is smooth and good. The stream is 10 yards wide, and winds much, with low banks. After 12 miles leave the creek, and crossing over some high land, strike Little Red Deer River at a large bluff of timber, where there are some old war lodges. Camp.
„ 17	14	NNE.	8.15 to 1.15	Leave Red Deer River to the left, and pass over a high hill, after four miles from which— Bearings—Course back - - N. 160° E. „ Devil's Head - - „ 210° „ „ Medicine Lodge Hills - „ 350° „ „ Valley in Mountains of Red Deer River - - „ 230° „ „ Ki-hi-watchis (*Hawk's Hill*) „ 225° „
„ „	9	„	4.45 to 7.30	Pass over high broken ground, and see the line of woods that runs towards the "Cachi camp." After three miles come to Little Red Deer River again, and descend on the ice. Follow the river, till water all over the ice compels us to camp at the foot of the high bank.
„ 18	6	NE.		Cross over fine rich prairie to the crossing-place of the track at Red Deer River, while the men and dogs follow down Little Red Deer River to the same place, which is just below its mouth. They found it to make a great head to the west, so that the distance was 13 miles. Encamp in the Big Pine Bluff at the ford.
„ 20	21	NNE.	9.15 to 4.15	Cross Red Deer river, and struck across the willow plains to the North Camp, in a thicket of poplars on a high ridge.
„ 21	10	„	5.15 to 9.15	After eight miles reach Blind Man's River, about four miles above its mouth. Commence to cross the plains of the "Wolf's road," and halt at a small bluff of willows.
„ „	19	„	11.15 to 4	Cross the plains, and camp in the "Big Bluff," having again fallen on our old track.
„ 22	18	N. by E.	4 to 9.30	Cross Battle River, and halt at our camp of the 29th November. Snow 16 inches deep on the level plain.
„ „	18	„	11.15 to 4.15	Camp at our sleeping place on the 28th November.
„ 23	13	„	8 to 2.30	Cross the "Bear's" plain, and at 11 reach the "Black-
„ „	11	N. by W.		" foot track." Halt, because of the cold, three miles N. of our camp of the 27th November.
„ 24	21	„	3.30 to 8	Get to camp of 26th November.
„ „	18	„	12 to 3.45	Arrive at Edmonton, having been 30 days in the field.
Start from Edmonton for Jasper House and the Athabasca River, with three men and four dog sleighs. Provisions for 25 days.				
1859.				
Jan. 12	19	W. by N.	10.30 to 2.30	Reach the Horse Guard.
„ 13	6	W.	10 to 12.15	Keep along the Lake St. Ann's track for six miles, when
„ „	2	N. by W.		we struck off on the Fort Assineboine trail through the woods. Halt at Sandy Lake, after crossing Sturgeon River.
„ „	18	NNW.	1.15 to 6	Follow Sandy Lake, which is four miles long, and then cross five other small lakes, which form part of the same line. Dense woods all over the country.
„ 14	11	NW. by N.	9.45 to 1.15	Pass through very thick woods, and to the right of Lac La Nun, and commence to find the waters flowing to the north-east, being over the water line of the Saskatchewan and McKenzie river systems.

Date.	Dist^{e}.	Course.	Time.	Remarks.
1859. Jan. 14	11	NW. by W.	3 to 5.30	There having been a party with [*sic*] before us, we have a pretty good trail. At 4·15 cross Pembina River, 80 yards wide, and flowing to the N.N.E. This is the point to which boats can be brought for the portage to Edmonton. Camp among cypress pines.
„ 15	12	„	9 to 12	Pass through woods over a regular country, fine, dry, and high ridges, with intervening strips of swamp land. Halt at noon in lat. 54° 12′ 1″ N. Before halting, we crossed Paddle River, a tributary of Pembina River, about 10 yards wide, flowing N.E.
„ „	9	NNW.	2.30 to 5	Pass through splendid forest of birch and other trees good for timber. Camp at "The Two Creeks."
„ 16	14	„	9.15 to 2.15	Trail very bad, with fallen trees. Cross "Pitcher Creek," and then an open plain, followed by a belt of heavy timber, on passing through which we reach the valley of Athabasca. The valley is as large as that of the Saskatchewan, at Carlton. Very steep bank to descend to gain the river level, where we halt.
„ „	8	W.	4 to 6	By the bends of the river, which is 300 yards wide, consisting of several channels among heavily timbered islands. Reach Fort Assineboine, in lat. 45° 31′ 4″. Only a few ruinous log huts. Once a trading post of the Hudson Bay Company, on a fine plain, on the left bank of the river. Camp in one of the huts.
„ 17	10	WSW.	12.30 to 3.45	Follow up the river, which winds a good deal. Banks 200 feet high, well wooded. River, when in one channel and narrowed, 250 yards wide. Camp in pines on the south side.
„ 18	7	SWSW. =4 miles straight.	9 to 11	Pass several rapids where the ice is much broken.
„ „	11	WSW. =6 miles straight.	12.30 to 3.20	Snow 22 inches deep. The valley is becoming more confined, and the channel freer from islands.
„ 19	12	WSW. =7 miles straight.	9 to 12	Much rough ice, showing that the river is very rapid. Sandstone cliffs at every bend. Valley more open, but at some distance back high hills.
„ „	8	WSW.	2 to 4	Valley again confined. Camp in very fine timber. Rough barked poplar 7 feet in circumference. Also large pines and birches.
„ 20	10	W. =6 miles straight.	9.45 to 12.15	The river now makes long straight ridges with the banks on the south side very high seem to be cutting obliquely through a range of hills running N.E. Cliff of sandstone and coal. Halt on right side of river in very fine wood. Balsam poplar 13 feet in circumference, birch 6 feet, and for the first time saw the silver fir.
„ „	4	WNW.	2.45 to 4	The river much confined by heavily wooded banks. Ice rough, and snow 2 to 3 feet deep, and soft. Camp at right bank, at some old Indian lodges, in sight of McLeod's River, a large tributary from the south.
„ 21	9	W. =6 miles straight.	9 to 1	After two miles pass the mouth of McLeod's River, which is 100 yards wide. Break a sled.
„ „	4	NW.	3 to 4.30	Can see nothing for the snow-drift. Camp on right bank.
„ 22	9	W. =6 miles straight.	10.15 to 1	The snow very deep and soft. River valley open, and much fine land and timber on the first level. Halt to make a caché of a log of pemican. Cut off a bend of the river by a straight course through a willow thicket.
„ „	5	W.		
„ 23	11	„ =6 miles straight.	8.30 to 11.30	Low banks with sandstone ledges : many rapids. Halt in lat. 54° 19′ 36″ N.
„ „	10	WSW.	2 to 4	Valley wide with large flats, round which the river makes long reaches. Camp on left bank, and find Jeffray's name carved on a tree.
„ 24	19	W. by S. =10miles straight.	9 to 12 1.15 to 4.15	River now cuts through high ridges formed of sandstone, at which point the banks are 300 feet high, almost precipitous, and clothed with cypress pines.
„ 25	9	WSW. =6 miles straight.	8.15 to 11.45	Snow soft and wet. High hills to the south of the river. Halt in lat. 54° 12′ 24″ N. Camped here, as the snow is so wet.
„ 26	9	SW. =5 straight.	9 to 12	Snow crusted on the surface. River valley again narrow, with high steep banks.
„ „	11	W.	1 to 4	After seven miles reach "Baptiste's River," a tributary from the west about 90 yards wide. Camp where there had been recent Indian "lodges."

Date.	Distᵉ.	Course.	Time.	Remarks.
1859.				
Jan. 27	18	W. by N. =10miles straight.	9.15 to 11.45 1.30 to 3.45	High sandstone cliffs along the river, the valley being very wide. Large "silver spruce firs" at our camp.
„ 28	12	W. by S. =7 miles straight.	10 to 12.30	River has rock banks, and the ice is very much broken. After two miles come on the fresh trail of Indians. Send off a man to follow them, and go till we camped on the left bank. Country all around, as seen from the high land behind, is covered with dense forest. Indians (Stoneys) arrive.
„ 29	7	S. =5 miles straight.	9.30 to 11.30	Halt in lat. 54° 10′ 51″ N.
„ „	11	S. by W.	12.30 to 4	After 10 miles come to Dead Man Rapid, and two miles further to Old Man River, a stream from the W. Camp in a muskeg on left bank. River without any decided valley now.
„ 30	10	SW. =7 miles straight.	9.30 to 11.45	Reach the "Grand View." Snow is now much firmer, and not so deep.
„ „	17	SSW. =12miles straight.	12 to 4	Reach the "Grand Buffon." First ascend the right bank and meet with Iroquois, and then cross to their tents 300 feet above the river on the right bank. Banks of the river terraced here. Fine view of the mountains.
„ 31	20	SW.	8 to 12.15	Descend to the river, and, as there is little or no snow on the ice, go without snow shoes. Banks rocky and irregular. Much open water.
„ „	5	SSW.	2 to 3	Have passed through several outer ranges to-day—have now reached the cac a brulé, where the Athabasca receives Freeman's Creek from the west.
„ „	7	S.	3 to 4.30	Traverse the lake, which is bounded to the west by the first range of the Rocky Mountains, rising 3,000 feet.
„ „	6	„	4.30 to 6	Through the woods to the base of the Roche à Myette.
„ „	5	SW.	6 to 7.30	Skirt the spur of the mountains, which compels us at last to cross the Athabasca River, which is rapid, and with no ice except along the margins: wade through the rapid water three feet deep, 70 yards wide.
„ „	2	S.	8 to 8.30	Through the woods to Jasper House, in lat. 53° 12′ 17″ N., Hudson Bay Company's winter trading post within the first range of Rocky Mountains on left bank of Athabasca. It stands on a large wooded plain. The Assineboine or Snake Indian River joins the Athabasca from the west four miles below the fort.
Feb. 10	10	S. by W.	—	Started with Mr. Moberly into the mountains with three men, crossed a lake into which the river is dilated above Jasper House. Pass under Roche à Jacque, and, recrossing the river, camp among sand-hills, within "Colin's range." The trend of all the longitudinal valleys is N. 125° E., which is also the strike of the strata. The valley of the Athabasca cuts the mountains obliquely, on the whole running N., and only very little to the E. Bearings from camp :— Top of Rochêt de Smet - - N. 323° E. Valley of Snaring River - - „ 262° „ N. end of Colin's range - - „ 340° „ Up the main valley - - - „ 142° „ This is also the bearing for Mount Tekarra.
„ 11	10	S.	2 to 6	Follow the left side of the valley to where it again changes its direction near the site of Myettes House, where we cross the river just above the mouth of the Malene River, which is said to head with Wapa-teehk River on the N. Saskatchewan. Camp about 300 feet above the river. Bearings from a hill behind camp :— Pyramid Mount (subtends an ∠ 12° 20′) N. 273° E. Up Caledonian Valley - - - „ 250° „ Mouth of Myettes River - - - „ 198° „ Up Valley of River Malene - - „ 75° „
„ 12	6	S. by W.	—	Cross over a high rocky point thickly wooded. Halt on the top in lat. 52° 55 50′ N., from where bearings : Pyramid - - - - - N. 294° E. Toothlike mount up Caledonian Valley „ 262° „ Two lofty snow peaks up same valley „ 250° „ Mount in angle of two valleys opposite to Myettes House - - - „ 205° „ Mount Le Duc - - - - „ 155° „ Mount Tekarra - - - - „ 73° „

Date.	Distᵉ.	Course.	Time.	Remarks.
1859.				
Feb. 12	11	S.	—	Descend into the valley again, which is very wide, pass "Rock Encampment" and camp near the river of "Prairie des Vaches." Bearings from hill behind camp :— Pyramid Mount - - - - N. 305° E. Myettes House (Mount opposite to) „ 275° „ Mount Tekarra - - - - „ 8° „ Mount Le Duc - - - - „ 170° „ Mount Kerkeslin - - - - „ 119° „ Mount Hardesty - - - - „ 104° „ Up valley - - - - - „ 125° „
„ 13	7	„	—	Follow the river on the ice to the mouth of Whirlpool River, which comes from Mount Brown, and up the valley of which the trail runs to "Boat Encampment." Halt here in lat. 52° 46′ 54″ N. From this point, bearings :— Rochêt de Smet - - - - N. 316° E. Pyramid Mount - - - - „ 306° „ Mount Tekarra - - - - „ 333° „ Mount Hardesty - - - - „ 85° „ Kerkeslin Mount - - - - „ 112° „ From a mount one mile east of this point:— Mount Hood - - - - - N. 179° E. Mount Brown - - - - - „ 181° „ Mount to right of entrance to the valley „ 190° „ Do. to left do. - „ 170° „ Pyramid Mount - - - - „ 300° „
„ „	7	S. by E.	—	Follow the Athabasca, and camp below Mount Kerkeslin.
„ 14	11	S.	—	The men return with Moberly, walk up the river through a precipitous cañon, until it becomes quite a small stream.
„ „	25	N.	—	Return to our camp of the 13th.
„ 15	16	N. by W.	—	Follow down the river on the ice, which is much broken. Above Myette's House, much open water ; have to pass through the woods.
„ 16	20	N.	—	Return to Jasper House. Jasper House, 3rd Feb. 1859. Bearings :— Roche Miette, distant 4½ miles - - N. 30° E. Point of N. Spur „ 2¼ „ - - „ 350° „ Roche Joe - - - - - „ 305° „ R. Ronde - - - - - „ 320° „ Rochêt à de Smet - - - - „ 235° „ Snake River valley - - - „ 275° „ Pyramid Mount, up the valley of Athabasca - - - - - „ 182° „ Top of Roche à Jacque - - - „ 150° „ Up the valley of Rocky River - „ 112° „ From shoulder of R. Miette :— Le Grand Bas-fond - - - N. 8° E. Top of Rochêt de Smet - - - „ 222° „ Upper end of Lac à Brulé - - „ 12° „ Moon River valley - - - „ 300° „
March 19	—	—	—	Start from Jasper House to return to Edmonton, with two men, Tekarra and Louis Cardinal.
„ „	11	NE.	—	Cross the river and pass round Rochet Miette, and halt at the south end of the lake, travelling with a horse.
„ „	9	„	—	With my dogs follow the lake by the N.W. shore. The ice very smooth and the wind very high. Camp after descending the river 1 mile below the lake.
„ 20	20	„	—	Leave the river, and ride straight to the "Grand Buffon," and wait till the others arrive with the dogs. This is where the horses are to be left with the waggons.
„ „	8	ENE.	—	Follow the river ; camp below the Grand Buffon.
„ 21	6	NE.	—	Still follow the river to where we leave it, ascending the left bank, in order to strike straight through the forest to Lac St. Ann's. Fling away the dog sleigh.
„ „	12	E. by N.	—	Pass through the woods over high ground ; snow very deep. Have to carry the things on our backs. Camp in a thicket of spruce.
„ 22	11	SE.	—	Travel for six hours through "muskegs," in which the snow is deep and soft. Very hard work with the snow-shoes to beat the track, owing to the fallen timber and the loads on our backs. Halt on a high hill overhanging McLeod's River.

Date.	Distᵉ.	Course.	Time.	Remarks.
1859.				
March 22	2	SE.	—	Reach McLeod's River ; 50 yards wide ; high banks.
„ „	8	E.	—	Follow the river, which winds very much. Camp on left bank.
„ 23	20	ENE.	—	Leave the river, and travel nine hours, cutting off a large bend it makes to the south. Pass "White Mud Lake," and descend along a small stream, by which we encamp.
„ 24	3	SE.	—	Again meet McLeod's River. Timber very large and fine.
„ „	17	E. by S.	—	Follow the river for nine hours, but it winds much, and the snow is very deep and much flooded by water from under the ice. Delayed several times from getting our snow-shoes wet from this cause. Camp on the left bank, after passing a tributary from the S.W.
„ 25	12	E. by N.	—	Still continue to follow the river. Travel 10 hours, but go very slow, as the snow is deep and we are hungry. Pass "Brazeau's Caché," and camp on right bank.
„ 26	18	E.	—	Left McLeod's River, and travelled through dense forests of large trees for 10 hours. After 15 miles came to more open country, with lighter timber. Camp in poplars.
„ 27	10	E. by N.	—	After a few miles strike a stream flowing to the east, and from a hill get a view of the mountains. Bearing of a prominent peak, N. 191° E. Camp where Tekerra kills a moose-deer.
March 1	7	E.	—	Cross several small creeks flowing to the N.E., and reach Brazeau's lob-sticks.
„ „	10	„	—	Cross a large creek, and camp in poplars. The character of the forest is changing much, there being but few pines.
„ 2	9	E ½ S.	—	Through poplars and cypress all day. Very hot and close. The walking very hard work, as the snow shoes are wet. Halt on a high hill, forming a portion of a ridge running N.W. and S.E. It is thickly wooded with poplar. To the north is a range of high hills, probably bounding the McLeod River.
„ „	11	NE.	—	Crossing the hill follow down a small stream through poplar thickets, and camp within one mile of Bull-dung Lake.
„ 3	10	E.	—	Travel on the lake to its lower end ; it is about 20 miles long, and 5 to 6 wide ; we struck it half way up the western shore.
„ „	25	E ½ N.	—	Follow the stream that flows out of the lake, "Buffalo River," for 15 miles. Leaving it to our right, cross high land, with open timber, and camp in pines, most of the wood here being poplar. Very fine pasture everywhere.
„ 4	15	ENE.	—	After five miles cross Pembina River, about three miles below the mouth of the stream we were on yesterday. The banks of Pembina River are high and steep. Sections of coal on fire. Cross high hills that form the watershed to the Saskatchewan, and halt on an island in Lac des Isles, passing Lac Road three miles to our right.
„ „	19	„	—	After travelling 19 miles altogether on the lake (seven miles before halting and after) we passed through dense pine woods for seven miles, and camped on an arm of Lac St. Ann's.
„ 5	10	SE. by S.	—	Follow a trail : we reached the Roman Catholic Mission early in the morning. Rested all day till night.
„ „	24	E. by N.	—	With a train of dogs and a man, which had come to meet me, started at 11 p.m., and got to Edmonton at 8 o'clock on the morning of the 6th, having been in the field eight weeks.

Odometer Log : Fort Pitt to Fort Edmonton.

Date.	Miles.	Course Back.	Remarks.
1859.			
April 26	3·41	N. 15° E.	French Man Knoll, from top of bank. Up river, 3 pts. dist. 280°.
„ „	8·38	„ 75° „	Dinner place. Camp in Grand Coulée.
„ „	6·97	„ 70° „	Up Coulée, 285°. Down Couleé, 180°.
„ 27	7·20	„ 60° „ 1703 m.	Vermillion River. River flows N. 340° E.
„ „	4·06	N. 70° E.	River's bank, 10 miles to north across Willow Plain.
„ 28	1·61	„ 75° „	Creek flowing to south.

Date.	Miles.	Course Back.	Remarks.
1859.			
April 28	7·50	N. 75° E.	Blackfoot Hills, 15 miles to S., lying E. and W.
„ „	2·78	„ 85° „	Bluff of woods, west side of Vermillion Hills.
„ „	10·28	„ 85° „	Cross Miry Creek.
„ „	3·42	„ 132° „	Strike the winter track to Edmonton.
„ „	4·61	„ 75° „	Dead Pine Coulée.
„ 29	10·4	„ 55° „	Pine Point Creek is from east lake of the chain.
„ „	6·82	„ 65° „	Chain lakes commence, lying N.N.W. Vermillion River flows to S.E. from second lake.
„ „	11·57	„ 45° „	Black Hill, south side of lakes.
„ 30	7·21	„ 70° „	End of chain of lakes.
„ „	6·28	„ 80° „	Pass the Hairy Hail.
„ „	3·72	„ 75° „	Indian camp at Black Muck Hill.
„ 31	12·66	„ 82° „	Edge of woods.
„ „	0·62	„ 90° „	Hay Creek.
May 1	10·17	„ 75° „	Near la [*sic*] Bois.
„ „	12·44	„ 75° „	Beaver Hill Creek.
„ „	10·11	„ „ „	Blackfoot Creek.
„ 2	14·40	„ 50° „	The Long Swamps.
„ „	1·48	„ 45° „	Old Man's Hill.
„ 3	10·80	„ 30° „	Fort Edmonton.

ODOMETER LOG. Route of Expedition, 1859. Start from EDMONTON, June 11th, along BLACKFOOT TRACK to South.

Date.	Miles.	Course Back.	Remarks.
June 11	6·15	—	White Mud Creek.
„ „	4·20	—	Camp on small plain.
„ 12	13·20	—	
„ „	11·20	—	Pine Creek. Flows from Long Lake to Battle River, S.E.
„ 13	12·01	—	In plain east of Musquackis. Battle River crossing-place.
„ „	10·60	N. 290° E.	Camp 2 miles south of Battle River.
„ 14	16·40	„ 297° „	Red Deer Lake, south end of.
„ 15	9·47	„ 295° „	Bearing of Bull Lake Hills, N. 170° E.
„ „	4·23	„ 290° „	Track of Expedition in advance.
„ „	13.80	„ 380° „	Edge of wood.
„ 16	11·60	„ 280° „	Last wood ridge.
„ „	14·00	„ 300° „	Prairie.
„ „	9·2	„ 310° „	Letter Hills.
„ 17	13·2	„ 310° „	Long Lake Hills.
„ „	9·81	„ 345° „	Edge of Salt Lake Plain.
„ „	8·1	„ 375° „	Salt Lake Creek flows to E. (Ribstone Creek ?)
„ 18	9·1	„ 165° „	
„ „	2·2	„ 185° „	Hand Hills.
„ 24	5·07	S. ½° E.	Swamp. Camp on hill.
„ 29	11·82	N. 315° E.	Lake Camp.
July 6	4·15	„ 295° „	Little Lake Camp.
„ 7	11·3	„ 295° „	Bull Swamp. Lat. 51° 14′ N.
„ „	5·3	E. ½ S.	Pond Creek, running S. by W. Lat. 51° 10′ N.
„ 12	6·0	S. by E.	Camp at swamp.
„ 13	10·6	N. 305° E.	Berry Creek. Lat. 50° 53′ N.
„ „	7·6	„ 315° „	Red Deer River. Lat. 50° 57′ N.
„ 14	5·3	E. by S.	„ „
„ „	14.6	E. & 3′ N.	„ „
„ 15	17·3	N.E.	Valley of Red Deer River. Lat. 50° 59′ N.
„ 16	7·7	SE. by S.	Cross Red Deer River to south side.
„ „	6·4	ESE.	„ „ Lat. 50° 50′ N.
„ 17	23·3	ENE.	„ „ „ 50° 54′ N.
„ 19	13·0	9 S. ½ W. 4 S. by E.	Grizzly Bear Swamp. Salt Lake.
„ „	13·0	2 S. by W., 3 E. by S. 3 S., 5 W. by N.	Rattle-snake Lake.
„ 20	10·3	5 SW. by W. 5 SSW.	Bow River crossing-place.
„ 21	8·5	SSW.	Blood Indian camp at swamp.
„ 24	9·05	„	Swamp.
„ „	4·7	S. by E.	Sandy Hill Creek.
„ 25	13·4	S. ½° W.	Lake in sight of Cypress Hills.
„ „	13·0	6 SW. 6 SSW.	Salt Creek. Flows to N.
„ 26	12·7	S. by W. S. ½ E.	Coulée in Cypress Hills. Lat. 49° 48′ N.
„ „	10·5	W. by N.	Maple Coulée.
„ 28	9·1	SE.	Coulée of 26th. Higher up.
„ „	10·3	S.	Cypress Hills, N. base of
„ 29	4·8	—	Great valley of Cypress Hills.

From top of Cypress Hill, Les Trois Butes, N. 196 E.

Date.	Miles.	Course Back.	Remarks.
1859.			
Aug. 3	8·2	W. by N. & W.	Coulée to N.
„ 4	12·4	W. by W. by S.	Lat. 49° 35′ N.
„ „	10·0	W. by S.	Coulée.
„ 5	16·9	WSW.	49° 25′. Cross the Big Coulée, and reach the springs.
„ „	4·7	W. by N.	Swamp. Bad water.
„ 6	11·8	W. ¾ N.	Halt without water on account of a storm.
„ „	17·2	W.	After six miles Les Trois Butes bear W. 238° N. to W. 222° N. No water.
„ 7	17·4	WSW.	Lat. 49° 47′.
„ „	11·9	WNW.	Marsh. Cabna Camp.
„ 8	9·8	SSW.	Lat. 49° 47′ N. Right side of Belly River.
„ „	5·8	WSW.	Crossing-place of Belly River.
„ 9	8·8	WSW. to S. 46° W.	Lat. 49° 44′ N. No water.
„ „	13·6	W. by S.	Branch of Belly River from the N.
„ 10	8·3	WSW.	Lat. 49° 36′ N.
„ „	10·5	S. by W.	Shooting Belly River. Porcupine Mountains.
„ 11	8·3	SW.	„ „
„ 12	14·3	W.	„ „
„ „	8·1	W.	Kootanie Pass.
			Abandon the carts.

Prairies. From Cypress Mountain Camp, in Lat. 49° 38′ N.; long. 110° 36′ W. Variation of compass, N. 22° E.

Date.	Distᵉ.	Course.	Time.	Remarks.
1859.				
Aug. 3	15	NW.	—	Return to the expedition camp of the 28th.
„ 4	6	W.	—	Halt at Bull Creek, running to the N.
„ „	14	„	2 to 6	After eight miles cross a large gully, with a stream to the N.E. Then over high plains with poor pasture. Camp at a swamp. Bearings from a hill seven miles back:— Cypress Mount Camp - - N. 90° E. East of the Trois Butes - - „ 175° „
„ 5	14	WNW.	9 to 1	Reach Bow River. It is flowing to the N.N.E. Valley very deep and making three-mile bends alternately to the N. and N.E.
„ „	3	S.	4 to 6	Without reascending to the plain, follow round the river. The valley is only twice the width of the channel, or one-third of a mile.
„ „	4	W.		
„ 6	10	SW. by W.	9 to 12	Follow the river for passing a large pile of stones, being an Indian landmark. Pass over sand-hills, and strike Belly River two miles above its junction with Bow River. Belly River flows N.E. Lat. 49° 42′ N.
„ „	11	NW.	4 to 7	Over high plains. Camp at a swamp. Bearing from seven miles back from camp. W. of the Trois Butes. N. 145° E.
„ 7	11	„	9 to 12.30	Plains very level. Halt at a rain-pool, in sight of the Rocky Mountains. To our north, distant three miles, a creek flows to the E.
„ „	8	,	6 to 8	No swamps or permanent water. Camp at a rain-pool.
„ 8	24		6 to 12	Reach a range of hills running to the N.E. Lat. 50° 13′ 5″ N.
„ „	7	„	3 to 5	Camp at a little lake before commencing the descent of the west slope of the hills. Bearings:— Chief mountain (?) - - - N. 211° E. Lodge des Corbeaux (?) - - „ 225° „ Three marked depressions - „ 243° „, „ 244° „, „ 245° „ Most northerly mount visible - „ 255° „ Hills across Bow River, 18 miles distant - - - - - „ 335° „
„ 9	12	„	8 to 12	Descend 700 feet, and cross a wide valley. After nine miles ascend the hills to the west, and halt by a small lake. Lat. 50° 23′ 39″ N.
„ „	7	WNW.	3 to 7.30	Descend to the west of the hills through a valley opening to the N. We then crossed a rolling plain, and camped by a large stream flowing N.
„ „	8	NW.		
„ 10	11	NW.	9 to 12	Reach Bow River, which is flowing E.N.E.
„ „	10	WNW.	4 to 7	Follow along the valley, but descend to the river to camp.

Date.	Distᵉ.	Course.	Time.	Remarks.
1859.				
Aug. 11	4	W.	8 to 9	Reach the mouth of Ispasquehow River, and find a large camp of Stoney Indians. Bow River flows from the W.N.W. Ispasquehow River from the S.W. Lat. 50° 43′ 8″ N.
„ 13	15	WNW.	12 to 4	Follow up Bow River, and camp three miles above Capt. Palliser's crossing-place, as he went to the boundary line in August, 1858, and four miles below where he crossed as he returned from the mountains in the September of that year.
„ 15	15	„	10 to 2	Cross Pine Creek, and after two miles leave Bow River to follow up Swift Creek, a large stream from the west. Halt in High Hills, Bow River being seven miles north of west. Bearings three miles from camp :— Forks of Ispasquehow River - N. 100° E. Devil's Head Mountain - - „ 247° „
„ „	9	„	5 to 7	Pass over high rolling prairie with willows and fine pasture.
„ 16	13	„	8 to 11.30	Cross a large stream from the S.W., "Tent Creek," and pass over the outer range, which is well wooded. Halt at White Earth Lake, in a deep valley surrounded by mountains 1,000 to 1,500 feet high. Lat. 51° 8′ 19″ N.
„ „	6	NW.	3 to 5	Reach Bow River one mile below the halting-place of the Expedition the day it reached the Old Bow Fort in August 1858. Cross at the "Gooseberry Ford."
„ „	8	WSW.	5 to 7	Reach the Old Bow Fort at the expedition camp of 1858, August 7. From Bow Fort, Bearings:— Valley of Bow River - - - N. 205° E. Kannanaski's Pass - - - „ 173° „ Ford for ditto - - - - „ 197° „ East flank of Earthy Mountain - „ 150° „ 1st nick up Bow River, E. of Pigeon Mt. - - - - „ 207° „ Down Bow River - - - „ 55° „

Rocky Mountains 1859. From Bow Fort. Lat. 51° 8′ 46″ N. Lon. 115° 4′ W. Mag. Var. N. 26° E. Alt. 4,100 feet.

Aug. 17	8	SW.	2.30 to 7	Reach M. Bourgeau's camp, opposite to Pigeon Peak and beside first Bow Lake, in lat. 51° 2′ N.
„ „	6	W.		
„ 18	4	„	10 to 2.15	Pass round the point of Grotto Mountains, and encamp opposite to Precipice Nick, in lat. 51° 2′ N.
„ „	7	NW.		
„ 20	13	„	10.30 to 3	Follow up the valley, and camp one mile S. of Cascade Mountain. Camp in lat. 51° 9′ N. Bearings—Mount Bourgeau - - N. 220° E. „ Simpson's Pass - - - „ 212° „ „ Corner of Terrace Mountains „ 120° „ „ Top of mountain S. of pass to Devil's Head - - „ 35° „
„ 21	10	W. by S.	9.45 to 1	Pass the great swampy lakes, and reach the last year's halting-place at angle of valley in the Saw Back Range. Bearings—Course back - - - N 143° E. „ Mount Bourgeau - - „ 210° „ „ Point of Terrace Mount - „ 70° „
„ „	9	NW. by N.	3 to 7	Pass through the Long Muskeg, and camp at tail of Castle Mount, at the fork of the track to Red Deer River. Bearings—Angle of valley (halting-place) N. 112° E. „ Top of Mount Bull - - „ 215° „ „ Observation Peak - - - „ 270° „ „ S. Peak of Castle Mount - „ 285° „ „ Mount down the valley wither „ 118° „
„ 22	9	WNW.	10 to 1.30	Pass through the burnt wood, and reach old camp at crossing-place to Vermillion Pass at foot of Castle Mount. Bearings—Angle of valley (as above) N. 100° E. „ Vermillion Pass - - „ 225° „ „ Top of Castle Mount, west end - - - - „ 305° „ Altitude of this camp above Bow Fort 373 feet. By observation in 1858 - - - 305 „
„ „	7	„	4.15 to 6.45	Camp in an opening opposite to west end of Castle Mount.

Date.	Distᵉ.	Course.	Time.	Remarks.
1859.				
Aug. 23	7	NW. by W.	8.30 to 10.45	Camp in burnt woods on a creek from the N. of Castle Mount, opposite to a nick for Red Deer River, in lat. 51° 19 N.
				Bearings—S. edge of Castle Mount - N. 93° E.
				„ Angle of valley at Simpson's Pass - - - - - „ 106° „
				„ The Knob - - - - - „ 111° „
				„ Mount to east of Vermillion Pass - - - - „ 138° „
				„ Top of Mount Ball - - „ 136° „
				„ Top of Observation Peak - „ 247° „
				„ Mountains to W. of Kicking Horse Pass - - - „ 285° „
				„ Goat Mount up Bow River „ 300° „
				„ Up Pipestone Pass - - „ 310° „
				„ Nick for Red Deer River - „ 340° „
„ 24	7	„	7.45 to 10.15	Camp at the creek by the rock four miles from lat. stat. in 1858, Sept. 6th, 51° 22′ N., and nearly opposite to Observation Peak.
				Bearings—Top of Mount Lefroy - N. 157° E.
				„ Top of Observation Peak „ 190° „
„ 25	5	„	7.30 to 12.20	Cross Pipe Creek, and then follow the valley until we meet the creek again where it emerges from a gorge into the great valley.
„ „	7	N.		
				Bearings—Top of Mount Richardson - N. 75° E.
				„ Sharp Peak up the valley - „ 25° „
„ „	8	N. by W.	4 to 6	Camp on left bank of Pipe Creek, opposite to a wide valley, up which is Mount Molar.
				Bearings—Observation Peak - - N. 175° E.
				„ Sharp peak, as before - „ 150° „
				„ Earthy Mount, Baptiste's Range - - - - „ 200° „
				„ Mount Molar - - - „ 300° „
				„ Nick before us - - - „ 350° „
				„ Nick from the valley to Red Deer River - - - „ 85° „
„ 26	5	NNW.	7.30 to 9	Follow up Pipe River in a valley two to three miles wide; open woods.
„ „	5	NW.	10 to 11.30	Camp at a cascade in left side of Pipestone Valley, before a sudden rise to the height of land.
				Bearings—Up the valley - - - N. 280° E.
				„ Down ditto - - - „
				Lat. 51° 38′ N. Altitude [*sic*] feet.
„ 27	15	NW. by W.	10 to 3	Ascend rapidly six miles to the height of land, which is above any vegetation, then for five miles descend gently along a wide valley far from wood, and then in three miles make a rapid descent into the valley of Sifleur River, flowing to the North Saskatchewan.
„ 28	11	„	9 to 1 3.40 to 6	Descend Sifleur River through a densely timbered valley, cross it below where it receives a large branch from the S.W., and encamp at the base of cliffs 2,800 feet high, on its left bank, where it emerges into the valley of the North Saskatchewan opposite to the Kootanie Plain.
				Bearings—Left angle of valley - - N. 265° E.
				„ Right ditto - - - „ 355° „
				„ Up a nick to Clear-water River - - - - „ 110° „
				„ First point in Saw Back Range - - - - „ 137° „
„ 29	10	N. by W.	9.30 to 2	Pass through the dense woods that clothe the flat bottom of the valley of the North Saskatchewan; strike that river opposite to the Kootanie Plain camp in 1858.
„ 30	6	SSW.	8.15 to 10	Follow up the river, and camp opposite to Pine Point, where the course of the river changes from the W.; in lat. 51° 58′ N; long. 117° 2′ W.
Sept. 2	5	WSW.	—	Pine Point Ford. Right bank of river.
„ 3	8	W. by N.	2.30 to 5.30	Follow along right bank of river, and camp at the crossing-place in 1858.
„ 4	12	W. by S.	8.40 to 1.40	At noon cross the Little Fork, and halt at the white mud swamps, in lat. 51° 54′ N.
„ „	3	„	4 to 6.30	Pass the branch from the Great Plain, and follow up the Middle Fork, encamping opposite to Mount Forbes.

Date.	Distᵉ.	Course.	Time.	Remarks.
1859.				
Sept. 5	9	S. by E.	8.40 to 11	Cross and recross the Middle Fork through a wide deep cañon, and halt at where it divides into two branches. Bearings—Down valley of Middle Fork N. 225° E. „ Nick for Blaeberry Pass - „ 120° „ „ „ for the Long Glacier - „ 225° „ „ „ for the West Glacier - „ 260° „ „ Mountains to left of valley - „ 290° „ „ Mountains between the forks „ 240° „ „ Mountains between glacier and Blaeberry Pass - „ 195° „ „ Mountains up Blaeberry Pass „ 220° „
„ „	4	W. by S.	3 to 6	Follow up the west of the two creeks, first across great shingle flats, and then through dense woods, when we encamped in an opening caused by a slide of stones from the mountain above us, which had swept away the timber. Walk up the valley for six miles, and find its upper part occupied by an immense glacier, extending S.W. by W. for at least eight miles further, when it descends from lofty pinnacled mountains. Return to the camp on the slide by noon, and find the lat. 51° 46′ N.
„ 6				Bearings—Up the glacier valley N. 210° E. „ Peak up West Fork „ 290° „ „ Mount Balfour „ 57° „ „ Blaeberry Nick „ 35° „ „ Mount at our camp „ 155° „
„ „	4	ENE.	1 to 2.30	Return to halting-place of previous day.
„ „	6	SSE.	3 to 5.30	Follow up a small stream through the Blaeberry Nick, through a flat well-wooded valley, after passing a glacier to our right.
„ 7	5	„	—	Keep along the right side of the valley, till, reaching a large stream flowing through a rock chain from a glacier, we make a rapid descent to the bottom of the valley to where that stream joins the Blaeberry Nick.
„ „	4	S. by E.	4.15 to 6.45	Cross and recross the river repeatedly, and encamp on a small gravel point.
„ 8	4	S.	9 to 11	Pass over a rocky angle on the right side of the valley; halt at the first place. Lat. 51° 40′ N.
„ „	4	S. by W.	2.15 to 4	Cross a stream from the east, and at 3.30 one from the west, which was seen to rise in a large glacier. Cross over a large bas-fond on the east or left side of the river, where the valley is much expanded. Bearings—Mount Balfour - - N. 345° E. „ Up the valley to N.E. - „ 100° „ „ Down the valley - „ 155° „ „ Mount on left side - „ 170° „ „ Mount on right side - „ 205° „
„ 10	4	„	10 to 3.30	Pass over another rocky angle in the valley, and camp at the base of high cliffs.
„ 11	7	S. by E.	7 to 10.30	Pass through a rocky cañon into a wide valley, lying N.W. and S.E., the upper end of which is occupied by a large glacier, sending a tributary to Blaeberry River, which flows through great shingle flats.
„ „	9	SSE.	1.30 to 4	Follow the river, and cross where it makes a bend to the right, to escape through a cañon from the wide valley before mentioned, and emerge on an extensive flat, where we encamped.
„ 14	15	S.	—	Pass through a cañon to the S.W., and over shingle flats in a very wide valley, which runs N.W. and S.E. This is the valley of the Columbia River, but a low range of hills has to be passed before we reach that river itself. Camp at the commencement of the gorge through these low hills. Lat. 51° 30′. Course back, N. 360° E.
„ 16	3	S. by E.	—	Cross to the right bank of Blaeberry river, and pass over high rocks, till on meeting a bas-fond we halt to search for the best way to reach the Columbia.
„ 17	2	S.	7.30 to 8.30	Reach Columbia river, and follow it down for a mile. Lat. 51° 25′.
„ „	1	NW.		Bearings—Down Columbia valley - N. 290° E. „ Nick to the W. - - „ 270° „ „ Block of Mountains to N. - „ 300° „ „ N. side of Blaeberry valley - „ 10° „ „ S. ditto ditto - „ 67° „ „ Sharp peak of the valley - „ 102° „ „ Nick to the left up the valley „ 125° „ (Kicking Horse River.)

Date.	Distᵉ.	Course.	Time.	Remarks.
1859.				
Sept. 18	10	SE.	9.30 to 4.30	Pass through extensive swamps up the valley of the Columbia. The river sluggish, 100 yards wide.
„ 19	6	SE. by S.	10 to 3	Through swamps at the base of high banks. Woods very dense. Camp close to the river.
„ 21	6	SE. by E.	11 to 4.30	After three miles cross Kicking Horse River, a large rapid stream, 60 yards wide, almost too deep to be forded. Follow along the margin of large lagoon-shaped lakes. Camp at the end of them.
„ 22	5	SE.	9 to 12	Ascend the side of the valley, to avoid the swamp in the bottom. At noon, in lat. 51° 14′ 49″.
„ „	6	„	2.15 to 4.45	Camp at a mountain torrent from the east. Bearings—Sharp Peak - - N. 325° E. „ Down the valley - „ 125° „
„ 23	7	„	7.30 to 10.30	At noon in lat. 51° 9′ N.
„ „	6	„	2.45 to 5.15	After crossing a small creek, follow the margin of a long crescent-shaped lake.
„ 24	5	„	8 to 12	Through very dense woods.
„ „	3	„	3 to 4.15	Camp on a spot of dry ground between a swamp and the river.
„ 25	6	„	—	Edge of a swamp, lat. 51° 2′ N. The river valley has here a flat bottom several miles wide, and occupied by swamps, through which the river winds in a distinct channel bounded by natural levées.
„ „	4	„	2.30 to 5.30	Wade through swamp all the afternoon, and camp on a narrow levée, which forms the bank of the river.
„ 26	5	„	8.30 to 12	Ascend the side of the valley to avoid the swamps ; pass over very broken ground.
„ „	4	„	3.30 to 6	Encamp at a creek on the side of the mountain, 600 feet above the valley ; fine open timber, but very rugged gullies to pass.
„ 27	4	„	8.30 to 12.30	Pass again through great swamps. Encamp by the edge of a small lake.
„ 28	7	SSE.	10 to 3.40	Break through the heavy timber, with soft ground all dry. Encamp in a muskeg, within hearing of a great waterfall on the other side of the valley : valley here changes to nearly a N. and S. direction.
„ 29	8	„	9.30 to 12.45	After crossing a large creek from the east, pass through poplar woods, and then swamps, till we come to open timber on terrace levels, where we fell on a well-marked trail, which seems to enter the valley by the creek we have just crossed.
„ „	10	„	—	Along the trail, and pass several old Indian camps.
„ 30	5	„	8.30 to 10	Halt beside the river, in lat. 50° 47′ N.
„ „	16	„	1.30 to 6	Cross several large creeks which have deep valleys channelled out of the shingle deposits. Track good and firm.
Oct. 1	13	„	8 to 11.30	Continue through open timber and bunch-grass plains. Halt half way up the Lower Columbia Lake, in lat. 50° 29′ N.
„ „	12	S. ½ E.	3.30 to 6.30	Trail more rocky and uneven. Camp at a small creek, one mile from the end of the Lower Columbia Lake. Bearings—Up valley - - N. 138° E. „ Down valley - - „ 340° „
„ 2	12	S.	7.45 to 11.15	Pass through fine open timber till we reached the upper lake, which is a fine sheet of water six or eight miles long, and bounded to the E. by rocky precipices, over which the track passed. This place is very dangerous to the horses. The west side of the lake is level, and in the mountains opposite a wide valley runs off to the S.E. Halt at the source of the Columbia, in lat. 50° 7′ 35″ N. Bearings—Valley to the west - - N. 225° E. „ Valley of Kootanie River, right side of - - - „ 165° „ „ Left side of - - - - „ 140° „
„ „	2	S.	—	Pass over a flat of open pine timber and reach the Kootanie River, below the cañon by which it enters the wide valley, which is continuous with that of the Columbia River, and through which it flows to the S.S.E.
„ „	6	„	4 to 6.30	Cross the Kootanie River, and pass through splendid open forest, and camp at several miles distance from the river.
„ 3	12	„	8 to 11.45	Lat. at noon, 49° 50′ N. Bearings—Back to Columbia Lake - N. 328° E. „ West side of - - - „ 320° „
„ „	6	SSE.	3 to 4.30	Pass along the high banks of the Kootanie, over level terraces, and through splendid open timber. Camp with Kootanie Indian “ Aleck.”

Date.	Distᵉ.	Course.	Time.	Remarks.
1859.				
Oct. 4	14	SSE.	10 to 1.45	Open level plains. Reach the great Kootanie Camp (Mitchell's), or the crossing-place to Choe-coos Track to Colville. Lat. 49° 36′ N. Bearings—Angle of mountain range up valley - - - N. 345° E. „ Course back - - - „ 315° „ „ Sharp peak to the E. - „ 60° „ „ Angle of range to S. - - „ 100° „ „ Nick for Kootanie Pass - „ 107° „ „ Mountain S. of Tobacco Plains - - - - „ 122° „ „ Wooded mountain down valley to W. - - - „ 153° „ „ Up the source of Choe-coos Creek - - - - „ 185° „
„ 5	9	„	—	Travel along with the Indians.
„ 6	11	„	8.40 to 11.50	Lat. 49° 24′ N.
„ „	8	„	2.20 to 5	Camp close to the river.
„ 7	4	SE.	—	Cross Elk River, and reach the point where the track leaves for the Kootanie Pass.
„ „	16	S. by E.	9.30 to · 1	Cross the tobacco plains, and reach the Kootanie trading post. Bearings—Co. back to lat. of 6th - N. 320° E. „ Valley of Elk River - - „ 340° „ „ Kootanie Pass - - - „ 350° „ „ Boundary Line Hill - - „ 300° „ „ Down river valley - - „ 185° „ „ S. Kootanie Pass - - „ 75° „ Kootanie River flows past the trading post to S. The mountain ranges four miles distant to the last, SSE. ½ S.
„ 8	6	SSW.	3 to 5	Camp on a small creek in the [*sic*]
„ 9	10	S. ½ W.	10 to 3.45	Continue along left side of Kootanie River.
„ 10	6	S.	8.20 to 11.30	Indian camp. Lat. 48° 40′ N.
„ „	3	WSW.	3.30 to 5	Old camp in an "opening."
„ 11	12	S.	9 to 1	Reach first crossing-place, where the river changes its course at right angles. Very deep, with rocky banks. Swim the horses.
„ „	5	W.	4.30 to 6	Camp on a long point. Good grass.
„ 12	5	W. & N.	10 to 11.30	Reach first wide valley. Lat. 48° 30′ N.
„ „	6	W. by S.	2 to 5	Reach second wide valley. Trail very rocky.
„ 13	6	WSW.	7.30 to 11	Halt below the great falls. Lat. 48° 25′ N.
„ „	7	WNW.	3 to 5.30	Pass through the second great valley, and cross in the third.
„ 14	16	NW by W.	8 to 5	After two hours cross a creek from the N., and then over high terraces along the valley. Camp at a small creek, 300 feet above the river.
„ 15	11	WSW.	8 to 12	Reach the second crossing-place, at Paddler's Lake. Indian camp. River flows N.N.W. from this point. Cross, and go two miles S. to that side of the lake.
„ 16	12	S.	7.30 to 12	Ascend the valley of a creek from the S. through fine open woods. Source of both streams in a long swamp.
„ 17	6	S. by E.	9.15 to 12.15	In dense woods, much obstructed; then through fine open timber to a very large stream, flowing S.E.
„ „	6	„	3 to 6	Cross the stream, and push on through pine forest, and camp at last without food for horses.
„ 18	3	S.	8 to 9	Reach Kullespelme Creek, which is large, and bounded to the S. by granite hills. E. of this point it dilates; to the W. runs as a long arm only two miles wide.
„ „	6	W.	3 to 4.30	Follow the margin of the lake past several points and round bays to near its W. end. Camp on the shore.
„ 19	10	NNW.	8 to 11	Follow the right bank of the Flathead River, or Clark's Fork, to where we thought the crossing-place should be. Indians arrive, and help us to cross. It is a long swim for the horses, but the stream is sluggish.
„ 20	21	S.	8 to 2	Leave the Flathead River, and pass through fine open woods to the S.
„ „	10	SSW.	4 to 6.30	Reach the Little Spokane Plain, which is 20 to 30 miles long, and 15 wide. Skirt the W. side of it, and camp without water.
„ 21	8	SSW.	7.45 to 10	Reach Plant's House, a farm on the Spokane or Cour d'Alene River.
„ „	12	NNW.	—	Camp on the Spokane River, near the old fort.
„ 22	15	NW.	—	Cross the Spokane River where it joins the Cour d'Alene River, and follow it down on the right bank.
„ „	7	„	4 to 6	Cross over a high mountain, and camp at a place called the "Springs," near where the trail joins the military road.
„ 23	6	N.	—	Ride on in advance of my party to Fort Colvile on the Columbia, following the military road. Reach Colvile at dark, having ridden from daylight, 10½ hours.
„ „	7	W.	—	

TABLE of ODOMETER DISTANCES between ST. PAUL and FORT GARRY.

Circumference of wheel - - - - - $13\frac{8}{10}$ feet.
Revolutions per mile - - - - - 382·609

Taken by Mr. W. E. Smith, of Fort Ridgley and South Pass, U. S. Exploring Expedition.

Reading of Odometer.	Place.	Distance in Miles.
0·0.	Saint Paul to	
3,600.	Saint Anthony Falls	9·40
10,930.	Anoka, at crossing of Rum River	28·56
29,480.	Saint Cloud, at crossing of Mississippi River	77·05
39,130.	Richmond, at second crossing of Sank River	102·27
51,270.	Crow River, crossing	134·00
57,250.	Chippewa River, crossing	149·63
59,590.	White Bear Lake	155·74
66,291.	Little Chippewa River	173·26
69,330.	Rapid River, crossing	181·21
72,960.	Pomme de Terre River, crossing	190·69
78,600.	Lightning Lake	205·43
84,500.	Ottertail River, crossing	220·85
93,260.	Graham's Point, Red River, crossing	243·75
97,619.	Wild Rice River, crossing	255·14
103,271.	Cheyenne River, crossing	269·91
110,365.	Hemlock River, crossing	288·45
133,192.	Goose River, crossing	348·11
162,924.	Salt River, crossing	425·82
178,350.	Pembina River (at its junction with Red River)	466·14
183,120.	„ „	478·61
189,350.	Scratchan River, crossing	494·89
201,720.	Stinking River, crossing	527·22
205,220.	Fort Garry	536·37

TABLE of ODOMETER DISTANCES between FORT GARRY and FORT PITT.

Circumference of wheel - - - - - $14\frac{75}{100}$ feet.
Revolutions per mile - - - - - 315·22388

Taken by Mr. W. E. Smith, of Fort Ridgley and South Pass, U. S. Exploring Expedition.

Reading of Odometer.	Place.	Distance in Miles.
0·0.	Fort Garry to	
2,156.	Sturgeon Creek	6·84
7,310.	White Horse Plains	23·19
22,146.	Small stream, course north	70·25
29,560.	Small creek, course north	93·77
49,300.	Rapid River, crossing	156·39
67,650.	Eagle River, crossing	214·60
71,620.	Assineboine River, crossing	227·20
72,910.	Fort Ellis	231·29
79,130.	Cassell River, crossing	251·02
126,330.	Touchwood trading post	400·76
164,800.	Long Creek, crossing	522·80
167,190.	South branch, crossing	530·10
178,400.	Eagle Mountain River, crossing	565·95
184,400.	North branch, crossing	584·98
217,530.	Hudson Bay Company's post, N. side of Jack Fish Lake	690·08

No 8.

Astronomical Observations.

Preface.

The map that has been prepared by Dr. Hector of the country explored by the expedition in the years 1857-8-9, is founded on the appended astronomical observations which were taken by the different members of the party, but chiefly by Mr. Sullivan, on whom also principally devolved the labour of computation.

The instruments furnished to the expedition were as follow :—

Three eight-inch sextants; 2 pocket sextants ; 2 mercurial horizons ; 1 glass horizon ; 3 prismatic compasses ; 3 pocket watch-chronometers, pocket compasses, spirit levels, barometers, thermometers, &c.

I. *Latitudes.*—The latitude was obtained if possible every day when on the march, either by meridian altitude of the sun, reduction to the meridian, double altitudes, or at night by stellar observations.

II. *Longitudes.*—The chronometers furnished from Greenwich observatory for the use of the expedition were of the best construction, but being necessarily exposed to much rough usage, they very soon lost that uniformity of rate on which alone depends their value for determining longitudes. When the party reached New York, the chronometers were placed in the hands of a maker to have their rates again compared with those furnished with them when issued from the observatory. Again, upon our reaching Fort William, situated on the North shore of Lake Superior, from the longitude of that plan having been determined exactly by the Admiralty survey, it afforded a still later point for comparison, and with very satisfactory results, as the longitude observed by means of our chronometers differed only $1\frac{1}{2}$ miles from the true position.

When the party commenced to travel on horseback, in July 1857, the continued jolting soon caused the rates of the chronometers to vary largely, and after a short time only one of them could be used daily for the purpose of determining the longitude, and even that one failed before reaching our winter quarters at Fort Carlton.

During the second and third seasons' explorations, the chronometers were only used to measure short intervals of time in the determination of longitudes by " lunar distances."

The longitude was obtained by this method whenever practicable, but as it required a halt of a few days to get the requisite series of observations, and this was often impossible, at the time when the moon was in favourable position, the total number obtained was small.

When stationed for some length of time during the winter seasons at Forts Carlton, Edmonton and Rocky Mountain House, their longitudes were determined by myself and Mr. Sullivan with considerable accuracy, by the average of a large series of lunar distances. At several other places fair averages were obtained, and the longitudes given for the following stations may be considered as the most reliable :—

Fort Ellice.	Site of Old Bow Fort.
Elbow of South Saskatchewan River.	Stray Camp, Kootanie River.
Fort Carlton.	Source of Columbia River.
The Wich-que-tin-ach.	Fort Edmonton.
Dried Meat Camp.	Rocky Mountain House.
Câche Camp.	Hand Hills.
Slaughter Camp.	Cyprés Hills.

The exact determination of these stations served as checks in the construction of the map, being used as centres from which the different routes followed have been plotted off, the intermediate longitudes having been derived by carefully kept itineraries, checked in turn by the frequent observations for latitude and compass variation.

During the last season's exploration, an odometer for attaching to the wheel of one of the carts and measuring the distance travelled by recording the number of revolutions was obtained from a party of Americans, and used until the carts were abandoned at the base of the Rocky Mountains. It proved of great use, and in addition to our own trails measured by this instrument, the American party, who were adventurers bound for the Fraser River gold mines, also furnished us with their own observations taken as they travelled between St. Paul's and Jack Fish Lake, near Fort Pitt. These observations are appended, and the route that they refer to has been laid down on the map.

The sextants and other instruments, excepting the chronometers and mercurial barometers, proved serviceable on the whole, notwithstanding the rough usage they experienced from unsuitable means of transport. Minute care was taken on every occasion when using them that no cause of error arising from the rough motion, should be overlooked, such for instance as the frequent and large alteration of the " index error " of the sextants.

The observations themselves were carefully registered in such a manner that the data have been preserved in case that for any reason it may be thought desirable to have them recomputed.

The tables hereto appended consist of:—

I. The results of astronomical observations, as they have been adopted in constructing the map. (Every place where an observation was made appears in this table, sometimes the latitude and sometimes the longitude, being the result that was obtained, but in some cases both entries are the average results of a series of observations.)

II. Record of observations for longitude.

III. Record of observations for latitude.

IV. Record of lunar distances.

V. Record of observed compass variations.

VI. Table (inserted for comparison) of observations made by Colonel Lefroy, of latitude, longitude, and variation of compass, in Ruperts Land, in the years 1843-4, and furnished by him to the expedition before it left England.

VI. Series of observations made by Mr. Sullivan at Fort Edmonton upon the comet that was visible in September and October 1858.

It may be stated in conclusion that with regard to the general geographical features of the country, we derived great assistance from Arrowsmith's map of British North America, and that we had very frequently cause to admire the singular felicity of judgment with which that geographer had sifted the evidence concerning the geography of localities, when the only information at his command must have been derived from report.

JOHN PALLISER, Captain.

I.—RESULTS of ASTRONOMICAL OBSERVATIONS as adopted in constructing the Map.

Date.	Locality.	Lat. N.	Long. W.
1857.		° ′ ″	° ′ ″
June 13	Fort William, H. B. C.	48 24 5	89 24 50
„ 21	Trembling Portage	48 30 0	89 58 48
„ 22	Dog Portage (W. end.)	48 45 0	89 53 45
„ 22	Dog Lake (S. shore)	48 46 11	89 45 0
„ 23	Dog River (right bank)	48 55 0	89 53 48
„ 24	Prairie Portage	48 56 16	89 45 0
„ 25	Savannah Portage	48 53 0	90 13 46
„ 26	Barrier Portage	48 45 0	90 50 24
„ 27	French Portage	48 40 0	91 11 32
„ 29	Camp Portage	48 25 0	92 27 28
„ 30	On the route	48 27 0	92 30 4
July 1	Fort Frances, H. B. C.	48 36 15	93 33 33
„ 2	La Pluie River	48 47 18	93 50 0
„ 3	Ditto	48 50 0	94 14 19
„ 4	Portage de Bois	49 26 0	94 48 7
„ 4	Lac de Bois	49 33 45	94 48 0
„ 5	Winnipeg River	49 55 0	94 45 30
„ 6	Ditto	50 15 0	95 17 19
„ 6	Ditto	50 21 38	95 20 0
„ 10	Lake Winnipeg	50 33 46	96 33 56
„ 11	Ditto	50 23 0	96 30 25
„ 16	Upper Fort Garry	49 52 6	96 52 27
„ 22	Prairie	49 28 43	97 0 0
„ 25	Post on Boundary Line near Pembina.	48 59 12	96 46 13
„ 28	Prairie	48 52 0	97 17 29
„ 30	St. Joseph	—	—
Aug. 1	Prairie	49 6 53	97 56 0
„ 1	Ditto	49 10 0	98 10 39
„ 2	Ditto	49 7 47	98 20 0
„ 2	Ditto	49 8 0	98 33 45
„ 3	Ditto	49 8 0	98 47 15
„ 4	Ditto	49 8 0	98 48 24
„ 4	Ditto	49 4 0	98 50 0
„ 5	Ditto	49 0 32	99 1 25
„ 5	Turtle Mountain (E. Flk.)	49 0 0	99 16 50
„ 7	Ditto	49 6 0	99 21 43
„ 12		49 36 3	100 5 0
„ 14	Prairie	50 4 20	101 10 0
„ 17	Fort Ellice, H. B. C.	50 24 28	101 48 0
Sept. 11	Prairie	50 23 40	102 10 0
„ 13	Qu'appelle Lakes (12 miles S. of).	50 20 0	103 45 45
„ 18	Prairie	50 26 26	106 30 0
„ 19	Ditto	50 27 59	106 50 0
„ 20	Ditto	50 44 45	107 10 0
„ 22	Saskatchewan (elbow of the S. Branch).	51 1 24	107 37 30
„ 27	Saskatchewan (S. Branch)	50 52 48	107 41 7
Oct. 3	Red Deer Lakes (6 miles N. of).	51 23 45	107 32 0
„ 3	Red Deer Lake	51 20 0	107 32 15
„ 4	Prairie	51 40 0	107 37 51
„ 4	Ditto	51 45 16	107 32 0
„ 5	Ditto	52 3 7	107 21 0
„ 5	Ditto	52 5 0	107 0 5
„ 6	Ditto	52 12 0	106 51 0
„ 7	Ditto	52 31 40	106 30 0
	Fort Carlton, H. B. C. (Winter 1857–8. Astro. Station.)	52 52 30	106 15 39
1858.			
June 21	Eagle Hills	52 17 59	107 28 15
„ 21	Eagle Hills (3 miles S. of the Lizard Lake).	52 16 0	107 28 16
„ 22	Eagle Hills, Stoney Lake	52 14 0	107 35 4
„ 23	Prairie	52 14 37	108 11 33
„ 24	Ditto	52 16 0	108 27 27
„ 25	Ditto	52 21 0	108 44 25
26–7	Wiquatinow (valley of)	52 28 39	108 52 7
July 2	Prairie	52 30 0	109 2 30
„ 4	Ditto	52 34 25	109 23 45
„ 8	Ditto	52 36 0	110 23 45
„ 8	Battle River (1st crossing of)	52 35 39	110 50 7
„ 10	Ditto (2nd ditto)	52 28 23	111 29 45
„ 14	Dried Meat Camp	52 24 29	112 16 10
„ 18	Bull Lake (3 miles S.E. of)	52 23 24	112 34 0
„ 20	Dead Man's Creek	52 19 25	113 3 0
„ 23	Nick Hills	52 12 52	113 40 0
„ 24	Camp	51 55 43	114 0 0
July 26	Câche Camp (edge of the woods).	51 52 52	114 10 15
Aug. 1	Prairie	51 19 12	113 55 0
„ 2	Slaughter Camp	51 20 47	113 50 0
„ 4	Bow River (1st crossing of)	50 54 46	113 50 0
„ 6	Most N. tributary to Belly River.	50 6 23	113 45 0
„ 7	Tributary of Belly River (1st crossing of).	49 32 31	113 53 0
„ 8	Chief Mountain (6 miles N. of)	49 5 6	113 50 0
„ 10	Tributary of Belly River (2nd crossing of).	49 33 50	113 58 0
„ 13	Woods	50 52 49	114 20 0
„ 15	Old Bow Fort (site of)	51 8 46	115 4 30
„ 19	Kananaskis's Pass in the Rocky Mountains.	50 54 17	115 12 0
„ 20	Ditto	50 45 3	115 12 0
„ 21	Ditto	50 37 1	115 21 0
„ 22	Ditto	50 37 49	115 21 0
„ 23	Ditto	50 38 55	115 27 0
„ 24	Tributary of Kootanie River	50 30 14	115 30 0
„ 26	Forks of Kootanie River	50 27 21	115 43 0
„ 27	Kootanie River	50 19 24	115 40 0
„ 28	Ditto	50 10 13	115 42 45
„ 29	Ditto	50 1 14	115 33 0
„ 30	Tobacco Plain (commencement of).	49 42 41	115 33 0
Sept. 2	Stray Camp	49 58 15	115 27 0
„ 6	British Kootanie Pass (W. end of).	49 11 21	115 22 0
„ 7	Ditto Height of land	49 19 44	114 58 0
„ 9	Ditto (E. end of)	49 32 3	114 30 0
„ 10	Middle Tributary of Belly River, coming from Crow lodge.	49 47 0	114 25 0
„ 11	Most N. Tributary of Belly River (2nd crossing of).	50 12 16	114 21 0
„ 12	High Wood River (4 miles N. of).	50 35 29	114 18 0
„ 13	Bow River (7 miles S. of)	50 57 16	114 10 0
„ 16	Red Deer River	52 4 45	114 13 0
„ 18	Battle River (3rd crossing of)	52 39 44	113 39 0
	Fort Edmonton	53 31 59	113 17 31
1859.			
Mar. 25	Rocky Mountain House	52 22 6	115 10 45
June 12	Hand Hills	51 33 13	111 30 0
„	Hand Hills Lake	51 21 43	111 27 0
July 7	Prairie, near Red Deer River	51 14 19	111 12 0
„ 13	Creek	50 53 7	110 58 0
„ 15	Red Deer River	50 53 52	110 36 0
„ 17	Prairie	50 53 47	110 20 0
„ 19	16 miles N. of Bow River	50 40 22	109 54 0
„ 20	8 ditto	50 34 25	110 20 0
„ 21	Crossing place, Bow River	50 27 42	110 28 0
„ 26	Cyprés Mt. (W. flank)	49 47 27	110 42 0
„ 27	Ditto	49 45 38	110 36 0
„ 28	Ditto	49 44 38	110 35 0
„ 29	Knoll, S. of Cyprés Mt.	49 31 22	110 35 0
„ 30	Milk River	48 58 40	111 0 0
Aug. 1	Cyprés Mts.	49 38 32	110 35 0
„ 1	Cyprés Mts. (W. flank)	49 35 21	111 0 0
„ 4	Prairie	49 35 0	111 0 0
„ 5	Springs	49 25 0	111 41 0
„ 7	Prairie	49 47 0	112 32 0
„ 8	Belly River	49 47 4	112 52 0
„ 9	North of Belly River	49 44 35	113 18 0
„ 10	Hills near tributary to Belly River.	49 36 44	113 50 0
„ 18	Kootanie Valley	49 0 3	115 12 0
„ 22	Kootanie River	48 32 0	115 0 0
„ 24	Ditto (right bank)	48 23 51	115 10 0
„ 26	Ditto	48 26 29	115 30 0
„ 27	Ditto	48 38 33	115 45 0
„ 28	Ditto (Paddler Lakes)	48 41 41	116 0 0
„ 30	Kootanie River	48 57 20	—
„ 31	Ditto	49 15 33	116 36 0
Sept. 1	Large Lake, North shore 5 miles east of western extremity.	49 36 25	—
„ 2	Portage, west extremity of Second Lake.	49 29 50	—

Date.	Locality.	Lat. N.	Long. W.
1857.		° ′ ″	° ′ ″
Sept. 3	Kootanie River	49 18 48	—
„ 4	Mouth of Pendoreilles' River	49 0 31	118 0 0
„ 8	Fort Colvile	48 37 48	118 12 0
„ 17	Fort Sheppard	49 1 7	118 0 0
„ 18	Observation Mount	49 0 15	—
„ 18	West of Fort Sheppard	49 3 10	—
„ 18	Ditto	49 2 44	—
„ 18	Ditto	49 5 19	—
Dec. 14	4 miles E. of Redberry Lake	52 42 0	106 56 0
„ 19	English Creek	53 16 0	108 56 0
„ 19	Red Deer Hiil	53 28 0	109 3 0
„ 20	Fort Pitt	53 34 15	109 18 0
1858.			
Jan. 11	Crossing Place, Battle River, on Mt. Ho. Track.	52 41 0	114 6 0
July 9	Elbow of Battle River	52 19 0	111 5 0
Aug. 12	Rocky Mts., Bow River, First Lakes.	51 1 44	115 16 0
„ 14	Rocky Mts., Bow R., Nick.	51 2 26	115 30 0
„ 15	Rocky Mts., Bow R., Cascade Mt.	51 9 18	115 40 0
„ 18	Rocky Mts., Bow R., Castle Mt.	51 10 42	116 0 0
„ 21	Rocky Mts., Vermillion R., the Angle.	51 6 0	116 26 0
„ 22	Rocky Mts., Vermillion R., Snow Creek, S. from Mt. Ball.	51 2 45	116 19 0
„ 24	Rocky Mts., Kootanie R., N. of Forks.	50 52 0	116 26 0
„ 26	Rocky Mts., Source of Kootanie R.	51 0 37	116 40 0
„ 28	Rocky Mts., Beaver Foot R.	51 9 37	116 52 0
„ 30	Rocky Mts., Kicking Horse River Falls.	51 10 0	116 55 0
Sept. 1	Rocky Mts., Kicking Horse River, Falls.	51 16 30	116 57 0
„ 3	Rocky Mts., Bow River, Moose's Creek.	51 22 40	116 38 0
„ 8	Rocky Mts., Bow River, above Moose's Creek.	51 28 0	116 43 0
„ 9	Rocky Mts., Source of Bow R.	51 40 0	117 0 0
„ 11	Rocky Mts., N. Branch Saskatchewan, E. end of Glacier Lake.	51 54 0	117 30 0
„ 12	Rocky Mts., N.B. Saskatchewan, W. end Glacier Lake.	51 52 16	117 39 0
„ 14	Rocky Mts., N.B. Saskatchewan, 4 miles above mouth of Little Fork.	51 56 30	117 22 0
„ 18	Rocky Mts., N. B. Saskatchewan, 4 miles below Wapattuk River.	52 18 0	116 46 0
„ 20	Rocky Mts., N. B. Saskatchewan, Sheep River.	52 24 0	116 40 0
„ 28	Saskatchewan, N. B. Miry Creek.	52 30 0	116 10 0
1858.			
Sept. 29	N. branch, Saskatchewan	52 26 0	116 0 0
Oct. 1	S.E. of Mountain House, in woods.	52 23 30	115 0 0
	Bad Beaver Dam	53 5 0	113 58 0
Nov. 29	Battle River, Bear Hill	52 46 26	113 55 0
Dec. 1	Red Deer R., Mouth of Blind R.	52 18 13	114 0 0
	Ditto, 10 miles above last.	52 12 36	114 10 0
„ 4	Red Deer R., 5 miles above Medicine River.	52 1 26	114 20 0
„ 6	Red Deer R., 20 miles above last.	51 50 28	114 40 0
„ 9	Little Red Deer River	51 29 28	114 45 0
„ 10	Ditto, source of	51 21 40	114 50 0
„ 15	Edge of Plain, Stoney Camp	51 25 24	114 45 0
1859.			
Jan. 15	Thickwoods, between Pembina and Paddle Rivers.	54 12 1	114 18 0
„ 17	Fort Assineboine	54 31 4	114 48 0
„ 23	Athabasca River	54 19 36	115 40 0
„ 25	Ditto	54 12 24	116 49 0
„ 29	Below Dead Man's Rapid	53 50 51	117 18 0
Feb. 2	Jasper House	53 12 21	118 10 0
„ 12	Maligne River	52 55 50	118 12 0
„ 13	Forks of Athabasca and Whirlpool Rivers. Trail to Boat Encampment.	52 46 54	118 6 0
Aug. 8	S. of Bow River	50 13 5	112 46 0
„ 9	Small Lake	50 23 39	113 6 0
„ 12	Mouth, Ispasquehow R.	50 43 8	113 58 0
„ 16	S. of Bow River	51 8 20	115 7 0
„ 23	10 miles above Vermillion R.	51 19 0	116 16 0
„ 24	Opposite Observation Point	51 22 29	116 20 0
„ 26	Height of Land, Pipe River	51 38 1	116 24 0
„ 30	N. B. Saskatchewan	51 58 3	116 50 0
Sept. 6	Great Glacier	51 46 33	117 30 0
„ 8	Blaeberry River	51 40 49	117 25 0
„ 10	R. B. Blaeberry River	51 36 39	117 30 0
„ 11	Blaeberry River	51 34 3	117 35 0
„ 15	Ditto	51 30 3	117 35 0
„ 17	Mouth Blaeberry R.	51 25 50	117 50 0
„ 22	Columbia River	51 14 49	117 30 0
„ 23	Ditto	51 9 5	117 20 0
„ 25	Ditto	51 3 55	117 0 0
„ 30	Ditto	50 47 3	116 40 0
Oct. 1	Lower Columbia Lake	50 29 33	116 26 0
„ 2	Source of Columbia	50 7 41	116 16 0
„ 3	Kootanie R.	49 50 24	115 50 0
„ 5	Ditto	49 36 18	115 35 0
„ 6	Ditto	49 23 42	115 20 0
„ 8	Kootanie Port	48 54 48	115 10 0
„ 10	Kootanie River	48 40 28	115 5 0
„ 12	Ditto	—	115 10 0
	Second Transverse Valley	48 30 34	115 20 0
„ 13	Third Transverse Valley	48 25 25	115 30 0

II.—Record of Astronomical Observations during 1857, 1858, 1859.

Approx. Mean Time at Place.	Mean of Chron. Times corrected for E on Greenwich Mean Time.	Mean of Obsd. Alts. corrected for I. E.	Latitude by Observation or Acc^{t}.	Longitude.
			N.	W.
1857.	D. H M. S.	° ′ ″	° ′ ″	° ′ ″
June 13, 8 a.m.	13 1 43 39	68 44 7	48 24 5	89 24 50
„ 21, 9 a.m.	21 2 47 35	88 45 41	48 30 0	89 58 48
„ 22, 9 a.m.	22 2 31 59	83 39 51	48 45 0	89 53 45
„ 23, 8 a.m.	23 2 16 59	78 30 39	48 55 0	89 53 48
„ 25, 8 a.m.	25 2 7 17	74 43 35	48 53 0	90 13 46
„ 26, 5 p.m.	26 10 34 15	64 2 23	48 45 0	90 50 24
„ 27, 10 a.m.	27 4 4 33	109 19 37	48 40 0	91 11 32
„ 29, 7 p.m.	29 13 24 48	11 48 20	48 25 0	92 27 28
„ 30, 7 a.m.	30 1 13 58	53 12 49	48 27 0	92 30 4
July 1, 6 p.m.	1 11 55 8	40 59 27	48 36 15	93 33 33
„ 3, 9 a.m.	3 3 43 36	99 13 31	48 50 0	94 14 19
„ 4, 9 a.m.	4 2 42 42	75 36 39	49 26 0	94 48 7
„ 5, 8 a.m.	5 3 2 4	84 34 31	49 55 0	94 45 30
„ 6, 8 a.m.	6 2 55 52	81 31 54	50 15 0	95 17 19
	*	*	50 33 48	96 33 56
„ 11, 8 a.m.	11 2 35 26	72 21 2	50 23 0	96 30 25
„ 16, 8 a.m.	16 2 47 47	74 49 20	49 52 6	96 52 27
„ 25, 3 p.m.	25 10 15 1	73 43 58	48 59 12	96 46 13
„ 28, 3 p.m.	28 10 39 34	65 34 4	48 52 0	97 17 29
„ 31, 4½ p.m.	31 11 5 27	56 51 56	49 10 0	98 10 36
Aug. 2, 4 p.m.	2 10 3 51	76 28 2	49 8 0	98 33 45
„ 3, 5 p.m.	3 11 6 37	56 18 32	49 8 0	98 47 15
„ 4, 8 a.m.	4 1 43 38	45 42 32	49 8 0	98 48 24
Aug. 5, 4 p.m.	4 10 31 20	67 37 43	49 0 32	91 1 25
„ 5, 5 p.m.	5 11 46 16	43 6 52	49 0 0	99 16 50
„ 7, 5 p.m.	7 11 21 48	50 23 27	49 6 0	99 21 43
Sept. 13, 3 p.m.	13 10 26 33	49 31 28	50 20 0	103 45 45
„ 27, 3 p.m.	27 11 32 31	25 19 17	50 52 48	107 41 7
Oct. 3, 9 a.m.	3 3 43 15	20 27 9	51 20 0	107 32 15
„ 4, 9 a.m.	4 4 44 59	26 43 30	51 40 0	107 37 51
„ 5, 2 p.m.	5 9 28 40	24 18 40	52 5 0	107 21 0
„ 6, 2 p.m.	6 9 43 4	22 11 31	52 12 0	106 51 0
1858.				
June 21, 7 a.m.	21 2 9 22	26 52 32	52 18 0	107 28 15
„ 21, 4 p.m.	21 11 30 33·5	33 23 19	52 14 0	107 28 16
„ 22, 3 p.m.	22 9 46 39	48 40 29	52 14 0	107 35 4
„ 23, 9 a.m.	23 3 15 19·4	42 22 11	52 16 0	108 11 33
„ 24, 7 a.m.	24 2 8 16·4	25 59 17	52 21 0	108 27 27
„ 25, 7 a.m.	25 2 30 14·6	25 59 17	52 21 0	108 44 25
„ 26, 8 a.m.	26 3 49 47	40 54 2	52 28 39	108 51 39
„ 27, 8 a.m.	27 3 50 43	41 1 6	52 30 0	108 52 36
July 2, 4 p.m.	2 11 20 15	35 53 22	52 34 25	109 23 40
„ 4, 8 a.m.	4 3 28 5	36 46 25	52 36 0	110 23 45
„ 8, 7 a.m.	8 2 32 13·5	27 27 4	52 35 39	110 50 7
„ 7, 9 a.m.	7 4 12 44·7	42 9 5	52 28 23	111 29 45
„ 10, 7 a.m.	10 2 55 48·6	30 4 31	52 24 29	112 14 35

TABLE III.

Date.	Obsd double Mer. Alt. corrected for I.E.	Long. by Obsn or Account.	Latitude.
1857.	° ⊙ ′ ″	° ′ ″	° ′ ″
June 13	129 11 16	89 24 50	48 24 5
„ 22	128 51 27	89 45 0	48 46 11
„ 24	128 27 37	89 45 0	48 56 16
July 1	128 28 41	93 33 33	48 36 15
„ 2	128 29 21	93 50 0	48 47 18
„ 4	126 4 53	94 48 0	49 33 45
„ 6	124 6 1	95 20 0	50 21 38
„ 10	122 45 51	96 33 56	50 33 46
„ 16	123 19 28	96 52 27	49 52 6
„ 22	120 56 52	97 0 0	49 28 43
„ 25	120 40 22	96 46 13	48 59 12
Aug. 1	117 4 14	97 56 0	49 6 53
„ 2	116 33 54	98 20 0	49 7 47
„ 4	115 36 50	98 50 0	49 4 40
„ 5	115 12 27	99 16 50	49 0 32
„ 7	113 54 47	99 21 43	49 6 2
„ 12	109 59 37	100 5 0	49 36 3
„ 14	107 49 17	101 10 0	50 4 20
„ 17	105 15 0	101 48 0	50 24 32
„ 21	102 37 40	101 48 0	50 24 24
Sept. 11	87 28 35	102 10 0	50 23 40
„ 18	81 58 55	106 0 0	50 26 26
„ 19	81 9 45	106 50 0	50 27 59
„ 20	79 50 55	107 10 0	50 44 45
„ 22	77 42 7	107 37 30	51 1 24
„ 27	74 5 7	107 41 7	50 52 48
Oct. 3	68 23 47	107 32 0	51 23 45
„ 4	66 54 27	107 32 0	51 45 16
„ 5	65 32 57	107 0 0	52 3 7
„ 7	63 3 27	106 30 0	52 31 40
„ 23	50 56 37	108 10 0	53 2 6
1858.			
June 21	121 48 35	107 28 15	52 17 59
„ 23	121 53 35	108 11 33	52 14 37
„ 26	121 16 45	108 52 10	52 28 39
July 4	120 5 20	109 22 0	52 34 25
„ 8	119 14 30	110 50 7	52 35 39
„ 10	118 59 45	111 29 45	52 28 23
„ 14	118 0 5	112 18 45	52 24 29
„ 18	116 42 55	112 34 0	52 23 24
„ 20	116 6 45	113 3 0	52 19 25
„ 23	115 8 45	113 40 0	52 12 52
„ 24	115 18 0	114 0 0	51 55 43
„ 26	114 31 40	114 10 15	51 52 52
Aug. 1	112 47 55	113 55 0	51 19 12
„ 2	112 14 5	113 50 0	51 20 47
„ 4	112 3 55	113 50 0	50 54 46
„ 6	112 34 30	113 45 0	50 6 23
„ 7	113 9 5	113 53 0	49 32 31
„ 8	113 29 35	113 50 0	49 5 6
„ 10	111 22 25	113 58 0	49 33 50
„ 13	106 56 25	114 20 0	50 52 49
„ 15	105 10 20	115 4 30	51 8 46
„ 19	103 5 25	115 12 0	50 54 17
„ 20	102 44 25	115 12 0	50 45 3
„ 21	102 20 35	115 21 0	50 37 1
„ 22	101 38 45	115 27 0	50 37 49
„ 23	100 55 55	115 30 0	50 38 55
„ 24	100 32 15	115 43 0	50 30 14
„ 26	99 14 50	115 40 0	50 27 21
„ 27	98 48 40	115 42 45	50 19 24
„ 28	98 24 40	115 42 45	50 10 13
„ 29	98 0 0	115 33 0	50 1 14
„ 30	96 54 25	115 33 0	49 42 41
Sept. 2	95 12 55	115 27 0	49 58 15
„ 6	93 49 5	115 22 0	49 11 21
„ 7	92 47 25	114 58 0	49 19 44
„ 9	90 52 15	114 30 0	49 32 3
„ 10	89 44 25	114 25 0	49 47 0
„ 11	88 0 40	114 21 0	50 12 16
„ 12	86 28 30	114 18 0	50 35 29
„ 13	84 59 0	114 10 0	50 57 16
	Obsn of Polaris	114 13 0	52 4 45
„ 18	77 42 25	114 0 0	52 39 44
„ 22	72 52 40	113 49 0	53 31 44
„ 24	71 18 41	do.	53 31 43
	Red. to Mer.	do.	53 32 11
	Red. to Mer.	do.	53 31 59
	Mer alt. of ☽	do.	53 32 13
1859.			
Mar. 25	39 13 0	115 4 0	52 22 6
June 12	61 21 35	111 30 0	51 33 13
„ 30	61 34 32	111 27 0	51 21 41
July 7	61 6 40	111 12 0	51 14 19
„ 13	60 42 25	110 58 0	50 53 7
„ 15	60 23 30	110 36 0	50 53 52
„ 17	60 4 10	110 20 0	50 53 47
„ 19	59 56 30	109 54 0	50 40 22
„ 20	59 51 20	—	50 34 25
„ 21	59 46 11	110 28 0	50 27 42

Date.	Obsd double Mer. Alt. corrected for I.E.	Long. by Obsn or Account.	Latitude.
1859.	° ′ ″	° ′ ″	° ′ ″
July 26	59 24 30	110 42 0	49 47 27
„ 27	59 12 55	110 36 0	49 45 38
„ 28	59 0 5	110 35 0	49 44 38
„ 29	58 59 22	110 35 0	49 31 22
„ 30	59 19 0	111 0 0	48 58 40
Aug. 1	58 8 10	110 35 0	49 38 32
„ 1	57 24 45	111 0 0	49 35 21
„ 8	56 6 50	112 52 0	49 47 4
„ 9	55 52 5	—	49 44 35
„ 10	55 42 30	113 50 0	49 36 44
„ 12	107 19 30	115 16 0	51 1 44
„ 14	105 59 0	115 30 0	51 2 26
„ 15	105 10 0	115 40 0	51 9 18
„ 18	103 10 0	116 0 0	51 10 42
„ 21	101 20 0	116 26 0	51 6 0
„ 22	100 49 0	116 19 0	51 2 45
„ 24	99 48 0	116 26 0	50 52 0
„ 26	98 11 0	116 40 0	51 0 37
„ 28	96 28 30	116 52 0	51 9 30
„ 30	95 0 0	116 55 0	51 10 0
Sept. 1	93 18 0	116 57 0	51 16 30
„ 3	91 38 0	116 38 0	51 22 40
„ 8	87 44 0	116 43 0	51 28 0
„ 9	86 34 0	117 0 0	51 40 0
„ 11	86 36 0	117 30 0	51 54 0
„ 12	83 54 0	117 39 0	51 52 16
„ 14	82 16 0	117 22 0	51 56 30
„ 18	78 45 30	116 46 0	52 18 0
„ 20	76 41 0	116 40 0	52 24 0
„ 23	74 21 0	—	52 23 30
„ 28	70 14 0	116 10 0	52 30 0
„ 29	69 35 30	116 0 0	52 26 0
Oct. 1	67 20 30	115 25 0	52 23 30
„ 5	42 50 30	113 58 0	53 5 0
Nov. 29	30 55 0	113 55 0	52 46 26
Dec. 1	31 10 0	114 0 0	52 18 13
„ 2	31 6 0	114 10 0	52 12 36
„ 4	30 55 0	114 20 0	52 1 26
„ 6	30 47 0	114 40 0	51 50 28
„ 9	30 52 0	114 45 0	51 29 28
„ 10	30 55 0	114 50 0	51 21 40
„ 15	30 7 0	114 45 0	51 25 24

N.B.—In the above Table all altitudes, except those to which the names of stars are prefixed, are double observed altitudes of the sun's lower limb.

Date.	Obsd double Mer. Alt. corrected for I.E.	Long. by Obsn or Account.	Latitude.
1859.	° ′ ″	° ′ ″	° ′ ″
Aug. 18	53 51 10	115 12 0	49 0 3
„ 22	53 0 17	115 0 0	48 32 0
„ 24	52 27 5	115 10 0	48 23 51
„ 26	51 43 0	115 30 0	48 26 29
„ 27	51 9 17	115 45 0	48 38 33
„ 28	50 45 40	116 0 0	48 41 41
„ 30	49 47 22	—	48 57 20
„ 31	49 7 32	116 36 0	49 15 33
Sept. 1	48 24 57	—	49 36 25
„ 2	48 9 40	—	49 29 50
„ 3	47 58 37	—	49 18 48
„ 4	47 54 47	118 0 0	49 0 31
„ 8	46 48 2	118 12 0	48 37 48
„ 17	42 58 17	118 0 0	49 1 7
„ 18	42 35 47	—	49 0 15
„ 22	40 59 43	—	49 3 10
„ 23	40 36 33	—	49 2 44
„ 24	40 10 43	—	49 5 19
1857.			
Dec. 14	*Polaris 108 20 0	106 56 0	52 42 0
„ 19	26 13 0	108 56 0	53 16 0
„ 19	*Polaris 110 53 0	109 3 0	53 28 0
„ 20	Ditto 110 4 30	109 18 0	53 35 0
„ 20	Jupiter 97 46 0	—	53 34 0
„ 22	26 32 0	—	53 34 0
1858.			
Jan. 5	28 26 0	113 49 0	53 34 0
„ 5	*Polaris 109 50 0	—	53 29 0
„ 8	28 0 0	—	53 30 0
Feb. 10	44 2 0	—	53 32 0
„ 11	44 42 0	—	53 30 0
„ 20	50 51 30	—	53 31 0
Mar. 4	59 51 0	—	53 30 0
„ 6	61 26 30	—	53 30 0
„ 7	62 9 30	—	53 31 0
June 11	Jupiter 99 34 0	114 6 0	52 41 0
„ 14	107 53 3	115 30 0	52 22 0
July 9	119 37 0	111 5 0	52 19 0

LUNAR DISTANCES.

Fort Ellice.—Lat. 50° 24′ 32″ N. Jupiter and Moon, mean of 3 sets of observations. Long. 101° 48′ 0″ W.

Elbow, S., Saskatchewan.—1857, September 22, at 4h. 15m. P.M. (mean time at place, nearly.) I. E. +4′ 17″. Mean of chronometer times, September, 22d. 11h. 35m. 51·7s. Mean of observed distances, 52° 29′ 4″. Chronometer, fast on mean time at place, 7h. 16m. 50s. Approx. error on Greenwich mean time, 10m. fast. Objects observed, Sun and Moon.

Lat. 51° 1′ 26″ N. Long. 107° 37 30″ W.

The following Lunars were obtained at *Fort Carlton.*

1857, December 22, at 5h. 30m. P.M. (mean time at place, nearly.) I. E.+5° 0″. Mean of chronometer times, December, 22d. 12h. 33m. 33s. Mean of distances (Jupiter and Moon's, F. L.), 50° 46′ 53″. Chronometer, fast on mean time at place, 6h. 57m. 21s. Approx. error on Greenwich mean time, 10m. slow.

Lat. 52° 52′ 9″ N. Long. 106° 8′ 30″ W.

1857, December 27.	Jupiter and Moon	-	Long. 106° 10′ 15″ W.
1857, December 28.	Jupiter and Moon	-	Long. 106° 13′ 45″ W.
1858, January 18.	Aldebaran and Moon	-	Not computed.
1858, January 21.	Sun and Moon	-	Long. 106° 19′ 15″ W.
1858, April 20.	Sun and Moon	-	Long. 106° 14′ 0″ W.
1858, April 23.	Sun and Moon	-	Long. 106° 18′ 37″ W.
1858, May 18.	Sun and Moon	-	Long. 106° 15′ 0″ W.

1858, May 19, at 1h. 10m. P.M. (mean time at place, nearly.) I. E.+3′ 30″. Mean of chronometer times, May, 19d. 7h. 48m. 33·9s. Mean of distances, 89° 3′ 32″. Chronometer, fast on mean time at place, 6h. 40m. 5·0s. Approx. error on Greenwich mean time, 12m. slow.

Sun W. of Moon - - Long. 106° 21′ 45″ W.

1858, May 20, at 2h. 30m. P.M. (mean time at place, nearly.) I. E.+1′ 55″. Mean of chronometer times, May, 20d. 9h. 11m. 49·6s. Mean of distances, 102° 5′ 43″. Chronometer, fast on mean time at place, 6d. 39h. 37·3s. Approx. error on Greenwich mean time, 12m. slow.

Sun W. of Moon - - Long. 106° 17′ 15″ W.

The mean, therefore, for Carlton is,

°	′	″
106	8	30
	10	15
	13	45
	19	15
	14	0
	18	37
	15	0
	21	45
	17	15
	128	22

Long. 106 14 16 W.

1858, July 4, at 8h. 30m. A.M. (mean time at place, nearly). In Lat. 52° 34′ 25″ N. Mean of chronometer times, July, 4d. 3h. 33m. 20·8s. Mean of observed distances, 85° 19′ 25″ (Sun and Moon). Chronometer, fast on mean time at place, 7h. 7m. 20s. Approx. error on Greenwich mean time, 11m. slow. I. E.+1′ 55″.

Long - - 109° 22′ 0″ W.

1858, July 25, at 10h. P.M. (mean time at place, nearly.) In Lat. 51° 52′ 40″ N. Mean of chronometer times, July, 25d. 17h. 17m. 49s. Observed distance (Mars and Moon's, N. L.), 72° 45′ 53″. Chronometer, fast on mean time at place, 7h. 23m. 55s. Approx. error on Greenwich mean time, 12m. slow. I. E.+2′.

Long. - - 114° 10′ 15″ W.

Site of Old Bow Fort. Lat. 51° 9′ 0″ N.

1858, August 15, at 3h. 40m. P.M. (mean time at place, nearly.) Mean of chronometer times, August, 15d. 11h. 6m. 13·4s. Mean of observed distances (Sun and Moon), 84° 4′ 51″. I. E.+5′ 25″. Chronometer, fast on mean time at place, 7h. 29m. 30s. Approx. error on Greenwich mean time, 15m. slow.

Long. - - 115° 8′ 0″ W.

Site of Old Bow Fort. Lat. 51° 9′ 0″ N.

1858, August 16, at 4h. 39m. P.M. (mean time at place, nearly.) I. E.+5′ 25″. Mean of chronometer times, August, 16d. 12h. 8m. 33s. Mean of observed distances (Sun and Moon), 95° 33′ 31″. Chronometer, fast on mean time at place, 7h. 29m. 21s. Approx. error on Greenwich mean time, 15m. slow.

	°	′	″
Long.	115	4	22
		8	0
		12	22

Mean 115 6 11 W.

The following Lunars were obtained at *Fort Edmonton.* Lat. 53° 32′ 0″ N.

1858, September 24, at 10 P.M. (mean time at place, nearly.) Mean of chronometer times, September, 24 d. 17 h. 22 m. 28 s. Mean of observed distances (Jupiter and Moon's N. L.) 52° 31′ 27″. I. E. + 6′ 12″. Error of chronometer on mean time at place, 7 h. 21 m. 35 s. fast. Approx. error on Greenwich mean time, 13 m. slow. (Mean of 7 sights.)

Long. - - 113° 19′ 45″ W.

1858, September 30, at 9 A.M. (mean time at place, nearly.) Mean of chronometer times, September, 30 d. 4 h. 50 m. 26 s. Error on mean time at place, 7 h. 23 m. 19 s. fast. Mean of observed distances (Sun and Moon) 81° 22′ 17″. I. E. + 6′ 12″. Chronometer slow on Greenwich mean time, 13 m. (Mean of 5 sights.)

Long. - - 113° 23′ 30″ W.

1858, October 28, at 10 A.M. (mean time at place, nearly.) Mean of chronometer times, October, 28 d. 6 h. 14 m. 1 s. Error on mean time at place, 7 h. 21 m. 41 s. fast. Mean of observed distances (Sun and Moon) 97° 26′ 51″. I. E. + 6′ 0″. Chronometer slow on Greenwich mean time, 15 m. (Mean of 9 sights.)

Long. - - 113° 12′ 0″ W.

1858, October 25, at 11 P.M. (mean time at place, nearly.) Mean of chronometer times, October, 25 d. 18 h. 30 m. 47 s. Error on mean time at place, 7 h. 21 m. 44 s. fast. Mean of observed distances (α Pegasi and Moon's F. L.) 89° 15 5″ I. E. + 6′ 0″. Chronometer 14 m. slow nearly on Greenwich mean time. (Mean of 5 sights.)

Long. - - 113° 24′ 15″ W.

1858, November 18, at 9 h. 30 m. P.M. (mean time at place, nearly.) Mean of chronometer times, November, 18 d. 16 h. 45 m. 58·6 s. Error on mean time at place, 7 h. 19 m. 44 s. fast. Mean of observed distances corrected for I. E. (Jupiter and Moon's F. L.) 48° 42′ 46″ Approx. error of chronometer on Greenwich mean time, 17 m.

Long. - - 113° 16′ 30″ W.

1859, March 10, at 10 h. A.M. (mean time at place, nearly.) Mean of chronometer times, March, 10 d. 5 h. 10 m. 21 s. Error on mean time at place, 7 h. 11 m. 5 s. fast. Mean of observed distances corrected for I. E. (Sun and Moon) 71° 5′ 20″. (Mean of 7 sights.)

Long. - - 113° 18′ 15″ W.

1859, March 11, at 11 h. A.M. (mean time at place, nearly.) Mean of chronometer times, March, 11 d. 5 h. 34 m. 10·2 s. Error on mean time at place. 7 h. 11 m. 5 s. fast. Mean of observed distances corrected for I. E. (Sun and Moon) 84° 6′ 21″ (Mean of 11 sights.)

Long. - - 113° 9′ 45″ W.

1859, March 12, at about 3 h. P.M. (mean time at place, nearly.) Mean of chronometer times, March, 12 d. 9 h. 49 m. 48 s. Error on mean time at place, 7 h. 10 m. 56 s. fast. Mean of observed distances (Sun and Moon) 99° 23′ 43″. I. E. + 5′ 51″. Chronometer about 20 m. slow on Greenwich mean time. (Mean of 5 sights.)

Long. - - 113° 11′ 30″ W.

1859, March 17, at 8 h. P.M. (mean time at place, nearly.) Mean of chronometer times, March, 17 d. 15 h. 5 m. 34 s. Error on mean time at place, 7 h. 11 m. 0 s. fast. Mean of observed distances (Jupiter and Moon's N. L.) 92° 59′ 32″. I. E + 5′ 41″. Chronometer about 20 m. slow on Greenwich mean time. (Mean of 7 sights.)

Long. - - 113° 8′ 45″ W.

°	′	″	
113	19	45	W.
	23	30	
	12	0	
	24	15	
	16	30	
	18	15	
	23	15	
	11	30	
	8	45	
	157	45	

Long. 113 17 31 W. for Edmonton.

1859, April 23, at 6 h. 20 m. A.M. (mean time at place.) Lat. 52° 25′ 6″ N. Mean of chronometer times, April, 22 d. 18 h. 21 m. 42 s. Mean of observed distances, 107° 8′ 5″. I. E. + 4′ 40″.

Long. - - 115° 10′ 45″ W.

At Rocky Mountain House.

Date.	Locality.	Longitudes. W.	Latitudes. N.	Variations. E.
		° ′ ″	° ′ ″	° ′
1857, June 20	Trembling Portage	89 59 48	48 31 5	6 21
„ 21	On Kaministoquoia R.	89 58 10	48 40 0	5 14
„ 22	In Latitude 48° 45′ North	89 53 0	48 45 0	8 54
„ 23	In Latitude 48° 55′ North	89 53 48	48 55 0	9 5
„ 25	Savannah Portage	90 5 0	48 53 0	6 53
„ 26	Lake of the Thousand Isles	90 50 24	48 45 0	3 31
„ 27	Perch Lake	91 12 0	48 35 0	8 14
„ 29	In Latitude 48° 27′ North	92 30 0	48 27 0	9 53
July 1	Fort Frances	93 30 0	48 36 0	9 31
„ 3	In Latitude 48° 50′ North	93 58 0	48 50 0	11 20
„ 4	In Latitude 49° 26′ North	94 48 0	49 26 0	10 17
„ 5	Winnipeg River	94 45 0	49 55 0	15 47
„ 6	In Latitude 50° 15′ North	95 17 19	50 15 0	15 7
„ 10	Lake Winnipeg	96 34 0	50 33 48	14 41
„ 11	Ditto	96 30 25	50 23 0	14 9
„ 23	Red River	96 52 27	49 52 6	12 3
„ 25	Pembina	96 46 13	48 59 12	12 12
August 5	Turtle Mt., East end	99 16 50	49 0 0	18 10
„ 9	Turtle Mt., West end	99 21 43	49 6 0	19 50
„ 20	Fort Ellice	101 48 0	50 24 28	21 34
September 10	Qu'appelle Fort	103 45 45	50 20 0	24 39
„ 22	Elbow, South branch	107 37 30	51 1 24	25 58
October 29	Fort Carlton	106 15 39	52 52 30	23 25
June 17	Eagle Hills	107 35 4	52 14 0	24 10
July 18	Bull Lake	112 34 0	52 23 24	23 50
August 15	Bow Fort	115 4 30	57 8 46	25 50
„ 26	Columbia Lake	116 16 0	50 7 41	26 10
September 1	Kootanie Fort	115 10 0	48 54 48	25 0
1858, Nov. 5	Fort Edmonton	113 49 0	50 31 59	25 20
1859, Mar. 29	Rocky Mt. House	115 10 0	52 22 0	26 20
February 2	Jasper House	118 10 0	53 19 21	26 15
September 8	Fort Colvile	118 12 0	48 37 48	24 20
August 2	Cyprés, Mt. Camp	110 36 0	49 38 0	22 0

Inserted for Comparison.

Mean of Variation observed in 1843-4, by Lieut., now Col. J. H. Lefroy.

Date.	Locality.	Long.	Lat.	Hour.	Variation, East.	Remarks.
		° ′	° ′		° ′	
November 4, 1844	Sancte St. Marie	84 34	46 31	A.M.	1 32	Mean of 3.
May 21, 1843	L. Superior Maimanse	84 53	46 58	P.M.	2 15	Place called Point au Cresse.
October 31, 1844	„ C. Gargantua	85 11	47 37	P.M.	0 53	
October 30, 1844	„ Michipicoton	85 7	47 56	A.M.	3 47	
May 23, 1843	„ Near Chienne	85 24	47 52	P.M.	2 22	
May 24, 1843	„ Le Petit Mort	85 49	47 58	A.M.	4 53	
October 21, 1844	„ White River	86 33	48 33	P.M.	2 10	
October 18, 1844	„ Pic	86 31	48 38	A.M.	5 32	Mean of 2.
May 27, 1843	„ La terre platte	87 45	48 48	A.M.	5 34	
May 28, 1843	„ La terre platte	88 32	48 33	A.M.	1 56	Error on local effect.
May 29, 1843 / May 31, 1843	Fort William	89 22	48 24	A.M.	6 46	Mean of 3. This considerable difference requires further investigation.
October 11, 1844	Ditto	„	„	A.M.	5 11	
June 3, 1843	Manoaisi Portage	89 40	48 29	A.M.	5 40	
June 4, 1843	On Chien Lake	89 40?	48 47	P.M.	6 26	
June 6, 1843	Savannah Portage	90 5	48 53	A.M.	8 8	
October 7, 1844	Ditto	„	„	P.M.	7 24	
June 9, 1843	Portage des deux rivières	91 30	48 34	A.M.	10 59	Two stations very near one another.
„ „	Portage des Morts	91 27	48 35	A.M.	11 1	
June 10, 1843	East end of L. la Crosse	92 10	48 24	A.M.	7 53	Query local attraction?
June 11, 1843	2nd Portage at west end of do.	92 27	48 15	A.M.	10 16	
June 13, 1843	Sokon of la Pluie	92 56	48 32	A.M.	11 28	
June 14, 1843	Fort Frances	92 29	48 37	P.M.	10 37	
September 30, 1844	Ditto	„	„	A.M.	8 33	
„ „	Ditto	„	„	P.M.	8 35	
June 16, 1843	North side of L. la Pluie	94 31	48 48	A.M.	13 7	
August 19, 1844	Edmonton House	112 52	53 30	A.M.	24 19	
„ „	Cumberland House	102 19	53 56	P.M.	19 16	
„ 1843	Ditto	„	„	A.M.	20 9	
„ „	Ditto	„	„	A.M.	19 42	
„ „	Near ditto	102 23	53 56	P.M.	19 21	
August 26, 1844	Carlton House	106 13	52 50	A.M.	22 55	
„ „	Fort Pitt	109 10	53 34	A.M.	23 10	
„ „	Ditto	„	„	A.M.	23 11	

OBSERVATIONS OF THE COMET, 1858.

At Fort Edmonton, Latitude 53° 31′ 40″ N. Longitude 113° 17′ 31″ W.

Approximate Mean Time at Place.	Chron. Time of Observation.	Error of Chron. on G. M. T.	Observed Distances.	Object.	Remarks.
	D. H. M. S.	M. S.	° ′ ″		
Sept. 20, 8 P.M. -	20 15 37 34	9 59 slow	34 24 0	Arcturus -	Bright Star under Cor. Borealis.
„ 24, 8 P.M. -	24 15 7 4	- -	127 45 2	Moon - -	Mean of 5 Sights.
„ „ -	16 4 43	- -	102 7 30	α Aquilæ.	
„ „ -	16 8 30	- -	21 16 45	η U. Major.	
„ „ -	16 11 4	- -	22 54 40	ζ U. Major.	
„ „ -	16 14 51	- -	22 7 20	ε U. Major.	
„ „ -	16 18 45	-	56 13 30	Polaris.	
„ „ -	15 24 37	- -	76 7 40	Capella.	
„ „ -	15 19 34	- -	28 43 20	Arcturus -	Bright Star under Cor. Borealis.
„ 27, 8 P.M. -	27 14 43 42	10 8 slow	34 59 40		
„ „ -	53 1	- -	32 36 30		
„ „ -	54 54	- -	32 11 35	Observed	
„ „ -	57 17	- -	31 40 25	altitudes of	
„ „ -	58 21	- -	31 21 30	Comet.	
„ „ -	15 0 34	- -	30 50 0		
„ „ -	3 3	- -	30 15 10		
„ 28, 8 P.M. -	28 14 37 45	10 10 slow	36 22 20		
„ „ -	40 47	- -	35 33 52		
„ „ -	42 17	- -	35 11 0	Observed	
„ „ -	43 23	- -	34 54 10	altitudes of	
„ „ -	44 31	- -	34 36 30	Comet.	
„ „ -	46 2	- -	34 13 25		
„ „ -	48 28	- -	33 34 10		
„ „ -	50 22	- -	20 6 20	η U. Major.	
„ „ -	54 2	- -	24 37 10	ζ U. Major.	
„ „ -	56 5	- -	24 38 0	ε U. Major.	
„ „ -	15 15 44	- -	59 18 30	Polaris.	
„ „ -	9 15	- -	20 49 50	Arcturus -	Bright Star under Cor. Borealis.
„ „ -	12 47	- -	96 0 20	α Aquilæ.	
Oct. 2, 8 P.M. -	2 15 25 25	10 30 slow	23 59 20	η U. Major.	
„ „ -	27 41	- -	29 52 30	ζ U. Major.	
„ „ -	29 38	- -	31 52 30	ε U. Major.	
„ „ -	34 0	- -	9 40 0	Arcturus -	Bright Star under Cor. Borealis.
„ 5, 8 P.M. -	5 14 56 43	10 20 slow	1 13 50	Arcturus - -	At present changed to North of Comet.
„ „ -	59 46	- -	31 53 0	η U. Major.	
„ „ -	15 3 45	- -	38 14 55	ζ U. Major.	
„ „ -	5 40	- -	40 59 20	ε U. Major.	
„ „ -	7 44	- -	72 33 50	Polaris.	
„ „ -	10 29	- -	104 18 30	Capella.	
„ „ -	12 19	- -	80 23 20	α Aquilæ.	
„ 12, 8 P.M. -	12 14 38 3	10 10 slow	32 39 30	Arcturus.	
„ „ -	40 6	- -	31 44 40	α Cor. Borealis.	
„ „ -	42 1	- -	58 56 50	α Lyræ.	
„ „ -	44 1	- -	62 34 50	α Aquilæ.	
„ „ -	47 8	- -	59 55 30	η U. Major.	
„ „ -	48 59	-	66 35 50	ζ U. Major.	
„ „ -	51 10	- -	70 16 50	ε U. Major.	
„ „ -	53 22	- -	95 32 20	Polaris.	
„ „ -	57 16	- -	134 23 40	Capella.	
„ „ -	15 1 34	- -	110 6 20	α Pegasi.	

N.B.—Index error of instrument + 5′ 58″ to each of the above Observations.

J. W. SULLIVAN, Secretary.
Approved
JOHN PALLISER, Captain.

No. 9.

Indian Tribes and Vocabularies.

Many travellers who have penetrated far into the Indian territories of North America, and studied the manners, life, and habits of the aborigines, are surprised at the inadequate and erroneous ideas they have previously conceived respecting these interesting and remarkable tribes. Yet this can hardly arise from an absence of books on the subject, much accurate and valuable information having long since been in print with reference to these people, especially in the able work of Mr. Catlin on the North American Indians. The real cause of this seems to be that, while these sources of sound knowledge are open to the public, other works of a more imaginative kind, such as the novels of Fenimore Cooper, have led the world generally to imagine the Indian to be a much more romantic personage than he really is. Nor, indeed, is this the only erroneous estimate which has been formed of this people; for they, on the other hand, who have only seen the Indians that live on the borders of civilization, degraded as they are by their begging habits and attachment to ardent spirits, are naturally too ready to conclude that all the tribes are like the corrupted specimens they have witnessed. The only way, therefore, to obtain correct notions of the Indians is to observe them in their native haunts, far from the influence of civilization; thus, and thus only, is there any chance of discerning the prominent elements of the character of these aborigines.

The tribes met with by the expedition during its three years in North America may be considered as either prairie or thickwood hunters; that is, they were either those that hunt the bison in the great plains, or those who pitch their tents in the thickwoods for the purpose of hunting deer, bears, and the valuable fur-bearing animals. Neither of these great classes or groups have, ordinarily, recourse to fishing, because they could not by this means obtain anything that would be esteemed valuable at the trading establishments of the Hudson's Bay Company.

When they are successful in their hunts they visit the trading posts, where the Prairie Indians dispose of dried bison meat, tallow, buffalo robes, and the skins of wolves and foxes, and receive in return European manufactures; while the Thickwood Indians, in like manner, barter the more valuable furs for similar objects. In both classes alike, the office of the men is to kill and cut up the animals, the far more laborious duty of dressing the skins falling to the lot of the women.

As a general rule, the bison hunters do not suffer from want of food; but it frequently happens that the lives of those who dwell in the Thickwoods are chequered by many days of privation and misery.

There is a marked difference between the Prairie Indians and those of the Thickwoods, owing, no doubt, to the dissimilarity of their modes of life. The latter, of necessity, from the scarcity of animals, camp only in small numbers, while the Indians of the prairies are invariably to be found in large bodies, the buffalo supplying them with food, clothing, fuel, and all the requirements of their simple mode of life. It is mainly owing to this that the Prairie Indians have a greater facility for mischief than their neighbours, possessing, as they do, time and means to war upon the adjacent tribes; while, on the other hand, the straitened circumstances of the inhabitants of the woods compel their more especial devotion to the providing for their daily subsistence.

The government among all these tribes is neither rigorous nor well defined, the chiefs exercising great influence in their respective camps, though scarcely able to enforce absolute obedience. In fact, the greatest chief, in his daily intercourse with his own people, commands no respect beyond that which all younger Indians pay to their elders When, however, the tribe sits around the council fire, his opinion has naturally more weight than that of the others. Thus, by long established precedent, he determines the time for pitching or striking the tents, and other matters having a general bearing on the economy of the tribe, while he is also usually the wealthiest of his family, and possesses more horses, more wives, a larger tent, and a more gaudy dress.

It is difficult to obtain reliable information respecting the numbers of the Indian population, their migratory habits, coupled with the vast extent of country over which they are spread, rendering the task of making a satisfactory census almost impossible.

The officers of the Hudson's Bay Company have registered the number of the different tribes who resort to their posts for the purposes of barter; but their reports, taken without correction, only afford a vague and often incorrect estimate of the Indian population with whom they have dealings; for, as the same bands (following in the footsteps of the buffalo) trade at different posts at different seasons of the year, it comes to pass that the same Indians are constantly counted over and over again. According to a document presented to the "Select Committee of the House of Commons on the Hudson's Bay Company," the number of Indians in British North America is given at 147,000; of these 80,000 are to the west of the Rocky Mountains; 3,000 border on Canada; and the remaining 64,000 constitute the Indian population of Ruperts Land. These numbers, however, considerably exceed those of the Indian tribes now dwelling in these districts.

We have, however, made the following estimate of the numbers in the different tribes of Indians we met with on the prairies (exceeding those of Red River Settlement and Pembina), together with a conjectural addition of some that we did not actually come across. We have also given a rough estimate of the remainder of the population of the Saskatchewan country and of the Indians that live in the Rocky Mountains.

ESTIMATE of the Numbers of WHITE, HALF-BREED, and INDIAN POPULATION, seen by the Expedition in the Saskatchewan Country and Rocky Mountains.

	No.	Total Population.
I. *Whites and Half Breeds:—*		
Fort Edmonton and Mountain House	250	
Fort Pitt	60	
Fort Carlton	50	
Fort Ellice	40	
Touchwood Hills	20	
Qu' appelle Lakes	40	
Lac, St. Ann's Mission (Roman Catholic)	400	
Pigeon Lake Mission (Wesleyan)	50	
Lac la Biche Mission (Wesleyan)	70	
Moosewoods	150	
Miscellaneous and Migratory	200	1,330

	No. of Tents.	Total Tents.	
II. *Thickwoa Crees (partly Wesleyan):—*			
Trade at Carlton	30		
„ Fort Pitt	40		
„ Fort Edmonton	15	85	425
III. *Plain Crees:—*			
At Moose Mountain	100		
„ Moosejaw Creek	120		
„ Coteau des Prairies	400		
„ Eagle Hills	200		
„ Moose Woods	200		
„ Jack Fish Lake (scattered)	200		
„ Vermillion River	300		
„ Snake Postage and Lac la Biche	100		
„ Beaver Hills	300	1,700	11,520
IV. *Assineboines:—*			
Seen at La Roche Percée	150	150	1,000
V. *Blackfeet:—*			
Hand Hills	200		
Bow River	500	700	6,000
VI. *Blood Indians:—*			
Forks of Red Deer River	200		
Bow River and Cypre's Mts.	150	350	2,800
VII. *Peaguns:—*			
Bow River	250		
Belly River	300	550	4,400
VIII. *Surcees:—*			
Battle River	180	180	1,100
IX. *Shooshwap (Roman Catholics):—*			
Columbia River	30	30	120
X. *Rocky Mountain Stoneys (Wesleyan):—*			
Ispasquehow River and Rocky Mountains	45	45	225
XI. *Thickwood Stoneys (Roman Catholic):—*			
Athabascah River	25	25	120
XII. *Kootanies (Roman Catholic):—*			
Kootanie River	90		
Kootanie Port	40	130	650
XIII. *Iraquois half-breed Freemen (Roman Catholic):—*			
Jaspar House	30	30	150
Total Number of Tents		4,195	
Total Nomadic Population			28,510

For the sake of clearness we give the following Table of the aboriginal groups into which the Indians of the British Territories have been divided, showing the relationship of the Tribes seen by the expedition.

I. *Esquimaux* :—
Not seen.

II. *Algonquin* :—
Chippeways.
Crees:
Of the Thickwoods.
Of the Plains.
Blackfeet, or Slave Indians.
Blackfoot Tribe.
Blood Indians.
Peaguns.

III. *Iraquois* :—
Principally Canoemen.

V. *Athabascah* :—
Chepewyans.
(Only a few lodges of this tribe were seen near Fort Pitt.)
Surcees.

V. *Dahcotah* :—
Assineboines:
Of the Plains.
Of the Thickwoods.
Of the Rocky Mountains.

VI. *Kootanah* :—
Kootanies.

VII. *Atnah* :—
Shooshwap.

VIII. *Kolooch* :—
Mixed tribes of the West Coast.

Disregarding the Salteaux, or Chippeways, of the district from Lake Superior to Red River on the one hand, and from the lake and wood country as far west as Forts Ellice and Carlton on the other, a tribe of whom the expedition saw little or nothing, we shall notice first, in the plain country, the Cree Indians, both from their greater number and also from their being on more intimate relations with the traders than any other of the tribes in the Saskatchewan prairies. This nation (which is closely allied to the above-mentioned Salteaux) is divided into two great groups, the Muskego or Swampy Crees, and the Saskatchewan Crees. The former inhabit the country from Hudson's Bay to Lake Winnipeg, living during the summer on the lakes and rivers, and in the winter hunting moose and reindeer in the morasses covering this tract of country. It is to this that they owe their name of Swampy Crees. They do not use any horses for transport, but travel by canoes in summer, and in winter with dogs, or on snow shoes.

Thickwood Crees of the Saskatchewan district, for so they are termed by the traders, inhabit a belt of country to the west of Lake Winnipeg, stretching along the northern border of the Saskatchewan Country, as far west as Longitude 113°. They are most numerous in the vicinity of Fort Pelly and Fort à la Corne, but they also trade at Forts Ellice, Carlton, Pitt and Edmonton.

They travel about in small parties, using horses and dogs for transport in summer; both of these animals carry their loads on their backs, but in winter the dogs draw a long light sleigh over the snow. These Indians have regular tracks cut through the woods, wide enough to allow a pack-horse to pass. During the open weather, they live by the chase of the moose-deer, carriboo, or thickwood reindeer, the wapiti, small deer, and bears; but in winter they are compelled to depend chiefly on rabbits, which are very abundant in some parts of the country. Though occasionally in autumn they make short excursions to the plains for baffalo, when the herds come close to the edge of the woods. They often suffer great privation during their long winters, as they are then confined to the dense woods, and are employed in trapping the marten, minx, fisher, and other fur-bearing animals. To secure these animals they construct rude fall traps of a few short poles, enclosing a space in which the bait is so adjusted that on the animal tugging at it a heavily weighted log falls on its head.

As a rule these Indians are hard working and docile, and in manner silent and self-possessed. They are extremely hospitable, though it is seldom they have more than the barest necessities of life. They trade their furs and dressed deer skins for ammunition, tobacco, and clothing; and but few of them care to waste the fruit of their hard toil on liquor. Those, however, who are nearest to Red River, form an exception to this statement, as the free-traders from that settlement have caused the introduction of ardent spirits among them.

The Thickwood Crees are simple in their dress, and seem to have none of those noisy and gaudy superstitious ceremonies to which those that dwell in the plains are so partial. They offer a most likely field for missionary enterprise, and advancement in civilization; and there would probably be little difficulty, under proper management, in inducing them to cultivate plots of land from which they might derive a more sure supply of food when trapping furs. North of Fort Pitt there are a few families who have adopted this plan, independently of any missionary station, at which, as might be expected, the first step is always, if possible, to establish farming operations.

Prairie Crees. These have the same appearance and speak the same language as those in the woods, but they differ greatly in disposition and mode of life. They move in camps of from two hundred to four hundred tents, each of which contains one family at least, and often several. The average number of persons to a tent is about six, but the size of the tents varies much. Their only employment, as is the case, too, with all the Indians of the plains, is the chase of the bison; hence they are constantly moving about as they follow the migration of the herds of these animals.

In the latitude of Fort Ellice they sometimes pitch their tents as far west as the elbow of the South Saskatchewan, and from that point their country may be bounded by a line carried to the Neutral hills, south of Battle River, and thence to the Beaver hills and Fort Edmonton. During the summer their favourite camping grounds are along the Qu'appelle River to the Missouri Coteau, where they border on the Assineboine and Sioux Indian. They are also found in the Bad and Eagle hills between the two branches of the Saskatchewan, and also Battle River to the south of Fort Pitt or to the south-east of the Beaver hills. At all these last-mentioned places they are in contact with the country of the Surcees and Blackfeet tribes, with whom they are frequently at war. During the winter, as the herds of buffalo seek the shelter of the partially wooded country, the Plain Indians tent nearer the North Saskatchewan and towards the Touchwood hills and Fort Carlton. In winter these Indians construct "pounds" for capturing the buffalo in great numbers in order to procure their skins for the manufacture of robes for the Hudson's Bay Company.

These pounds are strongly fenced enclosures, generally hid in a small bluff of woods; the herd is guided into them by black spots of brushwood, or other substance, laid in converging lines for miles over the snow. The frightened animals not liking to pass these bushes, are constrained to enter the pound by an inclined road, ending in a sudden jump of six or eight feet, so that they are unable to return.

The prevalence of this method of hunting among the Prairie Crees is leading to the rapid extinction of their only source of support. The great plains of the North Saskatchewan, which, within the last fifteen years, were every winter teeming with buffalo, have now only a few large bands, numbering, it is true, tens of thousands, but no longer to be found all over the country as in former times. The large bands, indeed, in which these animals are now met with, are a sure sign of their being over hunted, and the result is already being felt. Thus, in 1857 the buffalo were very plentiful between Edmonton and Fort Pitt, while the Indians and Company's servants alike, at the Mountain House and at Carlton, were starving. In the following winter the case was exactly reversed, the buffalo having come on this occasion within easy distance of the latter places; while at the former it was almost impossible to feed the people, and towards spring some of the more aged Indians were starved to death.

The Prairie Crees possess large bands of horses, but of neither the number nor the quality of those kept by their neighbours, the Blackfeet. In moving about they use the "travaille," a triangle formed of two poles, each 12 feet long and connected by cross bars, which bear the load, while the apex rests on the horse's neck. For dogs they have an exactly similar contrivance, but on a smaller scale. A travelling party is a curious sight, as the women are perched generally on the horses that have the "travailes" attached, while a long straggling chain of loaded dogs brings up the rear. Their women are very hard worked, and seldom have the slightest trace of beauty, their scanty dress being always dirty and untidy. The men, too, are very different from the Thickwood Crees, being idle and dissipated, and much given to gambling, begging, and drinking whenever they can get the liquor. They have little regard for personal finery, and devote themselves to their ceremonies, feasts, and superstitious medicine dances in a listless, half earnest manner as compared with that of the other Indians. They are, however, intelligent and hospitable, and have less of the barbarian's cunning, trickery, and deceit than any of the other Plain Indians. They show few signs of industry and design in the production of ornaments or implements of any kind, and even their skins, buffalo robes, and dried meats are considered inferior to the same articles as prepared by the Blackfeet.

It was not thought necessary to prepare an original vocabulary of the language of the Prairie Crees as it is so nearly allied to that of the Muskego Crees, of which several excellent grammars and vocabularies have been published, and which has had a system of syllabic characters adapted to it, which the natives learn with great facility both to read and write. It was invented some years since by the Reverend Mr. Evans, a missionary at Norway House, who has printed several small books and parts of the Bible in these characters. The Cree language is the most universal in the country of the eastern plains, and a person conversant with it will always find some one in every tribe that can understand him, even among the Kootanies on the west side of the Rocky Mountains.

The Cree nation was at one time very numerous, and as they were the first of the Rupert Land Indians to obtain fire-arms, they overran and made a temporary conquest of the greater part of the country, the tradition being that they even crossed the Rocky Mountains and reached the Pacific coast. They are still the most numerous tribe of the Saskatchewan country, and number in all, perhaps, about 12,500 souls. They are, however, rapidly on the decrease, as the small-pox and other diseases annually sweep them off in great numbers.

Rocky Mountain and Thickwood Stoneys. Almost the only other Indians on the east side of the Rocky Mountains, and within the district we are dealing with, who trade solely with the British Fur Company, are known by the name of the Rocky Mountain and Thickwood Stoneys. These are a detached portion of the Assineboine branch of the Sioux or Dacotah tribe, and having been separated a great distance from their kindred, they have naturally been much modified in their character and mode of life.

At one time the Plain Stoneys or Assineboines were a very powerful tribe in the Saskatchewan district, and inhabitants of the country between Carlton and the Missouri Coteau; indeed, even so late as when Franklin first visited that country in 1821, they were the terror of the traders from their daring attacks and plundering propensities. But when the small-pox commenced its ravages among the aborigines of this part of North America, it seemed to single them out for more severe visitation than any of the other tribes, till at length they were almost extirpated, the northern part of their country being occupied by the less mischievous Crees. They still, however, dwell in the plains along the boundary line to the south of Fort Ellice, at which post they trade in the winter, as also at the American Mandan Forts in the Missouri; and along this latter river they yet form a numerous tribe. Those in the British territory still preserve their old character of being the greatest scamps and horse stealers of the prairies. The expedition only met with one small band of them, numbering about 1,000 souls, but ascertained that their present haunts were to the west, along the boundary line, nearly to the Cypre's hills.

It is to these Assineboines, then, that the Thickwood and Rocky Mountain Stoneys belong; but so great is the difference between them, that were it not for their language being almost identical we

should not suspect the relationship on first seeing them. These dwellers, indeed, in the forest form but a very small tribe of scarcely more than 100 tents or 500 souls. They have, without exception, been converted to Christianity, as from their small number and mode of life (which is the same as that of the other Thickwood Indians) they were from the first more easily accessible than any other tribe. Those that live in the Rocky Mountains (who form the largest and best portion of them) were adopted and taught by the Rev. Mr. Rundall, a Wesleyan missionary, who spent many years at Fort Edmonton, and penetrated into remote parts of the Rocky Mountains in his well organized and satisfactory endeavours to reclaim these Indians. In fact, although it is nine years since Mr. Rundall left them, and though only a year previous to our visit that they had the attention of his successor, Mr. Woolsey, yet we found them still influenced by the good impressions that had been made on their habits and moral character by their first teacher.

Being Thickwood and Mountain Indians, and living in the most precarious manner, they are often in a destitute and wretched condition compared with that of other tribes ; yet a visitor to a camp of Rocky Mountain Stoneys will never fail to be at once struck with their quiet and respectful manner, and with their unobtrusive hospitality in sharing that which can generally be ill spared in their tents. Neither is there any begging or crowding for the purpose of forcing a ruinous trade on the hard-up traveller, which is too often a source of great annoyance on entering an Indian camp.

In addition to these good qualities, in a camp of these Indians you may leave anything lying about without fear of its being pilfered, unless, indeed, there is a possibility of its being eaten, when it is certain to become a prize to the dogs, and the Stoney dogs exceed all others in their digestive capacity.

The members of the Stone tribe are hard workers, as their life is one requiring constant exertion and foresight. They travel in the mountains or in the forests along their eastern base, in parties of six or seven families. The young men are always off hunting in search of moose or other kinds of deer, or of the Rocky Mountain sheep. The old men busy themselves cutting out the travelling tracks through the woods, while the women pack and drive the few horses they use for carrying their small supplies.

They generally use skin tents stretched on a conical framework of poles, but their wigwams are much smaller than those of the Plain Indians. The women dress all the skins of the animals they kill into a soft leather, which, when smoked, is the material used throughout the whole country for making mocassins, most of the fine leather being obtained from the Stoneys. They are excellent hunters, and though as a rule small and feeble in body, are probably capable of more endurance than any other class of Indians. They make trustworthy guides, and, with a few exceptions, after some acquaintance with this tribe, you no more expect to be deceived, or told lies, as a matter of course, than you would in a community of white men.

In the neighbourhood of the Pigeon Lake Mission they have cultivated small patches of land under the superintendence of Mr. Woolsey, but the want of proper implements is a serious bar to their advancement as gardeners or agriculturists. There is little doubt, however, that the majority of this tribe might easily be induced to quit their wandering life if they had other means of subsistence. The tract of country in the neighbourhood of Mountain House, which forms their present camping ground, and southwards to the Bow Fort, contains land admirably suited to the growth of barley, oats, and all kinds of vegetables, and the natural pasture and winter fodder cannot be surpassed. With these natural advantages no more fruitful field for missionary enterprise could be wished for than among these Indians, who are already disposed to adopt the habits of civilized men. Nor in stating this are we merely re-echoing the opinions of the missionaries, for we have heard the same views expressed by their own chiefs when sitting round their camp fires. Indeed they pointed out to us a small garden they had made in the neighbourhood of the Bow Fort, with rude implements of their own manufacture, having an evident pride in showing that their land as well as that of the white men could grow turnips, which was their only crop.

Many of the Stoney Indians can read and write in their own language, using the Cree syllabic characters, which are easily adapted to it ; and every morning and evening all the members of their camp meet to pray and sing as they were taught by Mr. Rundall, though, it must be confessed, that their music is rather uncouth, and bears strong resemblance to their pagan medicine chants. We may add that the Earl of Southesk, who was in that country at the same time as the expedition, bears a similar testimony to the good character of these Stoney Indians, in an address to the Red River settlers.

It may be thought that a tribe, numbering at the most only three hundred or four hundred souls, would afford but a small field for the employment of the missionary, especially when there are so many ever wandering over the plains ; but diffuseness of effort will be fatal to any attempts to elevate the condition of the Indian tribes in the Saskatchewan district or elsewhere. The number of converts gives no clue to the effect the teaching has had on the minds of Indians, who, though according to our ideas ignorant, are often an intelligent, thinking, and in some senses of the word a polished people.

It would prove far more effectual to concentrate the means of improving the condition of one small well-disposed community like the Mountain Stoneys, the example and advanced condition of which would offer the most powerful means of influencing the other tribes. The establishment of a nucleus formed of an industrial community, consisting almost wholly of pure Indians, would not have the same destructive effect as a colony of white men invariably has on the surrounding and still savage tribes.

The proper field for missionary enterprise should for this reason commence far away from the influence of white settlers, so as to allow time for the gradual elevation in condition of the Indians without their being thrown into an unequal competition that must and has always proved fatal to them. An Indian tribe can never fulfil the relations of a peasant or labouring class to a white community in a recently settled country, as they possess among themselves all the elements of the different grades in society, and the attempt to render them so has always ended in their rapid degradation and final extinction.

Meanwhile, to revert to the condition of these Stoneys, their conversion to Christianity, however flattering to our missionary efforts, and perhaps at first beneficial to them, yet if unaccompanied by some effort to improve their permanent condition, will really tend only to their extermination ; for the diffusion of the doctrines of docility and weakness will only render them more defenceless and less fitted for that struggle for existence which they must maintain till they are supplied with more civilized means of live-

lihood. If such means are not speedily supplied to them, so that they shall have made some progress towards independence before the influx of white men, who will inevitably, sooner or later, occupy the fertile country of the North Saskatchewan, these Stoneys, along with the Thickwood Crees, will share the fate of all other border Indians, a fate which, however, a little present expenditure might probably avert.

Are we warranted in looking on these vast territories merely as outlets for our surplus population, without considering the claims of the Indians to our aid and protection as British subjects? And are we to regard these natives as we should so many wild beasts, the natural evils of a new country which are in time to be removed in the process of settlement.

Hitherto, while indignantly denying the latter alternative, the policy of the dominant races has unvariably produced that result. On the other hand, our opinion, derived from some study of the Indian character, is, that any attempt to reclaim them, when in close proximity to the advancing line of civilization, will be of no avail at all, but that to be permanently improved in their condition they must be aided and governed while yet in their simple and primitive condition, and that therefore it is the duty of Government to take the initiative even in the most remote districts, in a work at present left to the feeble and often ill-directed efforts of missionary societies.

Where the Hudson's Bay Company have the sole sway over the Indians, they have been very successful in introducing that kind of discipline and government among them which is favourable for the purposes of the fur trade; and though that trade perpetuates the wandering and precarious modes of life, which it should be the first duty of the civilizer to eradicate, the sway of the Hudson's Bay Company, if it has done no other good, has at least shown that the Indians are capable of being governed. We may add, that what we ourselves saw of the Rocky Mountain Stoneys has led to the foregoing remarks, which may, however, be applied with almost equal truth to the Thickwood Crees, and to any other Indians dependent on means of subsistence similarly precarious.

The Thickwood Stoneys are a small branch of this same tribe who inhabit the country to the north west of Lake St. Anne's and along the Athabasca River. They have been for many years attached to the mission at Lake St. Anne's, and are all nominally Roman Catholics. To what extent they have been improved by their connexion with the mission is uncertain, as they were only seen once by some of the expedition on the Athabasca River; they were then destitute and wretched in the extreme, but notwithstanding very desirous of gambling with what little they possessed, so that on the whole they did not leave a very favourable impression.

Slave Indians.—All the remaining tribes which were seen by the expedition to the east of the Rocky Mountains and the Saskatchewan country are included in one large group, called the Slave Indians by the traders and Crees. They all speak the Blackfoot language, and during the summer roam over the great prairies along the South Saskatchewan and Red Deer River, in winter retiring to the north-west, where they tent along the edge of the woods between Rocky Mountain House and Bow Fort. In this group, however, is included a tribe with a distinct language of its own, called the Surcees, a branch of the great Chippewayan family, who inhabit the Athabasca district far to the north of the Saskatchewan, having broken away from their own relatives and changed their habits of life from that of Wood to that of Prairie Indians. This language is guttural and harsh, so that the Blackfeet, though always living with them, are rarely able to learn it, while the Surcees have no difficulty in acquiring, not only the soft flowing Blackfoot tongue, but also that of many other tribes. The mode of life of the Surcees is the same as that of the Blackfeet, but their habits and appearance denote that they are a degraded race. Their constitutions are enfeebled, and it is a curious fact that "goitre," so rare among other Indians, is almost universal among them. The only other persons in that country who are afflicted with this disease are the half-breeds resident at the Company's forts, who are influenced by depressing causes that enfeeble the constitution without actually producing disease.

The Surcees trade at Fort Edmonton; and as we saw many articles of American manufacture among them, they probably got these from their allies the Blackfeet, as they rarely themselves go so far southward as the Missouri. They generally camp in summer towards the Hand Hills, and in winter near the elbow of Battle River; sometimes joining in one large camp with the Blackfeet, though more generally living apart by themselves.

The Blackfoot Tribes.—These comprehend the Blackfeet Blood Indians and Peaguns, who all speak the same language and have the same habits of life. They trade chiefly with the Americans, as they share in the subsidies granted according to the Indian treaty by the United States Government, a portion of that territory lying south of the boundary line as well as to the north within British rule. The Blackfeet themselves trade a good deal at the Rocky Mountain House, principally bartering provisions for rum, tobacco, and ammunition; and they all prefer the goods supplied by the Hudson's Bay Company as superior in quality to those from the American forts.

In the summer these Indians form large camps along Red Deer River or Bow River, far out into the arid plains, but where there is always enough grass in some spots to support their large bands of horses. They are the real Bedouins of the prairies, having always parties on the move in every direction, making rapid journeys, sometimes to the British, and sometimes to the American trading posts, for the sake of gathering news concerning other Indians, or of the buffalo. They have large bands of horses, and some of fair quality. Their only food is the buffalo, and most of them will go a long time hungry rather than eat ducks, rabbits, and any kind of small game.

As part of their subsidies they receive flour, sugar, and coffee; but they care very little for such articles of food, which they say make them sick. Like the Crees, when moving about they use the "travailles," but their tents are much larger than those of this latter people, it being not uncommon in a Blackfoot camp to see them of forty or fifty buffalo skins sewn together, the more usual size only requiring from twelve to twenty skins. They are always conical, with triangular lappets at the apex for directing the smoke as it escapes. As they travel so much over bare plains, where there is no timber, their tent-poles are made of light dry wood, so that they are easily conveyed by attaching them to a horse with their ends trailing on the ground. The smallest tent requires thirteen poles.

The Blackfoot tribes are fond of fine dresses for themselves, and gay trappings for their horses. Their chiefs have state robes of ermine fur and of other skins, and their medicine-men have dresses

adorned with eagle feathers. The women of this tribe are often comely, and they always dress neatly with ornamented tunics and leggings of cloth or deerskin, worked with beads and porcupine quills.

They have many mysteries and ceremonious dances, in which they make great use of drums, rattles, and shrill whistles. Their chanting on these occasions is more harmonious than that of the Crees, and they seem to join in these rites with greater sincerity than other Indian tribes. They are of wilder nature and more treacherous than the Crees, and yet have certain ideas of honour to which they rigidly adhere.

The young men are great horse thieves, but are more under the control of their seniors than is the case with the other Indians. They are constantly at war, either with the Crees, Assineboines, or Crow Indians; horse-stealing on one side or the other being generally the cause of all their quarrels.

The Roman Catholic Missionary at Lac St. Anne's, M. Le Combe, has made one tour among these Indians with a view of establishing a mission, but, as we have already remarked, it will be much more difficult to effect any real improvement among these tribes than among those that dwell in the woods. Their constant communication with the Americans, their frequent migrations and free mode of life, and their sole dependence for food on the chase of the buffalo, are all against their adopting those habits of industry without which there can be little real advancement in their condition.

According to their own notions, it would be better for them if we would leave them alone, as their only fear for the future is caused by their perceiving the rapid decrease in the numbers of the buffalo, owing to the active trade forced on them for robes and provisions. Unfortunately, nearly all their trade at the establishments of the British Fur Company is for rum, the only luxury they cannot get at the American posts ; and their love for this spirit is so strong as to induce them to store up provisions to barter for it. It is only by supplying the Blackfeet with rum that the Hudson's Bay Company can induce them to prepare an excess of provision beyond their immediate wants, and though this again tends to ruin the future prospects of the Indians by gradually exterminating the buffalo, it is certain that, without this supply of provisions, the fur trade, as at present prosecuted, could not be carried on. The brigades that at present bring down the furs and take up the goods for trade to the different sub-arctic districts, by the tedious portage routes, are supplied with pemican made from the buffalo of the Saskatchewan country, but there is much reason to doubt whether, as a question of economy, even with the apparently low cost of the provisions thus obtained, it would not be cheaper to draw the required supplies from an agricultural population by a more civilized style of commerce.

The Blackfoot tribe have never yet suffered much from the small-pox, which has been such a scourge to the other Indians, but at present there is a very obscure form of disease which commits great ravages among them. It commences with a state of collapse, which attacks the Indian, generally young persons, suddenly, and if not fatal within a few hours, they sink into a low typhoid fever, from which they seldom recover. Their medicine-men use no means to recruit the sufferer's strength, but continue their attempts to cure him by beating drums and shaking rattles over him without intermission, relays of them keeping it up day and night in the case of an important patient, it is needless to say with what result. It is only when the sick Indian happens to be a man of little importance, and his friends are consequently unable to pay the medicine-men, that he has the slightest chance; indeed, the only cases of recovery we heard of were when we were able to persuade them to keep the poor sufferer clean and to give him nourishment and simple stimulants.

In the course of four days we spent near a Blood Indian Camp of two hundred tents, there were at least twenty or thirty deaths from this disease, and the wailing and lamentations of the relations were almost continually ringing in our ears. One night a chief was stricken down, and the whole camp, which was at a distance of less than a mile from ours, joined in keeping up wild and unearthly wailing till daylight.

What will become of these wild Plain Indians it is not difficult to foresee ; but it is to be hoped that their inevitable extermination will not be hastened, as on the western frontiers of the United States, by ruthless warfare. At present they have a most friendly feeling towards the British, by whose representatives, the Hudson's Bay Company, they have been always fairly treated. On the other hand, along the Missouri, within the American frontier, where an active competitive trade has sprung up, the thirst of gain has developed the worst features of the white man's character, and has led the Indians, who are a very observant race, to draw the most unfavourable conclusions with regard to the white man in general.

There cannot be a shadow of a doubt that if settlers are allowed to push their way into the Saskatchewan country, as has been the case in the western states, before any form of government has been established which would consider the interest of the Indian subjects of the Queen as well as that of the settlers, it will be almost impossible to preserve this friendly feeling towards the English, and secure the country from acts of incursion and rapine on the settlers, which, if once commenced, must necessarily end in a bloody war of retaliation and extermination against the Indians. Such wars have ever proved expensive and mischievous, in that they retard the progress of the young settlement, and are, moreover, apt to raise too soon questions of assistance from, and dependence on, the mother country, and so produce jealousies and ill will. For this reason, besides the crying injustice to the Indian possessor of the soil (who in sharing his land with our surplus population, should at least have the benefit of the same laws as are passed or maintained for the good of the settlers), any measures taken in time to prevent the usual sequence of evils in the first settlement of Indian country, would prove a great saving to ourselves.

The Saskatchewan country is peculiarly favourable for making the attempt to introduce this fairer method of settlement, as it will not yield any sudden source of wealth to tempt an unsettled population, or make any return to mere "cuteness" or unprincipled speculation. Having the advantages and defects of a temperate climate, with a great extent of good and varied soil, it is well fitted for colonization by an industrial population, who, by toil and intelligence, will obviate the defects to which the climate is liable, for the sake of the small but solid measure of prosperity they are sure to enjoy in return.

So long as the colonial gold fields hold out their strong allurements to emigrants, it cannot be expected that a field of profit so humble, though probably more lasting, will be chosen by them in preference ; and we may therefore be sure that even if the Saskatchewan country were at once thrown

open for settlement, and provision made for its government, there would be ample time for the system to exercise an influence in improving all classes of Indians, before those yet in their primitive state have been reached by the white population—an influence which would affect even the Blackfoot tribes, so far at least as to prepare them for becoming peaceful neighbours.

The Kootanie and Shooshwap Indians.—The expedition did not see much of these tribes, which are both small and inhabit a limited portion of country. The Kootanie Indians live generally in the wide open valley through which the river of that name flows, when parallel to the Rocky Mountains. They are all Roman Catholics, but no missionary resides among them; those that live at the Cœur d'Alleur Lake and Flathead mission stations only making occasional visits among them. They are a fine race of Indians, and seemed to us quite as well disposed as the Rocky Mountain Stoneys. They often make excursions across the Rocky Mountains to hunt buffalo, but, as a rule, tent in the large plains in the valley of the Kootanie River. They have larger bands of horses in proportion to their numbers than any other tribe we met with; and these animals, though small in size, are very swift and hardy. This arises, no doubt, from the dry gravel soil of their feeding grounds, and also from their being less frequently used than those belonging to the Plain Indians.

These Indians have several cows and oxen among them; the first of which they procured from a party of Red River emigrants, who crossed the mountains with the late Thomas Sinclair, who was afterwards killed by the Cascade Indians. They make no use of these animals; but they lassoed the cows for us, when we wanted to milk them, though they did not seem to care to milk them for themselves.

They make a few attempts at agriculture; but these, like those of the Mountain Stoneys and Thickwood Crees, are very imperfect. Their principal food is small fruit, such as cherries and the service berry, which they dry and make into cakes, and also a lichen from a species of pine tree; they also get deer and mountain sheep, and occasionally buffalo, as before mentioned.

As it is likely the Kootanie country will prove to be auriferous, perhaps in a few years these Indians may be submitted to the hard test of contact with the white man, and this, too, just at a time when his passions are most excited, and when he is least disposed to consider the claims of Indians for lenient, or even just dealing. It is to be hoped they will then migrate, as they are much superior to the tribes nearer the Pacific coast, and better worth being preserved.

The Shooshwap or Carrier Indians occupy the country of the Upper Columbia to the east to Jaspar House, where they sometimes trade, and west across the watershed to Kamiloop's Fort on Thompson's River. They are Canoe Indians, and make long journeys over the mountains, carrying heavy loads on their backs. Though small and miserable in appearance they are wonderfully strong at this work.

With them the dog is used only for hunting and never as a beast of burden, as with the other tribes. Only a few of them have horses, which they keep at the Columbia Lakes, as they have no tracks through the dense woods of the valleys further to the north. Their food is salmon (which ascends the Columbia all the way to its source), the mountain goat, and sheep, and the Siffleur or marmot, the flesh of all which they use dried and smoked. They also sometimes get a moose or rein-deer, or a bear; but no large game is plentiful on the Western Slope of the Rocky Mountains.

The other tribes of Indians seen by the expedition to the West of the Rocky Mountains, were all within the American territory excepting those at Vancouver's Island, to whom it is not necessary to allude in this report.

The vocabularies now offered were collected by Mr. Sullivan, with the exception of that of the Gros Ventres Indians, which was presented to the expedition by Mr. Denig, who collected it when resident in the Upper Missouri country.

They have all been prepared on the same plan, however, with regard to the method of syllabification, which is that adopted by the Smithsonian Institute of the United States, by which learned body many of the languages and dialects of the North American Indians have already been published.

Vocabularies of the Indian Languages.

English sounds of the vowels in syllabification.

ai. To express the sound of *a* in fate and of *ai* in aim.
ah. „ „ *a* in father.
au. „ „ *a* in fall, *au* in auction, &c.
a. Followed by a consonant or between two consonants to express the sound of *a* in hat.
ee. To express the sound of *e* in me and *ee* in feel.
e. „ „ *e* in met.
i. „ „ *i* in pine, when standing as a syllable by itself, or preceded by a consonant.
i. To express the short sound of *i* when followed by a consonant.
o. To express the sound of *o* in note and of *oa* in moan, when standing by itself, or preceded by a consonant.
oo. To express the sound of *o* in move, *oo* in pool, and *u* in rule.
o. „ „ *o* in not, when followed by a consonant.
u. „ „ *u* in nut.

N.B.—I have adopted the above method of English sounds of the vowels in syllabification, known as the Smithsonian, for want of a better. It is evident that however near we may approach to the various sounds in the Indian tongues, yet we cannot be said in the majority of instances to represent the exact sounds. In the Cree language the use of English letters has been superseded by the invention of syllabic characters, and at present a great portion of the scriptures has been translated into that language and these newly invented characters adopted.

J. W. Sullivan.

English.	Gros Ventres.	English.	Gros Ventres.
God	Mi-shie-ma-co-ka-ma-ho-pa.	Oar	Ech-oak.
Devil	Mi-shie-ma-ho-pa-ish-ea.	Paddle	do.
Angel	Unknown.	Shoe	Who-pa.
Man	Roch-pau-ka-nu-wet-za.	Legging	Whop-sie.
Woman	We-a.	Coat	My-e-to-chie-hamp-pie.
Boy	Man-ka-rish-ta-bet-sy.	Breech-cloth	Ma-rie-ip-shuck-a.
Girl	Man-ka-rish-ta-we-a.	Sash	Ma-ip-e-shan-ky.
Virgin	Unknown.	Head-dress	My-i-pock-a.
Infant or child	Man-ka-rish-ta.	Pipe	Ik-kip-pie.
Father, my	Ma-un-too.	Wampum	Ma-tuck-e-sheep-e.
Mother, my	E-cush.	Tobacco	O-pah.
Husband, my	Mank-e-rah.	Shot pouch	Ar-ro-po-ru-we-ish-e.
Wife, my	Ma-tar-a-wea.	Sky	A-pa-rie.
Son, my	Ma-nan-ka-bet-say.	Heaven	Log-ar-aut-ty-at-e.
Daughter, my	Ma-nam-ka-we-a.	Sun	Map-e-mi-nie.
Brother, my	Mat-sow-ka.	Moon	Man-ku-di-die.
Sister my	Mat-a-ke-shaw.	Star	E-cau.
An Indian	Roch-pan-ka.	Day	Ma-ni-pi.
A white man	Mush-e.	Night	O-i-a.
Head	Aunt-tow.	Light	A-waugh-aunt-e.
Hair	Mar-a.	Darkness	O-pa-sha.
Face	Ne-ta.	Morning	Aunt-ta.
Scalp	Aunt-tow-a-ru-ruch-hi-pie.	Evening	Min-nie-duck-a-we-re-a.
Ear	A-coch-i.	Mid-day	Min-nie-ma-pa-ra-pi-he.
Eye	Ish-ta.	Midnight	Mak-ow-room-at-its-haw.
Nose	Ma-pa.	Early	Ker-rak-kow-ta.
Mouth	Me.	Late	Mank-o-ti-a.
Tongue	La-je.	Spring	We-a-me-co-ta.
Tooth	E-sha.	Summer	Am-a-ra.
Beard	Ne-ke.	Autumn	Ma-ta.
Neck	Ta-how.	Winter	Ma-a-la.
Arm	Ha-ra.	Year	Ma-law-am-pie.
Shoulder	Ha-ra-puch-how.	Wind	O-see.
Back	Ma-e-shet-a.	Lightning	Car-it-scaw.
Hand	Ma-shuck-e.	Thunder	Ta-ho.
Finger	It-e-wobe.	Rain	Hal-ets.
Nail	Ma-such-ech-pow.	Snow	Mam-pie.
Breast	E-wak-e-row.	Hail	Ma-cuch-ma-it-a-rie.
Body	Ma-ich-ho-wa.	Fire	Mir-a-a.
Leg	E-rike.	Water	Mi-ne.
Navel	E-tel-lep-a.	Ice	Bir-ouch-i
Thigh	Mal-el-sa.	Earth	A-much-ki-it-a
Knee	Mach-wach-a.	Sea	Mi-ni-it-le-a.
Foot	Met-see.	Lake	do.
Toe	Met-se-nat-a.	River	Aun-gy.
Heel	Met-set-a.	Spring	Ma-ha.
Bone	Her-row.	Stream	Aun-gi-a-rook-a-rish-ta.
Heart	Nat-a.	Valley	Tar-rout-tee.
Liver	A-pish-a.	Hill	Am-a-ri-a.
Windpipe	Lot-ish-ka.	Mountain	Am-a-ha-me.
Stomach	A-pat-a.	Plain	Am-a-su-ka.
Bladder	O-shik-ur-ucha.	Forest	Mer-a-sha-e.
Blood	E-rie.	Meadow	Am-a-much-la.
Vein	Ich-ho-e-rie.	Bog	Am-a-kuck-a.
Sinew	A-caun-gy.	Island	Mi-ne-ta.
Flesh	My-ich-how-erow-her-row.	Stone	Me.
Skin	E-ho-o-ruch-pie.	Rock	Mish.
Seat	Mosh-i-la-ta.	Silver	Who-mit-sa-a-tuck-e.
Ankle	Mil-sy-row-shoak-a.	Copper	Who-mit-sa-she-re.
Town	At-ti-or-an-ky.	Iron	Who-mit-sa.
House	At.	Lead	do.
Door	At-mir-ra.	Gold	Who-mit-sa-she-re.
Lodge	At-sou-a.	Maize or corn	Oough-at-e.
Chief	Bet-sy-at-sy.	Wheat	Unknown.
Warrior	Bet-sy-re-rie shaw.	Potatoe	Me-she-kack-shaw.
Friend	Mir-ra-qua.	Turnip	A-hee.
Enemy	Mi-e-haw.	Rye	Unknown.
Kettle	Bir-ruch-a.	Bean	Am-ash-a.
Arrow	Mi-ra-ru-ish-ta-shaw.	Melon	Cack-ou-it-sa.
Bow	Bir-ruch-ha-per-room-e.	Squash	Cack-ou-i.
War-club	Ma-o-puck-e.	Tree	Mak-ou.
Spear	Me-rat-a-root-a.	Log	Me-ra-tit-sish.
Axe	Me-pit-saw.	Limb	Me-rak-am-e.
Gun	O-mit-say-ruch-a.	Wood	Me-ra.
Knife	Mat-sy.	Post	Ip-se.
Flint	Mish-shaun-ky.	Stump	Me-ra-ou-tee.
Boat	Maun-ty.	Pine	Maut-see.
Ship	Unknown.	Oak	Me-ra-ka-wek-a.

English.	Gros Ventres.
Ash	Mish-pa.
Elm	Mi-ra-e.
Shrub	Mi-ra-sheep-e.
Leaf	Mi-ra-ka-ka.
Bark	Mi-ne-shee.
Grass	Muk-aw.
Nettle	Ma-hop-e.
Thistle	Mat-sou-kee.
Weed	Ma-ap-har-e.
Flower, rose, lily, &c.	Car-a-push-e.
Bread	Mar-ach-hep-a.
Indian meal	Map-i.
Flour	Kouch-ought-i-tap-a.
Meat	Er-ouck-shit-e.
Fat	Er-i-pish.
Beaver	Bir-rup-a.
Deer	Seat-a-tuck-i.
Bison buffalo	Met-a.
Bear	Auch-pit-say.
Elk	Mar-oak-a.
Moose	A-put-a-pash.
Otter	Me-ra-pock-e.
Foxs	Ech-hock-a.
Wolf	Cha-shee.
Dog	Ma-shoun-ga.
Squirrel	Sep-sap-so-pie.
Hare	E-tuck-kie.
Lynx	Seat-a-pouch-e.
Panther	It-too-paung-it-e-ash.
Musk rat	Set-see-rook-a.
Mink	Nuck-su-a.
Marten	Nank-ush.
Mole	Ap-a-husk-ish.
Polecat	It-too-pa-pow-she.
Hog	Mish-e-it-a-rush-pish-ish.
Horse	It-show-ma-shoun-ga.
Cow	Mish-a-it-a-wit-a.
Sheep	Mish-a-it-aug-e-te-a.
Turtle	Ma-tuck-e.
Toad	Shauk-ka--roush.
Snake	Ma-pock-sha.
Lizard	Ma-kuck-pa.
Worm	Ma-pock-sha.
Insect	Ma-pos-ker-it-e.
Fly	Ma-posh-e.
Wasp	Co-wock-e-al-saun-te.
Ant	Ma-sker-et-te.
Bird	Sick-aunk.
Egg	Sick-aunk-a-naun-kuts.
Feather	Mauts-oak-e.
Claw	Ma-its-ick-pow.
Beak	Sick-aunk-a-pa.
Wing	Eck-pa.
Goose	Meal-a.
Duck	Me-auch-aunk.
Swan	Ish-shwo.
Pigeon	Ma-ra-ka-it-ea.
Plover	O-she-at-ea.
Crow	Ma-ar-ish-a.
Raven	Par-et-skuck.
Robin	Lo-ke-wa-ke.
Eagle	E-put-tuk-e.
Hawk	O-shit-tuk-e.
Snipe	Ka-wik-ka.
Owl	Yak-o-pish.
Woodpecker	Mat-o-eash-y.
Fish	Bo-a.
Sturgeon	Bo-a-up-ar-lach-e.
Catfish	Bo-a-cant-a.
Sucker	Bo-a-et-e-kip-ish.
Minnow	Bo-a-rank-ets.
Fin	A-pi-et-scaw.
Scale	Et-e-cant.
Roe	E-nang-kuts.
White	E-who-tuk-e.
Black	Ship-e-shaw.
Red	E-shee.
Green	To e-esht.

English.	Gros Ventres.
Blue	To-a.
Yellow	Ser-re.
Great	It-e-a.
Small	Car-ish-ta.
Strong	Sat-so-kits.
Weak	Hash-uts.
Old	Hay-ats.
Young	Car-ish-ta.
Good	Sack-its.
Bad	Na-she-ets.
Handsome	Sack-its.
Ugly	Na-she-a-kaut-ta.
Alive	In-its.
Dead	Ta-ats.
Life	He-ra-ba-couts.
Death	Ta-ra.
Cold	Se-re-ets.
Hot	Ar-ets.
Sour	Se-cou-a.
Sweet	Sic-cou-a.
Bitter	Ar-a-hits.
I	Me.
Thou	Ne.
He	He-re.
She	He-re-we-a.
They	I-it-sa.
Pepper	Mir-uch-on-pa-it-a.
Salt	A-much-hot-a.

The following English sounds of the vowels have been adopted for the vocabulary of the Blackfoot language; but it must be observed, that in the vocabulary of the Surcee, whenever *r r* commences a syllable, it represents a sound from the depth of the throat, and whenever *h h* occurs, it is a signification of a very strong aspirate. In this latter tongue also, I have adopted the symbol ᵕ for a peculiar chuckle, which I could not find letters to represent. This peculiar chuckle may be well likened to that, uttered by a person in the act of being choked.

In the vocabulary of Rocky Mountain Stoney, like that of the Surcee, all the English vowel sounds are as those adopted in the Blackfoot, and the following symbols in the Rocky Mountain Stoney should be observed, viz. :—

- over a syllable signifies the French nasal, as in *ment.*
over a *g*, signifies *g* soft.
signifies an aspirate.

English sounds of the Vowels.

a. As in father.
ai. As in fate.
eo. When together, *yo.*
ohc. Long aspirate, followed by *k.*
ahc. „ „ „
ohk. Short „ „ *k.*
ahk. „ „ „
i. Followed by *h*, as in fire.
i. Followed by a consonant, as *e* in met.
ee. As in meet.
ō. Thus marked is pronounced long.

English.	Surcee.
God	Tsin-is-chai.
Man	Kă-tin-nee.
Woman	It-si-ka.
Boy	It-si-tăi.
Girl	It-si-tat-sa.
Father, my	I-tă-ih.
Mother, my	I-nă-ih.
Husband, my	Si-ka-la.
Wife, my	Is-tsi-a.
Son, my	Si-rra.

English.	Surcee.	English.	Surcee.
Daughter, my	Si-zat-si.	Island	Noo.
Brother, my	Sa-tli-ki.	Stone	Tsah.
Sister, my	Sit-ta.	Tree	Ti-chee.
An Indian	Tin-na.	Wood	Koh.
A white man	Ti-ka-aih-yee.	Bark	Ka-lai-tŭn-na.
Head	Sit-zee.	Grass	Ko-tlo.
Hair	Sit-să-ah.	Fat	Kah.
Face	Sin-nee.	Beaver	Tsaw.
Scalp	Koot-sis.	Buffalo bull	Un-ni.
Ear	Sit-si-rra.	do. cow	Un-ni Ma-ka.
Eye	Sim-ne-rra.	do. calf	Til-ta-ga.
Nose	Sit-si.	Black bear	Ni-ni-gă-til-ko-shi.
Mouth	Si-zŭk-ka.	Grizzly Bear	Ni-ni-gă.
Tongue	Sit-so.	Elk	Chuz-zai.
Tooth	Soo-wa.	Moose	Tin-ni-chi.
Beard	Sit-tah.	Otter	Na-mi-yee.
Neck	Sihk-ka-sap.	Red fox	Chuk-ōl-ko-ee.
Arm	Sik-kŭm-na.	Black fox	Chuk-ōl-ko-ee Til-ko-shi.
Shoulder	Sis-a-mish-ha.	Cross fox	Chuk-ōl-ko-ee Til-chit-si.
Back	Siz-zai.	Wolf	Maw-si-na.
Hand	Sai-rre-tluk-ka.	Dog	Ili.
Finger	Sĭl-la.	Horse	Chis-tli.
Nail	Sĭl-la-kŭn-na.	Domestic bull	Until-klish-ee.
Breast	Si-chuk-a.	do. cow	Un-ni-ma-ka.
Body	Si-za-al-ti-sut-tee.	Egg	I-rre-za.
Leg	So-woos.	Goose	Ah-chee.
Navel	Sit-suk-ka.	Duck	Tsees.
Thigh	Choo-os-choo.	Swan	Toŏl-kў-ee.
Knee	Sit-sis-tak-i-ta.	Partridge	Ni-ta-ga.
Foot	Sik-ka.	Great	Ni-chow.
Toe	Si-kut-sis.	Small	Nit-si-tlih.
Heel	Si-kus-ta.	I	Sin-ni.
Flesh	A-li-ni.	Thou	Nin-ni.
House	Naz-hec-lai.	He	Tin-ni.
Door	Ta-mil-lai.	Who	It-ti-ga.
Lodge	Sah-rra.	Near	Quil-ta-wa.
Chief	Uk-ki-chee.	Far off	Kooz-zaw.
Kettle	Us-sa.	To-day	Tat-si-nis.
Arrow	Ilt-tŭn-nai.	To-morrow	I-tlat-si.
Bow	Ti-chi-taw-nai.	Yesterday	Hhil-ka.
Axe	Chilth.	Perhaps	Hhil-ye-ko.
Gun	Il-til-taw-nee.	To eat	Is-chu.
Knife	Muss.	To drink	Toos-ta.
Flint	Tan-it-sa.	To laugh	Chi-ni-tlo.
Boat	Tun-ni-kus-si.	To cry	Si-ni-to.
Oar	Ma-kit-si.	To love	Mi-kut-si-nis-ki.
Shoe	Si-ka.	To walk	Ish-hul.
Legging	Sis-tla.	To run	Ti-il-tlush.
Coat	Si-ki-yee-chi.	To see	Iso-hi.
Shirt	Si-ki-chis-i-tun-i-rra.	To hear	Iz-hilt-sai.
Breechcloth	Si-chŭn-na.	To speak	Ut-sa-ko-tin-nut.
Sash	Sis-kus-sa.	To think	In-ni-sim.
Pipe	Mis-to-tee.	Gunstock	Tan-it-see.
European pipe	Mis-to-tee Til-kul-lai.	Ramrod	Tich-in-chuk-i-rra.
Tobacco	Ka-chi-na.	Trigger	Mit-sus-tlo-tla.
Shot pouch	Kose-tla.	Percussion cap	Tan-it-sa-ha.
Sun	Cha-tur-ra.	Powder	Tuss.
Moon	Il-nur-ra.	Ball	Ki-til-tun-ni.
Star	Soh.	Powder horn	It-tak.
Day	Chi-ni-see.	Book	Tut-li-shi.
Night	It-tla-rri.	Glass bottle	Nis-tin-ni.
Lightning	Cha-tlish.	Mirror	Mi-ja-chi-tin-ni.
Rain	Cha-tee.	Comb	Tsa-hi-kit-see.
Snow	Suss.	Box	Kal-ta-gă.
Hail	I-ni-lo-e.	Button	Til-til ti-cot-ti.
Fire	Koh.	Medicine	Tlo.
Water	Toh.	Bridle	Chis-til-i-goo-ti-la.
Ice	Nist-in-ni.	Skunk	Naz-e-rra.
Earth	Koo-tlis.	Come here	Toos-ti-a.
Lake	Too-choo.	My native land	Si-nil-ka.
River	Tsis-ka.	Your native land	Ni-kil-ka.
Stream	Tsis-ko-wit-sa-kla.	He has it	I-ga-gil-hi.
Hill	Tsuts-sik-la.	Just so	Ek-ko-to-ko.
Mountain	Tsah.	Jumping deer	Na-kish-i.
Rocky Mountains	Tsah.	Put on some wood	Quk-a-til-a.
Plain	Tlo-kwa.	Across	Oo-nas-tin-a.
Forest	Ti-chi-tla.	This side	Is-tul-i-rra.
Bog	Ko-ti-tlut-chi.		

English.	Surcee.
I fear the wolf	Maw-sun-na Nus-chee.
Thou fearest the wolf	Maw-sun-na Nil-chee.
I will kill the wolf	Maw-sun Nult-za-zis-ka.
I am satisfied	Kos-nis-tli.
There are no buffalo	Un-ni Nin-to.
I smoke	Is-to.
I see many jumping deer.	Na-kish-im-t̆la Iss-hai.

The following are their Numerals.

1. Klŭk-a-za.	17. Chis-chi-i-ti-mi-tih.	
2. A-ki-a	18. Klĭhse-ti-chi-mi-tih.	
3. Ta-ki.	19. Ti-ko-lih-mi-tih.	
4. Ti-chi.	20. A-kut-ti.	
5. Ko-zil-ta.	21. Do.	Klak-i-mi-tih.
6. Koos-tun-i.	22. Do.	A-ka-mi-tih.
7. Chis-chi-tai.	23. Do.	Tăhc-ki-mi-tih.
8. Klĭhse-ti-chi.	24. Do.	Ti-chi-mi-tih.
9. Ti-ko-li-ga.	25. Do.	Ko-zil-ta-mi-tih.
10. Ko-ni-zaw-ni.	26. Do.	Koos-ta-mi-tih.
11. Koos-ta-mi-tih.	27. Do.	Chis-chi-i-ti-mi-tih.
12. A-ka-mi-tih.		
13. Tăhc-ki-mi-tih.	21. Do.	Klĭhse-ti-chi-mi-tih.
14. Ti-chi-mi-tih.		
15. Ko-zil-ta-mi-tih.	29. Do.	Ti-ko-lih-mi-tih.
16. Koos-ta-mi-tih.	30. Tah-ti.	

40. Tish-ti.
50. Ko-zil-ta-ti.
60. Koos-ta-ti.
70. Chis-chi-ti-mi.
80. Klĭhse-chis-ti.
90. Ti-kŏ-lih-ti-mi.
100. Ko-ni-zut-ti.

Vocabulary of Rocky Mountain Stoney of the Thickwoods.

English.	Rocky Mountain Stoney.
God	Wa-kūz-zai.
Devil	Wa-ka-i-nin-ga-za.
Man	Cho-ka-wa-zi-na-za.
Woman	Wa-kūz-za.
Boy	Cho-kun-na-zāi.
Girl	Wi-chi-un.
Infant	Ta-ow-shcun.
Father, my	A-dai.
Mother, my	I-na.
Husband, my	Mi-hi-na.
Wife, my	Mi-tow-wi.
Son, my	Mi-cheek-si.
Daughter, my	Mi-chōng-ksin.
Brother, my	Mi-sōng-un & Mi-tung-un.*
Sister, my	Mi-tōng-sin.
An Indian	Wa-chuss-ta.
A white man	Mi-ni-a-da.
Head	Ma-pa.
Hair	Ma-nan-to.
Face	Mai-hin-tai.
Scalp	Pa-ha.
Ear	Ma-no-hai.
Eye	Mih-his-ta.
Nose	Ma-poh-rrai.
Mouth	Mih-hiss-kai.
Tongue	Ma-chaiz-zai.
Tooth	Is-kai.
Beard	No-tai-mih-ish-mutz.
Neck	Ta-hoo.
Arm	Mih-hiss-to.
Shoulder	I-id-dai.
Back	Ma-chūm-ka-oo.
Hand	Ma-num-bai.
Nail	Ma-sha-gai.
Breast	Ma-huz-zai.
Body	O-wass.
Leg	Ma-chai-ğa.
Navel	Ma-chep-ta.
Thigh	Chai-ğoue-dai.
Knee	Ta-hūng-gai.
Foot	Ma-si-a.
Toe	Ma-si-pōng-gai.
Heel	Ma-si-a-dai.
Bone	Oo-hoo.
Heart	Ma-chun-dai.
Liver	Cha-ho.
Windpipe	Ma-no-dai-soo.
Stomach	Ma-ni-rrai.
Bladder	Ta-niz-zai.
Blood	Wai.
Vein	Kā.
Sinew	Ta-kā.
Flesh	Ta-no.
Skin	Mā-hā.
Seat	Ma-si-cha.
Ankle	Mih-his-kōu-a-rrai.
House	Ti'-wa-zai.
Door	Ti'-o-ba.
Lodge	Ti'-bi.
Chief	Ong-ga.
Friend	Mi-tow-wi-a-dai.
Enemy	Wa-gin-he-auch.
Kettle	Chai-rra.
Arrow	Wi-himp-tai.
Bow	In-daz-zai-bi.
Spear	Wo-kiz-za.
Axe	Mas-pai.
Gun	I-upe-ta-ha.
Knife	Min-na.
Flint	Chūng-ki-a-pa.
Boat	Wa-da.
Oar	Wak-man-ğa.
Shoe	Hain-ba.
Legging	Oos-ka.
Coat	Ik-noo-ai.
Shirt	Sis-zai-bāng-noo-ai.
Breechcloth	Choke-nūng-gai.
Sash	Ip-pi-a-gih.
Pipe	Pa-hoo.
Tobacco	Doo-kab-bi.
Shot pouch	Ho-ho-zoo-ha.
Sky	Wūng-kun-dó.
Heaven	Má-pi-a.
Sun	Ow-wi-um-ba.
Moon	A-heb-i-ow-wi-um-ba.
Star	Ya-yūng-gun.
Day	Um-butch.
Night	A-hai-bitch.
Light	Is-ka-nanch.
Darkness	A-haib-bai-hatch.
Morning	A-kai-natch.
Evening	Same as darkness.
Mid-day	Cho-gōug-to-yin-gatch.
Early	Ais-sin.
Late	Tosh-nūng-gutch.
Spring	Wai-dootch.
Summer	Mi-no-gai-dootch.
Autumn	To-ga-wa-nutch.
Winter	Wa-nai-dootch.
Year	A-gūng-ga-boo-wa-zi.
Wind	Ka-noo-zutch.
Lightning	Ing-to-ga-za-zum-bi.
Thunder	Mo-bi-sah.
Rain	Wa-patch.
Snow	Wah.
Hail	Wa-sootch.
Fire	In-ka-to.
Water	Mi-ni.
Ice	Cha-rra.
Earth	Ma-kun-do.
Sea	Shmantz.
Lake	Mi-nai.

* Elder and younger respectively.

English.	Rocky Mountain Stoney.
River	Wa-pi-ti.
Stream	Wa-pi-ta-nutch.
Valley	Mih-ya-ohks-si-a.
Hill	Pa-ha.
Mountain	I-yá-hai.
Rocky Mountains	I-yá-hai.
Plain	Tin-da.
Forest	Chih-a-da.
Bog	Sin-da.
Island	Chā-soo-da.
Stone / Rock	O-pa-bim.
Silver and gold	They apply the Cree names to these metals.
Copper	Soo-da-cha-zi.
Iron	Soo-da.
Lead	Tan-choo-dai-snow-a-bi-zi.
Grain of any kind is called by them	Ya-ho-wa-bi.
Potatoe	In-chak-i-a-bi.
Tree	Cho-wa-ha-tūng-a.
Limb	Má-sa-hunt-ch.
Wood	Cho-wa-zi-bi.
Stump	Cha-seğ-ğa.
Pine	Cho-wa-ba.
Leaf	Wa-zōug-ta.
Bark	Wa-hoh-pitch.
Grass	Pai-zhi.
Hay	Pai-zhi-pa-rrai-ğo-bi-ğai.
Weed	A-bih-yai.*
Flower	Wá-pai-ōug-ği-a-bi-ğai.
Meat	Tan-no.
Fat	Was-na.
Beaver	Cha-ba.
Buffalo bull	Ta-tūng-a.
do. cows	Wi-yai.
do. calf	Chin-ğun.
Black bear	O-zin-ga.
Grizzly bear	Wa-kez-za.
Cinnamon bear	Wink-chin.
Elk	Pa-chid-in.
Moose	Tah.
Otter	In-tai-bi-ğ
Red fox	To-kum.
Black fox	To-kus-sa-bi.
Cross fox	To-ka-ho-din.
Wolf	In-ğak-nóse-sa.
Dog	Shōng-ga.
Squirrel	Piz-zin.†
Wood squirrel	An-gash-a.
Hare	Maish-taim-tūng-a.
Lynx	In-ko-moug.
Panther	Ink-mōng-tūng-a.
Muskrat	Some-tai.
Mink	Tokes-siğ-ğa.
Fisher	Sind-ai-kap-pai.
Marten	Nip-ta-gai-chan.
Horse	Sho-a-tūng-a.
Domestic bull	Wi-ya-nek-nai-rra.
Do. cow	Ta-tūng-rra-nek-nai-rra.
Do. calf	Nek-nai-rra.
Frog	Ta-bai-a-tūng-a.
Snake	Snow-hen.
Fly	O-na-rrin.
Wasp	Toom-na-ti.
Musquito	Cha-pōng-a.
Ant	Wa-mi-noos-ka.
Bird	Sik-tan.
Egg	Chah-pa.
Feather	Wa-i-a-ga-zi.
Claw	O-zhin-da-sa-gi.
Beak	Sko-batch.
Wing	Wa-i-uze-za.

* This is the name of the weed which is used by them for smoking.

† This word is more properly the common marmot of the plains, Arctomys Hoodii.

English.	Rocky Mountain Stoney.
Goose	Na-wa-dis-kun.
Duck	Pa-rron-da.
Swan	Ko-ko.
Partridge	Si-chah.
Pigeon	Kun kai-ga.
Crow	Ka-rri.
Eagle	A-no-kas-sa.
Hawk	Pai-as-sa.
Snipe	Wa-moon.
Owl	Hi-hash-a.
Woodpecker	Tohs-kun.
Fish	O-rra.
Trout	Ome-nus-kun.
Sturgeon	I-moch-tan.
Pike	Ome-nas-kan.
Fin	Ti-wun-ki-sa.
Scale	Soo-da-ak-tai-tōng-bi-sa-zai.
Roe	O-chin-cha-ğun.
White	Scan-utch.
Black	Sab-ba.
Red	Shatch.
Green and blue	To-atch.
Yellow	Seetch.
Great	Tūng-atch.
Small	Choos-kin-atch.
Strong	Sah-kutch.
Weak	Wun-ka-nutch.
Old	Wa-nin-ga-zha-da-hutch.
Young	Kose-katch.
Good	Wais-taitch.
Bad	Tai-rritch.
Handsome	In-dai-wass-daitch.
Ugly	In-ing-utch.
Alive	Ninch.
Dead	Iatch.
Life	Nim-be-ğai.
Death	Ki-sninch.
Cold	Ose-a-ninch.
Hot	Ka-nooze-hutch.
Sweet	Squi-utch.
Pepper	Sinda-ha-za.
Salt	Ta-shoo-za.
Bitter	Si-ğum-nutch.
I	Mi-ya.
Thou	Ni-yai.
He	Ni-hish.
All	O-wass.
Part	To-kum.
Who	Too-wai.
Near	Ass-kan.
Far off	Tai-utch.
To-day	The same as the word *day*.
To-morrow	A-ki-ği.
Yesterday	Ah-tan-ni-a.
Yes	Ha-eh.
No	I-ya.
Perhaps	Hun-do-kai.
Never	To-ūng-ta-han-i-gas-tus.
Above	Ai-cha-gain.
Under	Wung-gun-doo-ği.
Within	Ma-kun.
Without	Pa-na-tah.
Something	Tūng-gun.
Nothing	Ta-go.
To eat	Ta-go-snitch.
To drink	Wam-na-tak-tucth.
To laugh	Mi-nim-na-tūng-tulch.
To cry	In-wak-hutch.
To love	Mis-ti-mung-tutch.
To burn	Wak-pūng-a-sitch.
To walk	Spow-wats.
To run	Ma-wa-nink-tutch.
To see	Im-ma-nung-hutch.
To hear	Wa-min-nag-hutch.
To speak	Na-wa-honch.
To strike	I-wa-hutch.
To think	A-wa-putch.
To wish	Ai-pi-chatch.

English.	Rocky Mountain Stoney.
To call	Wa-ching-hutch.
To live	Wa-huntch.
To go	Wa-nitch.
To sing	Ek-tam-na-tutch.
I come	I-mootch.
To dance	A-wa-nu-natch.
To die	Wa-Wa-ki-chitch
To tie	Pow-wa-tutch.
To kill	Wa-hc-atch.

N.B. It should be here observed that from "to eat" to "to kill," or, in other words, all the verbs given in the infinitive mood in English are translated in the opposite column by the third person singular, nominative case. As far as we know the infinitive form of verbs does not occur in the North American Indian languages.

The following are the NUMERALS of the ROCKY MOUNTAIN STONEYS.

1. Wa-zi.
2. Nome.
3. Yam-ni.
4. Tōng-sa.
5. Sap-ta.
6. Shak-pi.
7. Sha-gong.
8. Shak-no-rra.
9. Nam-cho-nūgk.
10. Wí-chim-na.
11. A-gai-wuz-zi.
12. A-gin-ome.
13. A-gai-am-ni.
14. A-gai-tōng-sa.
15. A-gai-sap-ta.
16. A-gai-shak-pi.
17. A-gai-sha-goug.
18. A-gai-shak-no-rra.
19. A-gai-nam-cho-ūngk.
20. Wi-chim-na-nome.
21. Ditto. A-gai-wuz-zi.
22. Ditto. 12 repeated.
23. Ditto. 13 ditto.

&c. &c.

30. Wi-chim-na Yam-ni.
40. Ditto. Tōng-sa.
50. Ditto. Sapta.
60. Ditto. 6 repeated.

&c. &c.

100. O-būng-wa-gai.
200. Ko-to-bōng-o-rrai-nome.

N.B. It is very difficult to get beyond 200 with any of the Indian languages I have met.

VOCABULARY of BLACKFOOT of the PLAINS.

English.	Blackfoot.
God	Is-po-ma-ta-pe.
Man	Ma-ta-pe.
Woman	A-kee.
Boy	Sa-ko-ma-pee.
Girl	A-ke-kwun.
Child	Po-kow.
Father, my	Nin.
Mother, my	Nik-sis-ta.
Husband, my	Nōme.
Wife, my	Ni-to-kee-man.
Son, my	No-choe.
Daughter, my	Ni-tan.
Elder brother, my	Nis.
Younger brother, my	Nis-kan.
Sister, my	Ni-nis-ta.
An Indian	Ni-tse-ta-pe.
A white man	Na-pai-quawn.
Head, my	No-to-kan.
Hair, my	Ni-to-co-yee-ki-sim.
Face, my	No-stoke-sis.
Scalp, my	Nit-sa-to-mo-ow.
Ear, my	O-tohc-is.
Eye, my	Ni-wa-pisp.
Nose, my	Nohc-is-sis.
Mouth, my	Ma-hoy.
Tongue, my	Nat-si-na.
Tooth, my	No-pi-kin.
Beard, my	Ni-mo-ee-o-e-yo.
Neck, my	No-ko-kin.
Arm, my	Note-sis.
Shoulder, my	Note-si-kis.
Back, my	No-ka-kim.
Hand, my	Ni mee-eet-si-kin-is.
Finger, my	No-keet-sis.
Nail, my	Ni-to-wo-ta-no-keet-sis.
Breast, my	No-nee-kis.
Body, my	No-sto-mee.
Leg, my	Och-at-sin.
Navel, my	No-to-yees.
Thigh, my	No-wa-pis-suck.
Knee, my	No-tohc-sis.
Foot, my	Nohc-kats.
Toe, my	Nohc-keet-sis.
Heel, my	No-toh-tone.
Bone, my	Och-kin.
Heart, my	Nose-kit-sa-pa-pee.
Liver	Kin-a-kin.
Windpipe	Oke-sis-tone.
Stomach	No-kin.
Bladder	Wa-pa-kis.
Blood	A-a-pan.
Vein	Ose-chee.
Sinew	A-si-pis.
Flesh	Ma-ta-pee-eek-si-sa-ko.
Skin	O-to-kis.
Seat	No-to-pai-suk.
Ankle	Ni-tahc-ko-ki-na-keep.
Town	O-kow-wow.
House	Na-pai-o-yees.
Door	Keet-sim.
Lodge	Mo-yees.
Chief	Ni-na.
Warrior	E-ka-pa-pe.
Friend	Na-pai.
Enemy	Ni-kah-tome.
Kettle	Is-ke.
Arrow	Ahp-see.
Bow	Na-mee.
War club	
Spear	Sa-pa-pis-tat-sis.
Axe	Kat-sa-kin.
Gun	Na-mo-a.
Knife	Is-to-ween.
Flint	Si-sai-ke-tau.
Boat	A-ki-oke-sa-chis.
Ship	O-mo-ta-ka-mee-ispe.
Sail	Na-che-kin.
Oar or paddle	Naht-sis.
Shoe	Na-che-kin.
Legging	Naht-sis.
Coat	Ni-so-ka-sim.
Shirt	Nit-sis-tak-si-so-sa-sim.
Breechcloth	Nit-so-ki-ohc-sa-sis.
Sash	Ni-mihp-sim.
Pipe	A-kwo-ni-man.
Tobacco	Pis-tah-kan.
Shotpouch	Ats-o-ee-aht-si-man.
Sun	Na-toos.
Moon	Ko-ko-mi-ki-soo.
Star	Ka-ka-to-see.
Day	Sis-chee-coe.
Night	Co-co-ee.
Light	A-pin-a-ko.
Darkness	Is-ki-ni-cheo.
Morning	A-pin-a-ko.
Evening	O-ta-ko.
Mid-day	Tak-si-ki-eek-sis-che-coe.
Midnight	Tak-si-ki-eek-e-co co-ee.

English.	Blackfoot.
Early	Es-ka-na-to-ni-o.
Late	At-ta-ko.
Spring	Mo-ko
Summer	Ni-po-ee.
Autumn	Mo-to.
Winter	Is-to-yee.
Year	O-ma-kohc-po-tan.
Wind	So-po-ee.
Lightning	A-ka-nat-seo.
Thunder	Sis-che-kome.
Rain	So-tahn.
Snow	Kone-sko.
Hail	Sa-ko.
Fire	Ist-chee.
Water	Oh-kee.
Ice	So-ko-ko-to-ni-kun.
Earth	Sa-kōme.
Lake	O-mahc-si-ki-mee.
River	Nee-ee-tan.
Stream	A-see-ee-tahc-tan.
Hill	Ni-to-mo.
Mountain	Mis-tuk.
Plain	Sou-kee.
Forest	A-chee-wos-ko.
Valley	Ka-wuk-ko.
Bog	Pak-si-ka-ko.
Island	Me-nee.
Stone or rock	Oh-ko-toke.
Copper	Oh-tih-kim.
Iron, Lead, Gold	The Blackfeet have no distinguishing names.
Metal	Meek-skeem.
Wheat or flour	Ta-pih-yeen.*
Vegetables of all kinds	Ju-si-man.
Tree	Mis-ta-va-mo.
Wood	Mis-tchis.
Limb	Wa-tse-pai-is.
Post	Is-tahc-sim.
Bark	O-tokes-kee.
Grass	Ma-to-yees.
Weed	Kuk-see.†
Flower	Soo-o-puk-kee.
Meat	Ik-se-sa-ko.
Fat	Po-mis.
Beaver	Kik-sta-kee.
Deer	Po-no-kow.
Buffalo bull	Sta-mik.
Ditto cow	Is-ki-na.
Ditto calf	O-mis-tahc-see.
Bear	Kai-yew.
Elk	Po-us-kow.
Moose	Sik-tsis-shoo.
Otter	A-mo-ni-see.
Fox	O-ta-to-yee.
Wolf	A-pis-se or Ma-co-ee.
Dog	E-mi-ta.
Squirrel	O-mahc-ko-ka-ta.‡
Hare	O-ma-kat-sis-tow.
Muskrat	Mi-sohp-skee.
Wood squirrel	Mais-chis-so-yee-ka-yeo.
Fisher	Pi-no-to-yeo.
Mink	As-so-yee-kih-yeo.
Marten	As-sin-o-tih-yee.
Mole	Ka-nas-ki-now.
Horse	Po-no-ka-mi-tow.
Cow	A-potes-ski-nee-ee.
Frog	Ma-tse-ka-pis-sa.
Snake	Pi-tse-ekes-si-man.
Fly	A-chim-o-soo-ski-seo.
Musquito	Soo-ski-seo.

* This word appears to me to be an imitation of the French word "la farine," rendered by them as in the vocabulary, owing to the absence of the letters *l*, *f*, and *r*, in their language.

† This is the weed used by them for smoking. It is the leaf dried of the common "bear berry plant."

‡ This is the marmot of the plains, "Arctomys Hoodii."

English.	Blackfoot.
Bird	Sist-tses.
Snow bird	A-pi-na-ko-sis-çhee.
Egg	O-wow.
Feather	Ma-min.
Claw	O-kit-sikes.
Beak	Oke-si-sis.
Wing	O-mins-sai-kin.
Goose	Aps-pi-nee.
Duck	Mik-si-kat-see.
Swan	O-mulk-kih-yew.
Partridge	Kit-o-kee.
Pigeon	Ka-ko-ee.
Crow	Mih-sto.
Raven	O-sai-sto.
White headed eagle	Ksai-kai-ki-ki-nen.
Owl	Si-pis-to.
Woodpecker	Pa-paks-ki-see.
Fish	Ma-meo.*
Salmon	O-ma-kus-ksis-ta-kee.
Fin	O-mai-nis-ti-kin.
Scale	Tsai-po-pats-aite.
Roe	O-kōse.
White	Chuk-si-nat-see.
Black	Sik-si-nat-see.
Red	A-moke-si-nat-see.
Green	Otes-kwe-nat-see.
Blue	Kih-sis-tai-nat-see.
Yellow	O-tah-kwee-nat-see.
Great	O-mahk-ka-pee.
Small	I-nak-tse-sim.
Strong	Mis-ka-peo.
Young	An-is-ki-seu.
Good	Ahk-seo.
Bad	Ma-tahk-seo.
Handsome	A-nat-si-num.
Ugly	Mat-si-po-ma-peo.
Alive	Ai-ta-peo.
Dead	Ai-neu.
Life	Ka-mo-tows.
Death	O-mo-ki-ak-ki-ta-pi-was-pi.
Weak	Ka-tih-yai-seu.
Old	A-peo.
Cold	Its-si-nai-pits.
Hot	Nick-si-sis-tote-sis.
Sour	Is-cheek-si-po-ko.
Sweet	Ai-kai-nis-seo.
Pepper	Ai-pis-ta-kih-po-ko.
Salt	Is-tsi-si-po-ko.
I	Nis-to.
Thou	Kis-to.
He	Wis-to-yee.
On the tree	Its-paw-peo.
In the house	Its-se-paim.
To eat	Ni-tow-ee.†
To drink	Ni-tai-si-mee.
To laugh	Ni-tai-ee-me.
To cry	Ni-tow-wa-see.
To love	Ni-ta-ko-maitse-si-man.
To burn	Nite-sak-so-ee.
To walk	Ni-tokes-kas.
To run	Nites-iks-kas.
To see	Nites-ee-no-a.
To hear	Ni-tih-ohc-to-wow.
To speak	Ni-tih-si-chee-pis-sa-tow.
To strike	Ni-ta-wih-a-kee-ow.
To think	In-tust.
To wish	Ni-chuk-she-mist.
To call	Ni-tow-wa nis-tow.
To go	Ni-tak-ki-ta-po.
To sing	Ni-tai-ni-kee.
To dance	Ni-tih-ee-pee.
To die	Ni-tih-nik.
I know	Nik-skee-neep.

* They have no distinguishing names for different species of fish, except the salmon.

† From "to eat" to "to die" inclusive, are verbs, 1st person singular, indicative mood.

English.	Blackfoot.
I don't know	Ni-mat-ski-ni-pan.
I flee	Ni-tse-chee-mo-ta.
Thou fleest	Kit-see-it-si-mote.
He flees	Ote-si-mo-to.
They flee	Ow-tsi-mo-tih-yow.
We flee	In-tse-tsi-mo-ta-pi-nan.
I fled	In-tow-tsi-mo-ta.
Thou fledest	Kit-si-it-si-mo-ta.
He fled	It-si-mo-tih-is-kiks.
He kicks	Sai-ee-kat-sew.
I spit	Ni-ta-si-ko-ta.
He spits	So-ko-tat.
He licks	As-tats-tew.
Leaf	Sih-yo-puk-kee.
Eye brow	O-ma-pi-man.
Eye lid	O-to-kee-a-pi-nan.
Pipe stem	Po-kuk-ee-man.
Steamboat	Is-tee-a-keo-sa-chis.
Spoon	I-noho-so-ee.
Medicine	Sa-ahm.
Rum (or any spirit)	Na-pee-o-kee.
Telescope	Is-sa-pee-at-sis.
Book	Is-si-nak-sin.
Watch	O-mo-tahc-tsi-tsi-ko-meep.
Road or trail	Po-totes-ko.
Here	A-mo-ta-pohtes.
There	Ō-mim.
Where	A na-che.
Like	Ni-toe.
He bites	Ih-siks-tak-keo.
Comb	Ma-kin-nee-ohe-sa-kis.
Beaver hat	I-nik-sis-to-mo-kan.
Cloth cap	Is-to-mo-kan.
Fur cap	I mo-yis-to-mo-kan.
Grey crane	Si-kum.
White crane	Pa-pi-sait-si-man.
Pig	Aik-si-nee.
Big horned sheep	Ai-mahk-ki-ki-na.
Mountain goat	A-po-mahk-ki-ki-na.
Mountain siffleur	O-ma-ko-kit-so-ma-ko-ka-tow.
Stirrup leather	Is-che-ka-po-ko.
Girth	Is-che-si-peo-ta-chis.
Whip	Is-tse-pi-si-mat-sis.
Doghead of gun	Ko-kee-a-pi-tan.
Trigger	Ak-si-pin-ak-see.
Ram rod	Is-tahc-si-mat-sis.
Gun-stock	O-tohc-tai-kin.
Ball	A-wak-so-pan.
Powder	Sat-so-pa-sis.
Powder horn	I-totes-ki-nam.
Percussion cap	Mik-ski-mik-sai-ki-tan.
Gun flint	Kis-sih-ki-tan.
Wood ashes	Maks-kait-see.
Soap	Is-sis-ki-o-sas-kis.
Bear's grease	Kai-ih-o-pōm-is.
Chair	As-so-pa-chis.
Box	Na-pai-so-kih-is.
Glass bottle	Sa-ko-to-tus-ko.
Button	Os-tan-nis-see.
Pin or needle	A-to-nowk-sis.
Thread	Nai-pis-te-sa-pis.
File	Si-si-na-tan.
Mits or gloves	At-sait-see.
Vermillion	Na-pi-san.
Fire-bag	A-so-ahc-ko-ee-ni-man.*
Turtle	Is-po-pee.
Clasp-knife	Us-tuk-ee-a-pit-see.
Buffalo horn	Otes-ki-na.
Louce	Ski-nas.
Peace	Ai-nas-teo.
Pistol	Okes-to-kan.
Snow-shoe	O-wame.
Come here !	Pokes-a-pote !
Bring some fire-wood	Pohcs-a-pi-pit-a-kit Mais-chis.

* This is a bag used by the Indians and Half-breeds for carrying their flints and steels, touchwood, smoking-weed, &c., better known as "sac à comis."

English.	Blackfoot.
Indians have arrived	A-neek-si-yee-ma-ta-pee You-o-to-yow.
Give me a buffalo robe.	A-a-ow Ko-kit.
My foot is sore	Ni-mee-eet-si-si-ko-pee-ist-so.
I cut some fire-wood	Ni-ti-ak-a-ki-ak Mais-chis.
My native land	In-tow-wahc-si-nee.
Your native land	Ki-to-wahc-si-nee.
His native land	O-tow-wahc-si-nee.
To tie	Ni-tih-ak-si-nōs.
To kill	I-tih-ak-si-ni-tow.
I sleep	Ni-tih-oke.
Thou goest	Ki-ta-ki-ta-po-pa.
He goes	I-ta-po.
I think	In-tust.
I possess it	Nit-si-nam.
Thou possessest it	Kit-si-na-nee.
He possesses it	Na-nee.
He is there	A-neem.
Come with me	Po-ko-mo-kit.
Go with him	Po-ko-mis.
Instantly	An-ohc.
Take some water	A-wa-tote-sit Oh-kee.
He gave me some water.	Ni-to-ko-ko Oh-kee.
Bring me some water.	Oh-kee Ta-kee.
What is it?	Chan-ses-tap-peo ?
My husband	No-ome.
Thy husband	Ko-ome.
Her husband	O-me.
I shall come	Ni-ta-ya-ka-to-to.
Where is the cord ?	A-na-tsa-pis ?
How many ?	Chan-eets-o-was-chow ?
I have lost my horse.	Ni-tat-sa No-tas.
Put on some fire-wood.	A-to-tote Mais-chis.
How many tents are there ?	Chan-eets-o Mo-yees ?
Grizzly bear	A-poh-kih-o.
Jumping deer	O-wa-kas-seu.
Prairie antelope	Sou-ki-ow-a-kas, or A-wa-to-yee.
Badger	Mi-sin-sqoo.
Ermine	Emow.
Blanket	A-pih-pis-chee.
Pillow	Kis-kat-sis.
Bed	A-kis-sin.
Mirror	A-see-pi-at-sis,
Window Glass	Chis-ti-ko-mis-tan.
Matches	I-tus-tse-mope.
Bridle	Is-co-ee-pis-ta-chis.
English saddle	Na-pee-ai-tan.
Indian saddle	Kote-sa-kee-ai-tan.
Stirrup	Sa-pee-ka-kee-at-sis.
I found a beaver lodge.	Kik-sta-kee-ko-wow Ni-to-ko neep.
How far is it from here to the Belly river?	Chan-sets-oke Chis-chi-coee Mo-ko-an-see A-ki-to-tas? *
He has married a wife.	Ih-ōme-yea A-kee.
Is she a good wife?	Ahk-see Wats?†
Does she love him?	A-ko-mi-mi- Wats?
Does he love her?	Kit-tuk-o-mi-mow Wats?
He has given her a dress and ear-rings.	Kit-to-ko-tow As-so-kas-simo Too-kee-pis.
He wants to go	A-ki-ta-po.
It is true	Nit-sai-man.
Are you (plural) going there?	Ki-tih-ya-ki-ta-po-po-wow Wats?
Go seek him	Ote-sa-me-yoke.

* Like the Crees, they are obliged to say how many days' travel from here to any place, distance being unknown to them. Sometimes, also, they represent distances by the number of encampments made on the journey.

† The word "*A-kee*" (wife) is understood.

English.	Blackfoot.
Two things alike -	Ni-to-man-is-chee-a.
On the other side -	A-pa-mohtes.
On the other side of the river.	A pa-mohtes Nai-ai-po-tih.
On this side of the river.	A-no-to-tohtes Nai-ai-po-tih.
Last winter he (or she) was born.	Is-chik Isto-yee Ai-chee-po-ka-wa-seu.
Last summer he (or she) died.	Is-chik Ni-po-ee Ain-new.
I am still indebted -	Ni-sai-kai-sin-nak.
I never get indebted	Ni-ma-ta-yak-si-now Wai-si-nak.
When I rise -	A-po-wow-ai-ni-kin.
The tent fell down -	Mo-yees A-nis-seo.
The horse leapt -	Ahk-si-ko-pai-pee-yew Po-no-ka-mi-tow.
The bird flies -	Pi-ki-sew Ai-poh-tow.*
The dog barks -	E-mi-ta How-keo.
Name this child -	A-mo-po-kow Ni-ni-ka-toke.
He is lean (spare) -	Peeks-in-new.
It is dirty - -	Ai-si-ka-aa-ni-kim.
I am angry - -	In-chus-che-tuk.
He is angry - -	As-chek-ta-kew.
He is in the middle	Tat-si-kak-see.
He is fat - -	A-wa-poh-sew.
Long ago - -	Ih-sa-ma.
Very long ago -	Mi-sa-me.
Holes in the ice -	O-to-ki-ahc-kis-sin.
I am sick or ill -	Ni-tih-a-pus-chee-mees.
Thou art sick -	Ki-tih-o-toh-kohcs.
He is sick - -	Ih-o-toh-kohc-so.
They are sick -	Ih-o-toh-kohc-si-ow.
I am wet - -	In-tsi-tse-aik-sik-saists.
Thou art wet -	Kit-a-chuk-saists.
He is wet - -	A-chuk-saists-cheo.
We are wet - -	Mo-te-ee-pai-eests.
You are wet - -	Ki-to-ka-na-chuk-saists.
They are wet -	Ow-chuk-saists-che-ow.
Sit down - -	Ap-peet.
Are you sitting ? -	Kit-see-to-pi-pa ?
Do you wish to eat?	Kit-tih-ak-so-ee-pa ?
Will you barter ? -	Kit-tih-ak-o-po-ma-pa ?
I am come from afar	Nit-si-pi-a-to-to.
Do you know me ? -	Nit-si-ki-ni Nisto ?
Yes, I know you -	Ha. Nis-to Nit-ski-neep.
Where did you see me ?	Isi-ma-chee-no-keep-na ?
I saw you once at the Battle river tenting.	Kit-sit-si-no Ki-nak-si-sa-tih Kit-si-to-ki-ka.
And after that I met you among the Kootanie Indians.	Kin-ee-nich-yee Kit-si-to-taht-sim Koo-tun-nih-o-tow-wuhk-sin.
Have the Kootanies any fine horses ?	Koo-tun-nih-o Ah-kih-yim O-tas Ahc-see ?
Yes, they have, but they are not liberal of them.	Ha. Ai-ta-see-ow A-kak-we-yeo.
Is there peace with the Crees and Assineboines ?	As-sin-now-a Sih-yeu Ai-nas-teo Wats ?
He is a very small man.	A-mo-a-nuks-tsum.
She is a very small woman.	A-mo A-kee A-nuks-tsum.
That is a very small tree.	A-mo A-nuks-stum Mais-chis.
My companions -	In-tak-kow.
How many are killed	Isa-ni-chum-ee-ni-taks ?
Did you go to war -	Kit-sa-ta-poh-pow O-chi-chee-aitsk.
I don't love fighting	Ma-tak-sit-si-pa.
Go with them to the lake.	O-ma Po-ko-mis-sow O-muhc-si-ki-mee.
Sing a war song -	Ak-si-ka-to-nai-ni-ki-ope.

This is the general name for the species bird.

English.	Blackfoot.
Large pheasant of the Mountain -	O-mahk-si-ko-to-keo.
Porcupine - -	Kas-kahp.
Plate - - -	A-pik-si-tsi-man-kōse.
Scissors - -	A-po-ta-pik-sis-tow-ee.
Black cloth - -	Sa-kih-pis-cheo.
Skunk - - -	
Prairie dog - -	Si-no-pow.
Awl - - -	Mōke-sis.
Vest - - -	Ka-ko-kin-so-kas.
Trousers - -	A potes-che-soke-sa-chis.
Handkerchief -	Kin.
Cross fox - -	Kit-tsi-po-ta-to-yeo.*
Black fox - -	Si-ko-ta-to-yeo.

The following are their Numerals

1. Ni-tohc-skum.
2. Na-to-kum.
3. No-ohc-skum.
4. Ni-so.
5. Nis-to. } †
6. Nai-ow.
7. I-keet-si-ka.
8. Na-ni-so.
9. Pi-ki-soo.
10. Ki-po.
11. Nit-si-ko-po-to.
12. Nat-si-ko-po-to.
13. Ni-ko-po-to.
14. Ni-si-ko-po-to.
15. Ni-si-si-ko-po-to.
16. Nai-ko-po-to.
17. I-keet-si-ko-po-to.
18. Na-ni-si-ko-po-to.
19. Pi-ki-si-po-to.
20. Nat-si-po.
21. „ Nit-si-ko-po-to.
22. „ Nat-si-ko-po-to.
23. „ 13 repeated.
24. „ 14 „
25. „ 15 „
26. „ 16 „

&c. &c.

30. Nee-ee-po.
40. Ni-si-po.
50. Ni-si-si-po.
60. Na-ow-po.
70. I-keet-si-po.
80. Na-ni-si-po.
90. Pi-ki-si-po.
100. Ki-pi-po.
1000. Ki-pi-pi-po.
1001. Tohc-skum ki-pi-pi-po.
1500. Tohcs-ki Ki-pi-pi-po Ni-si-si-pi-po.
2000. Na-to-kih-ow Ki-pi-pi-poe.
3000. No-okes-kih-ow Ki-pi-pi-poe.

&c., &c.

The following is a translation of the ten commandments into Blackfoot.

The method by which I obtained this may be some excuse for not vouching for its great accuracy. I took the ten commandments translated into the Cree tongue and read a short sentence, desiring the Blackfoot half-breed who assisted me, to render each phrase into the Blackfoot language, and I then wrote each syllable as he pronounced it. It will be observed that in many places I have run three or four words into one, but that was unavoidable ; nevertheless all the syllables have been preserved, and when the Blackfoot language becomes better known, there will then be no difficulty in arranging the individual words.

Is-po-mai-ta-pe A-nai-o A-mōs-chee-at-si-mo-ee-ka-ni-ow Ma-tan-neo.

1. Ki-ma-tih-ya Kōts-i-po-a-wats Nis-to-a-in-che-tum-ma-tōse.

* O-ta-to-yee is their word for the species fox.

† It should be observed here that 4, 5, and 6 of Blackfoot are exactly the same words as are used by the Crees to denote 2, 3, and 4.

No. 10.

Geological Report.

Museum of Practical Geology, 28, Jermyn Street,
London, May 13, 1857.

Instructions addressed to Dr. Hector, the Geologist of the American Expedition commanded by Mr. Palliser.

Provided with the general geological sketch maps of North America by M. Marcou and by Professor H. Rogers, which will convey some idea of the relative boundaries of the rocks, and also possessing the small map of the United States by Lyell, and the little map of North America by Mr. Isbister (given by me to Mr. Palliser), you will perceive that in the first instance you will have to traverse *un*fossiliferous rocks, with ores, &c., part of the Lawrentine system of Logan, and next a considerable breadth of Lower Silurian rocks of the same author, with their limestones and fossils.

You will, if practicable, put yourself in personal communication with Sir W. Logan, the Director-General of the Canadian Survey, or obtain from him copies of those sheets of his geological maps which form a part of the territory you have to pass through.

As far as our present knowledge goes, such Lower Silurian rocks are not succeeded on the west by the Upper Silurian, *i.e.*, Wenlock or Niagara limestones, &c., nor even by the Devonian rocks; both of which prevail in the United States. You must therefore look sharply to the order of succession, or what the next strata may be composed of, which follow or overlie the older Silurian deposits.

Richardson and other observers, who have turned northwards before they reached the edge of the Rocky Mountains, have noticed in their progress the occurrence here and there of coal; and fossils (*Productus*, &c.) have been collected which would refer such strata to the true or old coal period. This point must be well ascertained, and any real outcrops of fuel must be accurately laid down,—the thicknesses of the coal measured, and the angles of inclination of the strata carefully noted, specimens of the coal being brought away or tested *in situ*, and the fossils associated therewith being particularly noted. Any information on this point is of great statistical importance, particularly if obtained in the neighbourhood of the only "prairie" tract which (as is said) has been left to Britain by the last boundary line.

The tracts watered by the affluents of the Saskatchewan may possibly be found to offer some explanation on these subjects.

As yet we are unacquainted with the existence of any secondary rocks in the region you will traverse; but as M. Marcou has laid down on his map a broad area of cretaceous rocks, and has even marked deposits of jurassic (oolitic) age on the eastern flank of the Rocky Mountains, in New Mexico, you will be on the watch for the character and fossil contents of any strata which may succeed to those palæozoic rocks among which you will have been so long travelling.

Another point, and one of considerable theoretical importance, you can determine without much difficulty. It has been affirmed that a zone of tertiary deposits, including certain lignites, ranges from N. to S. in a depression between the chief eastern masses of land and the Rocky Mountains. If you should hit upon such a zone, you will, of course, collect the fossil leaves and shells imbedded in it, and mark whether its strata have been dislocated, and to what extent, and how they are related to the older rocks.

In approaching the more crystalline masses of the Rocky Mountains, you should observe where the stratified deposits show signs of metamorphism, and see also if there be no traces of rock salt, or any signs of a northward continuation of the same saline phenomena which characterize the eastern flank of the Rocky Mountains in the Mormon territory. Note also whether the beds, as is often the case on the flank of such chains, be bent back or thrown into inverted positions.

If any pass through the Rocky Mountains be discovered, you will describe the rocks which you traverse; for a true and accurate section across this chain cannot fail to be one of great interest, chiefly in showing the lithological changes which have been effected in the original deposits. In making this section you will not omit to distinguish the various rocks of intrusive character, and to observe carefully which of them was the last to penetrate or cut through the other masses. Inform us if among such igneous rocks there are trachytes, and if there be traces of sub-aerial volcanic action, either along the summits or slopes of the chain.

It is in this region, also, that you will endeavour to detect veinstones of gold ore, or of argentiferous galena. Should you discover the former, you will observe whether they be in quartz rocks or any other matrix, and also if the gold be disseminated in rocks of igneous origin, whether syenites, greenstones, &c. &c.

Both in ascending the Rocky Mountains from the east and in descending them to the west, look carefully at the detritic accumulations, and observe if there be any rolled gravel in the hollows or valleys, and if the *large erratic blocks* lie upon the surface of such water-worn materials. Do not omit to record the nature of such erratics, and search in the detritus for traces of gold.

Observe if there be any unaltered strata between the crystalline and hard rocks of the mountains and the Pacific, and if any of the carboniferous or cretaceous deposits known in Vancouver's Island occur along the coast of the mainland.

Having made yourself well acquainted with the structure of the adjacent mainland, you will have no difficulty in showing the exact condition of the coal strata of Vancouver's Island, the thicknesses of the fossil fuel, and the relations of those deposits to the cretaceous formations that are known to exist there by the fossils from that region which have been sent here. As the transport of specimens will be difficult, you must use your trimming hammer freely *in situ*, and bring away chiefly organic remains. But a few clean-fractured and characteristic specimens of the most peculiar of the igneous and metamorphic rocks ought also to be preserved, and if each of these be of the size of a *walnut* only, the object will be obtained. Let such specimens be taken from the rocks concerning which you have doubts; for in regard to all ordinary granites, greenstones, basalts, jaspidified strata, &c., &c., it is quite sufficient to note their occurrence.

Affix gum labels, nicely marking the localities and relations upon each specimen in the evening of every march, and be careful to fold each specimen in two folds of tough paper. Having thus directed your attention to those geological researches which will be found, I apprehend, quite enough to occupy the greater part of your time, you will, in carrying out your main object, be that necessarily occupied in making notes descriptive of the physical geography of the countries you traverse, such notes being in fact the basis of your geological and mineralogical notices. As a lover of nature, you will also aid, as far as practicable, in collecting rare plants for your botanical associate, and you will preserve any new species of small land or aquatic animals which may be detected in your path. You will further measure the chief altitudes, and seize every opportunity of making observations on meteorology, thus rendering yourself generally useful in promoting the objects of the Expedition.

Rod. I. Murchison,
Director General, Geological Survey

Supplemental Instructions for Dr. Hector.

Although I have adverted to the erratics and detrital deposits, I have omitted to direct your attention to all traces of glacial action, as evidenced by the striation of the crystalline or other hard rocks which you may pass over. The phenomenon is so universal in North America that I presume you would take care to mark well the direction of all such scratches, as indicating the erosion produced by the bottoms of icebergs or floes when the continent was under the sea. It is possible that you may meet with such appearances on the tract between Lake Superior and Lake Winnipeg. Again, it will be very interesting to observe if such striation is apparent at considerable heights in the Rocky Mountains, or if only visible in the valleys thereof.

I have also omitted to request you to look out for any signs of elevation in the presence of raised beaches, and to observe if the watersheds or "divortia aquarium" exhibit signs of having been lines of former elevation.

I need not tell you that the registering accurately the strike or direction of the strata is of much greater importance than the mere observation of their dip,—the precise angle of which (*i.e.*, to within two or three degrees) is of little moment.

RODERICK I. MURCHISON.

Geological Report.

Excepting in the maps of Mr. Arrowsmith, which gave very correctly on the whole the great general features of the region explored, which embraced 33° of longitude, and, in some places, 5° of latitude, nothing was known of its topography; so that this essential to sound geological reasoning had to be acquired step by step as the country was examined. I, therefore, submit my observations only as the best I could make under the circumstances, knowing that a re-examination of the country, with the aid of the topographical details which we now possess, would materially alter many of the views I have expressed.

Our previous knowledge concerning the geology of the interior of British North America was confined to the observations of Sir John Richardson, made during his three great overland Arctic expeditions, the first two with Sir John Franklin, and the last in search of that lamented traveller. His published descriptions of the country he passed through are models of minute observation and cautious inference. To him we owe the first discovery of Silurian strata, resting on a primitive axis, stretching to the north-west from Lake Superior to the Arctic Ocean, and overlaid by Devonian strata. He also showed the Rocky Mountains, where he met them on the McKenzie River, to be composed of carboniferous limestones for the most part, which is also their character, we will find, further to the south. From Elk River he brought home fossils, which, although from a group of strata which he classes as Devonian, yet in a foot-note, on the authority of Sowerby, he says have quite a jurassic aspect. That he was right in the latter suggestion is rendered probable by the recent publication of species of ammonites by Mr. Hind, which were procured from that locality by the fur traders, and which Messrs. Meek and Haydon consider to be jurassic. Sir John Richardson also described the existence of a great lignite basin in the valley of the McKenzie River, which he classes as of tertiary age.

The line of route, however, followed by Richardson did not, with the exception of the canoe route from Lake Superior to Lake Winipeg, and again at Fort Carlton on the Saskatchewan, touch on the country which has been explored by this expedition. With regard to the canoe route, I have added nothing to the researches of that traveller, and to the still more minute observations of Dr. Bigsby, which have been some years ago communicated to the Geological Society. In 1855 Mr. A. K. Isbister published in the Geological Society's Journal a useful and concise recapitulation of what had been written concerning the geology of the Hudson's Bay territories, without adding anything, however, in regard to our knowledge of the central district, with which I have principally to deal.

It is to Mr. Hind's publications* alone, who was in command of the Canadian expedition to explore part of Rupert's Land, that I can refer in confirmation of my observations in any part of the prairie region. Mr. Hind, in 1858, travelled over nearly the same ground as that traversed by our expedition during the previous summer, but only as far as the "Elbow" of the South Saskatchewan, and in regard to all essentials our work agrees exactly.†

Mr. Hind's report is valuable from his having had his fossils examined by Messrs. Meek and Hayden, whose labours in the Upper Missouri country and Western States since 1852 has given us most of the knowledge we possess concerning the classification of the strata which compose the great American prairies, and to those gentlemen I shall have frequent occasion to refer.

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* Assineboine and Saskatchewan Exploring Expedition. 2 vols. 1860.

† My first report on this district was dated Dec. 14, 1857. (See Parliamentary Papers, 1859.)

Concerning the mass of the country explored, consisting of the prairies within the British possessions, and the Rocky Mountains between latitude 49° and 53°, and of the country westward to Fort Colville, I am not aware of anything having been published, excepting a few general remarks collected by Richardson from the botanists Douglas and Drummond, or from the fur traders.

The prairie country, which I have principally to describe, may be considered as forming the northern portion of a triangular plateau which occupies the central region of the North American continent, having for its sides, first, the Rocky Mountains, second, the Laurentine axis or intermediate Primitive belt of Richardson, and third, the Alleghany Mountains.

A low indistinct watershed, 850 feet above the sea at its lowest point, and apparently undetermined by any disturbance of the rocky framework of this basin, posterior to the deposit of its more unconsolidated contents, follows a line sometimes north and sometimes south of the 49th parallel of latitude, dividing the waters which flow to the Gulf of Mexico from those to the Arctic Ocean.

The route of the Expedition, starting from Lake Superior, after crossing the eastern axis, traversed the northern part of this plateau to the Rocky Mountains, and thence down the western slope of the continent to the Pacific Ocean.

The McKenzie River, rivalling in its proportions the Mississippi, breaks the apex of this triangle, escaping through the Rocky Mountains to the Arctic Sea, while the Saskatchewan and other rivers of the southern British territory dilate into great lakes at the western base of the Laurentine axis, through which they then escape to Hudson's Bay.

The Laurentine axis of metamorphic rocks, with its fringe of Silurian strata, may be considered as stretching from Canada to the Arctic Ocean, near the mouth of the Great Fish River of Back, in a W.N.W. direction, but it sends off a spur, which encircles the western shore of Lake Superior, and loses itself under the prairies of the State of Minesota.

Lake Superior and Lake Winipeg, according to the surveys of the Canadian Expedition, have nearly the same altitude of 600 feet above the sea, while the rocky district that separates them has double that elevation, or 1,300 feet above the sea; but this is in many places increased to 1,600 feet by the deposits of drift that will be hereafter described.

The highest point of the great plateau that is in British territory is to be found when at the base of the Rocky Mountains that chain is intersected by the 49th parallel of latitude, where it is elevated 4,300 feet above the sea. If followed into the United States, to the south, it is found to reach a still greater elevation along the base of the mountains, until it merges with the great table-land of Mexico, which has an altitude of 7,000 feet. From the above point of intersection to the nearest point of the Laurentine axis, which is a line from near the source of Belly River, in a N.E. direction, to Cumberland House on the Saskatchewan, the distance in an air line is over 500 miles; and the difference of elevation of these two points gives a mean slope of 6 feet in the mile. The general level of the eastern base of the Rocky Mountains also declines rapidly to the north, for in latitude 51° 9′, at where the Bow River emerges on the plains, the elevation is 3,900 feet, and at where the Athabasca, the most southern tributary of the McKenzie, leaves the chain, in latitude 53° 12′, it is only 3,300 feet above the sea.* The slope of this plateau is not, however, uniform, but is broken by steppes, which have been formed by the erosion of the surface of the country, and which mark beautifully different grades in the elevation of the continent during later epochs. These steppes are boldly marked, sometimes increasing the altitude of the prairies, as the traveller follows a westerly course, by an abrupt rise amounting to 600 feet. They have a very irregular outline, and are cut through by the rivers in many cases so as to form isolated masses of broken table-land.

The Rocky Mountains, forming the western limit of the Great Plateau, rise from it very abruptly, the eastern ranges often presenting sheer cliffs, 2,000 to 3,000 feet in height. These are, however, cut by transverse valleys, into which the superficial deposits of the prairies penetrate, and have been preserved more or less perfectly as terraces in the mountain valleys.

The mountains, formed of broken plications of strata, as will be afterwards described, are disposed in parallel groups, the great valleys in the length of the chain generally occupying anticlinal fractures. The flexures have been more perfectly developed in the eastern part of the chain than towards the central parts, where the mountains have a massive cubical aspect, the strata having been fractured and upheaved rather than bent by disturbing agencies. This is owing, no doubt, to the mineral composition of the strata, and not to any modification of the disturbing force, for as the western slope is descended slaty rocks are met with, which present perfect flexures. The mean altitude of the Rocky Mountains between latitude 49° and 53° is about 12,000 feet above the sea, but there is a very singular absence of marked peaks.

The chain culminates in latitude 52°, where the mountains are very massive, and traversed by profound valleys, the highest offsets from which are occupied by glaciers. From the Rocky Mountains to the Pacific Ocean the country is extremely rugged, resembling the Silurian and Metamorphic regions in other parts of the world. It forms a great trough, bounded to the west by the Cascade range of mountains, which closely hugs the Pacific coast in this latitude. This range, which is only rarely broken by valleys, and those of comparatively recent date, runs like a wall 4,000 to 5,000 feet above the sea level. At intervals there occur great conical mountains, such as Mount Hood, Mount Baker, and others, which rise to 10,000 or 12,000 feet, and from their isolation, being perfectly unconnected except by the lower range, they present a very grand appearance when viewed from the coast. Owing to the great fall of the rivers, the narrow valleys, and the rapid erosion having continually carried on the re-arrangement of the superficial deposits, the grades in the elevation of the continent cannot be so well discerned on the western slope as on the eastern, although these deposits are found to be greatly developed.

With this brief sketch of the physical features of the country, I now proceed to describe the different strata, reversing the order of their deposition.

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* As the Rocky Mountains are cut through by valleys almost to the depth of the plateau on which they stand, this depression of the chain towards the north has a remarkable influence on the climate in some localities, especially mitigating the severity of the spring months, by admitting the influence of the mild climate of the western seaboard, at a time when the eastern part of the continent in the neighbourhood of the great lakes is still icebound.

Superficial Deposits.—These are very extensively developed in every part of the region explored, and their classification involves very interesting conclusions respecting the changes of level of the continent, both posterior and anterior to the great northern drift. Judging from the altitudes at which erratics are found to be dispersed, the continent must have been depressed at that period beneath a sea in direct connexion with the Arctic Ocean to the depth of nearly 3,000 feet, and since then, during its gradual emergence, the prairie region of North America has received its present form of surface by denudation, first, as effected on sea coast lines; secondly, by the coast lines of great inland lakes, which, it will be shown, though still existing, were previously of much greater dimensions; and, thirdly, by atmospheric agencies wearing away the soft strata, aided by streams. The superficial deposits, during and posterior to the drift, are so different on either side of the Rocky Mountains that they must be treated of separately, while those anterior to that epoch will be found to have a common character.

Terraces of the Lake Superior Basin.

In ascending the Kaministoquoia for a considerable distance above the Kakeleka Falls, the country is covered by a deposit of red marl earth, which forms the high terraces of the river. Thus, opposite to the mouth of White Fish River there are three distinct terrace levels, of 20, 60, and 90 feet. At some distance back from the river still higher terraces occur, belonging to this class of deposits, which must be considered as of more recent age than the true drift. Sir William Logan describes one at the height of 331 feet above Lake Superior. The great deposits of sand and gravel which rest on the highest levels of the axis, and are first met with at Dog Portage, belong, I think, to the period of the drift, and will be referred to in the next group.

Superficial Deposits of the Central Plateau.

The steppes of this great slope may be naturally divided into three groups, having different ages and circumstances of deposition, and boldly marking three distinct levels. To the most recent of these belong the low prairies which surround Lake Winipeg and the lakes of that group, including the marshy country to the west of Manitoba Lake. This forms the first prairie level. In the vicinity of the Red River settlement its composition is of argillaceous marl, with a deficiency of sandy matter, and it is invariably stratified in their layers. Underlying this, at various depths from the surface, is a bed of stiff clay, which forms the immediate margin of the river at many places. The upper layers of this deposit contain leaves and fragments of wood and reeds, and the whole is, undoubtedly, a freshwater deposit, indicating a time when the Winipeg group of lakes covered a much more extended area than at present, the gradual deepening of the rocky channels through the eastern axis having increased the drainage in modern times. The surface of this deposit is about 75 to 100 feet above Lake Winipeg, but it slopes gradually from the west, and at Pembina Mount, near St. Joseph, is at least 100 feet high. To the east of Red River, in descending the Winipeg River, two well-marked levels were observed, which belong to this group of extended lake deposits. Thus below the seven portages that river flows through a smooth channel, and the banks are composed of a white marl earth, the river being at first only slightly depressed, but soon, from its rapid descent, while the level of the deposit remains the same, the banks become high. At the Rat Portage this terrace, which is 150 feet above Lake Winipeg, retires from the river on each side, and is replaced by another at an altitude of only 75 feet, through a cutting in which the river flows to its mouth at Fort Alexander. This ancient lake-bottom extends south of the 49th parallel, into the American State of Minesota, and everywhere presents a rich level prairie, only broken by slight gravel ridges which have formed shoals in the ancient lake, or by patches of the magnesian limestone beds which crop out in the plain, such as at the Stony Hills, east of Fort Garry, and which has evidently been a rocky island at one time.

The banks of the lower part of Rainy River are composed of rich alluvial deposit of a light grey colour, containing a large proportion of white sand. It is distinctly stratified, and has, without doubt, been formed by an extension of the Lake of the Woods back towards Rainy Lake. In the upper part of Rainy River the banks are high and terraced, and boulders show that at this level there is also a deposit of true drift.

At Pembina Mountain, the eastern limit of the second prairie level forms an escarpment measuring 250 feet above the plain at its base. From the point where it crosses the 49th parallel, it sweeps to the north-west, and assumes a more gentle slope, being broken up into three or four subsidiary terraces. It then meets the Assineboine River near the mouth of the Souri, and is continued to the north by the high grounds that lie to the west of Manitoba Lake from Riding Mount to the Basquia Hill, which, however, rise to the full height of the level, that is to 1,600 feet above the sea. At Fort à la Corne, the banks of the Saskatchewan are described as suddenly becoming reduced from the height of several hundred feet to a slight elevation above the river, showing that it is at that place where the eastern limit of this level meets that river. The prairies of the Upper Assineboine, the Qu'appelle River, and those along the Saskatchewan from Fort à la Corne to the elbow on the south branch, and also up as far as the longitude of Fort Pitt, on the north branch, all belong to this level, and which also extends to the base of the Great Missouri Côteau. The composition of this second great steppe is very different from that of the first. Sand is the predominating ingredient. Thus, at St. Joseph, where the banks of the Pembina River present a fine section of it to its base, the material is a coarse red sand, with gravel and boulders. There are no signs of stratification in any part of this deposit as seen at Pembina Mount, but further west, where it assumes a light grey colour, and contains a considerable quantity of lime, it is imperfectly bedded. Near Fort Ellice, and at many other parts of the district to the south and west of that place, this deposit is formed wholly of fragments of the underlying cretaceous shales. At Long River, Forked Creek, and many other places, this deposit was observed to form only a very thin coating to the cretaceous rocks. Notwithstanding that the prairies of this level are often cut to a great depth by the rivers and creeks, very little can be learnt of its nature at different points, as slides in the banks of the gullies are rarely seen. At Fort Ellice, the valley of the Assineboine is 240 feet deep, and about 100 feet of that is composed of this drift deposit resting on the cretaceous beds. In the Qu'appelle Valley, near the mission, a slide exposed the structure of the plain to the depth of 250

feet, showing it to be composed of stiff sandy clay, of light red colour, with patches of blue clay, and gravelly beds. On the whole, the character of this level, as far as regards its mineral composition, is variable and local. Boulders are tolerably plentiful all over its surface, but occur in greatest quantity on the sides and summits of ridges and mounds, which rise in groups to the height of from 50 to 80 feet. Others of a still higher level occur, attesting the immense denudation which has taken place; these generally rise from 1,400 to 1,600 feet above the sea, which latter is the height of this level at the base of the Grand Côteau, Eagle Hills, and Thickwood Hills, all of which form the eastern limit of the next great steppe.

These outlying patches are in two lines, parallel to the general contour of Lake Winipeg, and the next higher level to the west, and were doubtless two consecutive ridges until they were cut through by the different river valleys. Thus overhanging the lakes we have the Pas, Porcupine, Duck, and Riding Mount, and to the west a line of which the Touchwood Hills, Moose, and Turtle Mountains form the principal parts. These have all a common character, rising gently to an ill-defined table-land from the west, while their eastern aspect is extremely rugged, presenting irregularly-disposed ridges of coarse sandy drift, highly charged with boulders. This steep escarpment is generally densely wooded, and encloses numerous small lakes.

The eastern limit of the third great prairie level is met with at the Grand Côteau, Eagle Hills, and Thickwood Hills, and is only cut through by the channels of the north and south branches of the Saskatchewan, while all the other rivers of the eastern plain, such as the Souri, Assineboine, Qu'appelle, &c., have their sources short of it. I have stated the prairie at the base of this third level has an elevation of 1,600 feet above the sea; and a depression of the continent to this extent was sufficient to submerge the eastern Laurentine axis between Hudson's Bay and Lake Winipeg, or, at least, to convert it into a mere chain of islands. At that time the eastern coast line would leave the Rocky Mountains in latitude 56° N., near Peace River, and would follow what is now the watershed between the Saskatchewan and the rivers more to the north, till it reached the 107° of longitude. From this point, the Thickwood Hills, Eagle Hills, and Thunder-breeding Hills would form the headlands of a great bay, into which poured the waters of the two Saskatchewans, at that time independent rivers, debouching where they now make the acute bends known as their elbows. The coast line was then continued to the south-east, forming the Grand Côteau that dips between the Missouri and St. Peter's rivers. As seen from a distance, when travelling in the low plains, this grand steppe appears as a range of blue hills, with a smooth, undulating outline. On approaching it, a gentle ascent is accomplished for many miles, after which an abrupt rise of from 600 to 800 feet has to be effected generally in from four to six miles. The surface of the slope is extremely rugged, and has evidently been worn into pot-holes, ridges, and conical mounds by the action of water on the soft clay strata of the Cretaceous group. Everywhere it is thickly strewn with boulders, all derived from the Laurentine chain to the east, or from the Bird's-eye limestone, which rests on the western flank of that axis.

Near the elbow of the Saskatchewan, a remarkable group of boulders of this kind of limestone, of enormous size, crosses the country in a line parallel with Côteau to the west. This line has been observed at points 30 and 40 miles apart. They occur as great angular masses, consisting of several of the beds of limestone, the coherence of which being very slight proves that they must have been stranded without any great violence. One of these masses contains over 3,000 cubic feet of stone, and rests on the plain obliquely, with its south-west angle buried in the soil. (*See sketch.*) More to the west than this is a line of sand-hills, which has evidently marked a coast line, although their original position may now be much altered, as they are still wind-blown as when during their first production. They have such a clear relation to the ancient level, and are found at the same altitude over such a stretch of country, always at a little distance from the base of the escarpment, that there can be no question as to their origin. Similar sand-hills were observed on the Souris River, at the base of the second prairie level, which must have been formed on the shore of the extended lake. The resemblance which the plains along the base of this great steppe bear to the shore of Hudson's Bay at the present time, may be judged of from the description given by Sir J. Richardson, who says, "The western shore of Hudson's Bay, "between latitude 56° and 58°, is flat, and the depth of the sea decreases very gradually on approaching "them. In seven fathoms of water the tops of the trees are just visible from a ship's deck. Large "boulder stones strew the beach, and form shoals even at the distance of five miles from the shore, which "are very hazardous to boats." In proceeding up the river from this coast, he describes that after a tract of level country, "the banks," consisting, he before mentions, of drift clay and boulders, "rise from "a very narrow river-channel to an elevation of very nearly 200 feet. Their outline is broken into conical eminences "by short ravines, which open into the river at right angles. These banks have "exactly the same form and constituent parts as those which occur on the confines of Lake Winipeg "and the Saskatchewan." As he made the latter remark in allusion to the nature of the underlying rocks at the two localities, without reference to the drift, it is all the more valuable, for the purpose of proving this similarity, which is so striking, between the present state of the coast of Hudson's Bay and the ancient coast line along the base of the third prairie level. In the rugged district of this steppe there are enclosed numerous lakes, some of great size, and all, without exception, more or less impregnated with salts, of which sulphate of soda is the predominating ingredient. In autumn, after the dry summer, these lakes are fringed with crystals, and the soil, in many places, is covered with a white efflorescence. Whether these salts are derived from the superficial deposits of the ancient coast line, or from the cretaceous clays, I am unable to say, but the position of the salt lakes generally at the same altitude inclines me to the former opinion.

The Laurentine axis is covered with a great deposit of drift, consisting of coarse red sand, with many large and small boulders. This deposit forms a flat swampy plain, well wooded towards the west, but towards its eastern margin, as at Cold-water Lake, worn into deep dry gullies, and round pot-holes without any exit. The thickness of this deposit is from 200 to 300 feet, and the highest point of it is about 900 feet above Lake Superior, or on a level with the plains near Carlton. Glacial scratchings were distinctly seen at many parts of the axis, and their direction is generally north and south. Hardly a surface in the granitic tracts did not present distinct scratches. They were seldom, however, to be observed on southern exposures of rock surfaces, if these sloped much, but the more surfaces with northern exposures sloped, the better they seemed to be marked.

As will be seen from section No. 1, in rising to the surface of the third steppe, we have the plains composed of the cretaceous strata, with only a very thin coating of drift, which has always a local mineral composition corresponding with that of the underlying strata, without admixture of materials carried from a distance further than a sprinkling of erratic blocks that are of small size, and are only to be found crowded in favourable spots. These consist almost entirely of fragments of metamorphic rocks, limestone being very rare. I have not remarked the ordinary erratics at a greater altitude than 3,000 feet; and at 3,700 feet above the sea, and 50 miles from the Rocky Mountains, there occur a very extraordinary group of blocks of granite, resting on a high plateau formed of sandstone strata. These blocks are of great size, one having been estimated to weigh 250 tons. Although lying in a line, miles apart, they seem to consist of the same rock, viz., a mixture of quartz and red felspar, the latter predominating, with only faint traces of mica disseminated in very minute flakes. They present smooth surfaces, although, in general, they are rhomboidal in form. Some of them are cracked into several pieces, which are quite detached, but are evidently parts of the same block. If these blocks were derived from the granite belt to the east, as I believe all the erratics of the prairies have been, they must have travelled at least 400 miles. From the fact, however, that they are beyond the western verge of the drift, and the boulders were found, as a rule, to diminish in size in that direction, it may be that the presence of these blocks is due to very different agencies, different at least in the time of their occurrence. No granite was observed on the east flank of the Rocky Mountains within British territory; but the "Trois Butes," south of the 49th parallel, are said to be the granite, and also the Black Hills, but both of those localities are much to the south of where those blocks occur.

The surface of the higher plains are in some localities traversed by profound rents, resembling the valleys of great rivers, but which, after running for several miles, are generally found to be closed at both ends. They are often occupied by deep lakes of salt water, depressed 200 feet to 300 feet below the plain, and from 500 yards to a mile in width. The great coulées in the neighbourhood of the "Ear Hills," south of Battle River, are the best examples of these, but they are found in many other localities. It is difficult to conceive how they can be due to erosion alone.*

Before leaving the superficial deposits of the prairie country, it is necessary to notice the great river valleys which traverse it, and which all point to a time when the rivers were of much larger size than they are now; even small streams such as Battle River flow through valleys from 150 to 250 feet deep. The sides of these are in general as regular and formal as those of a railway cutting, excepting where the nature of the strata causes frequent slides, or harder beds give rise to a cliff structure. The flat alluvial bottoms of these valleys are in general four or five times the width of the river which winds through them, and which is hemmed by secondary banks, often 30 to 40 feet high. The silt and alluvium is in general regularly stratified, and almost every river point contains one or more lagoons, showing the frequent, though slow change in the river channel.

At the distance of 90 miles from the Rocky Mountains, the valleys of the rivers flowing to the east commence to exhibit terraces composed of rounded fragments of quartzite and limestone, such as would form the rounded shingle on a rocky shore. At the Rocky Mountain House, where these terraces first attracted my attention in the winter of 1857–8, the North Saskatchewan has excavated a valley in the cretaceous strata which varies greatly in its width, sometimes being hemmed in by perpendicular cliffs of sandstone, and sometimes sloping gently back to the elevated country on either hand, where the strata have been less able to resist the erosion. In this valley there are three terraces extensively developed at 20, 60, and 110 feet above the water level. Until we approach close to the mountains these terrace deposits are confined to the valleys of the larger streams, but gradually they spread out, and at last cover the whole country along the base of the mountains, filling up the hollows and valleys of the outer ranges to the depth of several hundred feet. This feature was observed at every point where we approached the mountains from the east, from the 49th parallel northwards, and indeed being even better marked on the Athabasca River than on any of those further south. Judging from the accounts of American explorers, these terraces extend along the base of the Rocky Mountains all the way south to Mexico.

One hundred miles east of the mountains, in latitude 49° 30′ N. shingle beds of a similar kind are found to cap Cypress Hills, which have an altitude above the sea of 3,800 feet, or nearly the same as that of the base of the Rocky Mountains. These Cypress Hills are nothing more than the western extremity of the great Missouri Côteau, which, curiously enough, here presents an escarpment to the west, and is separated from the mountains by a tract of flat arid country of the above width. This côteau is composed of cretaceous and tertiary strata, which have remained as a dividing ridge, from the denudation having acted to the north and south of the line which it marks. It is on the west and south exposures of these hills that the shingle occurs formed into terraces like those along the mountains. These are not to be classed however with the river terraces, which are of much more recent formation, having been derived from the deposits along the base of the mountains.† This may not only be inferred from their relative position, but also from the composition of the terraces themselves, which, although all composed of the same pebbles, these in the valley terraces are well cleaned and mixed with sand, while in the terraces along the mountains and Cypress Hills they are often encrusted with white calcareous matter. This sometimes increases so as to form a perfect cement, so hard as to allow of the fracture of the pebbles before that of the matrix, just as is often seen in ancient conglomerates.

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* The ravines mentioned by Sir Chas. Lyell, in his second journey to the United States, as occurring in the Cretaceous and Tertiary strata of Georgia, seem to be very similar to them. He says that, when the woods are cleared from the country, the sun acting on the unprotected surface of the argillaceous strata, produces cracks that are soon enlarged to great gullies by the torrents of rain that fall. We may suppose that in the Saskatchewan, where there is only a small quantity of rain, the winter's frost effects the same result, but with this difference, that in the latter case the successive landslips remaining unremoved, at last form such a gentle slope that vegetation can retain a foothold, and so promoting the further extension of the rent, which is at last represented by a symmetrical valley.

† In latitude 42° at the base of the Rocky Mountains near Fort Laraniee, Hayden describes similar "deposits of coarse con-
" glomerate 50 to 150 feet in thickness, formed since the scooping out of the present river valleys."—Proc. Acad. Nat. Sci., 1858.

‡ Darwin says of the shingle formations of Patagonia, "the pebbles are imbedded in a white gritty calcareous matrix, very like
" mortar, sometimes merely covering with a whitewash the separate stones, and sometimes forming the greater part of the mass."
—Geol. of S. America, p. 19.

On approaching the Rocky Mountains, the extreme regularity with which these deposits have been terraced by retiring waters at once attracts attention. At where Belly River leaves the mountains, in latitude 49° 34′ N., Captain Blakiston measured three of them, and found that they were elevated 61, 152, and 202 feet above the river level, which at that point, according to his measurement, is 4,024 feet above the sea. He describes them as being "very marked, appearing as a succession of steps from the "level of the river to the plain above, often in sight for miles, and running horizontally. The tread of "the step is of variable width, but the rise is nearly always abrupt and well marked." From the regularity of these embankment-like terraces in the valley of one river, he named it Railway River. (Further papers, Palliser's Expedition 1860, page 68.)

On Bow River they are also well marked, and there I measured four at the altitudes above the river level of 30, 140, 170, and 240 feet, and traces of one still higher at 350 feet. The valley of Bow River within the mountains is narrow and tortuous for the first 12 miles, and in this part of its course the terraces are hardly preserved. Above this point, where it occupies one of the expanded horizontal valleys conforming to the strike of the strata, they are again enormously developed. Even in gaining the Vermillion Pass, the only steep climb is at first up the face of these terraces for 150 feet, and then a gentle slope leads to the height of land.

The valley of the North Saskatchewan is much wider and more direct within the Rocky Mountains; and there we have not only these terraces remarkably developed, but also their mineral composition much altered, partaking of what will be found to be their character on the western slope of the mountains. At a similar place, with respect to the mountains, to where the terraces were measured on Bow River, four were estimated to have an altitude of 25, 70, 180, and 300 feet above the North Saskatchewan. The shingle, cemented into a hard conglomerate, was here seen to rest on the edges of the contorted strata of grit and shale, with thin seams of coal, as in Section No. 1. Within the mountains the terraces expand so as to form level prairies along the North Saskatchewan, of which the Kootanie Plain is the principal.

It is many miles in extent, and composed of shingle and incoherent sand, the widest terrace being 100 feet above the river. The river is, however, skirted by terraces at still higher levels, especially on the south or right side of the valley. Above Pine Point the calcareous matter of these terraces so increases as to replace altogether the pebbles, when it becomes a fine gritty calcareous mud of glistening whiteness. If followed into the higher valleys, the terrace deposits become confused with the detritus of ancient glacier moraines, which, however, are easily distinguished by the angular blocks which they contain.

On the Athabasca River, at 15 miles from the mountains in a direct line, the terraces were found at 15, 100, 210, and 370 feet above the river level. Within the mountains this valley, which is more dilated than even that of the North Saskatchewan, has also the terraces better developed than I have elsewhere observed them on the east side of the chain. The river also dilates into extensive lakes at different points of its course, in which the re-arrangement of the material of the terraces is seen to be going on, the water separating the calcareous mud from the pebbles, while the winds, which are extremely violent in this valley, sift out the fine sand, and pile it in tracts of sand dunes, which cover large areas.

The terraces may be considered as ranging on the east side of the Rocky Mountains from 3,500 to 4,500 feet above the sea. Wherever they prevail they support a growth of a peculiar sturdy pine,* which, in common with the Banksian pine, is known to the Hudson's Bay Company's hunters as the cyprès.

Often the surface of a terrace is quite free from timber, the trees being easily thrown out of the loose gravelly soil, and it is then generally clothed with "bunch grass" (*Festuca ?*), which at once catches the eye as different from the grasses of the eastern plains (*Chondrosium?*) The country occupied by the terraces is easily passed through, as the forests are there free from underwood; and the only obstacle to the traveller arises from his having so often to make a steep descent to the base of the deposit, which is cut through by every little stream, and then to climb again the opposite bank. When passing along the side of a valley, the numerous cross gullies from this cause would render the construction of a road a very difficult matter, although nothing could be firmer or more level than the surface of the terraces themselves. This remark applies equally to the valleys on the west side of the Rocky Mountains, where the terrace deposits have a much greater development.

All the valleys between the Rocky Mountains and the Pacific coast, lower than 4,000 feet above the sea, are found to be more or less occupied by deposits, which are terraced with great regularity.

On descending the western slope, these deposits were first observed in the lower part of the valley of Vermilion River, where they are formed of the same glistening white calcareous mud that was seen in the valley of the North Saskatchewan; but it is in the wide valleys of the Kootanie and Upper Columbia rivers where these terraces are best developed in the Rocky Mountains. These rivers run in opposite directions through the same great valley which lies parallel with the mountain axis for nearly 250 miles, and which throughout is skirted by terraces, forming a succession of platforms often to 600 feet above the river. These extend into the side valleys, preserving their horizontal character, but their composition is often changed. At various points these deposits were seen to be distinctly stratified, and in some cases they must have been disturbed between the time of their formation and that of their being finally moulded into terraces. Thus where the Kicking-horse River joins the Columbia, and where both valleys present perfect terraces at five different levels, the highest forming a wide shelf 540 feet above the river, Section No. 2 is exhibited, where the stream has worn away the bank.

The erosion of these deposits, and the production of steep and quickly succeeding terraces, has been much more perfect in the valley of Columbia as far south as latitude 51°, than in the remainder of the Columbia valley, which extends for a degree further to the south, or throughout that portion of the same great trough which is occupied by the Kootanie River; for there the deposits remain comparatively undisturbed, and form great stretches of prairie, only cut through by a narrow but profound channel

* This pine is allied to the *P. inops* of the Atlantic board, and to the *P. contorta* of the Pacific, and yet has distinctive characters from either. It has been proposed to call it Pinus Saskatchewensis.

for the river. The change of appearance in the valley from this cause is very abrupt and striking. North of latitude 51° the terrace steps succeed one another rapidly, with the tread narrow and furrowed, and the traveller's progress is impeded by the dense growth of forest of a northern type, consisting of varieties of a spruce fir, for the most part with dense underwood; but on passing south of the slight bend of the Columbia at that point, the tread of the terrace steps commence to expand into wide level plains, dotted with a forest of the noble *Pinus ponderosa*, or the gigantic *Larix occidentalis*, both of which are trees that find their maximum in southern Oregon. The outlines of the terraces still preserve the same extreme formality and steepness of slope; but on their level surface a rider can gallop in almost any direction, so free is the forest from underwood. Sometimes the trees are entirely wanting, leaving great tracts of open plain embosomed in the mountains, which form the camping grounds of the Kootanie and Flathead Indians, where they raise the enormous bands of horses for which they are famous amongst all other Indians, the dry soil and nutritious bunch-grass producing a breed of superior hardihood and swiftness.

In descending the Kootanie River from the tobacco plains to Colvile, the country is rugged in the extreme; and these terraces are met with, wherever they have been sheltered from recent erosion, in valleys of unusual width, or in recesses of the more narrow ones. On reaching the belt of country where Silurian and metamorphic rocks prevail, the pebbles are often composed of greenstone, quartz, and the other vein rocks which they overlie. On reaching the lower part of the country, near Colvile, the terraces are still found in all the valleys, not only at moderate elevations, but also high up in the mountains. Thus the Columbia at Fort Colvile, in latitude 48° 34′, is 1,000 feet above the sea, and terrace deposits were observed on the sides of the valley at least 1,200 feet above the water level.

The Great Columbian Desert and the Spokane Plain are both covered with the same deposits of shingle, but these resting in the former case on the great lava-flows, and in the latter on granite and metamorphic rocks. The Spokane Plain, which is of comparatively limited extent, has its margin beautifully terraced, repeating on a grand scale the same phenomena as may be observed on the shore line of Shallow Lake after the summer drought. At old Walla Walla, where the Columbia River passes from a wide and flat sandy desert to break through the profound rocky cañon of the Cascade range, the whole country is covered with light blown sand, which renders it almost uninhabitable, being swept in clouds by the high gales that constantly blow either up or down the river through this wonderful chasm. Here in an ancient lake bottom has been found the remains of a mastodon by some American explorers.

To the west of the Cascade range of mountains, along the Pacific coast, terraces of shingle prevail as in the interior. Also on Vancouver Island they were observed near Nanaimo. Near Fraser River and Paget Sound they are very well marked, and at the latter place occur the "Mound Prairies," which, however, I only know of by report. These are level surfaces of terrace, free from forest, and covered with lines of conical mounds 10 to 20 feet high, said to be formed of boulders piled on one another and resting on the surface of the shingle.

Before leaving these shingle deposits, which are so largely distributed throughout the mountain valleys of British North America, I may mention that in California I found these terraces ranging on the western slope of the Sierra Nevada at least to the height of 3,000 feet, and there they are extensively worked by the hydraulic method for the sake of the gold they contain. At Nevada city, and also on the Yuba River, I saw deposits of this shingle conglomerate, 200 and 300 feet in thickness, actually being washed off from the face of the country by this powerful means, which consists in delivering water under great pressure against the face of the cliff, from nozzles like those of a fire-engine. The supply of water for this purpose is in the hands of separate companies from those that conduct the mining, as it is often brought from enormous distances through tunnels and over high level aqueducts from remote and uninhabited regions. The particles of gold are disseminated throughout the whole deposit, but the richest washings are from its base, where it rests on the "bed rock," and is technically known as "pay dirt." The whole water, with the material washed out of the cliff, is directed through long troughs called "flumes," which are constructed of wood like mill-heads, often continuously for six or seven miles. The large stones are thrown out as they pass by men with shovels, to save the wear on the bottom of the "flume," while the finer material is carried on by the rush of water and passes over frequent cross bars called "ripples," where a little mercury is placed to entrap the gold by amalgamation. At Nevada City, where the coating of shingle deposit had thus been cleared from the surface of the coarse-grained and soft granite which underlies it, gigantic masses were exposed on what had once been the rugged shore of an inlet, just as may be seen on a water-worn coast of the same material at the present day. In California fragments of wood are found throughout the shingle in abundance, often carbonized, but in general silicified into a substance exactly resembling asbestos. In the sand and conglomerate of the Kootanie valley I found fragments of wood of similar appearance.

As my observations in California should not properly be introduced in this report, I shall leave them for another opportunity, the object of my having mentioned them being to point out the great similarity between the superficial deposits of the great gold country of California and those within the British territory further north, which encourages me to assert that the whole country up to the Kootanie River and the base of the Rocky Mountains, wherever the ancient terraces prevail, resting on Silurian or metamorphic rocks, will be found to be auriferous. In my party in 1859 I had an expert "washer" who had been at the Californian mines, and he frequently got "colour," as a faint trace of gold is termed, by merely washing the gravel from the beds of the streams, without any regular "prospecting" or "digging." The discovery of what are among the richest "pan diggings" on the Pacific coast in the Similkameem valley, and the existence of gold mines worked since 1855 on the Clark's Fork, half a mile north of the boundary line where it meets the Columbia River, proves that the belt of auriferous country in California and Oregon is continuous with that of Fraser River: and there is no reason to doubt that in a short time the rugged and unexplored country which forms a triangular region north of the boundary line, and drained by the waters of the Upper Columbia and Kootanie Rivers, will be overrun by prospectors, and then by active gold-miners, just as the western part of British Columbia has been within the last few years.

The evidence we have respecting the age of the terrace accumulations is very imperfect. There can be no doubt that those occupying the valleys of the Rocky Mountains, being furthest from the coast and at the greatest elevation, are the most ancient, and that from the time of their deposit till now, the re-arrangement of the same materials has been carried on during the gradual upraising of the continent.

The shores of the intricate channels and inlets on the Pacific coast of British North America, if elevated from the sea, would present but slight difference from sides of the narrow valleys in the Rocky Mountains at an altitude of 3,500 feet. Whether the continent was ever in later times depressed to that extent in the mass, or whether the central upheaval has been much greater than that along its margins, is a consideration of great importance, and would perhaps be settled by ascertaining to what altitude the terraces can be traced on the Cascade Mountains.

The existence of marine tertiaries along the coast, supposed to be of the same age as those on the eastern prairies, and also within the Cascade range at slightly greater elevation, and sometimes overflown by the lava from those mountains, would seem to indicate that the elevation has been very unequal, or in other words that the tertiary formations along the Pacific coast have hardly been raised at all, while those in the interior are elevated several thousand feet.

On the eastern plains we have marine and other tertiaries at an altitude of about 3,000 feet above the sea, and Hayden describes them as "in all cases undisturbed, and not unfrequently resting on the "upturned edges of azoic and granitic rocks" (Ib. p. 17.) But in the prairies these tertiaries, along with the cretaceous strata on which they generally repose, have been enormously denuded, and are found merely as outlying patches forming the tops of hills. It must have been during the period when this denudation of the eastern plains accompanied the gradual emergence of the continent, but acting with very different results on a rocky sea-bottom and on successive ranges of iron-bound coast presented by the western slope, that these immense deposits of shingle were formed and moulded into terraces.

But if this reasoning is to apply to the most ancient of those accumulations, and so place them as more recent than the latest tertiary times, then there must have been a slight depression prior to the steady and gradual elevation of the continent that has continued ever since. Moreover, unless this depression was local and confined to the mountain region, how are we to account for the absence of post-tertiary formations over the high-lying tertiaries of the plains, in sufficient quantity to have allowed time for the production of such a gigantic formation of water-worn stones?

On the other hand it is possible that the production may have commenced in tertiary times, so that they are almost coeval with the great lignite basin of the Missouri, which is an estuarine deposit of Miocene age, resting, according to Hayden, quite conformably on his upper cretaceous beds. He also describes his tetanotherium bed, the lowest of the White River tertiary basin, which has yielded so many forms of reptilian and mammalian remains, as likewise resting without a break of conformity on the upper cretaceous. (Ib. p. 19.)

Thus, if this latter suggestion respecting the age of the most ancient of the terraced materials be correct, they must have been formed in the straits and inlets of an archipelago, or rocky reef, lying to the west of a flat cretaceous continent, in which were forming estuaries and lagoons, choking with rank vegetation, and containing large lakes, which gradually filled up, burying the remains of the gigantic turtles and extinct forms of mammals.

In the Gulf of Georgia there are beds of conglomerate and coarse sandstone overlying the cretaceous strata to all appearance, and which I have thought may perhaps correspond to the more ancient of the mountain terraces, to which they bear a great mineral resemblance, excepting that those in the Gulf of Georgia have been much disturbed, so that they are harder and their bedding better marked. The difference is, however, not greater than we should expect if we consider the one group to have been placidly raised to a great altitude, while on the other the force had been expended in producing plications and faults.

Drift of Pacific Coast.

The glacial markings on the metamorphic rocks of Vancouver Island are better displayed than I have elsewhere seen them. Every surface near Victoria that is either naturally exposed or from which the soil has been removed, exhibits deep parallel furrows, generally with a N.E. trend. They are also seen on the mainland at the entrance to Paget Sound equally distinctly. Erratics are distributed all along the Pacific coast, at least as far south as latitude 46° N., where they occur, but not very plentifully, near Vancouver and in the valley of the Willamette. They are often of great size, and on Vancouver Island are composed of a grey syenite, which Mr. Bauerman told me occurs in the Cascade range. Often in the woods to the south of Fraser River I saw solitary boulders six or eight feet high, resting apparently on the shingle terraces, which are only here 100 to 200 feet above the sea. Certainly at the fourth plain, five miles from Fort Vancouver, there are several large blocks, though not of the above size, that do rest on the gravel terrace which skirts the valley of the Columbia River. On most of the islands in the San Juan Archipelago, and along the coast of Paget Sound, high sections of yellow sand and clay are exposed, forming low sea-cliffs, the shingle terraces being then further inland. From this drift deposit Mr. Bauerman procured casts of *Cardium* and *Saxicava*.

As I never observed drift or boulders within the Cascade range, even in places elevated only 600 to 700 feet above the sea, but as all the superficial deposits in the great trough between that range and the Rocky Mountains clearly are formed from the re-arranged materials of the shingle terraces along with tuffas from the Cascade range, I conclude that the average lowest altitude of the Cascade range, which is somewhere about 4,000 feet above the sea at the present time, exceeded the depression of the continent during the glacial epoch, and presented a barrier to the causes which transported the erratics and scratched the rock surfaces along the Pacific coast. If the Cascade range at that time formed a promontory enclosing a gulf open only to the south, like the Gulf of California, it would exactly fulfil these conditions.

Tertiaries.

The existence of tertiary strata, ascertained to be so by the organic remains, has only been proved at one point west from the Cypress Hills, where Mr. Sullivan obtained *Ostrea velaniana*, associated

with a *Modiola*, and a few other fossils, which Mr. Etheridge, who has named all the neozoic fossils brought home, has been unable to identify. The beds from which these fossils were obtained consisted of friable sandstones, with argillaceous and calcareous concretions, the bedding heavy and irregular, and often passing into incoherent pebble conglomerate. Judging alone from mineralogical resemblance, these beds were recognized over a considerable area, but always forming high grounds in the neighbourhood of the Missouri Côteau, south-east from the mouth of Belly River.

On the Souri River, seven miles north of the boundary line, in longitude 104°, was observed what is, perhaps, a portion of the Missouri tertiary lignite basin. This locality, which is known to the half-breeds as "La Roche Percée," is well up the eastern slope of the Missouri Côteau, and within a degree of latitude of that river itself, at a point where the existence of the lignite of tertiary age has been well ascertained. The Souri River at this point flows through a valley with steep sides, depressed 165 feet below the surface of the plain, which at this place is quite hard, and strewn with an immense profusion of boulders, being at the base of the third great prairie level. The sides of this valley are cut by numerous ravines, which only extend a short way back into the prairie, and exhibit sections of the following strata:—

		Feet.
a.	Drift with boulders	4 to 7
b.	Mud stone	1
c.	Incoherent sandstone, fine grained, with hard concretions impregnated with iron, which weather concentrically	10
d.	Porous calcareous scinter	1
e.	Hard blue ironstone shale, decomposing into deep orange-coloured splinters	2½
f.	Gritty limestone	2
g.	Ash-coloured clay, in thin indistinct layers, very soft, with one bed of lignite, nine inches in thickness	8
h.	Hard blue limestone	
i.	Same as *g*, but with thin seams of lignite, 10, 8, and 6 inches in thickness	15
k.	Gritty limestone	2
l.	Brightly-coloured marls and shales, with selenite in small fragments	10
m.	Coarse-grained incoherent sandstone, more than	20

See Section No. 4.

Excepting a few fragments of plant impression, like stems of sedges, no fossils were obtained from these beds by which their age could be identified. They may, perhaps, be passage beds, representing the highest strata of the cretaceous era, overlaid by the lignite basin, as further south they are so disposed, and with very similar mineral characters.

The lignite does not occur in well-defined beds, but graduates into the shales on both surfaces. It is not visible till a light ashy deposit is removed from the exposed edge of the bed, which has been formed by the soft clay washing down from the strata above. The lignites are of several different varieties, some having quite the appearance of compact cannel coal of fine quality, some like the more glistening bituminous coal, friable, and only to be obtained in small cubical fragments, while some of it can hardly be distinguished from charcoal.

The sandstone which forms bed *c*, is composed of very fine pure grains of quartz, hardly colouring; but in the upper parts of the bed there occur concretions impregnated with clay and iron, and of a reddish hue, that are comparatively hard, and decompose concretionally. This irregular disintegration gives rise to a curious formation of the banks, which has rendered this locality an object of great superstition among the Indians. The lower sandstone wears away from under the hard concretions, that assume the form of compressed spheres, and sometimes long cylinders, like the boilers of a steam-engine, and are left supported on pillars of the white sandstone. The gullies which join the main valley are thus filled with grotesque forms, sometimes exactly resembling the half-buried remains of ruined edifices. The sandstone (*m*) at the base of the section is also very incoherent, but is composed of larger grains of quartz. The strata are not found in the same order and proportion throughout the valley, but yet they always appear to be horizontal. The marly shales (*l*) have a considerable quantity of selenite disseminated as small crystals. La Roche Percée is in lat. 49° 6′ N., and longitude 103° 54′ W.

This formation has, without doubt, been much more extensive, and has overlaid the cretaceous beds as far north and east as the great sandy waste where the track of the Expedition crossed the Souri River, in latitude 49° 30′ N., and longitude 100° 20′ W. At that place the sand-hills rise 70 and 80 feet, so pure, and so feebly bound by the few plants that grow on their surface, that they are constantly wind-blown. Under these, and cut through by the river Souri, was observed a lacustrine deposit, in which one bed was composed wholly of rolled fragments of lignite, overlaid by sandy marls and gravel enclosing fragments of bones, which Professor Huxley refers to the bison, and along with these small land and freshwater shells. This deposit has been found in one of the lakes, which I referred to generally as of quaternary age, when describing the superficial deposits of the prairies. The origin of this one has been from the damming back of the water by the blue hills of the Souri, which are composed of hard cretaceous shales, and through which the river of that name escapes to join the Assineboine by a narrow and profound chasm, which it has gradually cut through the horizontal strata. The place where the sand-hills and the bed of lignite pebbles is found, has been the north shore of the lake, which must have been of very considerable extent.

The great valley of the South Saskatchewan, when it is hemmed in closely by the Grand Côteau at its elbow, opens out, and at the junction of Red Deer River and Bow River, in longitude 109° 30′ W., latitude 51°, the hills retiring many miles from the river, which, however, always preserves its immediate banks of from 200 to 250 feet in height. The prairies are there again covered with a waste of blown sand, which may, perhaps, have had a similar origin from tertiary or upper cretaceous beds, which have been subjected to local denudation. The same iron-shot bands, containing the shells of land mollusca and bison bones, were there observed, but without any traces of lignite.

East from the elbow of the South Saskatchewan, there is also a tract of sand-hills, with quite the same feature; but there I observed masses of sandstone *in situ* resembling the lowest beds at La Roche

Percée. On the opposite side of the Qu'appelle valley, within a few miles of where I was, in the same sandstone, Mr. Hind found the characteristic fossils of the upper cretaceous group.—(Report of the Assineboine and Saskatchewan Exploring Expedition.)

On the North Saskatchewan, 40 miles above the elbow, and a little way above the Eagle Hills, on the left bank of the river, there are cliffs of a very incoherent sandstone, rising 40 to 60 feet above the water's edge, and worn into caves, which often communicate with the plain above. At the time I observed the sandstone, I took it for a local variety in the drift. If, on the other hand, it belongs to the tertiary or upper cretaceous groups, it proves them to have a very singular distribution, conforming in a great measure to the present river valleys, as on the opposite side of the river, at a little distance back, the middle cretaceous group rises to the height of several hundred feet.

Eight miles below the elbow of the same river, near Birch Gully, the banks rise abruptly on either side to the height of 210 feet, when the level plain is reached, at the point where the great erratic masses of limestone rest on its surface. At the base of the bank from this point all the way down to Carlton, a distance of 40 miles, springs of water escape highly charged with iron and zinc, which deposit a light yellow ochre. Here the springs were seen to issue from beds of sandstone and conglomerate, with travertine containing dicotyledonous leaves.

The section is as follows (see Section No. 3.)

a. Banks of valley, composed of drift.
Coarse ferruginous sand, very moist, with beds of blue and buff-coloured clay, the whole having rounded boulders irregularly dispersed.

b. Twenty feet of coarse and fine sandstone impregnated with lime; also gravel and shingle, and bed (*c*) travertine of dicotyledonous leaves.
Ancient valley deposit?
or underlying the drift?

d. Present river level with banks eight feet high of silt and fine sand, forming the "points" and densely wooded islands in the channel.

I was unable to determine whether these beds have been formed like the silt banks of the river at a time when it was much larger than at present, or whether they are beds cropping out from beneath the drift. They are quite consolidated, but this may have resulted from the calcareous nature of the matrix.

It will be seen that the observations I have made respecting the distribution of the tertiaries on the eastern plains are very disjointed and unsatisfactory. As the cretaceous strata overhanging the Winipeg group of lakes appear to dip to the west, again to rise to the "*Côteau des Prairies*," it is probable that the trough which they thus formed was occupied by tertiaries of the same age as those that cover the cretaceous strata on the Upper Missouri, but that, in the immense denudation that has taken place, they have been unable to withstand the erosion so well as the tough clays that underlaid them, which had therefore remained as a shoal further out to sea, while along the shore the more yielding strata were being rapidly ground down under the combined action of currents and stranded ice.

Although it is probable that tertiary basins occur in the plains further west, especially some of the groups that yield lignite, these will be afterwards described along with the cretaceous strata, as there is an absence of data by which to discriminate them.

Cretaceous System.

Nearly the whole of the great area of prairie country from the eastern axis to the Rocky Mountains is occupied by cretaceous strata, which have attained an enormous development throughout the whole of the central portion of the North American continent.

The classification of these strata, as they occur in the prairie to the south, has been worked out during the last six years by Messrs. Meek and Hayden with great success, and the results have been published as Memoirs in the Proceedings of the Academy of Natural Science, Philadelphia. The various Pacific railway exploring expeditions also give details and descriptions of the fossil remains which have been found in this group.

Messrs. Meek and Hayden divide the cretaceous system into five groups, but, as my observations were not sufficiently extended to warrant my referring the Saskatchewan strata to those without much doubt, in the following vertical section I have adopted a different method of lettering, only indicating the probable equivalents of their section. In the case of our group however (B), Mr. Meek has identified the strata from fossils submitted to him by Mr. Hind.

Vertical section of cretaceous system as developed in British North America.

A. Arenaceous Clays and Sandstones, with *Scaphites*, *Nautilus*, *Avicula*, and other Marine Mollusca. (No. 5 of M. and Hayden.)	Observed by Hind on South Saskatchewan below the elbow. Lower part of section at La Roche Percée? At elbow of Battle River?
B. Indurated olive-coloured Shales, with bands and fissures filled with Clay Ironstone, *Leda Hindi*, *Ostrea lugubris*, Scales of Ctenoid Fishes, Annelid tubes, and plant-remains. Also, by Hind, *Natica*, *Ammonites*, &c. (No. 4 of M. and Hayden.)	Forms the high grounds cut through by Long Creek and the Souri River. Also at the Forked Creeks near the Assineboine.
C. Dark purple and brown laminated Clays, with Ironstone, Septaria, and sometimes crystals of Selenite. Contains *Baculites*, *Inoceramus*, *Pholodomyia*, *Cardium*, *Exogyra*, *Astarte*, *Cytheria*, *Ammonites*. **(No. 3 of M. and Hayden?)**	Valley of Assineboine at Fort Ellice, elbow of South Saskatchewan, Eagle Hills, and on North Saskatchewan to Fort Pitt. On north slope of Cypress Mountain, in the Gulf of Georgia, on Vancouver Island, at Nanaimo River, Salt-spring Island, and at Valdez Inlet.

D. Sandstone overlying Marly Clays, bounded with the Seams of Ironstone, thin beds of Limestone, and stiff dark blue Clay and arenaceous Shales. *Ostrea cortex, O. vellicata, O. anomraeformis, Cytheria, Mytilus, Cardina, Venus, Natica,* &c. Stems and roots of Silicified Trees.	Battle River? Hand Hills, Red Deer River, &c. (Not observed on west side of Rocky Mountains.)
E.* Great Lignite Group, Sandstones coarse and friable, or argillaceous and concretionary, indurated Shales and soft Limestones, Ironstone Nodules, beds of Lignite 3 to 10 feet thick. Silicified Wood, *Taxites*, and sedge-like stems in the Sandstones? (No. 1 of M. and Hayden.) Includes Wealden?	Red Deer River, North and South Saskatchewan, Athabasca, Pembina River, &c. Nanaimo, Vancouver Island, Billingham Bay, Burrard's Inlet, Gulf of Georgia, &c. The position of this group is not clearly made out to the east of the Rocky Mountains, so the sections at the first and second localities are, so far as is known, contradictory. The beds at Battle River, Edmonton, and Lower Red Deer River, may be mixed with those of Upper Cretaceous or even Tertiary.
F. Green Sandstone and Conglomerate at base of Lignite Group at Nanaimo, Tuffaceous Sandstone within 4 feet of Greenstone Conglomerate. Much altered, and containing *Trigonia Emori, Cytheria Leonensis, Arca* (2 sp.), *Psammolia, Exogyra* (2 sp.), *Ostrea* (2 sp.), *Rostillaria pictea*, and Jurasin?	Fossil Point, Departure Bay, north of Nanaimo on Vancouver Island.
Bituminous Shales, resting on Limestone, and covered by friable Sandstone. The Shale takes fire and burns spontaneously. The limestone contains fossils that are Jurassic? From these Shales, perhaps, come the two species of Ammonites described by Hind, and obtained on Elk River.	Described on the McKenzie River, by Richardson. Similar bituminous Shales on the North Saskatchewan and on the Athabasca, where it cuts through to outer range of the Rocky Mountains. With a small *Ostrea?*

For comparison with the foregoing section, I give three sections of the cretaceous beds and the tertiaries immediately overlying them, extracted from the Reports of the Mexican Boundary Commission, vol. i. p. 126 *et passim*, where an able digest of their relations is given, prior, however, to the most recent of the researches of Drs. Meek and Hayden.

First.—*Section of Eastern States*—New Jersey.

VIII. Upper Greensand beds. (3rd.)
VII. Coarse and fine Beach Sand.
Nos. 4 & 5 of Meek & Hayden.
VI. Middle Greensand beds. (2nd.)
V. Quartzose Sand, indurated and concretionary, with Oxide of Iron.
Exogyra costata, Ostrea larva, Billemintilla-Pecten.
IV. Lower Greensand beds. (1st.) Marly Clays.
Exogyra costata, Ostrea larva, Gryphæa, Ostrea vesicularis.
III. Dark-coloured Clays, Greensand in patches.
Ammonites Delawarensis, A. placenta, A. Conradi, Baculites ornatus, and casts of Cardium.

In this position should be Nos. 2 & 3 of M. and Hayden.

No. 1, M. & H.
II. Dark Clays with *Fossil Wood.*
I. Fire and Potter's Clay, *Fossil Leaves and Wood.*

Second.—*Section of Strata on Mexican Frontier.*

Tertiaries of west coast. *Miocene.*

Tertiaries east of mountains. Sandstone, Sands, and Conglomerates, like those of the *Mauvais Terres* in Nebrasca.

Calcareous beds, with marine *Eocene* fossils underlying uncomformably the preceding strata.

Cretaceous.

1. Argillaceous beds. *Exogyra costata.*
2. Calcareous beds. Buff and lead-coloured, with beds of white Limestone, *Gryphæa Pitcheri, Cardium multistratum, Toxaster, Holictypus, Ammonites Texanus, Hippurites, Nerinea, Caprina,* &c.
3. Sandstones of various colours with beds of Clay Sandstone, Carboniferous.

Third.—*Section from the Missouri, westward.*

Tertiary. Indurated Clays, Sandstones, Conglomerate and Limestone. Mammalian and Chelonian remains. Freshwater shells.

Cretaceous.
Nos. 3, 4, and 5, of N. Jersey Sect. C. and D. of Nicollet.

5 Arenaceous Clays, argillo-calcareous Sandstones 80 feet.
4 Plastic Clays, concretionary calcareous Sandstone - - - - - 250 to 300 feet.
This is the principal fossil bed of the Upper Missouri.

* It is possible that the Lignite-bearing Group E, which occurs in two lines, separated by a belt of clays like D, may include deposits of two different ages; the one Upper Cretaceous or Eocene, like the beds at the La Roche Percée, and the other the cretaceous in the position assigned to it in the Section.

A. and B. of Nicollet.	3 Calcareous Marl, *Ostrea cagesta*, *Inoceramus problematicus*, scales of fishes - - - -	100 to 150 feet.	
	2 Clay with few fossils - - - - -	80 feet.	
Nos. 1 and 2 of N. Jersey -	1 Sandstone and clay *Fossil Wood* - -	90 feet.	

"The change from 3 to 4 is always well marked.

"*Inoceramus problematicus*, which is the same as *I. fragilis*, is the characteristic fossil of Nos. 2 "and 3, and, with *Ostrea cagesta*, ranges to Mexico. These latter groups everywhere rest on the sandstone "and clay beds (No. 1.), which are the Jurassic of M. Marcon. With the exception of two species, "the cretaceous fossils of the Mexican frontier are distant from those of the New Jersey section, and "nearly equally so from those of Nebrasca; whereas the latter or Nebrasca section, extending from the "Missouri westwards, has many fosssils in common with those of New Jersey and Alabama. It is "therefore probable that the Mexican beds represent a different epoch in the cretaceous series from those "of the east and north-west. However, from the Mexican frontier no sections were obtained, to show "whether one or more groups were represented."

Group B.

By reference to the map it will be seen, that the first point where the route of the Expedition passed over cretaceous strata was after gaining the great plain, of which Pembina Mountain forms the eastern limit, at Long River, latitude 49° 8′ N., longitude 98° 35′ W., a tributary of Pembina River flowing northwards. This stream flows through a deep valley in the high plateau which stretches back from Pembina Mount, and in the gullies, which gives it an exposed section of group B. It is a compact shale of light greenish drab colour, not occurring in continuous layers, but as fragments, with irregular conchoidal surfaces, which has been produced by the desiccation of what was originally thin layers of clay. Sometimes it has more of a slaty character. Among those beds are hard bands and nodules of dark brown clay ironstone, and perpendicular fissures are common, filled up with splintery iron shale; also small calcareous and rust-coloured tubes traverse the strata perpendicularly in large numbers. The same strata were observed at Forked Creek, where a deep gully joins the valley of the Assineboine, in latitude 50° 6′ N., and longitude 101° 18′ W., and these two places are both on a line of high hilly ground, which stretches in a north-west direction, no doubt marking the outcrop of the shales. At Long River they dip gently to the south, and are covered by six feet of pure white sand, very incoherent, and over this lay the drift, consisting of light grey calcareous earth. At Forked Creek they seemed to be strictly horizontal, and were covered by a local drift derived from the subjacent beds. Mr. Hind, who also saw these beds at Forked Creek and other localities, submitted the fossils he obtained to Messrs. Meek and Hayden, and they have referred them to their second highest group. He gives the following list as named by them:—

Anomia Flemingia.	*Natica obliquata.*
Inoceramus Cedarensis.	*Avillana concina.*
Leda Hindi.	*Ammonites* (sp. undet.)

Of those from my collection has been determined the *Leda Hindi*, and in addition *Ostrea lugubris*, scales of ctenoid fishes, with annelid tubes and plant remains. Traces of these beds were observed to the south of the Qu'appelle River, and also on the left bank of the North Saskatchewan, for a considerable distance above the Eagle Hills. Mr. Hind also observed them to form part of the high escarpment of the Duck and Riding Mountains which overhangs the lakes, having an altitude of 1,000 feet, and it was at 500 feet from the summit that he detected these strata. This group has not been distinguished from the next in colouring the map which accompanies this report; but from the more resisting texture of these shales, it is probable that they occupy a larger area than any other group of strata of the lower plains that have been subjected to such great denudation.

Group C.

At Fort Ellice the banks of the Assineboine are 240 feet high, and in general their structure is obscured by vegetation; but at one point a recent slide displayed a partial section of the bank. The upper part consisted of the comminuted fragments of the last-described shale, along with beds of pure sand, and also the more common yellow drift. Close to the water's edge masses of strata of tenacious calcareous clay were exposed, of a dark purple colour, but the weathered surface decomposing into a ferruginous earth. Along with these strata were two beds of soft clay ironstone about four feet apart, the lower one a half foot thick, and rather compact; the upper one concretionary, forming thick nodulated masses, the surfaces of which show the *cone-in-cone* structure. At this place only a few fragments of the nacreous shell of Baculites were found, but sufficient, along with the mineral resemblance, to identify these beds with *Group C*, in the vertical section. At the elbow of the South Saskatchewan, where that river cuts through the great prairie côteau, the boulder drift is seen to rest on strata of purple clay with nodular masses of ironstone, with veins of cavities filled with calc-spar. These septaria are in great numbers, and when broken are found to include fragments of the following fossils:—

Baculites compressus.	*Exogyra.*
Inoceramus (Cripin of Roemer and Conrad) sp.?	*Astarte Texana.*
Pholodomyn occidentalis, Morton.	*Cytheria.*
Cardium.	

The outcrop of these septaria clays has a clear relation to the great prairie ridge, which is cut by the South Saskatchewan at this point, and then is continued to the north-west by the Eagle Hills and others to near Fort Pitt, where it hems in the North Saskatchewan in like manner, the banks having an altitude of 500 feet, and also displaying sections of the strata with the same fossils. They were also observed at the base of the Eagle Hills, and wherever they prevail they form lofty and ruinous banks, the strata breaking away in great slices, while these slide forward successively at some points. I have counted as many as 13 such shales on the bank of the river, the oldest, though now close to the water level, still bearing part of the original prairie surface, supporting the same turf that once grew 200 or 300 feet above its present position. The result of this is, that it is seldom that anything can be

learnt of the strata which form the full thickness of the river banks, the more superficial beds being repeated again and again in each slip, so as to give a very exaggerated idea of their development. Above the elbow of the South Saskatchewan these strata are very dark, and contain a large quantity of selenite in radiating crystals. Portions of these soft strata have been formed at the place, by the action of the weather and of the river on their base, into lofty conical mounds, which present a most extraordinary appearance. As no grass has time to grow on them, from the constant attrition of their surface, they are perfectly black, and their outline is broken into terraces by the successive lines of ironstone concretions, which from their hardness retain the soft strata underneath them.

At the base of the Cypress Mountains, where they commence to rise from the plains that lie between them and the South Saskatchewan, the sides of the coulées are formed of the same septaria clays, with fragments of inverraini, and presenting the usual ragged features. This locality would be very favourable for the study of the whole cretaceous group, and the overlying tertiaries which form the summit of the high lands of the Missouri Côteau, were it not so dangerous on account of the different hostile Indians that move about in strong parties through it. The Expedition only spent a very few days at this interesting place, as it was here that we broke up into parties to explore the Rocky Mountains in 1859. From the few observations I was able to make, however, I have been induced to carry the line of these strata from the elbow of the south branch along the côteau to the Cypress Mountains, besides their outcrop to the north-west, along the line of the Eagle Hills to Fort Pitt.

In the prairies, this and the other group of the cretaceous system preserve an unaltered condition, and rarely present other than a most gentle dip; but close to the Rocky Mountains, and also within the plication of the older rocks forming that chain, altered shales, highly charged with iron, and overlying sandstone, were observed, which, at the time, I was inclined to consider to be these septaria clays, as the concretions had a very great resemblance to those of this group.

These beds, with their characteristic fossils, were also observed at Nanaimo, on Vancouver Island; but I shall describe the whole strata at that place together, and for the present confine myself to the development of the cretaceous system in the eastern prairies.

Group D.

A very large proportion of the higher plains to the west of the Eagle Hill côteau is occupied by this great group of the cretaceous strata. It is met with forming the banks of the lower part of Red Deer River, near where the Expedition crossed it during the last summer's explorations. From that part it rises to the westward, till, at the Hand Hills, the sandstone which forms its upper member has preserved it as outliers, having abrupt escarpments to the west. By its marked lithological character it was also recognized on Bow River to the south, for a considerable distance above the mouth of Belly River, and also yet further to the south-west, forming the high broken grounds over which I passed on my journey from the Cypress Mountains to the Rocky Mountains in August 1859. It was also met with at the elbow of Battle River, and above Fort Pitt on the North Saskatchewan, where it seems to form the banks of that river for a considerable distance, but is wanting above the Snake Portage, till it reappears again at the Pyramids, about 100 miles above Fort Edmonton. Between these points it probably forms the high grounds back from the river, such as the Beaver Hills, Bear's Hill, and the hills round St. Ann's, to the west and north of Edmonton. I, however, offer this sketch of its distribution more as a surmise, founded on the physical features of the country, than from actual observations of its relations at these various points.

Excepting very obscurely below the Snake Portage, on the North Saskatchewan, I cannot say that I anywhere observed the relation of this group to the baculite clays of the preceding division. I descended that river on the ice, travelling with dogs, in March, 1858; and as the late season compelled me to travel a great deal in the night, I missed many points of interest. Its relations to the strata beneath it were apparently quite clearly shown on Red Deer River. At this place the group is found to form the broken country round the base of the escarpment, which probably in its full altitude includes several of the members of the cretaceous system, and therefore merits a more minute description. These hills form a high mass of table-land, a few miles back from Red Deer River, presenting an abrupt escarpment to every quarter but the east, in which direction they slope off gently with the dip of the strata. Our encampment on June 25th, 1859, was in one of the deep ravines on its western face, 375 feet above the plains below, and 160 feet below the level of the plateau above.

In the upper part of the escarpment facing the south-west, grey coarse sandstones were exposed, which had a considerable dip to the north-east. The bedding of these was hard and distinct, and they were seen to rest upon soft incoherent sandstone, underlaid by light sandy clays and blue clay shale. (See Section No. 7.) In the clays are enclosed angular masses of black iron-shot sandstone, and also pebbles of quartz and granite. No evidence of the exact position of these strata was obtained, but, although they were somewhat disturbed, I saw no reason to doubt that they are a superior number of the cretaceous series, overlying the beds next to be mentioned, which are of the group D. Section No. 6 gives a sketch of the strata of the hills from the valley of Red Deer River northwards, and it will be seen that there is an interval of several hundred feet between the sandstones and clays and the banded clays of Group D, the nature of which were not ascertained. These banded clays, which occupy a narrow tract of country round the Hand Hills, give rise to large white mud swamps, which we found, at this season of our visit, to be nearly dry, and presenting a very rough surface from the floundering of the large bands of buffalos in the tough plastic clay bottom, as they have eagerly striven for the last trace of water. These clay beds, which contain a large proportion of calcareous matter, and are often banded by these seams of ironstone, have a white chalky aspect, and are so easily acted on by the weather, that what were originally gullies soon expand into wide flats, bounded by conical hills, their bright surfaces being marked regularly at every few inches by the parallel streaks of ironstone, which are often only half an inch thick. From these swampy flats, that serve as reservoirs for the water which descends from the hills in spring, the streams have worn deep ravines, which join the valley of Red Deer River. At the commencement of one of these, or near the base of the group D, Section No. 8 was observed. Here the "banded clays" are seen to rest on red iron clay shales in their beds, underneath which is the bed of rotten limestone, of a buff colour, which again rests on a bed of

shell conglomerate, principally composed of fragments of *Ostrea cortex*, and aggregated into a solid bed with many complete specimens of the same shell. Mr. Etheridge has identified this shell, which is a species described by Conrad, in the Mexican Boundary Commision Reports (p. 157). Along with *Ostrea multilorata* it was found at Dry Creek, Mexico, and in describing them Conrad says that he knows no species like them in the cretaceous system, and that probably they belong to strata of still earlier date. However, at another locality near the Hand Hills, I again found *Ostrea cortex*, and along with it *Ostrea vellicata* and *Cytherea Texana*, and these are undoubted cretaceous shells of Mexico. From between El Passo and Fontera, which are places within a few miles of each other, the following list of fossils is quoted in the Mexican Boundary Report, *Ostrea vellicata*, *Cytherea Texana*, *Exogyra* (2 sp.), *Nodosarca*, *Trigonia Emori* and *Arca*, which includes both fossils found in the neighbourhood of the lignite on Red Deer River, and also some that were found along with that of Vancouver Island.

On Battle River, in latitude 52° 17′, the banded clays were also observed with the same features, and, as far as I can judge, with the same fossils. These, however, along with many from other localities, including the Rocky Mountains, have not come to hand, which causes an unfortunate break in the evidence I have to offer. From Battle River to Red Deer River they appear to form the surface of the country, as every shallow ravine shows sides of the white chalky beds, and the white mud swamps are very common.

In my next group, E, the lowest of the cretaceous system, I have with great hesitation classed the large deposits of lignite; they are sufficiently compact to be of value as fuel, but which have hitherto been generally classed as of tertiary age. However, in all the sections which have been given of the cretaceous system in the United States, it will be observed that the lowest beds are always described as sandstones, containing fragments of fossil wood. Further Dr. Hayden has pointed out that at the base of his lowest cretaceous group freshwater beds occur, in which the shells are more nearly allied to tertiary forms, and the vertebrate remains, of which only a few bones have been obtained, are considered by Dr. Lerdy to belong to an equivalent of the Wealden period in Europe. In the same horizon have also been found angiospermous leaves, such as *Quercus*, *Salix*, &c. Also he remarks that the shells from the Judith River beds, of the supposed Wealden age, cannot be distinguished in many instances from those of the great lignite basin, which he knows to be tertiary beyond doubt, mentioning as instances an *Ostrea* and a *Trionyx* that were considered common to the two formations. It may, therefore, be justly concluded that this question is one of great nicety and doubt, which will only be slowly cleared up as those vast territories become explored. Nevertheless we are by these observations prepared to consider as possible, at least, the existence of a lignite-bearing formation at the base of the cretaceous system, even though developed to an extent not hitherto recognized. In his description of the lignite formation on the McKenzie River, Sir John Richardson refers to strata of a similar nature as occurring at Edmonton, on the North Saskatchewan; and on first arriving at that place, in January 1858, I had no difficulty in identifying the beds there with those he describes. I got not only the same yew-like leaf (*Taxites*) that he figures as characterising the shales, but also the same general succession of strata, excluding only the beds of shingle and gravel which he describes in his section of the McKenzie River. Before leaving England Colonel Lefroy furnished me with the following extracts from his notes on Peace River, a post midway between the McKenzie and Fort Edmonton, which are sufficient to show that the strata are probably continuous throughout this area. He observes that "at the ramparts on "Peace River is a vertical cliff of sandstone, with broken stratification towards the top," and that at Dunvegan the river is depressed "600 feet below the general level, and great quantities of crystals of "sulphite of lime were collected in the upper strata, while actual coal occurs in the seams about ten "miles above the fort, in one of the small tributaries." The lignite formation has also been remarked on "Smoking River," a tributary of Peace River, and I have traced it on the Athabasca and McLeod Rivers, and on Pembina River, all to the north of Edmonton, thus proving the range of this formation over a slope rising from 500 to 2,300 feet above the sea, and yet preserving on the whole the same characters, and showing no evidence of recent local disturbance beyond the gentle uplift which has effected this inclination.

I shall now describe this formation as it was observed in different parts of the country explored, commenced with the North Saskatchewan. The lowest point on that river where the lignite was actually observed, was about two miles below Fort Edmonton, where a heavy bed of it was seen dipping gently out of sight below the water level to the N.E. I have reason to believe, however, that other beds of it occur further down the river, for a distance of 50 or 60 miles.

At Fort Edmonton the beds of the river valley are from 190 to 250 feet high, and at most places densely wooded seven to ten miles back from this valley on either side, a line of high ground rising from 200 to 300 feet above a willow-covered plain, and consisting, as far as I could learn, of the white marly clays of the group D; but the country in this neighbourhood is much obscured by superficial deposits, and by small copse-wood. The river valley has a wide flat bottom, through which the river winds in a channel 40 to 60 feet deep, and wherever this present channel sweeps close under the higher valley banks, sections are displayed disclosing horizontal strata of arenaceous clays, sometimes passing into true sandstone with spherical concretions, but at others into clay shale. Many of these beds are highly charged with nodules of clay ironstone, which are filled with comminuted fragments of vegetable matter. The lignite occurs in the clay strata, and varies greatly in purity. It is used in the forge at the fort, and is found to answer very well, excepting that it "burns" * the iron more than ordinary coal. It ignites with difficulty, but keeps alight for a very long time, and if left to itself without a draught, smoulders away into an abundant orange-coloured ash. It contains a quantity of water in its composition, as, although generally compact, like fine bituminous coal, when first excavated, it soon splits up into fragments, which have dull earthy surfaces. There is a great difference in the quality of the lignite, according to the bed it has been procured from, and also the distance from the outcrop to which the seam has been worked. There are no workings of any sort into any of the seams, the manner of procuring the small supply which is required for use at the fort being for the blacksmith to go down to the river bank with a pick, and procure a few basketfuls, where he can most easily get access to the material.

* The sulphur of the coal combining with the metal.

The fort stands about 100 feet above the water level, and below it in the bank there are two seams of 18 inches each; but on the opposite side of the river at a little distance below, sections Nos. 11 and 12 occur, where there are several seams exposed, the principal of which, close to the water edge, is six feet in thickness, and another a little way, where it is four feet, with others less pure. In the middle of the six-feet seam there occurs a layer five to eight inches thick of magnesian steatitic clay, which works up into a lather like soap, and is used by the women at the fort for washing blankets. From this seam a specimen of the lignite has been analysed with the following results. (See Appendix.)

The gravel and shingle deposits are seen to rest on the cut edges of the lignite-bearing beds, and are, therefore, of more recent date. They contain fragments of the nodules derived from the underlying strata, along with pebbles of quartz and other rocks that must have been derived from elsewhere. Also large fragments of silicified wood are found in the subsoil at Edmonton, the same as that found in the upper part of the lignite group on Red Deer River, as will be described.

At the bend of the river below the fort, and on the same side, the bank looks as if broken tiles had been strewn over it. This arises from the lignite having at one time been completely burnt out, only being represented now by a thin layer of ash, while from the baked clays above and below the bright tile-like material has been derived. Amongst these fragments I obtained impressions of the same yew-like leaf that Sir John Richardson found in the McKenzie River beds under similar circumstances, but along with dicotyledonous leaves, of which I, however, found no trace.

For 90 miles up to the North Saskatchewan above Fort Edmonton, the grey arenaceous clays prevail, forming the banks of the river, which are high and precipitous, the valley for the distance making a succession of abrupt bends after every few miles of a straight course, its main direction being to the north. The secondary banks are also gradually lost, till at length, from the valley narrowing, the river occupies its full width. Above this point, however, the valley suddenly widens out, and preserves on the whole a straight course from the west, independent of the windings of the river itself, which has a very tortuous course between secondary banks, crossing from side to side of the great valley, round heavily timbered flats. Where the river sweeps under the high banks, sections about 200 feet high are exposed, of white variegated marls, which are cut in the most regular manner by gullies into pyramids, with a most artificial appearance, as seen from the river, their bright chalky surfaces being thrown into strong relief by the dark green pines that clothe the ravines and low river banks. These marls have much the look of those of group D.

Fifteen miles below the mouth of Brazeau's River, which is a large tributary to the North Saskatchewan from the west, we again meet with the lignite-bearing arenaceous, and from the point they were traced uninterruptedly to the base of the mountains. The formation now presents very different characters from those at Edmonton, having more the appearance of a shore deposit. The mineral composition is very varied, and large deposits of sandstone occur, which is fine or coarse-grained, but never makes any approach to a conglomerate. At the Rocky Mountain House, in lat. 52° 21′ N., longitude 115° 10′ W., where I had the best opportunity of examining this formation, I divided it into three groups, judging from the mineral composition alone, as they were found to pass from one to the other without superposition, just as we might expect to find in a shallow lagoon deposit.

1st. Coarse-grained sandstone composed of angular grains of quartz, cemented by calcareous matters present in small quantity. This sandstone forms bold perpendicular cliffs often 150 feet in height, and hemming in the river on both sides. It resembles the descriptions given of the sandstone of the "Ramparts" on McKenzie and Peace Rivers, and indeed on all the rivers this formation may be traced by this marked feature as far south as the Missouri at least, where a drawing of the falls on that river exactly resembles these sandstone cliffs. (Given in Pac. Rail. Rep.)

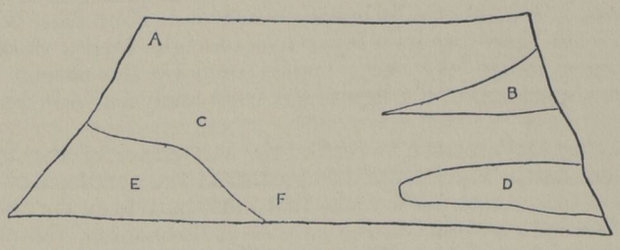
The 2nd group consists of beds of green argillaceous sandstone, which, as it weathers easily, always gives rise to sloping banks, from which protrude concretionary masses. These beds are generally horizontal, but sometimes present a rapid dip towards the edges of basins in the last group, in which they seem to have been deposited. They are, however, often overlaid by the hard bedded sandstone.

The 3rd group resembles more in its mineral characters than the other two the beds at Edmonton, consisting of alternations of clay shale and argillaceous sandstone in irregular beds, and including deposits of lignite. The shales, which are often very hard and compact, contain fragments of the yew-like frond, and also stems of plants like sedges.

Section No. 15 is an attempt to combine the different sections that were observed; and Nos. 13, 14, 16, and 17, show the arrangement of the strata at several localities. The irregularity in the mineral composition is well shown about five miles above the Mountain Fort, where, in a very short distance, beds of clay and soft green sandstone are suddenly replaced by cliffs of grey and yellow sandstone with heavy bedding. The features of the strata at the Mountain House are very similar to the description given of the lower cretaceous groups at Seargent's Bluff on the Missouri, by Meek and Hayden, where the following section is described:—

1. Dark coloured clay, with sandstone seams - - - 6 feet.
2. Light yellow clay passing into grey sandstone - - 5 „
3. Dark clay, with fragments of carbonized wood - - 1½ „
4. Grey indurated clay or marl, with wood - - - 4 „
5. Dark seam like No. 3 - - - - - 8 inches.
6. Clay like No. 4 - - - - - - 3 feet.
7. Grey sandstone (carbonized wood) - - - - 2 „
8. Very dark grey clay, sometimes black, with organic matter in the lower part, and crystals of selenite - - - 10 „
9. Grey clay, carbonized wood, and hard concretions - - 30 „
10. Grey sandstone, with wood - - - - - 2 „
11. Grey clay, with wedge-shaped masses of hard bituminous lignite or coal, and round lumps of sulphuret of iron, to the river level.

It is mentioned that the beds thin out in many directions. Some beds increase to a great thickness in a few hundred yards, and sections like the following are not uncommon:—



A. Soft heavy bedded sandstone
B. Dark slaty clay and indurated clay.
C. Grey sandstone.
D. Hard reddish sandstone.
E. Dark shales.
F. Sandstone.

(Mexican Boundary Rep., vol. i. p. 136.)

As developed at the Mountain House, this formation, whatever is its exact age, may be described as consisting of sand and clay in varying proportions, great ridges of pure sandstone, including basins in which have been deposited clays and clay sandstones charged with lignite and ironstone in large quantities.

On the Athabasca River the valley from Fort Assineboine, in latitude 54° 50′, up to the outer range of the mountains at Deadman's Rapid, cuts through argillaceous sandstones, with beds of clay and lignite of the same kind as those at the Mountain House. The sandstones are in much greater proportion, however, and the lignite beds are more rarely seen than in the sections along the North Saskatchewan. At Deadman's Rapid these strata are succeeded by grits and clay shale in regular beds, undisturbed at first, but, on approaching the mountains, found to be implicated in the later upheavals.

On Red Deer River the lignite formation was observed at various points, the lowest being at the Hand Hills, which have already been alluded to in speaking of the "banded clays." By again referring to section No. 6 it will be seen that a flat plain extends back from the summit of the river valley towards the base of the hills, where the white mud swamps are situated, but which is cut up by great ravines, gradually deepening as they approach the river. The river valley itself is half a mile wide and 270 feet deep.

At the commencement of one of the ravines, about three miles back from the river, was found the fossil before mentioned (*Ostrea cortex*), and in another at only a quarter of a mile back from the river valley that fossil was again found in the highest part of the bank along with *Cytheria Texana*, showing that these beds must form the surface of the level plain. At the mouth of the same ravine (Shell Creek) the following sections (No. 9) were observed in the bank of the valley of Red Deer River, the beds being to all appearance horizontal:—

a. Buff unstratified earthy clay - - - - - 12 feet.

b. Ash-grey and cream-coloured sandy clays in bands, with their seams of clay ironstone and carbonaceous layers ("Banded Clays.")
Throughout this bed are angular pebbles of ironstone, which look like fragments of septaria - - - - - - - 30 feet.

c. Seam of pure lignite ("cuboidal lignite") - - - 3 „

d. "Banded clays," very sandy in some places; in other parts the coal has been burnt out and has converted the upper beds of this group into material like broken tiles, which lie scattered over the banks. Probably the ochre beds observed in some parts of the banks are the layers of ash which represent the lignite bed where consumed.

e. One foot of silicified wood, composed of stems, trunks, and roots of large trees. In the bed these are of a deep brown-black colour, but the fragments which lie scattered about weather to a light cream colour on the surface. One silicified root measured 18 inches in diameter.

f. Brown coal. This bed is about 18 inches thick, and in thin leaves, with a paper-like texture.

g. Sandy clays partially banded, varying from grey to light cream-colour; crystals of selenite very common, but no large masses were observed. This group has a very chalky look from a distance. It is probably 100 feet thick, but the base of the section was not observed.

Although these beds are very variable, passing horizontally into different varieties of shales, banded clays, and sandstones, still there seemed to be a definite inclination to the N.E., so that in ascending the river deeper beds were exposed.

A few miles above Shell Creek, the lower part of the banks are to a great extent composed of a bed highly charged with ironstone nodules, which have very irregular shapes, unlike the nodules in the other parts of the strata. The profusion of these strewn on the slopes of the valley reminded me of the heaps of roasted ironstone scattered in the neighbourhood of iron furnaces. A little way further on, where a creek joins the valley, thick beds of lignite appear at the base of the section, as in section No. 10. The lowest bed is four to five feet thick, and very compact and pure. It is included in the same gritty sandy clay that everywhere forms the matrix of the lignite.

The iron shales immediately overlie these beds, and these are again overlaid by the "banded clays," that form the base of the section lower down. By following up Coal Creek for a few hundred yards, to where the banks attained a height of 250 feet above the burnt lignite seam, I found in a hard, sandy limestone bed the following fossils:—

Ostrea anomiceformis.
Mytilus (2 sp.)
Cardium multistriatum, Schun.
Crassitella.
Venus.
Natica.
Rostellaria.

No break was observed in the beds, and the succession of the strata from the lignite upwards was such as might be expected in a gradual passage from freshwater to marine beds. I did not, however, remark the layer of silicified wood or brown coal that I expected to occur above the banded clays that overlie the lignite.

On Battle River similar beds were observed in latitude 52° 28′ N.; longitude, 111° 29′ W., having the same order. The high part of the banks was composed of the banded clays along with concretionary masses of sandy limestone, containing *Ostrea*, *Avicula*, and other shells, some of the specimens of which were unfortunately lost.* Over the banded clays is the layer of silicified wood, while at the base of the section, and under the water of the river, the beds of lignite crop out.

For 60 miles above the Hand Hills I had no opportunity of examining the banks of Red Deer River, but at the mouth of Bull Creek the strata were found to present much the same appearance as at that place, the higher banks consisting of the "banded clays," which along the river are exposed, the beds of lignite overlaid by the silicified wood. Beneath the lignite, and what must be the lowest beds of the section at this place, occurs a hard grey sandstone, with large concretions that contain a slight admixture of lime, and in these I obtained several leaves of deciduous dicotyledonous trees. The exact spot where these were obtained is just below the mouth of Deadman's Creek. A little above this place the lignite forms beds of great thickness, one group of seams measuring 20 feet in thickness, of which 12 feet consists of pure compact lignite, and the remainer of carbonaceous clays. At one point the seam was on fire, the bed exposed in a cliff of about 300 yards in length being at many places in a dull glow, the constant sliding of the bank continuing to supply a fresh surface to the atmosphere. For miles around the air is loaded by a heavy sulphureous and limey smell, and the Indians say that for as long as they can remember the fire at this place has never been extinguished summer or winter. For 10 miles above this place the lignite beds were traced in ascending Red Deer River, when they were succeeded by cliffs of sandstone apparently formed by beds overlying the lignite group, but the dip is very slight. The Nick Hills is where this sandstone forms a high ridge running to the N.W., and above which point the banks of the river are composed of finely laminated marly clays, often containing concretionary masses of limestone filled with what I thought at the time were freshwater shells, but they are also among the missing specimens.

These marly clays overlie the sandstone of the Nick Hills, and seem to occupy a great basin through which the river flows from above the forks of Mechimi River. Above that point there appear chocolate-coloured shales, with beds of sandstone, and in little Red Deer River section No. 21 was about, in which the sandstone beds become disturbed and harder, presenting beautiful flexures, and exposing at the base the same shales.

Relations of the Cretaceous Series on the West.

On Waipairous Creek, a tributary to Deadman's River, and within 15 miles of the old Bow Fort, thin disturbed beds are very distinctly exposed, as in section No. 22, and must include an enormous thickness of strata. Although in the absence of fossils I cannot speak positively, yet I believe that these sections include carboniferous strata, which are represented by the lower grits and shales, which contain coal in their streaks, with plant-impressions. This was also observed on the North Saskatchewan, but there, over the grits and clays of probably carboniferous age, there came clear beds of pink quartzose grit, with dark shales, on which rested a great thickness of black aluminous shale, containing a small oyster in great abundance. Also, on the west shore of *Lac à Brulé*, where the Athabasca River leaves the mountains, section No. 31 shows this same resting high upon the flanks of a mountain of carboniferous limestone.

At many other points in the mountains throughout the eastern ranges, patches of shales occur, which are highly ferruginous, and along with grits and heavy-bedded sandstones of various tints, and having apparently a superior position to the rocks of carboniferous age, of which the greater mass of that portion of the mountains is composed. In the sections of the various mountain ranges, the beds I consider to belong to the group I have named (3), and, as they are of great thickness, it is probable that they represent some of the strata that are found undisturbed in the prairies. At the extreme range of mountains on the North Saskatchewan masses of thick-bedded encrinite limestone rise 1,500 feet, with a heavy dip to the west, while the pink grits and aluminous shales dip away from them in every direction, just as if they had been masses of intrusive rock thrust up from below; thus showing the want of conformity between these limestones and the strata that I consider to intervene between them and the cretaceous strata of Vancouver Island and the Gulf of Georgia.

The map is a tracing from the Admiralty chart of the straits between the south end of Vancouver Island and the mainland, but extended northwards so as to include the position of the coal mines. On it I have sketched in the probable range of the different formations, but in a very imperfect manner, as my own observations were only the result of a trip made in a canoe with four Indians, for 70 miles up the coast to Nanaimo. At this place coal has been worked by the Hudson's Bay Company since 1854, and the total outport up to January 1860 has been about 12,000 tons. Through the kindness of Mr. Nichol, the gentleman in charge of the works, and of Mr. Pearce of the Land Office, I am able to show a plan of the workings, and also a map of the neighbourhood, in which I have inserted my own observations of the geology. At the time of my visit there were three pits in operation, giving employment to 30 miners and a number of labourers. The former are principally Scotch and Staffordshire men that have been brought out to the country at the Hudson's Bay Company's expense; but the greater number of the latter are Indians, small tribes of whom come and settle at the mines, and work for a short time, till they tire of the uncongenial life, when they leave to make room for another band. The irregular supply of labour from this cause adds greatly to the uncertainty and expense of the workings. When working in the best seams at Nanaimo, a miner can put out two and a half tons per day. The shipment from Nanaimo in the month of January 1860 was 2,000 tons, the trade having at that time

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* The list of those examined by Mr. Etheridge, is as follows :—

Avicula Hebrascensis?	*Tellina.*	*Cardium.*	*Venus* (*Cytheria?*)	*Nucula.*
Nucula (*Leola?*)	*Ostrea Cortex.*	*Ostrea.*	*Baculites.*	*Wood.*

In one fragment occur *Cardium*, *Avicula*, *Nucula*, and *Baculites*. The *Ostrea Cortex* formed a bed by itself, along with another smaller species.

been suddenly extended by the demand consequent upon the establishment of gasworks at Portland, Oregon, and several other places. This extension of the market was supplied from a large stock that was lying on hand at the time, but from having been exposed to the action of the weather for many years was of very inferior quality. In spite of this, however, I understand that the demand has continued steady throughout last year, and that the coal has been much used in California for making gas, instead of that brought from the eastern states, as heretofore.

Coal from the same description of strata has been also worked to some extent on the opposite side of the Gulf of Georgia, at Billingham Bay, and also at Cooze Bay, in Washington territory. Although it has been found in many other localities along the coast, as I shall mention, after describing the formation, these are the only places where it has been worked to any extent. The whole formation associated with the lignite or coal beds is very extensively developed along the Pacific coast, and has generally been considered as of tertiary age, excepting from the first accounts sent home, which, as there were no fossils, induced geologists to consider them as carboniferous. Some fossils transmitted to the Jermyn Street Museum many years ago, were first rightly recognized by the late Professor E. Forbes as being cretaceous; but the localities were undescribed, and, in the absence of sections, it was impossible to deduce anything from them regarding the age of the coal beds.

The observations I have now to offer respecting these strata will, I believe, put their age beyond doubt as cretaceous: but rightly to understand the value to be attached to them requires me to give first a sketch of the physical features of the district.

The southern part of Vancouver Island, where the town of Victoria is built, is composed of metamorphic rocks, with occasional beds of crystalline limestone. This district, and also the central portion of the island, is, as may be expected from the formation, everywhere hilly, and even mountainous, with only limited patches of fertile soil in the valleys. However, the scanty soil on the rocky hills supports a fine growth of timber, so that they are almost invariably wooded to their summits. In the immediate neighbourhood of Victoria there is, nevertheless, a good deal of fine open land, dotted with small oak trees. On passing to the north, through the Canal de Nuro, the islands of the archipelago between Vancouver Island and the mainland are composed of strata of sandstone and conglomerate, which form lofty cliffs, overhanging intricate but beautiful inlets. The junction between these two formations was not observed, but I think it is south of St. Juan Island, and from thence crosses to Vancouver Island by Sandwich Point, and thence northwards a little way back from the coast, leaving a narrow slip of fine land.

These sandstone and conglomerate strata have a uniform strike of from N.N.W. and S.S.E., and in passing along the shore of Saluma Island they were observed to form several well-marked synclinal troughs, till on passing through the Plumper Pass they dip gently to the N.E. under the waters of the Gulf of Georgia. Section No. 1 (on the map) merely shows the plications of the strata as observed in passing along the shore once in a canoe, and again in a steamer; the nature of the beds not being ascertained beyond the general fact that they are thick-bedded sandstone and conglomerates, with sometimes strata of clay shale. The sandstones are much acted on by the weather, and at the water-line the sea has generally worn in them caves and hollows. The conglomerates form the highest beds of the series, and are of immense thickness.

After passing the Plumper Pass, in proceeding north through Trincomaler Channel, Galiano Island to the west presents cliffs about 800 feet high of the sandstone and conglomerate strata, with a gentle dip to the east: sometimes spits or low promontories of the strata run parallel with the coast, enclosing narrow bays. The west side of the channel, on Salt Spring Island, is a low shelving coast heavily timbered to the water's edge, and exposing outcrops of grey and blue clay shales, which dip to the east. The portion of this island which is occupied by these shales is the finest land for settlement I have seen on the coast; but the southern part is mountainous, rising to the height of 2,300 feet. It is on the north part of Salt Spring Island that the saline springs are situated from which it gets its name. They seem to escape from the shales, and occur in spots clear from timber, and covered with green moist vegetation abounding in saliferous plants. Round the orifices from which the brine escapes there have formed conical mounds of granular calcareous scinter stained with iron, but in summer there is said to be an abundant deposit of pure white salt.

North of Salt Spring Island the strata preserve the same strike and general appearance all the way to Nanaimo, the island forming long spits of sandstone and conglomerate, with precipitous shores to the west. Just below the "Rapids" the shales were again noticed resting on the sandstone, and both dipping to the west. At very low tide a thick seam of lignite is exposed at this point and on the island opposite, and to the east I found a thin seam in the sandstones. At Nanaimo the sandstone country occupies a broader belt along the shore of Vancouver Island than further to the south; but immediately to the north the strike changes to nearly east and west on Newcastle island, and on Fossil Point the lowest beds were seen to rest on igneous rocks, which continued to occupy the coast for the few miles I went further to the north. At the head of the Gulf of Georgia the sandstones are again said to form the islands that crowd the narrow channel that separates Vancouver Island from the main land, and also a great extent of both shores. From Comux and Valdez Inlet, which is situated in this locality, some of the fossils I have were procured by Mr. McKay of the Hudson's Bay Company. Also at the extreme north end of the island, at Fort Rupert, Mr. Lord, of the Boundary Commission, observed the sandstones and thick beds of lignite dipping out to sea.

At many points along the eastern shore of the Gulf of Georgia these strata have been detected with the associated lignite beds. North of Howse Sound the mountains closely hug the sea coast, but south of that they retire along the north shore of Burrard's Inlet to the S.E., so as to be 60 miles inland at where the boundary meets them, thus leaving a very heavily timbered tract, which forms the only level country in British Columbia east of the Cascade range. Most of this district is covered by shingle terraces and other superficial deposits, which obscure the underlying strata, but at Burrard's Inlet, eight miles north of the entrance to Fraser River, lignite and sandstones containing fossil leaves have been sent home by H.M. Ship "Plumper." Also on Fraser River, near Fort Langley, and on its tributary, Pitt River, the lignite has been observed; and again at Billingham Bay, south of the boundary line, so that it is probable that they underlie the greater part of this region.

Details of the Strata at Nanaimo.

In the section in the large map, I have represented the whole beds observed at Nanaimo in their probable order, but I did not see any one section giving the complete sequence expressed in it. In Section 1 (detached Sheet), starting from Fossil Point, north of Departure Bay, we have the high promontory formed of trap, resting on which are beds of greenstone conglomerate, consisting of spherical masses of greenstone cemented by a felspathic matrix. Over this is a tuffaceous bed with imperfectly formed crystals, five to six feet in thickness, partly fused and often buried by the trap from below. Then follows a very tough green sandstone quite filled with shells, for many of the specimens of which I have shown I am indebted to Mr. McKay. The following is the list as determined by Mr. Etheridge:—

Trigonia Emori.
Trigonia (sp.?).
Cytheria leonensis.
This is the most common shell.
Arca (3 species).
Psamslia sp. (?)
Exogyra (2 species).
Ostrea (2 species), one of which is of great size.
Rostellaria.
Pictea.

In speaking of the beds on Red Deer River, I referred to the fossils found at this place as showing the existence of forms which are in Mexico associated with those of the Saskatchewan, and in every case found in the proximity of the lignite beds. Thus, in particular, we have *Cytheria Texana*, common to the Saskatchewan and Mexico, and *Trigonia Emori* common to Mexico and the Pacific coast. This, in the very imperfect state of our knowledge and the limited collections, is probably a mere indication of the agreement that may yet be established.

The green sandstone beds, at the base of the series which contain the lignite, seem to have been deposited originally on the surface of the igneous rock, which was probably submarine, so that its chilled surface easily broke up into the masses that the conglomerate-like breccia, the cement of which has been from the tuffas that were deposited on its surface. On the shoal thus formed, the greensand beds had been found inclosing the molluscous remains. The whole has since been repeatedly disturbed, and some of the lower beds undergone partial fusion by more recent outbursts.

The sandstone is sometimes quite horizontal, but at others quite vertical for a little way, and is only found as patches all round the promontory and north side of Departure Bay. (See Sketch Map.)

Three hundred yards from the shore, in the channel that passes between Newcastle Island and the Fossil Point, is a row of islands composed of very fine conglomerate that might be termed "gravel stone," in beds that dip to the S.S.E. at 15°, these beds contain small fragments of carbonized wood.

A quarter of a mile further on in the direction of the dip, on the north end of Newcastle Island, there are high cliffs of sandstone which preserve the same direction. They seem to be rather more disturbed than the strata that form the islands in the channel, but this appearance is exaggerated by the great amount of false bedding. The strata of sandstone continue to preserve the same direction of dip all along the coast of Newcastle Island, but gradually becoming more horizontal towards the southern extremity. At "Exit Channel" occur the seams of coal, the lowest of which has been worked to a considerable extent, while the existence of the other has only been found by boring. The outcrop of these two seams has been ascertained on the east shore of the island, where they have the same characters and relative position, thus showing that they are continuous to that extent. The lowest bed of lignite is called the Newcastle seam, and is worked by levels driven into the outcrop as it rises with the high bank from the shore. The coal or lignite is six feet thick, with a floor of sandstone, and the roof of a very tough conglomerate of very small pebbles. The strata have a dip of 20 degrees, so that the method employed succeeds well for taking out small quantities.

This mine was not being worked when I visited it, but there were large heaps of the coal waiting for a market, that had been lying there for some years, so that I could judge the effect of the weather on it with great facility. The surface was turned to a rusty brown, and the masses showed a tendency to break up with a slaty fracture, otherwise the exposure had worked but little change.

Along the shore of the island to the south the strata of argillaceous sandstone are seen to dip steadily in the same direction, but with less and less inclination, till at the southern extremity they are almost horizontal. On Douglas Island there is said to be another seam of coal from the shale along with which the fossil leaves are generally procured. I had not an opportunity of visiting it, however, myself. On the coast of Nanaimo Harbour the strike of the strata is quite different, but yet they preserve the same character and sequence, "Exit Channel" seeming to mark a great fault. The little peninsula on which the Hudson's Bay Company's establishment stands, and where the coal was first discovered, is also another dislocated portion of the strata, as may be seen by reference to the map.

At Nanaimo, as on Newcastle Island, there are two seams, the "Newcastle" and the "Douglas," the first of which is everywhere about six feet in thickness, with sometimes a floor of fire-clay, but more generally of sandstone, and the roof consisting of the fine conglomerate bed, about 60 feet thick, on which rests the Douglas seam, with an average thickness of from three and a half to four feet. The roof of this seam is sometimes of iron clay shale, but more often of the same tough conglomerate that it rests upon. On Chase River, one and a quarter miles to the south, the outcrop of a seam has been discovered and worked to a small extent, which they consider to be the Newcastle seam, and as it occurs right in the line of strike, and they have ascertained the outcrop at several points, it is probable that the beds of coal are continuous thus far at least.

In the mines they have met several "stone faults," where the floor rises up and throws the coal seam out for several fathoms. It is generally represented, however, by a carbonaceous parting. These faults are a source of great expense in the working, as the conglomerate to be pierced is exceedingly tough and compact, so that the blast only brings it away in small pieces. The extent or character of the workings can be ascertained better from an inspection of map, however, than by any description.

It is probably from this place that the fossils were procured that Meek and Hayden refer to in a notice of the coal of the Pacific coast, contained in the Pacific Rail. Rep., where they say that, among the fossils from Vancouver Island, a number occur in a green sandstone matrix, which have a strong Jurassic aspect.

In proceeding along the coast towards the mouth of Nanaimo River, the strata consist of argillaceous sandstones, with a similar character to those of the southern part of Newcastle Island, and preserving a steady though gentle dip to the E. by S. A short way above the entrance to the river, in the sandstones there is a thin seam of coal, the position of which was pointed out to me by Mr. Nichol, as the river was too high to allow us to see it. Continuing to ascend the river, which is of small size, we found low exposures of the sandstone, still with the dip to the E., and at Fossil Bank, three or four miles from the mouth, they are overlaid conformably by dark purple clays, filled with septaria, which yield cretaceous fossils. The dip of the beds is 10° to the E. by N., and the clay strata were clearly seen to rest on the hard-bedded sandstones. I found *Inoceramus*, *Baculites*, and some other fragments of fossils, of which other specimens are also among those obtained by Mr. Bauerman at this place. I was told at Nanaimo that Ammonites have frequently been found there of large size, and from Mr. McKay I obtained a number of fossils, some of which he obtained at this locality, but others having the same appearance, and also contained in septaria, he procured from Comux and Valdez Inlet, at the head of the Gulf of Georgia; but these two sets of specimens had been unfortunately mixed together. For a couple of miles the Nanaimo River flows through these clay strata, and then turns again from the S.W., and in ascending the sandstone strata were again found to recur, as in the lower part of the river, but with a more rapid dip. At the "Cañon" these sandstones form precipices about 100 feet in height, forming a narrow gorge 600 yards long, through which the river flows. The beds dip at 15° to the E.N.E., and are very like those of Newcastle Island.

From under these sandstones, in ascending the river, hard beds of the gravel conglomerate cropped out with great regularity, separated by soft beds of red and greenish clay. These probably correspond to the group with the lignite at Nanaimo, but I failed in finding any trace of it beyond fragments of carbonized wood. The strata from the fossil bank up to the river, as far as I went, are shown in Section 3.

The total thickness of the beds from the lignite to the clays at Fossil Bank I estimated at 600 to 700 feet, but I had no opportunity of making any exact measurement. Between Nanaimo River on the coast there is a tract of very fine country, and it is probably occupied by the septaria clays, which, as I mentioned before, were seen a little south of the rapid.

The following is the list of fossils from the septaria clays, which includes those specimens obtained by Mr. McKay from Valdez Inlet:—*Inoceramus* (?), (this is the *I. Crepsii* of Conrad and Roemer), *I. Texanus*, *I. Nebracensis*, *I. nudulato-plicatus*, *J. confertimannulatus*, *I. mytiloides*, *Baculites compressus* (and two other species), *Ammonites geniculatus* (and three other species).

It is thus evident that the group of strata, with the lignite seams towards their base, must be of cretaceous age, but as yet it would be premature to infer the exact position they hold with reference to the rest of that system. The great beds of conglomerate which form the long narrow islands along the west of the Gulf of Georgia must, I think, overlie all these strata.

From the sandy shales along with the lignite I forward fragments of the yew-like frond, just the same as those I got in the shales.

At the Rocky Mountain House and in the collection sent home by H.M.S. Plumper, all the specimens from Nanaimo are of this plant. Those from Burrard's Inlet are in a different sort of stone, and are reticulate leaves, and were found along with beds of lignite; but there seem to be no specimens of the yew frond from that locality.*

From Nanaimo Mr. Bauerman has also sent home a plant that looks much like a portion of a monocotyledonous leaf (*Musca?*)

At Billingham Bay the sections given on map were taken by Mr. Pemberton, and show that the lignite occurs in large quantity at that place. Lieut. Trowbridge, in describing the strata there, says they are 2,000 feet thick, and including in all 110 feet of the lignite coal. His sections are probably, however, all of the same group of strata, being at different points in the strike, which gives rise to this apparently enormous thickness.

The analysis of the coal from Billingham Bay, which is generally considered inferior to that of Nanaimo, is given in the Pac. Rail. Rep., as follows:—

Carbon - -	47·63
Bitumen† - -	50·22
Ash - - -	2·15

This coal has been sold in San Francisco market at $18 to $22 per ton (75*s.* to 91*s.* 6*d.* sterling.)

Lignite coal has also been worked for the same market from Coon Bay, which has the following composition:—

Carbon - - -	46·54
Gaseous matter - -	50·27
Ash - - -	3·19

Conrad states that shells from this locality are of Miocene age.

At Binicia, above San Francisco, coal also occurs, and was wrought for some time, but the dip was too steep.

In Newbury's report on the geology of this part of California I have not seen any notice of where this Binicia lignite occurs in his sections; but between Binicia and the sea he describes 3,000 feet of strata, the lowest beds being of sandstone and shales, resting on and penetrated by serpentine and trap (the same which are so highly charged with ores of copper and mercury further to the south). These are followed by green and brown shales, coarse soft sandstone, fine sandstone and shales, with *Pecten*, *Natica*, *Mactra*, and *Filaria*, and these conglomerates and tuffas, the whole lying at an angle of 30°. Towards Binicia are thin-bedded clays, with sharks' teeth. Up Feather River, a tributary of

* Dr. Hooker has specimens from Disco Island in the Arctic Regions, where the yew frond and reticulate leaves are associated in the same specimen.

† Also includes the water most probably.

the Sacramento River at Chico Creek, a calciferous sandstone is described containing *Nucula*, *Mactra*, and other tertiary forms, but from the same place are *Baculites*, *Inocerami*, and *Ammonites*, which Meek considers as proving the existence of upper cretaceous strata at that place; so that it is probable that there are strata of both ages, but included in the same disturbances, and it is not unlikely that the section from Binicia to the sea may also include cretaceous strata.*

The existence of coal or lignite on the Pacific coast, of quality fit for the purposes of raising steam, is of great commercial importance, and that obtained from Nanaimo is as yet admitted to be the best in the market. If these beds are, therefore, discovered to be persistent, so that they can be worked to advantage on a large scale, there is little doubt that this coal, even though it be an imperfect substitute for the finer coal we are accustomed to in this country, will form a valuable source of wealth to the new British Colony. Already it is extensively used by the British Navy on that station, and it was found to require only a slight modification in the method of feeding the fires to make it highly effective as a steam generator.

As beds of coal of similar quality exist in the Islands of Japan and Formosa, we would thus have the supply of fuel at the extremity of the line of the great sea voyage, if the route from England by the Canadas, Saskatchewan, and British Columbia, to China and the east, were adopted, a natural fitness not to be overlooked in considering such a scheme.

Palæozoic Rocks of the Eastern Axis.

The general structural features of the country travelled over on the canoe route, so far as they can be learned from a single line of traverse, have already been well described by Mr. Keating, Sir John Richardson, Dr. Bigsby, and others; but from the complicated relations of the rocks of which it is composed, no detailed observation can be of any value until they are extended in every direction by means of a combined topographical and geological survey. The whole of this district is occupied by a primitive axis, the intermediate primitive belt of Sir J. Richardson, which is composed of gneiss, mica, schist, limestones, and other metamorphic rocks, with intrusions of granite, probably of very different ages, the whole formation being the Laurentian of Logan, corresponding, it is thought, to the fundamental gneiss recently described by Sir R. Murchison, as underlying the most ancient rocks in Scotland.

From observations made in the course of our journey, it appears that there are two distinct directions of strata in the rocks which compose this axis, marking it into two districts, one from Lake Superior to Rainy Lake; the other from Lake of the Woods to Lake Winipeg. Not only the general strike of the altered and upheaved rocks in these two districts, but also the direction in which the watercourses affect the principal descents, and the manner in which the lakes in each of them are arranged, all indicate a different direction of the elevating and disturbing force, in other words, two different axes. These seem to converge towards the south, including an angle of about 25°, the eastern one being directed from the north-east to south-west, while the western one lies much more nearly north and south. In each of these there is a great central district, where nothing but rounded bosses of granite are seen occurring as ridges and islands, which rise little above the level of the flooded country in which they occur. On either side of these two granite districts metamorphic rocks are ranged with great seeming irregularity as regards their order and dip, but still, on the whole, preserving their direction very consistently with the bearing of either of the two axes to which they belong. There are besides many minor outbursts of granite as dykes and intrusions, but they do not seem to interfere with above-mentioned general bearings of the country. From this cause, in crossing the district between Lake Superior and Rainy Lake, the summit level is reached by an abrupt and rapid ascent in a direction at nearly right angles to the main eastern axis. Then follows a long traverse almost along the summit of that axis, and then an abrupt but comparatively short descent to Rainy Lake, again at right angles to the axis.

The first great step in the ascent from the east is made at the Kakabeca Falls, where, from a succession of faults which mark the commencement of the more highly metamorphosed rocks, a sudden elevation is effected, the summit level of which is 179 feet above Lake Superior at Fort William.

About one mile below the fall, a fine section is exposed in the form of a cliff 130 feet high, crossing the country from north-east to south-west, consisting of a dark argillaceous schist in thin fissile beds, from one to two inches in thickness, very much jointed, and having many small veins of quartz, and sometimes calc-spar, included both in the lines of bedding and in the joints. These beds are quite horizontal, and through their whole thickness the river has cut its way back to the present position of the fall, in a manner similar to that in which the river-bed below the Niagara Falls has been formed. They are supposed to belong to the Naronian series, a system which is largely developed on the shores of Lake Superior and Naron, resting unconformably upon the Laurentian series, and having, according to Logan, a thickness of 12,000 feet. This large system, which has not as yet yielded any fossils, and always underlies the Silurian, has been considered as representing Cambrian.

On the River Kaministoquoiah, above the fall at Friars' Portage, the strata have an almost vertical position, and a little further on, at Lower Island Portage, are found to be dipping at an angle of 40° to south-south-east, and to be changed in character, having mica developed in them, and also a great abundance of quartz veins. Immediately afterwards, in the course of the ascent, true granite occurs; and after several alterations, schistose flags reappear at Upper Island Portage, but now dipping at a high angle to the north-west.

From the Falls to the Dog Lake, the ascent of the river pursues a northerly course, crossing the beds obliquely by a succession of minor falls, giving rise to scenery of unequalled beauty. At the Dog Portage, another sudden rise takes place in the water level; for the rocky high grounds, which, for a long way below have been skirting the river at some distance, forming as it were the limits of a wide valley, here converge, and form a granite barrier across the river, the summit of which is about 719 feet

* On the "Colerado River," in Texas, lignite coal, in beds four feet thick, has been observed in strata beneath those with Eocene fossils, and on a tributary of the "Del Norte" beds 3 to 4 feet thick occur, of good working quality, in true cretaceous strata.—Pa. Rail. Rep.

above Lake Superior, and 440 feet above the river at the lower end of the portage, but only 140 feet above the lake level at the upper end; thus making a rise in the water level of 297 feet in the short distance, two and a half miles. As the portage road passes right over the top of this hill, and leads to a point in the lake far from the exit of the river, the nature of the falls which produce this sudden change in level could not be examined, but the mass of the hills seem to be granite. Although this is not the highest point of land over which we passed during the route, still it is probable that this hill is as high as any portion of the rocky axis of the country, as those along the lake are even inferior to it in elevation, while the ascent, which is made after leaving the upper end of Dog Lake, is through a swampy country covered with drift. In fact, after leaving Dog Lake, until a considerable descent has been made to the west, no rock is exposed, the whole summit level being covered with a thick deposit of drift, as will be afterwards described.

From the Lake of the Thousand Isles, where the rocky flooring of the country is again uncovered, until Sturgeon Lake is reached, the descent is very slight, and the route follows a chain of small lakes, which are in most cases detached from one another, being separated by rocky barriers, over which the canoes and cargoes are carried. In many cases the lakes are at exactly the same level at each end of the portage; and the greatest difference between the two ends of any of these portages is only about 35 feet, so that the total descent in this part of the route cannot amount to very much. This chain of lakes may, in fact, be considered as occupying a line parallel with the summit of the watershed; and the country in which they lie is almost wholly composed of granite, occurring in broad rounded eminences, nowhere rising to 100 feet above the level of this half-drowned country. It is probable that this granitic belt is expanded considerably where the old portage route crosses it, and that the whole chain of lakes between Lake Rasiganagah and Sturgeon Lake lies within it. It is this belt which will form the great obstacle to the formation of any kind of road across this watershed.

From Sturgeon Lake in Bad River, there is a considerable descent to the south, which forms the only exception to the general north-westerly descent of the waters to Rainy Lake. From the Lake of the Cross to Lake Namucan the descent is rapid, and the river-channel crosses the strata of gneiss and bedded greenstones at right angles, following the direction of the dip.

Rainy Lake has its length agreeing with the strike of the strata, which is here more nearly east and west than before. Between Rainy Lake and the Lake of the Woods the superficial deposits again cover all rocks from view; and when the north end of the latter lake is reached, and they are again exposed, their general strike is now changed to almost north and south, agreeing with the greater axis of the lake, just as Rainy Lake agrees with the strike of the eastern district. The descent from the Lake of the Woods to Lake Winipeg is by successive groups of falls, between which the river forms lake-like expansions, which lie generally at right angles to its main course.

The first part of the River Winipeg flows across vertical strata, and then enters a granitic district, very similar to that passed through between the Lake of the Thousand Isles and Sturgeon Lake. The strike of the rocks in this region is generally a little to the east of north, and the nature of the strata is very similar to that of the country east of Rainy Lake, but less disturbed by dykes.

No trace was observed of the existence of the schistose rocks on the west flank of the axis, the gneissoid rocks continuing for the whole way to Lake Winipeg. The junction of the Silurian limestone, Silurian rocks, Mr. Hind, who had favourable opportunities from having coasted along the Lake Winipeg, and the other lakes that lie in this system, gives an interesting account of its development in his recent work (Hind's Canadian, Assineboine, and Sark, Ch. xxxviii.). His fossils having been submitted to Mr. Billings, of the Canadian , the following groups were identified as occurring in the Winipeg basin, all of which are lower Silurian:—

1. Chazy formation.
2. Bird's-eye.
3. Trenton.
4. Hudson River group.

Of these I only saw the latter at the same place that Dr. Owen examined and recognized the proper age of the beds in 1848, namely, at the Lower Fort Garry on Red River. Here there is a section of magnesian limestone exposed in the bed of the river when the water is low, and which is then quarried for building purposes. As the river was high when I was there, this section was not visible; but from fragments lying on the bank the following fossils were obtained:—

Cyathophyllum.
Columnaria alveolata, Hall.
Favertella (*Favosites basaltica* of Dr. Owen?)
Receptaculites occidentalis, Salter.
Osmoceras Lyonii, Stokes.
Strophomena plano-convexa.
Orthis, var. of Lynse.
Spirifer elegantula.
Machiria.
Rhynchonella incubiscens, Hall.

These fossils have been named for me by Mr. Paller, who has kindly examined the few Palæozoic fossils that have come to hand. The limestone is sub-crystalline, of a light buff colour with purple blotches, very hard, and with an angular fracture. At Stony Hill, about fifteen miles north-west from the upper fort, there is an isolated bluff of limestone, rising from the plain level to the height of 80 feet. The south and western exposures are abrupt and water-worn, it having evidently been at one time an island; and, indeed, during the great floods which have several times inundated the settlement, it has been one of the few spots upon which the inhabitants can take refuge, reaching it by means of boats. The beds of limestone are horizontal, or nearly so, and are slightly different from those at Fort Garry in their mineral aspect, having a more crystalline fracture, and the colour being of a reddish hue. No fossils can be discovered in newly fractured portions; but on the weathered surfaces a few obscure remains of fossils are to be seen, projecting, along with siliceous and gritty particles, from a dull floury surface.

The Silurian rocks have now been traced continuously from near Lake Superior, west of the sources of the Mississippi, and thence into the valley of Lake Winipeg, and on to the Arctic Ocean, skirting the more ancient axis. On the shore of Lake Winipeg, they have been observed much disturbed, and even vertical, by Dr. Owen (Report on Geol. of Minesota); but in general they rest nearly horizontal, or with only a very slight dip.

Resting on the Silurian strata, Mr. Hind has detected limestone with Devonian fossils, in a tract to the west of Lake Winipeg, where there are copious salt-springs, the brine from which is used for the

manufacture of salt. He considers the line marked by the occurrence of these salt-springs to indicate the outcrop of the Devonian strata. The route of the Expedition at once passed from Silurian and cretaceous rocks, without any indications of the intervening strata until reaching the Rocky Mountains.

Structure of the Rocky Mountains.

The plains at the eastern base of the Rocky Mountains are, as I have before stated, elevated above the sea 4,000 feet, and, as the average limit of vigorous vegetation at that latitude is attained at 5,000 to 6,000 feet, the greater mass of the mountains display, in consequence, naked and bald surfaces, which are generally very precipitous. Their structure is thus easily discerned to be of strata, the thickness of which, originally very great, has been much exaggerated by the complex flexures which cause the beds to recur again and again, sometimes even in the same mountain. This apparent confusion strikes the eye at once; and it is not till observations have been made over a considerable extent of the range that the extreme regularity with which the disturbing agencies have been exercised becomes evident. The flexures of the strata on the eastern part of the mountains have been so completely overturned that the prevailing dip is towards the centre of the mountains, that is, to the west and south. The strike of the plications varies, but in a regular manner. From Bow Fort southwards, it is only a few degrees E. of S., but north of that river, to the valley of the North Saskatchewan, its average direction is S.S.E., and between that valley and the Athabasca it is S.E. nearly, while to the north of that it is changed to within two points of east and west. These changes in the direction of the strata take place at the different great valleys by which these rivers leave the mountains, and which probably mark the lines of transverse fracture. The mountains are divided into groups by great longitudinal valleys, which are met with in every part of the chain I examined, running in the length of the range, and forming a part of each of the river systems. The course of these rivers is therefore in every case zigzag, alternately flowing through wide valleys either to the north or south, and then making short breaks to the east or west, through narrow and rugged defiles. Throughout these great valleys it seems to be the arrangement of the detrital deposits that has in many cases determined the direction in which the rivers flow. A curious feature is to be remarked in the position of the watershed between the waters of the Pacific and those of the Atlantic, arising, no doubt, from this cause. It is found gradually to occupy a position further to the west, and through the chain, so to speak, as the rivers rise more to the north. Thus the Missouri can hardly be said to rise within the Rocky Mountains at all; Belly River, on the boundary line, rises from the first ridge before reaching the first longitudinal valley; Kananiskis River rises in that valley, or from the second range; Bow River from the third range; the North Saskatchewan from the fourth range; the Athabasca from the fifth; and, although I have not seen Peace River, the one further to the north, still this feature is so well marked, that it has been spoken of as rising on the west side of the Rocky Mountains, and then cutting through that range to the east. This all tends to show that we must not look on the Rocky Mountains as a continuous range, stretching as a line of fracture through the length of the continent, but rather as a succession of centres of disturbance, a fact which has been amply proved within the American territory. Thus what are known as the Rocky Mountains at the head of the Missouri are rounded off to the north and south, losing their character of a lengthened range in that of a mass of mountain country. In like manner, the Rocky Mountains within the British territory must be looked upon as a mass with its longer axis lying N.N.W. and S.S.E., to which the main strike of the strata conforms.

There are three of these great longitudinal valleys that are more persistent than the others, each of which marks a change in the formations which compose the mountains. As far as the first of these the structure of the mountains may be obtained in sections Nos. 23, 33, 38, 39, and 40, where the strata are of thick-bedded limestones. These limestones are of dark and light blue colour, crystalline, compact or cherty, with fossils that are either of carboniferous or Devonian age, the principal of which are *Spirifer*, *Orthis*, *Chonetis*, *Conularia*, *Lonsdalia*, *Cyathophyllum*, *Lithostrotion*, &c. In the sections these limestones are numbered (1). Along with them are softer beds of gritty, sandy shale, generally of a dull red or purple colour (2), and the irregular disintegration of these two groups of strata produces the rugged appearance of this range, the mountains being in general formed by masses of synclinal folds, while the valleys mark anticlinal fractures. The valley between the first and second range marks a great trough in the strata, in which patches are preserved of chocolate-coloured ferruginous shales, with beds of grit and layers of ironstone, and which we see in section No. 24, resting on the flanks of the limestone mountains belonging to a more recent formation, being those to which I have previously alluded. In the second range we have the same limestones and shales repeated as in the first (see sections Nos. 26, 34, 31, 42), but at the base I observed traces of a magnesian limestone of a buff colour. Towards the west this range everywhere in the mountains presents a sheer wall of vertical limestone, the ragged edge of the beds forming the Sawback range. The change in the look of the mountains that now takes place may be well seen, as on Bow River in section 28, and on the North Saskatchewan in section 35, where the east side of this valley consists of vertical strata; while on the west side the mountains are formed of cubical masses of strata that are almost horizontal. These are of hard quartzite sandstone, passing into conglomerate, and capped by hard limestone, with the ferruginous shales resting obliquely on their sides at the line of fracture. The extraordinary block-like shape which is thus given to the mountains is shown in sections Nos. 29 and 30. Section 31, at the source of the Pipe Stone Creek, shows mountains of the second range, and from the beds marked (2) I procured some fossils that had been formed. They are, according to Mr. Salter, *Orthis*, *Lingula*, *Euomphalus*, and from the limestone (1) *Lithostrotion*. In a black carbonaceous shale, in another part of the second range, I found several calamites, and in the limestones along with them, *Productus*, *Spirifers*, *Encrinites*, and *Corals*, so there is little doubt that the beds are of a carboniferous age. On the Athabasca River gneissoid rocks, traversed with quartz veins, were observed to form the floor of the second longitudinal valley (Sect. 43) (6); and in descending the valley of Vermillion River, and also that of Blaeberry River, talcose shales were met with, also forming the floor of the valley. On Kicking-horse River, in the third range, we have the mountains again formed of blue limestone, along with a compact blue schist with red bands, giving a curious striped aspect to the rock. This schist or slate rock forms the highest points of the mountains in the above district.

The third longitudinal valley is that in which the Columbia and Kootanie Rivers flow in opposite directions, parallel with the range. Along the eastern shore of the Columbia Lakes we find the mountains again composed of the carboniferous limestones which form the eastern ranges, but resting on slates. At the source of the North Saskatchewan the mountains are very massive, and are principally composed of a deep blue compact limestone, that often contains nodules of iron pyrites. A few specimens of *Atrypa* (*reticularis?*), and *Athyris*, lead Mr. Salter to consider these limestones as Devonian. To the west of the great Columbian valley, the strata were only seen in descending the Kootanie River (as shown in Section No. 51). That river breaks through a succession of well-defined ranges, that never rise to any great altitude, and which are composed of dark schists traversed by quartz veins, the whole forming beautifully-developed flexures. Some miles east of Puddlers' Lake, the slates were again seen underlying these schists, and at that place commences a district of granite country, where mountain ridges rise in rounded masses to the height of 800 to 1,000 feet above the general level.*

Towards Fort Colville the Kullerpillem Mountains bound the Columbia to the east, and are formed of quartzite in thin beds, limestone partly altered, and serpentine. At the south end of the Kullerpillem Mountains the great trap flows of the Columbian Plain commence, and are then seen to overlie the granite and other rocks, filling up the hollows in their surface. The horizontal extent of these lava-flows is truly wonderful, as they occupy nearly the whole surface of the Great Columbian Desert, without any chain of mountains or peaks to which their origin can be referred.

This great plain is frequently cut by chasms, 500 to 600 feet deep, the sides of which expose stratum after stratum of thin lavas intercalated with softer tuffaceous beds, the whole being quite horizontal. The lava-flows have often a columnar structure, especially in the neighbourhood of depressions in the plain, such as Sil-katkwa Lake, which probably mark the position of ancient craters. At some points up Snake River, American explorers have procured tertiary fossils from the tuffaceous limestone that underlies these basalts.

The whole way to the Dalles the Columbia flows through an enormous chasm in these stratified lavas or tuffas, giving rise to most wonderful scenery. Often the whole of this mighty river is compressed between perpendicular walls of basalt, but with a channel of such depth that its treacherously swift current preserves a glassy surface. At where the Columbia breaks through the Cascade range, there is a great rapid rather than a fall, from which the mountains have derived their name, and connected with the formation of which there is an old Indian legend. The river from the Dalles to this point, a distance of 40 miles, is almost without current, and bounded by a perpendicular wall of mountains on either hand, and the story is that one time the river had a uniformly swift current the whole way, and, at where the cascades are, at that time passed under a gigantic natural arch that crossed from side to side of the chasm. During a great earthquake this arch fell down, and now remains as the chain of islands across the head of the cascades, while the river has gradually carried down the fragments so as to form the long rapid. The river was thus dammed back all the way to the Dalles, and submerged the forests along its banks, the stumps of which are still to be seen sticking out of the water at the distance of several hundred yards from the shore. The stumps of the submerged trees are of a kind of spruce that never grows near water, and as the other conditions of the story fit in remarkably well, I am inclined to think that there may be some truth in it. It was told me as we were passing the spot by a fellow passenger, who had been a long time among the natives as an American Indian agent, and I have since heard it repeated by gentlemen who have been 25 years in that country in the Hudson's Bay service.

In descending from the Cascades to Vancouver, stratified rocks are seen perched on the flanks of the mountains, among which is a group of strata of a bright vermilion colour. Along the valley of the river there are also strata of tuffaceous sandstone and clay, which are only slightly disturbed. At the Cascades the beds attain a considerable thickness, and contain large fragments of silicified wood. The scenery of the lower Columbia, before reaching the flat district around Vancouver, is exceedingly fine, the river passing successively by bold promontories, more than 1,000 feet in height, and sometimes under lines of cliff over which rivulets pour as cascades from a height of 600 feet. Between the Olympian or Coast range, which stretches to Cape Flattery, and the Cascade range, the great valley of Paget Sound is continued south as far as latitude 44°, first to the Columbia River by the Cowlity, and then by the Valley of the Willamette, thus forming a long stripe of valuable country, which forms the only good part of Oregon and Washington territories. The river Columbia crosses this stripe of country, only conforming to its direction for a short way from Vancouver to the Cowlity.

Of the Olympian range, I believe, nothing is known; but as viewed from Paget Sound the outline of this mountain reminded me in a striking manner of that of the exterior ranges of the Rocky Mountains, where they are composed of plications of stratified rocks. I have previously mentioned the metamorphic rocks, with beds of crystalline limestone, that form the base of Vancouver Island.

List of Fossil and Rock Specimens transmitted to England by Dr. Hector.

Fossils from lower Silurian magnesian limestone, from the bed of Red River, opposite to Lower Fort Garry. Col. 12th to 20th July 1857. (24 specimens.)

Fossils from upper cretaceous shales, exposed in the banks of *Long River*, and also at the *Forked Creeks*, in lat. 50° 2′ N., long. 101° 18′ W. Col. Aug. 1st to 14th, 1857. (15 specimens.)

Limestone from a bed at La Roche Percée, on the River Souri, in lat. 49° 7′ N., long. 104° W. The bed is two feet thick, and lies over the shale that includes the coal. On being exposed to the air it breaks into splintery fragments, and its blue colour changes to a light red.

Also specimens of the *coal*, *sandstone*, gypsum, and other beds, of upper cretaceous or tertiary age, from the same locality.

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* In the absence of data respecting their age, it is not advisable for me to dwell any longer on the strata which compose the Rocky Mountains, than I have in this my general sketch, or to give details that will be found in my journals elsewhere published.

Portions of ironstone septaria, from the clays of *upper cretaceous* age, which are exposed above the "Elbow" of the South Saskatchewan, Nos. 18 to 45. Col. Sept. 20th to 30th, 1857. Lat. 50° 48′ N., long. 108° W. These septaria are nodules of clay-ironstone, with a large proportion of lime, and generally traversed by cracks and veins filled with calc-spar. They also often contain fossil remains of Baculites, Ammonites, &c.

Similar specimens of septaria, with fossils, from the cretaceous clays at Fort Pitt, on the North Saskatchewan. Col. May 1858. Lat. 53° 35′ N.; long. 110° W. (25 specimens.)

Fossils from large boulders of magnesian limestone, found scattered over the plains near Fort Carlton. This is the same limestone as that at Fort Garry, and at the Grand Rapid on the Saskatchewan, above where it enters Lake Winipeg.

Specimen of coal from the lowest bed, exposed in the bank of the North Saskatchewan at Rocky Mountain Fort; lat. 52° 10′ N.; long. 115° 10′ W. This bed is about two feet thick, and is generally as pure as this specimen throughout. It can be traced for two miles along the river, close to the water's edge, and is easily worked for supplying the forge at the fort. No. 48.

Calcareous shale, with obscure plant-impressions, from below the thin coal seam in Sect. 14 at the mouth of Clear-water River. The impressions are like those of sedges or fibrous stems, along with *Taxites*, or a yew-like frond, but which is rare. No. 50.

Carbonaceous shale, into which the coal passes in the same section.

Ironstone nodule from the same shale. The ironstone is not very abundant in the deposits at the Rocky Mountain Fort. No. 53.

Calcareous shale, from above the coal in Sect. No. 14. No. 54.

Jet-like coal, from the two-foot seam at the Mountain Fort. No. 52.

Coal from the upper seam in Section 1. No. 61.

Calcareous shales and slates from same section. Nos. 56 to 60.

Coal from lowest bed in Sect. 13. No. 62. This bed abounds with iron pyrites. In this specimen the pyrites occurs in flat circular scales, very thin, and about one line in diameter. All the coal at the Rocky Mountain House is lustrous, with a sharp cubical fracture, and shows no tendency to crumble.

Specimens of the different sandstones associated with the coal and shales at the Rocky Mountain House. Nos. 63 to 70. There are two varieties among them. A, composed of large grains of pink or white quartz, cemented by a little calcareous matter, and containing a little green colouring matter disseminated in small specks. This stone is soft and friable, and often forms cliffs along the river, 100 to 200 feet in height. B, soft argillaceous sandstone, of a pale green colour. The clay varies in its proportion to the siliceous particles, so that the strata weather very irregularly, giving rise to ledges and concretionary masses, which protrude from sloping banks.

Portion of a silicified tree, ploughed up in a field at Fort Edmonton. The whole fragment was eight feet long, and one foot in diameter. Dark steel-grey colour. *Coniferous.* No. 71.

Specimens of the ash and slag from the forge at Edmonton, where the coal is used. Nos. 72 to 74.

Specimens of the shales, ironstone nodules, and limestone shales, that occur at Edmonton, along with the coal. They contain plant-impressions, of which only *Taxites* has a distinct form. Nos. 75 to 85.

Soap clay from the seam, six inches in thickness, that occurs in the middle of the six-foot coal seam at Edmonton in Section No. 12. This clay is of light green colour, very compact and unctuous, with a slightly harsh taste. It is used by the women at the fort for washing, and it works up into a lather like soap. Specimen No. 86.

Specimens of the coal from the seams at Edmonton; lat. 53° 32′ N.; long. 113° 20′ W. See Sects. Nos. 11 and 12. There are five or six beds, of good quality, but the coal varies much in character. The thickest seam is six feet in thickness. From this a block, one foot cube, was procured, which was compact and lustrous at first, but has since broken into large cubical fragments, the surfaces of which are dull and dusty. None of the coal has a proper wood-structure, like lignite, although portions of carbonized wood are not uncommon. Many of the seams abound in "*Mother of Coal*," or fibrous carbon, which fills small cavities in the coal, and might be mistaken for true charcoal.

Specimens of calcareous scinter and white pipe-clay from the superficial gravel, sand, and clay deposits in the neighbourhood of Edmonton.

Portions of the beds where the coal has been destroyed by spontaneous combustion, baking the adjoining clays into red brick-like material, and being itself represented by a stratum of ash.

Parcel of specimens collected on the route from York Factory to Lake Winipeg, by Lieutenant Blackiston, consisting of fragments of *Gneiss, Mica-schist*, quartz, slate, &c. No. 94.

Fragment of red sandstone picked up on the bank of the Saskatchewan, at Carlton, in which is a *fish vertebra.* No. 95.

Specimens of travertine, with dicotyledonous leaves, from the Saskatchewan valley at Birch Gully. In Section No. 3.

Fossils from the marl and sand beds of mixed tertiary and cretaceous age. Collected at Battle River; lat. 52° 17′ N.; long. 111° W. (18 specimens). These consist of shells, such as Cardium, Avicula, Ostrea, Baculites, &c., along with silicified wood, all overlying the coal beds. These strata were observed for 30 miles along Battle River above the point known as its elbow. They consist of sandstones, marlites with ironstone seams, gypsum, and compact clays. Col. July 1858.

Specimens of coal and associated strata from Red Deer River, in lat. 52° 5′ N.; long. 115° 30′ W. The coal seam exposed here reaches the thickness of 20 feet, of which 12 is pure carbonaceous matter. A little below the above point the coal is on fire, and has been burning slowly for ages. It is of good quality, but contains more iron pyrites than that obtained at Edmonton.

Dicotyledonous leaves, from nodules of grey sandstone that underlie the coal strata at the above locality. These leaves are of two kinds of trees, but the genera cannot be determined with certainty. Nos. 534, 535.

Fossil shells from masses of limestone in the marlites and freshwater strata at the crossing-place of Red Deer River; lat. 52° 5′ N.; long. 114° 30′ W. They consist of Paludina and some other forms, cemented into a hard concrete. The strata may be tertiary or of lower cretaceous age, like the coal strata. Nos. 531 to 533.

Specimens of a similar limestone which occurs on Windy Mount in the Rocky Mountains, also composed of an aggregation of freshwater shells. Collected by M. Bourgeau, at an altitude of 6,000 feet. Nos. 527 to 530.

Specimens of sandstones and shales, in the vicinity of the Rocky Mountains, at the Old Bow Fort, with obscure casts of Cardium, Ostrea, and plant stems. These strata are much disturbed and altered, and are probably of cretaceous age. Nos. 123 to 140.

Fossils from the blue crystalline limestone of the first range of the Rocky Mountains. Collected at Grotto Mountain, August 1858. Consist of *Spirifers*, *Strophomena*, *Cyathophyllum*, *Atrypa*, &c. Either Devonian or carboniferous in age. 19 *specimens*.

Fossils from the second range, which consist of limestones, with much the same character as the last mentioned. At their base limestone with *Atrypa reticularis*, which is Devonian. 10 *specimens*.

White chalky deposit composing the terraces in the mountain valleys, from the valley of Vermillion River. No. 192.

Recent conglomerate, with calcareous matrix, from the terraces along the North Saskatchewan, base of Rocky Mountains. No. 595. Overlying grits and shales with coal. *See* Section No. 1.

Fossils from micaceous shales of Big-horn Creek, south from where the North Saskatchewan leaves the Rocky Mountains. They consist almost entirely of a small *Ostrea*, imbedded in dark fissile beds of arenaceous shale. Cretaceous? 12 *specimens*.

Nodules of ironstone from septaria clays, occurring on Bow River, 10 miles below the Old Fort. They contain obscure cretaceous fossils.

Fossils of Devonian age, from the limestones at the great glacier which gives rise to the North Saskatchewan. These limestones are of a deep blue colour, with a compact or crystalline fracture, and contain large nodules of iron pyrites, feebly crystallized. 6 *specimens*. Also four of the same, from the Mountains at Jasper House.

Slate from the valley of Kicking-horse River.

Striped schist, from the top of Mount Hunter. This is a compact blue slate rock, with bands of red, which give it a striped look. This rock forms a great part of the mountains of the central range.

Earthy greenstone from a dyke in Beaverfoot valley, west side of Rocky Mountains. Nos. 182–3.

Various rocky specimens from the valley of Vermillion River.

Obsidian, found by the Indians on Red Deer River.

Tooth (reptilian?) found in the drift at Edmonton.

Corals from the limestone of 2nd range, height of land, Pipestone Pass. August 1859. 3 *specimens*.

Fossil shells from same locality. Consist of Lingula, Euomphalus, &c. 10 *specimens*. (B 17 to 27).

Devonian fossils from blue limestone in Glacier Valley, source of North Saskatchewan. 5 *specimens*.

Slate from the mouth of Blaeberry River. No. B. 5.

Coal, very impure, being a rolled fragment found on Kootanie River.

Tertiary shells *Ostrea*, *Unio*, &c., collected by Mr. Sullivan on a tributary to Belly River. Also, *Inoceramus* (cretaceous). Nos. 7 to 16.

From sections of cretaceous strata along Red Deer River, near the Hand Hills, in lat. 51°; long. 111°. These consist of freshwater shells, overlying the coal, with silicified wood, thin *Ostrea* and *Cytherea*, *Baculites* and *Inoceramus*. *Specimens*, Nos. B. 29 to 59.

Fossils from the coal-bearing strata of Vancouver Island, of cretaceous age. Partly obtained from the collection of Mr. McKay. 73 specimens. From under the coal, *Cytherea leonensis*, *Trigonia Emori*, *Exogyra*, *Ostrea*, and *Pecten*, &c.; with the coal, *Taxites* and other plants; over the coal, *Inoceramus*, *Baculites*, *Ammonites*, *Nautilus*, &c. Some of the specimens were from Valdez Inlet.

Specimens of plumbago, copper, and other ores said to be found by the Indians on Vancouver Island.

Secondary and Tertiary Fossils.—Saskatchewan Plains and Vancouver's Island.

Section.	Names, &c.	No.	Locality.
A 2. Incoherent sandstones, with concretions.	1. Modiola, ? sp. - - -	1	West flank of Cypress Mountains.
	2. Ostrea Veleniana - - -	5	
	3. ? sp. (Unio ?) - -	1	Lat. Long. Alt.
	4. Cardium, ? sp. - - -	1	
B 2. Indurated shale, traversed by band and fissures filled with clay ironstone.	5. Leda Hindi, Meek and Hayden -	1	Souri River, Long River, and Forked Creek.
	6. - - - - -	4	
	7. Annelid Tube - - -	1	Lat. Long. Alt.
	8. Ostrea Lugubris - - -	1	
	9. Plant remains - - -	2	
B 3. Dark purple and brown clay, with ironstone septaria and selenite crystals.	10. Baculites Compressus - -	23	Elbow of South Saskatchewan.
	11. Inoceramus, ? sp. - - -	1	
	Crepsii of Roemer and Conrad -		Lat. Long. Alt.
	12. Pholodomyn Occidentalis, Morton -	1	Also from bed of North Saskatchewan at Fort Pitt.
	13. Cardium, ? sp. - - -	1	
	14. Exogyra, ? sp. - - -	3	Lat. Long. Alt.
	15. Astarte Texana - - -	2	
	16. Cytherea, ? sp. - - -	1	
B 3.* As before; no selenite.	17. Inoceramus.—I. Cripsii of Conrad and Roemer.	2	Septaria clays on Nanaimo River at Fossil Bank,

* Of this group only specimens of Nos. 18, 22, 25, and 28 are, without doubt, from Nanaimo River beds, as in Sect. B 5, and of Nos. 17, 19, and 27, doubtfully so. The rest are from the sea coast at Comux, from beds the position of which is not known with reference to the section at Nanaimo.

In Bauerman's collection are Nautilus and Isocardium from Nanaimo River.

Section.	Names, &c.	No.	Locality.
	18. Inoceramus Texansis - -	2	Vancouver Island; also from Comux, Valdez Inlet, north of Nanaimo.
	19. „ Inbrascensis - -	1	
	20. „ Undulata Plicatus -	1	
	21. „ Confertim-Annulatus -	2	Lat. Long. Alt.
	22. „ Mytilopsis - -	1	The latter are collected by Mr. McKay.
	23. Baculites, ? sp. - - -	3	
	24. „ ? sp. - - -	2	
	25. „ Compressus - -	5	
	26. „ Ammonites, ? sp. - -	4	
	27. „ ? sp. - - -	1	
	28. „ Geniculatus - -	1	
	29. „ ? sp. - - -	1	
	Also Nautilus and Incardium.		
B 2 or 4. Sandy concretions in banded clays and siliceous marls, overlying the silicified wood and lignite group.	101. Auricula rubrascensis, ? - -	6	From Bath River, above the "Elbow." In ascending the river the beds dip to the east, and 15 miles above this point the lignite appears, the water bed and the Ostrea beds being high up in the banks.
	107. Tellina - - - -	4	
	118. Cardium - - - -	5	
	102. Venus (Cytherea ?) - - -	3	
	108. Nucula - - - -	2	
	113. Nucula (Leda ?) - - -	2	
	119. Ostrea Cortex - - -	2	
	121. Ostrea - - - -	1	
	112. Baculites - - - -	1	
	102. Wood - - - -	1	
B 4. Sandy clays, banded clays, ironstone, limestones, all above the great lignite group, in two beds; the highest having the Ostrea, the lower with the Natica? 90 to 120 feet above the lignite seams.	30. Ostrea Cortex - - -	6	Red Deer River, to the S.W. of Hand Hills.
	31. „ Vellicata. *Conrad* - -	2	
	32. „ Anomæformis - -	1	Lat. Long. Alt.
	33. Cytherea Texana - - -	4	
	34. Mytilus ? sp. - - -	3	
	35. Cardium Multistriatum. *Schum.* -	4	
	36. Crastilla, ? sp. - - -	1	
	37. Venus, ? sp. - - -	2	
	38. Natica, ? sp. - - -	15	
	39. Rostellaria, ? sp. - - -	3	
B 5. Great lignite group. Sandstones, grits, and silicified wood; beds of lignite 3 to 10 feet thick.	*Plants.* Taxites. Reticulate Dicotyledonous leaves.		Red Deer River, Saskatchewan, Athabesca, Bow River, Pembina River, &c., Nanaimo, Vancouver Island.
B 6. Green sand at base of lignite group at Nanaimo.	40. Trigonia Emori. *Conrad* - -	13	Departure Bay, Fossil Point, north of Nanaimo, Vancouver Island.
	41. ? sp. - - - -	1	
	42. Cytherea Conensis - - -	11	
	43. Area, ? sp. - - - -	1	
	44. „ ? sp. - - - -	1	
	45. ? sp. - - - -	1	
	46. Psamodobia, ? sp. - - -	3	
	47. Exogyra, ? sp. - - -	1	
	48. Ostrea Bella - - -	1	
	49. Rock specimen and shells - -		
	50. Exogyra, ? sp. - - -	1	
	51. Rostellaria, ? sp. - - -	1	
	52. Ostrea, ? sp. - - - -	1	
	53. Pecten, ? sp. - - -	1	
	54. ? sp. - - - - -	1	
	55. ?		
	56. ?		
	57. ?		
	58. ?		
	59. ?		
	60. ?		

INCERTA SEDES.

Section.	Names, &c.	Locality.
Ostrea shales - -	Small "Ostrea" - - - -	Big-horn Creek.
Dark mica, sandy shales overlying.	„ - - - -	North Saskatchewan.

Section.	Names, &c.	Locality.
Rose-coloured quartzose sandstone and carbonaceous shales, all disturbed, and forming the outer range of the mountain beds of blue sandy limestone.	Small Cardium, Stems of Rushes, Inoceramus (overlying these beds, much disturbed, were the Septaria Clays, with Baculites ?). Sect. No.	Bow Fort, on Bow River, base of mountains.
Fresh water beds, sandy marls and clays, with calcareous concretions.	Paludina, Unio, Planorbis, Cyclus - -	Basin along Red Deer River, above the Nick Hills.

(527 to 530 also said to be from Windy Mountain in the 2nd range of the Rocky Mountains. Collected by G. M. Bourgeau. Doubtful.)

PALÆOZOIC FOSSILS.—EASTERN AXIS AND ROCKY MOUNTAINS.

CARBONIFEROUS.

Section.	Names, &c.	No.	Locality.
Rocky Mountains. 1st range.	Spirifer ? - - - -	123	Like fig. 2, pl. V. A, "Dale Owen's Minesota," only has fine ribs on the [sic]
Grotto Mountain -	„ - - - -	149	„ „
Blue crystalline cherty limestones. *Spirifers.*	„ - - - -	150	„ „
	„ - - - -	180	
Dark, compact, earthy limestone, with calcareous spar and pitchy streaks. *Corals.*	Syringophora - - - -	598	
Cream-coloured nodular limestone. *Encrinite stems.*	Lonodalia - - - -	162	
Sandy ferruginous shales.			
Oolitic limestone -	„ - - - -	307	
See Sects. Nos.	Orthis ? - - - - -	308	Like Michilini.
	Lithostrotion - - - -	163	
	Lysthophyllum - - - -	301–2	
2nd range.	„ - - - -	305	
Same as first, but in addition a lower bed of limestone.	Spirifer (as No. 123) - - - Conularia (Gigantea. MSS.)	124	Somewhat like *Carpidalus* or *distans.*
Cascade Mountain, &c.	Strophomena finestilla - - -	148	*See* Dale Owen, fig. 11, pl. V., (Orthis Umbraculum).
	„ „ - - -	152	
	Orthis - - - - -	597	Like (308).
	Orthis ? - - - - -	8	
Pipe Stone Pass.	„ - - - - -	9	
Splintery sandy shale, light grey colour.	„ - - - - -	10	
	„ - - - - -	12	
	„ - - - - -	13	
	„ - - - - -	14	
	Lingula. Euomphalus. Lithostrotion. - - - -	- -	Curious, from the absence of the *Columella.*
	DEVONIAN.		
And from tough yellow crystalline limestone at base of Cascade Mountain.	Atrypa reticularis - - -	599	
3rd range.			
Quartzose limestone and conglomerate, deep blue compact limestone, with nodules of iron pyrites. Source of North Saskatchewan, and also on R. Myrtle at Jaspar House (1st range).	Spirifer - - - -	178	? Like Lineatus.
	„ - - - -	303	
	Clionest - - - -	303	
		178	
	Proctus - - - - -	311	Dale Owen, fig. 5, pl. V. A, (Strophodonta Costata Carb.)
	Fenistella - - - -	333	
	Atrypa reticularis - - -	1 to 6	
	Athyris - - - - -		

SILURIAN OF WINIPEG BASIN.—EASTERN AXIS.

MAGNESIAN LIMESTONE, LOWER FORT GARRY

Cyathophyllum. Nos. 90, 92, 99, 47, 46.
Columnaria alveolata. (Hall, 93.)
Orinocerus Lyonii. Stokes.
Favistilla. (Favorites basaltica of Owen.)
Receptaculites occidentalis. Salter.
Strophomena plano-convexa.
Strophomena Englypha.
Orthis, var. Lynx.
Spirifer elegantata.
Macluria.
Rhynconella incubescens. Hall.

Mr. Salter has appended the following note to this list:—"So far as yet appears, the fossil data "confirm the idea that the Laurentine Chain (or rather *ridge*) was above water in the Lower Silurian "times. On the Arctic side no Lower Silurian fossils at all have been detected."

No. 11.

BOTANICAL COLLECTIONS.

On M. Bourgeau's Botanical Collections.

BOTANICAL REPORT.

The collections made by the botanist, M. Bourgeau, were forwarded to England from time to time, and were duly received by Sir William Hooker, at the royal gardens at Kew. They consisted—1st, of plant-specimens prepared for preservation in the herbarium; 2nd, seeds and roots of plants for culture; and 3rd, specimens of the vegetable products used in the country by the Indians, and which are preserved in the Museum of Economic Botany at Kew. M. Bourgeau also made collections of insects and shelled mollusca, all of which were forwarded to the British Museum.

Of the dried plants there were in general at least 12 specimens of each species sent home, and the duplicate sets of the collection which thus arose have been sent to the following places, each specimen having been labelled and named before its issue from Kew. The appended list of the plants obtained was prepared by Mr. Black, curator of the Kew Herbarium, under the eye of Dr. Hooker.

The collection consists of 819 species, belonging to 349 genera and 92 orders, which is more than two-fifths of the total flora of British North America. In the list there are 62 species returned as "undetermined," some of which will most likely prove to be new.

In the relative order of their importance from number of species, the principal orders stand thus:—

Compositæ form,	1-7th	of the whole.	Ranunculaceæ form,	1-26th	of the whole.
Cyperaceæ „	1-12th	„	Cruciferæ „	1-26th	„
Gramineæ „	1-12th	„	Salicaceæ „	1-28th	„
Leguminosæ „	1-16th	„	Scrophulariaceæ „	1-28th	„
Rosaceæ „	1-16th	„			

The analysis of the collection, which is given in the table prefixed to the list, will give a further idea of the nature of the flora of the country from which it was made.

Three great zones of vegetation have been described by Sir John Richardson as occurring in the northern part of the American continent. To the north we have the Polar and Arctic flora, characterized by a predominance of the orders saxifrageæ, cyperaceæ, cruciferæ, and gramineæ, and of which the great majority of the species are common to both hemispheres. To the south of this commences the circum-arctic woodland zone, in which, from side to side of the continent, the country is covered with a worthless forest of spruce, scrub pine, birch, willows, and poplar. The natural families of plants, which in the Arctic region were 67 in number, are only increased in this zone to about 85, and by far the richest in species is the order of cyperaceæ.

The next zone Richardson described, he divided into three areas,—an eastern woody district, the eastern prairies, and the western woody district of the Pacific coast. M. Bourgeau's collection embraces plants from the two first of these areas, and also for the alpine regions of the Rocky Mountains.

The plants which belong to the flora of the eastern woodland district were gathered in the canoe route from Lake Superior to Lake Winipeg, and also in the neighbourhood of the Red River settlement. As far as this point the forest growth includes some of the finer species of coniferæ, along with oaks, ash, elm, maple, and cedar. Those plants which were collected on this part of the journey have not been distinguished in making up the list, but from comparison with the excellent tables constructed by Richardson from Hooker's "Flora Boreali Americana" it is probable that 10 or 12 of the *orders* given in the list were found in this region only.

In proceeding due west from the Red River settlement, the great prairies are at once entered upon, being bounded to the north by the wooded country, the limit of which nearly follows the "isothermal mean" of 40° Fah. in a N.W. direction until it reaches the 109th meridian, 53°, when it sweeps again to the S.W. to intersect the Rocky Mountain chain in latitude 51°. The country to the north of the 49th parallel, and up to latitude 54°, which was the region examined, is thus boldly marked into two districts by the presence or absence of timber. A third district must, however, be also considered, forming a belt dividing the forests from the plains, and which at one time was itself forest land, but having been cleared by the successive devastations of prairie fires, it now combines the advantages of both, having the free expanse of pasturage like the prairies, but possessing the rich vegetable mould, with the nutritious grasses and leguminous plants of the forest.

The woodland district would seem to possess a flora which is only slightly different from that of the Sub-Arctic zone. The principal tree is the *Abies alba*, which only reaches any size in bas-fond valleys. On the dry rising grounds grows the "*Cypres*" of the *Voyageurs*, but under that name they include two different species of *Pinus*, the P. Banksiana, and a Pinus allied to the P. inops of the United States, or to the P. contorta of the Pacific coast. A few of these trees were seen near Fort Carlton, after

which they were not again met with till near the Rocky Mountains to the S.W. of Fort Edmonton. The most important, though not most plentiful tree of the wooded country, is the birch (Betula papyracea), as it is the only "hard wood" which the natives possess, and serves for making snow-shoes, dog-sleighs, and other necessary articles. These trees, with a few balsam firs and poplars, comprise the bulk of the forest that covers the country to the north of the Saskatchewan; but by the banks of the rivers, which have generally deeply depressed valleys, there is of course a much greater variety in the vegetation, owing to the sheltered position and richer soil.

The belt of partially cleared country, which lies to the north of the forest land, and stretches continuously from the Red River Settlement to the Rocky Mountains, averages 80 to 100 miles in width, but it expands very much towards the west, its northern margin continuing nearly due west, while its southern border trends to the S.W. In this district the woods are very scanty, and consist almost exclusively of the aspen poplar, which forms small groves and artificial-looking clumps that dot the rich pasture lands. Sometimes a small clump of the spruce fir has been left by the fires, but this is only in a few rare localities. From Fort Carlton to Fort Edmonton, a distance of nearly 400 miles, there are not more than five or six spots where any of the coniferæ have been left. The Saskatchewan and the other rivers of the prairies flow through valleys one to two miles in width, and excavated to the depth of 200 to 300 feet below the general level. The stream winds from side to side of this valley successively bounding rich alluvial flats, which sustain a rich and very different kind of vegetation than that formed on the plains immediately above. In such low situations the false sugar maple (Negundo fraxinifolium) may be found as far west as longitude 108° on the North Saskatchewan, and on an island a short way on the same river above Fort Carlton, the "*bastard elm*" was observed. On the river "points" as they are called, besides the *Populus balsamifera*, which is the largest tree in that part of the country, sometimes reaching three feet in diameter, the thicket is principally composed of *Salix longifolia*, *S. rostrata*, *Viburnum edule*, *Cratægus coccinea*, *Amelanchier canadensis*, the wood of which is used for making bows, and the luscious fruit for mixing with "pemican," and the *Cornus stoloniflora*, or "red willow," the bark of which the Indians smoke along with their tobacco. *Shepherdia argentea* also forms often the greater mass of the thickets, and its red juicy berries are the favourite food of the grizzly bears.

On the prairies, besides the grove of the *Populus tremuloides* or aspen, there are dense willow thickets surrounding the swampy grounds. In such spots there is an immense variety of carices, and when, as is often the case, the water is saline, saliferous plants abound, and, as usual, generally of species having a very wide range. On the sides of rising grounds, the *Eleagnus argentea* forms a low silvery copse, affording food to large coveys of prairie grouse. If the ground is high, or has a very light sandy soil, it is then covered with a close matting of the *Kinnakin-ik*, or smoking weed, which is the *Arctostaphylos uva-ursi* of the Scotch Hills, or by the long flabelliform branches of the *Juniperus sabina* vel *prostrata*. Towards the mountains large expanses of plain are covered by a low birch or alder, six to eight inches high, which in winter much resembled the heather on a moorland. In some localities the prairies are covered with patches of brightly-coloured flowers of the genera *Astragalus*, *Hedysarum*, *Geranium*, *Lilium*, and others, or is covered with a low copse of rose-bushes. As the country towards the south merges more into open prairie, the clumps of copse and young poplars are found only nestling on northern exposures. The last outliers of the woods to the south generally consist of "islands," as they are called, which make a show from a distance, but when approached are found to consist of a small species of willow.

The true arid district, which occupies most of the country along the South Saskatchewan, and reaches as far north as lat. 52°, has even early in the season a dry parched look. In the northern district the accumulation of *humus*, and the distribution of the pleistocene deposits, have given rise to a great variety in the nature of the soil; but to the south the cretaceous and tertiary strata almost everywhere come to the surface, so that the stiff clay, highly impregnated with sulphates, bakes under the influence of the clear sun of early spring into a hard and cracked surface, that resists the germination of seeds. This must be the principal reason for the arid plains ranging to such a high latitude, as there is quite a sufficient quantity of moisture in the atmosphere during the summer months to support a more vigorous vegetation, as is shown as far south as lat. 49° 30′ N., when at the Cypress Hills, south sides of deep river valleys, and other expanses sheltered from the sun's rays until he acquires a considerable altitude, are found to be covered with pines, spruce firs, poplars, and abundant varieties of the vegetation that is found further to the north. In the arid plains, the plants which are most evidently different from those regions to the north are the small *Opuntias*, or prickly prairie apple, and which cause great annoyance to both horses and men; also the *absinthe*, or *sage* of the Americans, which name includes several species of fragrant *Artemisie*. In the ruts scratched by the buffalos, there also occurs a beautiful crimson mallow? (Sida coccinea, DeC.) The grass is very short on these plains, and forms no turf, merely consisting of little wiry tufts. Much of the arid country is occupied by tracts of loose sand, which is constantly on the move before the prevailing winds. This district, although there are fertile spots throughout its extent, can never be of much advantage to us as a possession. In June and July, the Expedition experienced great inconvenience in traversing it, from want of wood, water, and grass.

Along the base of the Rocky Mountains there is much fine land, with very rich pasture; but the sharp night frosts which occur throughout the summer, would render the raising of cereals in that district very precarious. Close to the mountains several trees, which are found in great numbers on the western slope of the continent, are met with for the first time. Of these the principal is that known to the voyageurs as the "*Perushe*," which is the name for the hemlock spruce (Abies Canadensis) of Canada. It appears, however, to have much larger cones than that species, and also several other characters that mark it as a distinct tree. Two species of pines were also found in this district, that are not observed further eastward, one of them being only slightly different from *P. Montreola*, Doug. The collections from the base of the mountains are not satisfactory, however, as it was past the flowering season, except for *alpines*, at the time of M. Bourgeau's visit.

The valleys of the mountains are occupied by forests, excepting in a few localities, where there are level gravelly plains covered with "*bunch-grass*," (*Festuca*, sp. ?). These forests consist principally of

the *Prushe*, or hemlock, Abies Douglassii, Abies alba, and A. niger. This mixed forest extends to 5,000 feet, when it is succeeded by the Abies balsamea. The tree that is found highest on the mountains, however, is the Abies alba, and at an altitude of 7,000 feet is quite dwarfed in size, with recumbent branches that spread like thatch over the mountain sides.

The altitude of the alpine region in the Rocky Mountains is very variable, and ranges from 7,000 to 9,000 feet. It is characterized by many plants of identical species with those found in similar situations in Europe. Of 50 plants collected at 8,500 feet on the eastern slope of the mountains, 15 are common to the Scotch mountains. The plants which range highest are *Salix reticulata*, *Saxifraga Dahurica*, and *S. Navalis*, which are also found in Europe.

As M. Bourgeau did not cross the Rocky Mountains, no collections are obtained from the western slope, or even from the axis of the chain, for a considerable distance on the east side of which there is an admixture of western forms. The most marked features of the physiognomy of the vegetation, and particularly of the forest growth on the Pacific slope, will be found alluded to in the journals.

Sir William Hooker has kindly furnished the following letters which he received from M. Bourgeau, and which contain much valuable matter respecting the flora of the country. The first two have already been printed in the Transactions of the Linnæan Society of London, 1859. His observations of the temperature of the interior of trees during the severe winter, taken by the readings of thermometers sunk obliquely into their trunks, are also appended; but they do not seem to point to any definite results. Various extracts are also furnished from his journal, giving the date of flowering of some early plants, and also remarks on the progress of the seasons.

Translations.

Letter I.—M. E. Bourgeau to Sir. W. Hooker.

(Journal of Linnæan Society, Vol. IV., No. 13, p. 1.)

Sir, Fort Garry, Saskatchewan, June 7th, 1858.

As you received the first letter sent from Fort Garry, I need not detain you with a description of the little collection I was enabled to make, while almost daily upon the rivers and lakes, hemmed in on all sides by dense forests, to the fort just mentioned.

I commenced my herborizations June 12th, upon the Ile Royale, situated on Lake Superior, where the vegetation had hardly commenced. The alders and willows were in flower on the banks of the island, and by their sides large banks of ice still existed under the rocks. This island is thoroughly wooded, and especially with two *Abies* (*alba* and *balsamifera*), *Betula papyracea*, and the *Thuya*. The same day we landed at the entrance of the Kaministoquoiah River, Fort William, but the shortness of the stay did not enable me to make excursions in that place. From that time it was only during the hours of rest and at the portages that I could gather a few specimens; the indifferent accommodation in our boat did not permit of a large collection being made, from the difficulty of preserving it from damp. I have been delighted to learn that you have received the plants in a good state of preservation, and I hope that this year also you will receive a pretty large quantity, and a good number of each species.

As you are geographically acquainted with the route of the Expedition, I need not speak concerning the localities through which we have passed; the specimens of plants (none neglected, but many repeated) will prove a better botanical journal of the Expedition than all the notes which I might send you from here; nevertheless, I have preserved some notes upon the particular places which are woody, if it is important to know them. There is one particular with which it is as well you should be acquainted; it is the geographical extent of the plants in the countries through which we have travelled; that is to say, the same species occupies a surface from 300 to 400 leagues. The prairies are well covered with plants, of the *Gramineæ* and *Cyperaceæ* in abundance, but of few species. Three distinct localities are to be met with in these prairies,—the ordinary plains, marshes and streamlets, and dry rising grounds. Each of these three localities has its peculiar vegetation, but let each locality occur where it will it presents the same plants throughout. The greater part of the plants at Fort Garry and Pembina are the same as those of Carlton, and it is my conviction that they extend close to the mountains. My collections of 1857, and a portion of those of 1858, you will receive this year, and I give you here the number of boxes which are addressed to you. Two from Fort Ellice, containing the collections from Pembina, and some parcels of seeds. The collection is superb, and contains the plants gathered at the most southerly part of our voyage, viz., from the great prairie of the Tortue Mountain, and in the neighbourhood of Riviere a Souris, to Fort Ellice, where I remained some time, and was consequently able to make a careful collection of the *Compositæ*, which are in perfection from August 15th till the close of the season.

From Fort Ellice our route lay direct to Saskatchewan, the greater part of which is what we in Europe would call pasturage. It is indeed pasture land, covered with buffaloes, and the grass being so constantly browsed does not attain any height. The country also seems very dry; there are some lakes, but few marshes. There are no forests, but, beside some streamlets, a few small copses of *Populus tremuloides*, which appear to have been spared from fires. The borders also of the Saskatchewan River at L'Elbow are wooded in some places with *Populus balsamifera*, *grandidentata*, *tremuloides*, *Fraxinus*, and *Betula pumila*. In the marshy localities, tufted willows, interspersed with other shrubs, constitute a covert for deer, and specially for the bear, whose principal food during the month of September is the fruit of such shrubs as the *Shepherdia argentea*, which I have seen in large quantities in his stomach.

We arrived at Carlton on the 8th of October, and there I finished putting in order my last collections, containing a quantity of seeds, besides the botanical specimens, and filling in all one case. There are 166 packets of different seeds, several shells, and some insects, which I beg you will keep until I return to make the catalogue. Of this spring's collection I send two cases; one containing the botanical packets, and the other some objects for your economical museum, and diseases of plants occasioned by the punctures of insects, for Dr. Hooker. In one of the boxes you will find some animals' skins and birds' eggs, which also I beg you will take care of till my return: each article is furnished with a ticket. As the news I looked for by the arrival of the Captain did not come, I shall be obliged to pass another

winter at Edmonton; and I trust, by the following spring, to be enabled to visit those parts of the Rocky Mountains lying nearest this locality, and thus I shall have all the spring plants, which, by arriving too late this season I run the chance of losing. It is well known that August is the most suitable month for traversing the mountains; and, besides, the *Compositæ*, and seeds of many plants, are not perfect till that season. The total number of cases which you will receive in 1858 is two from Fort Ellice, and three from Carlton, making five in all.

I am anxious to reach the mountains as soon as possible. It is now two seasons since I saw any mountains resembling the Alpine chains of my native country.

Dr. Hooker, to whom I desire my respectful remembrances, will receive at the same time all the observations which I have taken since I left Carlton. I have a journal, in which I have notes upon the temperature of the trees, upon the weather, and on various circumstances, and lastly, upon the vegetation, and specially upon a certain tree which puts forth its leaves a month later, which I should like to know the cause of. I desire to do my utmost in rendering the voyage as useful to science as possible.

Accept, Sir, every assurance of esteem from your humble servant,

E. Bourgeau.

I have given special attention to the collection of *Salices* made at Carlton; the species are not numerous, for which reason I have collected both male and female specimens of each plant, and have been careful to put corresponding numbers on each sex. There are a good many duplicates, therefore I trust you may have as many specimens as will enable you to study them satisfactorily. I regret not being able to send you the leaves of the *Salices;* they are not yet developed. During the third week of last month the catkins of *Populus balsamifera* have been frozen, and have fallen off; several other plants, also in flower, have been frozen, and thus for a week I have been deprived of my excursions.

Letter II. from M. E. Bourgeau to Sir W. J. Hooker.

(Journal of Linnean Society, Vol. IV., No. 13, p. 13.)

Sir, Fort Edmonton, Saskatchewan, October 9th, 1858.

I have much pleasure in laying before you the results of my botanical labours during the second season.

I suppose that you have received my account of the preceding season, in which I gave you full details up to Fort Carlton. I shall now, therefore, confine my narrative to the period between that locality and the Rocky Mountains.

The Expedition started on the 15th of June, crossing the prairie Saskatchewan, between the two arms of the river of the same name. Some days afterwards I found several places rich in leguminous plants, and particularly *Astragali*, which I had not found in the previous year. The numerous plants which I gathered led me to hope that I might find some fine things further on. My only difficulty was from the rains, which fall annually in June and July. I recorded 33 days of more or less continuous rain. I have succeeded in preserving all my collections without losing a single packet. I have not found so many different species as I had hoped to do. I have preserved many species already gathered the first season, on account of their forms, the dates, or their geographical distribution; probably half the collection is in duplicate.

On the 26th June we travelled over the open and treeless prairie, and on the 27th we encamped by a small forest of the two species of *Populus* (lat. 52° 39′ N., and long. 108° 52′ W.) On the 2nd July we reached more abundant forests, composed of the same trees, with thickets of rather large *Salix*, which provided us with excellent firewood. The spaces between the forests consist of more or less marshy prairies, with large plants of different species, nearly all inhabitants of the forests, such as *Lathyrus*, *Vicia*, *Orobus?* *Astragalus*, and *Carex*, in abundance. The prairies are rich in food for animals, the grass averaging in height from 18 inches to two feet. (Lat. 52° N.; long. 109° 3′ W.)

From the 3rd to the 7th July we crossed a wooded sandy slope. In many places the vegetation appeared to have suffered from the frosts and the hail. All the poplars looked as if they had been trimmed. The ends of the branches are cut by the frost nearly every year, and the number of checks which they thus receive gives them a peculiar appearance. Near this place we crossed two wide spaces where the hail has destroyed all the vegetation except the trees and the *Salix*.

It is worth describing to you the inconveniences of some seasons; for instance, the frosts which occurred this year on the 15th of May and the last week of July destroyed all the seeds of the trees, and the catkins of the *Populus* and *Salix* fell to the ground without ripening. The same thing occurred with the coniferous trees, and thus I have been unable this year to procure the seeds of any tree.

On the 10th of July we encamped on the shores of the Battle River, between the woods and rich prairies. The soil appears very fertile here, and I remarked some specimens of *Abies alba* and of *Pinus Banksiana*, which had escaped the fire, the first observed since leaving Carlton. This river is magnificent in summer. Towards the boundary of the woods it is in some places sunk between high banks. Lat. 52° 28′ N.; long. 111° 17′ W. from Greenwich.

From the 18th to the 20th July we encamped on the prairies, and amid thickets, near the Lake de Bœuf, which contains an abundance of a rather large fish of excellent quality. At this place we were about 50 miles from the superb river De la Biche, which is of sufficient size for the navigation of the ordinary boats of the country. Its shores are wooded for about 100 miles, particularly with *Abies alba*, and the two species of *Populus* useful as timber. Vegetation also is vigorous, and the soil appears to be very fertile. The varieties of herbaceous plants are not very numerous, but the quality of the species forms a good forage for horses. Fires appear to have been less frequent in this latitude, 52° 1′ N.

On the 24th, 25th, and 26th July we were in sight of the magnificent chain of the Rocky Mountains. I here observed a change in the vegetation. The first plants which attracted my attention were the *Geum rivale*, *Polygonum viviparum*, two species of geranium, &c. Although still 100 miles from the mountains, I am each day in hopes of finding new plants. Near a large "coulée" named the "Coulée of coloured stones," the prairie is magnificent, the *Astragali* especially forming a great ornament to it.

There are large patches of different colours, particularly red; a yellow and white *Astragalus;* a red, a white, and a violet *Geranium;* a *Hedysarum;* the three varieties, Rhinanthus, &c., forming an ensemble most attractive to a botanist.

At last, on the 7th of August, we arrived at the foot of the Rocky Mountains, at the place where stood the ancient fort, in lat. 51° 9′ N., long. 115° 4′ W., the shores of the River des Arcs being 4,100 feet above the level of the sea. In ascending this river, it is found to flow from a large valley in the interior of the mountains, which I have named the Valley des Arcs, as far as the second lake, there being a first and second Lake des Arcs. The high peaks of this valley bear the following names:—Pic des Pigeons, Pic de la Grotte, Pic du Vent, the last being so named from the storms which begin upon its summit. I have explored this valley more than any, and especially the mountains on the northern side of the Pic du Vent, which I have found peculiarly rich in alpine plants. From the river to the limit of the snow, all the chain of peaks, as far as the eye can reach, are wooded, principally with three species of conifers, *Abies nigra?* and *alba*, and *Pinus*. The latter grows mostly on the southern slopes, and does not much exceed 30 feet high, the largest being about one métre in circumference. The *Abies nigra?* is the largest and tallest of the forest trees which I have observed in the Valley des Arcs; one which I measured was 3 métres 23 centimétres in circumference. There are also other forest trees in greater or less abundance, as *Populus balsamifera*, *P. tremuloides*, *Betula papyracea*, and *B. pumila*. The shrubs are mostly the same as in the plains, except some *Salices* of the alpine region.

There are considerable obstacles to travelling in the mountains. The forests suffer almost every year from fires; the trees fall in all directions on the ground, and thus form innumerable barricades to the progress of horses and even of men. To ascend to the summit of a mountain, a very hard day's work is needed to cross the forest region. This description holds good in all the localities which I have visited.

I am happy to inform you that I have made a good collection during this season. I hope that I have gathered the greater number of the plants inhabiting that portion of the mountains which I have visited, and which I have been able to explore in 17 days. For weighty reasons it was not possible for me to remain there longer. The month of August is the best period of the year, the plants being in perfect flower, and some few in fruit. I observed but few withered kinds.

List of some species gathered close to the perpetual snow:—

Silene acaulis.	Draba.
Silene ?	Androsace.
Arnica.	Vaccinium.
Menziesia.	Salix herbacea.
Pedicularis.	Poa alpina.
Gnaphalium.	Aspidium.
Erigeron.	Valeriana.
Artemisia.	Aquilegia.
Saussurea.	Dryas octopetala.
Luzula.	Epilobium.
Saxifraga.	&c. &c.

The nearest tree to the snow is *Abies alba*, which assumes the appearance of *Juniperus communis*, with which it grows; that is to say, it trails along the ground. The alpine region is from 6,500 to 8,600 feet in elevation. The vegetation is not rich in species; the mountains are barren, with few streams and little humidity, and no pastures like those of the Alps. In the Rocky Mountains, streams are scarce on the southern slopes; on the northern, water is more abundant, owing to the snow; but they are only little torrents sunk deep in the rocks. This is the character of all the ravines which I have visited. The plants in the forests are, for the most part, common in the woods of the Saskatchewan plains. The number of species is about in the same proportion on the mountains as in the other parts of the country. They are few in number, but each species is abundant, and each mountain, at the same elevation, bears the same species both on the north and on the south. All the collections made this season, and which are tolerably extensive, and in a good state of preservation, are here at the fort. Thanks to Captain Palliser, who has taken much interest in the success of my labours, and who has greatly assisted me in preserving the specimens from damp during the journey, I have about 22 packets of dried plants, and 110 of different sorts of seeds. The herbarium contains about 460 species, and about 60,000 specimens, I am now busy with the arrangement and packing of the collections to be ready against the spring, the period fixed for my return to Europe.

I am, &c.

E. Bourgeau.

Monsieur Bourgeau to Sir W. Hooker.

(No date.)

In the last letter which I had the honour to address to you, I described our journeys in passing through the parts of the countries we had not yet visited.

The object of the present letter is to transmit to you the principal botanical observations which I have made during a journey of nearly 600 leagues from Fort Edmonton, which I left on the 24th of May 1859, descending the north branch of the Saskatchewan to Lake Winipeg. On the banks of this magnificent river, and especially on the southern one, extend vast prairies covered with bisons, and fringed by woods, consisting chiefly of the *Populus tremuloides* and *balsamifera*. The herbaceous plants which I met in these prairies, consist chiefly of the same species which I collected the previous year in other portions of the Saskatchewan district, with a few exceptions found between Forts Pitt and Carlton. Generally speaking, the woods, consisting of conifers (*Pinus* and *Abies*), less frequently occur, excepting in the neighbourhood of Fort Carlton. Bourbon Lake is scattered over with numerous islands, of which some are covered exclusively with *Salix*, others, whose soil is more elevated, offer to the view forests composed of *Larix Americana*, *Pinus Banksiana*, *Abies alba*, *Betula papyracea*, and of the two poplars already named. Towards the Grand Rapid and at Lake Winipeg extend magnificent forests, composed of several trees, among which the *coniferæ* still predominate. The islands in Lake Winipeg present a

forest vegetation very similar to that on the islands in Lake Bourbon. The passage across the lake, of nearly 260 miles, occupied 22 days, owing to the contrary winds. I availed myself of the numerous delays we were compelled to submit to, in order to explore several islands, which afforded me excellent collections. I profit by the opportunity afforded me by the descent of the Company's boats to Hudson's Bay, to forward you the remainder of my collections, contained in four cases ; a fifth case encloses a collection of eggs, animal remains, and various instruments and articles of Indian manufacture destined for the Economical Museum. Arrived at Red River, I was able to testify to the oak becoming sufficiently abundant. I have brought with me all the plants I collected between Red River and St. Pauls. From St. Pauls to New York I came by the most rapid conveyances, viz., steamboat and railways. I remained only two days in New York, and, after a passage of 13 days, arrived in London on the 20th of August. I enclose the list of meteorological observations made in the neighbourhood of Fort Edmonton, also information concerning the vegetable wealth or poverty in circumscribed spaces in different parts of my journey.

I am, &c.
(Signed) E. Bourgeau.

Letter IV. (Neither addressed nor dated.)

I submit the following remarks on the advantages for agricultural settlements in Rupert's Land and the Saskatchewan prairies of British North America, having been nominated by Sir William Hooker, in order to accompany the Expedition sent by the English Government into its North American possessions, and commanded by Captain Palliser, during the years 1857, 1858, and 1859.

I had especially to collect the plants which grew naturally in the country traversed by the Expedition, as well as their seeds. Independently of my botanical collections, Dr. Hooker had advised me to make thermometrical observations at the various stations, and above all things to take the temperature of the earth at certain depths, as well as that of the interior of forest trees; also to note the richness or poverty of the vegetation of the countries, and the maladies to which plants are exposed. In the several letters and notes addressed to Sir W. Hooker, which are also published, I have treated these questions with all the care that was permitted to me, by observations taken in the midst of the harassment and fatigue of a long journey; but it remains for me to call the attention of the English Government to the advantage there would be in establishing agricultural districts in the vast plains of Rupert's Land, and particularly in the Saskatchewan, in the neighbourhood of Fort Carlton. This district is much more adapted to the culture of staple crops of temperate climates, wheat, rye, barley, oats, &c., than one would have been inclined to believe from this high latitude. In effect, the few attempts at the culture of cereals, already made in the vicinity of the Hudson's Bay Company's posts, demonstrate by their success how easy it would be to obtain products sufficiently abundant largely to remunerate the efforts of the agriculturist. *There*, in order to put the land under cultivation, it would be necessary only to till the better portions of the soil. The prairies offer natural pasturage, as favourable for the maintenance of numerous herds as if they had been artificially created. The construction of houses for habitation and for pioneer development, would involve but little expense, because in many parts of the country, independent of wood, one would find fitting stones for building purposes, and in others it would be easy to find clay for bricks, and more particularly near Battle River. The other parts most favourable for cultivation would be in the neighbourhood of Fort Edmonton, and also along the south of the North Saskatchewan. In the latter district extend rich and vast prairies, interspersed with woods and forests, where thickwood plants furnish excellent pasturage for domestic animals. The vetches found here, of which the principal are Hedysarum, Lathyrus, Vicia, and Astragalus, are as fitting for the nourishment of cattle as the clover of European pasturage. The abundance of buffalos, and the facility with which the herds of horses and oxen increase, demonstrate that it would be enough to shelter animals in winter, and to feed them in the shelters with hay collected in advance, in order to avoid the mortality which would result from cold or the attacks of wild beasts, and to permit the acclimatization of other domestic farmyard animals, such as the sheep and pig. The harvest could, in general, be commenced by the end of August, or the first week in September, which is a season when the temperature continues sufficiently high, and rain is rare. In the gardens of the Hudson's Bay Company's posts, but more particularly in those of the different missions, feculent vegetables of the leguminous family, such as beans, peas, and French beans, have been successfully cultivated; also cabbages, turnips, carrots, rhubarb, and currants. No fruit tree has as yet been introduced; one might perhaps, notwithstanding, under favourable circumstances, try nut-trees; also apples that belong to varieties that ripen early (précoces). Different species of gooseberries, with edible fruits, as well as raspberries, grow wild here ; also different kinds of vaccinaceæ are equally indigenous, and have eatable fruits that will also serve for the preparation of preserves and confectionery. The Aronia oralis is very common in this country, and its fruit, commonly known by the name of "Poire," service berry, is eaten dried by the Indians, who collect it with care, and also serves for the purpose of excellent pudding, recalling the taste of dried currants. The only difficulty that would oppose agricultural settlements, is the immense distance to traverse over countries devoid of roads, and almost uninhabited; also the assistance of Government, or a company well organized, would be indispensable to the colonization of this country. It would be important that the settlements should be established in groups of at least 50 householders, for protection against the incursions of the Indians; who, notwithstanding, are far from being hostile to Europeans. It stands to reason that the colonists ought to be taken from the north of Europe, or from mountains; those brought up accustomed to the climatological condition and culture of the soil most resembling this interesting country, to the resources of which I call attention. The products of agricultural settlements thus established would yield subsistence to the Indians, whose resources for food, supplied only by hunting, tend to diminish every day. The presence of European settlers would form a useful model for this primitive people, who, notwithstanding their native apathy, still appreciate the benefits of civilization.

(Signed) E. Bourgeau.

To Sir W. Hooker.

TABLE showing the TEMPERATURE of the INTERIOR of POPULUS BALSAMIFERA and ABIES ALBA, FORT CARLTON, 1857-8.

N.B. The thermometer readings in the Populus balsamifera were taken generally between the hours of 9 a.m. and 10 a.m. ; those of the Abies alba, between 3 p.m. and 4 p.m.

Month.	Day.	Populus.	Abies.	Month.	Day.	Populus.	Abies.	Month.	Day.	Populus.	Abies.
		°	°			°	°			°	°
1857, Dec.	2	17·0	—	1858, Jan.	26	−4·0	—	1858, Mar.	22	27·2	—
,,	3	9·0	—	,,	27	—	—	,,	23	31·2	—
,,	4	7·0	—	,,	28	—	—	,,	24	31·8	—
,,	5	11·0	—	,,	29	2·0	−10·0	,,	25	31·8	—
,,	6	12·0	—	,,	30	4·0	−5·5	,,	26	32·0	—
,,	7	−1·0	—	,,	31	16·0	8·0	,,	27	32·0	—
,,	8	7·0	—	February	1	—	15·0	,,	28	32·0	—
,,	9	5·0	—	,,	2	−7·0	−12·0	,,	29	32·5	—
,,	10	7·0	—	,,	3	−2·5	—	,,	30	33·0	—
,,	11	7·0	—	,,	4	—	7·0	,,	31	35·0	—
,,	12	8·0	—	,,	5	—	20·0	April	2	32·0	—
,,	13	12·0	—	,,	6	15·5	18·5	,,	3	32·5	—
,,	14	5·0	—	,,	7	—	−3·5	,,	4	32·0	—
,,	15	14·0	—	,,	8	−4·2	−15·0	,,	5	32·0	—
,,	16	15·2	—	,,	9	−13·0	—	,,	6	33·0	—
,,	17	6·5	—	,,	10	−20·0	—	,,	7	33·8	—
,,	18	10·0	—	,,	11	−24·0	—	,,	8	32·5	—
,,	19	16·5	—	,,	12	−25·0	—	,,	9	33·5	—
,,	20	16·0	—	,,	13	Scale not sufficiently graduated. Mercury in bulb.		,,	10	34·5	—
,,	21	11·0	—	,,	14			,,	11	33·0	—
,,	22	24·0	23·7	,,	15			,,	12	34·5	—
,,	23	16·0	—	,,	16			,,	13	34·0	—
,,	24	8·0	24·0	,,	17	−9·5	−14·0	,,	15	32·0	—
,,	25	3·5	4·0	,,	18	—	—	,,	16	32·0	—
,,	26	8·2	9·0	,,	19	—	—	,,	18	32·0	—
,,	27	6·0	14·0	,,	20	—	−2·0	,,	19	35·0	—
,,	28	5·0	14·0	,,	21	4·0	−5·0	,,	20	36·0	—
,,	29	12·4	8·0	,,	22	—	19·5	,,	22	34·5	—
,,	30	10·0	15·0	,,	23	—	16·5	,,	23	37·5	—
,,	31	5·0	11·0	,,	24	—	—	,,	25	34·5	—
1858, Jan.	1	—	5·5	,,	25	—	—	,,	28	47·8	—
,,	2	9·0	8·2	,,	26	—	—	,,	29	54·0	—
,,	3	28·0	28·0	,,	27	—	—	May	1	59·0	—
,,	4	—	22·5	,,	28	7·5	—	,,	3	59·0	—
,,	5	7·5	9·0	March	1	7·0	—	,,	5	49·0	—
,,	6	−9·9	−20·0	,,	2	12·5	6·3	,,	6	52·0	—
,,	7	−9·2	−20·0	,,	3	21.5	11·0	,,	7	54·2	—
,,	8	−7·5	−12·0	,,	4	28.6	26·0	,,	11	47·8	—
,,	9	−6·0	−15·0	,,	5	31·0	29·5	,,	13	38·5	—
,,	10	—	4·2	,,	6	—	—	,,	14	38·7	—
,,	11	2·5	—	,,	7	—	—	,,	17	40·7	—
,,	12	−8·6	—	,,	8	—	—	,,	18	40·8	—
,,	13	−13·2	—	,,	9	30.0	—	,,	19	46·5	—
,,	14	−22·0	—	,,	10	—	—	,,	20	46·2	—
,,	15	−13·0	−25·0?	,,	11	28·0	24·2	,,	21	49·7	—
,,	16	−8·0	—	,,	12	—	28·0	,,	22	49·8	—
,,	17	−7·0	−5·0	,,	13	29·5	26·0	,,	23†	54·0	—
,,	18	12·2	6·5	,,	14	28·0	—	,,	25	62·3	—
,,	19	—	0·2	,,	15	32·0	—	,,	27	50·5	—
,,	20	6·0	8·0	,,	16	—	—	June	1	52·5	—
,,	21	4·6	6·0	,,	17	32·0	—	,,	3	60·0	—
,,	22	14·0	9·5	,,	18	32·0	32·0	,,	4	58·2	—
,,	23	4·5	5·0	,,	19*	31·0	26·3	,,	5	54·0	—
,,	24	−2·0	−8·0	,,	20	30·8	—	,,	6	50·5	—
,,	25	—	—	,,	21	26·0	—				

* No observations were made on the Abies after the 19th March 1858.

† May 23rd, 1858. The sap of the Populus had quite filled the hole into which the thermometer had been inserted.

TABLE showing the MEANS of the above OBSERVATIONS.

Month.	Year.	Populus.	Abies.	REMARKS.
		°	°	
December - - -	1857	9·67	13·63	Abies, mean of nine readings.
January - - -	1858	0	−0·08	
February - - -	1858	−7·11	3·96	See note of this month.
March - - - -	1858	29·27	20·93	Abies, mean of 10 readings.
April - - - -	1858	35·54	—	
May - - - -	1858	49·33	—	
June - - - -	1858	55·04	—	Populus, mean of five readings.

(*Translation.*)

List of Plants which were earliest gathered at Fort Carlton in the spring of 1858.

April 12. Alnus Americana.
„ 13. Pulsatilla Nuttaliana.
„ 14. (Four inches of snow fell this day.)
„ 20. (River ice commenced to break up.)
May 3. Phlox Hoodii.
„ „ Populus tremuloides.
„ „ „ balsamifera.
„ „ Salix. (2 sp.?)
„ „ Corylus Americana.
„ „ Equisetum arvense.
„ „ (Aleguminous plant with yellow flowers.)
„ 6. More species of Salix.
„ „ Two species of Shepherdia (Canadensis? and argentea?).
„ „ Negundo aceroides (fraxinifolium).
„ 7. Androsacea.
„ „ Viola (Canadensis) canina?
„ „ Potentilla.
„ „ Astragalus.
„ „ Fragaria Americana.
May 7 Two species of Carex.
„ 11. Agrostis.
„ „ Salix (more species).
„ 12. (The temperature having fallen last night to 14·5° Fah., nearly all the plants in flower have been frozen, and the vegetation has been thrown back 8 days.
„ 20. Astragalus.
„ „ Salix, (two species.)
„ „ Viola Nuttalliana.
„ „ Amelanchier oralis. (Canadensis?)
„ „ Legustrum?
„ „ Ribes uva-crispa (?)
„ „ Betula papyracea.
„ 22. Astragalus.
„ „ Antennaria margaritacea.
„ 23. (First rain and thunder of this spring.)
„ 27. (Frost during the night.)
„ 28. Do. do.

Fort Edmonton, Spring 1859.

April 27. Corylus Americana.
„ 28. Salix (2 species).
„ 29. Alnus Americana.
„ „ Peltigna canina.
May 2. Populus tremuloides.
„ „ Salix.
„ 8. Salix.
„ „ Populus balsamifera.
„ „ Adenostylis (?)
„ 17. Fragaria Americana.
„ „ Ranunculus rhomboideus.
May 17. Equisetum arvense.
„ 18. Cerasus.
„ „ Antennaria margaritacea.
„ „ Viola canina (Canadense?)
„ „ „ palmata.
„ 19. Capsella bursa-pastoris.
„ 20. Ribes uva-crispa (?).
„ „ Ribes rubrum.
„ „ Viola blanda.
„ „ Androsace.

(Signed) E. Bourgeau.

Various irregular Observations of Temperature at Fort Carlton.

May 16.—Water of river at 9 a.m. 40·7° air 33°

Near a mass of ice under the south bank of the valley surrounded by poplar trees.

Under the ice towards the willows - 33°
Open side between the ice and the earth 34·8°
Under the ice at roots of the willows - 34·7°
Source of the buoy - - - - 37·6°

The willows had several catkins in flower; the observations were made at noon.

(This mass of ice was formed by the freezing of the water from a spring which continued to flow throughout the winter, its water having a temperature of 37°. J. H.)

May 17.—Another buoy situated beside the poplar in which the thermometer was inserted.

Water of buoy at 10 a.m. - 45° air 45·7°

May 18.—Water of river - 41·3° air 35·8°

June 6.—Certain thickets of poplars have got their leaves 12 days later than the others.

In thin ground at 3 ft. depth - 41·0° air 51·5°
„ 2 in. among the roots 50° „ do.

Measurements of some of the largest trees near Fort Carlton.

	Circumference.
Populus balsamifera -	- 98·6 inches.
„ tremuloides	- 44·8 „
Abies alba - -	- 87·7 „

Observed in the valley of Bow River within the Rocky Mountains.

Abies Niger? (A. Douglasii?) 145·7 inches. Height, 160 feet. Most of the forest trees had no remarkable size, the too frequent burning of the woods preventing their development.

Observed by Lieut. Blackerton at Musquito Point, on the Lower Saskatchewan, lat. 53° 50′ N., long. 102° 53′ W.

Abies alba 100 inches.

Remarks on the richness and purity of the flora.

On the Saskatchewan, near Fort Carlton, got 29 species in a space of 10 yards, of which the principal were of the genera Oxytropis, Hedysarum, Astragalus, and Gramineæ. In the same extent of surface, and in soil of the same nature, and one mile from the first locality, six species only were to be found.

From 10 yards of space on the prairie at Pembina, collected 37 species, and sent them as a special collection to Kew.

From another spot on the same prairie, only five species were found in the same space.

A collection made in a little forest on the Saskatchewan shows the richness of the woodland flora.

(Signed) E. Bourgeau.

ANALYSIS of the COLLECTION of PLANTS made by M. BOURGEAU, PALLISER'S EXPLORING EXPEDITION, being an enumeration of the GENERA and SPECIES, with range of the ORDERS.

NOTE.—Those marked (a.) extend into the arctic province, (b.) into the circum-arctic zone, (c.) central district of the 3rd, or woodland zone, (d.) those orders which belong to either the Canadian or Pacific coast district, or to the central arid district.

Range.	Orders.	Genera.	Species.	of which undetermined.	In British N. America.	
					Genera.	Species.
					*	*
a.	Ranunculaceæ	11	32	—	18	72
d.	Minispermaceæ	1	1	—	1	1
c.	Berberideæ	1	1	—	3	5
b.	Sarraceneæ	1	1	—	1	1
d.	Nymphaceæ	1	1	—	3	4
a.	Papaveraceæ	1	1	—	3	3
b.	Fumariaceæ	1	2	—	4	9
a.	Cruciferæ	14	31	7	25	104
d.	Capparideæ	2	2	—	2	2
d.	Cistineæ	1	1	—	3	5
b.	Violaceæ	1	8	—	1	18
b.	Polygalaceæ	1	3	—	1	7
b.	Droseraceæ	1	1	—	2	9
b.	Lineæ	1	2	—	1	3
a.	Caryophylleæ	6	17	3	12	66
d.	Paronychieæ	1	1	—	2	2
c.	Malvaceæ	1	1	—	3	5
d.	Tiliaceæ	1	1	—	2	2
d.	Hypericineæ	1	1	—	1	8
c.	Acerineæ	2	3	—	2	8
c.	Oxalideæ	1	1	—	1	5
c.	Geraniaceæ	1	4	—	2	6
b.	Balsamineæ	1	2	—	1	2
d.	Rhamneæ	2	2	—	2	6
d.	Anacardiaceæ	1	2	—	1	6
a.	Leguminosæ	13	50	7	26	98
a.	Rosaceæ	16	48	7	24	124
b.	Halorageæ	3	4	—	4	10
a.	Onagrariæ	3	13	2	6	28
c.	Cucurbitaceæ	1	1	—	2	2
d.	Cactaceæ	1	4	4	1	2
d.	Loaseæ	1	1	—	1	3
b.	Grossularieæ	1	7	—	1	16
a.	Saxifrageæ	4	15	—	8	56
b.	Crassulaceæ	1	2	—	2	3
b.	Umbelliferæ	10	14	1	28	39
b.	Araliaceæ	1	3	—	3	7
d.	Loranthaceæ	1	1	—	1	1
b.	Corneæ	1	4	—	1	7
b.	Caprifoliaceæ	6	13	—	7	24
c.	Rubiaceæ	2	5	—	5	15
a.	Compositæ	40	112	8	70	321
b.	Valerianaceæ	1	1	—	2	6
a.	Campanulaceæ	1	2	—	1	8
d.	Lobeliaceæ	1	1	—	1	6
b.	Vaccineæ	2	5	—	1	16
a.	Ericaceæ	7	9	—	10	40

Range.	Orders.	Genera.	Species.	of which undetermined.	In British N. America.	
					Genera.	Species.
						*
b.	Pyrolaceæ	2	4	—	5	16
b.	Primulaceæ	7	10	—	8	23
d.	Oleaceæ	1	1	—	1	3
b.	Gentianaceæ	2	6	—	8	34
c.	Apocyneæ	1	2	—	1	4
c.	Asclepiadeæ	2	5	—	1	11
a.	Polemoniaceæ	3	5	—	3	13
b.	Hydrophylleæ	1	1	—	2	5
c.	Convolvulaceæ	1	1	—	3	6
c.	Solaneæ	2	5	2	5	8
b.	Boraginaceæ	8	17	2	5	27
b.	Labiatæ	9	9	—	24	40
b.	Verbenaceæ	1	1	—	2	7
a.	Scrophulaineæ	7	24	2	20	74
b.	Lentibularieæ	2	2	—	2	8
b.	Plantagineæ	1	2	—	1	5
d.	Nyctagineæ	2	2	—	2	3
a.	Polygonaceæ	4	14	—	5	34
c.	Amaranthaceæ	1	1	—	1	6
b.	Chenopodeæ	8	17	1	8	20
b.	Santalaceæ	1	2	—	1	2
b.	Elagneæ	2	3	—	2	3
d.	Aristolochiæ	1	1	—	1	1
c.	Euphorbiaceæ	1	1	—	2	8
c.	Cupuliferæ	3	4	1	5	15
a.	Salicaceæ	1	28	—	1	44
b.	Salicineæ	1	3	—	1	4
d.	Cannabinaceæ	1	1	—	2	2
b.	Urticaceæ	3	3	—	4	8
b.	Betulaceæ	2	4	—	2	11
b.	Coniferæ	5	13	4?	7	20
b.	Typhaceæ	2	3	—	2	4
b.	Aroideæ	3	3	—	6	9
b.	Naiades	2	4	—	4	14
c.	Alismaceæ	3	5	—	2	3
d.	Hydrocharideæ	1	1	—	2	2
b.	Orchideæ	8	13	—	16	54
b.	Irideæ	2	2	—	2	8
b.	Liliaceæ	11	20	—	16	45
b.	Melanthaceæ	4	4	1	5	5
a.	Juncaceæ	2	13	3	2	23
d.	Commelynaceæ	1	1	—	0	0
a.	Cyperaceæ	5	68	4	8	218
a.	Gramineæ	33	62	—	49	153
b.	Filices	13	17	—	17	47
a.	Zycopodiaceæ	1	4	—	2	12

SUMMARY of above in MONSIEUR BOURGEAU'S COLLECTION.

819 species.
349 genera.
92 orders.

Of these orders

a. 19 range into the arctic province.
b. 40 „ into the subarctic zone.
c. 14 „ into central district of the woody zone.
d. 29 „ are restricted in their range to the central arid district, or to the eastern and western woody districts.

Of the same orders, there have been enumerated by Richardson in British and Russian North America,

471 genera.
2155 species.

The total flora he enumerates comprising—

118 orders.
509 genera.
1725 Dicotyledones.
554 Monocotyledones.

2279 species.

* These columns are from the Tables given in the "Arctic Searching Expedition, by Sir John Richardson, 1851," Vol. 2, p. 322. It is hardly necessary to remark that in this and the other works of this veteran explorer and philosopher will be found generalizations respecting the climate and vegetation of British North America, which the results of this Expedition have only served to establish respecting a small area of the region of which he treated.

List of Flowering Plants and Ferns gathered in Captain Palliser's Expedition by M. Bourgeau, the Botanical Collector.

Ranunculaceæ.	No. of sp. collected.
Atragene Americana, *Sims.* Kakabeka Falls and Rocky Mountains	5
Clematis ligusticifolia, *Torr and Gr.*	
Thalictrum Cornuti, *L.* Saskatchewan Plains	4
Thalictrum dioicum, *L.* Canoe route and Saskatchewan Plains	18
Anemone patens, *L.* Saskatchewan Plains	25
Anemone Pensylvanica, *L.* Canoe route and Saskatchewan	16
Anemone parviflora., *Michx.* Rocky Mountains	20
Anemone multifida, *L.* East Saskatchewan. Var. glabra. Rocky Mountains	40
Anemone Virginiana, *L.* Fort Garry	
Anemone nemorosa, *L.*	
Anemone cylindrica, *A. Gray.* Kakabeka Falls	
Ranunculus abortivus, *L.* Fort Carlton and Canoe route	15
Ranunculus sceleratus, *L.* West Saskatchewan	30
Ranunculus repens, *L.* East Saskatchewan	16
Ranunculus rhomboideus, *Gold.* East Saskatchewan. Rare	24
Ranunculus Purshii, *Prichard.* Saskatchewan	40
Ranunculus Purshii, *Var.* 3. South and East Saskatchewan. Rare.	25
Ranunculus reptans, *L.* Saskatchewan	30
Ranunculus Cymbalaria, *Pursh.* Red River to Saskatchewan	12
Ranunculus Elscholtzii, *Schl.* Alpine Rocky Mountains	8
Ranunculus cardiofolyllus, *Hook.* West Saskatchewan	40
Ranunculus repens, *L.* East Saskatchewan	
Ranunculus aquatilis, *L.* Var. Saskatchewan and Canoe route	16
Caltha palustris, *L*	
Coptis trifolia. *Salisb.* Lake Superior, N. shore	
Aquilegia Canadensis, *L.* Canoe route and Rocky Mountains	20
Aquilegia brevistyla, *Hook.* Rocky Mountains	13
Actæa rubra, *Big.* Rocky Mountains	1
Actæa alba, *Big.* Rocky Mountains	
Delphinium scopulorum, *A. Gray.* Rocky Mountains	20
Delphinium azureum, *Var.* Lake Winipeg	7
Menispermaceæ.	
Menispermum Canadense, *L.* Lake Winnipeg	1
Berberideæ.	
Berberis aquifolia, *D.C.* West side of Rocky Mountains only	1
Saraceniaceæ.	
Saracenia purpurea, *L.* Prairie Portage, Canoe route. Rare	1
Nymphæaceæ.	
Nymphæa advena, *Ait.* Canoe route, and west side of mountains	3
Papaveraceæ.	
Sanguinaria Canadensis, *L.* Winipeg River	
Fumariaceæ.	
Corydalis aurea, *Willd.* Saskatchewan	7
Corydalis glauca, *Pursh.* Perch Lake, Canoe route	7

Cruciferæ.	No. of sp. collected.
Nasturtium palustre, *D.C.* West Saskatchewan. Rare.	
Barbarea præcox, *R. Br.* Red River	2
Barbarea vulgaris, *R. Br.*	
Turritis patula *Grah.* Alpine Rocky Mountains, also Saskatchewan	35
Turritis glabra, *L.* West Saskatchewan	4
Turritis retrofracta, *Hook.* West Saskatchewan and Rocky Mountains	10
Arabis hirsuta, *Scop.* Saskatchewan and Rocky Mountains	29
Cardamine hirsuta, *L.* Saskatchewan	20
Vesicaria didymocarpa, *Hook.* South exposures of Rocky Mountains	40
Vesicaria arctica, *R. Br.* Saskatchewan	10
Vesicaria arctica, *Var.* 3. North Saskatchewan in Thick-woods	
Vesicaria Ludoviciana? Saskatchewan	10
Draba lutea. *Gilb.* Red River to Saskatchewan	15
Draba alpina. Alpine Rocky Mountains	8
Draba (sp. 1) (Arabascans, *Meek?*)	
Draba Arabascans, *Meek.* Alpine Rocky Mountains	1
Draba (sp. 2.) Alpine Rocky Mountains	1
Draba (sp. 3.) Alpine Rocky Mountains	3
Draba (sp. 4.) Alpine Rocky Mountains	1
Draba (sp. 5.) (incana *L.?*)	
Draba incana. Saskatchewan and Rocky Mountains	2
Thalspi arvense, *L.* Lake Winipeg	2
Smelowstria calegcina. *E. Mey.* Rocky Mountains	15
Sisymbrium canescens, *Nutt.* Saskatchewan to Rocky Mountains	7
Erysimum cheiranthoides, *L.* Winipeg River	6
Erysimum asperum, *D.C.* Saskatchewan	20
Erysimum (sp. 1.) Saskatchewan to Rocky Mountains	16
Erysimum (sp. 2.) Rocky Mountains	1
Camelina sativa, *Crantz.* Introduced at Red River	
Nesllia paniculata. Introduced at Red River	
Lepidium Virginicum, *L.* Saskatchewan	22
Lepidium savitum, *L.* Introduced at Red River	
Capparideæ.	
Cleome integrifolia, *Forrd Gr.*. West Saskatchewan	14
Polanisia trachysperma, *A. Gr.* Crow Wing, United States	1
Cistineæ.	
Helianthemum Canadense, *Mx.* Pembina to Crow Wing	
Violaceæ.	
Viola pubescens, *Ait.* Canoe route and Saskatchewan	20
Viola Canadensis, *L.* North Saskatchewan, in Thick-woods	
Viola Muhlenbergii. *Torr.* Saskatchewan to Oregon	20
Viola cucculata, *Ait.* Kakabeka Falls	10

	No. of sp. collected.
Viola blanda, *Willd.* North Saskatchewan, in Thick-woods	3
Viola Nuttaliana, *Pursh.* North Saskatchewan. Rare	10
Viola pedata, *L.* Saskatchewan	30
Polygalaceæ.	
Polygala paucifolia, *Willd.* Kakabeka Falls	
Polygala Senega, *L.* Canoe route and Saskatchewan	40
Polygala verticillata, *L.* Saskatchewan	
Droseraceæ.	
Drosera rotundifolia, *L.* Fort Francis. Canoe route	
Linaceæ.	
Linum perenne, *L.*	
Linum rigidum, *Pursh.* Saskatchewan	
Caryophyllaceæ.	
Moehringia lateriflora, *Teuzl.* Canoe route	14
Cerastium arvense, *L.* Saskatchewan	5
Cerastium viscosum, *L.* introduced? Fort Edmonton	
Cerastium Alpinum, *L.* Alpine Rocky Mountains	8
Cerastium (sp.) West Saskatchewan	
Arenaria propinqua, *Rich.* Alpine Rocky Mountains	2
Arenaria Rossii, *R. Br.* Alpine Rocky Mountains	4
Arenaria (sp.) Alpine Rocky Mountains	4
Stellaria borealis, *Rig.* Alpine Rocky Mountains	1
Stellaria longifolia, *Mutel.* Saskatchewan	12
Stellaria longipes, *Gold.* Winipeg to Rocky Mountains	76
Stellaria (sp.) Rocky Mountains	6
Lychnis apetala, *L.* Alpine Rocky Mountains	6
Silene Drummondi, *Herth.* Canoe route	3
Silene Antirrhina, *L.* Pembina	8
Silene acaulis, *L.* Alpine Rocky Mountains	3
Silene Scouleri, *Pursh.* Valleys of Rocky Mountains	12
Paronychiaceæ.	
Paronychia sessiliflora, *Nutt.* Rocky Mountains	20
Malvaceæ.	
Malvastrum coccineæ. Arid plains of Saskatchewan	40
Tiliaceæ.	
Tilia Americana, *L.* Red River	7
Hypericineæ.	
Hypericum pyramidatum. Crow Wing, United States	1
Aceracæ.	
Negundo aceroides, *Moench.* Saskatchewan	4
Acer rubrum, *L.* Rat Portage, Canoe route	
Acer spicatum, *Lanell.* (montanum?) Rat Portage, Canoe route	
Oxalideæ.	
Oxalis corniculata, *L.*	
Geraniaceæ.	
Geranium Carolinianum, *L.* Lake Winipeg	1
Geranium Hookerianum, *Walph.* West Saskatchewan	18
Geranium albiflorum? Rocky Mountains	1
Geranium maculatum? West Saskatchewan	18
Balsamineæ.	
Impatiens fulva, *Nutt.* Red River	
Impatiens pallida? *Nutt.* Red River	
Phamnaceæ.	
Phamnus alnifolius, *L. Herit.*	
Cranolthus Americanus, *L.* Crow Wing, United States	4
Anacardiaceæ.	
Rhus glabra, *L.* Crow Wing, United States	2
Rhus Toxicodendron, *L.* Rainy Lake	
Leguminosæ.	
Thermopsis rhombifolia, *Nutt.* Elbow of South Saskatchewan to Carlton. Rare	24
Psoralea esculenta, *Pursh.* Red River to Rocky Mountains	26
Psoralea (brachiata, *Dougl.* esculenta). Pembina and Rocky Mountains	11
Psoralea argophylla, *Pursh.* Saskatchewan	
Amorpha nana, *Nutt.* Red River	7
Amorpha canescens, *Nutt.* St. Joseph's	17
Amorpha fruticosa, *Nutt.* Red River	7
Glycirrhiza lepidota, *Nutt.* Saskatchewan	3
Petalostemon villosum, *Nutt.* On the sand-hills of the Souri River	
Petalostemon candidum, *Michx.* Saskatchewan	
Petalostemon violaceum, *Michx.* Saskatchewan	
Petalostemon albidum, *D.C.* Var. candidum. Souri River	6
Astragalus pauciflorus, *Hook.* Alpine Rocky Mountains (occurs on the River Platte)	25
Astragalus Missouriensis, *Nutt.* Saskatchewan	20
Astragalus caryocarpus, *Pier.* (Buffalo apples.) Saskatchewan	12
Astragalus Drummondi, *Dougl.* Saskatchewan	25
Astragalus hypoglottis, *L.* (A. striatus, *Nutt.* var. adsurgens). Saskatchewan, also Alpine Rocky Mountains	30
Astragalus Canadensis, *L.* Saskatchewan. rare	5
Astralagus adsurgens, *Pall.* Fort Garry	
Phaca elongata, *Hook.* Saskatchewan to Rocky Mountains	40
Phaca bisulcata, *Hook.* Saskatchewan	40
Phaca frigida, *L.* Saskatchewan	25
Phaca astragalina, *D.C.* Rocky Mountains	3
Phaca cæspitosa, *D.C.* Fort Pitt. Rare	1
Phaca aboriginorum, *Hook.* Saskatchewan to Rocky Mountains	12
Phaca elegans, *Hook.* Saskatchewan. Rare	15
Phaca pectinata, *Hook.* Saskatchewan. Rare	25
Phaca (sp. 1.) Rocky Mountains	6
Phaca oroboides, *D.C.* Rocky Mountains	10
Phaca (sp. 3.) Rocky Mountains	15
Phaca (sp. 4.) (Astragulus nigrescens?) Saskatchewan	30
Phaca (sp. 5.) (elegans, *Hook?*) Saskatchewan	1
Oxytropis deflexa, *D.C.* Saskatchewan	22
Oxytropis arctica, *var.* Alpine Rocky Mountains	7

	No. of sp. collected.
Oxytropis campestris, *D.C.* Saskatchewan to Rocky Mountains	57
Oxytropis Lambertii, *Pursh.* Rocky Mountains	25
Oxytropis Lambertii, var. speciosa. Souri River	
Oxytropis splendens, *Dougl.* Saskatchewan	22
Lalthyrus ochroleucus, *Hook.* Lake Superior and Saskatchewan	20
Lalthyrus venosus, *Muchl.* Saskatchewan	25
Lalthyrus maritimus, *Big.* Fort Garry	16
Lalthyrus palustris, *L.* St. Joseph, U. S.	3
Vicia sativa, *L.* (cult.) Introduced at Red River	
Vicia Americana, *Muchl.* Saskatchewan	40
Vicia Americana. Var. 3. *Hook.* Carlton	12
Hedysarum Mackenzii, *Rich.* Saskatchewan and Rocky Mountains	60
Hedysarum boreale, *Nutt.* Saskatchewan	40
Hedysarum (sp. 1.) Rocky Mountains	25
Hedysarum (sp. 2.) Rocky Mountains	12
Desmodium Canadense, *D.C.* Carlton	4
Desmodium acuminatum, *D.C.* Pembina to St. Pauls, U. S.	6
Rosaceæ.	
Cerasus pumila, *Michx.* Winipeg	15
Cerasus Virginiana, *D.C.* Saskatchewan	20
Cerasus Pensylvanica, *Loisel.* Saskatchewan and Rocky Mountains	10
Prunus Americana, *Marsh.* Red River	
Spiræa salicifolia, *L.* Lake Winipeg	14
Spiræa betulifolia, *Pall.* Rocky Mountains	30
Chamærodos erecta, *Bge.* Saskatchewan	20
Sieversia triflora, *R. Br.*	
Geum strictum, *Ait.* Saskatchewan	16
Geum rivale, *L.* Rocky Mountains	8
Dryas Drummondi, *Hook.* A lpine Rocky Mountains	20
Dryas octopetala, *L.* Alpine Rocky Mountains	20
Agrimonia pilosa, *Led.* South Saskatchewan	3
Comarum palustre, *L.* Lake Winipeg	1
Fragaria Virginiana, *Mill.* Saskatchewan	12
Fragaria (sp.) Red River	16
Potentilla tridentata, *Ait.*	7
Potentilla fruticosa, *L.* Saskatchewan	30
Potentilla Norvegica, *L.* Saskatchewan	9
Potentilla Pensylvanica, *L.* with var. Saskatchewan	9
Potentilla argenta, *Pursh.*	
Potentilla Canadensis, *L.*	
Potentilla supina, *L.*	
Potentilla anserina, *L.* Saskatchewan	12
Potentilla concinna, *Prichard*	
Potentilla effusa, *Dougl.* Rocky Mountains	10
Potentilla flabelliformis, *Lehm.* Saskatchewan	20
Potentilla nivia, *L.* Rocky Mountains	2
Potentilla rubricaulis, *Lehm.* Rocky Mountains	1
Potentilla sericea, *L.*? Saskatchewan	12
Potentilla Drummondi? *Lehm.* Rocky Mountains	
Potentilla diversifolia, *Lehm.*	
Potentilla (sp. 1). Rocky Mountains and Saskatchewan	18
Potentilla (sp. 2). Saskatchewan	7
Potentilla (sp. 3). Rocky Mountains	18
Potentilla (sp. 4). Rocky Mountains	1
Potentilla (sp. 5). Saskatchewan	4
Rubris triflorus, *Prich.* Saskatchewan	8
Rubris arcticus, *L.* Lake Winipeg	15
Rubris strigosus, *Michx.* Saskatchewan	10
Rubris Mutkanus, *Nutt.* Rocky Mountains	1
Rubris pedatus. Rocky Mountains	1
Rosa blanda, *Ait.*	
Rosa (sp.) Many varieties. Saskatchewan	40
Cratægus tomentosa, *L.* Lake Winipeg	10
Cratægus coccinea. Saskatchewan	
Amelanchier Canadensis, *Torr.* and *Gr.* Saskatchewan and Rocky Mountains	12
Pyrus ancuparida, *D.C.* Winipeg River	2
Haloragеæ.	
Hippuris vulgaris. Saskatchewan	5
Myriophyllum verticillatum, *L.* Saskatchewan	10
Myriophyllum spicatum, *L.* Saskatchewan	2
Circæa alpina, *L.* var. Alpine Rocky Mountains	
Onægraceæ.	
Œnothera biennis, *L.*	
Œnothera punicla, *L.*	
Œnothera serratula. var. *Dougl.* Saskatchewan	3
Œnothera triloba, *Nutt.* Saskatchewan	7
Œnothera albicaulis. Saskatchewan	2
Gaura coccinea, *Spack.* Saskatchewan	30
Epilobium palustre, *L.* Saskatchewan	1
Epilobium angustifolium, *L.* Rocky Mountains and North Saskatchewan	4
Epilobium latifolium, *L.* Rocky Mountains	30
Epilobium tetragonum, *L.* Saskatchewan	5
Epilobium alpinum, *L.* Alpine Rocky Mountains	1
Epilobium origanifolium. Rocky Mountains	8
Epilobium (sp.)	
Cucurbitaceæ.	
Ecinocystus lobatus. *Nix.*	1
Cactaceæ.	
Opuntia (sp. 1.) Missouriensis. Arid plains, Saskatchewan	
Opuntia (sp. 2.) Arid plains, Saskatchewan	
Opuntia (sp. 3.) Arid plains, Saskatchewan	
Opuntia (sp. 4.) Arid plains, Saskatchewan	
Loasaceæ.	
Mentzelia ornata, *Torr.* and *Gr.*	
Grossulariaceæ.	
Ribes floridum, *L.* Winipeg	7
Ribes oxycanthoides, *L.* Saskatchewan	6
Ribes rubrum, *L.* Saskatchewan	6
Ribes Hudsonianum, *Rich.* Winipeg	3
Ribes lacustre, *Bir.* Rocky Mountains	6
Ribes hirtellum. *Michx.*	
Ribes Anseum, *Pursh.*	
Saxifragaceæ.	
Heuchera Richardsonii, *Br.* Saskatchewan	14
Mitella nuda, *L.* Winipeg	20
Saxifraga controversa, *Stern.* Alpine Rocky Mountains	25
Saxifraga oppositifolia, *L.* Alpine Rocky Mountains	2
Saxifraga hyperborea, *Br.* Alpine Rocky Mountains	4
Saxifraga aizoides, *L.* Alpine Rocky Mountains	7

	No. of sp. collected.
Saxifraga Virginiana, *Michx.* Rocky Mountains	10
Saxifraga Dahurica, *Pall.* Alpine Rocky Mountains	30
Saxifraga tricuspidata, *Retz.* Winipeg	14
Saxifraga bronchialis, *L.* Alpine Rocky Mountains	30
Saxifraga cernua, *L.* Alpine Rocky Mountains	6
Saxifraga cæspitosa, *L.* Alpine Rocky Mountains	20
Parnassia Kobzibuci, *Cham.* Rocky Mountains	17
Parnassia palustris, *L.* Saskatchewan	19
Parnassia fimbrata, *Hook.*	
Crassulaceæ.	
Sedum Rhodiola, *D.C.* Rocky Mountains	12
Sedum stenopitatum, *Pursh.* Rocky Mountains	14
Umbelliferæ.	
Sanicula Marilemdica, *L.* Saskatchewan	5
Carum Carui, *L.*	
Thaspium cordatum, *Torr.* and *Gr.*	
Thaspium Barbinode? *Nutt.*	
Thaspium macrocarpum, *Nutt.* Saskatchewan	10
Tizia aurea, *Koch.*	
Cicuta virosa, *L.* Saskatchewan	2
Cryptolæmia Canadensis, *L.* Red River	1
Sium lineare, *Michx.* Saskatchewan	7
Peucedanum macrocarpum, *Nutt.* Saskatchewan	10
Peucedanum (sp. nov.?) Saskatchewan	15
Heracleum lanatum, *Michx.* Saskatchewan	5
Osmorrhiza longistylis, *D.C.* Winipeg	6
Osmorrhiza brevistylis, *D.C.* Rocky Mountains	4
Araliaceæ.	
Aralia nudicaulis, *L.* Saskatchewan	7
Aralia spinosa, *L.* Lake Winipeg	1
Aralia hispida, *Michx.*	
Loranthaceæ.	
Arcenthobium oxycedre	
Corneæ.	
Cornus Canadensis, *L.* Saskatchewan	3
Cornus stolonifera, *Michx.* Saskatchewan to Rocky Mountains	8
Cornus circinata, *L. Herit.*	
Cornus (sp.)	
Caprifolaceæ.	
Sambucus racemosa, *L.*	
Sambucus Canadensis, *L.* Rocky Mountains	1
Symphoriocarpus racemosus, *Michx.* Saskatchewan to Rocky Mountains	17
Symphoriocarpus occidentalis, *B.* and *Br.* Saskatchewan	13
Linnæa borealis, *Gronor.* Saskatchewan	6
Dierbitta trifida, *Moench.*	
Lonicera involucrata, *Banks.* Rocky Mountains	14
Lonicera parviflora, *Lauck.* Saskatchewan	20
Lonicera oblongifolium	
Viburnum opulus, *L.* North Saskatchewan, Thick-woods	
Viburnum Lentago, *L.* Winipeg	6
Viburnum pubescens, *Pursh.* Winipeg	2
Viburnum pauciflorum, *Rylace.* Saskatchewan	15

	No. of sp. collected.
Rubiaceæ.	
Hediotis purpura, *Hook.*	
Hediotis angustifolia, *Hook.*	
Galium triflorum, *Mx.*	
Galium boreale, *L.*	
Galium trifidum, *L.*	
Compositæ.	
Liatris scariosa, *Willd.*	
Eupatorium purpureum, *L.*	
Nardosmia sagittata, *Hook.* Saskatchewan	9
Nardosmia corymbosa, *Hook.*	
Nardosmia palmata, *Hook.*	
Aster alpinus, *L.* Alpine Rocky Mountains	14
Aster lævis, *Torr* and *Gr.* Saskatchewan and Rocky Mountains	37
Aster Lindleyauns, *Torr* and *Gr.* Saskatchewan	20
Aster multiflorus, *Ait.* Saskatchewan	16
Aster conspicuus, *Lindl.* Rocky Mountains	28
Aster montanus, *Richards.* Alpine Rocky Mountains	30
Aster simplex, *Willd.*	
Aster pumiceus, *L.*	
Aster Novæ Anglice, *L.*	
Aster ptarmicoides, *Torr* and *Gr.*	
Aster laxiflorus	
Aster augustus, *Torr* and *Gr.*	
Aster salsiginoides, *Richard.* Alpine Rocky Mountains	
Erigeron sonchfolyllum? *Rich.*	6
Erigeron canescens, *Torr* and *Gr.* Saskatchewan and Rocky Mountains	60
Erigeron cæspitosum, *Nutt.*	
Erigeron strigosum, *Muhl.* Winipeg	1
Erigeron glabellum, *Nutt.* Saskatchewan and Rocky Mountains	29
Erigeron Philadelphicum, *L.* Saskatchewan	8
Erigeron uniflorum, *L.* Alpine Rocky Mountains	20
Erigeron compositum, *Pursh.* Alpine Rocky Mountains	3
Erigeron acris, *L.* Rocky Mountains	2
Erigeron (nov.?) Alpine Rocky Mountains	6
Erigeron (yellow flowers). Alpine Rocky Mountains	6
Erigeron macranthum, *Nutt.* Rocky Mountains	1
Diphlopappus umbellatus? *Hook.* Rocky Mountains	10
Townsendria sericea, *Hook.* Rocky Mountains	10
Gutierretzia Eutliamiæ, *Torr* and *Gr.*	
Solidago Missouriensis, *A. Gr.* Saskatchewan	3
Solidago humilis, *Banks.* Rocky Mountains	10
Solidago virgaurea, *L.*, var. Rocky Mountains	12
Solidago rigida, *L.* Saskatchewan	8
Solidago lanceolata, *L.* Saskatchewan	14
Solidago Missouriensis, *A. Gr.* Saskatchewan	8
Solidago nemoralis. var. (sp. 2.) Rocky Mountains	2
Solidago incana, *Torr* and *Gr.* nemoralis. Saskatchewan	2
Solidago Canadensis. Saskatchewan	
Solidago procera. Saskatchewan	
Solidago gigantea. Saskatchewan	
Aplopappus lanceolatus, *Torr* and *Gr.*	
Aplopappus spinulosus, *D.C.*	
Aplopappus Nuttallia, *Torr* and *Gr.*; *Dumal.* Saskatchewan	3
Chrysopsis villosa, *Nutt.* Saskatchewan	10
Toa xanthifolia, *Nutt.*	
Toa axillaris, *Pursh.* Saskatchewan	25
Ambrosia artemisifolia, *L.*	

	No. of sp. collected.
Ambrosia trifolia. Winipeg	1
Franseria Hookeriana. *Nutt.*	
Xanthium strumarium	
Xanthium Canadense	
Heliopsis lævis *Pers.*	
Echinacea angustifolia, *D.C.*	
Rudbeckia hirta, *L.*	
Rudbeckia laciniata, *L.*	
Lepachys columnaris, *Torr* and *Gr.* Saskatchewan	6
Helianthus lenticularis, *Dougl.*	
Helianthus petiolaris, *Nutt.*	
Helianthus giganteus? *L.*	
Helianthus rigidus, *Desf.* Saskatchewan	6
Helianthus (sp. 1.) var. giganteus. Saskatchewan	7
Helianthus (sp. 2.) Maximiliani. Saskatchewan	1
Helianthus (sp. 3.) strumosus, var.	
Coreopsis delphinifolia, *Lam.* Winipeg	13
Coreopsis rigida, var. *B.*	
Bidens frondosa, *L.*	
Bidens comata, *Muhl.*	
Guillardia aristata, *Pursh*	
Actinella Richardsonii, *Nutt.* Saskatchewan	30
Helenium antumnale, *L.* Saskatchewan	1
Amida hirsuta, *Nutt.*	
Achillæa millefolium, *L.* Saskatchewan and Rocky Mountains	8
Achillæa multiflora, *Hook.* Saskatchewan	8
Artemisia frigida, *Torr* and *Gr.* Saskatchewan	20
Artemisia Canadensis, *Mx.* Saskatchewan and Rocky Mountains	28
Artemisia biennis, *Willd.* Saskatchewan	5
Artemisia discolor, *Dougl.* Rocky Mountains	30
Artemisia Ludoviciana. *Nutt.* Saskatchewan	12
Artemisia dracunculoides, *Pursh.* Saskatchewan	3
Artemisia cana, *Pursh.*	
Artemisia (sp. 1.)	
Antennasia Carpatica, *R. Br.* Saskatchewan	40
Antennasia alpina, *Gaert.* Alpine Rocky Mountains	12
Antennasia divisa, *Gaert.* Saskatchewan	70
Antennasia racemosa, *Hook.* Rocky Mountains	17
Senecio aureus, *L.* Saskatchewan and Rocky Mountains	30
Senecio lugens, *Richards.* Rocky Mountains	15
Senecio exaltatus? *Nutt.* Saskatchewan	30
Senecio palustris, *Hook.* Saskatchewan	6
Senecio canus, *Hook.* Saskatchewan and Rocky Mountains	38
Senecio triangularis, *Hook.*	
Arnica angustifolia, *Vahl.* Saskatchewan and Rocky Mountains	12
Arnica Chamissoni, *Less.* Rocky Mountains and Saskatchewan	37
Arnica latifolia, *Boug.*, var. Rocky Mountains	5
Arnica cordifolia, *Hook.* Rocky Mountains	10
Saupurea alpina, *D.C.*, var. *B.*	
Circium Hookerianum, *Nutt.* Saskatchewan	12
Circium discolor, *Spreng.* Rocky Mountains	9
Circium Drummondi, *Torr* and *Gr.* Saskatchewan	12
Circium foliosum, *D.C.* Rocky Mountains	2
Hieracium Canadense, *Michx.* Rocky Mountains	3
Nabulus albus, *Hook.*	
Nabulus racemosus, *Hook.* Saskatchewan	9
Lygodesmia juncea, *Don.*	
Crepis runcinata, var.? *Torr* and *Gr.* Rocky Mountains	30
Crepis nana, *Richard.*	
Crepis elegans, *Hook.*	
Troximon glaucum, *Nutt.* Saskatchewan	10
Troximon (sp. 1.) Rocky Mountains	10
Taraxacum Dens Leonis, *Derf.* Saskatchewan. Unique	1
Mulgedium palchellum, *Nutt.* Saskatchewan	1
Mulgedium Floridianum, *D.C.*	
Valerianaceæ.	
Valeriana sylvatica, *Richard*	
Campanulaceæ.	
Campanula rotundifolia, *L.* Saskatchewan	10
Campanula aparinoides, *A. D.C.* Winipeg	10
Lobeliaceæ.	
Lobelia Claytoniana, *L.* Saskatchewan	2
Vaccineæ.	
Vaccinium corymbosum	
Vaccinium Canadense, *Michx.* Winipeg	6
Vaccinium Vitis Idæa, *L.* Winipeg	8
Vaccinium Myrtillus, *L.* Rocky Mountains. Unique	1
Oxycoceus palustris. *Pers.* Winipeg. Unique	1
Ericaceæ.	
Arctostaphylus Uva Ursi, *L.* Saskatchewan (abundant everywhere).	2
Cassandra calyculata, *Don.* Winipeg	17
Andromeda polyfolia, *L.*	
Ledum palustre, *L.*	
Ledum latifolium, *L.* Winipeg	4
Kalmia glauca, *L.*	
Menziesia glandulifera, *Hook.* Rocky Mountains	20
Menziesia globularis, *Salisf.* Rocky Mountains	3
Cassiope tetragona, *Don.* Rocky Mountains	17
Pyrolaceæ.	
Moneses uniflora, *Salisf.* Rocky Mountains	12
Pyrola secunda, *L.* Rocky Mountains	12
Pyrola rotundifolia, *L.* Rocky Mountains	20
Pyrola chlorantha, *Su.* Rocky Mountains	2
Primulaceæ.	
Maumbergia thyrsiflora, *Moench.*	
Trientalis Americana, *L.* Winipeg	7
Androsace septentrionalis, *L.* Saskatchewan	10
Androsace Chamagaome, *L.* Rocky Mountains	30
Glaux maritima, *L.* Saskatchewan	30
Dodycatheon media, *L.* Saskatchewan	30
Lysimachia ciliata, *L.* Saskatchewan	12
Lysimachia longifolia, *Pursh.* Winipeg	10
Primula Hornemanniana, *Hook.* Saskatchewan	8
Primula farinosa, *L.* Saskatchewan	30
Oleaceæ.	
Fraxinus viridis, *Michx.* Winipeg	4
Gentianaceæ.	
Gentiana propinqua, *Richard.* Rocky Mountains	14
Gentiana affinis, *Suo.* Saskatchewan	17
Gentiana detonsa. Var. Saskatchewan	25

	No. of sp. collected.
Gentiana acuta, *Michx.* Saskatchewan	20
Gentiana laponaria, *L.*	
Halenia deflexa, *L.*	
Apocyneæ.	
Apocynum hypericifolium, *L.* Winipeg	1
Apocynum androsomacfolium. *L.* Winipeg	9
Ascelepiadeæ.	
Ascelepias ovalifolia, *Dem.* Winipeg	7
Ascelepias incarnata, *L.* Winipeg	7
Ascelepias cornuta, *L.* Winipeg	1
Ascelepias Douglasii, *Hook*	
Aceratas viridiflora, *Ell.* Winipeg	2
Polemoniaceæ.	
Phlox Hoodii, *Richard.* Saskatchewan	12
Phlox aristata, *Michx.* Winipeg	25
Collomia parviflora, *Nutt.*	
Collomia linearis, *Nutt.*	
Polemonium cœruleum, var. γ. Rocky Mountains	22
Hydrophylleæ.	
Ellisia nyctalæ, *L.* Saskatchewan	24
Convolvulaceæ.	
Calystegia sepium, *Br.*	
Solaneæ.	
Solanum triflorum, *Hook.* Saskatchewan	4
Physalis grandiflora? *Hook*	
Physalis hirsuta? Winipeg	8
Physalis (sp. 1.) Winipeg	2
Physalis (sp. 2.) Winipeg	4
Boraginaceæ.	
Lithospermum canescens, *Lehm.* Saskatchewan	8
Lithospermum linearifolium, *Gold.* Winipeg	10
Lithospermum arvense, *L.* Winipeg. Unique	1
Lithospermum pilosum? *Nutt.* Rocky Mountains	8
Echinospermum Virginianum, *Lehm.*	
Echinospermum glomeratum? Saskatchewan	24
Echinospermum Redososkii, *Lehm.* Saskatchewan	30
Echinospermum floribundum, *Lehm.* Saskatchewan	12
Echinospermum Cappula, *Lehm.*	
Onosmodium hispidum, *Michx.* Winipeg	5
Eritrichium (sp. 1.) Saskatchewan	30
Eritrichium (sp. 2.) Saskatchewan	30
Pentalophus longiflorus, *A. D.C.* Saskatchewan	10
Pentalophus Mandanensis, *A. D.C.* Saskatchewan	8
Myosotis alpestris, *Schnuett.* Rocky Mountains	6
Mertensia paniculata, *Don.* Saskatchewan	15
Symphytum officinale? *L.*	
Labiatæ.	
Mentha Canadensis, *L.* Saskatchewan	12
Lycopus Virginicus, *L.* Saskatchewan. Unique	1
Monarda fistulosa, *L.* Saskatchewan	15
Lophanthus anisatus, *Benth.* Saskatchewan	9
Dracocephalum parviflorum, *Nutt.* Saskatchewan	4
Prunella vulgaris, *L.* Rocky Mountains	7
Physostegia Virginiana, *Benth.* Saskatchewan. Unique	1
Scutellaria galericulata, *L.* Saskatchewan	4
Stachys palustris, *L.* Saskatchewan	14

	No. of sp. collected.
Verbenaceæ.	
Verbena paniculata, *L.* Winipeg. Unique	1
Scrophulariaceæ.	
Pentstemon gracili, *Nutt.* Saskatchewan	30
Pentstemon confertus, *Dougl.*, var. Rocky Mountains	9
Pentstemon Menziensii? Rocky Mountains	10
Pentstemon procerus, *Dougl.* Saskatchewan	25
Pentstemon niltidus, *Dougl.* Saskatchewan and Rocky Mountains	26
Mimulus rigens, *L.* Saskatchewan	8
Veronica Virginiana, *Schw.*, *L.* Winipeg	12
Veronica Americana, *Schw.* Saskatchewan	8
Veronica Anagallis, *L.* Winipeg	2
Veronica scutellata, *L.* Saskatchewan. Unique	1
Veronica peregrina, *L.* Saskatchewan	20
Veronica sessilifolia, *L.* Winipeg	2
Orthocarpus luteus, *Nutt.* Saskatchewan	15
Castelleja sessiliflora, *Pursh.* Winipeg	2
Castelleja coccinea, *Benth.*	
Castelleja septentrionalis? *Benth.* Saskatchewan and Rocky Mountains	61
Castelleja minuta, *Dougl.*	
Castelleja (sp. 1.) Saskatchewan	25
Castelleja (sp. 2.)	
Rhinanthus minor, *Ehrh.* Rocky Mountains	24
Pedicularis lanceolata	
Pedicularis surrecta? *Benth.* Saskatchewan	30
Pedicularis Canadensis, *Mx.* Winipeg. Unique	1
Pedicularis bracteosa, *Benth.* Rocky Mountains	12
Lentibulariaceæ.	
Utricularia vulgaris, *L.* Saskatchewan	6
Pinguicula grandiflora, *Prau.* Rocky Mountains	4
Plantagineæ.	
Plantago eriopoda, *Torr.* Saskatchewan	6
Plantago major, *L.* Saskatchewan	2
Nyctagineæ.	
Oxybaphus hirsutus, *Hook.* Saskatchewan	6
Cycloptera annua, *Nutt.*	
Polygonaceæ.	
Eriogonum androsaceum, *Benth.* Rocky Mountains	25
Eriogonum flavum *Nutt.* Saskatchewan	30
Eriogonum flavum, var. crassifolium. Rocky Mountains	20
Polygonum tenue, *Mx.* Saskatchewan	4
Polygonum amphibium, *L.* Var. β. Saskatchewan. Unique	1
Polygonum aviculare, *L.* Saskatchewan. Unique	1
Polygonum lapathifolium, var. lanatum. Saskatchewan	8
Polygonum viviparum, *L.* Rocky Mountains	5
Polygonum Convolvolus, *L.* Saskatchewan. Unique	1
Polygonum cilinode, *Michx.*	
Rumex domesticus, *Hartum.* Saskatchewan. Introduced	3
Rumex maritimus, *L.* Saskatchewan	3
Rumex salicifolius, *Urcum.* Saskatchewan	6
Oxyria reniformis, *Hook.* Rocky Mountains	1
Amaranthaceæ.	
Amaranthus retroflexus, *L.* Saskatchewan. Unique	1

	No. of sp. collected.
Chenipodiaceæ.	
Blitium maritimum, *Nutt* - - -	
Blitium capitatum, *L.* Rocky Mountains -	13
Blitium rubrum, var. *Mog.* - - -	
Monolepis Nuttaliana, *Mog.* Saskatchewan -	20
Chenopodium glaucum, *L.* - - -	
Chenopodium hybridum, *L.* - - -	
Chenopodium album, *L.* Saskatchewan -	4
Atriplex hastata, var. - - -	
Atriplex canescens, *Hook.* Saskatchewan -	8
Atriplex littoralis, *L.* - - -	
Eurotia ceratodes - - - -	
Eurotia, var. humifusa, *Mog.* Saskatchewan	15
Conospermum hyssopifolium - - -	
Chenopodina prostrata, *Mog.* - -	
Chenopodina (sp.) - - - -	
Salicornia herbacea - - - -	
Salicornia herbacea, var. prostrata - -	
Santalaceæ.	
Commandra umbellata, *Nutt.* Winipeg -	20
Commandra divida, *Richard* - - -	
Eleagneæ.	
Shepherdia argentea, *Nutt.* - - -	
S. Canadensis, *Nutt.* Saskatchewan. (Unique?) - - - - -	1
Eleagnus argentea, *Kursti.* Saskatchewan -	15
Aristolochiaceæ.	
Asarum Canadense, *L.* - - -	
Euphorbiaceæ.	
Euphorbia glyptosperma. Saskatchewan -	9
Cupuliferæ.	
Quercus rubra, *L.* Winipeg - -	4
Q. obtusiloba, *Michx.* Winipeg. - -	5
Corylus Americana, *Watt.* Winipeg. Saskatchewan - - - -	3
Carpinus (sp. ?). Winipeg. Unique - - - - -	13
Salicineæ.	
Populus balsamifera, *L.* Saskatchewan and Rocky Mountains - - -	12
P. grandidentata, *Michx.* Elbow of South Saskatchewan. Unique - - -	1
P. tremuloides, *Michx.* Saskatchewan and Rocky Mountains - - - -	9
Salicaceæ.	
Salix discolor, *Muhl.* S. and W. - -	
S. ericeptiala, *Muhl.* S. and W. - -	
S. cordata, *Muhl.* S. - - -	
S. cordata, var. vitellina, *And.* S. - -	
S. pyrolifolia, *Led.* W. - - -	
S. cordata padifolia, *And.* R. M. - -	
S. cordata pseudo mersmetes, *And.* R. M. -	
S. cordata rubhastata, *And.* S. - -	
S. petiolaris, *S. M.* W. and S. - -	
S. petiolaris, *S. M.* gracilis, *And.* W. and S.	
S. glauca, *L.* subjolylicifolia. *And.* R. M. -	
S. glauca, *L.* pallida deundata, *And.* R. M. -	
S. glauca, *L.* pallida glabrata, *And.* R. M. -	
S. glauca, *L.* (S. villosa, *Don* and *Hook*) R. M. - - - - -	
S. glauca, *L.* (desertorum, *Rich.*) S. -	
S. longifolia, *Muhl.* pediculata, *And.* S. -	
S. longifolia, *Muhl.* S. - - -	
S. candida, *W.* pellita, *And.* W. - -	
S. candida, *W.* S. and W. - - -	
S. reticulata, *L.* vestita ( ) grandifolia, *And.* R. M. - - - -	
S. arbuscula, *L.*? R. M. - - -	
Salix arctica, *R. Br.* subalpeptris, *And.* (forte n. sp.) R. M. - - - -	
S. pentandra Americana, *And.* W. and S. -	
S. pentandra fragiliformis, *And.* W. -	
S. pentandra sublucida, *And.* W. - -	
S. pentandra forma? S. - - -	
S. pendandra forma? S. Carltoniana, *And.* (pro temp. apell.) - - -	
S. vagans (rostrata *Rich.*), *S. W.* - -	
Cannabinaceæ.	
Humulus Lupulus, *L.* - - -	
Urticaceæ.	
Urtica gracilis, *Ait.* Rocky Mountains -	20
Parietaria Pensylvanica, *Muhl.* - -	
Lapostea Canadensis, *Gand.* Winipeg. Unique - - - - - -	1
Betulaceæ.	
Betula glandulosa, *Mx.* Saskatchewan -	5
B. papyracea, *Ait.* Saskatchewan - -	13
B. pumila - - - - -	
Alnus viridis, *D.C.* Rocky Mountains, Winipeg, and Saskatchewan - -	11
Coniferæ.	
Juniperus communis, *L.* Saskatchewan and Rocky Mountains - - -	4
J. Virginiana, *L.*, vel Sabina prostrata. Saskatchewan and Rocky Mountains - -	6
Thuja occidentalis, *L.* Canoe route and Rocky Mountains - - - -	1
Larix microcarpa, *Lam.* North Saskatchewan and Canoe route - - -	1
Abies alba, *Michx.* Saskatchewan and Rocky Mountains - - - -	12
A. balsamea. Rocky Mountains - -	
A. Douglasii, *Lindl.* var. Old Bow Fort. Rocky Mountains - - - -	4
Pinus Banksiana, *Lamb.* Lake Winipeg and Canoe route - - - -	
P. (sp. 1) North Saskatchewan, Rocky Mountains - - - -	
P. (sp. 2.) Saskatchewan and Rocky Mountains - - -	
P. (sp. 3.) - - -	
P. (sp. 4.) - - -	
Typhaceæ.	
Sparganium ramosum, *L.* - - -	
S. simplex, *L.* Saskatchewan - -	11
Typha latifolia, *L.* Winipeg - -	2
Aroideæ.	
Arisaema - - - - -	
Caltha palustris, *L.* - - - -	
Lemna piscula, *L.* - - - -	
Naiadeæ.	
Zanichella palustris, *L.* Saskatchewan -	10
Potamogeton pectinatum, *L.* - -	
P. perfoliatum, *L.* - - - -	
P. natans, *L.* - - - -	
Alsinaceæ.	
Triglochin maritima, *L.* Saskatchewan -	4
Sagittaria variabilis, *Engl.* Saskatchewan -	2
Sagittaria variabilis angustifolia. Saskatchewan - - - - - -	7
Sagittaria variabilis hastata. Saskatchewan -	3
Alisina plantago - - - -	
Hydrocharideæ.	
Anacharis Canadensis, *Pursh.* Rocky Mountains - - - - -	2

	No. of sp. collected.
Orchidaceæ.	
Calypso borealis, *Salisb.* Winipeg	3
Aplectrum aphyllum, *Nutt.* Saskatchewan	7
Corallorhiza inuata, *Br.* Winipeg	1
Microstylis ophioglossoides, *Nutt.* Winipeg	2
Platanthera hyperborea, *Lindl.* Saskatchewan	17
Platanthera obtusata, *Lindl.* Rocky Mountains	8
Platanthera fimbriata, *Lindl.* Winipeg	1
Platanthera Hookerii, *Lindl.*	
Spiranthes cernua, *Lindl.* Rocky Mountains	12
Goodyera repens, *Brown.* Rocky Mountains	14
Cypripedium humile, *Salisb.* Winipeg	8
Cypripedium parviflorum, *Salisb.* Saskatchewan	12
Cypripedium pubescens, *Willd.*	
Irideæ.	
Sisyrinchium mucronatum, *Mx.* Saskatchewan	30
Iris Caurina, *Herb.*	
Liliaceæ.	
Allium reticulatum, *Froy.* Saskatchewan	2
Allium Schœnoprasum, *L.* Rocky Mountains	4
Allium cernuum? Saskatchewan	11
Allium stellatum, *Froy.* Saskatchewan	
Allium (sp. 1) Saskatchewan	4
Lilium Canadense, *L.* Winipeg	2
Lilium Philadelphium, *L.* Saskatchewan	5
Uvularia sessilifolia, *L.*	
Uvularia grandiflora, *Su.*	
Streptossus roseus, *Michx.*	
Streptossus amplexifolius	
Majanthenum bifolium, *Moench.* Winipeg	5
Smilacina racemosa, *Pursh.* Rocky Mountains	9
Smilacina stellata, *Derf.* Saskatchewan	25
Smilacina trifolia, *Derf.*	
Clintonia borealis, *Raf.*	
Prosartes Hookerii, *Torr* and *Gr.* Saskatchewan	6
Convallaria pubescens, *Willd.*	
Smilax lasioneuron, *Hook.* Winipeg	4
Trillium cernuum, *Pursh.*	
Melanthaceæ.	
Zygadenus chloranthus, *Mx.* Saskatchewan and Rocky Mountains	28
Amianthium Nuttalii, *Torr* and *Gr.* Saskatchewan	25
Stenanthium? Rocky Mountains	30
Tofieldia glutinosa, *Vild.* Saskatchewan and Rocky Mountains	37
Juncaceæ.	
Juncus acutiflorus, *Ehrh.*	
Juncus batticus, var. β. Saskatchewan	9
Juncus polycephalus, *Mx.* γ. Winipeg	5
Juncus polycephalus, var. β.	
Juncus castaneus, var. pallidiflora. Saskatchewan	5
Juncus arcticus	
Juncus affinis, *R. Br.* Saskatchewan	8
Juncus consifolius	
Juncus (sp. 1.) Rocky Mountains	1
Juncus (sp. 2.) Saskatchewan	2
Juncus (sp. 3.)	
Luzula parviflora, *D.C.* Rocky Mountains	12
Luzula spicata	
Commelinaceæ.	
Tradescantia Virginiana, *L.* Winipeg	14

	No. of sp. collected.
Cyperaceæ.	
Cyperus filiceulmis, *Wahl.* Winipeg	2
Scirpus maritimus, *L.* Saskatchewan	8
Scirpus atrovirens, *Muhl.* Winipeg	1
Scirpus sylvaticus, *L.* Saskatchewan	5
Scirpus eriophorum, *Wahl.* Saskatchewan	5
Scirpus lacustris, *L.* Winipeg	3
Scirpus triqueter? *L.* var.	
Scirpus (sp. 1.) Rocky Mountains	8
Scirpus (sp. 2.)	
Eleocharis acicularis, *R. Br.* Saskatchewan	4
Eleocharis palustris, *R. Br.* Saskatchewan	20
Eriophorum vaginatum, *L.*	
Eriophorum (sp. 1). Winipeg	6
Eriophorum (sp. 2). Saskatchewan	8
Carex aristata, *Br.* Saskatchewan	8
Carex aurea, *Nutt.* Rocky Mountains	25
Carex adusta, *Boot.* Saskatchewan	12
Carex alpina, *Su.* Rocky Mountains	7
Carex ampullacea, *Good.* Saskatchewan	13
Carex agnalitis, *Wahl.* Rocky Mountains	2
Carex Bachii, *Boot.* Saskatchewan	6
Carex Buxbaumii, *Wahl.* Winipeg	2
Carex Crawei, *Dewz.* Winipeg	8
Carex capillaris, *L.* Saskatchewan	10
Carex concinna, *R. Br.* Rocky Mountains and Saskatchewan	15
Carex disticha, *Huds.* Saskatchewan	10
Carex filifolia, *Nutt.* Saskatchewan	14
Carex festiva, *Doug.* Rocky Mountains	13
Carex flava, *L.* Saskatchewan. Unique	1
Carex gracillima, *Schw.*	
Carex granularis, *Muhl.* Saskatchewan	4
Carex Hoodii, *Boot.* Rocky Mountains. Unique	1
Carex Houghtonii, *Torr.* Saskatchewan	24
Carex intumescens, *Rudge*	
Carex incurva, *Light.* Rocky Mountains	3
Carex longirostris, *Torr.* Saskatchewan	9
Carex lenticularis, *Michx.*	
Carex lanuginosa, *Mx.* Saskatchewan	17
Carex marcida, *Boot.* Winipeg	4
Carex Novæ Angliæ, *Schw.*	
Carex nitens, *Boot.* Rocky Mountains	7
Carex ovata, *Rudge.* Rocky Mountains	11
Carex obtusata, *Lilgebe.* Saskatchewan	14
Carex pseudo cyperus, *N.*	
Carex pallida, *Megus.* Saskatchewan	
Carex panicea, *L.* Winipeg. Unique	1
Carex Pensylvanica, *Lam.* Saskatchewan	2
Carex retrorsa, *Lehm.* Saskatchewan	3
Carex rosea, *Schk.*	
Carex rupestris, *All.* Rocky Mountains. Unique	1
Carex Richardsonii, *Br.* Saskatchewan	14
Carex stricta, *Lamb.*	
Carex staminea, *Schk.* Winipeg	4
Carex siccata, *Deuz.*	
Carex stipata, *Muhl.*	
Carex scoparia, *Schk.*	
Carex stellulata, *Good.* Saskatchewan. Unique	1
Carex scirpoidea, *Mx.* Rocky Mountains	8
Carex stenophylla, *Wahl.* Saskatchewan	25
Carex fenella, *Schk.*	
Carex tenera, *Deuz.*	
Carex Torregi, *Tuck.* Saskatchewan. Unique	1
Carex Torregana, *Desf.* Saskatchewan	12
Carex utriculata, *Boot.* Saskatchewan. Unique	1
Carex vaginata, *Tausch.* Rocky Mountains	5
Carex vesicaria, *L.*	
Carex vitilis, *Fries.*	
Carex vulpinoidea, *Mx.* Saskatchewan	12

	No. of sp. collected.
Gramineæ.	
Beckmannia crucæformis, *Hochst.* Saskatchewan	8
Alopecurus geniculatus, *L.* Saskatchewan and Rocky Mountains	40
Phleum pratense, *L.*	
Phalaris arundinacea, *L.* Saskatchewan	9
Hierochloa borealis, *R. & S.* Winipeg	10
Panicum virgatum, *L.* Winipeg. Unique	
Panicum capillare, *Gronor*	
Panicum rectum, *R. & S.*	
Panicum nitidum, *Lamb.*	
Panicum xanthophysum, *Cyr.* Saskatchewan	16
Panicum Echinocloa colonum, *L.*	
Panicum Echinocloa Crus Galli, *L.*	
Setaria verticillata, *Beam.*	
Orygopsis asperifolia, *Rich.*	
Eriocoma cuspidata, *Nutt.* Saskatchewan	20
Stipa viridula, *Trim.* Saskatchewan	8
Stipa Richardsonii. Rocky Mountains	17
Stipa capillata, *Trim.* Saskatchewan	13
Stipa spartea, *Trim.* Saskatchewan	8
Muhlenbergia glomerata, *Trim.*	
Vilfa cuspidata, *Torr.* Saskatchewan	6
Sporobobus heterolepsis, *A. Gray.* Saskatchewan	4
Agrostis laxiflora, *Rich.* Saskatchewan	3
Agrostis æquivalvis, *Trim.*	
Calamagrostis purpurascens. *Br.*, var.	
Calamagrostis longifolia. *Hook.*	
Calamagrostis Canadensis, *Beam.* Saskatchewan	30
Calamagrostis struta, *P. de B.* Rocky Mountains	3
Calamagrostis sylvatica, *D.C.* Rocky Mountains	6
Calamagrostis coarctata. Saskatchewan	10
Spartina cynosuroides, *Willd?*	
Entryana oligostachia, *Kth.* Saskatchewan	10
Deschampsia cæspitosa, *Beam.* Saskatchewan and Rocky Mountains	36
Trisetnum subspicatum, *Beam.* Rocky Mountains	9
Avena versicolor, *Vill.* Saskatchewan	20
Danthonia sericea, *Nutt.* Saskatchewan	4
Brigopyrum spicatum, *Holt.* Saskatchewan	8
Poa alpina, *L.* Winipeg and Rocky Mountains	16
Poa serotina, *Ehrh.* Winipeg. Unique.	1
Poa pratensis, *L.*	
Poa flexuosa, *Wahl.*	
Poa brevifolia, *Muhl.*	
Atropis distans, *Grisel.*	
Atropis California, *Munro.* Saskatchewan	12
Glyceria Michauxii, *Kth.* Saskatchewan	30
Glyceria aquatica, *Wahl.* Saskatchewan	29
Reboulia gracilis, *Kth.*	
Catabrosa aquatica, *Br.* Saskatchewan	40
Koehleria cristata, *Pero.* Saskatchewan	30
Festuca ovina, *L.* Winipeg to Rocky Mountains	15
Festuca scabrella, *Trim.* and *Hook.*	
Festuca borealis, *Mert.* and *Koch.* Saskatchewan	12
Festuca rubra, *L.* Saskatchewan	10
Bromus purgans, *L.* Saskatchewan and Rocky Mountains	26
Bromus Kalmii, *Agr.*	
Bromus ciliatus	
Triticum repens, *L.* Saskatchewan	6
Triticum caninum, *L.* Saskatchewan and Rocky Mountains	40
Triticum substrictum	
Elymus Canadensis, *L.* Saskatchewan	12
Elymus mollis, *Br.* Saskatchewan	17
Hordeum tubatum, *L.* Saskatchewan	7
Filices.	
Woodsia ilvensis, *Br.* Rocky Mountains	
Cystopteris fragilis, *Beruh.* Rocky Mountains	
Cheilanthus vestita, *Willd.* Rocky Mountains	
Lastrea spinulosa, *Prest.* Saskatchewan	
Lastrea cristata, *Prest.* Winipeg	
Polysticum Lonchitis, *L.* Rocky Mountains	
Onvelea sensibilis, *L.* Winipeg	
Struthiopteris Germanica, *L.* Saskatchewan	
Pteris aquilina *L.* Rocky Mountains	
Allosonus acrostichoides, *Br.* Rocky Mountains	
Allosonus atropurpureus, *Agr.*	
Asplenium viride, *L.* Rocky Mountains	
Polypodium dryopteris, *L.* West Rocky Mountains	
Polypodium vulgare, *L.* West Rocky Mountains	
Botrychium Virginicum, *L.* Rocky Mountains	
Botrychium Lunaria, *L.* Winipeg	
Osmunda interrupta, *Mx.* West Rocky Mountains	
Lycopodiaceæ.	
Lycopodium dendriodeum. *Mx.*	
Lycopodium clavatum, *L.*	
Lycopodium complanatum, *L.*	
Lycopodium lucidulum, *Mx.*	

Alpine Plants collected by Dr. Hector at altitudes determined by the temperature of boiling water.

Silene acallis, *L.*
Pipe Stone Pass, Rocky Mountains, 8,800 feet. August 27th.

Arenaria.
Pipe Stone Pass, 8,700 feet. August 26th.

Cerastium alpinum, *L.*
Pipe Stone Pass, 8,800 feet. August 27th.

C. arvense, *L.*
Pipe River, 8,800 feet. August 26th.

Stellaria longipes, *Gold.*
Rocky Mountains, 7,500 feet. August 26th.

Fragaria Virginiana, *Ehrh.*
Pipe Stone Pass. August 26th.

Potentilla fruticosa, *L.*
Pipe Stone Pass, 8,000 feet. August 26th.

P. diversifolia? *Lehm.*
Pipe Stone Pass, 8,000 feet. August 26th.

Epilobium alpinum, *L.*
Rocky Mountains, highest point of vegetation, 9,500 feet to 10,000 feet, Pipe Stone River.

Saxifraga bronchialis, *L.*
Pipe River, 8,800 feet. August 26th.

S. controversa, *Sternb.*
Pipe Stone Pass, August 26th, 9,100 feet, and Kootanie River. October.

S. Dahurica, *Call.*
Pipe Stone Pass, 9,000 feet. August 24th.

Parnassia fimbriata, *Hook.*
Pipe Stone Pass, 7,500 feet. August 24th.

Sedum stenopetalum, *Pursh.*
Pipe River, 8,800 feet. August 20th.

Youngea pygmaia, *Led.*
Pipe Stone Pass, 9,100 feet. August 26th.

Senecio triangularis, *Hook.*
Pipe Stone Pass, 9,000 feet, August 26th, and West side Rocky Mountains.
Erigeron (sp.)
Pipe Stone Pass, 8,800 feet. August 27th.
E. compositum, *Pursh.*
Pipe Stone Pass, 8,800 feet. August 27th.
Valeriana capitata?
Pipe Stone Pass, 7,500 feet. August 26th.
Menziesia glanduliflora, *Hook.*
Pipe Stone Pass, 8,800 feet. August 26th.
Cassiope tetragona.
Pipe Stone Pass, 8,800 feet. August 26th.
Gentiana propinqua, *Rich.*
Pipe Stone Pass, 7,500 feet. August 26th.
Castillega mincata, *Doug.*
Pipe Stone Pass, 8,000 feet. August 26th.
Polygonum viviparum, *L.*
Pipe River, 8,800 feet. August 27th.
Oxyria reniformis, *Hook.*
Pipe River, 9,500 feet to 10,000 feet.
Salix reticulata, *L.*, var. nana, *Andr.*
Pipe River, 8,000 feet. August 27th.
Salix reticulata. var.
Pipe River, 8,000—9,000 feet, near the [*sic*]
S. arctica? *R. Br.*
Pipe Stone Pass, 8,000 feet. August 27th.
Allium Schœnoprasum, *L.*
Pipe River, 7,500 feet. August 28th. Only seen once, and those very abundant.

Ligadenus chloranthus, *Rich.*
Pipe Stone Pass, 7,500 feet. August 26th.
Juncus ensifolius, *Wick.*
Pipe Stone Pass, 7,500 feet. August 27th.
J. arcticus, *Willd.*
Pipe Stone Pass, 7,500 feet. August 26th.
J. castaneus, *Sm.*
Pipe Stone Pass, 8,000 feet. August 26th.
Luzula parviflora, *Desv.*
Pipe Stone Pass, 8,800 feet. August 26th.
L. spicata, *L.*
Pipe Stone Pass, 8,800 feet. August 26th.
Poa alpina, *L.*
Pipe Stone Pass, 8,800 feet. August 26th.
Phleum pratense, *L.*
Pipe Stone Pass, 8,800 feet. August 26th.
Poa pratensis, *L.*
Pipe Stone Pass, 8,800 feet. August 26th.
Bromus ciliatus, *L.*
Pipe Stone Pass, 8,800 feet. August 26th.
Trisetum subspicatum, *P. de B.*
Pipe Stone Pass, 8,800 feet. August 26th.
Festuca ovina, *L.*
Pipe Stone Pass, 8,800 feet. August 26th.
Calamagrostis (Degenia) caratata, *Torr.*
Pipe Stone Pass, 8,800 feet. August 26th.

NOTES on the foregoing PLANTS by DR. ASSA GRAY, U.S.

Ranunculus Pennsylvanicus. Saskatchewan. 1857-8=R. repens, *L.*
Delpinium exaltatum. *Nutt.*=D. scrophulorum, *A Gr.;* not the D. exaltatum of the Alleghanies, &c.
Turrites retrofracta=T. patula.
Vesicaria Astria has long style, &c., of=V. Ludoviciana.
Lepidium corymbosum=L. Virginiana.
Sphæralacea, Sp.=Malvastrum coccineum *Gr.;* or cristani, *Pursh.*
Phaca No. 2.=P. oroboides, *D.C.* (*Astragetus*)
Phaca Robinsii *Oakes*, No. 5.=P. elegans, *Hook.*
Astragalus hypoglottis var.?=A. strictus, *Nutt.*, var. adsurgens.
Phaca, No. 4.=Astragalus nigrescens, *Hook.*
Phaca, No. 3.=Astragalus homolobus decumbens, *Nutt.*
Phaca, No. 1.=Astragalus homolobus?
Pyrus Americana, Winipeg, just =P. aucuparida. Elliptical oblong leaves, not accuminate.
Œnothera Nuttalliana.=Œ. triloba, *Nutt.*
Opuntia Saskatchewanensis.=O. Missouriensis.
Cicuta maculata. Why not=C. virosa.
Peucedanum ? Rocky Mountains, = Musenium tenuifolium, *Nutt.*
Aster ptarmicoides; a wrong [*sic*] got in with a specimen of A simplex.
Erigeron (lanatum), globellum var., Rocky Mountains,=E. lilifolium.?
Erigeron sp. Rocky Mountains.=E. macranthum, *Nutt.*.
Erigeron. ? Rocky Mountains,=E. grandiflorum, *Hort.*, capit. minor.
Solidago sp. Saskatchewan.=S. nemoralis.
Solidago, No. 1.=dwarf S. Missouriensis.
Solidago, „ 2.=S. nemoralis, var.
Solidago, sp., Saskatchewan=S. incane. β., *Tor. Gr.*, inter S. nemoralis et Canadense.
Solidago, No. 3.=S. Canadense.
Solidago sp.=S. procera.
Solidago sp., Saskatchewan,=S. gigantea.
Grindelda. ? ? Saskatchewan.=Aplopappsus Nuttallii. *Tor. & Gr.* (Eriocarpum, *Nutt.*)
Coreopsis delphinifolia, var. rigida.=C. palmata, *Nutt.*
Helianthus, No. 1.=H. giganteus.
Helianthus, sp. Saskatchewan,=H. Maximiliani.
Helianthus, sp., Saskatchewan,=H. strumosus, var.
Bidens cornuta.=Cronna, *Tor. & Gr.*,=Chrysanthemoides.
Gentiana saponaria=G. Condrasii.
Pentstemon Mengasii, Rocky Mountains,=P. Lenisii. *Bath.*
P. Anitichus, the sp. in front Rocky Mountains, =certainly P. Floodlii, *Gray.*=P. cymothus, *Hook.* Bot. Mag. x. 4464; P. nitidus distinct ?
Asclepias purpurascens=A. cornuti.
Fraxinus viridis=F. tomentosa.
Bitula, Saskatchewan,=B. papyracea, var.
Quercus obtusiloba, Saskatchewan,=Q. macrocarpa.
Q. rubra, Winipeg Valley,=Q. palustris.
Platanthera, Pembina, 21 July, fl. alba.=P. leucra, cophæa, *Nutt.*
Aphetium aphyllum, Saskatchewan,=Corallorhiza Macræi, *Gr.;* in Agassiz C. superior.
Sparangum ramosum. Fort Garry.=S. enrycephalum, *Eug.*
Smilacina pubescens. R. Winipeg.=Polygonetum giganteum.
Scirpus, sp., Saskatchewan,=S. atrovirens.
Stenanthium? Rocky Mountains, est n. sp. ! ! !

(Signed) A. GRAY.

No. 12.

Meteorological Report.

Report on Meteorological Observations.

The meteorological observations were made with instruments supplied by Government, and furnished for the most part through the observatory at Kew, where the corrections were obtained previous to their issue.

Barometers. Several of Adie's mercurial barometers were supplied, but these were all damaged before they reached the Red River settlement, as their construction was too heavy to bear the rough carriage. The few observations that were made with them have therefore only been applied to the verification of the aneroids.

Three aneroid barometers were used by the Expedition for ascertaining the barometric variations, their readings being checked at intervals by comparison with the temperature of boiling water. For this purpose two sets of the necessary apparatus, with four thermometers, were supplied, but only one reached Fort Carlton in safety. The means remaining at the disposal of the Expedition for ascertaining the barometric readings during the second and third seasons were thus very imperfect; but while individual observations must therefore be looked upon as only approximate, reliance may still be placed on averages derived from continued observations at one place.

The behaviour of the aneroids at different altitudes, from their comparison with the boiling point of water is shown in a table appended to this report, and is interesting from its proving that where minute accuracy is not attempted, useful results can be obtained with a carefully-selected instrument over a much greater range than has generally been admitted. From the table mean corrections have been obtained for the aneroids, which are applied to the average readings elsewhere tabulated in the abstract. The errors were found to be so irregular, but always small in amount, that one uniform mean correction has been applied except in a few special cases.

The sympiesometers were used on some occasions, but leakage rendered the indications very irregular.

Thermometers. The thermometers which were furnished to the Expedition consisted of a Kew standard, with plain, maximum, and minimum thermometers. Most of these were made by Messrs. Negretti and Zambra, and had the requisite corrections supplied with them. After having been in use for some time at very low temperature, their relative readings varied from these corrections, but as the range of those selected for use had all the same error within a degree, their corrections were practically disregarded. For very low temperature, however, no corrections were supplied, and then they varied among themselves to a considerable degree. Metallic tubes, each three feet long, were supplied at the suggestion of Dr. Hooker, for the purpose of obtaining the temperature of the soil. The results obtained by the use of these are very interesting; and where observations with them were continued at one station for a length of time, they may prove to have a relation to the mean fluctuations of the temperature of the air at the place, which will be a practical value.

The meteorological data accumulated by the Expedition are as follows:—

1st.—Desultory observations during the summer of 1857, which are to be found scattered throughout the journal for that period, as they were made principally for the purpose of measuring differences of level.

2nd.—The regular meteorological register kept at Fort Carlton from October 10th, 1857, to June 1st, 1858. This valuable register was amassed under the superintendence of Captain Blackiston, in connexion with the hourly observations of magnetic variation, which were continued for the greater part of that period.*

3rd.—A register kept at Fort Edmonton from January 1st to April 30th, 1858, under the direction of Dr. Hector, but the greater bulk of the observations having been taken by chief factor Swanston, the gentleman in charge of the Saskatchewan district at that time.

4th.—Besides these registers, regular observations were made at least twice a day, including the minimum temperature for the 24 hours, by Dr. Hector, while engaged on the various journeys he made during the winter of 1857–8. At Fort Carlton, in addition to the ordinary observations, the temperature of the soil at two feet and three feet below the surface was observed daily by M. Bourgeau throughout the winter, also the readings of thermometers inserted in the trunks of different trees. The temperature of the river before and after winter, and the progress of the seasons, were carefully noted by Mr. Sullivan at the same place. At Edmonton, an extract of the journal kept under Mr. Swanston's care was obtained, giving facts relative to the advance of spring. At the same place the depth of the frozen soil was examined in the month of March by Dr. Hector.

5th.—On leaving Fort Carlton, in June 1858, regular observations were made morning and evening, and in some cases more frequently, while on the march to the westward. As the stations at which these observations were made embrace every variety of camping-ground, their tabulation only serves to display approximately the meteorological phenomena during the summer months. However, under the instructions of Captain Blackiston, partial observations were continued throughout the summer at Fort Carlton by Mr. Hardesty, the gentleman in charge of that post.†

In the latter part of the summer, while the members of the Expedition were engaged in exploring the mountains, the observations were made under very exceptional circumstances, and more properly find place in the journals, especially the aneroid readings, as the changes of level are generally greater than the possible barometric variations.

6th.—On returning to Fort Edmonton for the winter, such instruments as remained in order were devoted to the amassing of a register during the winter months under the direction of Dr. Hector, the

* The register was forwarded to England by Captain Blackiston, and has not been yet recovered. An extract from it by M. Bourgeau, of the daily maxima and minima temperatures, and of a portion of the register for January and February 1858, have been used, however, in this report.

† Neither of these have been received.

observations being taken three times a day, generally by M. Bourgeau, who was the most constant resident in the fort of the different members of the Expedition. This register extends from October 12th, 1858, to May 15th, 1859, and was conducted much on the same plan as that at Fort Carlton during the previous winter.

7th.—A register was obtained for the months of February, March, and April at Jasper House, which is situated within the Rocky Mountains at their eastern base, and is nearly the same latitude as Edmonton. These observations were commenced by Dr. Hector, and continued by Mr. Moberly, the Company's resident at that place.

8th.—The observations were taken with great regularity during the two winter journeys made by Dr. Hector from Fort Edmonton to the Rocky Mountains, and have been tabulated as affording some interesting variations from the standard observations at the former place.

9th.—Shortly after starting for the work of the summer of 1859, one of the two remaining aneroids became irregular in its indications, and the only sound one, along with the few thermometers that remained, was reserved for use in the mountains. The observations made during that summer were therefore very irregular, and have not been tabulated separately. When in the mountains observations were made by Dr. Hector, as in the previous summer.

In all these observations the instruments were used with every precaution against influences which might interfere with their results. When observations were taken at a station for a considerable time, the conditions under which the instruments were exposed have been prefixed to the register in each case, but where taken *en route* one method has been followed as nearly as possible, which was to suspend the thermometer to a tree or otherwise, at the height of four feet above the ground, exposed to the north, and well away from the influence of the camp fire. In winter the thermometer was always suspended immediately on choosing the camping-place, so that by complete sunset a reliable reading was generally obtained. The instrument used in winter travelling was always a spirit thermometer for registering the minimum temperature, and which also served to indicate the temperature of the air at the time of observation. If a halt was made in the middle of the day the thermometer was generally again suspended, and under special circumstances observations were taken. In every case simplicity of means and freedom from incumbrance were aimed at when travelling, even at the expense of minute accuracy in the results.

From the digest of these materials, a fair estimate has been obtained of the nature of the winters at least of 1857–8 and 1858–9 throughout the valley of the Saskatchewan, from the Rocky Mountains to Fort Carlton.

Fort Carlton.

The abstract of the few observations available for this report of the large series taken at this place is as follows:—

I. Fort Carlton.*—From Daily Maxima and Minima.

		Maxima.	Minima.	Range.	Mean.	
		° ′	° ′	°	° ′	
1857.	November -	25 5	9 1	41	17 3	12th to 30th.
„	December -	16 2	1 6	57	8 9	„
1858.	January - -	10 3	−10 2	79	0 0	„
„	February -	5 5	−20 4	98	−7 4	„
„	March - -	35 0	17 6	67	26 3	„
„	April - -	48 6	23 1	66	35 8	„
„	May - -	58 1	32 9	62	45 0	„
„	June - -	67 8	42 0	46	54 9	1st to 6th.

Extract from the Expedition Register, the original being in the hands of Captain Blackiston.

1858.	January.	Mean of Observations at 9 a.m. and 4 p.m. -	1 2
„	February.	Ditto ditto -	−1 6
„	January.	Mean of Minima - - - -	−10 0
„	February.	Ditto - - - - -	−14 2†

Notwithstanding the extreme low temperature indicated by these averages for this winter yet, by persons resident in the country it was considered a mild open season; and the reason for this can be understood when we consider the great range of the thermometer during the depth of winter, the variations of which were accomplished by rapidly succeeding recessions, giving rise to almost spring days even in the months of January and February. Early in November the mean daily temperature fell below the freezing point, and, with three exceptions, never again reached it until March. These were on the 22nd of December, when it reached 32°, the 3rd of January, when a great storm that was felt all over the country, raised it to 37°, and, again, on 5th of February, when it was 33°. From the 9th of March to the 17th of April the temperature remained about the same, oscillating above and below the freezing point. From that date, however, the mean temperature never again fell below 32°, excepting on the 11th, 13th, and 14th of May. To this untoward recession must be attributed the total sterility of all the coniferæ, and many other trees and shrubs throughout the district for that year. During the night the temperature frequently fell below the freezing point as late as the end of May, and on the 18th of that month it is recorded at 19°.

From the small materials at command no connection can be established between the degree of cold and the direction of the wind, further than in most cases the very extreme cold is from the N.W., but on the 14th February, the day before the greatest cold recorded, the wind blew from the S.W.

* These are from observations recorded by Mons. Bourgeau.

† This difference from the above mean arises from some of the lowest temperatures not having been corrected in the register at the time the extract was made. Thus on the 15th, 46° 7′ with M. Bourgeau reads 54°.

The S.W. and N.W. winds were usually clear and dry, while a fall of snow was in general preceded by a N.E. wind, which towards spring always brought with it a cold raw fog, and a temperature only slightly above 32°, but during the fall of snow the wind was generally due east.

Fort Edmonton.

As we have observations at this place for part of the winter of 1857-8, and besides for the whole of the winter 1858-9, we are enabled to compare the difference between these two seasons, besides also having the means of judging of its climate relative to that at Carlton.

The Abstract of the Observations taken three times a day, excluding the Maximum and Minimum Observations, is as follows:—

		Highest.	Lowest.	Range.	Mean.	No. of Observations.
		° ′	° ′	° ′	° ′	°
1858.	January - -	45	−19 5	64 5	11 2	62
„	February -	55 5	−41 5	97 0	9 3	61
„	March - -	56	5	51 0	34 9	93
„	April - -	76	24	52 0	45 1	90
„	May - -	74	21	53 0	49 6	54
„	October - -	53	16	37 0	38 5	49
„	November -	47 5	−19	66 5	27 1	85
„	December -	29 8	−27 5	68 0	−2 9	93
1859.	January - -	42	−26	68 0	12 0	93
„	February -	42 0	−37 0	79 0	5 1	84
„	March - -	44 5	−2 5	47 0	24 9	91
„	April - -	65 0	11 0	54	32 5	90
„	May - -	64	37	27	50 8	92

We have therefore—

Mean for January, February, March, and April, 1858 - - 25° 12′
Mean for January, February, March, and April, 1859 - - 18° 62′
Showing the latter winter to be much more severe than that of 1858.

The following is the Abstract of the Maxima and Minima Temperatures at the same place, and as there was no maxima thermometer used the first winter, the comparison of the average Minimum Temperature for the first four months of the year can only be shown.

		Maxima.		Minima.		Mean Temperature.
		Highest.	Mean.	Lowest.	Mean.	
		° ′	° ′	° ′	° ′	° ′
1858.	January - -	—	—	−22 5	3 3	—
„	February -	—	—	−41 10	3 2	—
„	March - -	—	—	1 5	22	—
„	April - -	—	—	11 5	27 9	—
„	October - -	—	—	18 5	26 2	—
„	November -	52	34 0	−2 0	18 9	26 45
„	December -	37 5	6 4	−25 0	−14 0	−7 6
1859.	January - -	45 0	20 1	−35 7	−1 0	9 55
„	February -	43 5	13 6	−38 0	−11 1	1 25
„	March - -	44 5	34 7	−6 0	11 4	23 05
„	April - -	67 0	41 8	0 0	20 4	31 1
„	May - -	67 0	58 6	31 0	37 2	47 9

Mean of Minima for January, February, March, and April, 1858 - 21° 7′.
Mean of Minima for January, February, March, and April, 1859 - 9° 8′.

For Fort Carlton the mean minimum temperature for the same four months in the first of these years is 13·7°, showing a difference of 8° in favour of Edmonton in this item.

During the winter of 1857–8 the influence of the different winds upon the climate of Edmonton was very well marked, and although in the following season the phenomena were the same, they were not so decided and easily discerned.

The winds may be divided into three groups at this place; first, the clear winds that in winter bring the intense extreme of cold, and which are from the N.W. In spring and summer this direction is exactly reversed, when it becomes a clear, hot, and dry wind. This may be considered as the proper Continental current, and is the wind of fine steady weather. It often only affects the lower stratum of the atmosphere, the clouds passing right across it in the upper air. This wind must not be too rigidly defined by its direction, as it often blows from anomalous quarters, while its character remains the same, being quite subordinate in force to either of the other two groups, which are both stormy winds. The second group includes all the winds that generally blow from between N. and E., and which in winter bring the snow; while the third group are S. and S.W. winds, that blowing from the Pacific over and through the Rocky Mountains, always bring cloud, warmth, and sometimes even rain during the winter. The succession of phenomena in the winter of 1857–8 in the Upper Saskatchewan district, excepting close along the mountain, was as follows:—A few days of fine steady, though, perhaps, intensely cold weather, with the north-westerly wind, would be followed by a slight rise in the

temperature, caused by the N.E. wind having piled a canopy of cloud over the lower stratum of wind, and so preventing the radiation. This is done gradually every morning, the sky being more and more overcast, and clearing away later in the day, till after a few days the clouds last till evening, when a cutting north-east wind commences, that soon increases to a storm followed by snow. This often lasts for two or three days, the snow at length falling more softly, and the temperature rising rapidly, till the clouds break and show the upper stratum of air moving rapidly from the south-west, carrying generally light fleecy clouds against a clear sky. Generally, the following night the wind, now from the S.W., increases in violence, sometimes ranging rapidly through many points of the compass, showing it to take the form of a cyclone, often bringing high temperature and dense cloud discharging rain. One of these storms passed over both Edmonton and Carlton on the 3rd January 1858, and at the former place the minimum temperature registered for that day and night was 36°, and the next day the maximum for the twenty-four hours was only 10°. Another, on the 24th of the same month, was still more striking, when the temperature fell from 37° at four p.m. to 13·5° before midnight, or a difference of 50·5° in eight hours. After the storm from the S.W. the light norwester generally sets in irregularly, and the temperature falls in a few days to an extreme, during which there is generally a calm, followed by the haze and fog from the N.E. as before.

By the register we can follow the proportion of these winds to each of the first four months in 1858 with great facility.

Thus in January there were of clear cold winds from the N.W. - 4 days.
Snow winds from the N.E. - - - - - - 17 days.
With 10 overcast and 4 days of snow.
Mild moist wind from S.W. - - - - - - 6 days.
With 4 cloudy and 1 day of rain.

January is thus seen to have been a stormy month, with long intervals of calm amounting to 11 days, and the majority of which would rank under the period of the clear cold weather.

In February of the clear cold wind there were - 10 days.
Of the snow winds - - - - - 7 days.
With 7 overcast and 4 days of snow.
Of the warm winds - - - - - 11 days.
With 7 of cloud and 3 days of rain.

These last-mentioned warm days did not occur throughout the month as in January, but just before and after one long period of steady cold, that occupied from the 5th to the 22nd, so that this was the month during which the climate was most nearly what we should expect to find in the central district of a great continent.

March was a very strong month, during which the proper continental weather was almost wanting, and a continual struggle was kept up between the N.E. snow winds and the warm winds from the S.W. Thus,

Of clear cold N.W. wind there was only - - 1 day.
Of N.E. snow or raw cold wind there were - 15 days.
With 9 overcast and 7 days of snow.
Of S.W. warm winds - - - - 13 days.
With 9 of cloud and 3 days of rain.

This continual struggle kept the temperature always close to the freezing point, the extreme range for the month being 50°, while that for February was 97°, but the average range, excluding a few occasional extremes, may be considered only as 25°.

In the month of April the warm winds begun to predominate, and, excepting the two first days, there was no snow, the N.E. winds bringing cold raw fog instead. Thus,

Of clear cold days - - - - None.
Of N.E. winds, cold and raw - - - 10 days.
With 8 overcast and 2 of snow.
Of S.W. warm winds - - - - 15 days.
With 10 cloud and 4 days of rain.

Irregular spring weather commenced in March, but it was not till the beginning of April that the mean daily temperature was habitually above the freezing point. In many houses the same recession took place as at Carlton from the 11th to the 14th, during which the average temperature fell to 27°, and the minimum to 21°, attended with snow. I have described this portion of the winter of 1858 somewhat minutely, as I believe it displays, better than any other series of observations we have, the succession of the winter phenomena in the northern part of the prairie country at a medium distance from the influence of the Rocky Mountains and that of the eastern lake country.

The same period of the following winter and spring was different in many respects, probably representing the opposite extreme of the usual climatic conditions. The temperature never reached such extremes, and the changes in the weather were effected more gradually. The mean daily temperature remained below the freezing point till April, when on the 3rd it reached 35°, and then receded till the 15th, when spring weather commencing, the average never again fell below 32°.

The register of the observations at Jasper House shows the nature of the climate at the eastern base of the Rocky Mountains just within the limits of the range. The following is the abstract of that register—

From Observations excluding Maximum and Minimum.

——	Highest.	Lowest.	Range.	Mean.	No. of Observations.
	°			°	
1859, February - -	42	—20	62	14·7	78
„ March - - -	43	7	36	25·3	92
„ April - - -	53	5	48	25·8	42

From Daily Minimum—

	Lowest.	Mean.
	°	°
1859, February -	26·0	—3·0
„ March - -	2·0	12·3
„ April - -	1·0	12·7

The little trading port of Jasper House where these observations were made, is in the valley of the Athabasca River within the first range of the mountains. The valley is almost straight, and lies north and south the whole way through the mountains; accordingly the winds are north or south, blowing uniformly either up or down the valley. All the cold weather comes from the N. and all the warm weather from the S. These blow alternately, and the warm soft wind with clear sky and spring weather is often after a few days seen quite distinctly to be banked up outside the mountains, forming a heavy black cloud that overhangs the plain country to the N.E. This at last forces its way into the valley, bringing a slighter fall of snow than might be expected, and then a "spell" of very cold weather sets in, generally, accompanied by a raw fog; this in a few days changes to a dazzling haze, from the wind having set in from the S.W. again in the upper stratum of air, where it is all sunshine and fine weather, as was proved by ascending a mountain where it was found to be actually warmer on the top of a peak than in the valley below; the S.W. wind at last occupies the valley again, upon which a "spell" of open weather ensues. The result of such changes occurring frequently during the winter prevents the accumulation of snow and also the freezing over of the rivers where they are rapid. In consequence ducks are frequently found remaining the whole winter in the mountains, while from the plains, in latitudes much to the south, they are necessarily absent from October till May.

The following are the means of similar observations for the same period at Jasper House and at Fort Edmonton, places nearly in the same latitude, and they show that although the temperature for February is rather higher in the mountains than in the plain district, yet during the advance of spring it is nearly the same:—

		°			°
February.	Jasper House - - -	5·8	April, 1st to 15th:—		
„	Edmonton - - -	—3·8	„	Jaspar House - -	19·2
March.	Jasper House - - -	18·0	„	Edmonton - -	18·7
„	Edmonton - - -	18·2			

Along the eastern base of the Rocky Mountains there is a narrow tract of country in which there is never more than a few inches of snow on the ground. About 40 miles to the eastward, however, there the fall begins to be much greater, but during the winter rarely exceeds two feet. On the prairies the snow evaporates rapidly, and except in hollows where it is drifted never accumulates, but in the woods it is protected, and in spring is often three to four feet deep. Both in 1858 and 1859 the snow was much deeper, and lay longer at Fort Pitt than either at Edmonton or at Carlton, and yet it is midway between these places, and in much the same latitude and position in respect to the line of wooded country.

The following abstracts of the temperatures recorded when travelling during the winter months shows the nature of the weather experienced in moving from place to place:—

I. Between Fort Carlton and Edmonton.

1857, December 14th to 30th	Means of daily observations - - -	15·0
	Means of minima - - - -	4·7
	Means of temperature - - -	9·8

No. of Observations 28.

During the journey there were two storms with high wind and snow, but never so severe as to prevent travelling. The snow averaged six to eight inches in depth, and only for two days, when between Fort Pitt and Edmonton, required snow shoes to be used.

II. Edmonton to the Rocky Mountain House and back.

	°
1858, January 9th to 30th.—Mean of daily observations - - -	10·0

No. of Observations 45.

The want of snow on the ground made this journey hard for the dogs, as they had often to drag the sleighs over bare ground for miles. Only once we had to camp a little earlier than usual on account of a storm. At the Mountain House the weather was often quite open, and there seemed to have been less of the cold N.E. wind there than for the same period at Edmonton, which is distant 100 miles to the N.W.

III. Edmonton to Lake St. Ann's.

On this trip from the 12th to the 15th of February, 1859, the mercury was twice frozen, exclusive of which the mean of the recorded temperature is —17·9°.

No. of Observations 10.

This was a trip during the coldest weather experienced in the country. If proper precautions are taken there is nothing merely in extreme cold to stop travelling in the wooded country, but the danger of freezing from exposure upon the open plain is so great that they cannot be ventured on with safety during any part of the winter.

IV. Edmonton to Bow Fort and Back.

		°
1858, Nov. 26th to Dec. 26th.	Mean of daily observations - - -	4·9
	Mean of minima - - - -	−4·2
	Mean temperature - - - -	0·3

No. of Observations 63.

During this trip we had to halt for half a day, as the snow became so wet on the 27th November from a temporary thaw, that the dogs could not drag the sleighs. These short thaws when followed by extreme cold, as is generally the case, are very dangerous to the traveller, all the serious injuries from frost-bite occurring under such circumstances.

V. Edmonton to Jasper House, Athabasca River.

		°
1859, 13th to 31st January.	Mean daily temperature - - -	6·5
	Mean of minima - - - -	−3·7
	Mean temperature - - - -	1·4

No. of Observations 40.

This journey through the northern thick wood country was severe from the depth of the snow which fell on 11 days out of the 19, requiring the constant use of snow shoes until within 40 miles of the mountains, when there was only a sprinkling on the ground.

VI.—Jasper House into the Mountains.

		°
1859, February 10th to 16th.	Mean daily temperature - - -	5·7
	Mean minima - - - - -	−5·0
	Mean temperature - - - -	0·3

No. of Observations 13.

Mean temperature at Jasper House for same period - - - - 13·9

No. of Observations 19.

This trip was made up the valley of the Athabasca towards the heart of the mountains. It was not till far up the river, when the valley became contracted, that the snow was so deep as to require the use of snow shoes. It will be noticed that the cold was more intense than for the same period at Jasper House, which is in the same valley, but only a few miles within the range. In the month of March in both years it was only possible to travel at night, as during the day the snow is so wet that the dog sleighs slide very heavily. At this season, therefore, the time for travelling is from 6 or 7 p.m. until the sun acquires power next morning, generally between 8 and 9 a.m. The snow is then crisp, and has a hard crust, which bears up the dogs, or a man upon snow shoes. After this comes the worst season of the year for travelling, as the rivers and swamp begin to break up, and are quite impassable till clear of the ice. The country is then soft and wet, and camping is miserable work.

The Indians travel throughout the winter with horses, and the Hudson's Bay Company also drag most of the buffalo meat with horse sleighs, but it is very slow work, and wears out the animals very quickly, In 1858, travelling with dogs was not possible after the 25th of March in the Upper Saskatchewan, but in 1859 it was continued till the 20th of April, at Fort Pitt.

Spring and Summer.—The advance of spring in the Saskatchewan district is very rapid, but much more so in the north-western part of the country than in the eastern, where the ice on the lakes renders the season much later. A few days after warm weather sets in the alders and willows are in flower, and the little prairie anemone covers the dry southern exposures. At this season (early in April) the ash-leaf maple (*Negundo fraxinifolium*) is tapped for sugar at Fort Carlton and several other localities; but sharp frost at night, followed by hot clear sunshine during the day, is essential to the flow of the sap.

During the summer months, when the Expedition was for the most part traversing the more arid plains, or skirting the edge of the wooded country, rain with cloudy weather was much more frequent than might have been expected. On the low prairies to the west of the Red River Settlement, as far as Turtle Mount, thunderstorms with heavy rain were almost of daily occurrence during the months of July and August. The temperature in that district was often very high, the thermometer several times reaching 90° to 95° in the shade.

On the higher plains, which were traversed in 1858, from Fort Carlton to the Rocky Mountains, and ranging in altitude from 2,000 to 3,500 feet, thunderstorms were more rare, but yet a good deal of rain fell. Thus during the latter part of June, in the district of the Eagle Hills, there were nine days of rain and cloudy weather, to six of fine clear sky. The winds were nearly equally divided between those from the north and east, which are raw and cold, and those from the south and west. The mean temperature for the same period, from observations made three times a day, was 58·8°; the highest recorded being 72°, and the lowest 46°. The minimum for each night was not observed however, and several times it must have approached very near to the freezing point. The mean degree of moisture in the atmosphere was 0·64: saturation being 100.

During the month of July, between the Grand Coulée and the base of the mountains, there was a greater proportion of fine weather, with light, unsteady winds, nearly all of which were from the south and west. However, on twelve days of the month there were rain clouds. The mean temperature was 59·5°, the highest record being 70°, and the lowest 40°, with the degree of humidity 0·59, or rather less than in June.

During the first half of August, when the Expedition was near the base of the Rocky Mountains, east from the Old Bow Fort, the mean temperature was 54·9°; the highest record 79° and the lowest 40·5°. The degree of moisture was 0·65, showing an increase upon that of the preceding month. This is an exceptional fact when we consider the proximity of the mountains, and remember the influence they apparently exercise in reducing the snow fall during the winter in the snow district. During the two months just treated of, the Expedition was travelling through the fertile belt that bounds the arid plains lying to the south, and which is a region that possesses much the same botanical features throughout, and the mean temperature for it, from June 16th to August 12th, for 1858 was 57·09°, and

the mean degree of humidity ·626. Notwithstanding that the whole amount of rain that falls in this district is but small, yet, from the frequent showers, the vegetation is enabled to make vigorous and rapid advance. In the beginning of July all the prairie streams are dried up, but those rivers that rise in the Rocky Mountains continue in flood till the end of that month, and never fall to extreme low water until the end of September or October. There are, however, sometimes remarkable exceptions to this rule, as for instance, in the summer of 1858 the Saskatchewan, and other large rivers, seem never to have been in flood during the whole season; and their navigation, which generally might be effected by steamers of light draught from the middle of May till August, would have been totally suspended for that year.

The radiation, as might be expected, is very great during the summer nights in the northern prairie region, so that when the sky is not cloudy, the quantity of dew that falls is great in proportion to the degree of moisture in the atmosphere. It is owing to this, combined with the sharp frosts that occur early in September, that the rich pasture along the north Saskatchewan plains is preserved green and juicy until the snow falls, when the hard steady frost keeps it as fresh and nutritious as artificial hay until the return of spring.

In the summer of 1859 the Expedition traversed the most arid plains that lie within the British territory, without however encountering any of the great expanses of true desert country which exist further to the south, within the United States. Neither was there any marked difference between the frequency of rain-clouds and the deposit of dew; and that a considerable amount of moisture passes over the plains is proved by the marked increase in the vigour of the vegetation on the high patches of table land, such as the Hand Hills. Other parts of the prairie are covered with a short sparse growth of wiry grass, which is very nutritious, but in very small quantities, along with sage (*Artemisia*) and cacti (*opuntiæ*). There is no doubt that the prevalence of a hard clay soil derived from the cretaceous strata, which bakes under the heat of the sun, has a great deal to do with the aridity of these plains, but it is probably due more to the want of moisture in early spring. The little snow which falls on the open plain is at once swept off by the winds, and evaporated during the winter, so that in spring the clear powerful sun at once bakes the soil and prevents the germination of seeds. We have an indication of this cause from the way in which patches of the northern flora nestle on steeps that are sheltered from the south, so that the snow drifts have been preserved to afford moisture till late in the season. This is most evident from comparing the opposite sides of rivers and valleys that lie N.W. and S.E., such as that of Battle River, where it traverses the low arid plains above its "elbow." This valley is a trough cut into the plains to the depth of 200 feet, and on its northern slope we find the arid vegetation characterised by the cacti and sage, while, on the opposite side, where sheltered from the sun, we have clumps of poplars and spruce firs.

The weather experienced in the Rocky Mountains was very irregular, with a great daily range of the thermometer. Thus in the end of August the temperature was as low as 14°, and almost every night fell below the freezing point, although during the day it reached to 70° and 80°. In the valleys of the eastern slope, the amount of rain-fall is very small compared to that on the first part of the descent to the west, where fine clear days form the exception. This only applies, however, to the mountain north of the 51st parallel of latitude; south of which, for some reason, the rain-fall on the western slope in the valley of the Kootanie River must be much less, both judging from the experience of two years, and from the nature of the vegetation, which is of the arid type.

On the eastern slope, throughout the whole summer, there are occasional slight falls of snow above an altitude of 5,000 feet, but snow never lies deeply at any season. It is only on the various heights of land which have an altitude of 6,000 feet, and for a few miles of the western descent, that snow appears to accumulate in quantities in the valleys, reaching sometimes in drifts to the depth of 16 to 20 feet. There is no season at which nearly the whole of the eastern slope of the mountains could not be ascended with horses, as far as snow is concerned, but in the months of May, June, and July, the flooded state of the torrents would present great difficulties. In the valleys of the western slope the quantity of snow that falls, although greater, must still be insignificant, as the Indians with bands of horses encamp on them during the whole winter.

Between the Rocky Mountains and the Cascade range the climate, from what was learned indirectly, seems to be a good deal similar to that of the eastern plains as regards duration of the seasons, but the winter is much less severe, and the snow-fall greater. The northern limit of the arid country on this slope of the continent is further south by several degrees than in the Saskatchewan district, but, owing to the broken and mountainous nature of the country, its boundary line has not the same simplicity of character.

The Cascade range of mountains, although not the geographical dividing ridge of the continent, yet acts more truly as such, as far as climate is concerned, than does the Rocky Mountain chain; the quantity of snow that falls on the Cascade range, especially in the western valleys, is from this cause much greater than on the central chains. The winter is mild and open to a high latitude upon the Pacific coast compared to that in the interior of the country, and still more to that on the Atlantic coast; but an idea of the difference of the various climates is best conveyed by diagrams of the ranges of temperature at a few typical localities given in Diagrams Nos. III. and IV.

Diagram Tables have also been prepared to show at a glance the nature of the climate at a few localities, so far as may be judged from the curves formed by the daily temperatures observed. Besides the observations made by the Expedition, there is also appended a series of readings of the thermometer taken by Mr. M'Aulay, clerk in the Hudson Bay Company's service, at York Factory, on Hudson's Bay, in the winter of 1856–7, the averages of which, for each month, were as following:—

VIII.—1856,	November	7°·9
„	December	−13·5
1857,	January	−19·8
„	February	−26·6
„	March	−5·6
„	April	4·9

The following observations of the temperature of the soil at depths less than [*sic*] feet were principally made by M. Bourgeau, excepting those of the prairies, which were taken by Mr. Sullivan. The curves formed by the two sets taken at Fort Carlton, where the thermometer was buried at two and three feet, have an extraordinary relation to each other. The more shallow thermometer kept about two degrees in advance of the deeper one, as the latter descended during the excess of radiation from the earth's surface until February; but during the greatest cold the difference between them is increased to 10 degrees. By comparing the two columns, however, it will be seen that two feet is not sufficient to remove the thermometer from the influence of temporary fluctuations, but that at three feet the indication has great steadiness.

From the point of greatest depression the two thermometers continue to rise together, preserving the same relative position, but that at two feet soon gains on the deeper one, so that by the middle of March the readings coincide, and continue together during the rise from 23° to 31°, which temperature is reached in the beginning of May. However, in June, while the temperature at three feet is still only slightly above the freezing point, that at two feet has nearly reached 40°.

The observations made at Fort Edmonton in 1858–9, were only with one thermometer, buried to the depth of two feet, and therefore no good comparison can be made between the series of two successive years; but still the average for the month agrees very fairly, showing a slightly higher temperature at Carlton in 1857–8. The following extracts from the Journal give the only observations which were made with a view to determine the depth of the frozen soil, and it will be observed that in 1857–8 the frost had penetrated the ground at Fort Edmonton to a greater depth than during the following winter, owing, no doubt, to the smaller quantity of snow that fell in that season.

Fort Edmonton, March 1858.

Observation on the Temperature of the Soil and Depth of the Frozen Ground.

Thermometer at 2 feet below the Surface.					Thermometer at 5 feet.				
Date.	Hour.	Therm. Air.	Therm. Soil.	Remarks.	Date.	Hour.	Therm. Air.	Therm. Soil.	Remarks.
March 3	8 A.M.	20°	18°·5		March 5	8 A.M.	20°	30°	
„	Noon	24	18·5						
„	4 P.M.	24	18·5						
Thermometer at 3 feet.					Thermometer at 8 feet.				
March 4	8 A.M.	23	21·5		March 6	8 A.M.	38	33	
„	Noon	30	21·5		„		49	33	

N.B.—A hole was dug 6 × 4 in order to ascertain the depth to which the soil is frozen. It passed through
(a.) dark loam 9 inches.
(b.) Reddish yellow sandy earth, with fragments of rock 2 feet.
(c.) White clay with shingle, 2 feet.
(d.) Red sand.

On the 5th the unfrozen soil was reached at the depth of 7 feet in the red (d.) As the sand was soft and incoherant below this point the line was easily observed.

1859, March 16th.—Got a hole dug close to that of last year (referred to above), and reached the limit of the frozen soil at 6 feet. At 2 feet from the surface the thermometer read 28° 5′ the thermometer sunk in the tube to that depth for daily use, reading 28° 0′ at the same time.

Table Showing the Temperature of the Soil at Fort Carlton.—Winter, 1857–8.
Thermometer sunk to depth of 2 and 3 feet respectively.

Year and Day.	Air.	Ther. at 2 feet.	Ther. at 3 feet.	Year and Day.	Air.	Ther. at 2 feet.	Ther. at 3 feet.	Year and Day.	Air.	Ther. at 2 feet.	Ther. at 3 feet.
1857.	°	°	°	1857.	°	°	°	1857.	°	°	°
Nov. 1	37·5	39·0	41·0	Nov. 23	28·5	33·7	36·0	Dec. 15	29·0	30·5	33·0
„ 2	27·0	39·5	41·5	„ 24	13·0	34·0	36·0	„ 16	19·0	30·5	33·0
„ 3	—	39·0	40·5	„ 25	12·5	33·5	35·5	„ 17	−5·0	30·5	33·3
„ 4	—	39·0	40·5	„ 26	21·0	33·0	36·0	„ 18	10·0	30·0	33·0
„ 5	—	38·5	39·5	„ 27	25·4	33·0	35·0	„ 19	20·3	30·0	33·0
„ 6	—	38·5	39·7	„ 28	18·5	33·0	35·0	„ 20	19·8	30·0	32·9
„ 7	—	37·7	39·6	„ 29	14·5	33·0	35·0	„ 21	14·0	29·2	32·6
„ 8	17·5	37·0	39·0	„ 30	14·0	33·0	35·0	„ 22	36·0	29·2	32·6
„ 9	—	37·0	39·0	Dec. 1	17·0	33·0	35·0	„ 23	10·0	30·0	32·6
„ 10	13·5	37·0	39·0	„ 2	14·0	32·5	35·0	„ 24	0	29·9	32·0
„ 11	—	37·0	39·0	„ 3	1·0	32·0	34·0	„ 25	11	29·2	32·0
„ 12	23·0	36·5	38·2	„ 4	12·2	32·0	34·0	„ 26	26·5	29·0	32·0
„ 13	25·0	36·0	38·0	„ 5	13·5	32·0	34·0	„ 27	5·9	29·0	32·0
„ 14	28·5	36·0	38·0	„ 6	14·5	32·5	34·0	„ 28	10·0	28·5	32·0
„ 15	—	36·0	38·0	„ 7	−14·6	32·0	34·0	„ 29	15·0	28·5	32·0
„ 16	30·8	35·5	37·5	„ 8	4·0	31·5	34·0	„ 30	15·0	28·0	32·0
„ 17	25·5	35·0	37·0	„ 9	0·2	31·0	34·0	„ 31	−7·0	28·0	32·0
„ 18	2·5	35·0	37·0	„ 10	−7·0	31·0	34·0	1858.			
„ 19	6·5	35·0	37·0	„ 11	6·5	31·0	34·0	Jan. 1	2·0	28·0	32·0
„ 20	28·0	34·7	36·7	„ 12	15·0	31·0	34·0	„ 2	31·7	28·0	31·7
„ 21	2·5	34·5	36·5	„ 13	13·0	30·5	33·0	„ 3	43·3	28·0	31·7
„ 22	3·5	34·0	36·0	„ 14	−1·0	30·5	33·0	„ 4	3·0	28·0	31·8

Year and Day	Air.	Ther. at 2 feet.	Ther. at 3 feet.
1858.	°	°	°
Jan. 5	2·9	28·0	31·8
„ 6	−23	28·0	31·8
„ 7	−12·2	26·5	31·5
„ 8	−3·0	25·2	31·5
„ 9	10·0	24·6	31·0
„ 10	−0·2	24·6	31·0
„ 11	1·0	24·2	30·5
„ 12	−23·0	24·2	30·5
„ 13	31	24·2	30·5
„ 14	−17·2	24·2	30·5
„ 15	−17·0	22·5	29·2
„ 16	−31·5	22·0	29·2
„ 17	−4·3	22·0	29·2
„ 18	20·5	22·0	28·1
„ 19	15·9	23·0	28·1
„ 20	14·5	23·0	28·0
„ 21	4·5	23·0	28·0
„ 22	7·0	23·2	28·0
„ 23	−2·3	23·5	28·0
„ 24	−7·7	23·2	28·0
„ 25	−5·2	22·5	27·6
„ 26	−9·3	22·2	27·4
„ 27	0·8	22·0	27·2
„ 28	−13·0	21·8	27·0
„ 29	−11·2	21·5	26·2
„ 30	−3·0	21·1	26·0
„ 31	8·0	21·0	26·0
Feb. 1	2·0	21·8	26·0
„ 2	−9·9	21·8	26·0
„ 3	0	21·0	25·8
„ 4	25·8	21·0	25·6
„ 5	26	21·0	25·3
„ 6	11·3	21·0	25·0
„ 7	−14·3	22·0	25·8
„ 8	−11·2	21·0	25·2
„ 9	−25·0	20·7	25·0
„ 10	−22·0	19·4	24·5
„ 11	23·7	18·2	24·0
„ 12	1·1	16·9	24·0
„ 13	−29·3	15·0	24·0
„ 14	−36·0	14·2	23·1
„ 15	−32·3	13·5	21·5
„ 16	−15·3	11·7	21·0
„ 17	−8·7	11·5	20·4

N.B.—The thermometers having been covered with ice, the observations from 17th February to the end of this month have been consequently irregular.

Year and Day.	Air.	Ther. at 2 feet.	Ther. at 3 feet.
1858.	°	°	°
March 1	1·0	19·8	23·0
„ 2	−1·0	18·8	23·0
„ 3	17·2	18·0	22·6
„ 4	22·0	18·8	22·0
„ 5	26·2	19·0	22·2
„ 6	33·2	19·8	22·2
„ 8	32·5	20·7	22·2
„ 9	31·5	23·0	23·5
„ 10	16·0	24·0	24·5
„ 11	28·2	24·8	24·8
„ 12	38·7	25·0	25·2
„ 13	30·0	25·8	25·8
„ 14	31·0	26·0	26·0
„ 15	38·5	26·5	26·5
„ 16	—	26·8	26·8
„ 17	28·0	27·0	27·0
„ 18	21·0	27·7	27·2
„ 19	40·3	27·8	27·8
„ 20	32·8	28·0	28·0
„ 21	21·2	28·0	28·0
„ 22	31·9	28·0	28·0
„ 23	35·7	28·0	28·3
„ 24	42·0	28·6	28·6
„ 25	37·8	28·9	28·9
„ 26	32·2	29·0	29·0
„ 27	38·2	29·0	29·0
„ 28	44·7	29·0	29·0
„ 29	28·1	29·4	29·0
„ 30	40·3	29·5	29·0
„ 31	39·0	29·8	29·6
April 1	0	29·8	29·6
„ 2	32·8	29·8	29·7
„ 3	26·9	29·8	29·7
„ 4	28·6	29·8	29·7
„ 5	28·3	30·0	29·8
„ 6	40·0	30·0	29·8
„ 7	39·4	30·0	30·0
„ 8	36·1	30·0	30·0
„ 9	40·0	30·0	30·0
„ 10	42·9	30·0	30·0
„ 11	49·8	30·0	30·0
„ 12	48·4	30·2	30·0
„ 13	—	30·2	30·0
„ 14	26·2	30·2	30·0
„ 15	16·0	30·2	30·0
„ 16	25·4	30·3	30·2
„ 17	28·3	30·3	30·2
„ 18	43·0	30·5	30·5
„ 19	42·0	30·6	30·5

Year and Day.	Air.	Ther. at 2 feet.	Ther. at 3 feet.
1858.	°	°	°
April 20	44·0	30·7	30·6
„ 21	43·0	30·7	30·6
„ 22	36·0	30·8	30·7
„ 23	32·0	30·8	30·7
„ 24	42·0	30·8	30·7
„ 25	45·0	30·9	30·8
„ 26	44·0	31·0	30·8
„ 27	54·0	31·0	30·8
„ 28	41·0	31·0	30·8
„ 29	53·9	31·2	30·9
„ 30	—	31·2	30·9
May 1	68·5	31·3	30·9
„ 2	48·0	31·6	30·8
„ 3	61·0	32·0	31·0
„ 4	56·5	32·2	31·0
„ 5	42·0	32·3	31·0
„ 6	52·0	32·4	31·0
„ 7	54·0	32·5	31·0
„ 8	50·0	32·7	31·0
„ 9	51·0	33·0	31·0
„ 10	37·0	33·2	31·2
„ 11	37·0	33·5	31·4
„ 12	42·0	33·5	31·4
„ 13	37·0	33·5	31·4
„ 14	29·0	33·0	31·5
„ 15	37·0	33·0	31·7
„ 16	39·0	33·0	31·7
„ 17	36·2	33·0	31·7
„ 18	38·3	33·0	31·7
„ 19	49·5	33·3	31·8
„ 20	54·5	33·7	31·9
„ 21	49·0	34·0	31·9
„ 22	52·0	35·0	31·9
„ 23	51·0	35·5	32·0
„ 24	62·0	36·0	32·0
„ 25	58·0	36·2	32·2
„ 26	43·0	36·7	32·2
„ 27	47·0	36·9	32·3
„ 28	50·0	36·9	32·3
„ 29	44·0	36·9	32·6
„ 31	44·0	36·2	32·8
June 1	52·5	36·4	33·0
„ 2	62·0	36·7	33·0
„ 3	62·0	37·5	33·2
„ 4	66·0	38·6	33·8
„ 5	57·0	39·7	33·9
„ 6	50·5	40·0	34·2
„ 7	57·0	40·0	34·9
„ 8	58·0	40·0	34·9

TABLE SHOWING the MEANS of the above OBSERVATIONS.

Months.	Year.	Mean Air.*	Mean at 2 feet.	Mean at 3 feet.	Remarks.	Mean Temperature for each Month.
		°	°	°		
November - - -	1857	19·03	35·88	36·66	- - - -	17·3
December - - -	1857	10·25	30·40	32·83	- - - -	8·9
January - - -	1858	−0·22	23·40	29·39	- - - -	0·0
February - - -	1858	−9·5	18·33	24·35	First 17 days - -	−7·4
March - - -	1858	28·94	24·66	25·37	- - - -	26·3
April - - - -	1858	36·75	30·39	30·26	- - - -	35·8
May - - - -	1858	47·31	33·86	31·60	- - - -	45·0
June - - - -	1858	58·12	38·61	33·86	First 8 days - -	54·9

* At time of Observation.

OBSERVATION on TEMPERATURE of SOIL at FORT EDMONTON at 9 a.m.—Thermometer 2 feet depth.

Date.	Soil.	Atmosphere.	Date	Soil.	Atmosphere.	Date.	Soil.	Atmosphere.
	°	°		°	°		°	°
1858, Nov. 9	37·5	44	1859, Jan. 2	13·5	−1	March 7	23·0	19
„ 10	37·5	34	„ 4	15·0	4	„ 11	24·0	13
„ 11	37·5	31	„ 6	20·0	−26	„ 14	25·0	19
„ 14	36·8	32	„ 8	24·0	32	„ 18	26·0	27
„ 18	35·8	20	„ 11	24·8	29	„ 21	26·7	−2
„ 21	35·0	19	„ 13	22·0	15	„ 24	27·5	22
„ 24	34·5	17	„ 17	22·0	17	„ 28	28·5	26
„ 27	33·7	25	„ 21	23·0	−11	„ 30	29·2	10
„ 30	33·0	0	„ 24	22·5	30	April 3	29·5	29
December 2	32·0	−14	„ 28	21·7	−8	„ 5	29·5	34
„ 4	31·8	−1	February 1	17·0	−6	„ 8	30·0	17
„ 6	30·0	−23	„ 4	17·5	24	„ 12	30·0	11
„ 8	28·5	10	„ 8	18·0	−21	„ 18	30·5	28
„ 10	26·0	−7	„ 12	18·0	−16	„ 22	30·5	35
„ 12	23·0	−16	„ 15	18·0	0	„ 26	30·5	52
„ 13	21·0	−10	„ 19	19·0	−9	„ 28	31·0	39
„ 18	21·0	−10	„ 21	17·0	11	„ 29	31·5	50
„ 20	18·5	−9	„ 24	17·0	4	May 2	31·7	43
„ 24	17·0	−18	„ 28	17·5	−9	„ 6	32·0	58
„ 28	16·5	−15	March 2	20·0	20	„ 8	32·6	50
„ 30	15·7	2	„ 5	22·5	14			

MEANS OF ABOVE OBSERVATIONS.

Months.	Year.	Mean Air.	Mean at 2 ft.	Remarks.	Mean Temp. for each Month.
		°	°		°
November - -	1858	25	35·7	From 9th to 30th	26·45
December - -	„	−9	23·4	„	−7·6
January - -	1859	8	20·8	„	9·55
February - -	„	−2	17·6	„	1·25
March - -	„	16	25·2	„	23·0
April - - -	„	33	30·3	„	31·1
May - - -	„	50	32·1	From 1st to 8th	47·9

TEMPERATURE of SOIL at depths less than three feet in the SASKATCHEWAN PRAIRIES.

Latitude.	Longitude.	Date.	Therm. in Air.	Therm. in Soil.	Nature of Soil.	Remarks.
°	° ′	1858.	°	°		
52 32 N.	109 6W.	July 3	—	44·9	2½ ft. V.M.—F.S.	Superior soil to any in the neighbourhood.
52 35	109 22	„ 4	—	54·2	1½ ft. V.M.—F.S.	Near poplar clump.
52 35	109 40	„ 6	50·	49·9	S.	On a sand-hill near to a growth of small poplars.
52 36	110 23	„ 7	56·	53·9	S.	
52 36	110 50	„ 8	65·	50·2	S.	Valley of Battle River.
52 33	111 20	„ 9	58·7	49·1	½ ft. V.M.—S.	Near poplar patches.
52 28	111 30	„ 10	66·6	54·2	— —	Valley of Battle River.
52 28	111 30	„ 11	62·0	54·5	— —	do.
52 27	112 0	„ 13	—	53·9	1 ft. V.M.—S.	Fine pasture here.
52 24	112 19	„ 15	55·5	51·9	do.	Poplars and fine pasture.
52 24	112 19	„ 16	65·0	52·2	do.	Same place.
52 24	112 19	„ 17	70·0	52·2	do.	do.
52 23	112 40	„ 18	—	52·1	do.	Fair growth of poplars.
52 23	112 40	„ 19	65·	51·9	do.	
52 19	113 3	„ 20	84·	53·4	S.	Dead Man's Creek.
52 19	113 3	„ 21	57·	53·4	— —	do.
52 18	113 10	„ 22	58·	52·0	3 ft. V.M.	Valley Red Deer River.
52 13	113 40	„ 23	47·	52·5	do.	Nick Hills.
51 56	114 10	„ 24	50·5	50·5	2 ft. V.M.—S.	Edge of the woods.
51 56	114 10	„ 25	65·7	49·0	do.	do.
51 56	114 10	„ 26	72·	50·0	do.	do.
51 56	114 10	„ 27	69·5	50·1	do.	do.
51 56	114 10	„ 28	65·	49·5	do.	do.
51 56	114 10	„ 29	57·	49·5	do.	do.
51 36	114 0	„ 30	63·	51·9	½ ft. V.M.—S.	In a creek valley.
51 26	114 0	„ 31	46·	54·4	S.	do.
51 20	113 55	Aug. 1	75·2	54·9	S.	Prairie.
51 20	113 55	„ 3	76·	55·1	S.	do.
51 9	115 6	„ 9	60·	47·2	Shingle.	Bow River.

V.M. signifies Vegetable Mould. —F.S. signifies followed by Fine Sand. S. signifies Sand.

The corrected barometric readings have been grouped, so as to afford data by which to arrive at a rough estimate of the various districts of the prairies. Their altitudes are given, along with a few others, that may be useful for reference. (Table, p. 276, gives a selection of the observations of the temperature of boiling water taken at various places for the correction of the aneroid barometer.)

In calculating the altitudes, Toronto was taken as the point of comparison with Fort Carlton for the winter of 1857–8, and all the localities have been obtained by reference to the latter place.

ABSTRACT OF CORRECTED BAROMETRIC MEANS.

Date.	Highest.	Lowest.	Range.	Mean.	Number of Observations.
I.—FORT EDMONTON.					
1858.—January -	27·80	27·12	·68	27·54	21
„ February -	27·54	27·28	1·26	27·77	40
„ March -	28·00	27·36	·64	27·39	36
„ October -	28·02	27·14	·88	27·59	50
„ November -	28·33	27·10	1·23	27·78	85
„ December -	28·41	27·09	1·32	27·63	93
1859.—January -	28·31	27·18	1·13	27·78	93
„ February -	28·21	27·21	1·00	27·31	84
„ March -	28·06	27·21	·85	27·60	93
„ April - -	28·41	27·41	·90	27·86	90
„ May - -	28·01	27·32	·69	27·74	22
				Mean 27·626	of 707 obs.
MEANS OF HOURLY OBSERVATIONS.					
1858.—February 21 -	- - -	- - -	- - -	27·00	25
„ „ 22 -	- - -	- - -	- - -	27·35	24
1859.—January 20 -	- - -	- - -	- - -	28·12	25
„ February 1 -	- - -	- - -	- - -	28·04	24
„ „ 21 -	- - -	- - -	- - -	27·46	24
„ March 1 -	- - -	- - -	- - -	27·52	24
				Mean 27·691	of 853 obs.
Mean for January, February, and March, 1858 -				- 27·566	
„ „ „ 1859 -				- 27·563	
II.—JASPER HOUSE.					
1859.—February -	26·77	26·02	·75	26·35	58
„ March - -	26·88	25·97	·91	26·34	93
„ April - -	27·24	26·40	·84	26·65	42
				Mean 26·443	of 193 obs.
MEAN OF HOURLY OBSERVATIONS.					
1859.—February 1 -	- - -	- - -	- - -	26·13	24
				Mean 26·285	of 217 obs.
III.—ROCKY MOUNTAIN HOUSE.					
1859.—January - -	26·69	26·02	·67	26·515	of 23 obs.
IV.—BASE OF MOUNTAINS, IN LAT. 51.					
This group includes a series of observations at the Old Bow Fort, with selected observations made in the neighbourhood.					
1858.—August - -	25·93	25·52	·41	25·701	13
„ December -	26·17	24·88	1·29	25·560	17
1859.—August - -	26·20	25·33	·87	26·070	8
				Mean 25·770	of 38 obs.
V.—RED DEER RIVER.					
Observations taken on the Ice for 94 miles of its course above the Nick Hills, for which mean lat. 52° 2′, long. .					
1858.—December -	27·35	26·21	1·14	26·729	of 27 obs.
Estimated mean fall of river per mile, 5·3 feet.					
VI.—NORTH SASKATCHEWAN.					
Observations taken on the Ice for 211 miles of its course from Mountain House to Edmonton, for which mean lat. 52° 57′, long. 114° 5′.					
1857.—January -	27·83	26·72	1·11	27·332	of 10 obs.
Estimated mean fall of river per mile, 4·2 feet.					

Date.	Highest.	Lowest.	Range.	Mean.	Number of Observations.
VII.—Athabasca River.					
Observations taken on the Ice for 259 miles of its course, from Fort Assineboine to Jasper House, for which mean lat. 53° 56′, long. 116°.					
1859.—January -	27·80	26·20	1.60	27·274	of 34 obs.
Estimated mean fall of river per mile, 4·9 feet, Fort Assineboine being considered as 200 feet below Edmonton.					
VIII.—General Plain Level.					
Level along Saskatchewan River Valley between Carlton and Edmonton.					
1857.—December -	28·62	27·14	1·48	28·120	of 55 obs.
IX.—General Level,					
Along track from Edmonton to Mountain House.					
1857.—Jan. & Dec. -	27·28	26·24	1·04	26·929	of 30 obs.
X.—Plains to East of Eagle Hill.					
South of North Saskatchewan.					
1858.—June - -	28·50	27·92	·58	28·209	of 8 obs.
XI.—Eagle Hill Plateau.					
1858.—June - -	27·68	27·24	·44	27·465	of 13 obs.
XII.—Grand Coulée and Valley of Battle River.					
1858.—July - -	28·08	27·40	·68	27·834	of 47 obs.
XIII.—Plains between Battle River and Red Deer River.					
South of Bull Lake Hills.					
1858.—July - -	27·47	27·24	·23	27·387	of 22 obs.
XIV.—Plateau South of Red Deer River.					
(Caché Camp.)					
1858.—July - -	27·22	26·69	·53	26·841	of 33 obs.

Table of Altitudes, deduced from Barometric Means, to which all Local Measurements of Altitudes have been referred.

Toronto, 29·62 ; 342 feet above sea level.
Carlton, above the sea 1,321 feet.

Place.	Refer.	Bar.	Therm.	Above Edmonton.	Above Carlton.	Above Sea.
			°			
Fort Carlton - - - - - -	—	28·555	1·1	—	—	—
Fort Edmonton - - - - - -	I.	27·691	24·	—	767	2,088
Jasper House - - - - - -	II.	26·285	22·9	1,284	2,051	3,372
Rocky Mountain House - - - - -	III.	26·515	10·	1,107	1,874	3,195
Bow Fort Level - - - - - -	IV.	25·770	29·	1,875	2,642	3,963
Mean Level of Red Deer River for 94 miles above Nick Hills.	V.	26·729	4·	901	1,668	3,089
Mean Level of Saskatchewan between Mountain House and Edmonton.	VI.	27·332	10·	344	1,111	2,432
Mean Level of Athabasca River between Jasper House and Fort Assineboine.	VII.	27·274	6·	320	1,087	2,408
Mean Level of Track from Carlton to Edmonton - -	VIII.	28·20	18·	−375	392	1,713
Mean Level of Trail from Edmonton to Mountain House -	IX.	26·929	10·	734	1,501	2,822
Level of Prairie at Elbow of North Saskatchewan -	X.	28·209	56·	−468	299	1,620
High Plateau of Eagle Hills - - - -	XI.	27·465	57·	240	1,007	2,328
Grand Coulée and Battle River - - - -	XII.	27·834	59·	−101	622	1,943
Plains to the South of Bull Lake - - - -	XIII.	27·387	56·	289	1,056	2,377
Plains to South of Caché Camp - - - -	XIV.	26·841	56·	817	1,584	2,905
Base of Hand Hills - - - - -	XV.	26·769	60·	850	1,517	2,838
Base of Cypress Mountains and of Watershed of Missouri -	XVI.	26·439	60·	1,173	1,940	3,261

ADDITIONAL ALTITUDES from various sources.

	Above the Sea.		Above the Sea.
Lake Superior	641 feet.	Height of Land, Kananaskis Pass	5,700 feet.
Dog Portage, upper end	1,420 „	„ „ Vermillion Pass	4,903 „
Height of Land, Prairie Portage	1,500 „	„ „ Kicking-horse Pass	5,210 „
Lake of the Woods	950 „	„ „ Howe's Pass	4,500 „
Rainy Lake	1,000 „	Source of South Saskatchewan or Bow River	6,347 „
Lake Winipeg	620 „	Source of Pipe-stone River	7,200 „
Riding Mountain	1,600 „	Lakes at Source of Columbia	3,090 „
Top of Hand Hills	3,400 „	Kootanie Trading Post	2,300 „
Top of Cypress Hills	3,800 „	Fort Colvile	1,050 „
Height of Land, South Kootanie Pass (*Blackiston*)	6,030 „	Height of Land, Manson's Trail, Cascade Range ?	4,000 „
Height of Land, British Kootanie Pass	6,300 „		

TABLE of OBSERVATIONS of the Temperature of the Boiling Point of Water for the Correction of the Aneroid Barometers.

Date.	Place.	Obs. Temp.	Corr.	Converted.	Aneroid, 18,257.	Corr.	Aneroid, 17,871.	Corr.	Therm. Air.
1858.		°							°
June 10	Carlton	209·43	+·100	28·460	28·35	+·11	28·36	+·16	Th. 60
Aug. 8	Bow Fort	205·57	+·095	25·795	25·75	+·04	25·66 (17,867)	+·13	„ 70
Nov. 1	Edmonton	208·55	+·150	27·989	27·84	+·14	27·76	+·22	„ 58
„ 8	„	207·86	+·147	27·601	27·41	+·19	27·35	+·25	„ 57
„ 19	„	207·20	+·170	27·249	27·10	+·14	27·02	+·22	„ 63
Dec. 26	„	207·85	+·147	27·642	27·47	+·17	27·41	+·23	„ 53
1859.									
Jan. 5	„	209·22	+·120	28·351	28·11	+·24	28·07	+·28	„ 60
Feb. 1	Jasper House	206·22	+·125	26·686	26·53	+·15	—	—	„ 60
„ 6	„	205·10	+·130	26·091	25·94	+·15	—	—	„ 61
May 10	Edmonton	207·30	+·160	27·291	27·18	+·11	27·11	+·18	„ 63
„ 20	„	208·03	+·150	27·702	27·61	+·09	27·58	+·12	„ 69
June 1	„	207·69	+·147	27·516	27·39	+·12	27·32	+·19	„ 70
„ 10	„	207·97	+·140	27·656	27·58	+·07	27·42	+·23	„ 77
„ 24	Hand Hills	205·49	+·110	26·288	26·26	+·02	25·97	+·21	„ 60
July 4	Lake Camp	207·21	+·165	27·252	27·06	+·19	26·98	+·27	„ 64
„ 26	Base of Cypress Mountains	207·28	+·158	27·293	27·18	+·11	26·98	+·31	„ 59
„ 31	Cypress Mountain Camp	205·95	+·150	26·511	26·34	+·17	26·13	+·38	„ 51
Aug. 2	„ „ „	205·65	+·100	26·368	26·28	+·08	25·96	+·40	„ 80
„ 17	Bow Fort	205·25	+·071	26·139	26·08	+·05	—	—	„ 50
„ 23	On Bow River	203·55	+·090	25·261	25·21	+·05	—	—	„ 51
„ 27	Pipe-stone Falls	200·60	+·070	23·762	23·69	+·07	—	—	„ 41
„ „	Height of Land	197·85	+·080	22·447	23·18	−·74*	—	—	„ 37
„ 31	North Saskatchewan	204·33	+·110	25·680	25·62	+·06	—	—	„ 41
Sept. 3	„ „	204·33	+·110	25·679	25·62	+·05	—	—	„ 39
„ 7	Source of Blueberry River	203·89	+·110	25·461	25·40	+·06	—	—	„ 40
„ 17	Mouth of ditto	207·83	+·147	27·606	27·41	+·19	—	—	„ 47
Oct. 2	Source of Columbia	207·15	+·170	27·219	26·96	+·25	—	—	„ 43
„ 8	Kootanie Post	208·10	+·165	27·742	27·48	+·26	—	—	„ 50
„ 19	Clark's Fork	209·250	+·120	28·360	28·20	+·16	—	—	„ 35
„ 28	Fort Colvile	210·20	+·100	28·902	28·82	+·08	28·61	+·29	„ 50

Mean Correction for Aneroid	No. 18,257	+0·122
„ „ „	No. 17,871	+0·142
„ „ „	No. 17,867	+0·252
Or for Observations while at rest at Edmonton		+0·213

* This reading is obviously beyond the range of the instrument.

TABLES USED FOR CALCULATING BOILING POINT OBSERVATIONS.

I.—REGNAULT'S VALUES for the Elastic Force of Aqueous Vapour in inches of Mercury at 32° at the Sea Level in Lat. 53°, as given by Dixon on Heat, vol. I., p. 270.

Temp.	Inches.	Diff.	Temp.	Inches.	Diff.	Temp.	Inches.	Diff.
195°	21·110	·449	201°	23·924	·498	207°	27·048	·552
196	21·559	·457	202	24·422	·507	208	27·597	·561
197	22·016	·464	203	24·929	·516	209	28·158	·570
198	22·480	·473	204	25·445	·524	210	28·728	·580
199	22·953	·482	205	25·969	·533	211	29·308	·598
200	23·435	·489	206	26·502	·543	212	29·898	

II.—Instrumental Corrections for the Themometer used, supplied from Kew Observatory.

Temp.	Corr.	Temp.	Corr.	Temp.	Corr.
182°	+·180	203°	+·090	208°	+·147
187	+·110	204	+·110	209	+·124
192	+·070	205	+·130	210	+·100
197	+·080	206	+·150	211	+·090
202	+·070	207	+·170	212	+·080

The magnetical observations of the Expedition have been admirably described and discussed by Major-General Sabine, in the great work published under his superintendence entitled "Observations made at the Magnetical and Meteorological Observatory at St. Helena, with discussion of the Observation at St. Helena, the Cape of Good Hope, Falkland Islands, Carlton Fort in North America, and Pekin. Vol. II. London. 1860." page 105.

What relates to the Expedition in this work has been extracted as follows.—

Carlton Fort.

In the spring of 1857, Her Majesty's Government, designing to send an expedition to examine and survey the yet unsettled country on the north of the boundary line of the British territories, and comprised between Canada on the east, and the Rocky Mountains on the west, notified their intention to the Royal Society, and invited suggestions regarding any objects of physical research for which the Royal Society might deem this to be a fitting occasion.

Amongst the objects to which attention was called in reply, the expediency of repeating and extending the magnetic survey of British North America,—which, at the instigation of the Royal Society, was made in 1843 and 1844, and of which the results are contained in the Philosophical Transactions for 1846, Art. XVII.,—was not forgotten, and Lieutenant (now Captain) Blakiston, of the Royal Artillery, was in consequence appointed to accompany the Expedition, having special charge of the magnetic observations, and with directions to assist generally in geographical determinations. The magnetic instruments were provided under the superintendence of the director of the observatory of the British Association at Kew, where, also, Captain Blakiston received instruction in their use, and acquired practical experience in their manipulation.

The hourly observation of the declination, which had been made by Captain Rochfort Maguire and the officers of H.M.S. "Plover" at Point Barrow in 1852, 1853, and 1854 (Phil. Trans. 1857, Art. XXIV.), having manifested the importance of observations of this nature, and the desirability of obtaining them at other stations on the North American continent not far removed from Point Barrow, the attention of Captain Blakiston was specially drawn to the subject by a memorandum supplied to him by the Royal Society through the Colonial Office.

In the winter and spring of 1857–58, Captain Blakiston availed himself of an opportunity, afforded by the sojourn of the Expedition at Fort Carlton during the part of the year not favourable to field operations, to carry into execution this part of his instructions by conducting a series of hourly observations with the uniflar magnetometer at that station, in latitude 52° 52′ N. and longitude 106° 30′ W., commencing November 12, 1857, and terminating April 15, 1858. Captain Blakiston was enabled to accomplish this laborious work by the assistance voluntarily rendered to him by Dr. Hector, Mr. Sullivan, and M. Bourgeau, which last gentleman had accompanied the Expedition as botanist, and actuated by a disinterested and most praiseworthy zeal for the advancement of science (though in a branch foreign from his own department) divided with Captain Blakiston the labour of maintaining the hourly observations unintermittingly during two of the five months. The records of the observations, transmitted through the Colonial Office, have been received at Woolwich, and submitted to the same process as those from Point Barrow; the original records of both will be ultimately deposited in the archives of the Royal Society.

On reviewing the Carlton Fort observations, 6 scale divisions, corresponding to 6′·0 of arc, appeared a suitable amount to be taken as characterizing one of the larger disturbances. The whole number of observations was 3,716, of which 776 differed from their respective normals of the same month and hour by an amount equalling or exceeding 6′·0, being about 1 in 4·8, or nearly one-fifth of the whole number, a proportion very nearly the same as at Point Barrow, where a difference from the normals of 22′·87 was adopted as constituting a large disturbance.

The aggregate amount of disturbance, computed from the respective normals, was 12,095 minutes of arc in the five months, of which 7676′·9 was easterly and 4418′·1 was westerly disturbance, the easterly preponderating in the proportion of 1·74 to 1·0. The aggregate values in different months were as follows:—

Table XCV.

November 1857 - -	19 days	1958·0 minutes of arc
December „ - -	31 „	2320·7 „
January 1858 - -	31 „	1047·6 „
February „ -	28 „	1534·4 „
March „ - -	31 „	2909·6 „
April „ -	15 „	2324·7 „
	155 „	12095·0 „

Table XCV. exhibits the aggregate values of the disturbances distributed into the different *hours* of their occurrence, and the ratios which the values at the different hours bear to the mean of all the hours.

TABLE XCVI.

Local Astronomical Hours.	Disturbances.	Ratios.	Local Civil Hours.	Local Astronomical Hours.	Disturbances.	Ratios.	Local Civil Hours.
H.			H.	H.			
18	603·2	1·20	6 a.m.	6	231·7	0·46	6 p.m.
19	470·7	0·93	7 a.m.	7	374·4	0·74	7 p.m.
20	373·0	0·74	8 a.m.	8	389·8	0·77	8 p.m.
21	317·8	0·63	9 a.m.	9	536·9	1·07	9 p.m.
22	613·0	1·22	10 a.m.	10	578·5	1·15	10 p.m.
23	410·8	0·82	11 a.m.	11	561·7	1·11	11 p.m.
0	262·7	0·52	Noon.	12	735·6	1·46	Midnight.
1	316·8	0·63	1 p.m.	13	809·6	1·61	1 a.m.
2	189·7	0·38	2 p.m.	14	1011·0	2·01	2 a.m.
3	333·2	0·66	3 p.m.	15	852·7	1·69	3 a.m.
4	282·5	0·56	4 p.m.	16	898·4	1·78	4 a.m.
5	286·3	0·57	5 p.m.	17	655·0	1·30	5 a.m.
				Total	12,095·0		
				Mean hourly value	$\frac{12,095·0}{24}=504·0=1·00$		

We perceive in this table, as everywhere else, unmistakeable evidence of the existence of laws regulating the occurrence and the mean effects of the disturbances according to the hours of solar time. We perceive, also, that this regularity is so systematic, that at Fort Carlton even the short period of five months of hourly observation is sufficient to yield an approximate representation of the ratio of disturbance at different hours.

In Table XCVII. the aggregate values of the disturbances are separated into their respective easterly and westerly constituents.

TABLE XCVII.

Local Astronomical Hours.	Disturbances.		Ratios.		Local Civil Hours.	Local Astronomical Hours.	Disturbances.		Ratios.		Local Civil Hours.
	Easterly.	Westerly.	Easterly.	Westerly.			Easterly.	Westerly.	Easterly.	Westerly.	
H.					H.	H.					H.
18	439·3	163·9	1·37	0·89	6 a.m.	6	95·6	136·1	0·30	0·74	6 p.m.
19	262·5	208·2	0·82	1·13	7 a.m.	7	239·0	135·4	0·75	0·74	7 p.m.
20	193·0	180·0	0·60	0·98	8 a.m.	8	282·1	107·7	0·89	0·58	8 p.m.
21	196·4	121·4	0·61	0·66	9 a.m.	9	464·9	72·0	1·45	0·39	9 p.m.
22	352·9	260·1	1·10	1·41	10 a.m.	10	364·7	213·8	1·14	1·16	10 p.m.
23	171·6	239·2	0·54	1·30	11 a.m.	11	349·3	212·4	1·09	1·15	11 p.m.
0	128·8	133·9	0·40	0·73	Noon.	12	465·2	270·4	1·45	1·47	Midnight.
1	98·2	218·6	0·31	1·19	1 p.m.	13	450·4	359·2	1·44	1·95	1 a.m.
2	59·8	129·9	0·19	0·71	2 p.m.	14	774·1	236·9	2·42	1·29	2 a.m.
3	164·4	168·8	0·51	0·92	3 p.m.	15	749·5	103·2	2·34	0·56	3 a.m.
4	84·7	197·8	0·26	1·07	4 p.m.	16	836·0	62·4	2·61	0·34	4 a.m.
5	123·2	163·1	0·39	0·88	5 p.m.	17	331·3	323·7	1·04	1·76	5 a.m.
						Total	7676·9	4418·1			

In reviewing Table XCVII. we perceive, as we might indeed expect, that as the easterly disturbances preponderate at Carlton Fort in the proportion of nearly one and three-quarters to one, so the easterly ratios bear a more decidedly systematic appearance than those of the westerly disturbances; both are, indeed, remarkable examples of the degree of regularity which may be manifested by the results of even so short a period of observation as five months, when conducted with the requisite care and fidelity; but a longer period would be desirable, particularly for the westerly deflections. The easterly and westerly disturbances have obviously distinct laws in respect to their times of occurrence; the easterly have their principal development from 2 to 4 a.m., and their ratios are above unity from 9 p.m. to 6 a.m., whilst, with a single exception, viz., at 10 a.m., which is probably accidental, the ratios are below unity from 7 a.m. to 8 p.m. In comparing the easterly ratios at Carlton with the easterly at the arctic station of Point Barrow (the latter being taken from the Phil. Trans., 1857, Art. XXIV. p. 504), a comparison to which we may be led by the circumstance that the easterly disturbances predominate at both stations (at Point Barrow in the proportion of 1·63 to 1, and at Carlton of 1·74 to 1), we find, as seen in Table XCVIII. (with a general resemblance in other respects) this remarkable difference, that the ratios are above unity about five hours earlier at Carlton than at Point Barrow; that they also descend below unity about five hours earlier, and that there is the same amount of difference of five hours between the respective epochs of principal development, viz., 2 to 4 a.m. at Carlton, and 7 to 9 a.m. at Point Barrow. It is obvious, however, that the data regarding the laws of the disturbances are yet insufficient for an attempt to generalize beyond the mere pointing out of certain decided resemblances and differences.

Table XCVIII. exhibits the comparison of the ratios of the disturbances which produce easterly deflections at Carlton Fort and Point Barrow.

TABLE XCVIII.

Local Astronomical Hours.	Easterly Disturbances.		Local Civil Hours.	Local Astronomical Hours.	Easterly Disturbances.		Local Civil Hours.
	Carlton Fort Ratios.	Point Barrow Ratios.			Carlton Fort Ratios.	Point Barrow Ratios.	
H.			H.	H.			H.
18	1·37	1·65	6 a.m.	6	0·30	0·09	6 p.m.
19	0·82	2·82	7 a.m.	7	0·75	0·13	7 p.m.
20	0·60	3·22	8 a.m.	8	0·59	0·15	8 p.m.
21	0·61	3·88	9 a.m.	9	1·45	0·48	9 p.m.
22	1·10	1·93	10 a.m.	10	1·14	0·57	10 p.m.
23	0·54	1·03	11 a.m.	11	1·09	0·81	11 p.m.
0	0·40	0·40	Noon.	12	1·45	0·96	Midnight.
1	0·31	0·34	1 p.m.	13	1·44	0·96	1 a.m.
2	0·19	0·27	2 p.m.	14	2·42	1·07	2 a.m.
3	0·51	0·15	3 p.m.	15	2·34	0·93	3 a.m.
4	0·26	0·14	4 p.m.	16	2·61	1·22	4 a.m.
5	0·39	0·08	5 p.m.	17	1·04	1·69	5 a.m.

Aurora.—When each hourly observation was recorded at Carlton Fort, an examination was made whether Aurora was visible or not, and if visible the hourly observation was marked by an asterisk. There are 460 observations so marked out of the whole number of 3,716, or Aurora was seen at about one-eighth part of the whole number of hourly observations in the five months. When the 460 observations of the Aurora are distributed into the different *hours* of their occurrence we find them to have been as follows:—

TABLE XCIX.

Showing the number of times that the Aurora is recorded to have been seen at the several observation hours in the months of November and December 1857; January, February, March, and April, 1858.

Hours of local Civil Time.	Number of Auroras observed.	Hours of local Civil Time.	Number of Auroras observed.	Hours of local Civil Time.	Number of Auroras observed.	Hours of local Civil Time.	Number of Auroras observed.
6 a.m.	10	Noon.	0	6 p.m.	5	Midnight.	59
7 a.m.	1	1 p.m.	0	7 p.m.	13	1 a.m.	56
8 a.m.	0	2 p.m.	0	8 p.m.	26	2 a.m.	46
9 a.m.	0	3 p.m.	0	9 p.m.	35	3 a.m.	46
10 a.m.	0	4 p.m.	0	10 p.m.	41	4 a.m.	40
11 a.m.	0	5 p.m.	3	11 p.m.	53	5 a.m.	26

We perceive by this table that the most frequent appearance of Aurora was between midnight and 1 a.m., and that the progression of frequency decreases without interruption from that hour to 7 a.m. on the one side, and to 5 p.m. on the other; whilst between 8 a.m. and 4 p.m. (both hours included) not a single appearance of Aurora is recorded. In all this the phenomena bear a marked resemblance to those at Point Barrow, as may be seen by the following tabular comparison:—

TABLE C.

Showing the number of times that the Aurora is recorded to have been seen at the several observation hours at Point Barrow in the months of December, January, and February 1852, 1853, and in the same months in the following years.

Local Civil Hours.	Number of Auroras.	Local Civil Hours.	Number of Auroras.	Local Civil Hours.	Number of Auroras.	Local Civil Hours.	Number of Auroras.
6 a.m.	66	Noon.	0	6 p.m.	30	Midnight.	85
7 a.m.	54	1 p.m.	0	7 p.m.	56	1 a.m.	103
8 a.m.	28	2 p.m.	0	8 p.m.	56	2 a.m.	96
9 a.m.	10	3 p.m.	0	9 p.m.	60	3 a.m.	95
10 a.m.	2	4 p.m.	5	10 p.m.	77	4 a.m.	80
11 a.m.	0	5 p.m.	15	11 p.m.	78	5 a.m.	71

The principal difference at the two stations consists in there being more manifestation of Aurora at the early hours of the morning, viz., from 6 to 10 a.m. at Point Barrow than was the case at Carlton Fort.

Solar-diurnal Variation.—The solar-diurnal variation shown by the five months of hourly observation at Carlton Fort, after the omission of the larger disturbances, or those which equalled or exceeded a difference of 6′0 from the respective normals, is exhibited in Table CI.

TABLE CI.

ASTRONOMICAL HOURS.

0h.	1h.	2h.	3h.	4h.	5h.	6h.	7h.	8h.	9h.	10h.	11h.
2″·31W.	3″·50W.	4″·75W.	4″·20W.	3″·69W.	3″·14W.	2″·03W.	1″·16W.	0″·17W.	0″·23W.	0″·46W.	0″·06 E.

continued.

12h.	13h.	14h.	15h.	16h.	17h.	18h.	19h.	20h.	21h.	22h.	23h.
0″·84 E.	0″·90 E.	1″·64 E.	0″·74 E.	0″·88 E.	1″·16 E.	1″·96 E.	3″·72 E.	5″·08 E.	4″·63 E.	3″·47 E.	0″·58 E.

The declination magnet reaches its extreme easterly deflection a little before 8 a.m., and its extreme westerly a little after 2 p.m.

The progression from the extreme easterly to the extreme westerly, and from the extreme westerly to the extreme easterly is continuous, with the exception of a slight interruption at 8 and 9 p.m., when the easterly disturbance variation is most considerable, and from 15h. to 18h., when the westerly deflection caused by the semi-annual inequality (October to March) interferes.

The range of the solar-diurnal variation at Carlton Fort is only a very little greater than the range in the same months at Toronto; whilst, on the other hand, the magnitude and frequency of the disturbances are much greater than at Toronto. The latitude of Carlton Fort is about a degree north of the latitude of London; but in comparing the relative frequency of Aurora in the southern parts of Britain and at Carlton Fort, we become fully sensible of the fact that auroral frequency is not simply a function of the geographical latitude, but that both Carlton and Point Barrow are in a part of the globe where magnetic disturbances, and their concomitant phenomena of auroral displays, prevail to a much greater extent than in the corresponding latitudes of Europe.

NOTES RELATIVE TO PROGRESS OF SEASONS.

EXTRACT from the JOURNAL of the Rev. THOS. WOOLSEY, Wesleyan Missionary, EDMONTON HOUSE, SASKATCHEWAN.

1855, November 1st.—A little snow has fallen for the first time.
November 12th.—Swamps frozen over so as to allow of haymaking.
November 13th.—Saskatchewan frozen over. A little more snow has fallen.
November 17th.—River crossed to-day for the first time.
December 2nd.—The past week has been remarkably mild.
December 9th.—More snow.

1856, January 8th to 11th.—More like spring than winter.
January 13th.—Still fine open weather.
January 17th.—Somewhat colder.
February 14th.—Weather open.
February 16th.—The snow is disappearing rapidly.
February 20th.—The winter packet "Express" arrived to-day.
February 23rd.—Mr. J. Simpson returned to Fort Pitt with six sleighs drawn by 24 dogs.
February 28th.—Rev. H. B. Sternham arrived with dog sleighs.
March 11th.—More snow.
March 17th.—They are firing the pasture ground to-day.
March 18th.—Thunderstorm.
March 21st.—Ducks and geese are returning.
March 30th.—A considerable fall of snow has taken place, but it is again rapidly disappearing.
March 31st.—Snow quite gone.
April 7th.—Ploughing commenced. River crossed to-day for the last time.
April 19th.—A hurricane of wind.
April 28th.—First wheat sown.
April 30th.—Rain.
May 1st.—Still rain all day.
May 5th.—The boats arrive from the Rocky Mountain House. Navigation open.
July 13th.—A terrific storm of wind, hail, rain, and thunder.
September 25th.—Very cold weather.
September 26th.—Heavy rain.
September 27th.—A little snow fell to-day.
November 4th, 5th.—Considerable fall of snow.
December 16th.—Influenza has prevailed in the fort for some days back, nearly everyone is affected.

1857, January 4th.—Weather very cold.
January 8th.—Weather somewhat less intensely cold.
February 11th.—Snow covers the ground to the depth of three feet. Winter very severe.
February 14th.—More snow still falling.
February 19th, 20th.—Partial thaw.
February 21st.—Mild.
February 27th.—Snow scarcely diminished in quantity yet. The "Express" is behind time, probably in consequence of it.

March 2nd.—Winter packet "Express" arrived to-day, having taken 13 days from Fort Pitt, and being 10 days behind last year.

March 3rd.—Snow disappearing.

March 17th.—Considerable fall of snow yesterday.

March 27th.—Three inches of fresh snow has fallen.

April 1st.—Snow storm still continuing.

April 6th.—Considerable fall of rain.

April 7th.—Thawing rapidly.

April 14th.—The river again crossed by a number of horses after having been broken up for some days. The cold has been severe for the last few days.

April 16th.—More snow has fallen.

April 17th.—The priest nearly drowned in crossing a lake on his way to Lake St. Ann's, in consequence of the rotten texture of the ice from the repeated thaws.

April 19th.—Again another fall of snow.

October 30th.—M. Bourgeau sank two thermometers at the depth of two and three feet respectively (according to Dr. Hooker's instructions), in order to record the temperature of the soil throughout the coming winter (*see* record of these observations; also two thermometers were inserted, one 15 inches into a *Populus balsamifera*, the other at 18 inches into an *Abies alba* (*see* record of these observations).

November 1st.—Sensible change in the weather, the thermometer indicating 2° below zero. The wolves killed one of our horses; this is by no means a rare occurrence during the winter months.

November 3rd.—Occasional snow.

November 4th.—Snow rests on the ground, and the river is full of drifting ice.

November 5th.—Very mild, thermometer as high as 33°.

November 6th.—Cold. Increase of snow. Second horse killed by the wolves. Buffalo reported far off.

November 7th.—Increase of snow. Dogs tackled in sledges for the first time this season. Very little provision in the fort.

November 9th.—Increase of snow. River entirely frozen over, and horses and carts have been driven over its surface.

November 10th.—Piercingly cold.

November 30th.—Nothing important to record since 10th. Mr. Vidler arrived at the fort, accompanied by an Indian, and obtained supplies from Expedition stores.

December 14th.—Dr. Hector started for Fort Edmonton to engage men for the ensuing spring. He goes *viâ* Fort Pitt.

January 12th.—Throughout the day and during last night it has been intensely cold. The mercurial thermometer had to be replaced by the spirit thermometer. The aneroid barometer proved valueless also, and we find that its indications are not to be relied on when the mercury is far below the "freezing point."

January 26th.—We have received bad news within the last few days—there are no buffalo, the fort hunters are reduced to great straits for provisions, and the Indians have been forced to kill their horses and dogs for food.

January 27th.—Letters from Fort Garry, none of later date than the first week of last June. Newspapers full of frightful accounts of the state of our Indian empire.

February 3rd.—Men returned from the hunter's camp without meat. Mr. Hardesty, the gentleman in charge of the fort, has been forced to kill a domestic cow, as there is not an ounce of provision in the establishment. He has served out ammunition also, and despatched all the resident families but three, to live in the woods. Two of our men start with them and the third remains for our horseguard.

February 19th.—Three inches of snow has fallen since last night, and has continued more or less throughout the day.

February 22nd.—An additional two inches of snow has fallen to-day.

April 6th.—The men whom Capt. Palliser engaged at Red River settlement for the ensuing spring have arrived.

April 8th.—Red River brigade sent off with guns and ammunition under charge of Hallet (second guide) to support themselves by hunting.

April 10th.—Everything is commencing to wear a spring aspect; the women of the fort are scattered along the banks of the river, busy gleaning their annual harvest of maple sugar. The tree from which they obtain sugar is not the true maple. It is the *Negundo fraxinifolium*. M. Bourgeau has a small portable garden, in which he has already brought several of the early plants to perfect flower. Ducks and geese have been seen more or less plentiful since March 25th, on which day they were seen for the first time this season at Jackfish Lake, Fort Pitt, and at this place. The river ice is entirely free at the margins, and only awaits a slight flood to be quite broken up. However, occasionally, winter struggles with the advancing spring, as after intervals of a few genial days, a storm occurs bringing sleet and snow and cold winds from N.E.

April 11th.—After a severe storm yesterday the weather to-day is delightfully open and warm, and, for the first time this season, frogs have been heard to croak in the swamps. A small gull has been seen to-day flying up the river. A blue Anemone was observed in flower on the plains, and the alders also, on the river banks.

April 12th.—The river water swarms with myriads of small blackbeetles: we have made a collection. Yesterday the ice in the river took a start, and at several places there are now clear open spaces of water extending from bank to bank. A lichen, *Peltigera canina*, in flower.

April 18th.—The temperature in 24 hours has not been below the "freezing point." Snow has almost entirely disappeared from the ground; some secluded localities, where the sun's rays cannot penetrate, still keep their winter coat. The buds of the flowers and leaves of the *Salix*, *Alnus*, *Betula*, *Acer*, *Elæagnus*, and *Populus tremuloides*, have greatly increased during the last few days, and await

only for the frosts to cease, in order to develop. An Astragalus on the plains is already sporting its new leaves.

Now that the snow has disappeared we are able to remark the excellent preservation in which the hay of last year has been kept during the long winter. The cold is so great during the inclement season that the snow which falls is perfectly dry, and the hay of the previous autumn therefore remains as well preserved beneath it as if it had been stacked.

April 21st.—River increased in volume, and drift timber is carried down by the current. Collections of insects made. *Alnus* on the border of the river in flower.

April 23rd.—The first swallows were seen to-day. Extensive prairie fire in the environs of the fort, and all hands engaged in extinguishing it.

Every night adds more voices to the chorus of frogs in the swamps and marshes. Ducks, geese, and swans plentiful, and these form our whole support. No buffalo have appeared, and the Plain Indians have eaten wolves, foxes, &c., which animals they use as food only when extreme want compels them. Since 11th numerous species of insects have appeared; small butterflies abound, and a great many specimens have been collected. The Anemones, which were remarked to have flowered on 11th, were frozen during the night of 15th.

April 24th.—Fire raging on N. side of river, and during the afternoon we have had three sudden whirlwind storms. These are undoubtedly local, and caused by the influence of the fires; they were seen carrying along columns of smoke with great rapidity. To the fires also may be attributed the almost entire disappearance of the annual plants. There is no doubt but that in former years forests of coniferous trees existed in the neighbourhood of Carlton, as frequently the remnants of numerous *Abies alba* are met with in the small poplar clumps which characterise the country here. To-day a pair of grouse (*Tetraho Canadensis*) which are rare in this part of the country, were shot.

April 28th.—Lieut. Blakiston started to run buffalo. M. Bourgeau has gone off also on a botanical tour. There are said to be two kinds of water hen in this part of the country, the rarer of the two was killed to-day, and Lieut. Blakiston has preserved it among his collection of birds. Land shells are very scarce here; we have only collected four species—*Helix*, *Succinia*, *Vitrina*, the two former by far the most plentiful. *Lymnia* are abundant.

April 29th.—First eggs obtained (three goose eggs). A young owl was taken from its nest, and appears to be three or four days old.

May 1st.—The catkins of the large grey willow commenced to show.

Some free traders arrived here from Fort Pitt; they had left that place on 21st April, and the ice there had only then commenced to thaw. It is curious that such a difference exists between the temperature at that place and that of Fort Carlton. Even when short periods of mild weather have taken place at the latter, the cold has been intense at Fort Pitt, and it is said to be the coldest spot on the river.

M. Bourgeau returned to-night; his botanical collection has not been great, but he has obtained the parasitical plant in flower which clings to the branches of the *Pinus banksiana*. This plant causes the leaves of the pine to be of a diminutive size, only about one inch in length. We observed it at the Kakabeca Falls in June 1857, but it was then in an unfit state for preservation.

The country which M. Bourgeau has visited is about 1° to the north of this place, and he describes it as being at least one month behind Carlton; the swamps and lakes in that locality are still frozen over. The dense forests, which commence about two miles to the N. of Shell River, are composed of the following, in the dry elevated parts, *Pinus banksiana*, and in the low marshy lands, *Abies alba*. The most northerly part he visited is densely clothed in the two ordinary kinds of poplar, the *Laryx Canadensis* and *Betula papyraceæ*. The latter are so closely packed that they attain a great altitude (sometimes 40 ft.) before any branches commence to protrude. Their extreme height seems to be 100 ft., but the *Laryx* grows to a greater height, and the average diameter does not measure more than 15 or 18 inches. In the environs of Carlton the new grass is sprouting on the old burnt ground, thus giving the country the appearance of young corn fields.

May 2nd.—The hazel nut, *Corylus Americana*, has flowered, and specimens have been obtained.

May 3rd.—Swallows appear plentifully. The Bearberry (*Hypophæ*) has flowered, also two other species of the same family. The *Phox Hoodii*, remarked by Sir J. Richardson to have flowered on 4th May 1827, has flowered to-day. Some specimens, three in all, of the *Salix*, and the *Populus balsamifera* and *tremuloides* are in flower.

May 4th.—An avocet, the bird with the curiously turned-up bill, has been shot near the fort. It differs slightly in colour from those we killed last September, at the Qu'appelle Lakes. At this place the neck of the avocet is of a fawn colour.

A squaw, while angling in the river, caught a fine sturgeon, and a fish called by the Canadians the Marry (Burbot). Also a fish with small clear scales and a round body, that we could not identify with any described by Richardson. (Sent home, but did not arrive well preserved.) Sturgeon is seldom fished for at Carlton, there being none of those eddies in the vicinity which facilitate the operation; but at the mouth of Battle River, a tributary of the Saskatchewan, sturgeon are plentiful, and at Fort à la Corne great numbers are caught.

May 5th.—Morning broke clouded, no sun visible, and during last night rain fell. The Cabri, or Prairie Antelope, has made his appearance for the first time this season. It is about this time every year that they return to the north in order to seek an asylum for their young against the attacks of wolves. A *Lathyrus* (?) has flowered.

May 6th.—The *Ranunculus rhomboideus*, *Negundo fraxinifolium*, and *Betula papyracea*, have flowered.

May 7th.—The *Viola androsacæ* flowered to-day.

May 8th.—The *Potentilla* in flower, also *Astragalus Fragaria*, and two *Carex*.

May 12th.—At 8 a.m. one half inch of ice on the surface of the water. An *Aira* in flower.

May 14th.—A half inch of ice on the surface of the water.

May 15th.—The frosts of last week have been sufficient to freeze all the flowers which have appeared since the 12th February. *Alnus*, *Corylus*, *Salix*, *Œleagnus*, &c., will not produce good seed this season

in the neighbourhood of Carlton, and others, as *Pulsatilla Nuttaliana*, &c., are killed on this account. The leaves of the poplars even have suffered, but the leguminous and cruciferous plants have suffered most.

May 16th.—Snow has fallen to-day, and a high wind prevails from S. First magpies seen. Gooseberry bushes in flower. Goatsuckers appear.

May 21st.—Numerous birds' nests with eggs appear. Sharp-tailed grouse lay in the long prairie grass, and as many as 12 eggs have been taken from a nest. Two falcons' nests, with two and three eggs respectively. Mosquitoes numerous.

May 23rd.—Day broke fine, but towards evening a storm broke out, accompanied by thunder and lightning. New grass four inches high at this date, and the young poplars and others have a lively green appearance.

May 25th.—Mr. Sullivan killed a new species of squirrel? It resembles the *Arctomys Hoodii*, but is much smaller, and is located in the woods. The animal is striped as the *Arctomys Hoodii*, but the grey patches on the dark stripe are wanting.

June 4th.—The people of the fort go off to the small lakes and swamps in search of eggs.

June 7th.—In the secluded valleys, and in the neighbourhood of marshy tracts of land, the trembling poplars are still leafless, but in exposed positions all the forest trees are in an advanced state.

TABLE showing the TEMPERATURE of the RIVER WATER previous to the Setting of the Ice in November 1857; also the Temperature after the Breaking-up of the Ice in April 1858. FORT CARLTON.

Date.	Hour.	Air.	Water.	Remarks.	Date.	Hour.	Air.	Water.	Remarks.
1857.		°	°		1858.		°	°	
Oct. 16	10 a.m.	39·2	38·2		May 12	2.30 p.m.	52·0	49·1	
„ 17	—	36·0	38·0		„ 13	9.30 a.m.	33·0	45·8	
„ 18	—	27·7	37·2		„ 14	2.30 p.m.	37·0	43·0	
„ 19	—	30·5	35·5		„ 15	2.30 p.m.	62·0	43·1	
„ 21	—	40	38·0		„ 16	2.30 p.m.	44·0	43·5	
Nov. 2	—	24	33·0		„ 18	3 p.m.	50·0	45·1	
„ 12	—	—	—	River frozen over.	„ 19	3 p.m.	62·3	48·4	
1858.					„ 20	2.30 p.m.	74·3	51·2	River risen 4 in.
April 24	9.30 a.m.	51·0	45·5		„ 21	2.30 p.m.	65·2	54·3	River sunk 6 in.
„ 29	9 a.m.	52·0	48·6	River risen 10 in.	„ 22	3 p.m.	65·6	57·8	
„ 30	10 a.m.	65·0	49·0		„ 24	7.30 p.m.	62·0	59·7	
May 1	10 a.m.	69·3	49·4	River risen 3 in.	„ 25	Noon.	64·8	59·2	
„ 2	10 a.m.	70	49·9		„ 25	7 p.m.	57·0	59·8	
„ 3	9 a.m.	64·5	50·3	River sunk 12 in.	„ 26	2.30 p.m.	54·8	56·2	River sunk 3 in.
„ 4	9.30 a.m.	62·0	52·8	Ditto 4 „	„ 28	9.30 a.m.	55·0	51·5	
„ 5	9 a.m.	44·2	51·6	Ditto 4 „	„ 30	7.30 p.m.	60·5	50·5	
„ 6	9 a.m.	59·9	48·8		„ 31	7.30 p.m.	59·1	54·2	River rapidly increasing in volume.
„ 6	7 p.m.	58·9	50·2						
„ 7	9 a.m.	58·0	50·1		June 1	7.30 p.m.	65·3	56·8	
„ 8	10 a.m.	59·0	52·0		„ 2	8 p.m.	61·5	58·2	Increase of 5 in. since yesterday.
„ 9	9.30 a.m.	61·0	52·1						
„ 10	9.30 a.m.	59·2	52·7		„ 3	7.30 p.m.	64·3	60·0	
„ 10	7 p.m.	48·0	51·2		„ 4	6.30 p.m.	71·5	61·9	Still increasing.
„ 11	9.30 a.m.	41·0	48·5						

The river has risen very slightly indeed during the past spring months. Sometimes it has been known to rise upwards of ten feet. At these times large quantities of sand are brought down by the stream, and even at this date (June 1st, 1858) we are obliged to allow the water to stand some time before drinking. There has been very little rain this spring. The following will show the extent of rainy weather since the breaking-up of winter:—

April 24th.—Smart shower for 10 minutes.
May 4th.—Very little rain fell at night.
May 23rd.—Rain this evening for 30 minutes.
May 26th.—Drizzling rain from 7 a.m. to 9 a.m.
May 27th.—A little rain.
May 28th.—Ditto.
May 29th.—Rain for half the day.
June 5th.—Thunder weather, with passing rain clouds.

EXTRACT from a DAILY JOURNAL kept at EDMONTON HOUSE, 1858.

March 1st to 7th.—Fine mild weather; very clear and calm.

March 8th.—A party sent off with horses and pack-saddles to meet the meathaulers and assist them in bringing home the meat, there being little or no snow on the track; it is unfit for sleighs.

March 9th, 10th, 11th, 12th.—Weather very mild and calm.

March 13th.—Blowing a strong breeze from the south. A party of four men arrived from the plains with sleighs; they had great difficulty in bringing them here, there being no snow whatever on the track; the snow is all melted away from all bare places, but a little is to be seen yet in thick woods.

March 14th.—Wind south; blowing fresh.

March 15th.—A dark cloudy day; blowing fresh. Dr. Hector, his man, and two Company's men from Fort Pitt started for Fort Pitt, with dogs, on the ice of the River Saskatchewan.

March 16th.—The weather still continues cloudy and blowing fresh.

March 17th.—Cloudy, and calm in the morning. A great deal of snow fell during the day, but it all melted before night.

March 18th.—A fine mild day; sky very clear.

March 19th.—Weather same as yesterday.

March 20th.—A dark, dull day. Rev. Mr. Steinham arrived by the river from Snake Hills; he informed us that the river was open in some places, and was so free of snow and slippery that it was difficult to travel on it. He met Dr. Hector and party at Snake Hills on his way to Fort Pitt.

March 21st.—A fine clear day; very mild.

March 22nd.—A dark cloudy day; very calm.

March 23rd.—A dark cloudy day; blowing fresh; a great deal of snow fell last night.

March 24th.—A fine clear day; blowing fresh.

March 25th.—Snowing all day.

March 26th, 27th.—Fine clear weather; very mild.

March 28th.—A dark cloudy day, but very mild. Stock ducks were seen to-day for the first time this season.

March 29th.—A fine clear day. The first goose this season seen to-day from the fort, but geese have been seen a few days ago at Sturgeon lake, 10 miles to the west.

March 30th, 31st.—Weather very mild and calm.

April 1st.—Sky overcast; snowing the most of the day, but the ground being so wet, and the weather so mild it soon melted away.

April 2nd.—Weather same as yesterday.

April 3rd.—Snowing all night and in the morning, but before evening it all disappeared.

April 4th.—A cold windy day; sky overcast.

April 5th.—A fine clear day and calm.

April 6th to 10th.—Weather, same as yesterday; engaged driving manure.

April 11th.—Weather still very mild.

April 12th.—Weather still very mild. The river open in different places, but yet in a fit state to cross over it. Salois killed two geese, being the first killed at this place this season. Three men commenced ploughing the tower fields to-day.

April 13th.—A cold, windy day; snowing all last night and the most of to-day.

April 14th.—Fine and clear in the morning; commenced to snow about noon, and cleared up again in the evening.

April 15th.—A fine clear day; thawing a little.

April 16th.—Fine and clear in the morning; after part of the day cloudy.

April 17th.—A fine clear day. Ducks and geese are very numerous about Long Lake.

April 19th.—A dark cloudy day. A party of men sent with horses to Fort Assinneboine Portage for the Lesser Slave Lake returns.

April 21st.—Weather same as yesterday; the river ice made a move this evening, but set fast again.

April 22nd.—A fine clear day; very mild.

April 23rd.—The river is clear of ice above the fort, but is still fast opposite it.

April 24th.—Fine clear weather. Men finished putting potatoes in cellars; 309 rigs were put into cellars, 91 rigs destroyed by frost.

April 25th.—A fine warm day; the ice has made a move at last; a great deal of ice drifting down the river; snakes and mosquitos were seen at the fort for the first time this season.

April 26th.—Fine warm weather.

April 27th.—Fine warm weather. Five old and nine new boats launched to-day. Light boat taken off the stocks.

April 29th.—A fine clear day. Three men sowing wheat; 10 bo. put in the ground to-day.

May 2nd.—Fine and clear in the fore part of the day; in the evening a sudden gale came on accompanied with thunder and lightning. Three men arrived from the R. M. House with the horses belonging to that place.

May 3rd.—A fine clear day; blowing fresh.

May 4th.—A dark cloudy day, rather cold. Three men sowing barley. Two men sent off with ten horses to meet Mr. Fraser and assist him in bringing the Lesser Slave Lake returns here.

May 5th.—A fine clear day. Mr. Brazeau and family arrived from the R. M. House in the morning with one boat, and the rest of his men and boats arrived in the evening.

May 6th.—Fine clear weather; blowing fresh.

May 7th.—Dark and cloudy in the morning, but cleared about noon. Nine boats started from here loaded with the returns of the R. M. House.

May 8th.—Weather same as yesterday.

May 9th.—Very cold and blowing fresh; raining most part of the day. Ten men arrived from Fort Pitt to assist in taking down the boats.

May 10th.—Weather same as yesterday. Seven men engaged in ploughing.

May 15th.—Remainder of the brigade left to-day.

Notes on the Month.—June, 1858.

June 16th.—Barometer at river level at 7½ p.m., 28″·05; thermometer 60°. Wind veered from S. to N. during the afternoon, with violent gusts and heavy passing showers.

June 17th.—Morning cloudy. At 9.30 a.m. thick mist from N. It passed off after one hour's duration and became overcast.

June 18th.—Morning, thick rain. Noon, rains heavily.

June 19th.—Dull the whole morning; cleared up in the afternoon; evening still cloudy.

June 20th.—Rain and thick mist nearly the whole day.

June 21st—Morning broke fine. Towards noon clouds passed to the W. During night a little rain fell.

June 22nd.—At 6.30 p.m. a dense thunder cloud to S. Rain fell; thunder cloud veered to W.; lightning.

June 23rd.—Wind cold and high from W and S.W. till sunset when it moderated. Aurora to-night.

June 24th.—Wind veered through N. during night. In the afternoon high gale from N. with very heavy rain. At 9 p.m. the wind suddenly chopped to S.E. and it has commenced to clear. Rain ceased; a high gale.

June 26th.—Readings of both aneroids identical, so that the extraordinary fall is no error in the instruments.

June 27th.—By 10 a.m. the sky overcast, although the morning was clear.

June 28th.—Very heavy rain during the night, dense thunder clouds passing to S.W. Distant thunder; heavy rain during the night, but no thunder, although there was vivid lightning.

June 29th.—It has been dull and overcast throughout the day with fresh wind from E. and S.E.

June 30th.—Wind increased to very fresh at noon, and at 8 increased to a gale. Rain.

Notes on the Month.—July 1858.

July 3rd.—Wind from S. till sunrise; fine till noon, when it became overcast. During the afternoon clouds gathered from S., and a thunder cloud of great breadth formed. At 5.30 p.m. it broke over us. Smart hail shower. Storm half hour in diameter. Thunder cloud very high, lightning very vivid. It passed to N.E. Rain incessant for one hour after the storm had passed.

July 4th.—At 11.45 a.m. sky overcast, distant thunder to N.E. At noon it commenced to clear, and the remainder of the day was bright up to 7 p.m., when dark clouds again pervaded the sky.

July 5th.—At noon a great storm burst on us; thunder with most violent rain.

July 11th.—At sunset a dense thunder cloud to N. of us. Heavy rain during the night.

July 12th.—Very hot all day. At night slight fog.

July 13th.—Very hot all day. Afternoon, wind fresh from N.E. At 4 p.m. heavy clouds from S.W. against the wind, and a thunder-storm with rain passed to N.E. Rain during the whole of night.

July 15th.—From 13th to this date cloudy and rain. Rain very local, at our next camp we could scarcely get water, the swamps all dry.

July 17th.—Very warm, although fresh breeze from W. The sky has now been cloudless for 48 hours.

July 18th.—In the afternoon heavy clouds gathered from W., and a violent thunderstorm, in a circular manner passed over us, moving from W. to N.E. The clouds high and diffused, but the lightning vivid and thunder peals continuous. It had passed by at 8.30 p.m.

July 19th.—Clear and hot all day. At 8 a heavy cloud to N.N.W., with much sheet lightning.

July 21st.—Afternoon overcast and rain. Sheet lightning to N.W.

July 23rd.—All afternoon heavy cloud with thunder skirting the mountains to S.

July 29th.—Thunder clouds passing to S.W. during the day, but not reaching us. Cloudy but fine.

July 30th.—Morning clear. Overcast 8 a.m. Threatening thunder clouds, with much lightning in E. Cloudy during the whole day. Much rain falling towards our east.

Fort Edmonton, 1858.

March 12th.—Most extraordinary aurora commenced at 8 p.m., as a faint arch, but by 10 p.m. the whole sky was covered with vivid streamers, and wreaths of coloured light, moving with great rapidity. The colours were orange, crimson, and green. The only part of the sky free from this display was that portion included by the primary auroral arch, which extended from N.W. to E. The appearance was that of a vortex, the centre of which was a little to the S.W. of the zenith, and around it the streamers waved and curdled with great rapidity. It lasted for 20 minutes, and then gradually disappeared.

October 27th.—9 p.m. a faint aurora of a reddish colour appeared at N., and soon very bright streamers followed, commencing at the zenith and extending to all points of the horizon. No auroral arch was visible. A great deal of dew also fell to-night.

November 1st.—Swamps and streams have been frozen for some time: the ground is also frozen to the depth of two inches, and the sun's heat only softens the upper surface of the layer. Last blackbirds seen in flocks on the 26th of October. Ducks and geese still to be found along the river. Snow birds have been here for some weeks. The grey plover is the only bird found on the plains. There has been great failure this year in the wild fruit, owing to the unfavourable spring.

November 4th.—The river is lower than it has ever been known to be before. Carts now cross at the ford; it is full of floating ice, and fringe ice is now found along the margins.

November 5th.—Ice collecting in the bends of the river.

November 11th.—The ice in the river gradually increasing. Snow fell.

November 12th.—Snow again to-day. During the last 20 hours, at various intervals, about $2\frac{1}{2}$ inches have fallen. An east wind caused it to melt very rapidly.

November 14th.—During the past week, the ice disappeared again from the river, and the frozen margin partially gave way. All summer birds have now left. The surface of the ground is now frozen to the depth of four inches.

N.B.—The maximum thermometer for several days back is erroneous. The indications of the wet bulbs for yesterday, and perhaps several days previous, are not trustworthy, the bulb of the thermometer having been allowed to dry, owing to the frost.

November 15th.—The wind has been from S.W. throughout the greater part of the day. At evening, high wind, accompanied by rain, which changed to sleet as the wind veered to N. At night, hard frost with drift snow.

November 16th.—River filling rapidly with ice. The water rising fast. The bays frozen across. Very cold.

November 17th.—River crossed to-day for the first time at a bend. The rapid still open, so that they crossed the meat carts with the boat.

November 18th.—This morning there are only a few open places in the river. Fall packet arrived last night. (The river was so full of ice at Fort Pitt on the 9th that they could not cross.)

November 19th.—Wind changed to S. yesterday, followed by thaw. The ice on the river going slightly.

November 22nd.—River set fast, and a horse crossed it to-day on the ice. Above the rapid at the ford, there is still much open water.

N.B.—Minimum thermometer taken for travelling with, replaced by Negretti and Zambra, 993.

November 23rd.—Remarkable weather, continues dull, and the thermometer has hardly altered for 24 hours. A little snow this evening. The wind continues light and variable, changing several times each day. The mass of cloud which has overhung us so long does not seem to have moved much. This is quite the same kind of weather as on the 22nd October. Then the overhanging clouds passed to N.E. Slight shower of fine sleet at 6 p.m. This occurs nearly every night.

November 28th.—The snow which fell last night in the environs of the fort, had almost entirely thawed by daylight of this date; at 9 a.m. to-day rain fell; at 10 p.m. the wind veered round to due N., and it froze hard. At 8 p.m. a very loud gust of wind, and since then a thaw has commenced.

December 24th.—Yesterday it was mild until sunset, when a keen north wind arose and blew fresh during the night. At 3 a.m. it calmed, and a bright aurora appeared which lasted until sunrise. It was very bright and was visible after clear daylight. It consisted of bright flame-like streamers, most of which were deep red mixed with green. A band of red, also, extended across the zenith.

1859, January 5th.—8 p.m. The weather has been very steady with N.E. wind until 2nd. Since then a little snow has fallen every day up to this date. This afternoon with the great rise of the barometer the sky cleared, and the wind is now from the N.W.

February 20th.—A very high wind prevailed from S.W. during the morning of this date, and had increased at noon to half a gale. A powerful sun throughout the day has caused a great thaw.

March 1st.—During the hours 2, 3, and 4 a.m., an auroral glow was visible in N.E., but no definite arch was apparent.

March 16th.—Got a hole dug close by the one of last year in order to ascertain the depth of the frozen soil. At two feet thermometer read 28°·5; the one buried in tube 28·80. The limit of frozen soil reached at 6 feet.

March 18th.—The standard thermometer broken to-day.

N.B.—After this date the temperature of the air is obtained by readings of minimum thermometer, 993.

March 25th.—An auroral glow visible in the north, no arch defined. The sky soon became overcast afterwards.

March 26th.—This morning at a very early hour snow had fallen, but disappeared with the rising sun. The river banks and exposed localities are becoming clear of snow, but on the plains the snow is still deep.

In the evening of this date a very bright aurora extended from N. to N.E., consisting of streamers and an ill-defined arch of about the altitude of 5°. One streamer, especially, in N.E., was particularly bright. The snow is one foot deep on the plains.

March 29th.—9 p.m. A magnificent auroral arch was observed at an altitude of 15°, extending from N. to E. Streamers were prevalent from the zenith to all points between N.E. and E., increasing in brilliancy towards the vertex of the arch.

March 30th.—Yesterday a high cold wind from N. by W. prevailed throughout the day, and died away towards sunset. To-day the wind has blown a half gale, and in like manner has become calmer towards the same hour.

March 31st.—The high wind from N. has blown throughout the day and, as yesterday, ceased at sunset; the evening remarkably calm till 8.30, when a stiff breeze sprung up. Sky overcast. No aurora visible.

April 1st.—Still an overcast sky with a high wind throughout the day, but modifying towards evening. Wind N. During the afternoon a little very light snow fell for about an hour after 2 p.m. Ducks seen for the first time this spring at Lac St. Ann's.

April 2nd.—A bright aurora to N. by E., no defined arch but two ill-defined streamers were visible, increasing in brightness towards the body of the glow, which was at an altitude of 5°. To-day the sun has made his first appearance since March 29th.

April 3rd.—Day broke fine with a high wind from N.W. Towards 2 p.m. it became overcast, and the sky changed to partially clear shortly afterwards. At 7 p.m. snow fell.

April 4th.—By this morning 2 inches of snow had fallen. Day broke and continued fine.

April 5th.—Day broke overcast, with gusts of wind at intervals from N.W. Ducks were seen for the first time this spring at Fort Edmonton.

April 6th.—During last night 4 inches of snow has fallen; sky remained overcast till 3 p.m., when a clear sky, with bright sun succeeded. The evening of this date was extremely fine, with a magnificent aurora, consisting of bright streamers from the zenith to all parts of the horizon; no arch visible.

April 8th.—A few auroral streamers appear to-night, but no arch.

April 13th.—Since 10th up to present date, snow has been almost incessant, and this morning three inches lay on the ground.

April 14th.—During last night 3 inches of snow fell. At 9 a.m. this morning the wind chopped round to E., and a partially clear sky prevailed.

April 16th.—Since 14th the thaw has been continual, and towards evening a mass of clouds from S. has for the last three nights hidden the moon and stars. Ducks appear to have returned again to the south, as none have been seen since those on the 1st at Lac St. Ann's, and on the 5th at this place. At 6 p.m. a shower of rain, the first smart shower for the season, commenced, and continued till 7.30 p.m., the thermometer indicating at the time 39°.

April 18th.—At 4 p.m. it became overcast, and the wind veered to E., blowing cold. To-day again a duck was seen on the river.

April 19th.—At midnight of last night the wind came on in gusts, and this morning a high wind has prevailed and snow has fallen; cold and cheerless. A goose was seen yesterday, and a duck was killed on the river. At 3 p.m. a bright sun succeeded to the overcast sky, and Cirri ·3 appeared.

April 20th.—This morning snow fell for one hour and a half, and was succeeded by a partially clear sky and a bright sun. Thermometer last night as low as 20°.

April 21st.—Day broke and continued fine, with a stiff breeze from due S. Geese were again seen to-day. The *Corylus Americana* is in an advanced state, and will flower in a day or two. At 9 p.m. an auroral streamer in N.E.

April 22nd.—It has been fine throughout the day; the river in many parts is quite clear of snow, and a few holes in the ice appear. Ducks commence to come in flocks, and a loon passed near the fort this morning. Auroral streamers to E.

April 23rd.—Beautiful day, with light breeze from S., but towards evening the sky became overcast, and a high wind followed from S.S.E. Plovers, for the first time this season, have been seen. The birds which remain in the neighbourhood during the winter months have, during the last two or three days, changed their note, especially the small bird resembling a linnet, that remains among the small poplars and willows. Auroral glow, though ill defined, in E. At 9 p.m. a beautiful auroral arch, the vertex of which was at an altitude of 13°, became developed in the sky, and extended from N. to E. At E. the light was excessively brilliant, being the lower extremity of a bright streamer which extended half way to the zenith. At 11 p.m. the arch was very brilliant, and extended right round to S. There the auroral light appeared as sparkling festoons to the very edge of the horizon. From the zenith to S.E. part of the horizon streamers were perfect, and the sky was patched by auroral light everywhere in the southern part of the horizon. Swans were seen for the first time to-day.

April 24th.—Day very fine. Near sunset two sun-dogs were visible, each at the distance of 20° from the true sun, and bearing in a line N. by E. and S. by W. The river thaws very gradually, there being no rush of water to break up the ice. It is usually the latter end of June before the snow melts sufficiently in the Rocky Mountains to cause an increase to the river volume.

April 25th.—Measured the extent to which the thaw had penetrated the soil, found it 1 ft. 6 in.

By Dr. Hector when travelling.

1858, November 26th.—All day the air filled with crystals of ice forming splendid sun-dogs. This month is known to the Indians as the Rhimy Moon, on account of the prevalence of this frozen fog. These crystals continue falling gently to a considerable depth.

November 27th.—Snowing all morning and at noon sets in thaw. Towards evening rain with S.W. wind.

November 28th.—In the afternoon frost set in again. During the night a very high gale.

November 29th—Clear sharp day. Snow during the night.

November 30th.—Snows all day till 4 p.m., then clear.

December 1st.—Very clear and sharp; gets colder as the day advances: towards evening the cold gets very intense with a light east wind. The stars are exceedingly brilliant; fancy we see one of Jupiter's satellites with the naked eye. Fine aurora.

December 2nd.—Still very cold, but towards evening the temperature rises and it begins to snow. At 9 p.m. the thermometer reads +24, making a change of 61° in less than 24 hours.

December 3rd.—The high temperature continues accompanied with violent snow storms from the N. and N.E.

December 5th.—Every night clouds gather from the N.E., with snow.

December 7th.—Very keen sharp weather. Bright aurora every night.

December 15th.—Weather has been steady with occasional snow storms. Rivers along the Rocky Mountains quite open. Temperature of water in Dead Man River 33°. The snow averages from 6 to 10 inches, but out on the prairies still more.

December 17th.—A circular storm passed over to the N.E., attended by a great rise in the temperature for a few hours.

December 23rd.—For the last few days the air has been filled with rime again, with snow storms almost every day. The snow is now about 18 inches deep. This afternoon there was a very sudden change from mild weather to most intense cold with a high breeze from the N.E. During the night the wind fell.

1859. January 13th.—Variable weather with occasional snow storms.

January 18th.—This afternoon a great storm of wind from the S.W. with a very decided thaw for a few hours and a heavy shower of rain. The whole storm passed in about eight hours.

January 22nd.—The storm of the 18th has been followed by extremely cold weather, the mean temperature for the last four days being −7·0. A great deal of snow has also fallen, so that in the open river ice there is from 2 to 3 feet.

January 27th.—The last five days have been milder again, with occasional thaws.

January 31st.—Since the 27th the temperature has been exceedingly low. The Athabasca, when it leaves the Rocky Mountains, is not frozen across, although there is a broad margin of very strong ice on either side. The reason is that during the winter here the wind either blows due N. or due S., and when the latter, it always thaws more or less, so that the rapid current clears away the new-formed ice; the snow does not lie along the eastern flank of the mountains from the same reason; in the valleys at Jaspar House the winds are extremely local; often a very cold and a warm wind blowing in different parts at the same time.

March 7th.—During the last month there have been several violent changes from extreme cold to thaw. An unusual amount of snow has fallen this spring: there being from 2 to 3 feet in the woods to the west of Edmonton. At Edmonton there is not more than 8 inches.

Notes on the Spring of 1859 at Fort Pitt.

March 28th.—The season is much later here than at Fort Edmonton. The snow is 18 inches deep in average localities.

March 29th.—Cold north wind with snow.

April 1st.—Mild wind from S.W.

April 2nd.—Thawing rapidly.

April 6th.—Stormy weather for the last four days. Wind from N. with much snow.

April 7th.—Men arrive from Fort Edmonton, and say that four days ago the ground there was nearly free from snow. Wind S.W. Mild.

April 10th.—Wind W.N.W. and N., with cold weather and snow.

April 12th.—Until this evening very intense cold, with heavy snow from the N.; but the wind at 4 p.m. changed to the S.E., and it is now raining slightly.

April 14th.—Dull raw weather, with snow from the S.W. Thaw for a few hours each day.

April 15th.—Men return from the plains to the south, near Battle River, where they say the snow is 3 to 4 feet deep.

April 17th.—This is the first night that there has been a thaw after sunset.

April 18th.—Great thaw to-day. Two geese passed the fort up the river. Ring-necked plover has arrived. Banks are beginning to show bare spots.

April 21st.—Frost every night, but thaw during the day. Snow 2 to 3 feet deep, except in the knolls, which are now bare.

April 22nd.—Bright cloudless day; very hot. Ice on river breaking into holes; much water overflowing it.

April 25th.—Yesterday and to-day the bulk of the snow has disappeared. River ice very rotten. Creeks running. Ducks and geese in numbers. Farming operations commenced.

April 26th.—Ice breaks up, and the river becomes open very suddenly towards evening with a flood to the height of 9 feet.

April 28th.—Cold at night; raw during the day.

April 29th.—Very hot, with rain.

May 3rd.—Dull rain, with much lightning, for the last few nights.

No. 13.

Meteorological Observations.

Fort Carlton, Saskatchewan River, 1857.

Maxima and Minima Temperatures observed, 9 A.M.

Date.	Max.	Min.
1857.		
Nov. 12	30	4
„ 13	27	9
„ 14	33	12
„ 15	35	18
„ 16	34	20
„ 17	31	11
„ 18	15	4
„ 19	14	0
„ 20	41	10
„ 21	6	0
„ 22	11	2
„ 23	34	11
„ 24	25	10
„ 25	28	10
„ 26	30	10
„ 27	26	23
„ 28	22	15
„ 29	17	13
„ 30	17	12
Mean	25·5	9·1
	Av. Temp. - 17·3	
Dec. 1	18	14
„ 2	17	5
„ 3	18	— 4
„ 4	17	— 5
„ 5	16	5
„ 6	23	1
„ 7	13	5
„ 8	8	2
„ 9	6	0
„ 10	9	—16
„ 11	16	4
„ 12	33	5
„ 13	27	8
„ 14	12	— 1
„ 15	35	4
„ 16	24	— 1
„ 17	8	—10
„ 18	19	0
„ 19	26	13
„ 20	21	12
„ 21	24	3
„ 22	41	24
„ 23	23	6
„ 24	5	—14
„ 25	15	— 2
„ 26	32	5
„ 27	14	— 7
„ 28	14	— 6
„ 29	32	— 2
„ 30	18	8
„ 31	19	— 7
Mean	16·2	1·6
	Av. Temp. - 8·9	
1858.		
Jan. 1	21·9	— 3·5
„ 2	44	5·1
„ 3	45	29
„ 4	28	— 1
„ 5	7	—14
„ 6	—13	—25
„ 7	—22·9	—31
„ 8	2·1	—13
„ 9	18·9	—10

Date.	Max.	Min.
1858.		
Jan. 10	14	— 2·1
„ 11	18	—15·0
„ 12	—15	—34
„ 13	—15·7	—40
„ 14	26	—14
„ 15	— 1·3	—29·2
„ 16	— 1·3	—11·4
„ 17	15·3	— 6·2
„ 18	26·1	5·2
„ 19	15·3	6·2
„ 20	24·5	2·6
„ 21	16·7	— 2·2
„ 22	22·5	5
„ 23	4·5	—11·6
„ 24	22·0	—14
„ 25	13·3	— 8·9
„ 26	1·0	—13·8
„ 27	5·0	—12·3
„ 28	5	—14·7
„ 29	6	—11·2
„ 30	1·4	—12·4
„ 31	3·2	— 8
Mean	10·3	—10·2
	Av. Temp. - 0·0	
Feb. 1	—21	—24·5
„ 2	— 9·9	—30·4
„ 3	0	—25·2
„ 4	32	9·7
„ 5	32	14
„ 6	12	— 9·1
„ 7	— 6·8	—23
„ 8	3·0	—24·7
„ 9	—10·0	—28·3
„ 10	— 4·7	—33·3
„ 11	— 7·8	—27
„ 12	—19·7	—36
„ 13	—24	—37
„ 14	—23·6	—42·1
„ 15	—24·2	—54
„ 16	— 9·7	—32·3
„ 17	— 1·6	—13·2
„ 18	1·2	—21·5
„ 19	3·8	—24·4
„ 20	2·0	—26
„ 21	8	—31
„ 22	14	—15
„ 23	39·2	3·6
„ 24	32·8	7·2
„ 25	44·6	18·4
„ 26	39	19
„ 27	18·8	— 5
„ 28	16	10·0
Mean	5·5	—20·4
	Av. Temp. — 7·4	
March 1	2·4	—18
„ 2	1·0	—23
„ 3	17·3	3
„ 4	20·7	6·0
„ 5	24·2	3·0
„ 6	39	15·5
„ 7	35·8	12·6
„ 8	38·8	23·7
„ 9	46·7	22·9
„ 10	30·5	13·7

Date.	Max.	Min.
1858.		
March 11	37·7	15·6
„ 12	39·2	21·2
„ 13	43·8	11·7
„ 14	44·0	12·0
„ 15	39·0	31·0
„ 16	35·8	31·3
„ 17	31·5	25·8
„ 18	33·0	15·5
„ 19	41·2	12·0
„ 20	33·6	14·4
„ 21	27·5	4·1
„ 22	40·0	23·7
„ 23	40·0	31·0
„ 24	41·5	25·5
„ 25	39·8	21·6
„ 26	35·4	22·5
„ 27	41·2	21·0
„ 28	49·5	15·8
„ 29	45·0	32·4
„ 30	43·8	30·0
„ 31	45·9	29·0
Mean	35·0	17·6
	Av. Temp. - 26·3	
April 1	49·0	25·6
„ 2	34·6	25·3
„ 3	26·9	18·0
„ 4	37·0	16·0
„ 5	32·7	13·0
„ 6	47·0	22·0
„ 7	48·8	22·0
„ 8	37·2	22·0
„ 9	48·7	18·6
„ 10	43·8	28·4
„ 11	53·7	26·7
„ 12	67·8	27·0
„ 13	53·0	24·5
„ 14	28·0	14·7
„ 15	28·4	9
„ 16	48·0	9
„ 17	22·0	19
„ 18	61·0	34·2
„ 19	63·0	29·0
„ 20	52·5	23·6
„ 21	48·3	18
„ 22	44·2	20
„ 23	45·5	20·2
„ 24	55·0	26·5
„ 25	52·7	28·0
„ 26	70·0	36·1
„ 27	75·0	35·2
„ 28	54·0	25·0
„ 29	64·5	27·2
„ 30	65·0	31·0
Mean	48·6	23·1
	Av. Temp. - 35·8	
May 1	69·0	42·2
„ 2	75·5	45·0
„ 3	71·0	37·2
„ 4	73·2	40·1
„ 5	52·7	30·0
„ 6	60·0	33·5
„ 7	61·7	38·8
„ 8	63·3	31·0
„ 9	60·8	33·0

Date.	Max.	Min.	Date.	Max.	Min.	Date.	Max.	Min.
1858.			1858.			1858.		
May 10	59·8	33·0	May 23	68·4	40·0	June 1	67	36·6
„ 11	43·8	14·5	„ 24	70·0	50·0	„ 2	72·0	44·0
„ 12	45·5	24·2	„ 25	69·0	35·3	„ 3	70·0	49·5
„ 13	32·0	20·0	„ 26	49·4	38·0	„ 4	77·6	46·3
„ 14	42·0	13·8	„ 27	54·7	45·0	„ 5	63·3	44·0
„ 15	58·7	27·0	„ 28	54·0	38·9	„ 6	56·0	31·9
„ 16	44·5	26·5	„ 29	48·8	33·7			
„ 17	48·0	28·6	„ 30	51·0	31·9	Mean	67·8	42·0
„ 18	49·0	19·0	„ 31	56·2	27·6		Av. Temp. -	54·9
„ 19	61·3	30·5						
„ 20	70·3	41·2	Mean	58·1	32·9			
„ 21	72·2	34·0		Av. Temp. -	45·0			
„ 22	67·2	39·0						

EXTRACT from the METEOROLOGICAL REGISTER kept at FORT CARLTON, Winter 1857–8. Jan. and Feb. 1858.

Date.	Hour.	Bar.	Therm.	Min.	Wind.	Date.	Hour.	Bar.	Therm.	Min.	Wind.
Jan. 1	9 a.m.	28·10	4	— 8·0	N.	Jan. 30	4 p.m.	28·39	13·5	—	Calm.
„ „	4 p.m.	28·12	— 3·4	—	Calm.	„ 31	9 a.m.	28·31	8	— 9·2	„
„ 2	9 a.m.	27·94	24·9	— 3·3	SW.	„ „	4 p.m.	28·28	27·3	—	SW.
„ „	4 p.m.	27·90	40	—	W.	Feb. 1	9 a.m.	28·40	2·8	2·7	ENE.
„ 3	9 a.m.	27·60	33·8	23·7	W.	„ „	4 p.m.	28·62	1·8	—	NE.
„ „	4 p.m.	27·58	39	—	NW.	„ 2	9 a.m.	28·77	30·3	—28·6	Calm.
„ 4	9 a.m.	28·07	— 1·0	— 0·7	Calm.	„ „	4 p.m.	28·66	—12	—	S.
„ „	4 p.m.	28·03	5·2	—	„	„ 3	9 a.m.	28·60	— 7·1	—26·2	Calm.
„ 5	9 a.m.	28·01	— 2·2	— 1	„	„ „	4 p.m.	28·55	5	—	SSW.
„ „	4 p.m.	28·10	1·2	—	NNE.	„ 4	9 a.m.	28·13	18	— 6·3	WSW.
„ 6	9 a.m.	28·14	—24·8	—23·7	Calm.	„ „	4 p.m.	28·01	31·8	—	SW.
„ „	4 p.m.	28·12	—13	—	SE.	„ 5	9 a.m.	28·31	24·9	17·4	N.
„ 7	9 a.m.	28·12	—19·6	—22·2	NE.	„ „	4 p.m.	28·41	30	—	NNW.
„ „	4 p.m.	28·00	— 3·8	—	Calm.	„ 6	9 a.m.	28·53	12	— 6·2	N.
„ 8	9 a.m.	27·91	—11·1	—17	SW.	„ „	4 p.m.	28·58	7·3	—	„
„ „	4 p.m.	28·00	3	—	„	„ 7	9 a.m.	28·94	—16·5	—16·3	NNE.
„ 9	9 a.m.	27·84	5·2	—11·4	SSW.	„ „	4 p.m.	28·93	— 7	—	Calm.
„ „	4 p.m.	27·58	16·9	—	Calm.	„ 8	9 a.m.	28·51	—16·2	—22·9	W.
„ 10	9 a.m.	27·70	— 0·2	— 0·5	„	„ „	4 p.m.	28·28	2	—	SW.
„ „	4 p.m.	27·95	10	—	„	„ 9	9 a.m.	28·68	—25	—24·4	N.
„ 11	9 a.m.	27·82	1·7	— 2·7	NE.	„ „	4 p.m.	28·64	—16	—	WNW.
„ „	4 p.m.	27·59	5	—	„	„ 10	9 a.m.	28·37	—30·9	—29	W.
„ 12	9 a.m.	27·07	—23	—22·5	WNW.	„ „	4 p.m.	28·40	— 6	—	Calm.
„ „	4 p.m.	27·65	—20·3	—	W.	„ 11	9 a.m.	28·41	—30·4	—29	N.
„ 13	9 a.m.	28·32	—33	—36·2	Calm.	„ „	4 p.m.	28·30	—11·1	—	W.
„ „	4 p.m.	28·24	—16·3	—	NE.	„ 12	9 a.m.	28·48	—29	—32·4	NNE.
„ 14	9 a.m.	28·46	—18·5	—32·6	Calm.	„ „	4 p.m.	28·53	—21·3	—	Calm.
„ „	4 p.m.	28·50	—15	—	„	„ 13	9 a.m.	28·66	—34·2	—33·6	NE.
„ 15	9 a.m.	28·22	—21·2	—29·9	E.	„ „	4 p.m.	28·64	—24	—	N.
„ „	4 p.m.	27·91	— 2·7	—	SE.	„ 14	9 a.m.	28·75	—39·6	—42·2	SW.
„ 16	9 a.m.	28·26	— 6·7	—19·6	NW.	„ „	4 p.m.	28·79	—24	—	„
„ „	4 p.m.	28·43	— 6	—	Calm.	„ 15	9 a.m.	28·89	—41·4	—46·7	Calm.
„ 17	9 a.m.	28·30	— 4·3	—11·4	„	„ „	4 p.m.	28·87	—24·2	—	„
„ „	4 p.m.	28·36	13	—	SSW.	„ 16	9 a.m.	28·75	—19·8	—40·6	E.
„ 18	9 a.m.	28·14	8·2	— 3·5	SW.	„ „	4 p.m.	28·74	— 9·7	—	„
„ „	4 p.m.	28·10	23	—	„	„ 17	9 a.m.	28·75	—11·7	—17·2	NNE.
„ 19	9 a.m.	28·17	9·8	8	WSW.	„ „	4 p.m.	28·74	— 4·1	—	NE.
„ „	4 p.m.	28·12	23·3	—	Calm.	„ 18	9 a.m.	28·60	— 8	— 9·8	ENE.
„ 20	9 a.m.	28·16	5	4	NW.	„ „	4 p.m.	28·61	— 0·4	—	Calm.
„ „	4 p.m.	28·21	21	—	Calm.	„ 19	9 a.m.	28·22	—10·4	—22·7	E.
„ 21	9 a.m.	28·20	— 1·9	— 2·5	NE.	„ „	4 p.m.	28·4	1·9	—	NE.
„ „	4 p.m.	28·23	14·9	—	E.	„ 20	9 a.m.	28·50	— 4·7	— 9·4	N.
„ 22	9 a.m.	27·88	7	— 0·0	Calm.	„ „	4 p.m.	28·53	4	—	NW.
„ „	4 p.m.	27·86	20	—	„	„ 21	9 a.m.	28·58	—15·5	—	WSW.
„ 23	9 a.m.	28·19	— 1·2	— 7·5	NE.	„ „	4 p.m.	28·52	7·1	—	SW.
„ „	4 p.m.	28·24	— 3	—	N.	„ 22	9 a.m.	28·14	— 7·5	—14·2	NNW.
„ 24	9 a.m.	28·39	—10·8	—13·8	Calm.	„ „	4 p.m.	28·01	12·8	—	Calm.
„ „	4 p.m.	28·20	4·9	—	S.	„ 23	9 a.m.	28·03	12·8	— 6·1	SE.
„ 25	9 a.m.	28·38	— 4	— 9	NNE.	„ „	4 p.m.	28·22	35·5	—	WNW.
„ „	4 p.m.	28·39	— 1·5	—	NE.	„ 24	9 a.m.	28·30	11·6	6·7	Calm.
„ 26	9 a.m.	28·29	—10·7	—12·6	„	„ „	4 p.m.	28·22	31·7	—	SW.
„ „	4 p.m.	28·14	— 4·2	—	„	„ 25	9 a.m.	28·11	22·5	11	„
„ 27	9 a.m.	28·21	0·8	— 9·2	W.	„ „	4 p.m.	27·91	42·2	—	„
„ „	4 p.m.	28·46	2·9	—	NE.	„ 26	9 a.m.	28·03	28·1	21	WNW.
„ 28	9 a.m.	28·70	—13	—13·9	„	„ „	4 p.m.	28·02	29	—	NW.
„ „	4 p.m.	28·66	— 5·3	—	E.	„ 27	9 a.m.	28·52	5·6	5	N.
„ 29	9 a.m.	28·44	— 9·5	—12·1	„	„ „	4 p.m.	28·70	6·5	—	NNW.
„ „	4 p.m.	28·45	8·9	—	ENE.	„ 28	9 a.m.	28·90	— 9·5	15	Calm.
„ 30	9 a.m.	28·53	—10	—12	Calm.	„ „	4 p.m.	28·79	8·9	—	SW.

II.—1858.—Fort Edmonton.

Date.	Hour.	Bar.	Therm. in Air.	Min. Therm.	Wind.		Remarks.
					Direcn.	Force.	
		°	°	°			
Jan. 1	9 a.m.	27·44	16	16·0	N.	light	Clear, snow during the day.
„ „	4 p.m.	27·40	35·5	—	—	calm	Overcast.
„ 2	9 a.m.	27·34	41	15	SW.	fresh	Very fine. Clear.
„ „	4 p.m.	27·27	45	—	„	„	Cloudy.
„ 3	9 a.m.	26·98	44·5	36·0	„	high	Rain. Great storm. Hot wind.
„ „	4 p.m.	27·20	32	—	NW.	very high	Fine. Clear.
„ 4	9 a.m.	27·28	9	8·5	—	calm	Clear.
„ „	4 p.m.	27·15	15	—	N.	light	Fine.
„ 5	9 a.m.	27·51	7	0·5	NW.	„	„
„ „	4 p.m.	27·59	5	—	E.	fresh	„
„ 6	9 a.m.	27·58	−11	−14·0	—	calm	Clear.
„ „	4 p.m.	27·45	0	—	NW.	light	Fine.
„ 7	9 a.m.	27·44	− 9	−11·0	„	fresh	„
„ „	4 p.m.	27·42	2	—	N.	light	Overcast.
„ 8	9 a.m.	27·42	−14·5	−15·5	NW.	„	Clear.
„ „	4 p.m.	27·22	17·5	—	NW.	„	Overcast.
„ 9	9 a.m.		30	−14·5	SE.	„	Partially overcast.
„ „	4 p.m.		32	—	N.	„	Overcast.
„ 10	9 a.m.		16	0	NE.	„	Clear.
„ „	4 p.m.		20·5	—	ENE.	„	Overcast.
„ 11	9 a.m.		− 9	−10·5	N.	„	Clear.
„ „	4 p.m.		−14	—	„	„	„ } Dull, haze in the mornings.
„ 12	9 a.m.		−16	−22·0	„	„	„
„ „	4 p.m.		−16·5	—	„	„	„
„ 13	9 a.m.		−19·5	−22·5	NE.	„	Overcast.
„ „	4 p.m.		−13·5	—	„	„	„
„ 14	9 a.m.		−17·5	−21·0	„	fresh	Clear.
„ „	4 p.m.		− 9	—	„	„	Overcast.
„ 15	9 a.m.		− 8·5	−17·0	ENE.	light	„ Snow } 4 inches.
„ „	4 p.m.		− 2·5	—	„	„	„ „
„ 16	9 a.m.		2	− 7·5	SW.	„	Clear.
„ „	4 p.m.		22·5	—	SE.	„	„
„ 17	9 a.m.		20	− 2·5	SW.	„	Cloudy.
„ „	4 p.m.		30	—	S.	„	Overcast.
„ 18	9 a.m.		33	20	„	„	Clear.
„ „	4 p.m.		33·5	—	SW.	„	Cloudy.
„ 19	9 a.m.		35	—	„	fresh	Clear.
„ „	4 p.m.		17	—	W.	light	„
„ 20	9 a.m.		22	11·5	„	fresh	„
„ „	4 p.m.		35·5	—	NE.	light	„ Cloud in E.
„ 21	9 a.m.		15	12	„	„	Cloudy.
„ „	4 p.m.		23	—	„	„	Clear.
„ 22	9 a.m.		− 1	−11	N.	„	Cloudy.
„ „	4 p.m.		− 4	—	„	„	„
„ 23	9 a.m.		−13·5	−14	„	„	„
„ „	4 p.m.		−11	—	„	„	„
„ 24	9 a.m.		17	−17·5	„	„	„
„ „	4 p.m.		37	—	„	„	„
„ 25	9 a.m.		−11	−13·5	NE.	light	Overcast. Snow } 3 inches.
„ „	4 p.m.		− 2	—	ENE.	„	„ „
„ 26	9 a.m.		− 1·5	−11·5	NE.	„	„
„ „	4 p.m.		17	—	„	„	„
„ 27	9 a.m.		2·5	− 1·0	ENE.	„	„
„ „	4 p.m.		6·5	—	NE.	„	Clear.
„ 28	9 a.m.		2	− 1·5	„	„	„
„ „	4 p.m.		16	—	„	„	„
„ 29	9 a.m.		4	− 3	„	fresh	Cloudy.
„ „	4 p.m.		17·5	—	E.	light	Clear. During night, fog with brilliant Lunar Perihilia.
„ 30	9 a.m.	27·59	12	2	NE.	fresh	Cloudy.
„ „	4 p.m.	27·61	35	—	SW.	„	„
„ 31	9 a.m.	27·64	33	12	S.	high	Clear.
„ „	4 p.m.	27·66	30	—	SW.	light	„
Feb. 1	9 a.m.	27·69	21·5	7·0	S.	„	Clear.
„ „	4 p.m.	27·70	23	—	W.	fresh	Overcast.
„ 2	9 a.m.	27·64	17	15	„	light	Cloudy.
„ „	4 p.m.	27·60	31·5	—	SW.	„	„
„ 3	9 a.m.	27·72	28·0	17	W.	light	Clear.
„ „	4 p.m.	27·63	38·5	—	„	fresh	„
„ 4	9 a.m.	27·42	44	28	„	„	Overcast.
„ „	4 p.m.	27·48	39·5	—	„	„	Clear. Heavy rain during night.
„ 5	9 a.m.	27·78	35·5	27·5	„	light	Cloudy.
„ „	4 p.m.	27·77	33	—	NW.	fresh	Clear. Gale from N.W. last night.

Barometer absent on trip to Rocky Mountain House.

Date.	Hour.	Bar.	Therm. in Air.	Min. Therm.	Wind.		Remarks.
					Direcn.	Force.	
		°	°	°			
Feb. 6	9 a.m.	27·70	12·5	10·5	E.	fresh	Overcast. Drifting snow.
„ „	4 p.m.	27·81	5·5	—	N.	„	„ „
„ 7	9 a.m.	27·93	− 9	−13	NW.	„	Clear.
„ „	4 p.m.	28·40	4	—	W.	„	„
„ 8	9 a.m.	27·78	− 5·5	−12	SW.	„	„
„ „	4 p.m.	27·60	14	—	NW.	„	„
„ 9	9 a.m.	27·67	− 5	−18·5	E.	light	„
„ „	4 p.m.	27·79	0·5	—	SW.	„	„
„ 10	9 a.m.	27·76	− 8	−20·0	NE.	fresh	„ Clouds in NE.
„ „	4 p.m.	27·63	2·5	—	NNE.	light	Cloudy.
„ 11	9 a.m.	—	− 5	−14·5	SE.	„	Clear. Haze.
„ „	4 p.m.	—	− 2	—	NE.	„	Cloudy.
„ 12	9 a.m.	—	−25·5	−26·5	N.	„	Clear.
„ „	4 p.m.	—	−21	—	„	„	Cloudy.
„ 13	9 a.m.	—	−33	−39·5	—	calm	Haze. Very cold.
„ „	4 p.m.	—	−22·5	—	N.	light	Overcast.
„ 14	9 a.m.	—	−41·5	−41·5	NW.	„	Clear, with little haze.
„ „	4 p.m.	—	−13	—	W.	„	Clear.
„ 15	9 a.m.	—	28	−38·0	„	„	„
„ „	4 p.m.	—	−10	—	N.	„	„
„ 16	9 a.m.	—	−19	−27·5	E.	„	„
„ „	4 p.m.	—	−14	—	W.	„	„
„ 17	9 a.m.	—	−15·5	−25·5	E.	fresh	Overcast. Raw.
„ „	4 p.m.	—	−11	—	„	„	„ Snow } 2 inches.
„ 18	9 a.m.	—	− 7·0	−15·5	W.	light	„ „ }
„ „	4 p.m.	—	− 3·0	—	„	„	Clear.
„ 19	9 a.m.	27·33	1	− 9	E.	„	Overcast.
„ „	4 p.m.	27·41	7	—	„	„	Clear.
„ 20	9 a.m.	27·78	16	− 4	NE.	„	Fine. Clear.
„ „	4 p.m.	27·69	14	—	NW.	„	Clear. Cold.
„ 21	9 a.m.	27·72	16	6·5	SW.	„	Fine. Clear.
„ „	4 p.m.	27·69	26·5	—	W.	„	Fleecy clouds.
„ 22	9 a.m.	27·21	18·5	9·5	„	„	Overcast.
„ „	4 p.m.	27·14	41·5	—	„	„	Cloudy. Dull.
„ 23	9 a.m.	27·56	41	18·0	NW.	moderate	Clear. Mild.
„ „	4 p.m.	27·58	38	—	NE.	light	Overcast.
„ 24	9 a.m.	27·44	36	25	SW.	„	„ Rain.
„ „	4 p.m.	27·47	55·5	—	NW.	very light	„ Close. Hot.
„ 25	9 a.m.	27·30	53·5	36	NNW.	very high	{ Forenoon, cloudy at 2 p.m. Ther-
„ „	4 p.m.	27·20	52	—	N.	—	{ mometer, 65°. Rain at 2.30 p.m.
„ 26	9 a.m.	27·57	30	24·5	NW.	very light	Fine. Cloudy to SE.
„ „	4 p.m.	27·24	25	—	„	high	Gusty. Stormy. Overcast.
„ 27	9 a.m.	27·92	2	0·5	NNW.	fresh	Clear. Cold.
„ „	4 p.m.	28·05	7	—	NW.	light	Overcast. Cold.
„ 28	9 a.m.	27·60	15	−12·0	SW.	„	Clear. Cold.
„ „	4 p.m.	27·84	24	—	NW.	„	Passing clouds,
Mar. 1	9 a.m.	27·84	9·0	1·5	E.	„	Overcast.
„ „	2 p.m.	27·85	8·0	—	„	„	Clouds in patches. Raw.
„ „	9 p.m.	27·86	5·0	—	NE.	moderate	Hazy. Overcast.
„ 2	9 a.m.	27·66	11	2	E.	light	Overcast. Chilly.
„ „	2 p.m.	27·51	24·5	—	NE.	very light	Clear. Cloudy in E.
„ „	9 p.m.	27·48	19	—	SW.	light	Overcast.
„ 3	9 a.m.	27·56	20	11	E.	„	Cloud from NE to SW. Chilly.
„ „	2 p.m.	27·56	24·5	—	„	moderate	Cloudy. Haze in E.
„ „	9 p.m.	27·50	16	—	„	fresh	Dense cloud.
„ 4	9 a.m.	27·42	20	14	„	light	Overcast. Chilly.
„ „	2 p.m.	27·52	35·5	—	„	„	Clear. Cloud to S. Mild.
„ „	9 p.m.	27·68	26	—	SE.	„	„ Starlight.
„ 5	9 a.m.	27·66	24·5	12.5	„	„	„ Snow during night.
„ „	2 p.m.	27·62	46	—	SW.	light	Overcast. Mild.
„ „	9 p.m.	27·56	37	—	—	calm	Clear. Very mild.
„ 6	9 a.m.	27·63	37	24·5	W.	light	Cloudy. Mild.
„ „	2 p.m.	27·70	43	—	NE.	moderate	Clear. Mild.
„ „	9 p.m.	27·74	35	—	—	calm	Stars dull, but clearing.
„ 7	9 a.m.	27·62	35	25	W.	very light	Hazy. Very mild.
„ „	2 p.m.	27·54	52	—	SSW.	light	Mild. Cloudy.
„ „	9 p.m.	27·42	41	—	—	calm	Overcast. A few dim stars.
„ 8	9 a.m.	27·47	37	29	—	„	Dull. Mild.
„ „	2 p.m.	27·46	49·5	—	E.	light	Cloudy. Very mild.
„ „	9 p.m.	27·30	37·5	—	—	calm	Clear. Mild.
„ 9	9 a.m.	27·44	48·5	26·5	W.	light	„ Warm.
„ „	2 p.m.	27·36	39	—	E.	moderate	Cloudy. Mild.
„ „	9 p.m.	27·40	30	—	ESE.	light	Clear. Chilly.
„ 10	9 a.m.	27·46	31	19·5	W.	„	Cloudy.
„ „	2 p.m.	27·40	42	—	SW.	fresh	Clear.

Date.	Hour.	Bar.	Therm. in Air.	Min. Therm.	Wind.		Remarks.
					Direcⁿ.	Force.	
		°	°	°			
Mar. 10	9 p.m.	27·48	31	—	NE.	light	Bright star light.
„ 11	9 a.m.	27·62	40	21	—	calm	Clear. Fine.
„ „	2 p.m.	27·54	43	—	SE.	moderate	Cloudy at 3 p.m. Wind W.
„ „	9 p.m.	27·42	34	—	„	light	Dull.
„ 12	9 a.m.	27·34	31·5	22	—	calm	Partially overcast.
„ „	2 p.m.	27·29	51	—	SW.	light	Cloudy. Mild.
„ „	9 p.m.	27·22	40	—	„	„	Clear. Warm.
„ 13	9 a.m.		46	26	„	„	„ „
„ „	2 p.m.		48	—	—	calm	Cloudy. Mild.
„ „	9 p.m.		35·5	—	SW.	moderate	Cloudy and chilly.
„ 14	9 a.m.		32	23	„	light	Overcast.
„ „	2 p.m.		39·5	—	E.	„	Cloudy and mild.
„ „	9 p.m.		29	—	„	„	Overcast. Chilly.
„ 15	9 a.m.		42	27	W.	fresh	Clear. Mild.
„ „	2 p.m.		42	—	NE.	„	Clear. Chilly.
„ „	9 p.m.		29	—	SW.	light	„ „
„ 16	9 a.m.		29	23	W.	very light	Overcast. „
„ „	2 p.m.		41	—	—	calm	Densely overcast.
„ „	9 p.m.		35	—	NE.	very light	„
„ 17	9 a.m.		32	29	W.	light	Overcast. A little snow.
„ „	2 p.m.		34	—	E.	very light	Snowing.
„ „	9 p.m.		29	—	SE.	light	Still snow.
„ 18	9 a.m.		31·5	27	E.	„	Overcast.
„ „	2 p.m.		38	—	E.	,	Cloudy. Snow disappearing.
„ „	9 p.m.		29	—	NE.	„	Very clear Aurora.
„ 19	9 a.m.		33	24·5	„	„	Cloudy. Mild.
„ „	2 p.m.		52	—	W.	light	Clear. Mild.
„ „	9 p.m.		38	—	—	calm	Fine. Clear.
„ 20	9 a.m.		35·5	32·5	W.	very light	Overcast.
„ „	2 p.m.		45	—	ENE.	light	Cloudy. Mild.
„ „	9 p.m.		34	—	E.	moderate	Overcast. Chilly.
„ 21	9 a.m.		29	27	NE.	light	„ Raw.
„ „	2 p.m.		37	—	W.	„	Overcast at 6 p.m. Rain and hail. Wind SE.
„ „	9 p.m.		33	—	—	calm	Clear stars, Bright.
„ 22	9 a.m.		32·5	29	W.	light	Overcast. Chilly.
„ „	9 p.m.		46	—	E.	very light	„ Mild.
„ „	2 p.m.		36	—	—	calm	„ Moon dim. During night 2 inches snow, followed by rain.
„ 23	9 a.m.		32	27·5	W.	moderate	Cloudy.
„ „	2 p.m.		38·5	—	NE.	„	Clear. Mild.
„ „	9 p.m.		32	—	—	calm	„ Chilly.
„ 24	9 a.m.		45	16	S.	light	„ Warm.
„ „	2 p.m.		43	—	E.	moderate	„ Chilly.
„ „	9 p.m.		32	—	NE.	light	Cloudy. Cold. Raw.
„ 25	9 a.m.		27·5	27·5	„	„	Chilly. Overcast. Snow.
„ „	2 p.m.		31	—	E.	„	Still snowing.
„ „	9 p.m.		25	—	NE.	„	Overcast. 6 inches of snow.
„ 26	9 a.m.		34	23	W.	„	Cloudy and mild.
„ „	2 p.m.		38	—	—	calm	Mild. Clear. Snow melting.
„ „	9 p.m.		26	—	E.	light	Clear. Cold.
„ 27	9 a.m.		37	8·5	—	calm	Cloudy. Mild.
„ „	2 p.m.		41	—	E.	fresh	Clear. Chilly. Snow off.
„ „	9 p.m.		30	—	NE.	moderate	Clear and cold.
„ 28	9 a.m.		34	24·5	E.	„	Cloudy. Chilly.
„ „	2 p.m.		38·5	—	W.	„	Overcast. Rain from 2.30 to 2.48.
„ „	9 p.m.		36	—	NE.	light	„ Chilly.
„ 29	9 a.m.		48	24·5	E.	„	Clear. Warm.
„ „	2 p.m.		56	—	SW.	„	Clear and mild.
„ „	9 p.m.		38	—	NE.	„	Densely overcast. Raw at 8 p.m.
„ 30	9 a.m.		37·5	34·5	NW.	moderate	Cloudy.
„ „	2 p.m.		41	—	N.	fresh	„ Chilly.
„ „	9 p.m.		30	—	E.	very light	Clear. Cold.
„ 31	9 a.m.		49	22	SW.	light	„ Warm.
„ „	2 p.m.		49	—	S.	very light	„
„ „	9 p.m.		35	—	E.	moderate	Overcast and close.

Barometer returned to Fort Carlton.

Date.	Hour.	Therm. in Air.	Min. Therm.	Wind.		Remarks.
				Direcn.	Force.	
		°	°			
April 1	9 a.m.	31·0	27·0	N.	very light	Overcast. Snowing.
„ „	2 p.m.	38	—	NE.	moderate	„ Snow till 1 p.m.
„ „	9 p.m,	32	—	„	„	„ Snow now.
„ 2	9 a.m.	30	30	ENE.	„	„ Snowing a little.
„ „	2 p.m.	29	—	NE.	light	„ „
„ „	9 p.m.	25	—	—	calm	„ Snow ceased at 7 p.m.
„ 3	9 a.m.	33·5	24	SE.	light	Cloudy.
„ „	2 p.m.	38	—	NE.	„	„
„ „	9 p.m.	27	—	—	„	„
„ 4	9 a.m.	35·5	16·5	N.	„	Clear. Cold.
„ „	2 p.m.	34	—	SE.	fresh	„ „
„ „	9 p.m.	25	—	W.	„	Overcast. Cold.
„ 5	9 a.m.	38·5	23·5	„	light	Clear and mild.
„ „	2 p.m.	46	—	S.	„	Dark cloud to N.
„ „	9 p.m.	33	—	E.	„	Clear and mild.
„ 6	9 a.m.	41	27	S.	very light	Cloudy and mild.
„ „	2 p.m.	50	—	NW.	moderate	Mild. Cloudy to W.
„ „	9 p.m.	38	—	W.	very light	Clear.
„ 7	9 a.m.	39	24	SW.	mild	Cloudy from E. to S.
„ „	2 p.m.	50	—	E.	light	Cloudy and mild.
„ „	9 p.m.	36	—	„	„	Clear and mild.
„ 8	9 a.m.	52	24	S.	„	Clear and warm.
„ „	2 p.m.	53·5	—	E.	moderate	Cloudy and mild.
„ „	9 p.m.	38	—	SE.	light	Rather hazy and mild.
„ 9	9 a.m.	44	28·5	ENE.	„	Clear and mild. Sprinkling rain.
„ „	2 p.m.	45	—	W.	„	Overcast and mild. Small rain.
„ „	9 p.m.	34·5	—	SW.	„	Clear. Few clouds to E.
„ 10	9 a.m.	55	29	S.	„	Clear and warm.
„ „	2 p.m.	52	—	W.	„	Cloudy. At 11·30 a little hail.
„ „	9 p.m.	38	—	„	moderate	Cloudy and chilly. A little hail.
„ 11	9 a.m.	58	31	„	very light	Clear and warm.
„ „	2 p.m.	54·5	—	„	light	Rather cloudy. Mild.
„ „	9 p.m.	40	—	NW.	„	Clear.
„ 12	9 a.m.	60	30	S.	„	Clear and warm.
„ „	2 p.m.	61	—	—	calm	Partially cloudy. Mild.
„ „	9 p.m.	37	—	ENE.	fresh	Fresh. Overcast.
„ 13	9 a.m.	30·5	30·5	N.	„	„ „
„ „	2 p.m.	30	—	„	„	„ „ and cold.
„ „	9 p.m.	25	—	„	light	Overcast and cold.
„ 14	9 a.m.	41	15·5	SW.	„	Clear and warm.
„ „	2 p.m.	31·5	—	W.	„	Clear and mild. 10·20 snow.
„ „	9 p.m.	24	—	„	very light	Chilly. Clouds in W.
„ 15	9 a.m.	44	—	W.	„	Clear and mild.
„ „	2 p.m.	40	11·5	„	moderate	Light fleecy clouds. Chilly.
„ „	9 p.m.	33	—	„	light	Cloudy and cold.
„ 16	9 a.m.	59	22	S.	very light	Clear and warm.
„ „	2 p.m.	50	—	E.	light	Overcast. Chilly.
„ „	9 p.m.	36	—	„	very light	Chilly.
„ 17	9 a.m.	37	30	NE.	very fresh	Cloudy and chilly.
„ „	2 p.m.	38	—	„	„	Overcast.
„ „	9 p.m.	42	—	E.	moderate	„
„ 18	9 a.m.	62	31	SW.	light	Clear and warm.
„ „	2 p.m.	61	—	„	„	Very bright. Clear and warm.
„ „	9 p.m.	48	—	E.	„	Bright. Rather chilly.
„ 19	9 a.m.	48	34	NW.	moderate	Cloudy and chilly.
„ „	2 p.m.	53	—	„	—	Clear and mild.
„ „	9 p.m.	38	—	„	very light	Clear and cloudy.
„ 20	9 a.m.	52	29	SW.	light	Clear and warm.
„ „	2 p.m.	49	—	NE.	fresh	Very hazy and mild.
„ „	9 p.m.	33	—	W.	„	Very bright, clear and dry.
„ 21	9 a.m.	55	26	SW.	light	„ „ „
„ „	2 p.m.	52·5	—	E.	„	Partially clouded. Mild.
„ „	9 p.m.	38	—	—	calm	Overcast. Rather chilly.
„ 22	9 a.m.	46	28	ESE.	moderate	Clear and warm.
„ „	2 p.m.	48·5	—	W.	very light	Fleecy clouds, and mild.
„ „	9 p.m.	35	—	NE.	light	Clear and chilly.
„ 23	9 a.m.	47	32·5	SW.	moderate	Overcast. Rather chilly.
„ „	2 p.m.	55	—	E.	light	„ „
„ „	9 p.m.	45	—	W.	moderate	Densely overcast and mild.
„ 24	9 a.m.	54	37	„	„	Cloudy and mild.
„ „	2 p.m.	53	—	N.	„	Cloudy and cold.
„ „	9 p.m.	38	—	—	calm	Clear and chilly.
„ 25	9 a.m.	61	28·5	SW.	very light	Clear and warm.
„ „	2 p.m.	59	—	—	calm	Clear and mild.
„ „	9 p.m.	47	—	SW.	moderate	Hazy and mild.

Date.	Hour.	Therm. in Air.	Min. Therm.	Wind.		Remarks.
				Direcn.	Force.	
		°	°			
April 26	9 a.m.	61·5	39	SW.	light	Clear and warm.
„ „	2 p.m.	76	—	NE.	fresh	„
„ „	9 p.m.	56	—	SW.	very light	Beautifully clear. Chilly.
„ 27	9 a.m.	57·5	34	W.	moderate	Overcast. Mild.
„ „	2 p.m.	58·0	—	NW.	strong	Cloudy. Mild.
„ „	9 p.m.	41·5	—	NE.	light	Clear and mild.
„ 28	9 a.m.	42·0	36·5	E.	„	Overcast. Mild with rain.
„ „	2 p.m.	52	—	NW.	„	Overcast and chilly.
„ „	9 p.m.	44	—	E.	very light	Clear and mild.
„ 29	9 a.m.	66	31·0	S.	„	Clear and warm.
„ „	2 p.m.	65	—	W.	„	„
„ „	9 p.m.	49	—	W.	„	„
„ 30	9 a.m.	64	36·0	SSE.	light	Hazy and warm.
„ „	2 p.m.	66	—	S.	„	„
„ „	9 p.m.	54	—	SW.	moderate	Fine, clear, and chilly.

Meteorological Register, No. . Fort Edmonton, 1858–9. Lat. 53° 32′ N.

Date.	Hour.	Aneroid.	Thermometers.			Wind.		Remarks.
			Air.	Max.	Min.	Force.	Direcn.	
			°	°	°			
Oct. 11	Sunr.	27·56	16	—	—	light	ESE.	Cloudy. Sunrise. Clear.
„ „	2 p.m.	27·54	46	—	—	„	SW.	Overcast.
„ 12	Sunr.	27·54	38	—	—	fresh	NW.	Clear. Cloudless. Cold.
„ „	2 p.m.	27·62	49	—	—	„	WNW.	„ „ Wind in gusts.
„ 13	7 a.m.	27·59	33·5	—	—	light	NW.	Dull. Heavy cloud in NW.
„ „	2 p.m.	27·48	49	—	—	„	SE.	„ Overcast.
„ 14	7 a.m.	27·40	31	—	—	„	E.	Rain. Threats of Snow.
„ „	2 p.m.	27·42	39	—	—	„	„	Rain and snow.
„ 15	7 a.m.	27·38	33	—	33·0	„	„	„ Cold.
„ „	2 p.m.	27·42	39	—	—	„	NE.	Snowing.
„ 16	7 a.m.	27·68	24	—	24·5	„	E.	„
„ „	2 p.m.	27·72	27	—	—	„	„	„
„ 17	7 a.m.	27·65	26	—	23·0	„	N.	Fine Cirri ·2.
„ „	2 p.m.	27·68	41	—	—	„	W.	„
„ 18	7 a.m.	27·60	29	—	20	„	NW.	„ Cirri ·3.
„ „	2 p.m.	27·58	42	—	—	„	W.	„ Cirri ·1.
„ 19	7 a.m.	27·55	40	—	28	„	SW.	Soft. Overcast.
„ „	2 p.m.	27·45	42	—	—	„	„	Cloudy. Wind veering to N.
„ 20	9 a.m.	27·38	45	—	33	„	„	Very fine.
„ „	2 p.m.	27·40	53	—	—	„	„	„
„ 21	9 a.m.	27·49	35	—	32	„	NE.	Overcast. Little rain.
„ „	2 p.m.	27·45	47	—	—	fresh	E.	Clear.
„ 22	10 a.m.	27·32	34	—	33	light	„	Dull. Raw. Threatening rain.
„ „	2 p.m.	27·27	44	—	—	„	„	„ „ „
„ „	9 p.m.	27·23	—	—	—	very light	„	„ Thick rain.
„ 23	9 a.m.	27·17	39·5	—	34·5	„	NNE.	„
„ „	5 p.m.	27·08	43·5	—	—	„	E.	„ Mist.
„ „	9 p.m.	27·02	42	—	—	„	„	„ „
„ 24	9 a.m.	27·09	32·5	—	28	„	NE.	„
„ „	2 p.m.	27·12	42·5	—	—	light	„	Overcast.
„ „	7 p.m.	27·25	38·5	—	—	very light	„	„
„ 25	9 a.m.	27·50	42	—	31·5	light	„	Clear. Cirri ·3.
„ „	2 p.m.	27·55	51	—	—	„	N b E.	„ Cirri ·4.
„ „	7 p.m.	27·64	37·5	—	—	very light	„	„ No cloud.
„ 26	9 a.m.	27·59	39·5	—	18·5	light	„	Cloud ·2 to the S.
„ „	2 p.m.	27·55	47	—	—	fresh	SE.	Clear.
„ „	7 p.m.	27·60	41·5	—	—	very fresh	SSE.	Overcast.
„ 27	9 a.m.	27·59	35·5	—	33	light	S.	„ Little rain.
„ „	2 p.m.	27·62	39	—	—	„	„	Partially clear.
„ „	7 p.m.	27·63	37	—	—	very light	S b E.	Clear.
„ 28	9 a.m.	27·64	39·5	—	20	light	NE.	Partially clear.
„ „	7 p.m.	27·42	37	—	—	„	„	Clear.
„ 29	9 a.m.	27·26	30·5	—	21	very light	N.	Cir-cum ·4.
„ „	2 p.m.	27·27	39	—	—	„	E b N.	Overcast.
„ „	7 p.m.	27·32	35·5	—	—	„	NE.	Partially clear.
„ 30	9 a.m.	27·58	37·5	—	33	very light	N b E.	Overcast. Moist.
„ „	2 p.m.	27·59	43·5	—	—	fresh	N.	Partially clear.
„ „	7 p.m.	27·67	34·0	—	—	light	„	Clear. Starlight.
„ 31	9 a.m.	27·90	34	—	20	„	NE.	Fine. Clear.
„ „	2 p.m.	27·85	47	—	—	„	„	„ „

Date.	Hour.	Aneroid.	Thermometers.			Wind.		Remarks.
			Air.	Max.	Min.	Force.	Direcⁿ.	
			°	°	°			
Nov. 1	9 a.m.	27·80	34	—	30	light	E.	Dull.
„ „	2 p.m.	27·90	41	—	—	„	„	„ Overcast.
„ 2	9 a.m.	28·11	32	—	28	„	„	Cir-cirri ·5.
„ „	2 p.m.	28·12	41·5	—	—	„	„	Clear. Fine.
„ 3	9 a.m.	27·94	40·5	—	25·5	„	NE.	„ „
„ „	2 p.m.	27·90	42	—	—	„	„	Very fine.
„ 4	9 a.m.	27·70	37	52	15	„	E.	Fine. Clear.
„ „	2 p.m.	27·66	42	—	—	„	SW.	Fine open. Soft.
„ 5	9 a.m.	27·72	32	—	25	very light	„	Very bright sun. Cloudless.
„ „	2 p.m.	27·66	39	—	—	„	NW.	Sharp. Clear. Cloudless.
„ „	9 p.m.	27·68	28	—	—	„	NE.	Cloudless. Sharp. Bright starlight.
„ 6	9 a.m.	27·86	29	41	26·4	fresh	N.	Overcast. Raw. Storm threatens.
„ „	2 p.m.	27·86	31	—	—	light	„	Very fine. Cloudless.
„ „	9 p.m.	27·87	27	—	—	very light	NE.	Clear. Cirri ·2 in West.
„ 7	9 a.m.	27·85	31	33	25·2	„	SE.	Very fine. Bright.
„ „	2 p.m.	27·84	39	—	—	light	„	Clear. Cloudless.
„ „	9 p.m.	27·80	32	—	—	„	„	„ „
„ 8	9 a.m.	27·36	35·5	40	28·5	„	„	Dull. Overcast.
„ „	2 p.m.	27·30	41·0	—	—	„	„	Overcast.
„ „	9 p.m.	27·40	47·5	—	—	very fresh	—	Partially clear.
„ 9	9 a.m.	27·60	44	50	20	light	NW.	Clear. Cirri ·2.
„ „	2 p.m.	27·65	43·7	—	—	fresh	„	Cirri ·4.
„ „	9 p.m.	27·68	34·5	—	—	light	„	Partially clear.
„ 10	9 a.m.	27·61	34·0	47	29	„	SE.	Very clear.
„ „	2 p.m.	27·58	45·2	—	—	calm	„	Slightly overcast.
„ „	9 p.m.	27·56	38·0	—	—	„	„	Partially clear.
„ 11	9 a.m.	27·72	31·5	45·8	32·0	„	NE.	Slightly overcast.
„ „	2 p.m.	27·67	32·5	—	—	light	„	„
„ „	9 p.m.	27·68	31·5	—	—	calm	„	Clear.
„ 12	9 a.m.	27·57	25	32	21·5	„	„	„
„ „	2 p.m.	27·45	33·5	—	—	light	„	Partially clear.
„ „	9 p.m.	27·42	30	—	—	fresh	—	Overcast.
„ 13	9 a.m.	27·50	26·2	34	24	—	—	Snowy.
„ „	2 p.m.	27·57	31·6	—	—	calm	NE.	Overcast.
„ „	9 p.m.	27·60	29	—	—	„	N.	„
„ 14	9 a.m.	27·50	32·6	34	28·3	fresh	—	Partially clear.
„ „	2 p.m.	27·48	38·0	—	—	light	SE.	Clear. Cirri. 2.
„ „	9 p.m.	27·30	33·7	—	—	very light	„	„
„ 15	9 a.m.	27·08	30·8	39	28	light	„	Overcast.
„ „	2 p.m.	27·02	36	—	—	„	„	„
„ „	9 p.m.	27·37	15	—	—	very fresh	NW.	„
„ 16	9 a.m.	27·84	4·6	38	1·0	fresh	„	Clear.
„ „	2 p.m.	27·81	15	—	—	„	„	„ Cirri ·1 to W.
„ „	9 p.m.	27·84	10·5	—	—	light	„	„ Starlight.
„ 17	9 a.m.	27·85	9·7	13	6·5	calm	„	Partially overcast.
„ „	2 p.m.	27·80	30	—	—	„	NNW.	Clear.
„ „	9 p.m.	27·80	21·7	—	—	„	NW.	„
„ 18	9 a.m.	27·70	20·0	31·7	9·2	„	SE.	Cirri ·3.
„ „	2 p.m.	27·50	38·2	—	—	light	„	Cirri ·4.
„ „	9 p.m.	27·29	34·7	—	—	calm	„	Slightly overcast.
„ 19	9 a.m.	27·10	33·5	40·0	19·5	light	NE.	„
„ „	2 p.m.	26·94	42	—	—	„	„	Cirri ·2.
„ „	9 p.m.	26·89	29·8	—	—	calm	N.	Slightly overcast.
„ 20	9 a.m.	27·05	29·5	44·8	27·2	light	NE.	Snow.
„ „	2 p.m.	27·14	30	—	—	„	„	„
„ „	9 p.m.	27·34	24·5	—	—	—	—	Slightly overcast. α Lyræ brilliant.
„ 21	9 a.m.	27·50	19	27·5	17·5	light	NE.	Overcast.
„ „	9 p.m.	27·58	18	—	—	—	N.	„ Dull.
„ 22	9 a.m.	27·65	19	22·5	10·5	light	NW.	Dull haze.
„ „	2 p.m.	27·60	35·6	—	—	very light	„	Overcast.
„ „	9 p.m.	27·52	22	—	—	light	„	„
„ 23	9 a.m.	27·35	22·7	28	16·2	calm	NE.	„
„ „	2 p.m.	27·36	22·5	—	—	light	N.	„
„ „	9 p.m.	27·47	22	—	—	—	„	„
„ 24	9 a.m.	27·68	17	25·5	16	—	NE.	Partially clouded.
„ „	2 p.m.	27·67	21·2	—	—	very light	„	Slightly overcast.
„ „	9 p.m.	27·77	20	—	—	—	—	Overcast. Sign of clearing.
„ 25	9 a.m.	27·78	11	25·5	10	light	NE.	Cir-cum ·6.
„ „	2 p.m.	27·74	13·2	—	—	—	„	Slightly overcast.
„ „	9 p.m.	27·70	11	—	—	—	—	Overcast.
„ 26	9 a.m.	27·77	9·6	17	5	calm	NE.	Partially clear.
„ „	2 p.m.	27·68	12·5	—	—	—	—	Slightly overcast.
„ „	9 p.m.	27·58	10	—	—	light	N b E.	Overcast.
„ 27	9 a.m.	27·25	25	31·5	9·5	fresh	NNE.	„
„ „	2 p.m.	27·18	36·8	—	—	—	—	„

Date.	Hour.	Aneroid.	Thermometer.			Wind.		Remarks.
			Air.	Max.	Min.	Force.	Direcn.	
			°	°	°			
Nov. 27	9 p.m.	27·13	37	—	—	—	—	Overcast.
„ 28	9 a.m.	27·26	37·2	39·8	27	fresh	NE.	„
„ „	2 p.m.	27·40	28	—	—	„	NW.	Partially clear.
„ „	9 p.m.	27·54	26·7	—	—	light	„	Snow.
„ 29	9 a.m.	27·60	13·5	35·0	8·6	„	NE.	Partially clear. Cirri ·3.
„ „	2 p.m.	27·55	17	—	—	very light	NNE.	Clear. Cirri ·1.
„ „	9 p.m.	27·42	5·2	—	—	light	ENE.	„
„ 30	9 a.m.	27·78	0	18·5	−2	calm	E.	Partially clear.
„ „	2 p.m.	27·80	−2	—	—	„	NE.	Clear.
„ „	9 p.m.	28·00	−19	—	—	very light	„	Clear at 10 p.m.
Dec. 1	9 a.m.	28·15	−22·3	4·7	−23	calm	„	Clear.
„ „	2 p.m.	28·20	−9	—	—	„	„	„
„ „	9 p.m.	28·20	−19·5	—	—	„	„	„
„ 2	9 a.m.	27·70	−14	−3·7	−20	„	„	„
„ „	2 p.m.	27·64	11·2	—	—	—	NW.	Slightly overcast.
„ „	9 p.m.	27·32	22	—	—	—	NNW.	Overcast.
„ 3	9 a.m.	27·10	29·8	37·5	−13	calm	NW.	Slightly overcast.
„ „	2 p.m.	27·25	24·2	—	—	light	NNW.	Overcast. Snow.
„ „	9 p.m.	27·50	15	—	—	—	NW.	Snow.
„ 4	9 a.m.	27·71	−1	32	−2	light	„	Partially clear.
„ „	2 p.m.	27·70	−1·5	—	—	very light	NNW.	Slightly overcast. Snow.
„ „	9 p.m.	27·67	−2·6	—	—	light	NW.	Partially overcast.
„ 5	9 a.m.	27·78	−10	4·2	−11	„	„	Partially clear.
„ „	2 p.m.	27·77	−10	—	—	calm	„	Sky nearly clear of clouds.
„ „	9 p.m.	27·88	−13·5	—	—	light	—	Clear.
„ 6	9 a.m.	27·88	−23	−7	−24	very light	NNW.	„
„ „	2 p.m.	27·82	−6	—	—	light	„	„
„ „	9 p.m.	27·70	−12·2	—	—	fresh	„	„
„ 7	9 a.m.	27·50	−11·9	−5·7	−23	calm	NW	Overcast. Snow.
„ „	2 p.m.	27·43	9·5	—	—	—	—	Snow.
„ „	9 p.m.	27·42	25	—	—	—	—	Overcast.
„ 8	9 a.m.	27·68	10	26·2	9·0	—	NW.	Cloudy.
„ „	2 p.m.	27·70	21	—	—	—	WNW.	Overcast.
„ „	9 p.m.	27·70	4·5	—	—	light	NNW.	Clear at 10¼ p.m.
„ 9	9 a.m.	27·77	−2·5	24	−9	—	NW.	Clear.
„ „	2 p.m.	27·75	−3·2	—	—	—	NNW.	„
„ „	9 p.m.	27·60	−13·2	—	—	—	NW.	„
„ 10	9 a.m.	27·60	−7·5	0·5	−15·2	light	NNW.	Slightly overcast.
„ „	2 p.m.	27·57	−1·0	—	—	fresh	NE.	Overcast.
„ „	9 p.m.	27·70	−5·0	—	—	light	NNE.	Partially clear.
„ 11	9 a.m.	27·71	−10·0	0·5	−11·0	calm	NE.	Overcast.
„ „	2 p.m.	27·65	−10·5	—	—	„	„	„ Snow.
„ „	9 p.m.	27·58	−8·5	—	—	„	„	„
„ 12	9 a.m.	27·47	−16·0	−7·5	24	very calm	NNE.	Slightly overcast.
„ „	2 p.m.	27·41	−10	—	—	calm	„	Partially clear.
„ „	9 p.m.	27·38	−10·5	—	—	„	„	Clear.
„ 13	9 a.m.	27·24	−10·5	−7·7	−21	„	NE.	„
„ „	2 p.m.	27·20	1·0	—	—	light	„	Light clouds to S.
„ „	9 p.m.	27·20	−10·0	—	—	very light	NNE.	Clear.
„ 14	9 a.m.	27·29	−10·0	−7·2	−21	calm	NE.	Partially clear.
„ „	2 p.m.	27·30	−6·0	—	—	light	SE.	„
„ „	9 p.m.	27·32	−12	—	—	„	SSE.	„
„ 15	9 a.m.	27·38	−6·0	−5·0	−14·5	very light	SE.	„
„ „	2 p.m.	27·44	−4·0	—	—	light	„	Cirri ·2 to SE.
„ „	9 p.m.	27·35	−5·2	—	—	fresh	SSE.	Cloudy. Cir-cum ·8.
„ 16	9 a.m.	27·20	−1·0	0·5	−8·0	„	SE.	Cirri ·3.
„ „	2 p.m.	27·16	4·5	—	—	light	„	„
„ „	9 p.m.	27·25	3·0	—	—	„	SE b S.	Partially clear.
„ 17	9 a.m.	27·18	14·0	16·5	−0·5	fresh	ENE.	Slightly overcast.
„ „	2 p.m.	27·00	27·2	—	—	—	—	Overcast.
„ „	9 p.m.	26·88	19·0	—	—	—	—	Partially clear.
„ 18	9 a.m.	27·44	−10·5	29·0	−11·0	light	NE.	Clear.
„ „	2 p.m.	27·37	−5·0	—	—	—	—	Partially clear.
„ „	9 p.m.	27·27	−10·5	—	—	—	—	„
„ 19	9 a.m.	26·88	−4·0	−1·0	−14·0	fresh	NW.	Overcast.
„ „	2 p.m.	27·02	5·2	—	—	„	„	Slightly overcast.
„ „	9 p.m.	27·20	−4·5	—	—	—	—	Partially clear.
„ 20	9 a.m.	27·45	−9·0	7·5	−10·0	light	NE.	Clear. Cirri ·2.
„ „	2 p.m.	27·51	−5·0	—	—	—	—	Partially clear.
„ „	9 p.m.	27·45	−6·5	—	—	—	—	Slightly overcast.
„ 21	9 a.m.	27·08	−3·0	−2·0	−8·0	calm	ENE.	„
„ „	2 p.m.	27·07	−5·0	—	—	—	—	Snow.
„ „	9 p.m.	27·21	−6·5	—	—	—	—	Overcast.
„ 22	9 a.m.	27·35	−10·0	−1·0	−13	calm	NE.	Partially clear.
„ „	2 p.m.	27·30	20	—	—	—	NNE.	Overcast.

Date.	Hour.	Aneroid.	Thermometer.			Wind.		Remarks.
			Air.	Max.	Min.	Force.	Direcn.	
			°	°	°			
Dec. 22	9 p.m.	27·24	25	—	—	—	SSE.	Overcast.
„ 23	9 a.m.	26·97	29·7	30·2	−5·5	fresh	SE.	„
„ „	2 p.m.	97·00	24·3	—	—	—	E.	„
„ „	9 p.m.	27·21	−5·0	—	—	—	„	„
„ 24	9 a.m.	27·39	−18·0	31·5	−19·5	fresh	N b W.	Clear.
„ „	2 p.m.	27·38	−9·0	—	—	—	N.	Slightly overcast.
„ „	9 p.m.	27·28	−13·2	—	—	—	NNW.	Overcast.
„ 25	9 a.m.	27·06	−18·0	−7·5	−20	calm	N.	Clear. Cirri ·2.
„ „	2 p.m.	27·12	−6·3	—	—	—	NNE.	„
„ „	9 p.m.	27·23	−12	—	—	—	NE.	Slightly overcast.
„ 26	9 a.m.	27·40	−20	−3·7	−21·7	calm	„	Clear. Cirri ·3.
„ „	2 p.m.	27·43	−11·4	—	—	„	„	Partially clear.
„ „	9 p.m.	27·58	−20	—	—	„	„	Clear.
„ 27	9 a.m.	27·51	−27·5	—	—	„	„	„
„ „	2 p.m.	27·53	−9	—	—	„	„	„
„ „	9 p.m.	27·54	−15	—	—	„	„	„
„ 28	9 a.m.	27·39	−15·2	−7·7	−25	„	„	„
„ „	2 p.m.	27·42	−3	—	—	„	NNE.	„
„ „	9 p.m.	27·40	−15	—	—	„	„	„
„ 29	9 a.m.	27·11	−20	−1·5	−20·5	—	NE.	A large difference. Slightly overcast.
„ „	2 p.m.	27·12	1·0	—	—	—	—	Overcast.
„ „	9 p.m.	27·20	1·5	—	—	—	—	„
„ 30	9 a.m.	27·24	1·7	6·5	−18·0	—	NE.	„
„ „	2 p.m.	27·22	11·0	—	—	—	—	Partially overcast.
„ „	9 p.m.	27·25	8·0	—	—	—	—	Partially clear.
„ 31	9 a.m.	27·42	−1·0	11·8	−30	light	NE.	„
„ „	2 p.m.	27·48	2·0	—	—	—	—	—
„ „	9 p.m.	27·55	−10	—	—	—	NE.	Clear.
Jan. 1	9 a.m.	27·17	−6	6	11	light	„	Overcast.
„ „	2 p.m.	27·19	8	—	—	—	—	—
„ „	9 p.m.	27·25	−5	—	—	—	—	—
„ 2	9 a.m.	27·48	−1	10·5	8	„	„	Cloudy.
„ „	2 p.m.	27·62	6·5	—	—	—	—	—
„ „	9 p.m.	27·71	2·5	—	—	—	—	—
„ 3	9 a.m.	27·27	18·5	20	−7·5	—	NNE.	Clear. Cirri ·2.
„ „	2 p.m.	27·18	17	—	—	—	—	Cir-cum ·6.
„ „	9 p.m.	27·26	11	—	—	calm	NE.	Slightly overcast.
„ 4	9 a.m.	27·51	4·5	20·2	1·7	„	„	Partially clear.
„ „	2 p.m.	27·59	11	—	—	—	—	Slightly overcast.
„ „	9 p.m.	27·79	0	—	—	—	—	Partially clear.
„ 5	9 a.m.	27·94	−9	12	−9·5	—	NW.	„
„ „	2 p.m.	28·01	−10	—	—	light	„	Clear.
„ „	9 p.m.	28·10	−26	—	—	calm	N	„
„ 6	9 a.m.	27·88	−26	−9·7	−35·7	„	SE.	„
„ „	2 p.m.	27·70	1	—	—	light	„	Slightly overcast.
„ „	9 p.m.	27·59	4 6	—	—	very light	SSE.	Partially clear.
„ 7	9 a.m.	27·68	31	35·5	−26·2	light	SSW.	„
„ „	2 p.m.	27·64	35·5	—	—	„	„	Slightly overcast.
„ „	9 p.m.	27·69	25	—	—	fresh	S.	Partially clear.
„ 8	9 a.m.	27·68	32·5	36·5	16·5	„	SSE.	Cirri ·4.
„ „	2 p.m.	27·65	42	—	—	—	—	Clear. Cirri ·2.
„ „	9 p.m.	27·62	34	—	—	—	—	Clear. Cir-cum to W.
„ 9	9 a.m.	27·47	24	43·5	17·2	light	„	Clear.
„ „	2 p.m.	27·48	32	—	—	—	—	Slightly clouded.
„ „	9 p.m.	27·48	21·2	—	—	—	—	Partially clear.
„ 10	9 a.m.	27·44	16·5	41·5	12·7	„	SSW.	Clear. Sun dogs.
„ „	2 p.m.	27·27	32·7	—	—	—	—	„
„ „	9 p.m.	27·21	28	—	—	—	—	„
„ 11	9 a.m.	27·28	29	34·5	26·7	„	SW.	„
„ „	2 p.m.	27·30	37	—	—	—	—	—
„ „	9 p.m.	27·34	28	—	—	„	NW.	Clear. Sun dogs.
„ 12	9 a.m.	27·36	21	38	18	—	—	„
„ „	2 p.m.	27·39	34·5	—	—	—	—	„
„ „	9 p.m.	27·40	18	—	—	—	—	„
„ 13	9 a.m.	27·54	15	35·7	9	fresh	NE b E.	„ Cir-cum ·2.
„ „	2 p.m.	27·61	28	—	—	—	—	„ „
„ „	9 p.m.	27·62	14·7	—	—	—	—	Clear.
„ 14	9 a.m.	27·66	16	23	5	„	NE.	Partially clear.
„ „	2 p.m.	27·55	25	—	—	light.	„	Overcast.
„ „	9 p.m.	27·07	25·2	—	—	fresh	„	„ Snow.
„ 15	9 a.m.	27·33	17	22	14·2	very fresh	NNW.	Snow.
„ „	2 p.m.	27·54	14	—	—	—	„	Partially clear. Indications of snow.
„ „	9 p.m.	27·70	−1	—	—	very light.	N.	Clear. Sun dogs visible.
„ 16	9 a.m.	27·65	−7	19	9	light.	NE b E.	Partially clear.
„ „	2 p.m.	27·65	16·2	—	—	—	NE.	Overcast.

Date.	Hour.	Aneroid.	Thermometer.			Wind.		Remarks.
			Air.	Max.	Min.	Force.	Direcⁿ.	
			°	°	°			
Jan. 16	9 p.m.	27·50	14	—	—	—	„	Partially clear.
„ 17	9 a.m.	27·38	17·0	20·0	−5·7	light	NE.	Clear. Cir-cum. ·2.
„ „	2 p.m.	27·34	28·0	—	—	„	„	Partially clear.
„ „	9 p.m.	27·26	18·3	—	—	„	„	„
„ 18	9 a.m.	29·02	19·5	30	14·5	„	„	„
„ „	2 p.m.	26·97	39·0	—	—	—	—	Light clouds pervading.
„ „	9 p.m.	27·04	35·7	—	—	light	NE.	Slightly overcast.
„ 19	9 a.m.	27·48	7·5	40·5	4·0	fresh	NNW.	Clear. Cirri ·3.
„ „	2 p.m.	27·74	1·0	—	—	„	„	Slightly overcast.
„ „	9 p.m.	27·90	−2·5	—	—	„	„	„ Snow.
„ 20	9 a.m.	27·91	−8·0	7·8	−10	very fresh	N	Overcast. Snow.
„ „	2 p.m.	27·81	−5·5	—	—	light	„	Snow.
„ „	9 p.m.	27·90	−10·0	—	—	—	—	Overcast.
„ 21	9 a.m.	28·04	−11·0	−4·5	−11·3	calm	NE.	Slightly overcast.
„ „	2 p.m.	28·00	−2·0	—	—	„	„	„
„ „	9 p.m.	27·85	5·0	—	—	light	NNW.	Overcast.
„ 22	9 a.m.	27·65	14·0	17·0	−9·8	„	„	Partially clear.
„ „	2 p.m.	27·55	40·5	—	—	—	—	„
„ „	9 p.m.	27·34	29·0	—	—	—	—	„
„ 23	9 a.m.	27·41	33·0	45·0	15·0	very light	WNW.	„
„ „	2 p.m.	27·60	34·0	—	—	„	„	Clear. Cirri ·2.
„ „	9 p.m.	27·68	26·7	—	—	—	—	„
„ 24	9 a.m.	27·68	30·0	35·7	21·0	very light	W b N.	Snow.
„ „	2 p.m.	27·78	34·0	—	—	—	—	Overcast.
„ „	9 p.m.	27·90	21·5	—	—	—	—	Partially clear.
„ 25	9 a.m.	27·50	24·0	34·0	9·0	fresh	SE.	Slightly overcast.
„ „	2 p.m.	27·34	35·0	—	—	„	„	„
„ „	9 p.m.	27·47	30·0	—	—	„	„	„
„ 26	9 a.m.	27·59	20·0	38·0	19·0	„	NNE.	Overcast. Snow.
„ „	2 p.m.	27·60	16·0	—	—	—	—	Partially clear.
„ „	9 p.m.	27·65	21·3	—	—	—	—	„
„ 27	9 a.m.	27·77	6·8	23·0	4·5	light	NNW.	„
„ „	2 p.m.	27·77	19·0	—	—	—	—	„
„ „	9 p.m.	27·78	4·5	—	—	—	—	Slightly overcast.
„ 28	9 a.m.	27·79	−8·5	11·5	−10·0	„	„	„
„ „	2 p.m.	27·80	−5·5	—	—	„	NE	„
„ „	9 p.m.	27·79	−17·5	—	—	„	—	Partially clear.
„ 29	9 a.m.	27·78	−25	−4	−26	calm	„	Clear. Cirri ·1.
„ „	2 p.m.	27·85	−9·2	—	—	—	—	„
„ „	9 p.m.	27·87	−15·9	—	—	—	—	„
„ 30	9 a.m.	27·77	−15·0	−14·0	−24	calm	ENE.	Slightly overcast.
„ „	2 p.m.	27·70	−5·0	—	—	„	„	„
„ „	9 p.m.	27·67	−12·5	—	—	„	ESE.	Clear. Cirri ·2.
„ 31	9 a.m.	27·47	−10·0	−5·0	−12·0	fresh	NE.	Slightly overcast.
„ „	2 p.m.	27·49	−4·2	—	—	—	—	„
„ „	9 p.m.	27·54	−8·0	—	—	—	—	„ Snow.
Feb. 1	9 a.m.	27·76	−6·0	−5·8	−10·8	light	NNE.	„
„ „	2 p.m.	27·85	−5·5	—		—	„	Partially clear.
„ „	9 p.m.	28·00	−18·0	—	—	—	„	Clear.
„ 2	9 a.m.	27·75	−29·5	−5·2	−30	calm	SE.	„
„ „	2 p.m.	27·75	−1·0	—	—	—	„	„
„ „	9 p.m.	27·69	−9·0	—	—	—	„	„
„ 3	9 a.m.	27·54	−4·0	8·0	−30·0	„	NNE.	Slightly clouded.
„ „	2 p.m.	27·41	25·0	—	—	—	—	„
„ „	9 p.m.	27·44	27·5	—	—	—	—	Snow.
„ 4	9 a.m.	27·51	24·0	23·4	−27	„	NE.	Slightly overcast.
„ „	2 p.m.	27·58	33·5	—	—	fresh	NW.	„
„ „	9 p.m.	27·58	31·0	—	—	light	NE.	Overcast.
„ 5	9 a.m.	27·35	39·5	—	—	„	—	Clear.
„ „	2 p.m.	27·30	40·0	—	—	very light	—	„
„ „	9 p.m.	27·20	32	—	—	light	—	Partially overcast.
„ 6	9 a.m.	27·00	14·5	40·0	11·0	fresh	NE.	Slightly cloudy.
„ „	2 p.m.	27·08	28·0	—	—	—	—	„
„ „	9 p.m.	27·37	18·0	—	—	—	—	Snow.
„ 7	9 a.m.	27·67	1·0	28·5	0·5	light	NW.	Slightly cloudy.
„ „	2 p.m.	27·74	0·5	—	—	„	„	„
„ „	9 p.m.	27·83	−10·5	—	—	calm	N.	Clear.
„ 8	9 a.m.	27·97	−21·0	4·0	−21·2	„	NNE.	„
„ „	2 p.m.	27·97	−12·0	—	—	„	„	„
„ „	9 p.m.	27·96	−22	—	—	„	„	„
„ 9	9 a.m.	27·84	−34	−11·5	−33·0	„	„	„
„ „	2 p.m.	27·84	−10·0	—	—	„	„	„
„ „	9 p.m.	27·88	−21·0	—	—	„	„	„
„ 10	9 a.m.	27·71	−37·0	−10·6	−38·0	„	ENE.	„ Mercury frozen in bulb.
„ „	2 p.m.	27·72	−9·5	—	—	light	SE.	„

Date.	Hour.	Aneroid.	Thermometer.			Wind.		Remarks.
			Air.	Max.	Min.	Force.	Direcⁿ.	
			°	°	°			
Feb. 10	9 p.m.	27·64	−17·5	—	—	light	SE.	Clear.
„ 11	9 a.m.	27·50	−21·0	− 8·5	−34·0	„	S.	„
„ „	2 p.m.	27·55	−1·0	—	—	„	„	„
„ „	9 p.m.	27·56	−12·0	—	—	„	„	„
„ 12	9 a.m.	27·40	−16·5	—	—	„	NE.	„
„ „	2 p.m.	27·44	24·0	—	—	—	—	„
„ „	9 p.m.	27·49	12·0	—	—	—	—	„
„ 13	9 a.m.	27·38	−4·5	26·0	−14·0	„	„	„
„ „	2 p.m.	27·30	26·0	—	—	—	ENE.	„
„ „	9 p.m.	27·27	19·0	—	—	„	„	Slightly overcast.
„ 14	9 a.m.	27·19	6·0	29·0	6·0	—	NE.	„
„ „	2 p.m.	27·15	29·0	—	—	calm	„	Snow.
„ „	9 p.m.	27·17	13·7	—	—	„	„	Clear.
„ 15	9 a.m.	27·16	−0·5	29·5	−0·4	„	„	Slightly overcast.
„ „	2 p.m.	27·11	23·0	—	—	„	„	„
„ „	9 p.m.	27·09	14·5	—	—	„	„	Overcast.
„ 16	9 a.m.	27·04	9·5	29·5	0·5	light	„	Partially clear.
„ „	2 p.m.	27·05	12·5	—	—	„	„	„
„ „	9 p.m.	27·04	−2·0	—	—	„	„	Clear. Cirri ·1.
„ 17	9 a.m.	27·09	1·5	16·0	−10·0	„	„	Slightly overcast.
„ „	2 p.m.	27·19	13	—	—	„	„	„
„ „	9 p.m.	27·38	8·0	—	—	„	„	Slightly clouded.
„ 18	9 a.m.	27·40	7·0	12·0	0·5	„	„	„
„ „	2 p.m.	27·38	14·0	—	—	„	SE.	Clear, with cirri ·1 to N.
„ „	9 p.m.	27·39	0	—	—	„	„	Clear.
„ 19	9 a.m.	27·44	−9·0	15·0	−10·0	„	„	Partially clear.
„ „	2 p.m.	27·54	13·6	—	—	„	„	Clear. Cir-cum ·1.
„ „	9 p.m.	27·50	2·0	—	—	calm	„	Partially clear.
„ 20	9 a.m.	27·16	4·0	18·0	−10·0	fresh	SE.	Clear.
„ „	2 p.m.	27·13	42·0	—	—	very fresh	SW.	Partially clear.
„ „	9 p.m.	27·13	28·5	—	—	calm	„	Clear.
„ 21	9 a.m.	27·28	11·0	43·5	5·0	light	NE.	Partially clear.
„ „	2 p.m.	27·14	14·0	—	—	„	„	„
„ „	9 p.m.	27·40	1·8	—	—	„	„	„
„ 22	9 a.m.	27·54	−1·0	14·0	−1·7	fresh	ENE.	Slightly overcast.
„ „	2 p.m.	27·58	10·0	—	—	„	„	Overcast.
„ „	9 p.m.	27·62	0	—	—	light	NE.	Partially overcast.
„ 23	9 a.m.	27·50	1·0	10·0	−3·3	very light	SE.	Partially clear.
„ „	2 p.m.	27·40	9·0	—	—	—	—	„
„ „	9 p.m.	27·35	5·0	—	—	—	—	Overcast.
„ 24	9 a.m.	27·35	4·0	10·0	1·0	light	N.	Slightly overcast.
„ „	2 p.m.	27·38	7·0	—	—	„	„	„
„ „	9 p.m.	27·37	4·0	—	—	fresh	„	Snow
„ 25	9 a.m.	27·30	−8·8	10·0	−9·5	light	NE.	Clear.
„ „	2 p.m.	27·27	15·0	—	—	„	ENE.	„
„ „	9 p.m.	27·32	6·0	—	—	very light	NE.	„
„ 26	9 a.m.	27·52	−16·0	−17·5	−16·0	calm	„	„
„ „	2 p.m.	27·51	17·0	—	—	„	„	„
„ „	9 p.m.	27·48	8·5	—	—	fresh	„	„
„ 27	9 a.m.	27·40	1·5	23·0	−10·0	light	„	Partially clear.
„ „	2 p.m.	27·44	22·0	—	—	„	„	Clear.
„ „	9 p.m.	27·44	4·0	—	—	calm	ENE.	„
„ 28	9 a.m.	27·36	−9·0	24·0	−15·0	„	NE.	„
„ „	2 p.m.	27·38	23·0	—	—	fresh	„	„
„ „	9 p.m.	27·31	9·0	—	—	calm	„	Partially clouded.
March 1	9 a.m.	27·32	2·1	25	−5·1	light	W.	Clear. Bright.
„ „	2 p.m.	27·29	27·4	—	—	„	NE.	Clear. Cirri ·1.
„ „	9 p.m.	28·0	18·0	—	—	—	—	Partially clear.
„ 2	9 a.m.	27·22	20·0	20·0	2	calm	ENE.	Sky very bright to W.
„ „	2 p.m.	27·14	42·0	—	—	„	E.	Clear with no clouds.
„ „	9 p.m.	27·34	35·0	—	—	—	—	Cloudy.
„ 3	9 a.m.	27·40	25·5	44	24	fresh	E b S.	Fine. Bright.
„ „	2 p.m.	27·38	38·0	—	—	light	ESE.	„ „
„ „	9 p.m.	27·10	28·5	—	—	very light	SE.	Overcast.
„ 4	9 a.m.	26·88	35·0	44·5	21·0	—	NE b E.	Fine. Bright.
„ „	2 p.m.	27.00	—	—	—	—	—	—
„ „	9 p.m.	27·24	—	—	—	—	—	—
„ 5	9 a.m.	27·37	14·0	42·0	8·0	light	NE.	Clear.
„ „	2 p.m.	27·37	35·0	—	—	„	SSE.	Very fine. Clear.
„ „	9 p.m.	27·31	27·5	—	—	„	SE.	Clear.
„ 6	9 a.m.	27·06	26·5	36·0	9·0	„	„	Overcast.
„ „	2 p.m.	27·05	44·5	—	—	fresh	SW.	Clear. Cirri ·2.
„ „	9 p.m.	27·25	26·0	—	—	„	„	Partially clear.
„ 7	9 a.m.	27·39	19·0	42·7	15·0	light	NE.	Slightly overcast.
„ „	2 p.m.	27·38	34·0	—	—	very light	ENE.	„

Date.	Hour.	Aneroid.	Thermometer.			Wind.		Remarks.
			Air.	Max.	Min.	Force.	Direcⁿ.	
			°	°	°			
March 7	9 p.m.	27·35	27·0	—	—	fresh	ENE.	Slightly overcast.
„ 8	9 a.m.	27·37	24·5	38·5	17·0	„	NE.	Partially clear.
„ „	2 p.m.	27·38	28·0	—	—	„	„	„
„ „	9 p.m.	27·37	18·2	—	—	light	N.	Clear.
„ 9	9 a.m.	27·38	2·0	29·5	−6·0	calm	NE.	Slightly overcast.
„ „	2 p.m.	27·39	26·0	—	—	„	„	Partially clear.
„ „	9 p.m.	27·47	14·5	—	—	„	„	„
„ 10	9 a.m.	27·55	10·0	25·5	−5·5	light	E b N.	Clear.
„ „	2 p.m.	27·44	34·0	—	—	„	„	„
„ „	9 p.m.	27·30	21·7	—	—	„	„	„
„ 11	9 a.m.	27·31	13·5	34·7	6·0	„	NE.	„
„ „	2 p.m.	27·35	34·5	—	—	very light	„	„
„ „	9 p.m.	27·49	23·0	—	—	„	„	„
„ 12	9 a.m.	27·60	24·0	36·0	9·5	fresh	ENE.	Partially clear.
„ „	2 p.m.	27·62	39·0	—	—	„	E.	Clear.
„ „	9 p.m.	27·60	27·4	—	—	„	E b N.	„
„ 13	9 a.m.	27·44	32·0	39·5	20	light	NW.	„
„ „	2 p.m.	27·50	39·0	—	—	„	NNW.	Cir-cum ·3.
„ „	9 p.m.	27·58	28·5	—	—	„	„	Cir-cum ·2.
„ 14	9 a.m.	27·48	19·5	41·0	12·0	very fresh	NE.	Clear.
„ „	2 p.m.	27·30	38·7	—	—	—	—	Partially clear.
„ „	9 p.m.	27·07	30·0	—	—	—	—	„
„ 15	9 a.m.	27·00	30·6	38·0	16·5	light	E.	Raw. Dull. Partially clear.
„ „	2 p.m.	27·20	35·0	—	—	„	E b N.	Partially clear.
„ „	9 p.m.	27·32	25·0	—	—	fresh	W.	„
„ 16	9 a.m.	27·51	23·7	37·0	16·0	„	NW.	„
„ „	2 p.m.	27·56	32·5	—	—	light	„	„
„ „	9 p.m.	27·65	21·0	—	—	very light	NE.	Clear.
„ 17	9 a.m.	27·58	21·0	32	7·0	„	„	„
„ „	2 p.m.	27·54	37·0	—	—	„	„	Partially clear.
„ „	9 p.m.	27·48	26·2	—	—	light	„	„
„ 18	9 a.m.	27·28	27·5	36·0	18·5	„	ENE.	Slightly overcast.
„ „	2 p.m.	27·28	38·0	—	—	„	NE.	Partially clear.
„ „	9 p.m.	27·18	25·5	—	—	very light	ENE.	„ Cirri ·2.
„ 19	9 a.m.	27·18	24·0	40·0	18·0	light	NE.	Snow.
„ „	2 p.m.	27·30	30·0	—	—	—	N.	„
„ „	9 p.m.	28·36	20·5	—	—	—	„	Snow (fine).
„ 20	9 a.m.	27·34	20·0	29·7	17·0	fresh	NW.	Overcast.
„ „	2 p.m.	27·30	25·0	—	—	—	WNW.	„
„ „	9 p.m.	27·25	13·2	—	—	—	„	Partially clear.
„ 21	9 a.m.	27·18	− 2·5	22·0	−3·7	light	NE.	Clear.
„ „	2 p.m.	27·13	27·0	—	—	—	SE.	Partially clear. Cir-cum ·2.
„ „	9 p.m.	27·12	14·2	—	—	fresh	„	„
„ 22	9 a.m.	27·14	11·2	30·0	2	light	NE.	Overcast.
„ „	2 p.m.	27·16	26·0	—	—	—	„	Partially clear.
„ „	9 p.m.	27·25	12·2	—	—	—	„	Clear.
„ 23	9 a.m.	27·47	13·5	29·0	1·0	light	NE.	Slightly overcast.
„ „	2 p.m.	27·52	29·5	—	—	„	„	Partially clear.
„ „	9 p.m.	27·60	25·0	—	—	„	„	„
„ 24	9 a.m.	27·57	22·0	36·0	9·5	„	ENE.	Clear.
„ „	2 p.m.	27·42	35·2	—	—	fresh	SE.	Partially clear.
„ „	9 p.m.	27·29	29·0	—	—	light	S.	Slightly overcast.
„ 25	9 a.m.	27·27	28·5	38·0	19·0	„	NE.	„
„ „	2 p.m.	27·30	31·5	—	—	„	„	„
„ „	9 p.m.	27·35	29·0	—	—	„	„	Partially clear.
„ 26	9 a.m.	27·37	29·5	38·0	25·5	fresh	ENE.	Overcast.
„ „	2 p.m.	27·31	38·0	—	—	light	E.	Partially clear. Cirri ·2.
„ „	9 p.m.	27·34	33·0	—	—	„	—	„
„ 27	9 a.m.	27·32	29·0	42·4	19·0	fresh	NE.	„
„ „	2 p.m.	27·36	38·5	—	—	„	NE.	„
„ „	9 p.m.	27·42	28·0	—	—	„	—	Partially clear.
„ 28	9 a.m.	27·58	26·5	41·0	25·0	very fresh	W.	Slightly clouded.
„ „	2 p.m.	27·60	29·2	—	—	fresh	NW.	Partially overcast.
„ „	9 p.m.	27·65	20·0	—	—	light	„	Clear.
„ 29	9 a.m.	27·69	20·5	33·5	11·0	„	N.	„
„ „	2 p.m.	27·70	22·0	—	—	fresh	„	Partially clear.
„ „	9 p.m.	27·70	14·0	—	—	„	„	Clear. Fine Aurora.
„ 30	9 a.m.	27·68	10·0	25·5	10·0	very fresh	N b W.	Partially clear.
„ „	2 p.m.	27·64	17·0	—	—	„	„	Slightly overcast.
„ „	9 p.m.	27·70	13·5	—	—	calm	„	Clear.
„ 31	9 a.m.	27·81	9·5	20·0	8·0	very fresh	N.	Slightly overcast.
„ „	2 p.m.	27·81	19·0	—	—	„	„	„
„ „	9 p.m.	27·85	16·2	—	—	calm	„	„
April 1	9 a.m.	27·85	15·2	22·0	9·0	very fresh	„	Overcast.
„ „	2 p.m.	27·85	24·5	—	—	„	„	Slightly overcast.

Date.	Hour.	Aneroid.	Thermometer.			Wind.		Remarks.
			Air.	Max.	Min.	Force.	Direcn.	
			°	°	°			
April 1	9 p.m.	27·86	24·2	—	—	calm	N.	Slightly overcast.
„ 2	9 a.m.	27·76	28·0	30·5	15·0	light	NE.	Partially clear.
„ „	2 p.m.	27·70	39·0	—	—	„	„	„
„ „	9 p.m.	27·70	29·0	—	—	„	„	Clear.
„ 3	9 a.m.	27·70	29·5	41·0	16·5	„	NW.	„
„ „	2 p.m.	27·78	41·0	—	—	„	„	„
„ „	9 p.m.	27·88	31·5	—	—	„	„	Partially clear.
„ 4	9 a.m.	28·20	27·0	44·0	25·0	„	„	„
„ „	2 p.m.	28·19	31·5	—	—	very light	NNW.	Clear.
„ „	9 p.m.	28·08	26·0	—	—	—	„	„
„ 5	9 a.m.	27·69	34·0	36·7	20·5	—	„	Slightly overcast.
„ „	2 p.m.	28·71	38·0	—	—	—	—	Partially clear.
„ „	9 p.m.	27·72	29·5	—	—	—	—	Overcast. Snow.
„ 6	9 a.m.	27·73	21·0	41·5	19·8	light	ENE.	Three inches of snow fell.
„ „	2 p.m.	27·90	31·2	—	—	„	N.	Overcast.
„ „	9 p.m.	28·00	13·0	—	—	calm	„	Clear.
„ 7	9 a.m.	27·84	11·5	30·5	0	light	NE.	„
„ „	2 p.m.	27·77	25·5	—	—	„	„	„
„ „	9 p.m.	27·59	16·5	—	—	„	„	„
„ 8	9 a.m.	27·51	17·7	31·0	10·0	„	„	Partially clear.
„ „	2 p.m.	27·50	23·0	—	—	—	„	Clear.
„ „	9 p.m.	27·55	14·0	—	—	„	—	„
„ 9	9 a.m.	27·65	16·3	25·7	10·5	„	—	Slightly overcast.
„ „	2 p.m.	27·69	23·0	—	—	„	—	Clear.
„ „	9 p.m.	27·71	14·0	—	—	„	—	Slightly overcast.
„ 10	9 a.m.	27·60	14·5	26·2	6·0	fresh	N.	Overcast.
„ „	2 p.m.	27·56	18·0	—	—	„	SE.	Slightly overcast.
„ „	9 p.m.	27·61	11·5	—	—	„	„	Snow (fine).
„ 11	9 a.m.	27·62	12·0	22·0	7·0	light	—	Partially clear.
„ „	2 p.m.	27·59	18·0	—	—	„	NE.	Clear.
„ „	9 p.m.	27·54	11·0	—	—	„	„	„
„ 12	9 a.m.	27·60	11·6	22·0	7·0	„	N.	Overcast. Very fine. Snow.
„ „	2 p.m.	27·56	21·2	—	—	„	„	Slightly overcast.
„ „	9 p.m.	27·53	11·5	—	—	„	„	Snow.
„ 13	9 a.m.	27·66	13·5	24·5	8·0	„	E.	Slightly overcast.
„ „	2 p.m.	27·70	26·0	—	—	„	„	Very fine snow.
„ „	9 p.m.	27·69	15·2	—	—	„	„	„
„ 14	9 a.m.	27·49	21·5	30·0	12·5	„	NE.	Overcast.
„ „	2 p.m.	27·70	34·0	—	—	„	„	Partially clear.
„ „	9 p.m.	27·89	23·5	—	—	„	„	Slightly overcast.
„ 15	9 a.m.	27·90	24·0	38·8	19·0	„	E.	„
„ „	2 p.m.	27·96	41·0	—	—	—	—	Partially clear.
„ „	9 p.m.	27·85	31·5	—	—	—	—	„
„ 16	9 a.m.	27·60	39·0	42·0	24·5	Light	E.	Overcast.
„ „	2 p.m.	27·44	43·0	—	—	„	„	„
„ „	9 p.m.	27·42	34·0	—	—	„	„	Partially clear. Rain at 6 p.m.
„ 17	9 a.m.	27·54	41·0	47·2	27·0	„	NE.	„
„ „	2 p.m.	27·52	48·5	—	—	„	E.	„
„ „	9 p.m.	27·59	33·0	—	—	„	„	„
„ 18	9 a.m.	27·54	28·0	52·0	27·2	„	NE.	„
„ „	2 p.m.	27·46	35·0	—	—	„	„	„
„ „	9 p.m.	27·50	25·0	—	—	„	„	„
„ 19	9 a.m.	27·70	28·0	50·0	27·0	„	„	Overcast. Very fine snow.
„ „	2 p.m.	27·87	35·0	—	—	„	„	Slightly overcast.
„ „	9 p.m.	27·98	25·0	—	—	„	„	Clear at 11 30 p.m.
„ 20	9 a.m.	28·02	28·0	40	20	very light	NE.	Snow.
„ „	2 p.m.	28·00	37·0	—	—	„	ENE.	Partially clear.
„ „	9 p.m.	27·98	27·0	—	—	fresh	E b S.	Clear.
„ 21	9 a.m.	27·78	39·0	44·5	20	„	SSE.	„
„ „	2 p.m.	27·70	49·0	—	—	light	„	„
„ „	9 a.m.	27·62	39·0	—	—	„	„	„
„ 22	9 a.m.	27·66	35·0	54	25	„	NE.	„
„ „	2 p.m.	27·67	52·0	—	—	—	—	„
„ „	9 p.m.	27·70	39·0	—	—	light	NE.	„
„ 23	9 a.m.	27·64	47·5	56·5	30·0	„	S.	„
„ „	2 p.m.	27·54	54·0	—.	—.	„	„	„
„ „	9 p.m.	27·50	40·0	—	—	„	„	Clear. Starlight.
„ 24	9 a.m.	27·41	49·0	57·5	29·5	„	SSE.	„
„ „	2 p.m.	27·38	55·5	—	—	„	„	„
„ „	9 p.m.	27·36	44·0	—	—	„	„	Clear. Starlight.
„ 25	9 a.m.	27·35	49·0	57	29·5	very light	S b W.	„ Very fine
„ „	2 p.m.	27·33	65·0	—	—	light	SSW.	„
„ „	9 p.m.	27·30	50·0	—	—	„	„	„
„ 26	9 a.m.	27·40	52	67·0	32·0	„	S.	Slightly overcast.
„ „	2 p.m.	27·35	60	—	—	„	„	Partially clear.

Date.	Hour.	Aneroid.	Thermometer.			Wind.		Remarks.
			Air.	Max.	Min.	Force.	Direcn.	
			°	°	°			
April 26	9 p.m.	27·40	49·0	—	—	light	S.	Partially clear.
„ 27	9 a.m.	27·60	39·0	63·0	37·0	fresh	NW.	„
„ „	2 p.m.	27·59	48·0	—	—	light	W.	„
„ „	9 p.m.	27·59	39·0	—	—	„	„	Slightly overcast.
„ 28	9 a.m.	27·57	39·0	51·0	34	„	NE.	„
„ „	2 p.m.	27·48	47·5	—	—	„	E.	„
„ „	9 p.m.	27·48	42·0	—	—	„	NW.	Partially clear.
„ 29	9 a.m.	27·50	50·5	52	34·0	„	S.	„
„ „	2 p.m.	27·58	40·0	—	—	„	„	„
„ „	9 p.m.	27·49	40·0	—	—	„	„	Slightly overcast.
„ 30	9 a.m.	27·49	41·5	54	32	fresh	NW.	Overcast.
„ „	2 p.m.	27·40	54·0	—	—	—	E.	Partially clear.
„ „	9 p.m.	27·47	45·0	—	—	—	—	„
May 1	9 a.m.	27·58	45·5	58·5	34	light	NE.	„ Cirri ·2.
„ „	2 p.m.	27·57	56·6	—	—	„	„	„ Cirri ·3.
„ „	9 p.m.	27·59	47·0	—	—	„	„	„
„ 2	9 a.m.	27·49	43·0	60	38·0	„	„	Slightly overcast.
„ „	2 p.m.	27·54	45·5	—	—	„	NW.	„
„ „	9 p.m.	27·52	40·5	—	—	„	„	Rain.
„ 3	9 a.m.	27·53	42·0	50·0	37·0	„	N	Overcast.
„ „	2 p.m.	27·47	53·0	—	—	„	„	Partially clear.
„ „	9 p.m.	27·46	46·5	—	—	„	„	„
„ 4	9 a.m.	27·54	50·5	56·0	40·0	„	„	„
„ „	2 p.m.	27·57	59·5	—	—	„	„	„
„ „	9 p.m.	27·64	49·0	—	—	„	„	„ Cirri ·2.
„ 5	9 a.m.	27·80	53·6	63·6	34	fresh	NE.	Clear.
„ „	2 p.m.	27·78	60·0	—	—	„	S.	„
„ „	9 p.m.	27·75	57·0	—	—	„	„	„
„ 6	9 a.m.	27·74	58·0	62·0	34	light	SE.	„
„ „	2 p.m.	27·61	64·0	—	—	„	„	„
„ „	9 p.m.	27·60	60·0	—	—	„	„	„
„ 7	9 a.m.	27·46	57·0	66	40·0	fresh	„	„
„ 8	9 a.m.	27·18	50·0	58	46·0	„	„	Overcast.
„ 9	9 a.m.	27·31	40·5	67·0	38	light	N.	Rain.
„ 10	9 a.m.	27·11	37·0	45·0	31·0	„	„	„

III.—Meteorological Observations. Jaspar House, 1859.

Date.	Hour.	Barom.	Therm.	Min.	Wind.	Force.	Sky.
			°	°			
Feb. 2	9 a.m.	26·55	+13·0	−18·5	N.	light	Tops of mountains to W. covered.
„ „	7 p.m.	26·54	+29	—	S.	fresh	Cloudy and soft. High wind during night.
„ 3	9 a.m.	26·46	+31	+23·5	„	light	„ High gale from S.
„ „	2 p.m.	26·35	37	—	„	„	„ High wind.
„ „	9 p.m.	26·34	37	—	„	„	Passing clouds. Wind in gusts.
„ 4	9 a.m.	26·44	35	33·5	„	„	Cloudy. Soft wind. Mountains capped.
„ „	2 p.m.	—	42	—	„	„	Clear. Mountains to W. capped.
„ „	9 p.m.	26·44	34	—	„	„	Clear. Gale from S.
„ 5	9 a.m.	26·30	37	34	„	fresh	Fine passing clouds.
„ „	2 p.m.	26·18	35	—	SW.	„	Overcast. Dense black snow clouds to NE.
„ „	9 p.m.	26·08	30·5	—	„	gale	Clear.
„ 6	9 a.m.	25·90	26	23	„	light	Dull. Mountains capped.
„ „	2 p.m.	25·94	31	—	N.	„	Thick clouds filling the valleys.
„ „	9 p.m.	26·18	15	—	„	fresh	Snowing.
„ 7	9 a.m.	26·44	4	3·5	„	„	Mist. Snow.
„ „	2 p.m.	26·49	8	—	„	light	Clearing.
„ „	9 p.m.	26·60	−1	—	„	„	Clear. Starlight.
„ 8	9 a.m.	26·65	−10·5	−11	„	„	Clear. Very sharp.
„ „	2 p.m.	26·58	3·5	—	„	„	Clear. Mist on mountains.
„ „	9 p.m.	26·50	−10	—	„	„	Hazy to the W.
„ 9	9 a.m.	26·44	−15	−15·5	„	fresh	Raw. Foggy.
„ „	2 p.m.	26·36	−7	—	„	„	Cold. Raw.
„ „	9 p.m.	26·35	−14	—	„	„	Very hazy.
„ 10	9 a.m.	26·34	−20	−26	„	light	Very clear.
„ „	2 p.m.	—	8	—	„	„	Clear.
„ „	9 p.m.	—	−6	—	S.	very light	„
„ 11	9 a.m.	—	−6	—	„	fresh	„
„ „	2 p.m.	—	24	—	„	light	„
„ „	9 p.m.	—	15	—	„	„	„
„ 12	9 a.m.	—	6	—	„	very light	„

Date.	Hour.	Bar.	Therm.	Min.	Wind.	Force.	Sky.
			°	°			
Feb. 12	2 p.m.	—	6	—	S.	fresh	Clear.
„ „	9 p.m.	—	29	—	„	light	„
„ 13	9 a.m.	—	21	—	„	„	Cloudy. Overcast.
„ „	2 p,m.	—	15	—	„	fresh	„ „
„ „	9 p.m.	—	34	—	„	„	„ „
„ 14	9 a.m.	—	30	—	„	light	„ „
„ „	2 p.m.	—	26	—	„	fresh	„ „
„ „	9 p.m.	—	34	—	calm	—	„ „
„ 15	9 a.m.	—	2	—	S.	light	„ „
„ „	2 p.m.	—	25	—	„	„	„ „
„ „	9 p.m.	—	4	—	N.	„	„ „
„ 16	9 a.m.	—	6	—	calm	—	„ „
„ „	2 p.m.	—	3	—	N.	light	Clear.
„ „	9 p.m.	25·92	3	—	„	„	„
„ 17	9 a.m.	25·99	5	— 4	„	fresh	Dull. Fog.
„ „	2 p.m.	26·05	15	—	„	light	Thick snow. Fog.
„ „	9 p.m.	26·08	5	—	„	very light	Foggy.
„ 18	9 a.m.	26·08	— 5	—15	„	light	Overcast.

Meteorological Observations. Jasper House, Spring, 1859. Kept by Mr. Moberly.

Date.	Hour.	Bar.	Therm.	Min.	Wind.	Force.	Sky.
			°	°			
„ 19	9 a.m.	26·24	12·0	—7·0	S.	light	Mountains. Covered to W.
„ „	2 p.m.	26·22	33·0	—	„	fresh	„ Covered to W. and S.
„ „	9 p.m.	26·33	26·0	—	„	„	Clear.
„ 20	9 a.m.	26·30	29	5·0	„	„	Fog on mountains to SW.
„ „	2 p.m.	26·20	34	—	„	high	Snowing.
„ „	9 p.m.	26·20	19·5	—	„	fresh	„
„ 21	9 a.m.	26·00	19·0	8·5	„	light	Clear.
„ „	2 p.m.	26·10	31·5	—	„	„	Mist on mountains to S.
„ „	9 p.m.	26·20	19·5	—	„	„	Overcast.
„ 22	9 a.m.	26·24	1·5	—10	N.	„	Clear.
„ „	2 p.m.	26·21	28·5	—	S.	„	Cloud to N.
„ „	9 p.m.	26·22	10	—	„	fresh	Clear. Bright Aurora.
„ 23	9 a.m.	26·22	— 3	—10	N.	light	„
„ „	2 p.m.	26·21	12	—	„	„	„
„ „	9 p.m.	26·13	— 3	—	„	fresh	„ Bright Aurora.
„ 24	9 a.m.	26·24	— 2	— 9	„	light	„
„ „	2 p.m.	26·11	12·5	—	„	„	„
„ „	9 p.m.	26·12	— 3	—	„	„	„ Bright Aurora.
„ 25	9 a.m.	26·03	—12	—15	„	„	„
„ „	2 p.m.	25·96	27	—	S.	„	Cloudy.
„ „	9 p.m.	26·12	13	—	„	„	Overcast to S.
„ 26	9 a.m.	26·24	15·5	9	„	„	Clear. Mountains covered to SW.
„ „	2 p.m.	26·22	31	—	„	„	Cloud to the S.
„ „	9 p.m.	26·31	11·5	—	„	„	Overcast.
„ 27	9 a.m.	26·21	14·5	0·0	„	„	Clear. Sharp.
„ „	2 p.m.	26·12	32	—	„	„	„
„ „	9 p.m.	26·14	14·5	—	„	„	Cloudy to S. and W.
„ 28	9 a.m.	26·16	4·5	— 6	„	fresh	Clear.
„ „	2 p.m.	26·11	29	—	„	„	Mountains covered with mist to S.
„ „	9 p.m.	26·18	25	—	„	„	Overcast.
Mar. 1	9 a.m.	26·22	21·5	11	„	„	Cloudy.
„ „	2 p.m.	26·18	37	—	„	high	„ Clearing to S.
„ „	9 p.m.	26·18	15·5	—	„	high	„
„ 2	9 a.m.	26·12	31	29	„	fresh	Heavy snow falling.
„ „	2 p.m.	26·10	26	—	„	„	Clear.
„ „	9 p.m.	26·19	22	—	„	„	Snowing to W.
„ 3	9 a.m.	26·18	28	14	„	light	Cloudy to S. and W.
„ „	2 p.m.	26·12	33	—	„	„	Heavy clouds to SW. and E.
„ „	9 p.m.	25·92	28	—	„	high	Cloudy.
„ 4	9 a.m.	25·92	29	15	„	light	Light snow falling.
„ „	2 p.m.	26·14	31	—	„	fresh	Clear.
„ „	9 p.m.	26·14	26	—	„	„	„
„ 5	9 a.m.	26·24	22	9	„	light	Cloudy to S. and W.
„ „	2 p.m.	26·22	32	—	„	—	Cloudy.
„ „	9 p.m.	26·12	30	—	„	—	Snowing to W.
„ 6	9 a.m.	25·94	31	29	„	—	Mountains covered.
„ „	2 p.m.	26·20	25	—	W.	—	Heavy snow.
„ „	9 p.m.	26·14	14	—	S.	—	Clear.
„ 7	9 a.m.	26·16	12	2	calm	—	„
„ „	2 p.m.	26·12	30	—	S.	—	Cloudy to S.
„ „	9 p.m.	26·18	17	—	„	—	Clear.

Date.	Hour.	Bar.	Therm.	Min.	Wind.	Force.	Sky.
		°	°	°			
Mar. 8	9 a.m.	26·16	7	7	N.	—	Clear.
„ „	2 p.m.	26·08	29	—	S.	—	Cloudy.
„ „	9 p.m.	26·12	13	—	„	—	Clear.
„ 9	9 a.m.	26·18	7	7	N.	—	„
„ „	2 p.m.	26·19	31	—	S.	—	„
„ „	9 p.m.	26·32	20	—	„	—	„
„ 10	9 a.m.	26·29	22	9	„	—	Cloudy.
„ „	2 p.m.	26·08	29	—	„	—	„
„ „	9 p.m.	26·06	26	—	„	—	„
„ 11	9 a.m.	26·14	23	13	„	—	Clear.
„ „	2 p.m.	26·19	33	—	„	—	„
„ „	9 p.m.	26·22	21	—	„	—	„
„ 12	9 a.m.	26·42	19	9	„	—	„
„ „	2 p.m.	26·32	33	—	„	—	Cloudy.
„ „	9 p.m.	26·28	29	—	„	—	„
„ 13	9 a.m.	26·28	27	9	„	—	Overcast.
„ „	2 p.m.	26·31	32	—	„	—	Clear.
„ „	9 p.m.	26·29	21	—	„	—	Cloudy.
„ 14	9 a.m.	25·92	17	9	„	—	„
„ „	2 p.m.	25·91	36	—	„	—	„
„ „	9 p.m.	25·85	33	—	„	—	„
„ 15	9 a.m.	25·96	30	13	„	—	„
„ „	2 p.m.	26·17	32	—	„	—	„
„ „	9 p.m.	26·29	23	—	„	—	„
„ 16	9 a.m.	26·41	22	6	„	—	Clear.
„ „	2 p.m.	26·44	31	—	„	—	„
„ „	9 p.m.	26·46	26	—	„	—	„
„ 17	9 a m.	26·34	12	12	„	—	Overcast.
„ „	2 p.m.	26·29	39	—	„	—	„
„ „	9 p.m.	26·31	32	—	„	—	„
„ 18	9 a.m.	26·11	34	26	N.	—	Clear.
„ „	2 p.m.	26·28	43	—	S.	—	Cloudy.
„ „	9 p.m.	26·24	29	—	N.	—	Snowing.
„ 19	9 a.m.	26·22	21	20	S.	—	Cloudy.
„ „	2 p.m.	26·26	24	—	„	—	Snowing.
„ „	9 p.m.	26·26	16	—	„	—	„
„ 20	9 a.m.	26·21	19	13	„	—	„
„ „	2 p.m.	25·90	31	—	N.	—	„
„ „	9 p.m.	25·92	17	—	calm	—	Overcast.
„ 21	9 a.m.	25·98	15	9	S.	—	Snowing hard.
„ „	2 p.m.	25·96	35	—	„	—	Clear.
„ „	9 p.m.	25·86	9	—	calm	—	„
„ 22	9 a.m.	25·86	15	4	S.	—	Cloudy.
„ „	2 p.m.	25·89	43	—	„	—	Clear.
„ „	9 p.m.	25·90	25	—	calm	—	„
„ 23	9 a.m.	26·36	19	5	S.	—	„
„ „	2 p.m.	26·38	32	—	„	—	„
„ „	9 p.m.	26·44	23	—	N.	—	Overcast.
„ 24	9 a.m.	26·24	32	5	S.	—	Clear.
„ „	2 p.m.	26·11	33	—	„	—	„
„ „	9 p.m.	26·11	31	—	„	—	Snowing to S.
„ 25	9 a.m.	26·18	35	27	„	—	Clear.
„ „	2 p.m.	26·19	41	—	N.	—	Snowing to N.
„ „	9 p.m.	26·29	26	—	calm	—	Clear.
„ 26	9 a.m.	26·22	24	18	S.	—	„
„ „	2 p.m.	26·24	33	—	„	—	Light snow.
„ „	9 p.m.	26·26	25	—	N.	—	Heavy snow.
„ 27	9 a.m.	26·29	27	13	S.	—	Clear.
„ „	2 p.m.	26·29	29	—	N.	—	Snowing.
„ „	9 p.m.	26·36	23	—	„	—	Heavy snow, 6 inches.
„ 28	9 a.m.	26·46	21	14	S.	—	Clear.
„ „	2 p.m.	26·47	30	—	„	—	„
„ „	9 p.m.	26·54	23	—	„	—	Cloudy.
„ 29	9 a.m.	26·56	26	16	N.	—	Clear.
„ „	2 p.m.	26·52	25	—	„	—	Heavy snow.
„ „	9 p.m.	26·58	19	—	„	—	Cloudy.
„ 30	9 a.m.	26·59	13	5	„	—	Clear.
„ „	2 p.m.	26·59	22	—	„	—	Light snow.
„ „	9 p.m.	26·64	12	—	„	—	Clear.
„ 31	9 a.m.	26·74	12	4	S.	—	Cloudy.
„ „	2 p.m.	26·71	31	—	„	—	„
„ „	9 p.m.	26·76	15	—	calm	—	Clear.
April 1	9 a.m.	26·76	16	1	S.	—	Cloudy.
„ „	2 p.m.	26·71	42	—	„	—	Clear.
„ „	9 p.m.	26·72	22	—	„	—	„
„ 2	9 a.m.	26·69	22	5	„	—	„
„ „	2 p.m.	26·62	42	—	„	—	„
„ „	9 p.m.	26·64	27	—	„	—	„

Date.	Hour.	Bar.	Therm.	Min.	Wind.	Force.	Sky.
1858.		°	°	°			
April 3	9 a.m.	26·74	38	17	N.	—	Clear.
„ „	2 p.m.	26·79	38	—	„	—	Light snow.
„ „	9 p.m.	26·95	32	—	„	—	Snowing.
„ 4	9 a.m.	27·12	29	22	„	—	Clear.
„ „	2 p.m.	27·02	45	—	„	—	„
„ „	9 p.m.	26·56	27	—	„	—	Cloudy.
„ 5	9 a.m.	26·79	25	19	S.	—	„
„ „	2 p.m.	26·64	24	—	„	—	Clear.
„ „	9 p.m.	26·76	30	—	„	—	„
„ 6	9 a.m.	26·36	26	23	N.	—	Heavy snow.
„ „	2 p.m.	26·36	32	—	„	—	„
„ „	9 p.m.	26·32	19	—	„	—	Snowing.
„ 7	9 a.m.	26·59	19	5	S.	—	Clear.
„ „	2 p.m.	26·46	28	—	„	—	„
„ „	9 p.m.	26·34	25	—	N.	—	Snowing.
„ 8	9 a.m.	26·29	28	18	„	—	Cloudy.
„ „	2 p.m.	26·29	18	—	„	—	Snowing.
„ „	9 p.m.	26·39	21	—	„	—	„
„ 9	9 a.m.	26·38	13	12	„	—	Heavy snow.
„ „	2 p.m.	26·39	12	—	„	—	„
„ „	9 p.m.	26·41	13	—	„	—	„
„ 10	9 a.m.	26·36	5	3	„	—	„
„ „	2 p.m.	26·41	23	—	„	—	„
„ „	9 p.m.	26·41	9	—	„	—	„
„ 11	9 a.m.	26·46	13	12	„	—	„
„ „	2 p.m.	26·36	30	—	S.	—	Clearing.
„ „	9 p.m.	26·31	11	—	N.	—	Snowing.
„ 12	9 a.m.	26·56	12	5	„	—	Clearing.
„ „	2 p.m.	26·28	32	—	S.	—	Clear.
„ „	9 p.m.	26·34	28	—	„	—	„
„ 13	9 a.m.	26·38	19	13	calm.	—	„
„ „	2 p.m.	26·39	53	—	S.	—	Cloudy.
„ „	9 p.m.	26·56	25	—	„	—	Clear.
„ 14	9 a.m.	26·41	33	23	„	—	„
„ „	2 p.m.	26·56	53	—	„	—	„
„ „	9 p.m.	26·54	26	—	„	—	„

Regular Meteorological Observations while on the Route.

I.

Date.	Hour.	Locality.	Bar.	Therm.	Air.	Min.	Wind.	Remarks.
			°	°	°	°		
Dec. 14	4 p.m.	4 ms. E. of Redberry Lake	28·00	13	11	—	E.	Overcast.
„ 15	8 a.m.	„ „	27·70	27	26	9·4	„	Raw. Overcast.
„ „	3 p.m.	E. side of the Wide Plain	27·68	28	21·2	—	SW.	High. Cloudy.
„ „	6 p.m.	„ „	27·76	12	10·0	—	calm	Clear.
„ 16	5 a.m.	„ „	27·94	20	12·0	2·0	„	Fine. Clear.
„ „	7 p.m.	Indian Camp at White Lake	28·04	10	5	—	„	„ „ Aurora.
„ 17	7 a.m.	„ „	28·03	8	9	−1	—	Dull. Fog.
„ „	9 p.m.	H. B. Co.'s Post at Pike Lake, 40ft. above lake level - - -	28·18	24	26	—	NE.	High. Cloud. Cold.
„ 18	7 a.m.	„ „	28·26	20	10	10	„	Light. Dull. Snow during night.
„ „	3 p.m.	6 miles E. of Horse Knoll	28·10	20	20	—	calm	Dull. Threatens snow.
„ 19	3 a.m.	„ „	27·64	18	17	10	„	Clear. Fine.
„ „	4 p.m.	E. side of Red Deer Hill -	27·70	32	25	—	—	During night high.
„ 20	7 a.m.	„ „	28·06	15	—	—	—	Wind veering from NW. to SE.
„ „	4 p.m.	Fort Pitt - - -	28·48	28	20	—	calm	Fine. Clear.
„ 24	4 p.m.	Mouth of Vermilion River	28·23	—	−9	—	—	Clear. Very cold.
„ 25	6 a.m.	„ „	27·92	—	3·0	−9	—	Dull.
„ „	4 p.m.	Camp beyond the hills near Indian Pond -	27·50	20	15	—	N.	Overcast.
„ 26	4 a.m.		27·18	20	28	13	E.	Calm. Dull.
„ „	4 p.m.	1st Lake of the Chain -	27·38	20	20	—	NW.	Fine. Clear.
„ 27	6 a.m.	„ „	27·46	6	4	0	—	„ „
„ „	4 p.m.	W. side of the Black Hill	27·40	15	11	—	E.	Overcast. Threats of
„ 28	6 a.m.	„ „	27·37	0	−3	−4	—	Clear. Sharp. [snow.
„ „	4 p.m.	Le Jolli Bois - - -	27·40	15	20	—	calm	High wind from the
„ 29	4 a.m.	„ „	27·00	18	24	3	—	S. during night.
„ „	4 p.m.	"The Pines" - - -	27·28	40	30	—	NE.	High. Drifts snow.
„ 30	3 a.m.	„ „	27·28	20	21	15	—	Fine. Cloudy.
„ „	7 a.m.	Fort Edmonton - -	27·28	30	—	—	—	„ „

II.

Date.	Hour.	Locality.	Bar.	Ther.	Air.	Min.	Wind.	Remarks.
1858.								
Jan. 9	4 p.m.	17 miles S. of Fort Edmonton	26·72	39	31	—	—	Fine.
„ 10	7 a.m.	17 miles S. of Fort Edmonton	26·76	−3	−3	—	NW.	„
„ „	4 p.m.	The "Bad Beaver Dam"	26·38	33	31	—	SW.	Light. Change to NE. during day. Very cold.
„ 11	7 a.m.	„ „	26·60	—	−11	—	—	
„ „	noon	Woodpecker Creek	26·33	—	−15	—	NE.	Stormy.
„ „	4 p.m.	W. side of Battle River	26·46	—	−16	—	—	Calm.
„ 12	7 a.m.	„ „	26·48	—	−20	—	N.	Light. Clear.
„ „	4 p.m.	4 miles to the W. of Gull Lake	26·10	—	−15	—	SW.	Overcast.
„ 13	7 a.m.	4 miles to the W. of Gull Lake	26·12	—	−13	—	„	„
„ „	noon	Medicine River	26·18	—	−11	—	NW.	Cold.
„ „	4 p.m.	Cabrier's Hill	26·13	—	−11	—	NE.	Clear.
„ 14	3 a.m.	„	26·13	—	−16	—	N.	Fine. Clear.
„ „	4 p.m.	Rocky Mountain House	26·29	34	−16	—	W.	Clear.
„ 15	8 a.m.	„ „	25·90	40	0	—	NW.	Light. Fine.
„ „	4 p.m.	„ „	25·88	40	0	—	W.	„ Cloudy.
„ 16	8 a.m.	„ „	26·55	40	28	—	NW.	„ Fine.
„ „	8 a.m.	„ „	26·55	40	10	—	NW.	„ „
„ „	6 p.m.	„ „	26·49	50	18	—	W.	„ „
„ 17	8 a.m.	„ „	26·54	50	21	—	„	„ „
„ „	6 p.m.	„ „	26·50	50	26	—	SW.	Very light. Overcast.
„ 18	8 a.m.	„ „	26·40	50	36	—	„	High „
„ „	6 p.m.	„ „	26·34	60	33	—	„	Fresh. „
„ 19	8 a.m.	„ „	26·34	58	24	—	NW.	Very light. Fine.
„ „	6 p.m.	„ „	26·37	59	38	—	„	„ „
„ 20	8 a.m.	„ „	26·24	58	26	—	„	„ „
„ „	6 p.m.	„ „	26·37	45	38	—	S.	Fresh.
„ 21	8 a.m.	„ „	25·89	50	24	—	calm	Haze.
„ „	6 p.m.	„ „	25·92	50	29	—	„	Dull.
„ 22	8 a.m.	„ „	26·04	50	13	—	„	Snow.
„ 23	6 p.m.	„ „	26·34	52	−4	—	N.	Clear.
„ 24	8 a.m.	„ „	26·00	42	21	—	SW.	Dull.
„ „	6 p.m.	„ „	26·18	60	38	—	N.	Clear.
„ 25	8 a.m.	„ „	26·26	28	−3	—	calm	Very fine.
„ „	6 p.m.	„ „	26·28	47	5	—	W.	Overcast.
„ 26	8 a.m.	„ „	26·02	30	13	—	NE.	Threatens snow.
„ „	6 p.m.	Batiste's River	26·58	30	26	—	N.	Clear.
„ 27	6 a.m.	Saskatchewan River	26·82	25	20	—	„	„
„ „	noon.	„	27·10	30	19	—	calm	„
„ 28	6 a.m.	„	27·16	22	1	—	—	Cold. Clear.
„ 28	noon.	„	27·14	20	20	—	—	Gusty. Hazy.
„ „	6 p.m.	„	27·29	10	3	—	NE.	Overcast.
„ 29	6 a.m.	„	27·38	10	5	—	—	Fine. Cold.
„ „	noon.	„	27·26	18	28	—	—	„
„ „	6 p.m.	„	27·46	16	14	—	—	Dull.
„ 30	7 a.m.	Fort Edmonton	27·69	10	8	—	—	NE. Cloudy.

III.

Feb. 12	8 a.m.	Fort Edmonton	—	—	−23·5	—	N.	Clear. Cold.
„ „	4 p.m.	On the road to Lac Ste. Ann.	—	—	−22	—	N.	Light.
„ 13	6 a.m.	„	—	—	calm.	—	—	Mercury frozen.
„ „	noon.	„	—	—	−25	—	—	Fine. Clear.
„ „	6 p.m.	Lac Ste. Ann	—	—	−28	—	—	Hazy.
„ 14	8 a.m.	„	—	—	−20	—	—	„
„ „	noon.	„	—	—	− 8	—	W.	„ Dull.
„ „	4 p.m.	„	—	—	−17	—	N.	Clear.
„ 15	6 a.m.	„	—	—	—	—	—	Mercury frozen.
„ „	noon.	On road to Edmonton	—	—	− 6	—	NE.	Fine. Clear.
„ „	6 p.m.	Edmonton (Fort)	—	—	−12	—	N.	Dull.

IV.—Meteorological Observations, 1858. Fort Edmonton to Bow Fort.

Date.	Hour.	Locality.	Bar.	Air.	Min.	Wind.	Force.	Remarks.
Nov. 26	Sunset.	Camps along the Blackfoot track to the South.	27·44	11	—	calm.	—	Air filled with ice crystals.
„ 27	7½ p.m.	„ „	27·08	20·5	10·5	NE.	—	Threatens snow.
„ „	4 p.m.	„ „	26·88	34·5	—	SW.	light	Thaw all day.
„ 28	7 a.m.	„ „	26·79	35·5	28·5	„	fresh	Dull. Wet.
„ „	4 p.m.	„ „	26·99	27·5	—	NW.	light	Clear and sharp.
„ 29	7 a.m.	„ „	27·08	12	10	calm.	—	High gale during night from NW.

Date.	Hour.	Locality.	Bar.	Air.	Min.	Wind.	Force.	Remarks.
Nov. 29	4 p.m.	50 feet above Battle River	26·97	23·5	2·5	NW.	light	Clear. Sharp.
„ 30	7 a.m.	Lake in Wolf track.	27·00	3	2·5	N.	—	Heavy snow.
„ „	4 p.m.	„ „	27·06	− 2	—	„	—	Snowing a little.
Dec. 1	7 a.m.	„ „	27·14	−22	−23	calm.	—	Very clear and cold.
„ „	2 p.m.	Points along Red Deer	27·18	− 3	—	NW	—	Bright and clear.
„ „	3 p.m.	River when travelling	27·20	− 8	—	calm	—	Very clear.
„ „	4 p.m.	up it on the ice. Camps	27·22	−18	—	„	—	„
„ „	6 p.m.	generally 10 to 20 feet	27·23	−32	—	„	—	„
„ 2	7 a.m.	above the level of the	27·20	−22	−37	NW.	light	Cloudless.
„ „	noon.	river.—Mean lat. 52°	27·01	3·5	—	„	„	Cloud to N.
„ „	4 p.m.	2′ N.	26·89	9	—	„	„	Snowing.
„ „	9 p.m.	„ „	26·41	24	—	N.	—	Gusty. Snow.
„ 3	7 a.m.	„ „	26·38	31	9	NW.	—	Snow storms all day.
„ „	4 p.m.	„ „	26·56	21·5	—	„	—	Heavy snow.
„ 4	7 a.m.	„ „	26·83	5	4·5	„	light	Clear. Fine.
„ „	noon.	„ „	26·77	2·5	—	NE.	„	„
„ „	4 p.m.	„ „	26·70	− 5	—	N W.	„	Very clear.
„ 5	7 a.m.	„ „	26·70	4	−4	N.	„	Snow during night. Clear.
„ „	4 p.m.	„ „	26·54	− 6	—	„	fresh	Very cold.
„ 6	8 a.m.	„ „	26·54	−23	−22	NW.	light	Fine. Cloudless.
„ „	4 p.m.	„ „	26·34	−12	—	W.	„	Clear.
„ 7	7 a.m.	„ „	26·26	7	−23	WS.	„	Dull.
„ „	5 p.m.	On high ground south of	25·62	17	—	N.	„	Cloudy.
„ 8	8 a.m.	Red Deer River.	25·87	5	4	NW.	„	„
„ „	4 p.m.	Along the ice in Little	26·05	10	—	calm.	—	„ Snow storms.
„ 9	8 a.m.	Red Deer River in the	25·93	1	0·0	„	—	Snowing gently.
„ „	4 p.m.	outer range of moun-	25·68	− 0·5	—	W.	light	Clear. Mountains clouded.
„ 10	7 a.m.	„ „	25·58	4	−17	calm.	—	Dull. Red sky in E.
„ „	5 p.m.	Waipiuse Creek and Dead	25·18	18	—	NW.	light	„
„ 11	7 a.m.	Man's River, all near the	25·14	− 5	−5·5	NE.	„	„ Snow.
„ „	5 p.m.	Old Bow Fort.	25·05	− 3	—	N.	„	Snow in gusts.
„ 12	7 a.m.		25·01	−17	−27	W.	„	Clear. Cold.
„ „	5 p.m.	„ „	25·18	− 5	—	NW.	„	Cloudy.
„ 13	8 a.m.	„ „	25·16	−17	−28	„	„	Clear. Sharp.
„ „	6 p.m.	High grounds of outer	24·79	− 7	—	N.	„	„ Fine.
„ 14	6 a.m.	range.	24·76	2	− 7	NE.	„	Dull.
„ „	5 p.m.	Prairie along edge of	25·22	− 2	—	NW.	„	„ Overcast.
„ 15	8 a.m.	Woods.	25·26	11	−13	N.	„	Cold. Sharp.
„ „	5 p.m.	High Ground - -	25·74	− 1	—	NE.	„	Clear.
„ 16	8 a.m.	„	25·51	27·5	0·0	SW.	„	Dull.
„ „	9 p.m.	Little Red Deer River, on	26·11	10	—	N.	„	Very clear and cold.
„ 17	8 a.m.	the ice.	26·09	17	5	NW.	„	Dull.
„ „	9 p.m.	„ „	26·12	32	—	E.	light	„ Cloudy.
„ „	10 p.m.	„ „	26·11	27	—	NW.	fresh	Windchanged. Clearing.
„ 18	8 a.m.	„ „	26·49	5	5	W.	—	Clear. Cold.
„ „	7 p.m.	„ „	26·52	13	—	NW.	—	Cloudy.
„ 19	9 a.m.	Red Deer River - -	26·16	29	11	SE.	—	Dull.
„ „	9 p.m.	„ „	26·34	11	—	NE.	—	Cloudy.
„ 20	8 a.m.	„ „	26·58	− 6	−12	N.	—	Clear. Fine.
„ „	7 p.m.	Wolf's Road Prairie -	26·45	2	—	NE.	—	Hazy.
„ 21	5 a.m.	„ „	26·28	5	2·5	„	—	Clear. Sharp.
„ „	7 p.m.	„ „	26·52	− 5	—	N.	—	Snow.
„ 22	3 a.m.	„ „	26·70	− 8	−8	calm	—	Bright clear moonlight.
„ „	8 p.m.	Musquachis - - -	26·78	25	—	W.	fresh	Cloudy.
„ 23	a.m.	„ „	26·54	29	25	SW.	„	Dull. Snow.
„ „	5 p.m.	Black Foot Track - -	26·78	− 4	—	N.	„	Extremely cold.
„ 24	2 a.m.	„ „	27·00	− 9	−9	„	light	Very clear. Cold Aurora.

V.—Meteorological Observations, 1859. Fort Edmonton to Jaspar House.

Jan. 13	8 p.m.	Portage track to the Athabasca River from Fort Edmonton.	27·49	1	—	calm	—	Clear. Sharp.
„ 14	8 a.m.		27·48	−9·5	−11	„	—	Clear and fine.
„ „	6 p.m.		27·30	25	—	NE.	—	Dull. Overcast.
„ 15	8 a.m.		27·36	19	14	NW.	—	Snowing all night.
„ „	6 p.m.		27·64	0	—	N.	—	Snow at intervals.
„ 16	8 a.m.		27·66	− 9	−16	„	light	Fine. Clear.
„ „	6 p.m.	Taken in Athabasca River	27·41	0	—	„	—	„ „
„ 17	7 a.m.	while travelling on the	27·44	10	− 3	NE.	light	Clear.
„ „	7 p.m.	ice; never much above	27·41	21·5	—	„	„	Dull. Haze.
„ 18	8 a.m.	the water level.	27·12	14	12·5	N.	—	Snow during night.
„ „	4 p.m.	„ „	26·84	31	—	SW.	—	Great storm of wind.
„ „	6 p.m.	„ „	26·96	38	—	W.	—	Storm at its height.
„ „	7 p.m.	„ „	27·02	34	—	N.	—	Storm past almost.
„ 19	8 a.m.	„ „	27·47	3	1	W.	fresh	Clear and fine.
„ „	7 p.m.	„ „	27·72	− 7	—	NW.	„	Clear.

Date.	Hour.	Locality.	Bar.	Air.	Min.	Wind.	Force.	Remarks.
1859.				°	°			
Jan. 20	8 a.m.	Taken in Athabasca River	27·80	− 9	−11	NW.	—	Snow all night.
„ „	7 p.m.	while travelling on the	27·60	− 7	—	E.	light	Heavy snow.
„ 21	8 a.m.	ice ; never much above	27·76	1·5	−10·5	„	—	Still snowing (22 in.)
„ „	7 p.m.	the water level.	27·58	− 1·5	—	„	—	Clearing a little
„ 22	8 a.m.	„ „	27·48	− 1	− 5	NW.	—	Clear. Very cold.
„ „	7 p.m.	„ „	27·30	5	—	W.	—	Strong gale. Snow.
„ 23	8 a.m.	„ „	27·14	20	9	„	fresh	Clearing.
„ „	7 p.m.	„ „	27·24	27	—	„	light	Thaw during day.
„ 24	8 a.m.	„ „	27·34	31	12	NW.	—	Heavy snow.
„ „	7 p.m.	„ „	27·38	18	—	calm	—	Clear and fine.
„ 25	8 a.m.	„ „	26·92	26	3·5	W.	—	Dull.
„ „	7 p.m.	„ „	27·01	22	—	„	—	„ High.
„ 26	8 a.m.	„ „	27·10	29	12	„	—	Clear and mild.
„ „	7 p.m.	„ „	26·89	10	—	NW.	—	Snow.
„ 27	8 a.m.	„ „	27·10	9	− 4	„	—	„
„ „	7 p.m.	„ „	26·92	5	—	E.	—	„ Dull.
„ „	8 p.m.	„ „	27·00	− 2	—	NE.	—	Heavy snow.
„ 28	8 a.m.	„ „	26·98	−18	−18	N.	—	Fine. Clear.
„ „	7 p.m.	„ „	26·89	− 5	—	„	—	Clear.
„ 29	8 a.m.	„ „	26·89	−15	−28	„	—	Dull. Snow a little.
„ „	noon	„ „	26·85	−25	—	„	—	Clear. Sundogs.
„ „	7 p.m.	„ „	26·82	−15	—	E.	—	Snowing.
„ 30	8 a.m.	„ „	26·78	10	1	„	—	Dull. Snow.
„ „	7½p.m.	„ „	26·20	−11	—	NE.	—	Very cold.
„ 31	8 a.m.	„ „	26·20	−24	−25	N.	—	Clear. Cold.

VI.—Meteorological Observations in Rocky Mountains, above Jaspar House.

Feb. 10	8 p.m.	All taken up the Valley of	26·18	0·0	—	S.	light	Fine. Clear.
„ 11	7 a.m.	the Athabasca River.	26·17	5	− 9	NE.	—	Very cold.
„ „	9 p.m.	„ „	26·28	4	—	SW.	—	Clear.
„ 12	8 a.m.	„ „	26·30	−10	−15	S.	—	„
„ „	8 p.m.	„ „	26·08	− 3	—	SW.	—	„
„ 13	7 a.m.	„ „	26·10	−18	−23	„	—	„
„ „	noon	„ „	25·85	25	—	S.	fresh	Milder.
„ „	8 p.m.	„ „	25·74	24	—	SW.	—	Overcast.
„ 14	8 a.m.	„ „	25·56	19	14	„	—	„
„ „	9 p.m.	„ „	25·54	10	—	S.	—	High gale. Dull.
„ 15	8 a.m.	„ „	25·54	3	0·5	„	—	Clear. Sharp.
„ „	8 p.m.		25·70	15	—	N.	—	„ Fine.
„ 16	7 a.m.		25·76	0·0	− 2	„	—	Dull.

VII.—Observations made when travelling in Summer of 1858, from Fort Carlton to the Old Bow Fort.

Date.	Hour.	Bar.	Att. Therm.	Thermometer.		Wind.		Remarks.
				Dry.	Wet.	Direcn.	Force.	
1858.			°	°	°			
June 16	noon	—	—	67·0	54·8	SE.	fresh	Overcast.
„ „	7.30 p.m.	27·78	60	60·0	58·3	E b N.	„	Clearing.
„ 17	6.30 a.m.	27·90	50	50·5	46·1	N.	ight	Cloud in N. Overcast.
„ „	noon	28·02	55	56·0	48·2	N b E.	„	Overcast.
„ „	8 p.m.	28·14	58	53·5	47·0	„	fresh	„
„ 18	6.30 a.m.	28·14	50	50·0	47·8	NE.	light	„
„ „	noon	28·28	50	49·8	46·1	NNE.	„	Rain.
„ „	9 p.m.	28·36	51	47·5	45·0	„	„	„
„ 19	7 a.m.	28·36	45	47·5	45·0	NE.	„	Dull. Cloudy.
„ „	noon	27·95	60	62·0	55·0	ESE.	very light	Cloudy. Fine.
„ „	8 p.m.	27·58	50	50·0	46·5	E.	„	Overcast. Chilly.
„ 20	9 a.m.	27·30	45	49·0	47·0	SE.	„	Rain.
„ „	2 p.m.	27·20	47	59·0	58·0	E.	„	„
„ „	8 p.m.	27·10	40	60·1	56·0	NW.	fresh	Clearing.
„ 21	7 a.m.	27·24	50	51·0	49·8	SE.	„	Cloudy.
„ „	noon	27·18	70	70·5	58·2	S.	„	Very fine. Cloud.
„ „	9 p.m.	27·14	60	56·2	49·1	„	„	Calm.
„ 22	6 a.m.	27·10	50	54·6	47·2	SSW	„	Clear. Fine.
„ „	1 p.m.	27·25	70	69·0	52·0	SW.	„	Cloud ·2 in NE.
„ „	8 p.m.	27·24	55	51·2	44·9	„	calm	Cloud ·5.
„ 23	4 a.m.	27·28	45	47·0	44·2	„	light	—
„ „	noon	27·48	60	51·0	50·2	W.	fresh	—
„ „	8.30 p.m.	27·5	45	46·0	42·0	SW.	light	Clear. Fine.
„ 24	7 a.m.	27·58	55	55·0	50·0	S.	„	Very fine.
„ „	noon	27·78	70	68·0	54·0	„	„	„
„ „	9 p.m.	27·74	45	48·0	45·0	NW.	„	—
„ 25	7 a.m.	27·70	55	56·0	50·0	NE.	fresh	—
„ „	2 p.m.	27·73	55	58·0	54·2	„	„	—

Date.	Hour.	Bar.	Ast. Therm.	Thermometer.		Wind.		Remarks.
				Dry.	Wet.	Direcn.	Force.	
1858			°	°	°			
June 25	9 p.m.	27·74	55	55·0	53·0	SE.	very fresh	Clearing.
„ 26	8 a.m.	27·65	55	55·5	50·0	S.	light	Very fine. Cloudless.
„ „	noon	27·69	65	65·3	55·1	E b N.	fresh	Cloud ·9.
„ „	9 p.m.	27·88	45	46·5	44·5	SW.	light	Cloudy.
„ 27	6 a.m.	27·91	60	58·0	54·2	S.	„	Very fine.
„ „	1 p.m.	27·92	60	60·0	54·0	SW.	„	Cloudy.
„ „	8 p.m.	27·94	55	57·0	52·0	„	„	Overcast.
„ 28	7 a.m.	27·90	60	58·0	55·0	W b N.	„	Rain.
„ „	2 p.m.	27·8	70	72·0	62·0	SW.	fresh	Cloudy.
„ „	9 p.m.	27·8	60	60·2	58·0	W.	light	Rain.
„ 29	8 a.m.	27·87	55	57·0	55·5	E.	fresh	Dull. Overcast.
„ „	9 p.m.	27·67	60	59·0	55·0	NE.	light	Overcast.
„ 30	9.30 a.m.	27·50	70	65·2	52·7	S b E.	fresh	Cloud·8.
„ „	1 p.m.	27·52	70	67·3	55·0	SW.	very fresh	Cloud·3.
„ „	9 p.m.	27·58	50	50·0	46·0	„	gale	Rain.
July 1	9a.m.	27·60	50	53·0	47·0	„	„	Cold.
„ „	1p.m.	27·68	60	63·0	51·0	WSW.	—	Cloudy.
„ „	9 p.m.	27·75	51	48·0	41·0	SW.	fresh	Clear.
„ 2	9 a.m.	27·83	60	60·2	51·0	„	„	Fine. Clear.
„ „	2 p.m.	27·70	65	54·0	67·0	NW.	„	—
„ „	10 p.m.	27·82	40	43·0	41·0	calm	—	Very clear.
„ 3	5 a.m.	27·88	40	45	41·0	E.	light	Clear. Fine.
„ „	noon	27·50	70	69	58·0	S.	fresh	Overcast.
„ „	10 p.m.	27·49	60	63	57·0	calm	—	Clear.
„ 4	noon	27·62	80	72·2	64·5	S.	light	Cirri ·3.
„ „	8 p.m.	27·61	60	60·0	56·1	—	—	Overcast.
„ 5	7 a.m.	27·55	60	58·0	53·2	NW.	light	—
„ „	3 p.m.	27·40	60	59·5	52·5	W.	fresh	Clearing.
„ „	9 p.m.	27·4	50	51·2	48·0	N.	light	Overcast. Cloud in N.W.
„ 6	8 a.m.	27·60	50	50·5	50·0	W.	„	Rain.
„ „	9 p.m.	27·70	55	54·0	48·5	N.	„	Fine. Clear.
„ 7	7 a.m.	27·62	55	56·2	50·0	SE.	„	—
„ „	1 p.m.	27·64	70	69·0	58·0	S.	„	Fine. Passing clouds.
„ „	9 p.m.	27·58	55	55·5	53·0	E.	„	Cloudy.
„ 8	8 a.m.	27·56	65	65	59	„	„	„
„ „	1 p.m.	27·61	70	68·5	56·2	„	fresh	„
„ „	8 p.m.	27·60	60	54·5	53·9	„	light	Cloud ·2.
„ 9	7 a.m.	27·61	60	58·7	54·3	E b N.	fresh	Clear. Cirri ·1.
„ „	1 p.m.	27·67	75	70·5	61·0	SE.	light	Cirri ·6.
„ „	8 p.m.	27·82	65	60·0	54·4	„	„	Cloudy to W.
„ 10	7 a.m.	27·80	70	66·6	58·1	E.	fresh	Fleecy cloud ·4.
„ „	9 p.m.	27·82	60	58·0	51·0	W.	—	Overcast.
„ 11	9 a.m.	27·7	80	71·0	62·0	calm	—	—
„ „	2 p.m.	27·68	60	79·8	63·2	NW.	—	Rain and thunder.
„ „	9 p.m.	27·17	60	60	53	—	—	—
„ 13	3 p.m.	27·18	60	58	52·5	NW.	fresh	Rain and thunder.
„ „	9 p.m.	27·24	50	51	47	NNW.	„	„
„ 14	7 a.m.	27·28	50	50	43	NW.	„	Rain.
„ „	noon	27·27	60	58	51	„	„	Cloudy.
„ 15	9 a.m.	27·28	50	51	47	N.	light	„
„ „	noon.	27·23	60	63	58	NW.	„	Fine. Clear.
„ „	9 p.m.	27·24	60	61	53	„	„	„ „
„ 16	7 a.m.	27·22	60	61	52	W.	fresh	„ „
„ „	2 p.m.	27·32	75	76	59	„	light	Very fine.
„ „	9 p.m.	27·33	60	63	53	„	„	„
„ 17	9 a.m.	27·28	60	68	59	„	„	„
„ „	9 p.m.	27·14	50	52	50	„	„	Slight fog. Fine.
„ 18	9 a.m.	27·10	65	65	55·2	N.	„	—
„ „	2 p.m.	27·20	75	75	64	„	„	Fine. Cloud in W.
„ „	9 p.m.	27·22	50	50	47	NW.	„	Clearing.
„ 19	8 a.m.	27·30	60	63	57	W.	„	Fine.
„ „	9 p.m.	27·32	60	57	52	„	„	—
„ 20	9 a.m.	27·27	60	60	53	SW.	„	Fine.
„ „	9 p.m.	27·26	55	62	55	„	„	„
„ 21	9 a.m.	27·18	55	57	54	N b E.	fresh	—
„ „	9 p.m.	27·31	60	59	55	„	light	Clear.
„ 22	9 a.m.	27·26	60	58	55	W.	fresh	Dull. Rain.
„ „	3 p.m.	27·08	65	67	58·2	SW.	light	Hazy.
„ „	9 p.m.	26·90	60	60	—	NW.	„	Rain and thunder.
„ 23	6 a.m.	26·97	45	46	44	W.	„	Fine. Fog at sunrise.
„ „	noon.	26·68	65	67	61·5	„	„	Cloudy.
„ „	9 p.m.	26·74	60	60	56	„	„	Thunder clouds.
„ 24	7 a.m.	26·76	50	50·5	47·2	„	„	Cloudy.
„ „	9 p.m.	26·6	45	47	41	NW.	„	Cloud and thunder to SW.
„ 25	9 a.m.	26·64	—	60·5	5	„	fresh	Cloudy.
„ „	2 p.m.	26·78	—	64·5	55	„	light	Cloud in W.

Date.	Hour.	Bar.	Ast. Ther.	Thermometer.		Wind.		Remarks.
				Dry.	Wet.	Direc.	Force.	
1858.								
July 25	9 p.m.	26·70	—	49	47	NW.	light	Clear.
„ 26	9 a.m.	26·62	—	65	59·5	SE.	„	Light clouds.
„ „	3 p.m.	26·71	—	75	64·5	„	„	Clouds gathering to SW.
„ „	9 p.m.	26·61	—	49·5	48	S.	very light	Cloud ·3.
„ 27	9 a.m.	26·59	—	69·5	64	SE.	light	Fleecy clouds ·5.
„ „	3 p.m.	26·62	—	70·4	62	E.	fresh	Fleecy cloud.
„ „	9 p.m.	26·56	—	54·9	52	SE.	„	—
„ 28	9 a.m.	26·55	—	57·5	55	N.	light	Overcast. Much rain during night
„ „	9 p.m.	26·56	—	49	47	NW.	„	Cloudy. Hoar frost during night.
„ 29	8 a.m.	26·55	—	55	51·5	„	„	Cloud in W.
„ „	9 p.m.	26·86	50	50	48·2	W.	„	Cloudy to E.
„ 30	5½ a.m.	26·82	50	49	46	„	„	Fine. Clear.
„ „	9 a.m.	26·88	60	63·2	54	„	„	Overcast.
„ „	9 p.m.	26·85	50	52·5	49·5	„	„	Clear fog.
„ 31	4 a.m.	26·78	40	42·5	40	„	very light	Thick fog.
„ „	9 a.m.	26·75	65	66·5	61·5	SW.	light	Fine. Clear.
„ „	2 p.m.	26·78	70	70·5	63·5	NE.	„	Overcast. Cloudy.
„ „	9 p.m.	25·71	60	58	55·5	„	„	Thunder clouds.
Aug. 1	9 a.m.	25·73	70	69	59·5	SW.	„	Fine. Clear. Cloud in W.
„ „	2 p.m.	25·75	80	79·5	—	Calm	„	Very clear.
„ „	9 p.m.	25·69	60	60	—	N.	fresh	Thunder. Rain.
„ 2	9 a.m.	25·68	60	63·2	—	W.	light	Fine. Clear.
„ „	9 p.m.	25·77	55	54	—	NW.	fresh	Thunder. Rain.
„ 3	9 a.m.	25·78	75	77·2	—	SE.	light	Fine. Clear.
„ „	9 p.m.	25·30	50	53	—	N b W.	fresh	„ Cold wind.
„ 4	5½ a.m.	26·33	—	49·5	—	—	light	—
„ „	9 p.m.	25·84	—	60	—	NW.	fresh	Overcast.
„ 5	9 a.m.	25·82	—	45	—	„	—	Clearing fine.
„ „	2 p.m.	25·71	—	53	—	NE.	—	—
„ „	9 p.m.	25·66	—	40·5	—	W.	light	—
„ 6	5 a.m.	25·67	—	29	—	„	fresh	Fine. Clear.
„ „	9 p.m.	25·62	—	51	—	NW.	„	Overcast.
„ 7	5 a.m.	25·56	—	41	—	—	—	Dull.
„ „	noon.	25·80	—	61	—	W	fresh	„ Clouds high.
„ „	8 p.m.	25·61	—	47·5	—	Vble.	var.	Clear. Cloud.
„ 8	8 a.m.	25·56	—	53	—	W.	light	„ Fine.
„ „	2 p.m.	25·68	—	78	—	„	—	Fine.
„ „	8 p.m.	25·66	—	47	—	„	light	Clear.
„ 9	8 a.m.	25·57	—	58·5	51·5	Calm	„	Very fine.
„ „	8 p.m.	25·58	—	52	46	W.	„	„
„ 10	8 a.m.	25·46	—	61	55	„	„	Cloudy. Rain.
„ „	2 p.m.	25·48	—	70	58	„	„	„
„ „	8 p.m.	25·39	—	56	50	„	„	„ Mountains capped.
„ 11	8 a.m.	25·42	—	61	53	„	„	Fine.

VIII.—Journal of Thermometrical Observations made at York Factory, H.B.C., from 1st November 1856 to 30th April 1857. Lat. , long. Time of observations, Noon.

Date.	Zero.		Date.	Zero.		Date.	Zero.		Date.	Zero.		Date.	Zero.		Date.	Zero.	
	ab.	be.		ab.	be.		ab.	be.		ab.	be.		ab.	be.		ab.	be.
Nov. 1	20	—	Dec. 1	12	—	Jan. 1	—	23	Feb. 1	—	27	Mar. 1	—	26	April 1	—	10
„ 2	10	—	„ 2	—	13	„ 2	—	30	„ 2	—	30	„ 2	—	2	„ 2	10	—
„ 3	4	—	„ 3	—	6	„ 3	—	29	„ 3	—	25	„ 3	—	17	„ 3	—	1
„ 4	—	6	„ 4	—	15	„ 4	—	36	„ 4	—	28	„ 4	—	20	„ 4	—	2
„ 5	1	—	„ 5	—	25	„ 5	—	30	„ 5	—	22	„ 5	—	17	„ 5	—	10
„ 6	3	—	„ 6	—	29	„ 6	—	40	„ 6	—	36	„ 6	—	25	„ 6	2	—
„ 7	—	7	„ 7	—	17	„ 7	—	10	„ 7	—	24	„ 7	—	29	„ 7	15	—
„ 8	—	17	„ 8	—	5	„ 8	23	—	„ 8	—	34	„ 8	—	27	„ 8	—	20
„ 9	—	15	„ 9	—	23	„ 9	13	—	„ 9	—	39	„ 9	—	31	„ 9	—	14
„ 10	9	—	„ 10	—	17	„ 10	13	—	„ 10	—	32	„ 10	—	22	„ 10	—	5
„ 11	11	—	„ 11	—	6	„ 11	13	—	„ 11	—	33	„ 11	—	12	„ 11	—	3
„ 12	15	—	„ 12	—	12	„ 12	—	10	„ 12	—	20	„ 12	—	7	„ 12	—	6
„ 13	21	—	„ 13	—	22	„ 13	—	15	„ 13	—	25	„ 13	—	16	„ 13	0	0
„ 14	31	—	„ 14	—	25	„ 14	—	31	„ 14	—	27	„ 14	—	13	„ 14	—	5
„ 15	29	—	„ 15	—	21	„ 15	—	19	„ 15	—	32	„ 15	—	13	„ 15	—	4
„ 16	26	—	„ 16	—	25	„ 16	—	20	„ 16	—	9	„ 16	—	22	„ 16	—	6
„ 17	17	—	„ 17	—	30	„ 17	—	19	„ 17	—	33	„ 17	2	—	„ 17	3	—
„ 18	15	—	„ 18	—	16	„ 18	—	25	„ 18	—	34	„ 18	2	—	„ 18	1	—
„ 19	27	—	„ 19	—	2	„ 19	—	34	„ 19	—	42	„ 19	9	—	„ 19	11	—
„ 20	20	—	„ 20	—	15	„ 20	—	33	„ 20	—	32	„ 20	29	—	„ 20	6	—
„ 21	25	—	„ 21	—	15	„ 21	—	35	„ 21	—	17	„ 21	18	—	„ 21	3	—
„ 22	6	—	„ 22	—	18	„ 22	—	25	„ 22	—	32	„ 22	3	—	„ 22	15	—

Date.	Zero.		Date.	Zero.		Date.	Zero.		Date.	Zero.		Date.	Zero.		Date.	Zero.	
	ab.	be.		ab.	be.		ab.	be.		ab.	be.		ab.	be.		ab.	be.
Nov.23	—	16	Dec.23	—	12	Jan. 23	—	9	Feb. 23	—	7	Mar.23	—	12	Apr.23	13	—
„ 24	—	6	„ 24	—	4	„ 24	—	28	„ 24	—	37	„ 24	6	—	„ 24	20	—
„ 25	8	—	„ 25	—	6	„ 25	—	25	„ 25	—	28	„ 25	9	—	„ 25	26	—
„ 26	14	—	„ 26	—	11	„ 26	—	15	„ 26	—	15	„ 26	14	—	„ 26	16	—
„ 27	—	12	„ 27	—	6	„ 27	—	17	„ 27	—	7	„ 27	16	—	„ 27	26	—
„ 28	—	1	„ 28	3	—	„ 28	—	27	„ 28	—	20	„ 28	9	—	„ 28	18	—
„ 29	13	—	„ 29	—	5	„ 29	—	31				„ 29	12	—	„ 29	20	—
„ 30	—	8	„ 30	—	18	„ 30	—	28				„ 30	14	—	„ 30	30	—
			„ 31	—	15	„ 31	—	33				„ 31	—	6			
Mean	—	7·9	Mean	—	13·5	Mean	—	19·8	Mean	—	26·6	Mean	—	5·6	Mean	—	4·9

Table of Barometric Readings, 1857.

Date.	Locality.	Bar.	Ther.	Date.	Locality.	Bar.	Ther.
			°				°
June 13	Fort William, H.B.C.	29·25	62	June 24	Swamp Lake (3)	28·66	80
„ 14	1st camp	29·34	49	„ „	Savannah Lake (4)	28·62	87
„ „	Halting place	29·37	62	„ „	Savannah River	28·63	88
„ „	Rise at Kakebeka Falls, 172 ft.	—	—	„ „	Ditto	28·62	82
„ 21		29·07	52	„ „	Lake of the Thousand Isles	28·58	81
„ „	Bad Portage	29·10	61	„ 25	Barrier Portage	28·59	79
„ 22	Dog Portage	29·12	45	„ „	Ditto Ridge	28·51	79
„ „	Dog Ridge (top of)	28·65	52	„ „	Ditto Lake	28·59	79
„ „	Dog Lake	28·80	57	„ 26	Ridge Portage	28·46	79
„ 23	Viscou's Lake	28·67	66	„ 27	Ditto	28·49	62
„ „	Cold Water Lake (1)	28·59	79	„ „	French Portage (E. end)	28·44	67
„ „	Ridge	28·51	79	„ „	Top of Ridge	28·39	68
„ „	Ditto, highest point	28·47	78	„ „	French Portage (W. end)	28·50	81
„ „	Warm Water Lake (2)	28·58	79	„ „	Perch Lake	28·44	74
„ „	Depth of Cold Water Lake 2 ft.	—	—	„ 28	Ditto	28·46	59
				„ „	Two River Portage	28·58	59
„ „	Ditto Warm Water ditto 27 ft.	—	—	„ 29	Sturgeon River	28·66	52
				„ 30	Nimuecan Lake	29·05	51
„ 24	Warm Water Lake(2)	28·72	72	„ „	Rainy Lake	—	—
„ „	Meadow Portage Ridge	28·62	77	„ „	Lake of the Woods	—	—

(Barometer deranged.)

Barometric Observations on the Prairies, 1857.

Date.	Locality.	Bar.	Ther.	Date.	Locality.	Bar.	Ther.
1857.			°	1857.			°
July 23	Fort Garry to 1 day from Pembina (Mean of 16 days.)	29·03	82	Aug.14	Camp	28·49	74
„ 24				„ 15	„	28·45	39
				„ 16	Fort Ellice, H.B.C.	28·38	62
„ 28	Pembina 45 feet above River	29·20	72	„ 17	„ 150 feet above level	28·60	60
„ „	Ridge	29·13	76				
„ 29	St. Joseph's	28·90	73	„ „	Poplar Ridge Creek	28·49	64
„ 30	Salt Lake	28·97	80	„ „	Level of Plain	28·45	64
„ 31	Camp of 30th	28·78	60	„ „	Poplar Ridge Creek Level	28·48	63
„ „	Halting place	28·32	96	„ „	Camp on Poplar Ridge	28·29	61
„ „	Camp	28·26	70	„ 18	„ „	28·29	55
Aug. 1	Pembina valley (left bank)	28·18	75	„ „	Pipe Stone River (left bank)	28·12	54
„ „	At River level	28·50	82	„ „	„ „ level	28·23	54
„ „	Second level (right bank)	28·30	83	„ „	Mountain du Poile (top of)	28·07	64
„ „	Camp on Prairie	28·22	77	„ „	River level on starting	28·18	64
„ 2	„	28·31	62	„ „	2nd Poplar Creek level	27·87	64
„ „	Long River (right bank)	28·45	62	„ „	„ Plain level	27·78	64
„ 3	„	28·53	62	„ „	Ridge near Moose Mountain	27·72	67
„ „	Camp	28·47	68	„ 19	„ „	27·65	50
„ 4	„	28·42	61	„ „	East tail of Moose Mountain	27·54	61
„ 5	„	27·72	60	„ „	„ „	27·60	83
„ „	At noon	27·62	65	„ „	Moose Mountain, Creek level	27·97	73
„ 6	Turtle Mountain	27·62	68	„ „	„ Plain level	27·91	72
„ 8	„	28·10	58	„ „	Camp on Plain	27·90	71
„ „	„	28·02	69	„ 20	„	27·72	52
„ 9	„	28·02	65	„ „	Halting Place	27·77	66
„ 10	„	27·98	56	„ „	Souri River, Plain level	27·75	64
„ „	Prairie halt	28·20	78	„ „	„ „	27·72	50
„ 11	Camp of 10th	28·02	62	„ 21	Level of River Straith	28·07	60
„ „	Souri river (left bank)	28·04	82	„ „	Level of River	28·10	60
„ 12	Camp of 11th	27·98	67	„ 22	Level of Plain	28·02	60
„ 13	„ 12th	28·14	58	„ 23	Tail of Moose Mountain	27·35	76
„ 14	„ 13th	28·41	37	„ „	Top of Peak	27·06	77

Date.	Locality.	Bar.	Ther.	Date.	Locality.	Bar.	Ther.
1857.			°	1857.			°
Sept. 7	Fort Ellice (mean) - -	28·26	68	Sept. 16	Moose Jaw Creek (50 ft.) -	27·96	62
„ „	1st Camp at Swamp - -	28·21	50	„ 17	„ „	28·15	29
„ 8	Poplar Ridge Swamp - -	27·89	63	„ „	„ (14 m. up)	28·16	63
„ 9	„ „ - -	27·56	53	„ 19	Cree Camp on Côteau - -	27·47	59
„ „	Small Lake - - - - -	27·50	59	„ „	Our Camp below - - -	27·90	65
„ 10	„ - - -	27·66	48	„ 21	High Ridge (N. side) - -	27·64	64
„ 11	Weedy Mountain (W. side of)	27·60	46	„ „	High Plain S. branch of Saskatchewan River.	27·67	57
„ 12	Large Stone Lake - -	27·45	48				
„ „	Qu'appelle Lake Fort - -	27·06	60	„ „	Camp in Elbow Creek - -	27·97	54
„ „	Top of Qu'appelle River bank	27·46	54	„ 22	S. branch Saskatchewan -	28·00	60
„ „	Mission House - - -	27·74	48	„ „	River Aiktow - - -	27·84	62
„ 13	„ - - -	27·76	54	„ „	Summit Level Lake - -	27·79	58
„ „	„ - - -	27·89	58	„ 23	Level at Elbow S. Saskatchewan.	28·04	57
„ „	Top of Bank - - -	27·67	61				
„ „	Fort - - - - -	27·38	63	„ 24	Elbow Creek Camp (mean) -	27·98	52
„ 14	„ - - - - -	27·52	56	Oct. 4	Sandy Hills (mean) - -	27·90	57
„ 15	Duck Lake Camp - -	27·25	51	„ 5	Rabbit Point Camp - -	28·03	59
„ „	Last Wood Point - -	27·34	57	„ 6	Marsh on Burnt Ground -	27·97	40
„ „	Creek - - - - -	27·70	63				

1858. Fort Edmonton, February 21st. Hourly Observations.

Date.	Hour.	Bar.	Therm.	Wind.		Remarks.
				Direcn.	Force.	
1858.			°			
Feb. 21 *	Mid.	27·68	— 2·0	W.	very light	Clear, except in the E.
„	1	·68	— 2·5	„	„	Clear. Slight cloud, NE.
„	2	·68	— 3·0	—	calm	Very clear.
„	3	·68	— 4·0	—	„	Very clear. Faint Aurora.
„	4	·69	— 3	W.	very light	„ „
„	5	·69	— 6	SW.	light	„ No Aurora.
„	6	·68	— 5·5	„	„	„ Rosy daybreak.
„	7	·68	4	W.	„	„ „
„	8	·68	6	„	„	„ „
„	9	·72	16	SW.	„	„ „
„	10	·74	27	W.	„	„ „
„	11	·76	27	„	very light	„ Mild.
„	noon	·74	27	„	„	Fine. Light clouds forming.
„	1	·74	28	SW.	light	Overcast.
„	2	·70	27	„	„	„
„	3	·69	26·5	„	„	Clearing. Fleecy clouds.
„	4	·69	24·5	„	„	„ „
„	5	·64	23·5	W	„	„ „
„	6	·60	23	„	„	„ Gusty.
„	7	·59	22	„	„	„ „
„	8	·52	19	„	moderate	„ „
„	9	·50	17·5	SW.	fresh	Partially overcast.
„	10	·46	17·5	„	„	Overcast. Stormy.
„	11	·42	15·5	W.	„	„ Gusty.
„	12	·40	15·0	„	„	„ „
Mean	—	27·64	13·6			
Feb. 22	Mid.	27·38	12·5	W.	light	Overcast.
„	1	·38	11·5	„	„	„
„	2	·36	11	—	calm	Partially overcast.
„	3	·33	10	—	„	Hazy. Cloud in NW.
„	4	·32	10	—	„	„ „
„	5	·32	10	—	„	„ Cloud in E.
„	6	·32	10	—	„	Overcast.
„	7	·28	12	W.	very light	Dull. Overcast.
„	8	·26	14	SW.	light	„ „
„	9	·21	18·5	W.	„	„ „
„	10	·20	21	NW.	„	„ „
„	11	·16	27·5	W.	„	„ „
„	noon	·10	33	„	„	Clearing in W. Cloudy in E.
„	1	·12	39·5	„	„	Light fleecy clouds.
„	2	·12	43	„	„	Cloudy. Dull.
„	3	·13	42·5	„	very light	„ „
„	4	·14	41·5	—	calm	„ „
„	5	·14	40	—	„	„ „
„	6	·15	37·5	—	„	Overcast.
„	7	·15	35	—	„	Clearing.
„	8	·15	33·5	—	„	„

* As the 21st Feb. falls on a Sunday, the hourly observations are taken also on 22d.

Date.	Hour.	Bar.	Therm.	Wind.		Remarks.
				Direcn.	Force.	
1858.						
Feb. 22	9	27·15	33°	—	Calm	Clearing.
„	10	·17	33	—	„	Overcast. Dull. Dead calm.
„	11	·18	33	—	„	„ „ „
„	12	·20	34·5	SW.	light	Close. Overcast. Dull.
Mean	—	27·21	25·4			
—	Mid.		—	—	—	—
March 21	1		—	—	—	—
„	2		—	—	—	—
„	3		—	—	—	—
„	4		—	—	—	—
„	5		—	—	—	—
„	6		—	—	—	—
„	7		27·5	NE.	light	Overcast. Chilly.
„	8		28	„	„	„ „ Occasional snow.
„	9		29	„	„	„ „
„	10		30·5	W.	„	„ „
„	11		33	NE.	„	Clearing. Mild.
„	12		34	E.	„	Clouds breaking up in S. Mild.
„	noon		35	NE.	„	Overcast.
„	1		37	W.	„	„
„	2		38·5	„	„	Clouds in patches. A little snow.
„	3		40	„	„	Clouds from E. to S.
„	4		39	„	„	Partially clear.
„	5		38	NE.	„	Densely overcast.
„	6		35·5	„	„	Overcast. Raw.
„	7		34	„	„	„ A few dim stars.
„	8		33	„	„	Clear starlight.
„	9		32·5	„	„	Overcast.
„	10		32	„	„	Dense clouds in the W.
„	11		32	„	„	Overcast.
„	12		32	„	„	„
Mean	- -	- -	33·1			
March 22	Mid.		—	—	Calm	Chilly. Overcast.
„	1		32·0	—	„	Cloudy in N. and NW.
„	2		30·5	E.	„	Stars dim.
„	3		30	—	Calm	„
„	4		29·5	—	„	„
„	5		29	NE.	light	Overcast.
„	6		29	E.	„	„
„	7		30	W.	„	„
„	8		30·5	„	„	„
„	9		32·5	„	„	Fog.
„	10		34	E.	„	Clearing.
„	11		38	SE.	moderate	Overcast. Very mild.
„	Noon		45·5	„	light	„
„	1		46	E.	„	„
„	2		46	„	„	„
„	3		46	„	„	„ Chilly.
„	4		44	„	„	„
„	5		41·5	SE.	moderate	„
„	6		40	„	„	Haze round the moon.
„	7		37	—	calm	„
„	8		37	—	„	„
„	9		36	—	„	Overcast and chilly.
„	10		36	E.	very light	„
„	11		35·5	SW.	light	„
„	Mid.		35	„	„	„
Mean	- -	- -	36·2			
April 21	1		26	E.	very light	Clear. Stars brilliant. Chilly.
„	2		24	—	calm	„ „ „
„	3		23	—	„	„ Faint Aurora.
„	4		22	—	„	„ Daybreak.
„	5		20	—	„	„
„	6		25	W.	light	Fine. Clear.
„	7		28	„	very light	„
„	8		47	SW.	„	Haze. Warm.
„	9		55	„	„	Clear. Warm.
„	10		59·5	E.	„	Clear. Fleecy clouds in E.
„	11		57	W.	moderate	Cloudy and rather chilly.
„	noon		55	E.	light	Cloudy and rather mild.

Barometer returned to Fort Carlton.

Barometer returned to Fort Carlton.

Barometer returned to Fort Carlton.

Date.	Hour.	Bar.	Therm. in Air.	Wind. Direcn.	Wind. Force.	Remarks.
			°			
April 21	1	Barometer returned to Fort Carlton.	54	E.	light	Clear. Mild. Fleecy clouds.
„	2		52·5	„	„	Cloudy and mild.
„	3		50	„	„	„
„	4		50	„	„	„
„	5		48	„	„	Partially cloudy and mild.
„	6		46	NE.	„	„ „
„	7		42	„	„	„ „
„	8		40	„	„	Overcast. Chilly.
„	9		38	„	„	„ „
„	10		36·5	W.	very light	„ „
„	11		35	„	„	„ „
„	12		34	„	„	„ „
„			—	—	—	—
Mean	- -	- -	40·3			

1859. Fort Edmonton. Term Day. Hourly Observations.

Hour.	Bar.	Therm. in Air.	Max. Therm.	Remarks.
		°	°	
		20th January.		
12	27·93	−4·5	—	Overcast. Snow.
1	27·94	−5·0	—	
2	27·97	−6·0	—	„ „
3	27·97	−6·0	—	Wind from N. Fresh. Overcast.
4	28·0	−8·0	−9·0	„
5	27·95	−9·0	—	Slightly overcast. Lt.
6	27·91	−8·5	—	„ „
7	27·91	−8·4	—	„ „
8	27·91	−8·5	—	„ „
9	27·91	−8·0	−9·2	Overcast. Snow.
10	27·90	−8·0	—	„ „
11	27·88	−5·5	—	Snow and overcast. Light N.E.
12	27·86	−6·3	—	Snow.
1	27·84	−5·5	—	„
2	27·81	−5·0	—	„
3	27·80	−6·0	−7·0	„
4	27·82	−7·0	—	„
5	27·83	−9·2	—	„
6	27·84	−9·2	—	„
7	27·87	−9·5	—	„
8	27·90	−10·0	—	„
9	27·90	−10·0	—	Overcast. Very calm.
10	27·95	−10·0	—	Overcast.
11	27·98	−11·0	—	Slightly overcast.
12	28·30	−11·6	—	Partially clear.
Means	27·91	−7·8	−8·4	
		1st February.		
1	27·59	−9·0	—	Overcast. Light snow.
2	27·62	−8·9	—	„
3	27·65	−10·0	—	Partially clear.
4	27·65	−8·9	−7·9	„
5	27·68	−9·0	—	„
6	27·70	−10·8	—	„
7	27·70	−0·8	—	„
8	27·75	−19·7	—	Snow. Overcast.
9	27·76	−6·0	−5·0	Slightly overcast.
10	27·80	−5·5	—	„
11	27·84	−4·8	—	Partially clear.
12	27·85	−4·5	—	„
1	27·85	−4·0	—	„
2	27·85	−5·5	—	„
3	27·88	−5·5	−5·0	Clear.
4	27·90	−5·5	—	„
5	27·92	−6·5	—	„
6	27·96	−9·0	—	„
7	27·98	−12·0	—	„
8	27·98	−15·0	—	Clear.
9	28·00	−18·0	−16·5	„
10	27·99	−22·0	—	„
11	28·10	−23·9	—	„
12	28·00	−25·5	—	„
Means	27·83	−10·4	−8·6	
		21st February.		
1	27·14	20·0	—	Partially clear.
2	27·14	18·0	—	„
3	27·14	17·5	16·0	„
4	27·14	15·3	—	Overcast.
5	27·16	13·5	—	„
6	27·20	11·2	—	Partially clear.
7	27·21	11·0	—	„
8	27·14	10·7	—	Slightly overcast.
9	27·25	11·0	10·0	Clear.
10	27·26	11·5	—	Partially clear.
11	27·22	12·0	—	—
12	27·17	11·8	—	—
1	27·13	11·5	—	Snow.
2	27·14	14·0	—	Partially clear.
3	27·14	12·7	11·5	„
4	27·29	9·7	—	„
5	27·34	8·0	—	Slightly overcast.
6	27·37	7·0	—	Overcast.
7	27·38	3·5	—	„
8	27·37	3·5	—	Partially clear.
9	27·40	1·8	1·2	Slightly overcast.
10	27·42	0·5	—	„
11	27·43	0	—	„
12	27·44	0	—	„
Means	27·25	9·6	9·6	
		1st March.		
1	27·32	3·0	—	Clear. Very calm.
2	27·29	1·4	—	„ „
3	27·29	−0·3	—	„ „
4	27·28	−2·0	—	„ „
5	27·29	−4·4	—	„ „
6	27·29	−5·0	—	Fine. Bright.
7	27·33	−0·2	—	„ „
8	27·34	0·2	—	„ „
9	27·32	2·1	—	„ Wind light, W.
10	27·31	8·0	—	Clear. Bright. Wind W b N.
11	27·30	14·2	—	Cir-cum. ·5. Wind fresh, NW.
12	27·30	19·6	—	Cir-cum. ·6. Wind light, NW.

Hour.	Bar.	Therm. in Air.	Max. Therm.	Remarks.	Hour.	Bar.	Therm. in Air.	Max. Therm.	Remarks.
		°	°				°	°	
1	27·31	24·9	—	Cir-cum. ·4.	7	27·32	25·2	27·0	Partially clear. Wind
				Wind light, NNE.	8	27·34	22·5	—	„ [ENE.
2	27·29	27·4	—	Cirri ·1.	9	27·32	20·0	18·0	„ „
				Wind light, NE.	10	27·33	17·5	—	„ „
3	27·30	29·5	—	Clear. Wind calm.	11	27·34	15·0	—	„ „
4	27·30	30·0	—	„ „ ENE.	12	27·33	15·0	—	Clear. Calm.
5	27·31	30·0	—	„ „ „					
6	27·31	28·0	—	„ „ „	Means	27·31	13·4	22·0	

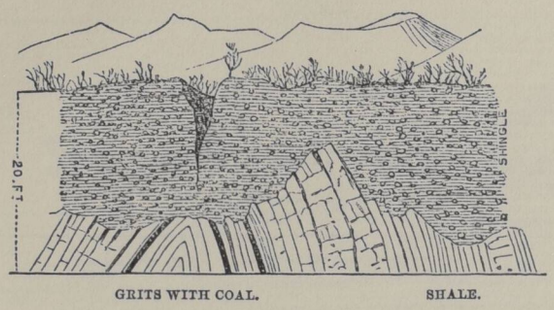
Term Day. Meteorological Register. Fort Pitt, Saskatchewan. Lat. , Long. , Alt.

Date.	Hour.	Barometer.	Therm.	Wind.	Remarks.
1857.					
Dec. 21.	Mid.	28·46	5·0	calm	Hazy. Cloud ·2 in NE. Faint Aurora.
„ „	1 a.m.	28·44	4	„	„ „
„ „	2 a.m.	28·42	3·5	„	„ Aurora disappeared.
„ „	3 a.m.	28·39	3·5	„	„ „
„ „	4 a.m.	28·36	3	„	„ „
„ „	5 a.m.	28·31	3	„	Stars seen towards zenith.
„ „	6 a.m.	28·29	2·5	„	„ „
„ „	7 a.m.	28·25	3·0	very light, N.	Clearing.
„ „	8 a.m.	28.25	5·5	„	Fleecy clouds ·5.
„ „	9 a.m.	28·24	7·5	„	Cloud ·9
„ „	10 a.m.	28·26	10	calm	Overcast.
„ „	11 a.m.	28·22	14	„	„
„ „	noon.	28·18	16	„	„
„ „	1 p.m.	28·14	18·5	„	„ Threatens snow.
„ „	2 p.m.	28·11	20	„	„ „
„ „	3 p.m.	28·14	17	very light, SW.	Clearing. Cloud ·5.
„ „	4 p.m.	28·18	14	„	„
„ „	5 p.m.	28·17	13	calm	Clear.
„ „	6 p.m.	28·13	11	„	„
„ „	7 p.m.	28·10	11	„	„ [snow.
„ „	8 p.m.	28·07	11	very light, N.	Fleecy clouds rising from N.E. Threatens
„ „	9 p.m.	28·06	14·5	„	„ „ „
„ „	10 p.m.	28·06	15	„	„ „ „
„ „	11 p.m.	28·04	14	very light, NE.	Clearing.
„ „	mid.	28·03	14	calm	Clear. Slight haze towards horizon.
Means -	—	28·21	10·1		

Jaspar House, February 1st, 1859. Hourly Observations.

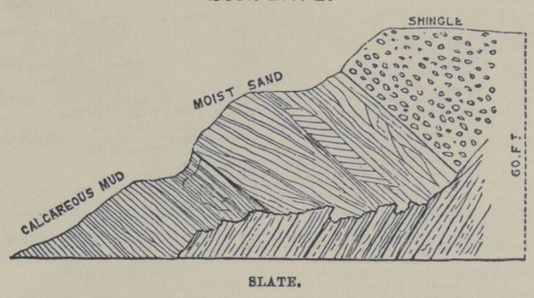
Hour.	Barom.	Therm.	Wind.		Remarks.
			Dir.	Force.	
1859.					
mid.	26·30	−11	N.	light	Sky clear.
1	·33	−12	„	„	Still clear. Wind variable.
2	·36	−13	„	fine	„ „
3	·35	−12	„	light	Sky overcast.
4	·36	−12	„	fine	Clear.
5	·38	−11·5	„	light	Passing clouds.
6	·40	−11	„	„	„
7	·44	−10·5	„	„	Cloudy.
8	·48	−10·5	„	„	„
9	·52	−8	„	„	„
10	·52	−4	„	„	„
11	·52	−0	—	calm	Overcast.
noon.	·52	1	S.	very light.	Cloudy.
1	·53	3·5	„	„	„
2	·55	4	„	light	Clearing.
3	·60	3	„	„	Clear and fine.
4	·60	−0·5	„	„	Cloudy to W.
5	·64	−6·5	SW.	„	Clear and fine.
6	·64	−11	„	„	„ „
7	·68	−15	„	„	„ „
8	·70	−17	„	„	„ „
9	·66	−17	„	fair	„ „
10	·68	−18	„	„	„ „
11	·68	−16	S.	light	Clear. Aurora.
mid.	—	—	—	—	—
Means -	26·01	−9·0			

Sect. No. 1.



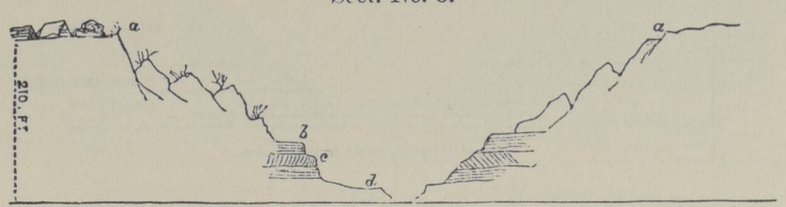
Shingle Terrace. Left bank N. Saskatchewan. Base of Rocky Mountains.

Sect. No. 2.



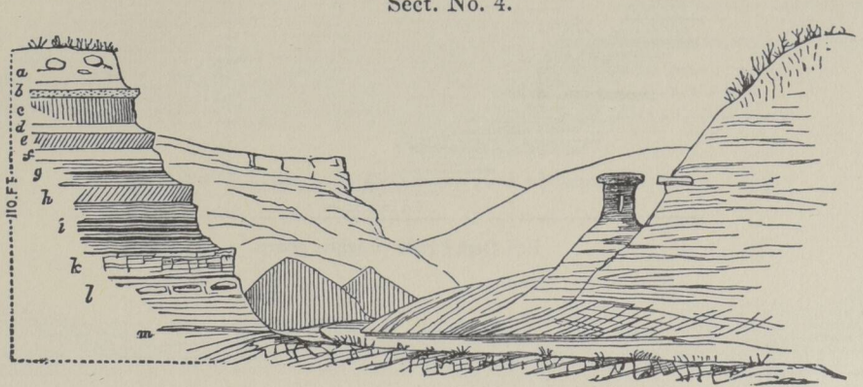
Shingle Terraces. Mouth of Kicking Horse River. Valley of Columbia R. Rocky Mountains.

Sect. No. 3.



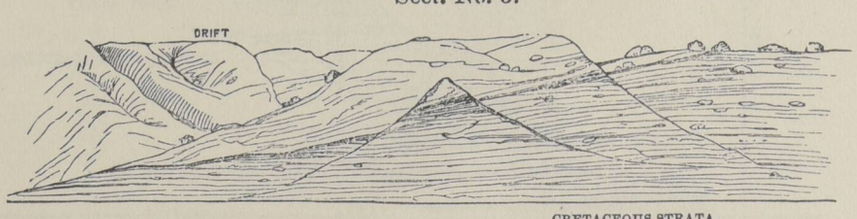
Valley of N. Saskatchewan, near Birch Gully, showing the leaf beds and drift.

Sect. No. 4.



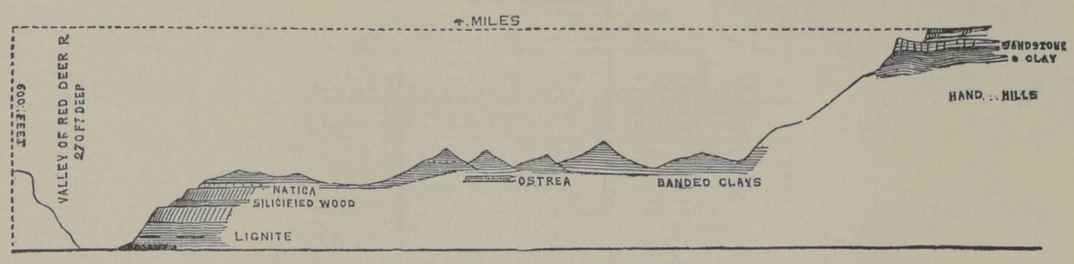
Valley of Souri River at La Roche Percée. Lignite strata.

Sect. No. 5.



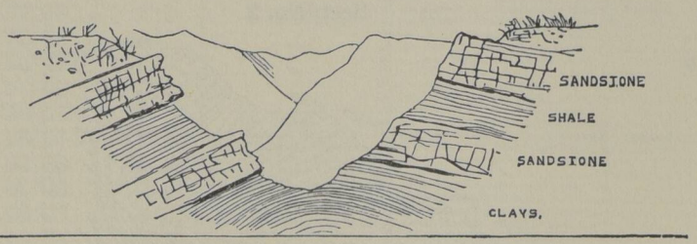
South Saskatchewan. Base of Grand Coteau. Junction of drift and cretaceous strata.

Sect. No. 6.



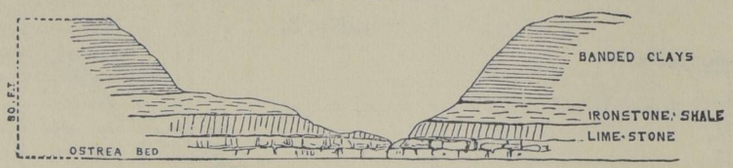
Red Deer River to the Hand Hills.

Sect. No. 7.



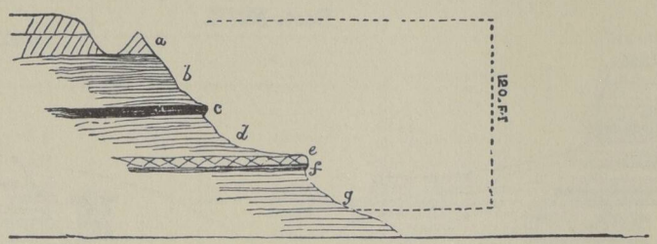
Coulée in Hand Hills, showing a disturbance of the strata.

Sect. No. 8.



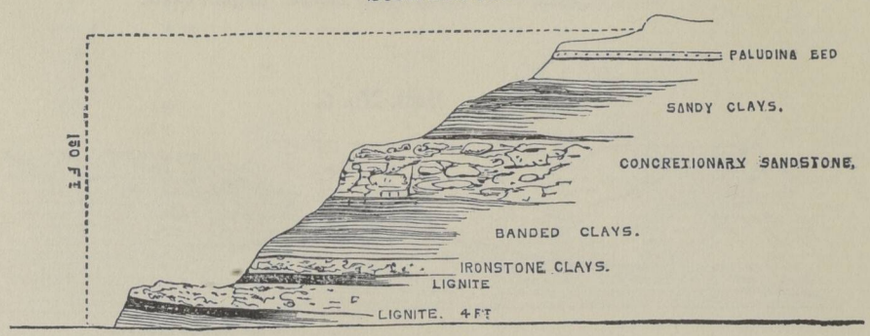
Shell Creek, near Hand Hills.

Sect. No. 9.



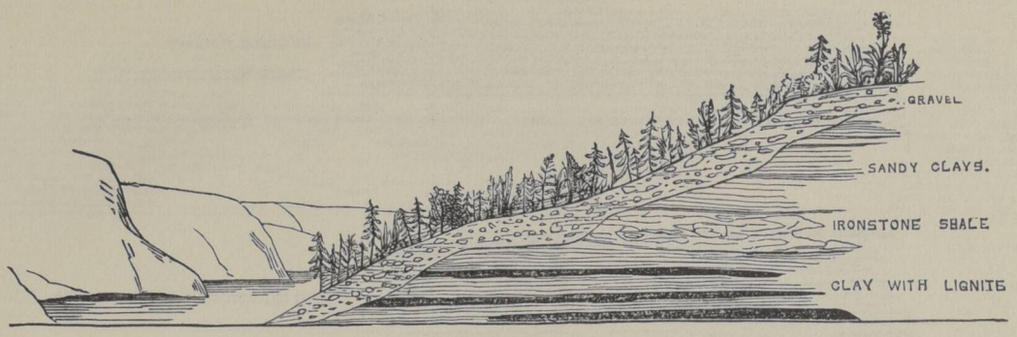
Red Deer River. Lignite group.

Sect. No. 10.



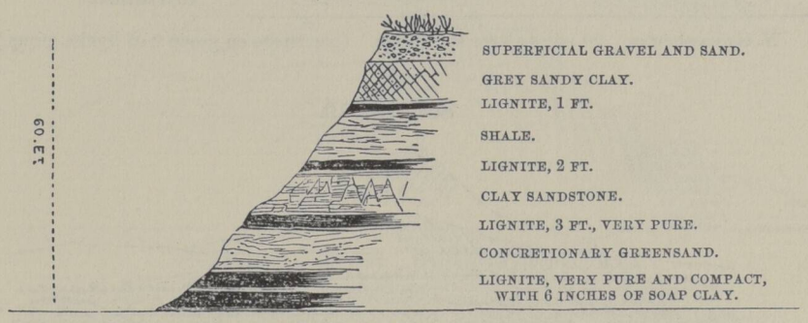
Red Deer River. Lignite group.

Sect. No. 11.

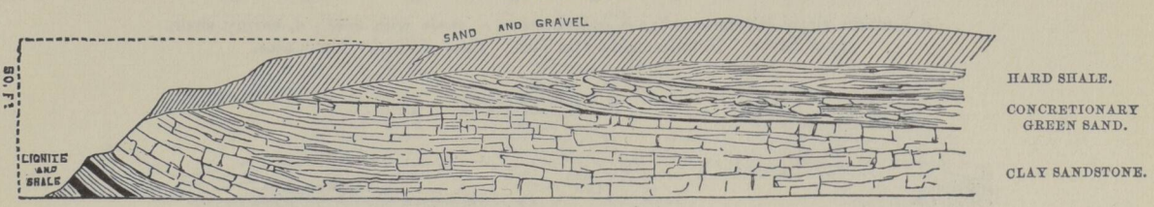


North Saskatchewan. Lignite and gravel beds, near Edmonton.

Sect. No. 12.



Sect. No. 13.



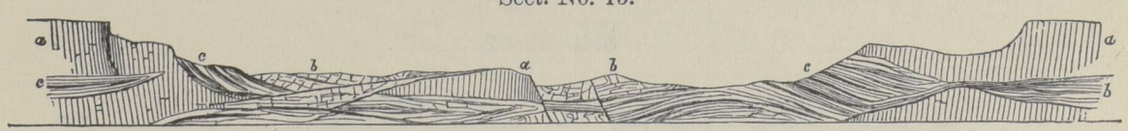
North Saskatchewan. Lignite group. Rocky Mountain House.

Sect. No. 14.



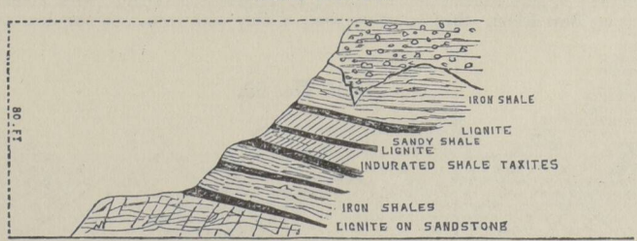
North Saskatchewan. Lignite group. Rocky Mountain House.

Sect. No. 15.



Ideal section of the lignite group at the Mountain House, showing the variation in the beds.
a, coarse-grained sandstone ; *b*, concretionary greensand ; *c*, shales with lignite.

Sect. No. 16.



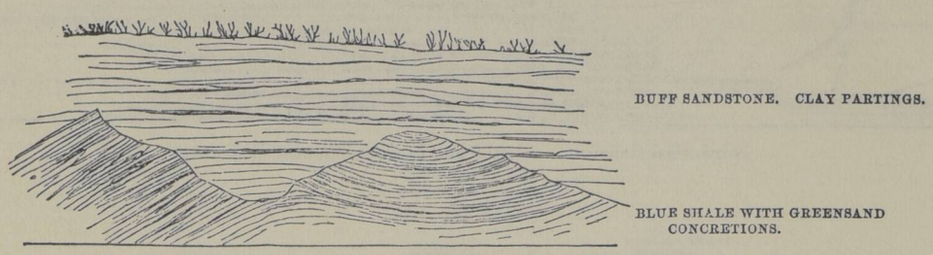
North Saskatchewan. Lignite group. 3 miles above Mountain House.

Sect. No. 17.



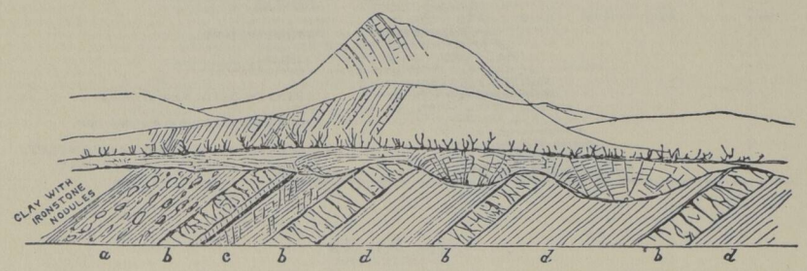
N. Saskatchewan. 5 miles above Mt. House. Shingle deposited on eroded surface of lignite.

Sect. No. 18.



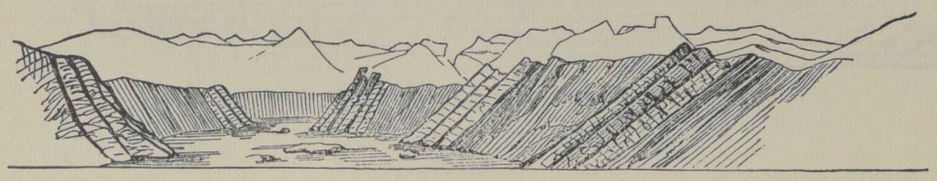
N. Saskatchewan. 20 miles above Mt. House. (Sandstone on group 2 of lignite group.)

Sect. No. 19.



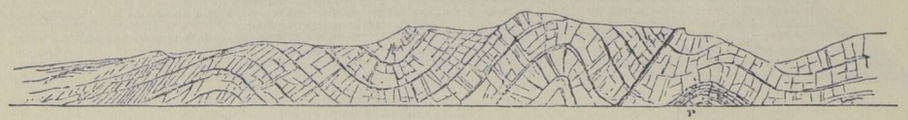
a, septaria clays (Cretaceous?); *b*, sandstones; *c*, shale with coal; *d*, earthy shale.
Bow River. 10 miles below Old Fort. Base of Rocky Mountains.

Sect. No. 20.



Bow River. Grits and shales. 15 miles from Old Fort. Base of Rocky Mountains.

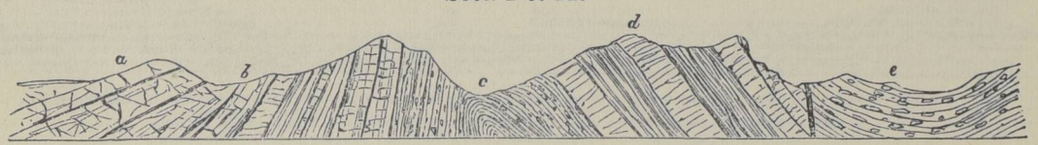
Sect. No. 21.



Little Red Deer River. Exterior range. Rocky Mountains. (7 miles.)

Heavy bedded sandstones, with clay partings and carbon streaks, becoming gradually altered and disturbed. Beneath them at *r*. chocolate-coloured arenaceous shales.

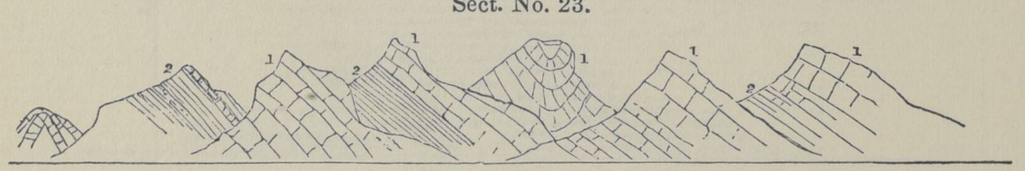
Sect. No. 22.



Deadman River. Below Old Bow Fort. Base of Rocky Mountains.

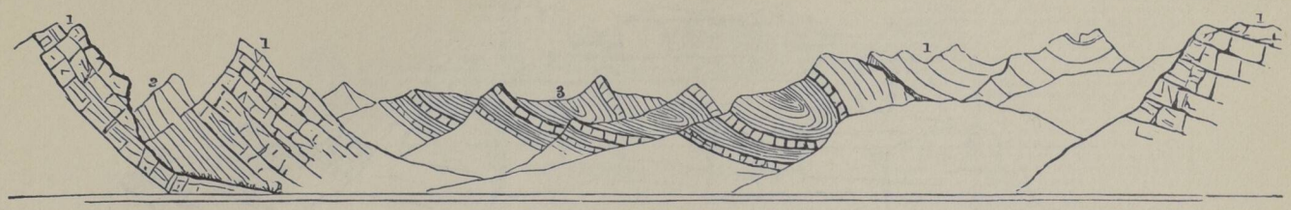
a, concretionary clay sandstone; *b*, hard sandstone and shale; *c*, carbonaceous shales, with nodules of ironstone and thin seams of coal; *d*, grits and shales, as on Bow River. Streaks of carbon; *e*, clay with ironstone nodules. (*Cret.* Bacutile Septaria clays?)

Sect. No. 23.



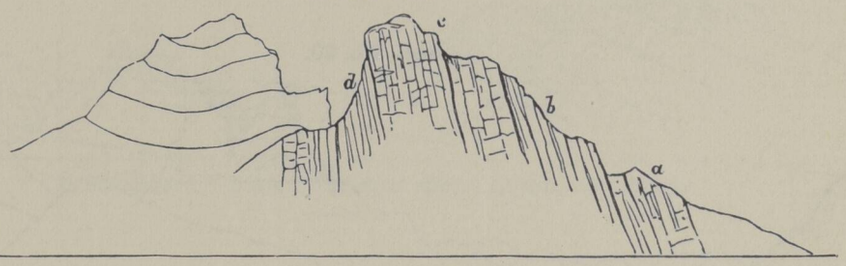
Bow River. First range. 3,000 ft. above the eye.

Sect. No. 24.



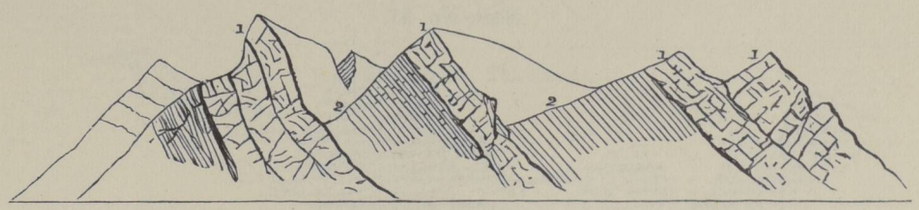
Bow River. First longitudinal valley.

Sect. No. 25.



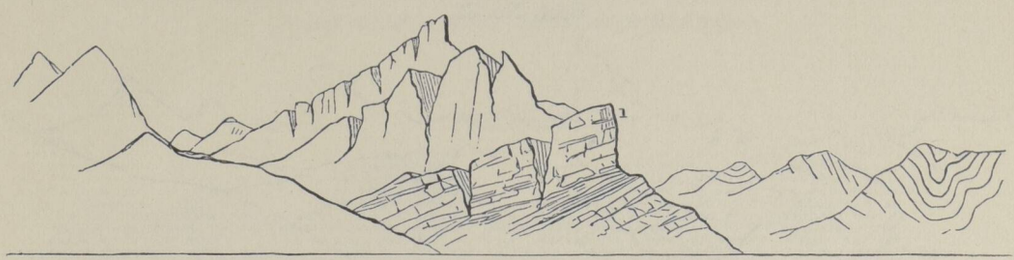
Bow River. Mountain. East side of first valley.

Sect. No. 26.



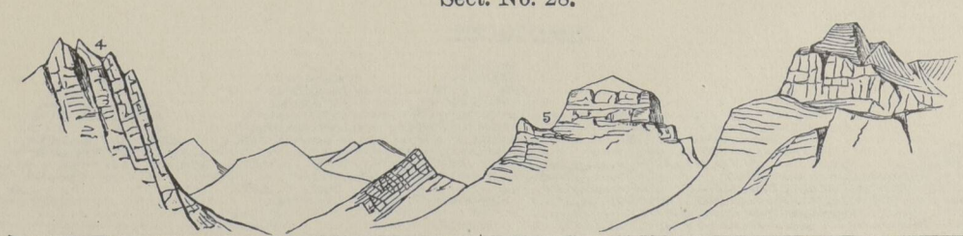
Bow River. Second range. 3,500 ft. above the eye.

Sect. No. 27.



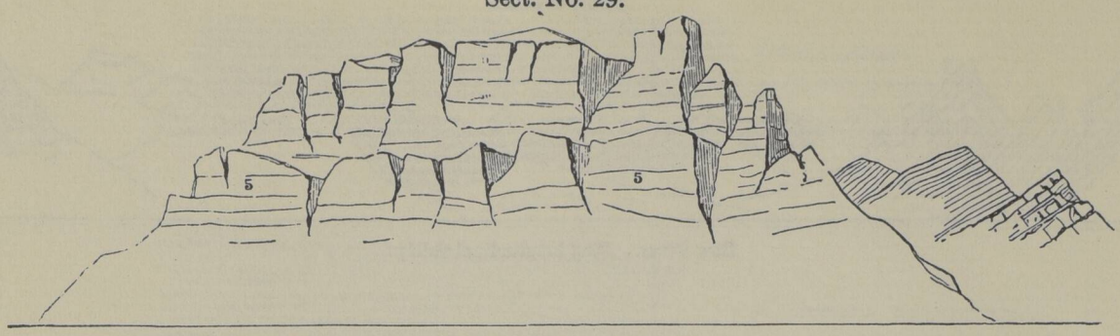
Bow River. Cascade Mountain. 4,521 ft. above the eye.

Sect. No. 28.



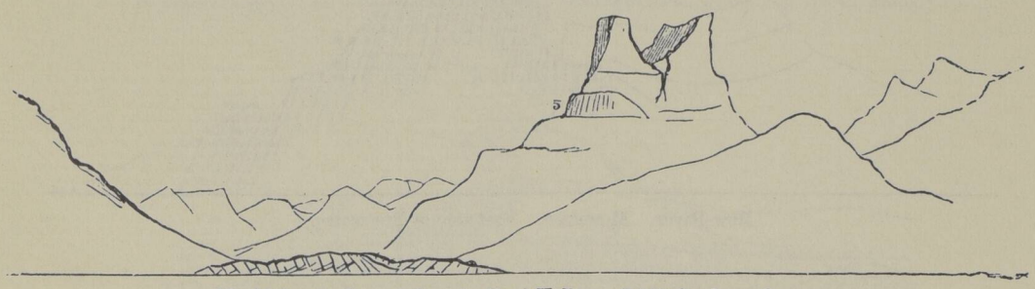
Bow River. Second longitudinal valley. Mt. Bourgeau.

Sect. No. 29.



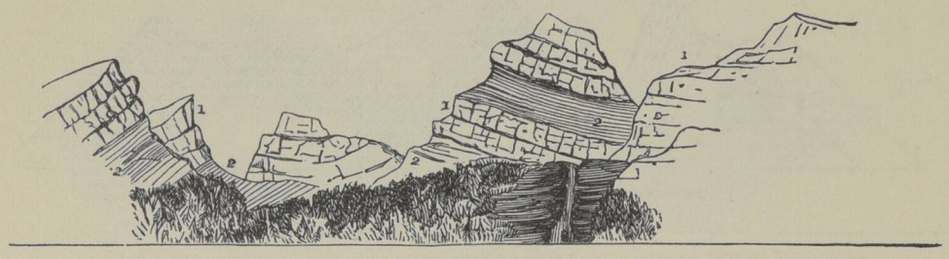
Castle Mountain, in second longitudinal valley. 5,000 ft. above the eye.

Sect. No. 30.



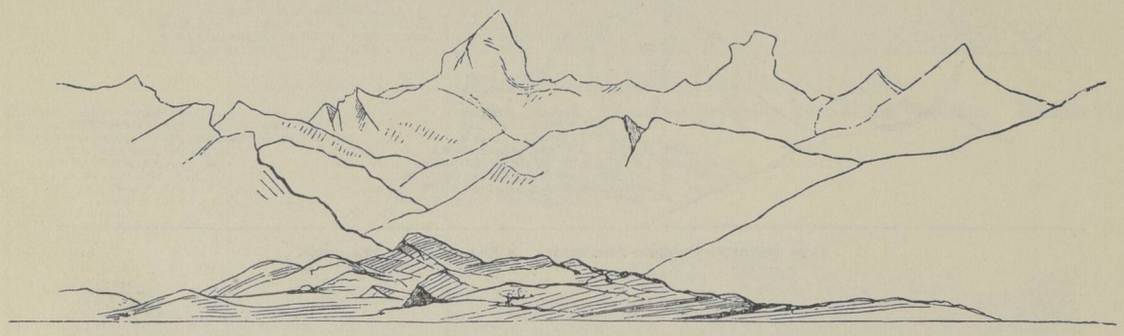
Mt. Molar, in Second Longitudinal Valley. 3,000 ft. above the eye.

Sect. No. 31.



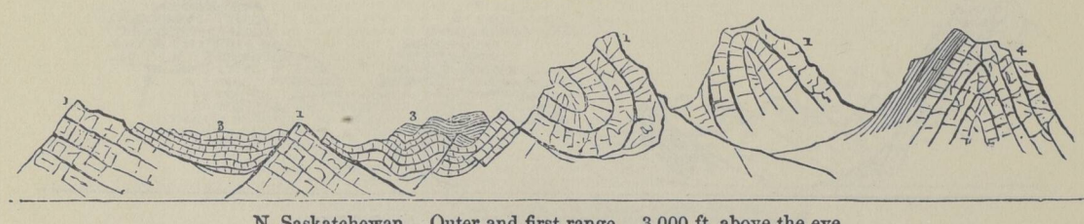
Mountains at source of Pipe Stone Creek. Second longitudinal valley.

Sect. No. 32.



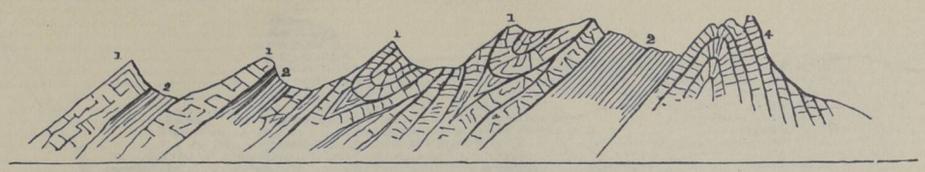
Mt. Murchison (?) From Pipe Stone Pass, alt. 7,000 ft. 6,000 ft. above the eye.

Sect. No. 33.



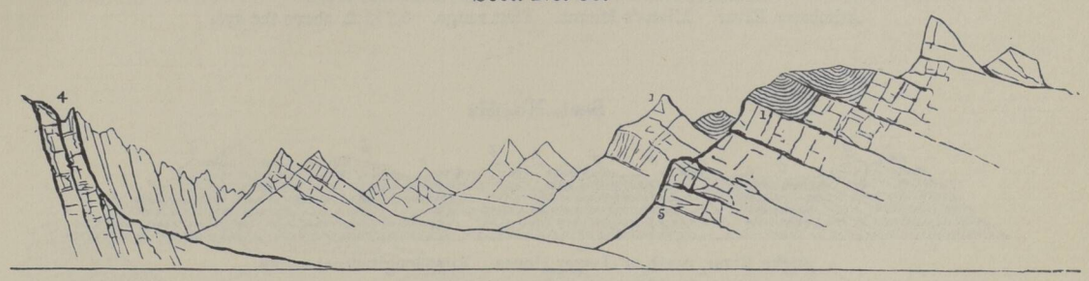
N. Saskatchewan. Outer and first range. 3,000 ft. above the eye.

Sect. No. 34.



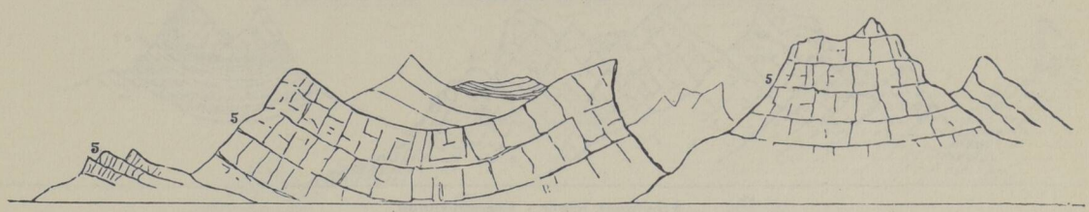
N. Saskatchewan. Second range.

Sect. No. 35.



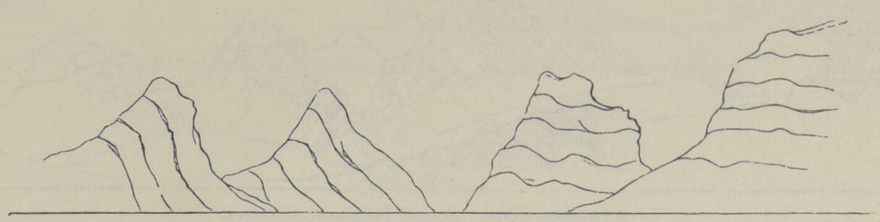
N. Saskatchewan. Second longitudinal valley. 5,500 ft. above the eye.

Sect. No. 36.



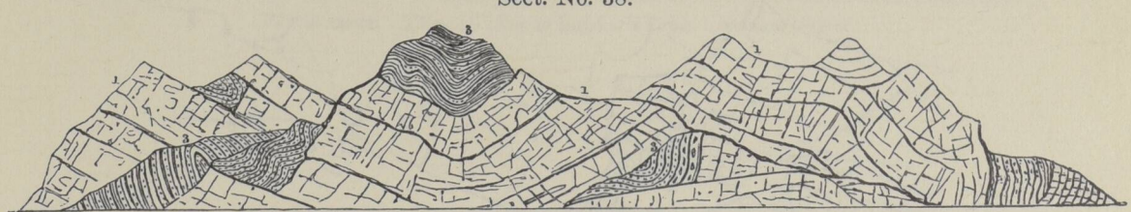
N. Saskatchewan. Third range.

Sect. No. 37.



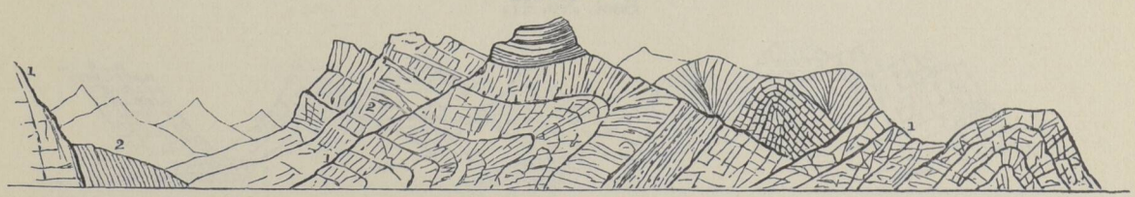
Valley of Siffleur River. Second longitudinal valley.

Sect. No. 38.



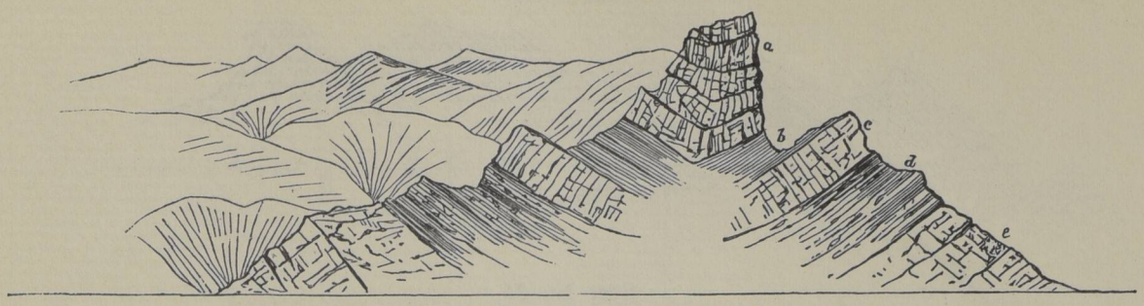
Athabasca River. First range, west side of Lac à Brulè.

Sect. No. 39.



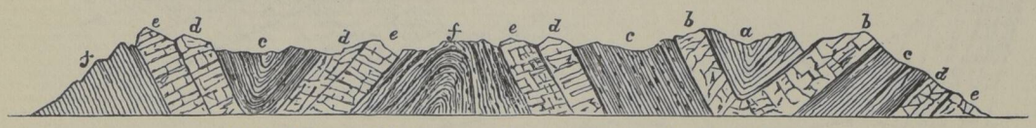
Athabasca River. First range.

Sect. No. 40.



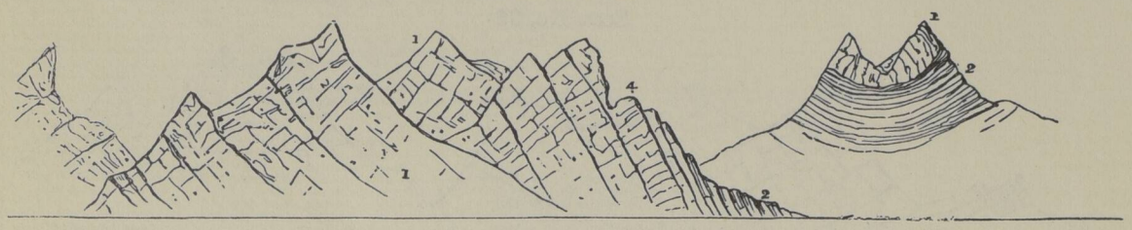
Athabasca River. Miette's Mount. First range. 5,713 ft. above the eye.

Sect. No. 41.



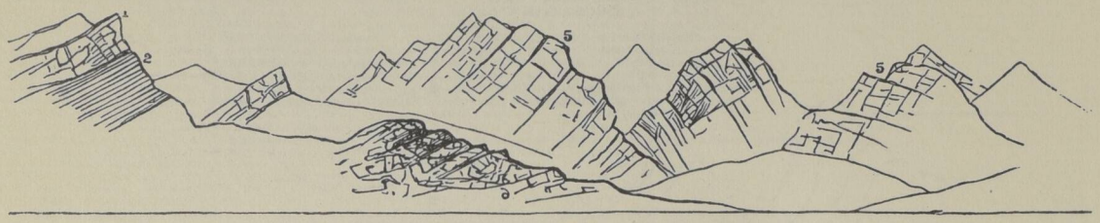
Snake River, north of Jasper House. First longitudinal valley.

Sect. No. 42.



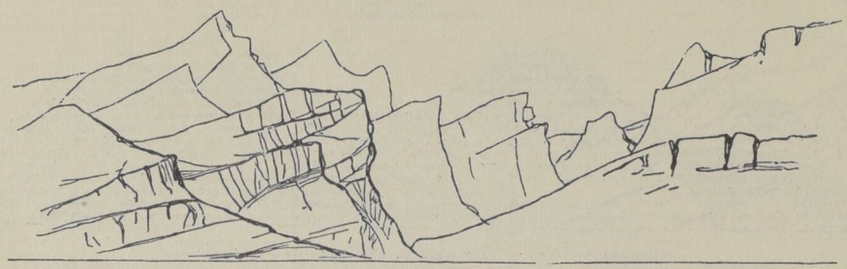
Athabasca River. Second range.

Sect. No. 43.



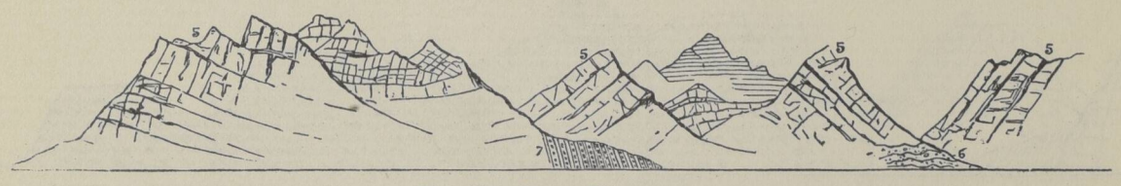
Athabasca River. Second longitudinal valley.

Sect. No. 44.



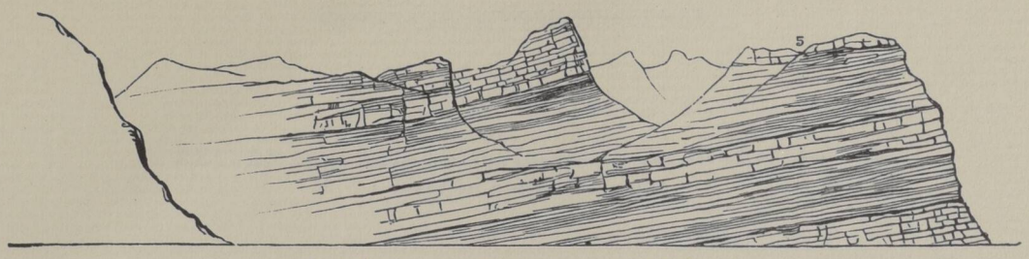
Valley of Glacier Valley. Source of N. Saskatchewan.

Sect. No. 47.



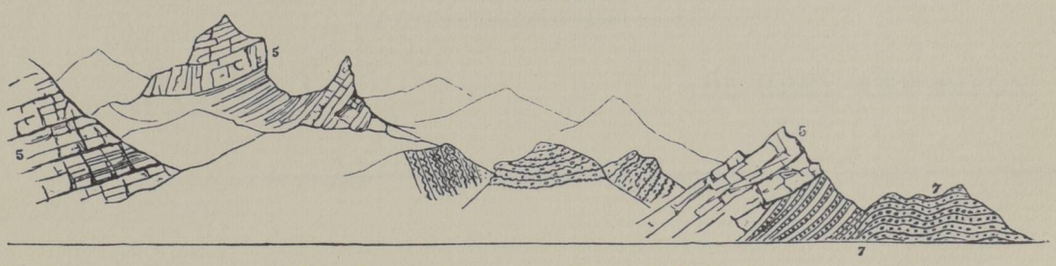
Vermillion Pass. Third range.

Sect. No. 48.



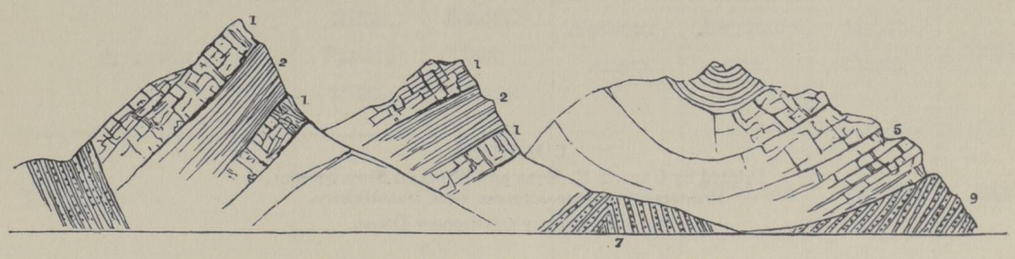
North Saskatchewan. Third range, West Section of.

Sect. No. 49.



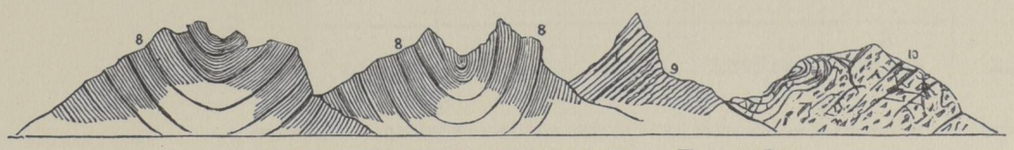
Blaeberry Pass. Third range to third longitudinal valley.

Sect. No. 50.



Kootanie River to Columbia Lakes. West part of third range.

Sect. No. 51.



Fourth range. Tobaco Plains to Baddler's Lake. Kootanie River.

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For Her Majesty's Stationery Office.

BRITISH NORTH AMERICA (ARMS, &c.)

RETURN to an Address of the Honourable The House of Commons, dated 16 April 1863;—*for*,

A "RETURN showing the Number of ARMS, &c., sent to BRITISH NORTH AMERICA, from December 1861, and ordered in consequence of the Affair of the 'TRENT.'"

War Office, 21 April 1863.

DE GREY AND RIPON.

RETURN showing the Number of ARMS, &c. sent to BRITISH NORTH AMERICA, from December 1861, and ordered in consequence of the Affair of the "TRENT."

STATIONS.	Rifles, Pattern 1853.	Smooth-bore Arms.	Accoutre-ments.	Ammuni-tion.	Great Coats.	Blankets.
To Canada - - -	26,829	- -	25,000	2,276,500	16,000	10,440
„ Halifax - - -	5,000	2,500	7,500	- -	8,000	8,000
„ New Brunswick -	13,000	- -	13,000	- -	16,000	7,500
TOTAL - - -	44,829	2,500	45,500	2,276,500	40,000	25,940

War Office, 18 April 1863.

J. Crauford Caffin, Director or Stores.

BRITISH NORTH AMERICA (ARMS, &c.)

RETURN showing the Number of Arms, &c., sent to British North America, from December 1861, and ordered in consequence of the Affair of the "Trent."

(*Mr. Arthur Mills.*)

Ordered, by The House of Commons, *to be Printed*,
22 *April* 1863.

194.

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