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Various pagings.

In Sessional paper No. 11, Part I, page 47 is incorrectly numbered page 49.

In Sessional paper No. 11, Part II, pages 24 & 95 are incorrectly numbered page 4 & 9.

In Sessional paper No. 11, Thirty-second annual report of the Department of Marine and Fisheries 1899 ... page lxxix is incorrectly numbered page lxxvix.

In Sessional paper No. 11a, page 107 is incorrectly numbered page 10.

SESSIONAL PAPERS

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OF THE

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CONTENTS OF VOLUME 1.

(This volume is bound in two parts.)

1. Report of the Auditor General, for the year ended 30th June, 1899. Presented (in part) 6th February, 1900, by Hon. W. S. Fielding. Presented (in part) 27th February, 1900.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 2.

2. Public Accounts of Canada, for the fiscal year ended 30th June, 1899. Presented 5th February, 1900, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
- 2a. Estimates of sums required for the service of Canada, for the year ending on the 30th June, 1901. Presented 27th February, 1900, by Hon. W. S. Fielding.
Printed for both distribution and sessional papers.
- 2b. Supplementary Estimates for the year ending 30th June, 1900. Presented 1st May, 1900, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
- 2c. Further Supplementary Estimates for the year ending 30th June, 1900. Presented 15th May, 1900, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
- 2d. Further Supplementary Estimates for the year ending 30th June, 1900. Presented 22nd May, 1900, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
- 2e. Supplementary Estimates for the year ending 30th June, 1901. Presented 26th June, 1900, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
- 2f. Further Supplementary Estimates for the year ending 30th June, 1901. Presented 10th July, 1900, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
3. List of Shareholders of the Chartered Banks of the Dominion of Canada, as on 31st December, 1899. Presented 4th May, 1900, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
- 3a. Report of dividends remaining unpaid, and unclaimed balances in the Chartered Banks of Canada, for five years and upwards, prior to 31st December, 1899. Presented 29th May, 1900, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME 3.

4. Report of the Superintendent of Insurance, for the year ended 31st December, 1899.
Printed for both distribution and sessional papers.
- 4a. Abstract of Statements of Insurance Companies in Canada, for the year ended 31st December, 1899. Presented 23rd April, 1900, by Hon. W. S. Fielding.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 4.

5. Report of the Department of Trade and Commerce, for the fiscal year ended 30th June, 1899. Presented 6th April, 1900, by Hon. J. Sutherland. *Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME 5.

6. Tables of the Trade and Navigation of Canada, for the fiscal year ended 30th June, 1899. Presented 27th February, 1900, by Hon. W. Paterson. *Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME 6.

7. Inland Revenues of Canada. Excise, etc., for the fiscal year ended 30th June, 1899. Presented 26th February, 1900, by Sir Henri Joly de Lotbinière.
Printed for both distribution and sessional papers.
- 7a. Inspection of Weights, Measures, Gas and Electric Light, for the fiscal year ended 30th June, 1899. Presented 26th February, 1900, by Sir Henri Joly de Lotbinière.
Printed for both distribution and sessional papers.
- 7b. Report on Adulteration of Food, for the fiscal year ended 30th June, 1899. Presented 26th February, 1900, by Sir Henri Joly de Lotbinière. *Printed for both distribution and sessional papers.*
8. Report of the Minister of Agriculture, for the year ended 31st October, 1899. Presented 15th May, 1900, by Hon. A. S. Fisher. *Printed for both distribution and sessional papers.*
- 8a. Report of the Director and Officers of the Experimental Farms, for the year 1899. Presented 29th May, 1900, by Hon. S. A. Fisher. *Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME 7.

- 8b. Criminal Statistics for the year 1899. *Printed for both distribution and sessional papers.*
- 8c. Report on Canadian Archives, 1899. Presented 1st June, 1900, by Hon. S. A. Fisher.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 8.

9. Annual Report of the Minister of Public Works, for the fiscal year ended 30th June, 1899. Presented 17th May, 1900, by Hon. W. Mulock *Printed for both distribution and sessional papers.*
10. Annual Report of the Department of Railways and Canals, for the fiscal year ended 30th June, 1899. Presented 2nd May, 1900, by Hon. A. G. Blair.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 9.

11. Annual Report of the Department of Marine and Fisheries (Marine), for the fiscal year ended 30th June, 1899. Presented 7th March, 1900, by Sir Louis Davies.
Printed for both distribution and sessional papers.
- 11a. Annual Report of the Department of Marine and Fisheries (Fisheries), for the fiscal year ended 30th June, 1899. Presented 12th March, 1900, by Sir Louis Davies.
Printed for both distribution and sessional papers.
- 11b. Report of Harbour Commissioners, etc., 1899. *Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME 10.

12. Report of the Postmaster General, for the year ended 30th June, 1899. Presented 26th April, 1900, by Hon. W. Mulock.....*Printed for both distribution and sessional papers.*
13. Annual Report of the Department of the Interior, for the year 1899. Presented 1st May, 1900, by Hon. J. Sutherland.....*Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME 11.

- 13a. Summary Report of the Geological Survey Department, for the year 1899. Presented 5th June, 1900, by Hon. J. Sutherland.....*Printed for both distribution and sessional papers.*
14. Annual Report of the Department of Indian Affairs, for the year ended 30th June, 1899. Presented 28th March, 1900, by Hon. J. Sutherland...*Printed for both distribution and sessional papers.*
- 14a. Supplementary Crop Returns, for the year ended 31st December, 1899.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 12.

15. Report of the Commissioner of the North-West Mounted Police Force, 1899. Presented 10th May, 1900, by Sir Wilfrid Laurier.....*Printed for both distribution and sessional papers.*
16. Report of the Secretary of State of Canada, for the year ended 31st December, 1899. Presented 2nd May, by Sir Wilfrid Laurier.....*Printed for both distribution and sessional papers.*
- 16a. Civil Service List of Canada, 1899. Presented 12th February, 1900, by Sir Wilfrid Laurier.
Printed for both distribution and sessional papers.
- 16b. Report of the Board of Civil Service Examiners, for the year ended 31st December, 1899. Presented 2nd May, 1900, by Sir Wilfrid Laurier....*Printed for both distribution and sessional papers.*
- 16c. Annual Report of the Department of Public Printing and Stationery, for the year ended 30th June, 1899. Presented 5th July, 1900, by Hon. S. A. Fisher.
Printed for both distribution and sessional papers.
17. Report of the Joint Librarians of Parliament, for the year 1899. Presented 1st February, 1900, by the Hon. The Speaker.....*Printed for sessional papers.*

CONTENTS OF VOLUME 13.

18. Report of the Minister of Justice as to Penitentiaries of Canada, for the year ended 30th June, 1899. Presented 1st May, 1900, by Sir Wilfrid Laurier...*Printed for both distribution and sessional papers.*
- 18a. Statement of the action of the government in respect to the manufacture and sale of twine produced by convict labour. Presented 2nd April, 1900, by Sir Wilfrid Laurier.
Printed for both distribution and sessional papers.
- 18b. Report of the Commissioner appointed to investigate the affairs of the Dorchester Penitentiary. Presented 6th July, 1900, by Hon. C. Fitzpatrick.
Printed for both distribution and sessional papers.
19. Report of the Department of Militia and Defence of Canada, for the year ended 31st December, 1899. Presented 1st May, 1900, by Hon. F. W. Borden.
Printed for both distribution and sessional papers.
20. Correspondence relating to the despatch of colonial military contingents to South Africa. Presented 5th February, 1900, by Sir Wilfrid Laurier.
Printed for sessional papers.
- 20a. Supplementary to No. 20. Presented 5th February, 1900, by Sir Wilfrid Laurier.
Printed for sessional papers.
21. Copy of an order in council relative to the issue of licenses to United States fishing vessels. Presented 5th February, 1900, by Sir Louis Davies.....*Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

22. Statement of all superannuations and retiring allowances in the civil service during the year ended 31st December, 1899, showing name, rank, salary, service and cause of retirement of each person superannuated or retired, also whether vacancy filled by promotion or by new appointment, and salary of any new appointee. Presented 5th February, 1900, by Hon. W. S. Fielding.
Printed for sessional papers.
23. Statement in pursuance of section 17 of the Civil Service Insurance Act, for the year ending 30th June, 1899. Presented 5th February, 1900, by Hon. W. S. Fielding.
Printed for sessional papers.
24. Return of over-rulings by the treasury board of the auditor-general's decisions between the sessions of 1899 and 1900. Presented 5th February, 1900, by Hon. W. S. Fielding. *Not printed.*
25. Return showing the expenditure on account of unforeseen expenses from the 1st July, 1899, to the 1st February, 1900. Presented 5th February, 1900, by Hon. W. S. Fielding. *Not printed.*
26. Statement of Governor General's Warrants issued since the last session of parliament, on account of the fiscal year 1899-1900. Presented 6th February, 1900, by Hon. W. S. Fielding.
Not printed.
27. Return to an address of the House of Commons, dated 10th July, 1899, for a copy of the treaty of 1825 between Great Britain and Russia, respecting Alaska, and for copies of the projets, protocols, and correspondence between the imperial government and the government of Russia respecting the said treaty, and subsequent thereto, and copies of the correspondence between the imperial government and the British ambassador at St. Petersburg during the negotiations for the said treaty. Presented 6th February, 1900.—*Mr. McCarthy.* *Printed for sessional papers.*
28. Return to an order of the House of Commons, dated 19th April, 1899, for copies of all letters or reports (official) addressed to or in possession of the department of agriculture or any departments of the government on the subject of freight rates from Canadian or other ocean ports on this continent to any part of Europe; also of all letters or reports on the subject of freight rates from Chicago and other points to ocean ports, to Montreal, New York or elsewhere; also of all letters or reports on the subject of freight rates from Chicago or other points to Liverpool. Presented 6th February, 1900.—*Mr. Davin.* *Not printed.*
29. Detailed statement of all bonds or securities registered in the department of the secretary of state of Canada, since last return, 29th March, 1899, submitted to the parliament of Canada under section 23, chapter 19 of the Revised Statutes of Canada. Presented 13th February, 1900, by Hon. C. Fitzpatrick. *Not printed.*
30. General rules and orders of the Exchequer Court of Canada, 1899. Presented 13th February, 1900, by Hon. C. Fitzpatrick. *Not printed.*
31. Return to an address of the Senate, dated 26th July, 1899, for a copy of the report of the delegate sent by the government of Canada to the medical congress on tuberculosis, held at Berlin, Germany, in the month of May last. Presented 6th February, 1900.—*Hon. Mr. Power.* *Not printed.*
32. Copy of regulations in connection with the Public Works (Health) Act, 1899. Presented 9th February, 1900, by Sir Wilfrid Laurier. *Not printed.*
33. Return to an order of the House of Commons, dated 19th April, 1899, for copies of all communications, orders and instructions issued by the department of the interior to the administrator, or any of his officials, in the Yukon district, with the dates of their despatch. Presented 12th February, 1900.—*Mr. Foster* *Not printed.*
- 33a. Supplementary return to an order of the House of Commons, dated 24th April, 1899, for copy of all reports to the minister of the interior, or to the department of the interior, or to any officer of that department from William Ogilvie, or from the council of the Yukon district, or from any member of such council relating to the administration of the said Yukon district or relating to any matter connected with the administration of the said district. Presented 12th February, 1900.—*Mr. Borden (Halifax)* *Not printed.*
- 33b. Return to an order of the House of Commons, dated 8th May, 1899, of copies of all reports, letters and telegrams from Mr. Ogilvie, the commissioner for the Yukon territory, to any member of the government, or any department thereof, and all replies thereto and instructions thereon. Presented 12th February, 1900.—*Sir Charles Hibbert Tupper.* *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

- 33c. Return to an order of the House of Commons, dated 8th May, 1899, for copies of all reports, letters and telegrams from Major Walsh, when commissioner for the Yukon territory, to any member of the government, or any department thereof, and all replies thereto or instructions thereon. Presented 14th February, 1900.—*Sir Charles Hibbert Tupper*.....*Not printed.*
- 33d. Ordinances of the Yukon territory for 1898, pursuant to 61 Victoria, chapter 6, section 7. Presented 16th February, 1900, by Sir Wilfrid Laurier.....*Not printed.*
- 33e. Return to an order of the House of Commons, dated 10th May, 1899, for copies of all particulars, applications, correspondence and grants respecting two and one-half miles of Hunker Creek, Klondike mining division, Yukon district, for the purpose of hydraulicing the same. Presented 26th March, 1900.—*Sir Charles Hibbert Tupper*.....*Not printed.*
- 33f. Return to an address of the House of Commons, dated 19th March, 1900, showing the number of gold claims in the Yukon which have been given in compensation for claims alleged to have been lost through mistakes of officials or otherwise, with all papers, correspondence, reports and orders in connection therewith and any regulations or instructions in relation thereto. Presented 5th April, 1900.—*Mr. Foster*.....*Not printed.*
- 33g. Return to an order of the House of Commons, dated 7th February, 1900, for a tabular statement of all contracts and agreements for mail service between Victoria and Vancouver and the Yukon district for the year 1898-9, the names of the parties thereto, the routes covered, amounts paid or to be paid for such service, and a similar return for the year 1899 and 1900 so far as they are current. Presented 17th April, 1900.—*Mr. Foster*.....*Not printed.*
- 33h. Return to an address of the House of Commons, dated 19th March, 1900, for all liquor permits for the Yukon district granted by government, or by the commissioner in council of the Yukon council, since July, 1898; amount, and to whom granted. Presented 24th April, 1900.—*Mr. Foster*.....*Not printed.*
- 33i. Return to an order of the House of Commons, dated 7th February, 1900, for copies of instructions to Mr. F. C. Wade not already brought down and referred to on page 15 of Further Report of William Ogilvie, Esq., laid before parliament, 1899. The tenders and papers respecting the same referred to on page 16 of said report not already brought down, and any note or memorandum of approval of the Department of the Interior at Ottawa referred to on page 19 of the said report. Presented 24th April, 1900.—*Sir Charles Hibbert Tupper*.....*Not printed.*
- 33j. Supplementary return to No. 33g. Presented 24th April, 1900.—*Mr. Foster*.....*Not printed.*
- 33k. Return to an order of the House of Commons, dated 25th April, 1900, for copies of petitions, correspondence, etc., on the subject of granting representation in the House of Commons of Canada to the Yukon territory. Presented 25th April, 1900.—*Sir Wilfrid Laurier*...*Not printed.*
- 33l. Return to an order of the House of Commons, dated 10th May, 1899, showing the dates upon which mails for Dawson were despatched from Vancouver or Victoria since 1st July, 1898, to the present, and the dates of the arrival of them at Dawson respectively, and the routes by which they were despatched; also the dates on which mails were despatched from Dawson since 1st July, 1898, and when these reached Vancouver or Victoria and by what routes.—Presented 4th May, 1900.—*Mr. Foster*.....*Not printed.*
- 33m. Ordinances of the Yukon territory for the year 1899, pursuant to 61 Victoria, chapter 6, section 7. Presented 7th May, 1900, by Sir Wilfrid Laurier.....*Not printed.*
- 33n. Return to an order of the House of Commons, dated 8th May, 1899, for copies of all reports, letters, and telegrams from any member of the council for the Yukon territory to any member of the government, or any department thereof, and all replies thereto or instructions thereon. Presented 7th May, 1900.—*Sir Charles Hibbert Tupper*.....*Not printed.*
- 33o. Supplementary return to an order of the House of Commons, dated 19th April, 1899, for copies of all communications, orders and instructions issued by the department of the interior to the administrator, or any of his officials, in the Yukon district, with the dates of their despatch. Presented 15th May, 1900.—*Mr. Foster*.....*Not printed.*
- 33p. Return to an order of the House of Commons, dated 22nd May, 1900, for correspondence with the department of customs in re steamship *Yukoner*. Presented 22nd May, 1900.—*Mr. Paterson*.
Printed for distribution.

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- 33q.** Return to an order of the House of Commons, dated 30th May, 1900, for a statement of the royalty paid by Alex. McDonald, of the Yukon territory. Presented 30th May, 1900.—*Mr. Sutherland.*
Not printed.
- 33r.** Return to an order of the House of Commons, dated 30th May, 1900, for copies of correspondence and papers relative to certain applications of J. M. Guerin, of Montreal, for leases to dredge certain rivers in the Yukon territory for minerals. Presented 30th May, 1900.—*Mr. Sutherland.*
Not printed.
- 33s.** Return to an order of the House of Commons, dated 7th February, 1900, for an itemized statement of the number of gallons of spirituous and malt liquors taken into the Yukon district since the period covered by Return 63g, 1899, the number of permits issued therefor, names and post office addresses of those persons or companies to whom permits were granted and the amount paid therefor, and all correspondence in connection therewith. Presented 5th June, 1900.—*Mr. Foster.*
Tabular matter printed.
- 33t.** Return to an address of the House of Commons, dated 19th March, 1900, for a statement of the living allowance scale now in effect with relation to Yukon officials, and for all orders in council in connection therewith. Presented 7th June, 1900.—*Mr. Foster.**Not printed.*
- 33u.** Return to an order of the House of Commons, dated 7th June, 1900, for a copy of the report of Mr. William Ogilvie, commissioner of the Yukon territory in connection with the administration of affairs in that region. Presented 7th June, 1900.—*Hon. J. Sutherland.*
Printed for both distribution and sessional papers.
- 33v.** Copies of certain resolutions passed at a mass meeting of British subjects of the Yukon territory, held in Dawson city on the 23rd March, 1900, and copies of certain petitions from the citizens' committee, praying for representation in the council of the Yukon territory, and also representation in the federal parliament. Presented 11th June, 1900, by Sir Wilfrid Laurier.*Not printed.*
- 33w.** Return to an address of the House of Commons, dated 7th February, 1900, for copies of all reports, papers, telegrams and correspondence not already brought down relating to the closing (so called) and opening (so called) of Dominion Creek, referred to on page 79, Yukon Evidence Blue-book, including (a) minutes or notes of meetings or of council, such as referred to on pp. 79, 81, 85, 88, 89, 112 (Yukon Blue-book Evidence). (b) Report of Mr. Fawcett referred to, p. 80. (c) Type-written statement, p. 100. (d) Order of Major Walsh, p. 110. (e) Returns, memoranda and reports of Corporal Wilson and other officers respecting inspection of mines and collection of royalties, p. 121. (f) The letter from Mrs. Koch to Major Walsh, p. 128. (g) The permit to Mrs. Koch, pp. 127, 128. Presented 13th June, 1900.—*Sir Charles Hibbert Tupper**Not printed.*
- 33z.** Supplementary return to No. 33f. Presented 30th June, 1900.*Not printed.*
- 34.** Statement in reference to fishing bounty payments for the year 1898-1899. Presented 13th February, 1900, by Sir Louis Davies.*Not printed.*
- 35.** Return to an address of the Senate, dated 9th February, 1900, for 1. A copy of the statement of the case submitted to English council for their opinion as to the competency of the Canadian parliament to alter, by legislation, the electoral divisions of the Dominion, except upon the recurring occasions of the decennial proportionate readjustment of the representation provided for by the British North America Act, 1867, after the taking of each census. 2. A copy of the opinion so given by such counsel. 3. A statement of the fees or emoluments paid or granted to such counsel for such opinion. 4. Copies of all correspondence by the government, or any member of the government, or any person on behalf of the government or any member thereof, with said counsel or either of them with reference to such statement of case, or the opinion founded thereon; with copies of all messages, memoranda or documents made, had, submitted or taken with reference to said statement of case and said opinion. 5. The names of the counsel to whom application was made for such opinion, the date of such application, and the names of the parties by whom the application was made. Presented 1st March, 1900.—*Hon. Sir Mackenzie Bowell**Not printed.*
- 36.** Supplementary return to an address of the House of Commons, dated 15th May, 1899, for copies of all complaints, referred to on page 3 of the report of the deputy minister of the interior (Annual Report of the Department of the Interior for the year 1897), minutes of council, commission instructions and report of Mr. Archer Martin, the commissioner, respecting the New Westminster crown timber office. (Notes of evidence.) Presented 14th February, 1900.—*Sir Charles Hibbert Tupper.**Not printed.*

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37. Return showing reductions and remissions made under section 141 as added to the Indian Act by section 8, chapter 35, 58-59 Victoria, for the year ended 30th June, 1899. Presented 15th February, 1900, by Hon. C. Sifton *Not printed.*
38. Return of correspondence, etc., respecting the affairs of the Canadian Pacific Railway Company, which the department of the interior has had since the previous return was presented to parliament under the resolution of the 20th February, 1882. Presented 15th February, 1900, by Hon. C. Sifton *Not printed.*
39. Return of orders in council which have been published in the *Canada Gazette*, between 1st January and 31st December, 1899, in accordance with the provisions of clause 91 of the Dominion Lands Act, chapter 54 of the Revised Statutes of Canada, and its amendments. Presented 23rd February, 1900, by Hon. C. Sifton *Not printed.*
40. Return of orders in council which have been published in the *Canada Gazette*, between 1st January and 31st December, 1899, in accordance with the provisions of section 46, the North-west Irrigation Act, being 57-58 Victoria, chapter 30, etc. Presented 23rd February, 1900, by Hon. C. Sifton *Not printed.*
- 40a. Supplementary return to No. 40. Presented 31st May, 1900, by Hon. J. Sutherland *Not printed.*
41. Return of orders in council which have been published in the *Canada Gazette* and in the *British Columbia Gazette*, between 1st January and 31st December, 1899, in accordance with the provisions of subsection (d) of section 38 of the regulations for the survey, administration, disposal and management of Dominion lands within the 40-mile railway belt in the province of British Columbia. Presented 23rd February, 1900, by Hon. C. Sifton *Not printed.*
42. Return to an order of the House of Commons, dated 12th February, 1900, for a statement of all sums paid to the *Leader Company, Ltd.*, of Regina, N.W.T., or to N. F. Davin, M.P., managing director of said company, in the years 1894 and 1895, showing the services for which such sums were paid. Also for copies of all letters, telegrams and correspondence between said N. F. Davin and the government in connection with such payments. Presented 23rd February, 1900.—*Mr. Davis* *Not printed.*
43. Return to an order of the House of Commons, dated 12th February, 1900, for copies of all letters, reports, entries and other documents in reference to the homesteading or sale of the south-east and the south-west quarters of section twenty-five of township one in the third range east of the first principal meridian, in the province of Manitoba. Presented 23rd February, 1900.—*Mr. La Rivière* *Not printed.*
44. Statement of affairs of the British Canadian Loan and Investment Company (Limited), for the year ended 31st December, 1899. Also a list of the shareholders on 31st December, 1899. Presented (Senate) 1st March, 1900, by the Hon. The Speaker *Not printed.*
45. Return to an address of the Senate, dated 2nd August, 1899, calling for copies of all specifications and advertisements issued in May, 1896, for tenders for supply of lubricating and signal oils for the Intercolonial Railway. 2. All tenders received in response to said advertisements. 3. Analyst's report on sample submitted. 4. Notices to successful tenderers. 5. Order in council authorizing minister to notify successful tenderers that contracts would not be executed with them. 6. Any subsequent tender made by the Galena Oil Company, with analyst's report on samples furnished. 7. Contracts made with the Galena Oil Company and bearing date the 17th of September and the 23rd of September, 1896, respectively. Also a return showing the car mileage on the Intercolonial Railway for each of the years 1895, 1896, 1897 and 1898, each year to be computed from the 1st day of November to the 31st of October following. Also a statement of amounts deducted, with dates of such deductions from the accounts of the Galena Oil Company to cover the guarantee in the contract. Presented 1st March, 1900.—*Hon. Mr. Ferguson* *Not printed.*
46. Return to an address of the Senate, dated 30th May, 1899, for a statement showing: 1. Names and residences of all parties filing claims against the crown in the exchequer court from July, 1893, to May, 1899. 2. Dates of filing and nature of claim and amounts claimed. 3. Dates of hearing each case. 4. Dates when judgment was recorded, and amounts allowed; amount of costs awarded. 5. Dates when award and amount was paid. 6. A statement showing appeals to supreme and other courts, from decision of exchequer court. 7. Names and residences of parties,

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- with dates of claims so appealed, with amounts originally claimed. 8. Result of appeals and amounts allowed in cases appealed. 9. Amount of costs allowed in appeal cases. 10. When such amounts so recovered in appeal were paid, and the amounts thereof. Presented 1st March, 1900.—*Hon. Mr. Clemon* *Not printed.*
47. Return to an order of the House of Commons, dated 7th February, 1900, for copies of all correspondence in the possession of the government relating to the offer of Major General Hutton to serve in the South African war; and also all correspondence between the department of militia and defence and Major-General Hutton relating to the organization of the Canadian contingents despatched to Africa. Presented 2nd March, 1900.—*Mr. Bourassa*..... *Printed for sessional papers*
48. Return to an order of the House of Commons, dated 19th February, 1900, for copies of all telegrams, letters, reports and documents of every description, between the department of militia and defence, or any member of the government, and J. H. Wilson, M.D., ex-M.P., or any person or persons on his behalf regarding the military parade-ground at St. Thomas, Ontario, and for which a large sum of money was placed in the Estimates of last year. Presented 2nd March, 1900.—*Mr. Ingram*.
Not printed.
- 48a. Supplementary return to No. 48. Presented 20th July, 1900..... *Not printed.*
49. Copies of orders in council, general orders, appointments to office and militia orders affecting the contingents, in connection with the despatch of the colonial military force to South Africa. Presented 5th March, 1900, by Hon. F. W. Borden..... *Printed for sessional papers.*
50. Return to an order of the House of Commons, dated 26th February, 1900, for a copy of the regulations under which bounties on silver lead ore (58-59 Vic., C. 7) are paid. Presented 6th March, 1900.—*Mr. Foster*..... *Not printed.*
51. Return to an order of the House of Commons, dated 19th February, 1900, for a copy of the report of Mr. Coote, the engineer lately in the employ of the department of public works, respecting the Teslin Lake railway route. Presented 6th March, 1900.—*Mr. Davin* *Not printed.*
52. Return of all lands sold by the Canadian Pacific Railway Company, from the 1st October, 1898, to the 1st October, 1899. Presented 6th March, 1900, by Hon. J. Sutherland... .. *Not printed.*
53. Return to an order of the House of Commons, dated 7th February, 1900, for copies (1) of any correspondence between Mr. James Ross, M.L.A., minister of public works in the North-west Territories government, on the subject of the desirability of the department of agriculture of the Dominion handling wheat in the same manner as dairying is handled, so as to secure that the highest grade of North-west wheat should reach the English market. (2.) Copies of letters inclosed in the aforesaid correspondence which had passed between Mr. A. J. Hunter, farmer, Assiniboia, N.W.T., and a Plymouth miller, respecting a certain sample of wheat. Presented 7th March, 1900.—*Mr. Davin* *Not printed.*
54. Return to an order of the House of Commons, dated 26th February, 1900, for copies of forms used in the census of the respective years of 1871, 1881 and 1891, with regard to the place of birth, origin and nationality. Presented 7th March, 1900.—*Mr. La Rivière*..... *Not printed.*
55. Return to an order of the House of Commons, dated 8th March, 1900, for copies of certain letters and cablegrams relating to the Pacific cable scheme. Presented 8th March, 1900.—*Hon. W. Mulock* *Printed for both distribution and sessional papers.*
- 55a. Return to an address of the House of Commons, dated 26th February, 1900, for copies of all correspondence with the imperial government, any of the colonies or any individuals, not already brought down, on the subject of the Pacific cable, and all papers, letters, telegrams and reports relating to the delays which have arisen in connection with the establishment of the undertaking. Presented 14th March, 1900.—*Sir Charles Tupper*.
Printed for both distribution and sessional papers.
- 55b. Return to the Senate, of certain papers relating to the subject of the Pacific cable. Presented 25th June, 1900, by Hon. R. W. Scott..... *Printed for both distribution and sessional papers.*

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56. Return to an order of the House of Commons, dated 24th April, 1899, showing the number of (a) passenger, (b) sleeping or parlour, (c) freight, (d) other cars purchased by the government for the Intercolonial Railway or other government railways since the first day of January, 1898. 2. The number of locomotive engines purchased by the government for the said railways during the said period. 3. The names, residence and place of business of the company, firm or person from whom each such engine and car was purchased. 4. The price paid for each such engine and car respectively. Presented 12th March, 1900.—*Mr. Pope*.....*Not printed.*
- 56a. Return to an order of the House of Commons, dated 12th February, 1900, For (a) the number of all first-class tickets issued at the Sydney and North Sydney stations respectively over the Intercolonial Railway from the 1st day of September, 1899, to the 31st January, 1900. (b) The number of first-class tickets that were issued to each of these stations respectively during the said period. (c) The number of parlour car tickets issued to and from each of these stations respectively during the stated period. (d) The number of cars of freight and the aggregate number of tons of freight that were shipped from and arrived at each of these stations respectively during the period stated. (e) The aggregate amount earned at or received from each of these stations respectively for all passenger rates and fares and for all freight during the period stated. Presented 12th March, 1900.—*Mr. Gillies*.....*Printed for sessional papers.*
- 56b. Return to an order of the House of Commons, dated 10th May, 1899, for (1) copies of all local and other tariffs and of all supplements thereto in force on the 1st day of July, A.D. 1898, on the Intercolonial Railway and on all railways leased, used or operated by the government in connection with the Intercolonial Railway; (2) copies of all such local and other tariffs and supplements thereto in force on the said Intercolonial Railway and other railways on the 1st day of April, A.D. 1899; (3) a complete list, statement and return, giving full and complete particulars of all special rates or other concessions to any merchants, traders, manufacturers or other persons for or in respect of the carriage of freight on the said Intercolonial Railway and other railways aforesaid, which were in force or effect on the following dates respectively: (a) the 1st day of July, A.D. 1898; (b) the 1st day of April, A.D. 1899. (4) Copies of all letters, reports, telegrams and communications in writing during the year 1898 from Mr. A. H. Harris as general traffic manager of the Intercolonial Railway to the general manager of the said railway respecting or relating to or concerning the re-arrangement or revision of tariffs on the Intercolonial Railway, or of the rules and regulations governing the carriage of either passengers or freight on the said railway. Presented 2nd April, 1900.—*Mr. Pope*.....*Not printed.*
- 56c. Return (in part) to an order of the House of Commons, dated 29th May, 1899, for: 1. Copies of all claims presented to the government for lands purchased or expropriated for the construction or connected with the operation of St. Charles Branch of the Intercolonial Railway; also a statement showing the amount of each claim, the names of those whose claims have been settled for land purchased or expropriated. 2. For land and other damages, and the names and amounts of claimants whose claims are still unpaid, and the bills presented for legal or other expenses and the amount paid to each person or firm. Presented 2nd May, 1900.—*Mr. McMullen*....*Not printed.*
- 56d. Return to an address of the Senate, dated 3rd April, 1900, for: 1. Copies of all notices issued by the Intercolonial Railway since May, 1896, calling for tenders for the supply of oil for the said railway, and also copies of all tenders received in reply to said advertisement and contracts entered into, as a result of such call for tenders. 2. A return showing the locomotive, passenger and freight car mileage on the Intercolonial Railway for the year ended the 31st day of October, 1899. 3. Also a return showing the total net amount paid for oils for the Intercolonial Railway for the year ended the 31st day of October, 1899, giving the names of the parties to whom such payments were made. Presented 10th May, 1900.—*Hon. Mr. Ferguson*.....*Not printed.*
- 56e. Return to an order of the House of Commons, dated 7th May, 1900, for: 1. The total amounts of the freight charges mutually accounted for between the Intercolonial Railway and the Canadian Pacific Railway for the year ending the 30th day of June, 1897, and with respect to freight interchanged (1) at St. John, N.B., (2) at Montreal; (b) with respect to through freight bonded over (1) at St. John, N.B., (2) at Montreal; the said amounts for the year ending 30th June, 1899. 2. The total amounts, respectively, allotted to the Intercolonial and Canadian Pacific Railways in the division of passenger fares in connection with through passengers (a) via Montreal, (b) via St. John, N.B., for the year ending the 30th day of June, 1897. 3. The said amounts for the year ending 30th day of June, 1899. Presented 16th May, 1900.—*Mr. Foster*.....*Not printed.*

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- 56f. Return to an order of the House of Commons, dated 7th May, 1900, showing the total amounts of freight and charges and passenger fares collected by the Canadian Pacific Railway and accounted for by the Canadian Pacific Railway to the Intercolonial Railway for the year ending the 30th June, A.D. 1897, and the amounts of said charges and fares for the year ending the 30th day of June, 1899. Presented 16th May, 1900.—*Mr. Powell*..... *Not printed.*
- 56g. Return to an order of the House of Commons, dated 7th February, 1900, for copies of all correspondence between the minister of railways or any of the officers of the department, and the Canadian Pacific Railway Company, in reference to traffic arrangements over the Intercolonial Railway, and all reports, agreements and instructions in connection therewith. Presented 7th June, 1900.—*Mr. Foster*..... *Not printed.*
- 56h. Return to an order of the House of Commons, dated 8th June, 1900, showing what rails, rolling stock or other material, if any, have been sold or otherwise parted with by the Intercolonial Railway each year since the 1st day of July, 1896, to whom were the same sold or otherwise parted with, and whether the sales were made by public contract or tender. Presented 8th June, 1900. *Mr. Blair*..... *Not printed.*
57. Return to an order of the House of Common, dated 7th February, 1900, for copies of papers, correspondence, telegrams and memoranda and agreement entered into between or on behalf of the governments of Canada and Prince Edward Island relating to the construction of a railway and traffic bridge across the Hillsborough river, in the province of Prince Edward Island. Presented 12th March, 1900.—*Mr. Martin*..... *Printed for sessional papers.*
58. Return to an address of the House of Commons, dated 26th February, 1900, for a copy of the order in council of the 3rd August, 1898, appointing Joseph Eno Girouard to the position of registrar of the Yukon territory. Presented 12th March, 1900.—*Mr. Bergeron*..... *Not printed.*
59. Return to an address of the House of Commons, dated 12th February, 1900, for copies of all despatches, papers and correspondence respecting the salaries of county court judges in the province of British Columbia, not already brought down. Presented 13th March, 1900.—*Sir Charles Hibbert Tupper*..... *Not printed.*
60. Return to an order of the House of Commons, dated 26th February, 1900, for copies of all correspondence, petitions and other documents relating to the application for subsidy for rebuilding that portion of the Montreal, Portland and Boston Railway, now the Montreal and Province Line Railway, from Farnham via Stanbridge East and Frelighsburg to the Province Line in the county of Missisquoi. Presented 13th March, 1900.—*Mr. Moore*..... *Not printed.*
61. Return to an order of the House of Commons, dated 12th February, 1900, for a statement of the number of permits to cut timber, fuel, or both, issued during the year 1899 by Martin Jérôme, or, upon his recommendation, by the crown timber inspector, or by any officer of the crown timber office at Winnipeg; the dates of such permits, the amount of fees collected or due, and the dates of payment, whole or part; also the names of the respective parties to whom these permits were issued. Presented 13th March, 1900.—*Mr. LaRivière*..... *Not printed.*
62. Return to an order of the House of Commons, dated 19th February, 1900, for copies of all correspondence, reports, telegrams or papers which have passed between the government, or any member thereof, and the president of the Montreal conference of the methodist church in Canada, or any member of the missionary committee of that church, who was approached to investigate the grievances of the methodist Fox Bay settlers of the island of Anticosti. Presented 13th March, 1900.—*Mr. Taylor*..... *Not printed.*
63. Return to an order of the House of Commons, dated 12th February, 1900, for reports, correspondence and papers relating to the ss. 'John C. Barr' admitted to the Canadian registry of shipping at Dawson. Presented 13th March, 1900.—*Sir Charles Hibbert Tupper*... *Printed for distribution.*
- 63a. Supplementary return to No. 63. Presented 19th April, 1900..... *Printed for distribution.*
- 63b. Further supplementary return to No. 63. Presented 10th May, 1900..... *Printed for distribution.*
64. Return to an order of the House of Commons, dated 26th February, 1900, for copies of all letters, telegrams, evidence, reports, documents and papers in reference to or in connection with the dismissals of Isaac Dick and Bartholomew Brown as special fishery guardians in the county of Charlotte, New Brunswick. Presented 13th March, 1900.—*Mr. Ganong*... *Not printed.*

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- 64a. Supplementary return to an address of the House of Commons, dated 14th March, 1898, for copies of all orders in council, papers, depositions, reports, evidence, correspondence and documents in relation or reference to any charges made against Peter S. Archibald, lately chief engineer of the Intercolonial Railway, or to the dismissal of the said Peter S. Archibald from his position or office as such chief engineer, or the grounds or reasons for such dismissal, or in relation or reference to any claim of the said Peter S. Archibald for superannuation allowance or otherwise in relation or reference to the retirement or dismissal of the said Peter S. Archibald from the service of the Intercolonial Railway. Presented 14th March, 1900.—*Mr. Borden (Halifax)*.....*Not printed.*
- 64b. Return to an address of the Senate, dated 28th April, 1899, for names of all commissioners appointed by order in council or otherwise since 9th April, 1897, to inquire into and report upon charges preferred against any employee of the government, whether permanent or temporary, of offensive partisanship, or of any misconduct whatever. 2. The reports of said commissioners, or of commissioners previously appointed, not already brought down, and a statement showing the action taken by the government thereon. 3. The amounts paid each commissioner since the 9th April, 1897, in fees *per diem* allowance, travelling expenses and incidentals of all kinds. 4. The names, ages, offices and salaries of all employees in the inside or outside service of the government, whether temporary or permanent, who since the 9th April, 1897, have been removed from office by dismissal, superannuation or otherwise, whether on a report of a commission or otherwise, specifying in each case the grounds of dismissal, and the amount of superannuation or gratuity granted if any; also the age, office, salary or remuneration of any and every person appointed in the place of, or as a consequence of any such removal. Presented 20th March, 1900.—*Hon. Sir Mackenzie Bowell*.....*Printed in abstract form.*
- 64c. Supplementary return to 64b (Department of Marine and Fisheries). Presented 29th March, 1900.
See 64b.
- 64d. Return to an order of the House of Commons, dated 2nd April, 1900, for copies of all correspondence, telegrams and reports in regard to the dismissal of Mr. E. H. Jones, late postmaster of Kamloops, B.C. Presented 25th April, 1900.—*Mr. Prior*.....*Not printed.*
- 64e. Return to an order of the House of Commons, dated 19th March, 1900, for copies of all papers, petitions, affidavits, reports, charges and correspondence between the government and any person or persons in connection with the dismissal of R. W. Miller, postmaster of Actinolite, Hastings County. Presented 25th April, 1900.—*Mr. Carscallen*.....*Not printed.*
- 64f. Return to an order of the House of Commons, dated 28th March, 1900, for copies of all correspondence, telegrams, memorials or petitions with the signatures thereto, in possession of the government or any member or official thereof, relating to the dismissal of Mr. R. K. Brace as inspector of gas meters in the province of Prince Edward Island. Presented 2nd May, 1900.—*Mr. Martin*.
Not printed.
- 64g. Supplementary return to 64b. Presented (Senate) 11th May, 1900.....*See 64b.*
- 64h. Return to an order of the House of Commons, dated 16th May, 1900, for copy of the report of post office inspector W. W. McLeod into certain charges of offensive political partisanship against Mr. C. A. Gass, postmaster of Moosejaw, West Assiniboia. Presented 16th May, 1900.—*Mr. Mulock*.
Not printed.
- 64i. Return to an order of the House of Commons, dated 23rd April, 1900, for copies of all papers, letters, telegrams, etc., between the post office department or any member of the government, and any persons whatsoever, in connection with the dismissal of D. McLeod Vince from the postmastership of Woodstock, N.B. Also for the report of the commission which inquired into the case, and the evidence taken. Presented 4th June, 1900.—*Mr. Hale*.....*Not printed.*
- 64j. Return to an address of the House of Commons, dated 23th March, 1900, showing the total amount paid since July, 1896, for all commissions and investigations authorized by the government, distinguishing between payments for services and expenses, and detailed so far as to show amount for each commission or investigation. Presented 11th June, 1900.—*Mr. Foster*.*See 64b.*

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- 64k. Return to an address of the House of Commons, dated 28th March, 1900, showing: The amounts paid from 1st July, 1896, to date, for investigations into the cases of alleged partisanship against government employees, to whom paid, and how much to each commissioner for services and expenses respectively; the amount of money paid since 1st July, 1896, to date, for investigating the affairs of penitentiaries, to whom paid, and how much to each for services and expenses respectively; the amount paid to date since 1st July, 1896, for services and expenses respectively, and to whom, on account of commission for investigating and securing information concerning the tariff; and the similar expenditures for similar purposes paid from July, 1890, to July, 1896. Presented 11th June, 1900.—*Mr. Foster*.....*See 6fb.*
- 64l. Return to an order of the House of Commons, dated 9th April, 1900, for copies of all correspondence, charges, investigations, reports and other papers in connection with the dismissal of J. P. Alexander from the position of sub-collector of customs at Deloraine. Presented 12th June, 1900.—*Mr. Rutherford*.....*Not printed.*
- 64m. Return to an address of the House of Commons, dated 14th February, 1900, for copies of all letters, telegrams, evidence, reports, documents and papers in reference to or in connection with the investigation and dismissal of Henry Hall from the customs department. Presented 13th June, 1900.—*Mr. Tisdale*.....*Not printed.*
- 64n. Supplementary return (to complete the return) dated 28th March, 1900, showing the number of employees dismissed or retired from the service of the government on account of alleged partisanship since 1st July, 1896, and the number for each department, and in how many cases the dismissal or retirement was preceded by an official investigation. Presented 9th July, 1900.—*Mr. Foster*.....*See 64b.*
65. Return to an address of the House of Commons, dated 26th June, 1899, for copies of the evidence of Collingwood Schreiber, E. H. Parent, G. F. Desbarats and L. G. Papineau, taken before the royal commission appointed to inquire into the construction of the Wellington street and Grand Trunk bridges across the Lachine canal at Montreal. Presented 14th March, 1900.—*Mr. McInerney*.....*Not printed.*
66. Return to an address of the House of Commons, dated 26th February, 1900, for a statement of commissions of inquiry and investigation appointed or current since July 1, 1899, under the headings of (1) names of commissioners, (2) pay and expenses of the same, and (3) other expenses of the commission. Presented 15th March, 1900.—*Mr. Foster*.....*See 6fb.*
67. Return to an order of the House of Commons, dated 14th February, 1900, showing all correspondence, investigations, reports and departmental action taken in connection with the case of H. A. Lemieux, assistant inspector of customs at Montreal, alleged to have taken part in the 1896 election in Magdalen Islands under the assumed name of H. A. Lamirande. Presented 15th March, 1900.—*Mr. Foster*.....*Not printed.*
- 67a. Supplementary return to No. 67. Presented 11th April, 1900.....*Not printed.*
68. Return to an order of the House of Commons, dated 26th February, 1900, showing the monthly statements of paid up capital, circulation and deposits of the Ville Marie Bank from 1st July, 1892. Presented 15th March, 1900.—*Mr. Foster*.....*Not printed.*
- 68a. Return to an order of the House of Commons, dated 7th February, 1900, for copies of all correspondence between the department of finance and the directors and officials of the Ville Marie Bank since January 1, 1890, and of reports upon the situation of the said bank by the officers of the department of finance. Also a statement of all sums paid by the government, and of claims made upon the government in connection with the prosecution of directors and officials of said bank since its suspension. Presented 15th March, 1900.—*Mr. Monk*.....*Not printed.*
69. Return to an address of the House of Commons, dated 7th February, 1900, for copies of all correspondence by letter or telegram, and all reports respecting the inquiry under royal commission dated 7th October, 1898; including references to or connected with the following subjects: (a) The limitation of the scope of the inquiry referred to in the blue-book of evidence, 1899, re Yukon affairs, at pp. 12, 13, 34, 35, 72, 73, 74, 75, 76, 85, 131, 132, 133, 134, 135, 196, etc. (b) Mr. Ogilvie's request for another commission, or an extension of the above, referred to on pp. 72, 74, 75, 76, of the above blue-book. Presented 15th March, 1900. *Sir Charles Hibbert Tupper*.
Not printed.

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70. Return to an order of the House of Commons, dated 14th February, 1900, for copies of all correspondence, telegrams, reports or papers that have passed between the government, or any member thereof, and any person or persons or corporation in regard to a grant or grants of land, or minerals, or both, adjacent to White Horse Rapids, Yukon territory, during the last six months. Presented 15th March, 1900.—*Mr. Prior*..... *Not printed.*
71. Return to an order of the House of Commons, dated 26th February, 1900, for a copy of the report of the agent of the marine and fisheries department at St. John, New Brunswick, regarding necessity for the erection of a light at the 'Narrows' near Seal Cove, Grand Manan, New Brunswick. Presented 15th March, 1900.—*Mr. Ganong*..... *Not printed.*
72. Return to an order of the House of Commons, dated 26th February, 1900, for copies of all letters, telegrams, reports and other papers in reference to or in connection with the application of Goff & Batson for a weir privilege on the eastern side of Frye's Head, Campobello, in the early part of the year 1898. Presented 16th March, 1900.—*Mr. Ganong*..... *Not printed.*
- 72a. Return to an order of the House of Commons, dated 19th March, 1900, for copies of all papers, letters, or other communications, between the department of marine and fisheries, or any other department of the government, and any person or persons, relating to the application of Goff and Batson for a weir license on the eastern side of Frye's Head, Campobello, New Brunswick, or relating to the refusal to grant such license in the years 1897 and 1898. Presented 4th April, 1900.—*Mr. Ganong*..... *Not printed.*
73. Return to an address of the House of Commons, dated 12th February, 1900, for copies of orders in council, reports and correspondence relating to the coasting laws on the Pacific coast of Canada and the United States not already brought down. Presented 19th March, 1900.—*Sir Charles Hibbert Tupper*..... *Printed for sessional papers.*
74. Return to an order of the House of Commons, dated 7th February, 1900, showing in tabulated form all tenders, accepted tenders and departmental agreements for supply of steel rails for the government railways, detailing quantities and price, dates, places of delivering and quantities delivered from July 1, 1896, to date. Presented 20th March, 1900.—*Mr. Foster*..... *Not printed.*
75. Return to an order of the House of Commons, dated 26th February, 1900, for copies of all petitions or other papers in the possession of the government on behalf of the Caughnawaga Indians, asking for a return to the tribal form of government for such Indians. Presented 20th March, 1900.—*Mr. Quinn*..... *Not printed.*
76. Return to an address of the House of Commons, dated 7th February, 1900, for copies of all reports, orders in council, papers and correspondence relating to the admission of United States vessels to coasting privileges on the Canadian lakes in the year 1899. Presented 20th March, 1900.—*Mr. Foster*..... *Printed for both distribution and sessional papers.*
- 76a. Copy of an order in council of the 16th October, 1899, and other papers respecting the suspension of the coasting laws; United States vessels permitted to carry cargoes between Fort William or Port Arthur, Ontario, and any other port in Canada, for the remainder of the year 1899. Presented 14th May, 1900, by Sir Wilfrid Laurier.. *Printed for both distribution and sessional papers.*
77. Return to an order of the House of Commons, dated 19th February, 1900, for copies of all correspondence, telegram, and cablegrams that may have passed between Major-General Hutton and Lieut.-Col. Samuel Hughes, M.P., or between these officers and any member of the government of Canada, or others, touching the conduct of Lieut.-Col. Hughes, M.P., in connection with his volunteering for active service in South Africa; these papers to include all letters, cablegrams and telegrams sent to South Africa, England or elsewhere, and replies received. Also any report or reports made by Major-General Hutton on the conduct of Lieut.-Col. Samuel Hughes, M.P., in connection with such offer or offers for active service. Presented 22nd March, 1900.—*Mr. Domville*..... *Printed for distribution.*
- 77a. Return to an order of the House of Commons, dated 7th February, 1900, for copies of all correspondence between all members of the government, the militia department, General Hutton, or any other officers of the department, and Colonel Hughes in reference to the contingent sent to South Africa; also all correspondence between the Dominion and Imperial governments on the same subject, if any. Presented 22nd March, 1900.—*Mr. Corby*..... *Printed for distribution.*

CONTENTS OF VOLUME 13—*Continued.*

- 77b. Return to an address of the House of Commons, dated 28th March, 1900, for copies of all papers, correspondence, telegrams and cablegrams, relating to the removal of Major-General Hutton from the command of the Canadian militia, including all orders in council, minutes of council and communications with the Imperial government appertaining thereto. Also a copy of his resignation, with the date of its receipt by the government and the date of its acceptance. Presented 9th April, 1900.—*Mr. Prior*..... *Not printed.*
78. Return to an order of the House of Commons, dated 19th February, 1900, for copies of all correspondence, telegrams and papers in any way relating to the claim of Henry Haloro, of Prince Albert, N.W.T., for compensation for losses incurred during the North-west rebellion of 1885. Presented 22nd March, 1900.—*Mr. Davis*..... *Not printed.*
79. Return to an order of the House of Commons, dated 26th February, 1900, for copies of all letters, petitions, reports and other documents in reference to the opening for homestead entries of odd number sections in townships 7, 8 and 9, ranges 7, 8 and 9, east of the first principal meridian in the province of Manitoba. Presented 22nd March, 1900.—*Mr. LaRivière*..... *Not printed.*
80. Return to an order of the House of Commons, dated 29th May, 1899, for a copy of the report of W. H. Lynch, referred to by the honourable the minister of the interior (*Hansard*, page 1896, April 19th, 1899). Presented 26th March, 1900.—*Sir Charles Hilbert Tupper*..... *Not printed.*
- 80a. Supplementary return to No. 80. Presented 13th June, 1900..... *Not printed.*
81. Return to an address of the House of Commons, dated 19th March, 1900, for copies of the order in council on which the royal commission on the shipment and transportation of grain was issued, of the commission, and of the letter of the minister of the interior to the late Judge Senkler, the chairman of said commission, respecting its issuance. Presented 26th March, 1900.—*Mr. Davin*.
Printed for both distribution and sessional papers.
- 81a. Return (in part) to an order of the House of Commons, dated 19th March, 1900, for a copy of the report and evidence of the royal commission on the shipment and transportation of grain. Presented 4th April, 1900.—*Mr. Larivière*..... *Printed for both distribution and sessional papers.*
- 81b. Supplementary return to No. 81a. Presented 25th April, 1900..... *Not printed.*
82. Return to an order of the House of Commons, dated 19th March, 1900, showing the number of envelopes and the kind supplied to the department of trade and commerce, or to any officer or employee thereof, from 1st August, 1899, until 1st January, 1900. Presented 27th March, 1900.—*Mr. Taylor*..... *Not printed.*
83. Return to an order of the House of Commons, dated 19th March, 1900, for copies of all correspondence between the department of marine and fisheries and persons in the province of Prince Edward Island, during the year 1898-9, relative to the removing of the range light from Savage Island to the sand-hills at Cascumpec harbour in that province. Presented 27th March, 1900.—*Mr. Martin*.
Not printed.
84. Return to an address of the House of Commons, dated 19th March, 1900, for copies of all papers, reports, correspondence and cablegrams between the Imperial government and the Dominion government, and of all orders in council passed by the Dominion government in regard to the repatriation of the 100th regiment. Presented 28th March, 1900.—*Mr. Prior*..... *Not printed.*
85. Return to an address of the House of Commons, dated 12th February, 1900, for copies of all correspondence and telegrams between the Dominion government and the Provincial government of British Columbia, also between the Dominion government and the Imperial government, or any other persons, in regard to the offer of the British Columbia government to raise and equip a contingent of mounted men in that province for service in South Africa. Presented 28th March, 1900.—*Mr. Prior*..... *Not printed.*
86. Return to an address of the House of Commons, dated 26th February, 1900, for copies of orders in council passed in 1898 and 1899 to enable the department of the interior to grant permits to cut timber on Dominion lands in Manitoba, and of all orders in council cancelling the same; copy of all applications made for cutting timber under such orders in council, and the conditions attached to any grants made for the same. Presented 28th March, 1900.—*Mr. Davin*..... *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

87. Return to an address of the House of Commons, dated 19th March, 1900, for copies of all correspondence, telegrams and reports between the government and the provincial government of British Columbia, or their agents, since 1st June, 1899, in regard to anti-Chinese and anti-Japanese legislation. Presented 2nd April, 1900.—*Mr. Prior* *Printed for sessional papers.*
- 87a. Supplementary return to No. 87. Presented 15th May, 1900. *Not printed.*
88. Return to an order of the House of Commons, dated 26th June, 1899, for the contract with A. Onderdonk, or a copy thereof for the construction of the Canadian Pacific Railway, with the several awards made by the arbitrators chosen to value the rolling stock, and all letters and telegrams referring to the purchase of said rolling stock from the said Onderdonk; together with any opinion or opinions given by the justice department as to the obligations of the crown to take over the said rolling stock, together with the cheques given in settlement of said rolling stock, and all other papers and documents relating to the purchase of said rolling stock. Presented 2nd April, 1900.—*Mr. McMullen*. *Not printed.*
89. Return to an address of the House of Commons, dated 24th April, 1899, for: (a.) Copy of tenders for the letting of sections one and two of the Soulanges canal; also a copy of advertisement of the same, and a statement of the tenders moneyed out. (b.) A copy of the tenders for the reletting of sections one and two of the Soulanges canal; also a copy of advertisement for the same, and a statement of the tenders moneyed out. (c.) A copy of all correspondence, or orders in council, directly or indirectly relating to the letting or reletting of the above sections. Presented 2nd April, 1900. *Mr. Bergeron*. *Not printed.*
90. Return to an order of the House of Commons, dated 12th February, 1900, for copies of all and any reports of surveys that may have been made since last session, as well as all petitions and applications from all and any source whatsoever in connection with the Montreal, Ottawa and Georgian Bay canal project. Presented 2nd April 1900.—*Mr. Poupore*. *Not printed.*
91. Return to an order of the House of Commons, dated 26th February, 1900, of all papers and correspondence, etc., in connection with the selection of officers of the Canadian militia for the course of instruction in the duties of general staff now being carried out at Kingston. Presented 2nd April, 1900.—*Mr. Foster*. *Printed for sessional papers.*
92. Return to an order of the House of Commons, dated 12th February, 1900, showing the dates of the different trips of the steamer *Lunenburg* to the Magdalen Islands in 1899, under the contract with Robt. J. Leslie, of Halifax, for carrying mails, passengers and freight, and setting forth the hours of arrival at and departure from the Magdalen Islands, and arrival at and departure from Pictou, N.S. Presented 2nd April, 1900.—*Mr. Macdonald (King's)* *Not printed.*
93. Return to an address of the House of Commons, dated 19th March, 1900, for copies of all correspondence between this government and the provincial government of British Columbia, or their respective agents, in regard to the removal of the Indians from the Songhees Indian reserve, since the return on the same subject brought down to the house last session. Presented 2nd April, 1900.—*Mr. Prior* *Not printed.*
94. Return to an order of the House of Commons, dated 7th February, 1900, of names of all clerks in the civil service who received statutory or other increase of salary during the year 1898-9, and the first half of the year 1899-1900, and the amount of increase paid. Presented 2nd April, 1900.—*Mr. Foster* *Not printed.*
- 94a. Supplementary return to No. 94 Presented 9th April, 1900. *Not printed.*
- 94b. Further supplementary return to No. 94. Presented 24th April, 1900. *Not printed.*
95. Return to an order of the House of Commons, dated 19th March, 1900, showing the amount of wharfage collected at Tignish, Prince Edward Island, in 1899. Presented 3rd April, 1900.—*Mr. Macdonald (King's)* *Not printed.*
96. Return to an order of the House of Commons, dated 19th March, 1900, for copies of all letters and memorials of the town council of Moosejaw to the government, or the department of the interior on the subject of the Moosejaw town site and certain lots claimed by certain parties to be exempt from taxation, and the replies sent thereto. Presented 6th April, 1900.—*Mr. Davin* *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

97. Return to an order of the House of Commons, dated 19th March, 1900, for details included in the \$4,744.25 collected by Clement, Pattullo & Ridley, on account of Dawson Water Front, H—107, Auditor General's Report; also of fines, \$23,861, collected as per Auditor General's Report, H—107. Presented 4th April, 1900.—*Mr. Foster*..... *Not printed.*
98. Return to an order of the House of Commons, dated 26th February, 1900, for copies of advertisements or the terms calling for tenders for printing for the North-west Territories government from 1890 to 1899 inclusive, or at least until the audit of North-west expenditure passed out of the hands of the auditor general; the price at which the contract for each of the above years was let; when, and to whom it was given. Presented 4th April, 1900.—*Mr. Davin*..... *Not printed.*
99. Return to an address of the House of Commons, dated 19th March, 1900, for reports of the engineers sent to ascertain the cost basis of the subsidy to be paid to the Restigouche Railroad Company for the first ten miles of its line, and the reports and orders in Council relating to the payment of the same. Presented 5th April, 1900.—*Mr. Foster*..... *Not printed.*
100. Return to an order of the House of Commons, dated 19th March, 1900, for copies of all correspondence, telegrams, reports of engineers and other papers relating to, or in any way appertaining to the contract between the public works department and Messrs. Brennan and Ramsey, for repairs to the breakwater at Souris East, Prince Edward Island, entered on in the year 1898. Presented 9th April, 1900.—*Mr. McLellan*..... *Not printed.*
101. Return to an order of the House of Commons, dated 28th March, 1900, for copies of all correspondence between the government and their agents and any other person in regard to the omission of the lighthouse-keeper on Egg Island Light to show a light for some days during last winter. Presented 9th April, 1900.—*Mr. Prior*..... *Not printed.*
102. Return to an order of the House of Commons, dated 2nd April, 1900, showing the amount of the rebate paid on agricultural implements exported from Canada for the fiscal years ending 30th June, 1896, 1897, 1898 and 1899, specifying the amount paid to each firm in each of the above years. Presented 9th April, 1900.—*Mr. Clarke*..... *Printed for sessional papers.*
103. Return to an order of the House of Commons, dated 26th February, 1900, for all tenders, contracts and correspondence relating to mail service between Hopewell Cape and Hopewell, Albert county, New Brunswick, since July 1, 1896. Presented 10th April, 1900.—*Mr. Foster*..... *Not printed.*
104. Return to an address of the House of Commons, dated 19th March, 1900, for copies of all petitions and representations forwarded to the department of marine and fisheries, and of all correspondence, orders in council and memorials, in relation to the incorporation of the pilots between Montreal and Kingston. Presented 11th April, 1900.—*Mr. Talbot*..... *Not printed.*
105. Return to an order of the House of Commons, dated 7th February, 1900, for copies of all correspondence, applications, grants and other papers relating to the area of and any part thereof covered by the following applications (and including the said applications and papers connected therewith) mentioned in Return 83, 3rd session, 8th parliament, 61 Victoria, 1893: W. J. Lindsay, Brandon, Stewart River; P. C. Mitchell; A. E. Philp, Klondike; F. Burnett, Vancouver, Hootalinqua; F. Burnett, Colborne, Indian River; J. G. Burnett, Edmonton, Peace River; F. Burnett, Colborne, Teslin River; A. E. Philp, Ottawa, S. Fork Stewart; G. Philp, London, L. Salmon; A. E. Philp, Ottawa, Indian River; A. D. Cameron, Ottawa, Indian River; F. A. Philp, Ottawa, Teslin River; W. L. Parish, Ottawa, Felly River. Presented 11th April, 1900.—*Sir Charles Hibbert Tupper*..... *Printed for distribution.*
106. Return to an order of the House of Commons, dated 14th February, 1900, showing: 1. The amount paid each year for printing for the government of the North-west Territories, namely, from 1889 until 1899 inclusive, for ten years or at least until the audit of the North-west Government expenditure passed out of the hands of the auditor general. 2. The amount paid for advertising each year of the same period and for the same behalf. 3. The names of persons or officers or companies to which payment for each of these annual services was made. Presented 11th April, 1900.—*Mr. Davin*..... *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

107. Return to an order of the House of Commons, dated 17th May, 1899, showing the information asked for by Sir Charles Hibbert Tupper respecting United States boats registered at Dawson, the said information (as per *Hansard* of May 8th, 1899) being required to state the names and tonnage of United States boats built which have been given Canadian registry by the collector of customs at Dawson from July 1st, 1898, to latest date known at Ottawa, the duty paid, the amount of valuation of each vessel, and by whom such valuation was made, and the names of British owners of the same. Presented 18th April, 1900.—*Sir Charles Hibbert Tupper*..... *Not printed.*
108. Return to an order of the House of Commons, dated 19th March, 1900, for copies of all correspondence, telegrams and reports since 1st September, 1899, between the honourable the minister of militia, or his agents, and the district officer commanding military district No. 11, or any other person, in regard to the rifle range at Clover Point, Victoria, B.C. Presented 18th April, 1900.—*Mr. Prior*..... *Not printed.*
109. Return to an order of the House of Commons, dated 28th March, 1900, of all complaints made since 1st January, 1890, to the honourable the minister of agriculture or the commissioner or deputy commissioner of patents, of excessive charges demanded by the Auer light patentees for the use of the patent article under the provisions of section 37, subsection 'A' of the Patent Act, and of all correspondence with the minister or commissioner or deputy commissioner in respect of complaints. Presented 18th April, 1900.—*Mr. Gibson*..... *Not printed.*
110. Return to an order of the House of Commons, dated 9th April, 1900, for copies of all letters and documents of every description between the department of the interior, or any member of the government, and D. H. Macdowall, ex-M.P., or any other person, respecting the claim of John C. McNevin, of Kirkpatrick, Saskatchewan, for compensation for losses incurred during the North-west rebellion of 1885. Presented 18th April, 1900.—*Mr. Davis*..... *Not printed.*
111. Return to an address of the House of Commons, dated 28th March, 1900, for copies of all statements, memorials, claims, memoranda, correspondence, telegrams, etc., with the government of Prince Edward Island and a delegation from that province, in the month of February, consisting of the Hon. Donald Farquharson, premier of the province, Hon. D. A. McKinnon, attorney-general, and Hon. Benjamin Rogers, in regard to all questions at issue between the government of Prince Edward Island and Canada. Presented 23rd April, 1900.—*Mr. Martin*... .. *Not printed.*
112. Return to an order of the House of Commons, dated 23rd April, 1900, for a copy of the correspondence respecting trade with Trinidad. Presented 23rd April, 1900.—*Sir Louis Davies*.
Printed for both distribution and sessional papers.
113. Return to an order of the House of Commons, dated 9th April, 1900, for copies of all correspondence between George Hood and others and the minister of the interior or other members of the government in reference to the rising of the waters in Lake Dauphin. Presented 24th April, 1900.—*Mr. Roche*..... *Not printed.*
114. Return to an order of the House of Commons, dated 28th March, 1900, for copies of all letters addressed, since the 1st January, 1899, to the minister of the interior, or any officer of the department of the interior, with regard to advances made by any person or company, to settlers on lands in Manitoba or the North-west Territories, under the provisions of clause 44 (as amended) of the Dominion Lands Act, and of the replies thereto; copies of all letters, circulars, schedules or other papers mailed by the said minister or any officer of the department of the interior, to any person or company, since the same date, upon the same subject, and of all replies thereto or other communications in any way concerning such subject, received by the department of the interior; also copies of all schedules prepared by the department of the interior since the above mentioned date, of lands in Manitoba or the North-west Territories so encumbered, giving the name of the settler, the usual description of the land encumbered, the amount of the encumbrance and rate of interest, the name of the person or company by whom the advance was made, the name of the assignee where the encumbrance has been assigned, and the name of the patentee, and date of patent where the land has been patented. Presented 24th April, 1900.—*Mr. Douglas*... *Not printed.*

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115. Return to an address of the House of Commons, dated 9th April, 1900, for copies of all correspondence between any member or members of the executive of the North-west Territories, or any member or members of the legislative council or legislative assembly, and any member or members of the Dominion government, respecting the amount of subsidy voted for the carrying on of the government of the North-west Territories, and the amount which should be voted during the last two years. 2. Also copies of all memorials from the North-west council or the legislative assembly of the North-west Territories, to the governor general in council on the subject of the said subsidy. Presented 24th April, 1900.—*Mr. Davin*.....*Not printed.*
116. Return to an order of the House of Commons, dated 19th March, 1900, for copies of all correspondence, specifications, plans, tenders received, and contract or contracts entered into by, or on behalf of, the government relating to the straightening of about two miles of the Prince Edward Island Railway between Colville and Loyalist. Presented 1st May, 1900.—*Mr. Martin*.
Not printed.
117. Return to an address of the House of Commons, dated 19th March, 1900, for copies of all contracts, petitions of right, memorials, letters, correspondence, orders in council and other papers and documents relating to or connected with the claims of John W. Broderick, Elliot H. Fuller, Lewis A. Dickie, W. B. Harrison, Charles W. McDormand, Margaret Chapman, Thomas D. Curtis, James Barclay Havelock, H. Mosher, James Hernigas, D. Sauntry, Jerome Scott, William Neville, Graham Timmons, George W. Stone, George Moffatt, Peter S. Rose, Samuel Sloan, Samuel Squires, Elizabeth Coke, Albert H. Hagen, E. J. Smith, Jos. W. Riun and John Medd Coulson, respectively, against her majesty upon or in respect of contracts or renewals thereof entered into by the said respective persons for the carriage of mails, or by reason of the breach or rescission by the postmaster general of any such contract. Presented 26th April, 1900.—*Mr. Borden (Halifax)*.....*Not printed.*
118. Return to an order of the House of Commons, dated 26th February, 1900, for copies of all petitions or other communications received by the department of public works since June, 1896, relative to the building of a public wharf or breakwater at Grand Manan, New Brunswick. Also copies of reports and estimates made by E. T. P. Shewen, the resident engineer at St. John, New Brunswick, or any other officer of the department for this work. Presented 1st May, 1900.—*Mr. Ganong*.....*Not printed.*
119. Papers on the subject of commissions in the imperial army. Presented 1st May, 1900, by Sir Wilfrid Laurier.....*Not printed.*
120. Return to an order of the House of Commons, dated 19th March, 1900, showing: 1. Names of all officials in interior department, including Indian department, in Manitoba and Assiniboia. 2. The whereabouts of those officials between the dates November 15, 1899, and December 15, 1899, and the particular work in which they were engaged. Presented 1st May, 1900.—*Mr. Roche*.....*Not printed.*
121. Return to an address of the House of Commons, dated 12th June, 1899, for copies of all petitions, applications, correspondence, charter and reports with reference to the Toronto and Georgian Bay Ship Canal Company. Presented 2nd May, 1900.—*Mr. Wallace*.....*Not printed.*
122. Return to an address of the House of Commons, dated 19th April, 1899, for copies of all letters or notices sent to the contractors by the minister of railways and canals, or the chief engineer, with relation to the re-letting of the work on the several sections on the Soulanges canal, and the replies made thereto by the contractors. Presented 2nd May, 1900.—*Mr. Taylor*.....*Not printed.*
123. Return to an order of the House of Commons, dated 19th March, 1900, showing: 1. Names or official number of boys reprieved from the Penetanguishene reformatory and of girls reprieved from the industrial refuge for girls at Toronto during the two years previous to the 1st February, 1900. 2. The date when the petitions or applications were received by the department of justice asking for a reprieve. 3. When the report of judge (if any) was received. 4. When the report of the superintendent was received. 5. When the reprieve was granted. Presented 2nd May, 1900.—*Mr. Clarke*.....*Not printed.*

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124. Return to an order of the House of Commons, dated 7th February, 1900, for copies : 1. Of all correspondence which has passed between the minister of the interior or any of the officers of his department, and any persons in the North-west Territories or in Manitoba on the working of the act respecting securities for seed grain indebtedness passed in 1899. 2. More particularly all correspondence respecting the claim of any homesteader to get his patent and which claim may have been refused because of the homesteader being bondsman for the seed grain indebtedness of other parties, including the application of the homesteader and the letters refusing his application. Presented 2nd May, 1900.—*Mr. Davin*. *Not printed.*
125. Return to an order of the House of Commons, dated 19th March, 1900, showing all regulations passed with respect to the sale of liquors in military canteens since 1890, denoting those now in force. And all correspondence had with the militia department, or any of its officers, since 1896 in relation to the carrying out of the existing regulations at the military camps. Presented 2nd May, 1900.—*Mr. Foster*. *Not printed.*
126. Return to an address of the Senate, dated 25th April, 1900, for copies of all papers, correspondence, orders in council and communications of every kind to date, relating in any way to the claim of E. J. Walsh, C.E., against the Dominion government, the department of the secretary of state for the colonies, and the government of the Leeward Islands, for professional services rendered the government of the said Leeward Islands; also copies of any papers or correspondence in the department of railways and canals, or in the hands of the deputy minister of railways and canals, relating to the engagement or otherwise of the said E. J. Walsh, C.E. Presented 2nd May, 1900. —*Hon. Sir Mackenzie Bowell*. *Not printed.*
127. Return to an order of the House of Commons, dated 23rd April, 1900, for copies of all correspondence between the chief analyst of the department of inland revenue, or any other officer or persons in the department, and the Canadian representative or agents of the chemical works (late H. & E. Albert). Presented 3rd May, 1900.—*Mr. Donville*. *Not printed.*
128. Return to an order of the House of Commons, dated 14th February, 1900, showing the applications made for the appointment on the official staff of the various contingents of Canadian troops sent to or now being collected for South Africa, the names, age and address and qualifications as to service and course of instruction of each, and the names of the successful applicants. Presented 4th May, 1900.—*Mr. Foster*. *Not printed.*
129. Return to an order of the House of Commons, dated 23rd April, 1900, for a statement showing total amount of money paid by years since 1st July, 1892, to the 30th June, 1899, on each of the following accounts : 1. Salary of governor general. 2. Travelling expenses of governor general. 3. Expenditure on Rideau Hall, on capital account; maintenance; grounds, on capital account; grounds, maintenance. 4. Expenditure on furnishings of all kinds for Rideau Hall. 5. Allowance to governor general for fuel and light. 6. Expenditure on any other account in connection with the office of governor general. 7. Expenditure on any other account in connection with Rideau Hall and grounds. 8. Total expenditure of every kind since 1st July, 1892, in connection with the office of governor general. 9. Total expenditure of every kind in connection with Rideau Hall and grounds for same period. Presented 4th May, 1900.—*Mr. Wilson*. *Printed for sessional papers.*
130. Return to an order of the House of Commons, dated 9th April, 1900, for copies of all correspondence, memorials, petitions, etc., in possession of the government, or any member or official thereof, relating to the resignation of Mr. John McPhee as postmaster at Murray Harbour Road, in Prince Edward Island, and the appointment of his successor. Presented 4th May, 1900.—*Mr. Martin*. *Not printed.*
131. Return to an address of the Senate, dated 2nd April, 1900, showing : 1. The number and names of all persons to whom commissions have been granted in the mounted police force of Canada since June, 1896. 2. The length of time each person to whom commissions have been issued served in said force. 3. If no service had been rendered in said force by the person or persons so commissioned, the qualification they possessed for such commission or commissions. Presented 7th May, 1900.—*Hon. Sir Mackenzie Bowell*. *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

132. Return to an order of the House of Commons, dated 7th February, 1900, for copies of specifications, plans and tenders received and contracts entered into by the government, relating to the construction of ten miles of railway known as the Belfast and Murray Harbour Railway, in the province of Prince Edward Island. Presented 9th May, 1900.—*Mr. Martin*. *Not printed.*
133. Return to an address of the House of Commons, dated 2nd April, 1900, for copies of all orders in council, memoranda, reports and statements concerning the sale of timber on the ordnance lands of Point Pelée, in the county of Essex, and present standing of accounts between purchaser and government. Presented 9th May, 1900.—*Mr. Cowan* *Not printed.*
134. Return to an order of the House of Commons, dated 19th March, 1900, for copies of all correspondence, telegrams, memoranda and all papers in the hands of the government, or any member or official thereof, relating to the admission of Newfoundland into the confederation of Canada. 2. Also all similar documents relating to any proposals for the establishment of reciprocal trade relations between Newfoundland and Canada. Presented 9th May, 1900.—*Mr. Martin*. *Not printed.*
135. Return to an address of the Senate, dated 23rd March, 1900, for: 1. A copy of the correspondence exchanged between the members for Montmagny, at different periods, and the government on the construction of a post office in the town of Montmagny. 2. A copy of each communication on this subject made to the government by the town council, or by any person belonging to the town of Montmagny. 3. A copy of the deeds passed for this purpose by the government and the seminary of Quebec for the sale of the land on which the post office of Montmagny was built; and also of all deeds forming the titles of the property in question. Presented 9th May, 1900.—*Hon. Mr. Landry* *Not printed.*
136. Return to an address of the Senate, dated 25th April, 1900, showing in detail the cost and nature of all repairs and alterations made to the steamer "Minto" since her arrival in Canadian waters. The said return to show the names of the parties who were employed in making these repairs and alterations, and the amount paid to each. Presented 9th May, 1900.—*Hon. Mr. Ferguson*.
Not printed.
137. Return (in part) to an address of the House of Commons, dated 28th March, 1900, for copies of all correspondence, telegrams and reports since 1894, between the government and their agents in British Columbia or any other person, in regard to the necessity that exists for the employment of another vessel to work in conjunction with the ss. "Quadra" in the lighthouse, customs and fishery protection services on the coast of British Columbia. Presented 10th May, 1900.—*Mr. Prior*. *Not printed.*
138. Return to an order of the House of Commons, dated 23rd April, 1900, for copies of all correspondence, reports and papers between the marine and fisheries department, or any other department or minister of the government, and any person or persons in connection with the prohibition of exportation of fish caught in the waters of Lakes Manitoba and Winnipegosis during the summer months. Presented 10th May, 1900.—*Mr. Roche* *Not printed.*
- 138a. Return to an order of the House of Commons, dated 15th May, 1900, for copies of all correspondence, reports and papers relating to the prohibition of exportation of fish caught in Lakes Winnipegosis and Manitoba, since date of return moved for 23rd April, 1900, to present time. Presented 23rd May, 1900.—*Mr. Roche* *Not printed.*
139. Return to an address of the House of Commons, dated 10th May, 1900, for copies of orders in council and correspondence relative to the admission of the inscribed stock of Canada to the list of securities in which trustees in Great Britain are authorized to invest trust funds in their hands. Presented 10th May, 1900.—*Hon. W. S. Fielding*. *Printed for both distribution and sessional papers*
140. Return to an address of the Senate, dated 25th April, 1900, showing the expenses and earnings of the steamer "Stanley," while engaged on the winter service between Prince Edward Island and the mainland, for the years 1892, 1893, 1894, 1895, 1896, 1897, 1898 and 1899. And also a similar return for the steamer "Minto" for the winter of 1900. The above statement of expenses not to include repairs to either steamer. Presented 11th May, 1900.—*Hon. Mr. Ferguson*. *Not printed.*
141. Return of the names and salaries of all persons appointed to, or promoted in the civil service during the calendar year 1899. Presented 14th May, 1900, by Sir Wilfrid Laurier. *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

142. Return to an order of the House of Commons, dated 19th March, 1900, for copies of all accounts rendered by Captain S. M. Hatfield, fishery overseer for Yarmouth, and a return showing all amounts paid to him for salary, and all amounts paid to him for travelling expenses in each year since his appointment. Presented 14th May, 1900.—*Mr. Borden (Halifax)*..... *Not printed.*
143. Return to an address of the Senate, dated 25th April, 1900, showing the amount, in detail, of compensation paid or tendered to landholders as damages to property or for land taken for the Charlottetown or Murray Harbour Railway; said statement to show the quantity of land taken from each owner. Presented 14th May, 1900.—*Hon. Mr. Ferguson*..... *Not printed.*
144. Return to an order of the House of Commons, dated 26th February, 1900, for copies of all petitions or other communications received by the department of public works since June, 1896, relative to the repairing and extension of the breakwater at Wilson's Beach, New Brunswick; also for copies of all estimates and reports made by the government engineers for the above named work. Presented 21st May, 1900.—*Mr. Ganong*..... *Not printed.*
145. Return to an order of the House of Commons, dated 9th April, 1900, for copies of all papers, petitions, correspondence and reports, relating to a request made to the authorities of St. Vincent de Paul penitentiary, for the carting of waste stone along the banks of Rivière des Prairies, in St. Vincent de Paul, to prevent damage being caused by said river to the public highway, in said locality. Presented 22nd May, 1900.—*Mr. Fortin*..... *Not printed.*
146. Report of the commissioner relating to miners and mining conditions in British Columbia. Presented 23rd May, 1900, by Sir Richard Cartwright..... *Not printed.*
- 146a. Second report of the commissioner relating to miners and mining conditions in British Columbia. Presented 6th June, 1900, by Sir Wilfrid Laurier..... *Not printed.*
147. Return to an order of the House of Commons, dated 29th May, 1900, for a copy of papers respecting purchase of boots for the mounted police. Presented 29th May, 1900.—*Sir Wilfrid Laurier*.
Not printed.
148. Return to an order of the House of Commons, dated 1st June, 1900, for copies of correspondence respecting the securing of tonnage for the shipment of hay and other produce, from St. John to South Africa ports. Presented 1st June, 1900.—*Hon. S. A. Fisher*..... *Not printed.*
- 148a. Return to an order of the House of Commons, dated 23rd April, 1900, for copies of all correspondence had by the government with the British authorities, and with all parties in Canada relating to the purchase of hay for the troops in South Africa. Presented 29th June, 1900.—*Mr. Hale*.
Not printed.
149. Return to an order of the House of Commons, dated 26th February, 1900, of all letters, telegrams, petitions and representations made by the town council of the town of Sydney, Cape Breton and of the Cape Breton board of trade, and of all persons to or with the department of railways, or any member of the government, remonstrating and protesting against the present arrangement of running the whole express train twice every day from North Sydney Junction to the wharf at North Sydney, a distance of about six miles each way, when on its way to and from the west to the terminus of the railway at Sydney. Presented 4th June, 1900.—*Mr. Gillies*..... *Not printed.*
150. Return to an order of the House of Commons, dated 23rd April, 1900, for copies of all correspondence, letters and reports between the marine and fisheries department and Mr. W. W. Stumbles, the agent of that department, in connection with his late visit to British Columbia. Presented 4th June, 1900.—*Mr. Prior*..... *Not printed.*
151. Copy of an order in council appointing a commission to investigate election frauds. Presented 4th June, 1900, by Sir Wilfrid Laurier..... *Printed for both distribution and sessional papers.*
152. Return to an order of the House of Commons, dated 2nd April, 1900, of all correspondence, papers, report or reports in connection with the application for the establishment of a post office at Lavelle, in the township of Devlin, Rainy River district. Presented 4th June, 1900.—*Mr. Sproule*..... *Not printed.*
153. Return to an address of the Senate, dated 7th May, 1900, showing: 1. The number of cars that have arrived at Halifax and St. John respectively, previous to the 10th April last, and which had not been unloaded at that date. 2. The dates upon which such cars arrived. 3. The names of the consignees of such cars. 4. The stations where such cars were loaded. 5. The names of the shippers. 6. The dates of shipment. Presented 6th June, 1900.—*Hon. Mr. Wood*.
Not printed.

 CONTENTS OF VOLUME 13—*Continued.*

154. Return to an address of the Senate, dated 15th May, 1900, for copies of all petitions, memorials or other communications received by the government since 1895, in regard to the construction of branch railways in Prince Edward Island. Presented 6th June, 1900.—*Hon. Sir Mackenzie Bowell*..... *Not printed.*
155. Return to an address of the Senate, dated 10th May, 1900, for a copy of the report of Captain Smith in regard to the loss of the steamer "Portia" off Sambro, Nova Scotia, on the 10th July, 1899; together with the evidence taken at the investigation subsequently held regarding the loss of the said steamer. Presented 6th June, 1900.—*Hon. Mr. Ferguson*..... *Not printed.*
156. Return to an address of the Senate, dated 7th May, 1900, for a copy of the communication of J. L. P. O'Hanly, C.E., to the governor in council on the dangerous state of the railroad bridge over the Lachine canal at Wellington street, Montreal. Presented 6th June, 1900.—*Hon. Mr. O'Donohoe*..... *Not printed.*
157. Return to an address of the Senate, dated 1st March, 1900, for copies of all orders in council disallowing acts which had been passed by any of the legislatures of the provinces of the Dominion, or by the legislative assembly of the North-West Territories, since the first day of August, 1896, together with all correspondence between the federal and any of the provincial governments relating to any suggestions of changes or amendments to any local act which may have been passed by such local legislatures, and the action taken thereon. Presented 6th June, 1900.—*Hon. Sir Mackenzie Bowell*..... *Not printed.*
158. Return to an order of the House of Commons, dated 12th June, 1900, for copies of correspondence, etc., respecting emergency rations. Presented 12th June, 1900.—*Hon. F. W. Borden*..... *Not printed.*
159. Return to an order of the House of Commons, dated 7th February, 1900, for copies of all correspondence between any officer of the interior department and any officer of the North-West mounted police in the inside service at Ottawa, respecting the giving of contracts for supplies for the North-West mounted police since 23rd June, 1896. Copies of all correspondence between Mr. Fred. White, comptroller of the North-West mounted police, and Col. Herchmer or any officer of the North-West mounted police respecting the giving of contracts for or the buying of supplies for the North-West mounted police since 23rd June, 1896. Copies of correspondence which passed between Walter Scott of Regina and the minister of the interior or any officer of his department in 1899, respecting the purchase of large quantities of teas at the hands of a Regina merchant. Presented 12th June, 1900.—*Mr. Davin*..... *Not printed.*
160. Return to an address of the Senate, dated 2nd May, 1900, for : 1. Copies of specifications used in making contracts for the construction of the steamer "Minto." 2. Copies of all notices calling for tenders for offers to build said steamer. 3. Copies of all tenders received for the same. 4. Statement showing actual cost of said steamer, contract price and extras being stated separately. 5. Statement of extras, showing their nature in detail. Presented 11th June, 1900.—*Hon. Mr. Ferguson*..... *Not printed.*
161. Return to an address of the House of Commons, dated 23rd April, 1900, for a copy of the contract between the government of Canada and the Beaver Steamship Line for the carriage of mails between Canada and England, and all orders in council in relation thereto. Also statement showing the length of each voyage of the steamships of said line between Liverpool and Halifax, and Halifax and Liverpool, during the winter season of 1899-1900. Presented 13th June, 1900.—*Sir Adolphe Caron*..... *Not printed.*
162. Return to an order of the House of Commons, dated 28th March, 1900, for copies of all papers and correspondence relating to claim of J. Wilson for services rendered marine and fisheries department in connection with Egg Island lighthouse, province of British Columbia. Presented 22nd June, 1900.—*Sir Charles Hibbert Tupper*..... *Not printed.*
163. Return to an order of the House of Commons, dated 22nd June, 1900, for copies of correspondence between the department of finance and the Canadian Bank of Commerce respecting the government banking business in the Yukon district. Presented 22nd June, 1900.—*Hon. W. S. Fielding*..... *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

164. Return to an address of the Senate, dated 15th May, 1900, for copies of all petitions, memorials or other communications received by the government since 1895, in regard to the construction of branch railways in Prince Edward Island. Presented 19th June, 1900.—*Hon. Sir Mackenzie Bowell*..... *Not printed.*
- 164a. Supplementary return to No. 164. Presented 25th June, 1900..... *Not printed.*
165. Return to an address of the Senate, dated 26th April, 1900, for a copy of all letters and correspondence exchanged between the government or any of its members, and the interested parties, on the subject of the Baie des Chaleurs Railway, of the Atlantic and Lake Superior Railway, of the projected railway known under the name of the Short Line Railway of Gaspé, and of the South Shore Railway Company in connection with the granting, or payment of subsidies to any of the said companies or the granting of any privileges to any of them ; as well as a copy of all requests, petitions, resolutions, or other documents relating to any of these lines. Presented 21st June, 1900.—*Hon. Mr. Landry*..... *Not printed.*
166. Return to an address of the Senate, dated 25th April, 1899, for : 1. The number of acres of land set apart for the purpose of education in the province of Manitoba and in the North-west Territories, respectively, under the authority of chapter 54, Revised Statutes of Canada, section 23. 2. The number of acres sold in Manitoba and the North-west Territories, the amount received in payment therefor, and the amount now due thereon. 3. The total sum now at the credit of said fund held by the dominion of Canada, how invested, and the rate of interest paid thereon. 4. The amount advanced out of said principal sum in aid of education in the province of Manitoba and the North-west Territories. 5. The sum recouped to the said principal out of the proceeds of the sale of lands set apart for the purpose of education, and the amount now due to said principal sum. 6. And all correspondence relating to any further advance or advances out of said school fund, either to Manitoba or the North-west council. Presented 21st June, 1900.—*Hon. Sir Mackenzie Bowell*..... *Not printed.*
167. Return to an address of the Senate, dated 8th March, 1900, for a copy of the supplementary report of J. L. P. O'Hanly, C.E., on the effect of the Chicago Drainage canal on the levels of the great lakes. Presented 25th June, 1900.—*Hon. Mr. O'Donohoe*..... *Not printed.*
168. Return to an order of the House of Commons, dated 28th March, 1900, giving the quantities of scrap iron, and at what dates and for what prices, sold by the department of railways, since 1st July, 1896. To what persons the sales were made, and whether on tender after public advertisement, or otherwise. And where by tender, giving the several tenders received and prices offered in each. Presented 27th June, 1900.—*Mr. Foster*..... *Not printed.*
169. Return to an order of the House of Commons, dated 23rd April, 1900, showing all tenders, contracts and correspondence in reference to the purchase of locomotives and rolling stock for Canadian government railways from 15th July, 1896, until 15th April, 1900. Presented 27th June, 1900.—*Mr. Haggart*..... *Not printed.*
170. Return to an order of the House of Commons, dated 28th June, 1900, for copies of all correspondence and reports of post office inspectors in connection with alleged irregularities at the post office, Kinnear's Mills, Quebec. Presented 28th June, 1900.—*Hon. W. Mulock*..... *Not printed.*
171. Return to an address of the House of Commons, dated 28th March, 1900, for copies of all reports, papers, correspondence and orders relating to the retirement of Lieut-Col. Domville from the active militia service of Canada. Presented 30th June, 1900.—*Mr. Foster*..... *Not printed.*
172. Return to an order of the House of Commons, dated 3rd July, 1900, for a statement of dredging at Rivière du Loup (*en haut*) during the fiscal year 1899-1900. Presented 3rd July, 1900.—*Hon. W. Mulock*..... *Not printed.*
- 172a. Return to an order of the House of Commons, dated 3rd July, 1900, for a copy of the memorandum to the hon. the acting minister of public works *re* dredging Miller's Landing, Sumas, Fraser River, B.C. Presented 3rd July, 1900.—*Hon. W. Mulock*..... *Not printed.*
173. Return to an order of the House of Commons, dated 3rd July, 1900, for a statement showing the prices of timber bought in connection with the reconstruction of booms on the St. Maurice River works. Presented 3rd July, 1900.—*Hon. W. Mulock*..... *Not printed.*

 CONTENTS OF VOLUME 13:—*Concluded.*

- 174.** Return to an address of the Senate, dated 3rd July, 1900, for copies of all correspondence which has taken place between the premier, secretary of state or any other member of the government and the lieutenant governor of British Columbia, having reference to the dismissal of Premiers Turner and Semlin by the said lieutenant governor, and the calling upon Mr. Robert Beaven, Mr. Joseph Martin or any other person to form a cabinet; together with all reports, orders in council, or other documents referring to the said dismissals and formation of such cabinets. Presented 7th July, 1900.—*Hon. Sir Mackenzie Bowell*.....*Printed for both distribution and sessional papers.*
- 175.** Return to an address of the Senate, dated 14th June, 1900, calling for copies of all plans, specifications, profiles, estimates of cost and all other papers relating to the construction of the proposed bridge over the Hillsborough river at Charlottetown, P.E.I., said papers to include the contract entered into between the government of Canada and that of Prince Edward Island regarding the said bridge; also all correspondence on the said subject between the two governments; and also any order in council or of the department of railways settling the site of the said bridge. Presented 10th July, 1900.—*Hon. Mr. Ferguson*.....*Not printed.*
- 176.** Return to an address of the Senate, dated 20th June, 1900, for a statement showing in detail the work undertaken, expenditure incurred and results obtained in the experimental operation carried on last year in regard to orcharding in Prince Edward Island; giving the names of all persons employed to carry on the work and the amount paid to each, and stating on whose recommendation such persons were employed. Presented 13th July, 1900.—*Hon. Mr. Ferguson*.....*Not printed.*

THIRTY-SECOND ANNUAL REPORT

OF THE

DEPARTMENT OF MARINE AND FISHERIES

1899

MARINE

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

PRINTED BY S. E. DAWSON, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY

1900

[No. 11—1900]

*To His Excellency the Right Honourable SIR GILBERT JOHN ELLIOTT EARL OF MINTO,
Governor General of Canada, etc., etc.*

MAY IT PLEASE YOUR EXCELLENCY :

I have the honour to submit herewith, for the information of Your Excellency and the Legislature of Canada, the Thirty-Second Annual Report of the Department of Marine and Fisheries, Marine Branch.

I have the honour to be,

Your Excellency's most obedient servant,

LOUIS HENRY DAVIES,

Minister of Marine and Fisheries.

DEPARTMENT OF MARINE AND FISHERIES,

OTTAWA, December, 1899.

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PART I.

THE REPORT OF THE DEPUTY MINISTER—THE REPORT
OF THE CHIEF ENGINEER IN DETAIL RELATING
TO CONSTRUCTION AND REPAIRS TO LIGHT-
HOUSES, HYDROGRAPHIC SURVEY AND
TIDAL SURVEY.

REPORT OF THE DEPUTY MINISTER.

To the Honourable

Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to report on the transactions of the Marine Branch of this department for the fiscal year ended June 30 last, and to give an account of a portion of the business up to date.

In Part I. of this report will be found the detailed report of the Chief Engineer on construction and maintenance of lighthouses and other aids to navigation, and references to the reports of the Chairman of the Board of Steamboat Inspection, Chairman of the Board of Examiners of Masters and Mates, the Inspectors of Live Stock Shipments, the Director of the Meteorological and Magnetic Service, the Inspector of Signal Service, and the reports on Life-boat Stations and Rewards for Humane Service.

A short account of the work of the Dominion Steamers is given and the expenditure in connection therewith, the Buoyage of the coast, harbours and inland waters, the purchase of oil for the use of lighthouses, the Marine Hospitals in the Dominion, Certificates to Masters and Mates, Wrecks and Casualties and the Ice Boat Mail Service.

In Part II. the reports from which the synopses have been made will be found *in extenso*, also statements of expenditure, revenue, sick mariners' dues, wharfage, wrecks and casualties, steamboat inspection, and a list of light-keepers.

The amount expended on the various branches of the public service comprised in the Marine Branch of this department, during the fiscal year ended June 30 last, was \$1,020,259.08; the expenditure for the previous year was \$782,911.74. The expenditure for Civil Government, including the Marine and Fisheries branches, amounted to \$61,426.16 and for Civil Government Contingencies \$11,407.81.

The amount voted by Parliament for the various branches, not including the departmental salaries, was \$1,068,124.00. It will thus be seen that the expenditure for the fiscal year was \$47,864.92 less than the amount voted by Parliament.

The whole number of persons in the Outside Service of the Marine Branch at the date of this report is 1,907.

During the past fiscal year the expenditure for maintenance of lighthouse and coast service amounted to \$472,751.93, construction \$64,705.63; total for maintenance and construction \$537,457.56; while for the previous year the expenditure for the lighthouse and coast service, including construction was \$474,216.67, showing an increase of expenditure for the year ending 30th June last of \$63,240.89.

The appropriation for this service was \$539,010, the expenditure being \$1,552.44 less than the appropriation of Parliament for the fiscal year.

LIGHTHOUSE SERVICE.

The lighthouse service of the Dominion is divided as follows :—The Ontario division, embracing all lights from Montreal westward to the North-west Territories; the Quebec

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division, extending below Montreal and including the River and Gulf of St. Lawrence and Strait of Belle Isle; the Nova Scotia division, including St. Paul's Island, Cape Breton, Sable Island and Cape Race, Newfoundland; the New Brunswick division, the Prince Edward Island division and the British Columbia division each including lights within the provincial boundaries. The total number of light-stations, light-ships and fog-alarm stations in the Dominion on the 30th June, 1899, was 674 and lights shown 846, the number of steam-whistles and fog-horns, bells and guns 88, the number of light-keepers and engineers of fog-alarms with masters of light-ships, was 676.

The report of the Chief Engineer relating to lighthouse construction, repairs, hydrographic and tidal surveys, &c., will be found in Part I. The principal repairs, changes and improvements at existing stations are referred to in his report; also new aids to navigation. The work done at fog-alarm stations in connection with steam-whistles, compressed air horns and explosives, are dealt with under their proper headings. Information is also given respecting the extent of repairs and some account of the repairs in detail, under the head of the station.

CORRESPONDENCE.

The Correspondence Branch of the department is under the control of Mr. John Hardie, chief clerk of the department. About 15,640 letters, exclusive of telegrams, were received in the department during the fiscal year. This correspondence was carefully examined and replied to as far as necessary. About 15,000 letters were sent out during the same period. Forms, reports, circular letters, notices inviting tenders are not included in the number of letters addressed to this department or sent out. These forms, &c., are numerous and require special attention as the matters to which they refer are important.

In the Records Branch of the department the letters received are carefully examined, entered in the record book, placed on file and the copy of the reply attached, so that the letters and the answers can be readily seen, and any subject easily followed up.

MERCHANT SHIPPING.

Reports relating to merchant shipping for the calendar year of 1899 have not been received from the registrars of shipping, in the various ports of the Dominion. The reports are made up to the end of the calendar year, and therefore, will not be received until some time after the month of January, as required by the Canadian Merchant Shipping Act.

The statements showing the number of vessels on the registry books of the Dominion at the 31st of December, 1899, will appear in supplement No. 1 to this report. The number of new vessels built and registered will also be shown, and also a comparative statement of the tonnage of new vessels built and registered from 1874 to 1898, both inclusive.

Mr. W. L. Magee, chief clerk, attends to all matters in connection with merchant shipping.

BUOYS AND BEACONS.

The extended coast line of Canada, and numerous bays, inlets, rivers, lakes, harbours and other navigable waters require a large number of buoys, which are maintained at an

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average cost of \$55,000 per annum. For the fiscal year ending 30th June last, the service cost \$78,176.93. The cost of this service is increased in years when new contracts are given for steel signal and other coast buoys.

The Chief Engineer, in his report relating to buoyage, points out that the department has been substituting steel coast buoys for wooden buoys, with favourable results. The districts now buoyed, in all parts of the Dominion, number over three hundred and the buoys number over three thousand. A record of the names of shoals, dangers, reefs and various points in channels, harbours, &c., where the buoys are placed, is carefully maintained; this enables the department to immediately locate the buoys, when any reference is made to them in the correspondence.

The contract system has been found to work most economically and efficiently; in the majority of instances the contracts are immediately under the supervision of departmental officers, whose duty it is to report to the department any neglect of work on the part of contractors. There are now existing about 150 contracts, over 110 having expired and new contracts will be entered into in the spring. The contractors are paid semi-annually, upon the certificate of the superintending officer. There are, however, some districts not under contract; the work is being attended to by the harbour masters. In these cases it has been found more advantageous to place the work immediately in the hands of these officers.

A large number of whistling, bell and other iron buoys are maintained along the coasts of the several provinces by Dominion steamers, particularly Nova Scotia, New Brunswick and British Columbia. The cost of this maintenance by the steamers is not charged directly to the buoy service, but is included in the cost of maintenance of steamers which frequently perform the double duty of attending to lighthouses and the coast buoy service on the same trip.

The expenditure in connection with the buoy service for the year ended June 30, 1899, was as follows:

For the province of Quebec, including the port of Montreal.	\$39,644	11
Above Montreal, including Ontario.	6,323	73
Nova Scotia	11,843	89
New Brunswick	11,634	42
British Columbia	5,409	81
Prince Edward Island.	3,320	97
Total	\$78,176	93

In addition to the buoys for marking dangers there are eleven gas buoys below Quebec and one spare buoy, also gas works and supply tanks, &c. Two gas buoys are maintained in Pelee Passage, Lake Erie and three in Parry Sound, Ontario. All of these buoys assist vessels at night by their light.

The contract for maintaining the buoys and beacons between Montreal and Quebec in the ship channel was cancelled in the spring of 1899. The steam barge "Shamrock" which was built for the work by the late contractor, was purchased and officers were appointed who are immediately under instructions from the department in carrying out the work of buoying the channel. The buoys were increased in number and various changes and improvements were made.

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Eighteen large steel conical top and ten 3-ft. iron can buoys were constructed under contract and placed in position by the "Shamrock". In addition to this a number of heavy spar buoys were prepared and put in the ship channel at various points.

The Chief Engineer of the department gave personal attention to the changes and improvements and provided for close supervision of the maintenance of buoys and beacons.

Several new beacons were erected and old ones improved. The Chief Engineer's report contains the details of the improvements made and the work performed during the season of navigation.

It will be observed that the total cost of the buoy service for the fiscal year is greater than usual; this is owing to the purchase of the "Shamrock" which vessel is used entirely for the buoy service between Montreal and Quebec.

Tenders were invited and contracts entered into for the following steel buoys during the year, viz., three bell buoys, two whistling buoys, two conical buoys and seven can buoys for New Brunswick; four whistling buoys, three bell buoys, five conical buoys and four can buoys for Nova Scotia; four conical buoys for Quebec, and six conical buoys for British Columbia.

OIL FOR USE OF LIGHTHOUSES.

Tenders were invited for lighthouse oil in March, 1897, and the contract awarded to the National Oil Company of Petrolia, Ont., their tender being the lowest, and a contract was entered into with them for three years. The contract was transferred to the Imperial Oil Company of Sarnia for the season of 1899 as the National Oil Company discontinued business.

The specification upon which tenders were invited requires the oil to weigh at 62° Fahr., not less than 7.85 nor more than 8.20 lbs. per gallon, and to withstand a flash test of 115° Fahr.

The quantity of oil supplied lights above Montreal during the season of 1899 was 21,782.18 imperial measure, which cost \$3,728.70; to the lights in the Quebec district, 12,915 gallons, which cost \$2,176.26; to the lights in the Nova Scotia district, 37,431 gallons, which cost \$7,948.93; to the New Brunswick district, 8,550 gallons, costing \$1,816.88; to the Prince Edward Island district, 7,501 gallons, costing \$1,650.33.

In addition to this the department purchased from the Standard Oil Company of New York 7,000 gallons of American oil for the Nova Scotia district at a cost of 15½ cents a gallon in New York; for New Brunswick 4,000 gallons, at 15½ cents per gallon; for the district above Montreal 1,150 gallons at the same price in New York. The freight was paid by the department. In addition to this 5,500 gallons of American oil was purchased for the British Columbia district at 21½ cents per gallon.

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The list of prices according to contract is as follows:—

Delivered at	Per gallon in barrels.	Per gallon in case.
	cts.	cts.
Sarnia.....	14½	19
Hamilton.....	15	19½
Kingston.....	15½	20½
Montreal.....	16½	20½
Quebec.....	16½	21½
St. John, N.B.....	16½	21½
Pictou, N.S.....	16½	21½
Halifax, N.S.....	16½	21½
Charlottetown, P.E.I.....	17½	22

DOMINION STEAMERS.

"NEWFIELD."

The "Newfield" is an iron steamer commanded by Captain John H. Campbell, and has a crew of 33 men. Her dimensions are: length, 206 feet; breadth, 29 feet; depth of hold, 16 feet; tonnage, 785 gross and 509 register.

The steamer "Newfield" was engaged in lighthouse service around Cape Breton, Cape Race, St. Pauls Island and Northumberland Straits, with the Superintendent of Lights and Mr. Stevens on board from the 1st to the 19th of July, 1898. The vessel was then prepared for cable service and was engaged in this service up to the 23rd of September.

On the 24th of September the "Newfield" loaded coal and other supplies for Sable Island. After visiting Sable Island and landing supplies the vessel returned to Halifax and landed the return stores.

The ship was then prepared to resume the cable work, in which service she was engaged until the 17th of November. Lighthouse supplies and buoys and moorings for the Western shore were taken on board on the 18th of November. The steamer was engaged in the lighthouse and buoy service in that locality until the 27th of November.

The "Newfield" was sent to take up the automatic buoys on the coast of Prince Edward Island, as the "Stanley" was then undergoing repairs. The steamer then resumed the lighthouse and buoy service in Nova Scotia and continued in that service until the 1st of January, 1899, when the crew was transferred to the "Aberdeen" and the "Newfield" was put into winter quarters.

On the 26th of April the ship left Halifax to engage in the lighthouse and buoy work. This service was continued until the 7th of May when a trip was made to Sable Island with supplies. Some wrecked goods from the SS. "Moravia" were taken on board at Sable Island and landed at Halifax. The lighthouse and buoy service was resumed on the 19th of May and was continued until the 30th of June.

Ordinary repairs were made to the "Newfield" largely by the engineer and assistants. The cost of repairs to the hull was \$507.92 and to the engine, \$4,226.01.

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"LANSDOWNE."

The "Lansdowne" is a wooden steamer commanded by Captain Geo. W. J. Bissett, and has a crew of 34 men in all. Her dimensions are 188 feet in length, 32 feet in breadth and 15 feet in depth; gross tonnage 680 and register tonnage 463.

The steamer "Lansdowne" was engaged in the coast buoy service in the New Brunswick Agency from the 1st of July, 1898, to the 4th of the same month, on which date she entered upon lighthouse work. On the 22nd of July the steamer was sent to the Nova Scotia Agency where she was employed in the lighthouse and coast buoy service up to the 4th of November. The "Lansdowne" then made a trip to Sable Island, returning from that place on the 10th of November with return stores. From the 14th to the 21st of November the steamer was engaged in lighthouse work, she then returned to St. John and entered upon the work of supplying lighthouses and attending to the buoy service in the New Brunswick Agency.

The "Lansdowne" went into winter quarters at St. John on the 3rd of March, 1899. Extensive repairs were made to the ship while in winter quarters. On the 26th of April she was placed in Hilyards Dock and her bottom was copper painted. This occupied two days and the steamer was put in commission on the 30th of April.

The "Lansdowne" continued her usual work in the buoy and lighthouse service in the New Brunswick Agency, with the exception of several trips made during May and June to lighthouses in the Nova Scotia Agency supplying fog-alarms with coal.

Extensive repairs were made to the cabin of the "Lansdowne" and a heater supplied which involved considerable plumbing work. The stern outside was repaired, a new main rail was put on starboard side and steel plates were put on starboard and port side and on the bow. The fore rigging was shifted forward about three feet and the main deck and part of the poop deck caulked. About 50 feet of shoe was put on the keel.

New furniture was added to the cabin and some upholstering was done, costing \$44.20. Blocks and sheaves were repaired and new ones added, a new jib was also purchased.

Tenders were invited for painting the steamer inside and out. The painting cost \$345.30 with the exception of the copper painting on the bottom which work was done by the caulkers.

The repairs to the boiler and machinery cost \$1,021.22.

"ABERDEEN."

The "Aberdeen" is an iron screw steamer 180 feet long, 31 feet broad, and 16 feet deep; her tonnage is 674 gross and 266 tons net. Her Captain is Sigismund Belanger and her crew consists of 36, all told.

The steamer "Aberdeen" loaded lighthouse supplies at the Queen's Wharf, Quebec, on the 11th of July, 1898, and made a trip to Belle Isle with men and materials on board for the construction of a new lighthouse. A number of lighthouses were visited and supplied on the way to Belle Isle and on the return trip to Quebec. The steamer arrived at Quebec on the 13th of August when some painting and cleaning up was done by the

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crew. On the 18th of August a trip was made to Grosse Isle with the Canadian Medical Association on board, and the steamer returned to Quebec the same day. The "Aberdeen" made three trips in the Quarantine Service in August and September and she was otherwise engaged in the lighthouse service.

On the 5th of September the steamer left Quebec for Belle Isle and called at Cape Ray and Cape Norman on the way. Mr. Noble and several workmen were brought from Belle Isle to Quebec. The vessel arrived at Quebec on the 15th of September. On the 30th of the same month the steamer was sent out to pick up the anchor and chain of H.M.S. "Renown" and returned to Quebec on the 1st of October. Lighthouse supplies were then taken on board and the ship left Quebec on the 11th of October on the fall trip with supplies for lights in the River and Gulf of St. Lawrence, Straits of Belle Isle and Bird Rocks; she returned to Quebec on the 6th of November. The steamer left Quebec on the 14th of November to engage in the buoy and lightship service and continued in this service until the 30th of November.

The "Aberdeen" then proceeded to Halifax to replace the "Newfield" and arrived at Halifax on the 4th of December. She was engaged in the lighthouse and buoy service in the Nova Scotia Agency until the 20th of December. Supplies were then taken aboard and a trip was made to Sable Island, the vessel returning to Halifax on the 23rd of December. The buoy service was then resumed by the "Aberdeen" and continued until the 1st of March, 1899, on which date supplies were taken on board and another trip made to Sable Island. The crew of the wrecked steamer "Moravia" were brought to Halifax from Sable Island. Another trip was made to this station with supplies on the 8th of May. The "Aberdeen" was otherwise engaged in the buoy service up to the 30th of June.

"QUADRA."

The "Quadra" is an iron steamer and her dimensions are, length, 174 feet; breadth, 21.1 feet, and depth of hold, 13.6. Her gross tonnage is 573.30 tons, and her register tonnage 265.25 tons. This steamer is commanded by Jno. T. Walbran, and has a crew of 21 all told.

On the 1st of July, 1898, the "Quadra" was engaged on the west coast of Vancouver in connection with revenue work, she was engaged in this service until the 10th of July. The lighthouse and beacon service was then entered upon and continued until the 22nd of the same month, when the steamer was placed at the service of His Excellency the Governor General from the 22nd to the 23rd of July.

On the 28th of July the Mayor and Aldermen of Victoria and 180 ladies and gentlemen, members of the Wisconsin and Michigan U.S. Press, were conveyed from Victoria to Esquimalt and back.

The steamer then resumed her regular lighthouse and buoy work and continued in it up to the 20th of December. On the 21st of December preparations were made for overhauling the ship. The work was begun on the 23rd December, and the steamer was out of commission until the 16th of March, 1899. On that date she was placed in commission and entered upon the lighthouse service in which she was engaged until the 8th of April, when the work of cleaning and painting the ship was done.

On the 15th of April the ship entered upon the lighthouse and buoy service and was engaged in it until the 18th of June, when the Western Canadian Press Party

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embarked at Victoria and the "Quadra" visited Seattle taking a number in addition from that port, these were all disembarked at Victoria on the 20th of June. The steamer then resumed the lighthouse and beacon work in which she was engaged until the 30th of June.

"STANLEY."

The "Stanley" is an iron steamer commanded by Captain Angus Brown and has a crew of 35 all told. Her dimensions are: length, 207 feet; breadth, 32 feet, and depth of hold, 19 feet; tonnage, 914 gross and 395 register.

The "Stanley" on the 1st of June, 1898 left Charlottetown to go into the service of the Customs Department in which she was engaged until the 4th of October. The ship then returned to Charlottetown for the usual overhauling and repairs for the winter service.

On the 15th of December the "Stanley" entered upon the coast buoy service and continued in this service until the 17th of the same month.

The steamer on the 20th December began the regular mail service between Charlottetown and Pictou, continuing on this route until the 29th December, when on going out and finding the Hillsborough Bay full of heavy ice and very cold it was decided to go to Georgetown. The vessel continued on the Pictou-Georgetown route until the 2nd of February, 1899, when she was caught in the ice on a trip from Pictou and did not reach Georgetown until the 18th of February. From the 20th to the 24th of February was occupied in making one trip. From the 25th February until the 9th of April the "Stanley" continued making all trips as regular as possible, having established return daily trips. The mails were transferred from the Capes route to the "Stanley." On the 17th April the ship returned to the Charlottetown route and continued on it until the 28th of the same month, when she was taken out of the service, the steamer "Princess" of the Steam Navigation Company, taking charge of the mails.

On the 29th of April the "Stanley" towed the spars of the wrecked barque "Bartins" out of the channel to the flats on the south side of the channel.

On the 2nd of May the steamer was prepared for the coast buoy service. On the 8th May Tryon Shoal buoy was placed, on the 9th Indian Rocks, and on the 11th the bell buoy and nun buoy at Tormentine Harbour. From the 11th to 22nd of May the men were engaged in scraping and cleaning out ballast tanks and other necessary work.

The "Stanley" left Charlottetown for Pictou to have the bottom cleaned and painted on the 23rd of May. This work was completed on the 6th of June. A new automatic buoy for West Point Reef was then taken on board and placed in position, the steamer returning to Charlottetown on the 10th of June.

On the 12th of June the steamer again started on the Charlottetown and Pictou route for the Steam Navigation Company, their steamer going on the slip to be painted. This service was continued until the 15th of June, on which date the steamer was laid up for overhauling. This work was not completed on the 30th of June.

The gross earnings of the steamer amounted to \$12,187.24. The vessel carried 1,730 passengers and 121,420 packages of goods, besides doing mail service.

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" MINTO."

The " Minto " is an iron steamer 225 feet long, breadth 32·6 and depth 20·6 ; gross tonnage 1,089, net tonnage 371 ; indicated horse-power 2,900 and nominal horse-power 216. This steamer is commanded by Captain Allan Finlayson and has a crew of 35 in all.

The steamer " Minto " was built for the winter service between Prince Edward Island and the Mainland. As stated in last year's report the " Stanley " has been upon the route in winter since 1887, and a careful examination of that steamer's hull showed that it would not be prudent to depend entirely upon the " Stanley " to continue the winter service.

Tenders were invited for a new steamer in Great Britain and the tender of Messrs. Gourlay Brothers & Co., of Dundee, was accepted.

The " Minto " was built according to plans and specifications prepared by M. P. McElhinney, Nautical Adviser of the department. The vessel was successfully launched on the 12th of July, 1899, equipped and made ready for sea on the 13th of September. The captain, first officer and second engineer, together with twenty men were sent from Charlottetown to Dundee to bring the steamer out. The crew was increased by a few men who signed articles in Dundee.

The " Minto " left Dundee on the 14th of September, 1899, and arrived in Charlottetown on the 25th of the same month, having experienced a rough passage in which her good sea-going qualities were proved. The speed attained was 16 knots on her trial trip and 14 knots at sea.

The engines are triple expansion having cylinders 26, 41 and 65 inches diameter ; the stroke is 39 inches. The vessel has improved corrugated furnaces fitted with force draught which can be used as required.

The stern has been specially designed for backing in the ice with an ice cutter to protect the rudder stock, the rudder itself is of solid cast steel. The vessel is provided with water ballast tanks in the bottom and trimming tanks forward and aft, and equipped with a special engine and pump for this purpose.

Experience has been gained by the service of the " Stanley " and in designing the new steamer improvements were kept in view. Instead of berths as in the " Stanley " eight state-rooms are provided, with two berths and a lounge in each. One specially large state-room is fitted up with beds and other conveniences. The dining saloon is sufficiently spacious and neatly furnished, upholstered and well lighted with incandescent electric lamps. Part of the saloon is furnished specially for the comfort of ladies and has the latest improvements in heating apparatus.

The main objects, however, have been to secure strength of hull and powerful engines.

" BRANT."

The " Brant " is a new wooden steamer 100 feet long over all, 19 feet in breadth and 8 feet depth ; her tonnage is 141 gross and 57 net. The " Brant " is commanded by Captain D. Mackinnon and has a crew of 12 all told.

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This steamer was built in Charlottetown for a supply steamer for the Prince Edward Island lighthouse service and other work. The hull was built under contract with Mr. John White, of O'Leary Station, and the engines and boilers by Messrs Bruce Stewart & Co., of Charlottetown. The hull was built under Lloyd's inspection to class 10 years and the vessels bottom is sheathed with muntz metal.

The engine is of the compound expansion surface condensing type; cylinders, high pressure 14 inches and low pressure 28 inches, both having a stroke of 22 inches.

The "Brant" was launched on the 10th of June, 1899, but was not completed at that period. The machinery, equipment and furnishings were placed on board which enabled the steamer to enter upon the work of carrying lighthouse supplies during the season of 1899.

The total cost including contracts for hull, machinery, equipment and furnishings is about \$19,000. The "Brant" is fitted up with good accommodation for the officers and men, she is substantially built and is a very serviceable steamer. Her engines have worked well from her trial trip, giving a speed of $9\frac{1}{2}$ knots per hour with a small consumption of coal.

"SHAMROCK."

The "Shamrock" is a steam barge 117 feet long, 25 feet in breadth and 9.7 in depth; her gross tonnage is 237 and net tonnage 161. The "Shamrock" has a crew of 12 all told including Mr. U. P. Boucher, who is in charge of the steamer and directs her movements. The sailing captain is S. Savaugau.

The "Shamrock" is used entirely in the buoy service in the ship channel between Montreal and Quebec. This vessel was constructed specially for this service by Mr. J. C. Kaine of Quebec, late buoy contractor, and was launched in 1898. She was purchased in the spring of 1899 at a cost of \$21,500, which included equipment and furnishings.

The steamer was engaged in buoy work in the St. Lawrence River from the 17th of April, 1899, until the 5th of December, when she was placed in winter quarters at Sorel, P.Q.

"BAYFIELD."

The "Bayfield" is a wooden steamer 110 feet long, 18 feet broad and 9 feet deep. Mr. W. J. Stewart is in charge of the Hydrographic Survey and has as his assistants, Messrs F. Anderson and R. E. Tyrwhit. Captain A. M. McGregor is the sailing master of the "Bayfield" and the crew consists of 19 men in addition.

The "Bayfield" resumed the survey on the 3rd of May, 1899, and ended for the season on the 25th of October. The survey of the south shore of Manitoulin Island was completed. The steamer was then employed in surveying the north-east shore of Lake Huron between Cape Hurd and Lyal Island at the entrance to Stokes Bay. Slight repairs were made to the "Bayfield" in the spring.

"DOUID"

The "Druid" is an iron screw steamer of 161 feet in length, 21 feet breadth, and depth 9 feet. Her tonnage is 239 gross and 166 net. The vessel is commanded by Capt. Charles Koenig, and has a crew of twenty.

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From the 1st of July, 1898, to the 8th the "Druid" was engaged in assisting to build the pier at the Traverse, after which she entered on the work of replenishing gas buoys and beacon work. On the 25th of July a trip was made from Grosse Isle to Quebec. Similar work, namely replenishing gas buoys, visiting Traverse Pier and carrying passengers in connection with quarantine work was engaged in up to the 22nd of August. The steamer was then placed in Russels floating dock at Lévis to scrape and paint her bottom. After which her usual work was resumed, consisting of buoy work, delivering lighthouse supplies and quarantine work until the 20th November when the crew was discharged and the vessel laid up.

On the 20th April, 1899, the "Druid" left her winter quarters to place the light-ships and attend to the buoy service; this work was continued until the 22nd May when two trips were made to the quarantine station. The buoy and lighthouse service was resumed the next day. Another trip was made in the quarantine service on the 27th of May and on the 13th of June. The ship then resumed the buoy service and continued in this service until the 30th of June.

"SIR JAMES DOUGLAS."

This steamer was considered unsafe for use seven years ago owing to the worn-out condition of the boilers. It was not considered in the interests of economy to place new boilers in the "Douglas" as the hull was then nearly thirty years old. No use has consequently been made of the steamer for seven years and efforts have been made several times to dispose of her. In October of this year tenders were invited publicly and the highest offer received was from Mr. R. Winkleman for \$1,292.50. This offer was accepted and the vessel was transferred to the purchaser.

"DOLPHIN."

This small steamer was in commission in the Fisheries Branch for several years and when the Ontario Government assumed control of Fisheries matters in the province the "Dolphin" was put out of commission and sold to Mr. H. B. Harrison for \$700. The steamer had been many years in the Government service.

OTHER STEAMERS.

The "Acadia," "Petrel," "Curlew" and "La Canadienne" are engaged in Fisheries protection work and reports concerning them will be found in the Fisheries Report of this department.

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STATEMENT showing cost of maintaining Dominion Steamers from 1884 to 1899.

Year.	Cost of Maintenance.
	\$ cts.
1883-84	122,816 25
1884-85	148,864 26
1885-86	130,759 83
1886-87	141,424 42
1887-88	150,659 19
1888-89	126,629 33
1889-90	114,959 20
1890-91	111,437 03
1891-92	127,406 28
1892-93	146,521 77
1893-94	142,487 42
1894-95	129,899 80
1895-96	150,519 41
1896-97	136,940 11
1897-98	117,644 39
1898-99	145,270 75

The following statement shows the expenditure for maintenance and repairs and the receipts of Government steamers for the fiscal year ended June 30, 1899 :—

Name.	Repairs.	Maintenance.	Total.	Receipts.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
General Account		269 16	269 16	
"Druid"	3,874 42	11,876 39	15,750 81	
"Lansdowne"	1,486 01	25,841 97	27,327 98	
"Newfield"	4,734 93	16,184 09	20,919 02	
"Quadra"	1,312 81	19,157 94	20,470 75	
"Stanley"	3,389 40	22,314 25	25,703 65	12,187 24
"Aberdeen"	4,412 69	30,321 44	34,734 13	183 50
"Sir James Douglas"		95 25	95 25	
	19,210 26	126,060 49	145,270 75	12,370 74

CERTIFICATES TO MASTERS AND MATES.

The report of Captain W. H. Smith, R.N.R., Chairman of the Board of Examiners of Masters and Mates, forms Appendix No. 5 of this report.

During the fiscal year the Board of Examiners of Masters and Mates held examinations at Halifax ten times, at St. John six times, Yarmouth two times, and at Quebec once; nineteen times in all. There were also three examinations held at Victoria, B.C., the papers and problems were forwarded to the agent at that place and returned to Halifax, for inspection of the Chairman of the Board.

At Halifax nine applications were made for foreign-going certificates of competency as master, and nineteen for coasting and inland; eight foreign-going and sixteen coasting and inland masters received certificates; seven applications were made for foreign-going certificates of competency as mate and three for coasting and inland; seven foreign-going and three coasting mates received certificates.

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At St. John four applications were made for foreign-going certificates of competency as master, and one foreign-going master received a certificate ; twelve applications were made for foreign-going certificates as mate, and eight mates received certificates ; one coasting master received a certificate.

At Yarmouth two applications were made for foreign-going certificates as master, and two foreign-going masters received certificates ; two applications were made for foreign-going certificates as mate, and one mate received a certificate.

At Quebec two applications were made for foreign-going certificates as mate, and both received certificates.

At Victoria, B.C., four applications were made for mates' certificates foreign-going, and three received certificates.

The amount received for the renewal of certificates, inland, coasting and foreign-seagoing, during the twelve months ended June 30, 1899, was \$148.

In supplement No. 1 to this report will be found a list of all who have obtained certificates of competency and service, either as master or mate, during the year ended 30th June, 1899.

INLAND AND COASTING CERTIFICATES.

During the twelve months ended June 30, 1899, the number of candidates in the Dominion who have passed and obtained masters' certificates of service was eight, and one certificate of service has been issued ; the amount paid for these certificates was \$68.

The number of certificates of competency as master was 223, as mate 68, and the amount paid for these certificates was \$3,557. The amount received for renewed certificates of competency and service was \$148, making a total of \$3,639.50 received from masters' and mates' inland and coasting certificates.

A list of certificates issued during the twelve months ended June 30, 1899, will be found in supplement No. 1 to this report.

The total amount of fees received on account of certificates of competency and service, sea-going and inland and coasting, during the fiscal year ended June 30, 1899, was \$4,486.50, and the amount in detail expended on account of the service as will be seen by reference to Appendix No. 1 to this report was \$3,568.26. The vote for this service was \$5,000, and the sum expended to June 30, 1899, \$3,568.26, leaving an unexpended balance of \$1,431.74.

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The following statement shows the total receipts and expenditure on account of masters and mates since 1871 :—

	Expenditure.		Receipts.	
	\$	cts.	\$	cts.
For the fiscal year ended June 30, 1871	1,410	45		
" " " 1872	4,312	07	1,344	00
" " " 1873	6,466	18	4,963	00
" " " 1874	4,520	19	2,995	00
" " " 1875	5,696	62	2,715	00
" " " 1876	4,672	08	2,021	87
" " " 1877	4,050	00	1,740	50
" " " 1878	4,249	76	1,296	50
" " " 1879	4,250	12	1,334	50
" " " 1880	4,253	43	1,547	00
" " " 1881	3,838	41	1,333	50
" " " 1882	3,965	19	1,152	50
" " " 1883	4,021	20	1,314	00
" " " 1884	3,909	59	9,437	50
" " " 1885	4,324	15	2,897	00
" " " 1886	5,245	28	2,152	00
" " " 1887	4,855	98	2,172	00
" " " 1888	5,060	96	3,220	80
" " " 1889	4,381	04	2,202	00
" " " 1890	4,117	83	2,186	00
" " " 1891	4,255	24	2,586	00
" " " 1892	4,363	88	2,194	00
" " " 1893	4,116	99	2,484	00
" " " 1894	3,721	33	2,907	04
" " " 1895	3,758	29	3,974	50
" " " 1896	4,062	82	2,307	50
" " " 1897	3,536	29	3,754	00
" " " 1898	3,335	40	4,800	00
" " " 1899	3,568	26	4,486	50
Expenditure	122,369	03		
Receipts			77,518	21
Excess of expenditure over receipts	44,850	82		

WRECKS AND CASUALTIES.

The total number of casualties to British and Canadian sea-going vessels reported to the department, as having occurred in Canadian waters and to Canadian sea-going vessels in waters other than those of Canada, during the twelve months ended June 30, 1899, was 255, representing a tonnage of 88,820 tons register, and the amount of loss both partial and total, to vessels and cargoes as far as ascertained, was \$542,890. The number of casualties to inland vessels was 15, tonnage 3,861, loss \$106,750.

The number of lives reported lost in connection with the casualties was 53. A statement of the wrecks and casualties will be found in supplement No. 1 to this report.

SICK AND DISTRESSED MARINERS.

MARINE HOSPITALS.

Under the provisions of chapter 76, Revised Statutes, a duty of two cents per ton register is levied on every vessel arriving in any port in the province of Quebec, Nova Scotia, New Brunswick, Prince Edward Island and British Columbia, the money thus

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collected forming the Sick Mariners' Fund. Vessels of the burden of 100 tons and less pay the duty once in each calendar year, and vessels of more than 100 tons, three times in each year.

By an amendment of this Act passed at the session of Parliament in 1887, 50-51 Victoria, chapter 40, it is provided that no vessel, which is not registered in Canada and which is employed exclusively in fishing or on a fishing voyage, shall be subject to the payment of this duty.

The receipts for the fiscal year ended June 30 last, amounted to \$57,365.79, being an increase of \$2,812.98 as compared with the preceding year. The increase in receipts for sick mariners' dues in the various provinces was as follows:—Nova Scotia, increase \$3,302.54; Quebec, decrease \$98.70; New Brunswick, increase \$6.73; Prince Edward Island, decrease \$86.62; British Columbia, decrease \$310.97.

The Sick Mariners' Act does not apply to the province of Ontario, and consequently no dues are collected from vessels in that province, although a small expenditure is incurred on account of sick seamen. An appropriation is made by Parliament to cover the expenditure at Kingston and St. Catharines, where general hospitals have been established and sick seamen are attended. During the fiscal year ended June 30 last sick seamen were paid for at a per diem rate of 90 cents.

In the province of Quebec the expenditure on account of sick seamen amounted to \$8,351.45, being \$294.53 more than the previous year. The total collections for the entire province amounted to \$17,478.41, being \$98.70 less than the previous year.

At the port of Montreal sick seamen are cared for at the General Hospital and at Notre Dame Hospital, under an arrangement made by the department, by which 90 cents per diem is paid for board and medical attendance of each seaman. The sick mariners' dues collected at the port of Montreal during the fiscal year ended June 30, amounted to \$8,550.16.

At the port of Quebec sick seamen were cared for at the Jeffery Hale and the Hotel Dieu hospitals, the sum of 90 cents per diem for each seaman is allowed in return for medical attendance and board. The sick mariners' dues collected at Quebec amounted to \$6,053.90.

The expenditure on account of sick seamen in the province of New Brunswick for the fiscal year amounted to \$5,252.23, being \$1,104 less than the preceding year, and the collection of dues to \$10,558.24 or \$6.73 more than the previous year. Marine hospitals have been maintained at Miramichi, Richibucto and Bathurst.

The Sackville hospital has been leased to Mr. Bradford Carter for a term of years from 1892, at a nominal rental. The terms of the lease require Mr. Carter to keep the buildings in repair, and if the department should require the hospital at any time it is to be handed over on notice being given.

In the province of Nova Scotia, marine hospitals are maintained at the ports of Yarmouth, Pictou, Sydney, Lunenburg and Point Tupper. The total expenditure on account of sick seamen in the province of Nova Scotia for the fiscal year amounted to \$15,067.63 and the receipts to \$20,719.42.

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At Halifax provision is made for the care of sick seamen at the Victoria General Hospital, under arrangements made with the managers, by which the sum of 90 cents per diem is allowed for board and medical attendance to sick seamen.

In the province of Prince Edward Island the amount expended on account of sick and disabled seamen during the fiscal year was \$1,102.53 and the receipts from sick mariners' dues were \$383.10.

Sick seamen are cared for at the Charlottetown and Prince Edward Island hospitals, under arrangements made with the managers of these institutions, at the same rate that is paid to the public hospitals in other parts of the Dominion.

In the province of British Columbia the sum of \$5,186.20 was expended for sick and disabled seamen, while the receipts from the collection of sick mariners' dues amounted to \$8,246.62.

The marine hospital at Victoria has in attendance a medical superintendent with a salary of \$300 per annum, a keeper whose salary is \$500 per annum. He is also allowed a rate of \$5 per week for board and attendance of each seaman. The keeper procures fuel, light, bedding, &c., at his own expense.

At ports where no hospitals are established in the provinces of Quebec, Nova Scotia, New Brunswick, British Columbia and Prince Edward Island, sick seamen are cared for under the direction of the chief officer of Customs, when the vessels to which the seamen belong have paid their dues according to law. A circular to collectors of Customs was issued February 7, 1891, permitting sick seamen to be attended to at the port of arrival of a vessel, provided that the regular dues were previously paid at some port.

During the fiscal year the sum of \$2,393.25 was expended for shipwrecked and destitute seamen, under the provisions of the Sick and Distressed Mariner's Act.

The total expenditure on account of sick and disabled seamen and Marine Hospitals amounted to \$37,353.29 and the appropriation by Parliament for this service was \$38,000. The dues collected amounted to \$57,365.79. It will be seen that the receipts exceed the expenditure \$20,012.50.

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The receipts and expenditure in connection with sick and distressed seamen from the year 1869 were as follows:—

	Receipts.		Expenditure.	
	\$	cts.	\$	cts.
For the fiscal year ended June 30, 1869.....	31,353	78	26,987	64
“ “ “ 1870.....	31,410	46	27,029	34
“ “ “ 1871.....	29,683	41	28,971	22
“ “ “ 1872.....	34,911	64	34,947	60
“ “ “ 1873.....	37,136	10	41,016	43
“ “ “ 1874.....	41,500	16	59,778	90
“ “ “ 1875.....	37,801	46	50,684	76
“ “ “ 1876.....	41,287	66	48,828	49
“ “ “ 1877.....	43,739	21	51,647	94
“ “ “ 1878.....	44,665	07	43,780	90
“ “ “ 1879.....	37,779	57	42,729	36
“ “ “ 1880.....	42,523	20	42,160	91
“ “ “ 1881.....	49,779	72	40,667	52
“ “ “ 1882.....	45,951	47	39,359	11
“ “ “ 1883.....	45,573	42	36,249	65
“ “ “ 1884.....	48,667	07	39,553	58
“ “ “ 1885.....	39,068	39	44,501	57
“ “ “ 1886.....	40,848	06	50,377	62
“ “ “ 1887.....	42,334	92	37,447	35
“ “ “ 1888.....	41,669	64	36,447	85
“ “ “ 1889.....	39,306	29	41,320	59
“ “ “ 1890.....	47,881	75	41,729	11
“ “ “ 1891.....	43,829	68	35,155	12
“ “ “ 1892.....	45,381	92	33,498	83
“ “ “ 1893.....	46,190	60	35,052	37
“ “ “ 1894.....	49,105	40	38,403	94
“ “ “ 1895.....	42,815	74	38,332	55
“ “ “ 1896.....	45,751	61	36,683	36
“ “ “ 1897.....	54,358	10	35,931	19
“ “ “ 1898.....	54,552	81	34,526	83
“ “ “ 1899.....	57,965	79	37,353	29
Total.....	1,334,224	18	1,234,161	62
Deduct expenditure from receipts.....	1,234,161	62		
Excess of receipts over expenditure.....	100,062	56		

STEAMBOAT INSPECTION.

The total number of steamboats reported in the several districts in the Dominion is 1,427. Of this number 112 are new vessels, the gross tonnage being 236,257.93. Fees were collected for inspection amounting to \$32,814.45; the fees from engineers for certificates amounted to \$910, and fees for inspection of tow barges to \$130, making the total receipts from steamboat inspection and engineers' certificates \$33,854.45. The receipts for the previous year from these sources amounted to \$31,525.40; it will thus be seen that the receipts of the fiscal year ending June 30, 1899, exceed the receipts of the preceding year by \$2,635.27. Owing to the increase of tonnage of steamers, mainly caused by the Yukon trade, and the additional work of inspecting steamers without certificates, not registered in the Dominion, the work of inspection has been increased in most of the divisions. A new inspector of machinery, who is also inspector of hulls, was appointed in British Columbia. The total expenditure in connection with inspection was \$28,035.49, showing an increase of expenditure for the last fiscal year of \$1,693.20.

The consolidated laws relating to steamboat inspection came into force on the 1st day of January, 1899.

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The report of the Chairman of the Board of Steamboat Inspection forms an appendix to this report.

The following is a comparative statement of the receipts and expenditure in connection with Steamboat Inspection :—

	Receipts.		Expenditure.	
	\$	cts.	\$	cts.
For the fiscal year ended June 30, 1870.....	12,521	29	7,379	18
" " " 1871.....	10,369	96	8,321	00
" " " 1872.....	11,710	43	8,500	00
" " " 1873.....	15,412	75	11,205	54
" " " 1874.....	15,603	19	10,291	58
" " " 1875.....	15,011	90	12,199	81
" " " 1876.....	13,811	24	13,081	86
" " " 1877.....	15,858	42	12,073	01
" " " 1878.....	12,431	25	13,228	28
" " " 1879.....	12,331	16	13,076	46
" " " 1880.....	15,424	02	11,854	34
" " " 1881.....	16,905	49	12,211	65
" " " 1882.....	15,277	78	14,835	97
" " " 1883.....	12,577	36	16,209	02
" " " 1884.....	15,371	79	21,893	28
" " " 1885.....	13,343	66	23,235	04
" " " 1886.....	14,087	76	21,775	57
" " " 1887.....	12,701	20	22,837	80
" " " 1888.....	12,550	14	21,430	45
" " " 1889.....	12,576	18	22,313	03
" " " 1890.....	19,859	18	20,989	52
" " " 1891.....	21,644	72	22,183	76
" " " 1892.....	20,994	84	22,736	59
" " " 1893.....	25,295	35	24,386	95
" " " 1894.....	24,835	47	25,961	36
" " " 1895.....	24,630	56	26,385	88
" " " 1896.....	24,002	32	26,321	27
" " " 1897.....	25,094	95	26,837	83
" " " 1898.....	31,525	40	26,342	29
" " " 1899.....	33,854	45	28,035	49
	527,663	12	549,153	81
Deduct receipts from expenditure.....			527,663	12
Balance to debit of fund.....			21,490	69

The following list contains the names of the inspectors of boilers and machinery and hulls and equipments of steamboats, viz :—

Name.	Position.	Address.
Edward Adams.....	Chairman of Board of Steamboat Inspection.....	Ottawa.
M. P. McElhinney.....	Inspector of Hulls and Equipments.....	" " " " " "
I. J. Olive.....	" " " " " "	St. John, N.B.
S. R. Hill.....	" " " " " "	Halifax, N.S.
William Evans.....	" " " " " "	Toronto, Ont.
Alex. Horn.....	" " " " " "	Kingston, Ont.
P. D. Brunelle.....	" " " " " "	Quebec.
R. Collister.....	" " " " " "	Victoria, B.C.
John Dodds.....	Inspector of Boilers and Machinery.....	Toronto, Ont.
J. Johnson.....	" " " " " "	" " " " " "
T. P. Thompson.....	" " " " " "	Kington, Ont.
Wm. Laurie.....	" " " " " "	Montreal, P.Q.
L. Arpin.....	" " " " " "	" " " " " "
J. Samson.....	" " " " " "	Quebec, P.Q.
J. P. Esdaille.....	" " " " " "	Halifax, N.S.
H. L. Waring.....	" " " " " "	St. John, N.B.
J. A. Thomson.....	" " " " " "	Victoria, B.C.
G. P. Phillips.....	" " " " " "	Rat Portage, Ont.

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MESSENGER PIGEONS.

Several attempts were made at Hazel Hill, N.S., where the pigeon loft is now situated, to train and fly some of the birds for use in the Sable Island service. The results were not satisfactory, as a number of the pigeons were lost and others returned to the loft in a dying condition. The report in detail of Mr. S. S. Dickenson, under whose care the birds have been placed, forms an appendix to this report. This service will be discontinued.

OUTSIDE SERVICE, MARINE BRANCH.

The number of persons employed in the Outside Service on the 30th June, 1899, was as follows :—

Superintendent of lights and light-keepers, &c., in Ontario and above Montreal.....	182
Officers of agency in the city of Quebec and light-keepers, fog-whistle-keepers, crews of light-ships, &c., at and below Montreal, in the province of Quebec.....	182
Agent, clerk, messenger, superintendent of lights, light-keepers, fog-whistle-keepers, attendants at humane establishments, &c., in Nova Scotia.....	213
Agent, clerk, messenger, superintendent of lights, light-keepers, fog-whistle-keepers, &c., in New Brunswick.....	113
Agent, foreman of works, messenger and light-keepers, in Prince Edward Island.....	49
Agent and light-keepers in British Columbia.....	22
Officers and crews of Dominion steamers and vessels, including Fisheries Protection Service.....	436
Coxswains of lifeboats.....	25
Inspectors of steamboats.....	22
“ shipments of live stock.....	4
Examiners of masters and mates, and clerk to Chairman of Board.....	19
Officers and servants in marine hospitals.....	20
Shipping masters.....	35
Harbour masters.....	206
Officers of observatories, meteorological observers, &c., receiving pay.....	162
Hydrographers and engineers at Ottawa.....	7
Receivers of wrecks.....	46
Wharfingers.....	164
Making a total of.....	<u>1,907</u>

For the previous year the number was 1,825. In addition to the 1,907 mentioned above there are 71 registrars of shipping, who act under the direction and control of this department, but are, at the same time, collectors of customs at various ports of registration, and receive no salary or fee in their capacity of registrars. There are 94

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measurers and surveyors of shipping throughout the Dominion who act as officers of this department, and are remunerated from their fees of office, although in addition to such office, many of them hold positions in the customs service. Also, in addition to the above by Orders of Council of the 21st of April and 2nd of December, 1874, the chief officer of customs at each port in the provinces of Quebec, Nova Scotia, New Brunswick, British Columbia and Prince Edward Island, where no separate shipping office has been established, is to be held and deemed a shipping master, is to receive the fees, make the yearly returns to the department, and act in that capacity under its directions.

LIVE STOCK SHIPMENTS.

In last year's report the statements furnished by Messrs. George Pope and E. B. Morgan, inspectors at Montreal, contained the total number of live stock shipped from the port of Montreal for the season of 1898. The returns show that the total number of cattle shipped from Montreal during the season of 1899 was 81,804, a decrease of 17,335 from 1898. The total number of sheep shipped during the same time was 58,277, an increase of 23,336 over the shipment of the season of 1898. The number of horses shipped from Montreal during 1899 was 4,739, being 1,088 less than last year. The total number of United States cattle in bond shipped from Canada numbered 11,745. From Quebec were shipped 4,293 cattle and 779 sheep. From St. John, N.B., 8,579 cattle, 1,624 sheep and 303 horses. From Halifax 6 horses were shipped. From Charlottetown 1,593 sheep and 91 cattle were shipped. Total from all these ports, 94,767 cattle, 62,273 sheep and 5,048 horses.

The shipments in detail will be found in the appendix to this report under the head of Live Stock Shipments.

METEOROLOGICAL SERVICE.

Efforts have been made to bring the monthly weather review of this service up to date. The monthly review gives a short description of the weather and brief articles on climatology. Six new stations were established in British Columbia, fifteen in the North-west Territories, two in Manitoba and eleven in Ontario.

The Departments of Agriculture in Ontario, Manitoba and British Columbia realize the importance of reliable meteorological data in connection with statistics of crops, acreage under cultivation, &c. Monthly charts containing notes on the leafing of trees and flowering of plants and other information are published. In August, 1896, the publication of a daily weather chart was commenced, containing information gathered from meteorological observations taken each day at 8 a.m. This chart is displayed in Toronto at the Board of Trade, Harbour Master's office, and at some of the public schools. Private individuals obtain the chart, paying for it \$4 per annum. The forecasts of the weather are telegraphed to 33 ports in the Maritime Provinces and also to all the principal ports on the Great Lakes. The value of these forecasts will be seen by reading the report of the Director.

SIGNAL SERVICE.

The reports of the Superintendents of Signal Service at Quebec and Halifax contain information valuable to mariners, Mr. J. U. Gregory is Superintendent of this service at Quebec, and Major H. B. Roberts of the Royal Engineers, at Halifax.

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ICE BOAT MAIL SERVICE.

This service began on the 18th of January, 1899, when the "Stanley" ceased to make daily trips, and was continued until the 13th day of April. During this time the following service was performed:—

Number of mail bags carried.	5,707,	as against	3,579	in 1898
Extra baggage carried, lbs.	539	"	1,169	"
Number of strap passengers carried	66	"	136	"
Number of passengers hauled.	26			

The expenditure for the ice boat service was \$8,637.18, which included wages, cost of boats and gear. The receipts from passengers and baggage amounted to \$249.42.

In the expenditure is included the cost of conveying mails for which the department receives no revenue.

REMOVAL OF OBSTRUCTIONS TO NAVIGATION.

The sum of \$1,000 was appropriated by Parliament for the removal of obstructions to navigation. By reference to the statement of expenditure it will be seen that the sum of \$745.49 was expended for the fiscal year. A statement in detail will be found in the report of the Chief Engineer of this department under the heading of Removal of Obstructions. The expenditure is given in detail for the amount that has been expended during the calendar year and therefore includes payments which have been made since the ending of the fiscal year.

COASTING TRADE OF CANADA.

By the provisions of chapter 83, Consolidated Statutes of Canada, being an Act respecting the Coasting Trade of Canada, no goods or passengers can be carried by water from one port in Canada to another except in British ships, but the Governor in Council may, from time to time, declare that the Act shall not apply to ships or vessels of any foreign country in which British ships are admitted to the coasting trade of such country, and to carry goods and passengers from one port or place to another in such country. The Parliament of Canada was empowered to pass the Act alluded to under the provisions of the Imperial Act, 32 Vic., chap. 11, intituled: "An Act for amending the Law relating to the Coasting Trade and Merchant Shipping in British Possessions," which came into operation in this country on its proclamation by the Governor General on the 23rd October, 1869.

It was ascertained that the following countries, viz., Italy, Germany, the Netherlands, Sweden and Norway, Austro-Hungary, Denmark, Belgium, and the Argentine Republic, allowed British ships or vessels to participate in their coasting trade on the same footing as their own national vessels—the ships of Italy by Order in Council of the 13th August, 1873; those of Germany by Order in Council of the 14th May, 1874; those of the Netherlands by Order in Council of the 9th September, 1874; those of Sweden and Norway by Order in Council of the 5th November, 1874; those of Austro-Hungary by Order in Council of the 1st June, 1876; those of Denmark by Order in Council of the 25th January, 1877; those of Belgium by Order in Council of the 30th September, 1879; and those of the Argentine Republic by Order in Council of the 18th May, 1881, were admitted to the coasting trade of Canada.

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LEGISLATION.

During the season of 1899 the following Acts were passed :—

An Act further to amend the Act respecting the protection of Navigable Waters.

An Act respecting the Safety of Ships.

An Act to amend and consolidate the Acts relating to the Quebec Harbour Commissioners.

An Act respecting the Quebec Harbour Commissioners, Chapter 35.

An Act respecting the Harbour Commissioners of Montreal, Chapter 36.

F. GOURDEAU,

Deputy Minister of Marine and Fisheries.

DEPARTMENT OF MARINE AND FISHERIES,

OTTAWA, January, 1900.

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ANNUAL REPORT OF THE CHIEF ENGINEER OF THE
DEPARTMENT OF MARINE AND FISHERIES.The Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit a report of the work done in the several services under the supervision of this office during the twelve months ended on the 31st December, 1899.

This embraces most of the technical work at departmental headquarters, including the construction and maintenance of lighthouses, light-ships, fog-alarms, buoys and beacons ; the supervision of construction and repairs of Dominion steamers, construction and repairs of lifeboats ; the administration of the vote for the removal of wrecks and obstructions in navigable waters ; tidal and current surveys ; hydrographic surveys, and the publication, examination and correction of hydrographic charts ; construction of and repairs to fish hatcheries and refrigerators ; engineering points in connection with the construction and maintenance of fish-passes ; supervision of surveys of oyster beds ; examinations of applications for foreshore, wharf and water lots as they affect the interests of navigation ; preparation and publication of notices to mariners and hydrographic notes, &c.

There are special staffs appointed for the tidal observation work and for the hydrographic survey work ; the remainder of the work of the branch is attended to by the general staff of the office.

STAFF.

I am able again to refer in terms of the highest commendation to the quality and quantity of work done in my office by all the members of my staff.

Mr. B. H. Fraser was specially entrusted with the supervision of new designs for large cast iron lanterns and the new patterns give us much stronger and better lanterns than the old ones. Mr. Fraser was sent out to superintend the erection of some of these lanterns, which enabled him to see that the fitting was properly made in the foundry.

Mr. J. F. Fraser has, during the past year, been employed on special service. The first half of the year, he was put in charge of the plans of the ship channel and has prepared new plans of portions which were not up to date so that we have now a complete record of the positions and fixes of aids to navigation in this important stretch. Latterly, he has been in charge of the designing and construction of fish bait freezers, and is now employed in the erection of buildings at different places.

Mr. G. F. Smith, a man with large naval and engineering experience, was temporarily employed in the office for seven months. I regretted very much losing his services in consequence of his acceptance of a more highly remunerated appointment in New Zealand.

Mr. J. W. G. Roberts is being temporarily employed as a draughtsman.

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Mr. W. H. Noble spent the summer on Belle Isle, completing the installation of the fog signal at that station. The sirens were successfully put in operation on the 9th September last. His work in connection with this installation was very arduous and particularly satisfactory.

OFFICE WORK.

A large proportion of the work done by the general staff of the branch consists in the construction and maintenance of light buildings, fog-alarms, buoys, beacons and other aids to navigation. Full details of the work done in this connection last year are contained in a separate report prepared by me, and attached hereto. (Inclosure A.)

Plans and specifications for all important new buildings and repairs are made or approved in this office.

The following table indicates the work done in the draughting office during the past year :—

Description of work.	Plans designed.	Plans received.	Copies made.
Lighthouse towers and dwellings.....	23		61
Details.....	3		17
Wharfs, piers, &c.....	2	3	6
Outbuildings.....	1		2
Buoys and apparatus.....	3	3	7
Machinery.....	2	15	4
Land surveys.....	6	20	39
Charts.....	1	5	11
Charts under construction.....	1		
Miscellaneous.....	24	47	161
Lanterns.....	2		11
Plans relating to foreshore.....		17	13
Total plans for 12 months from January 1 to December 31, 1899.....			510
Charts received and recorded.....			65
" " entered in chart book.....			54
Photographs received and recorded.....			115
Specifications written.....			18
Notices to mariners issued (comprising 200 subjects).....			100

PERSONAL INSPECTIONS.

During the past season, I have been more than usually occupied in personal visits to the coasts, in connection with the work of this branch. Among the most important inspections made, were a visit to the north shore of Prince Edward Island, in March, to ascertain the damage done by winter storms to light-stations in that district. The work necessitated in consequence of the shifting of bars and destruction of buildings will be found in the detailed report under the heading "Prince Edward Island." (Inclosure A.)

In May I visited New York, with the special view of inquiring into the use of oil engines as a source of power for operating fog-alarms and for inspecting the Atlantic coast light-ships used in the United States lighthouse service, with a view to securing the best type of light-ship for use on our own coasts. This department is under very great obligations to the United States Lighthouse Board for the courtesy extended to me on

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this trip. Mr. A. B. Johnson, Chief Clerk of the Board, was sent from Washington to meet me and to place at my disposal his very extended knowledge of sound signals, and Lt.-Colonel D. P. Heap, engineer of the 3rd lighthouse division, was especially kind in referring me to manufacturers, in showing me the very thorough equipment of the board, and in conveying me to points to be inspected on the lighthouse tenders. I secured much information of use to this department, on which I made special reports:

During the summer I was specially occupied in connection with the building, placing in position and completion of a permanent pier for a lighthouse at the Upper Traverse. This work was thoroughly successful in every respect. The pier was sunk in 24 feet water, on the 5th July, and was completed on October 26, at a cost of \$43,869.10. This work was superintended by Mr. L. Lemieux, wharf builder, of Lévis, who was temporarily employed by this department for the purpose and whose services are deserving of great praise. I consider the cost of erection reasonable, in view of the difficulty of working in so strong a tideway and in so exposed a situation. After the pier was sunk, there was considerable loss of time, with a corresponding increase in the cost of the finished work. I am thoroughly satisfied that we could not have had this structure placed in position satisfactorily by contract. Not only would the contractor have required a large margin to cover possible accidents but we could not have secured so good material and workmanship.

When the effect of winter storms and the spring run of the ice on the pier have been learnt we shall be in a position to erect a lighthouse on the pier next season. It is possible that some extra protection from waves and ice will be necessary to protect a permanent building.

In the month of October, I proceeded to Sable island and made a complete resurvey thereof, besides inspecting all the stations and becoming thoroughly acquainted with the work of the humane establishment on the island. The management of the island under the direction of Mr. R. B. LeBoutilier is particularly efficient, and there is little that could be improved in the existing status. The island has changed less in position and form since the survey of Bayfield was made than had been expected but it is steadily being eaten away at the west end and it will be necessary, within a year or two, to again move the west end lighthouse eastward. Protection of the island by the construction of breakwaters has been advocated, but I consider this would be so expensive that it cannot be undertaken.

REMOVAL OF OBSTRUCTIONS.

There were no heavy demands, during the past year, on the vote for removal of obstructions administered by this branch, but considerable useful work was made and a consistent effort is being made to compel the owners to incur the expense of protecting navigable waters by caring for their own wrecked property. Wherever an opportunity occurred, Government steamers were utilized to remove wreckage.

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The following statement shows work done on wrecks as far as has come under the official notice of this department.

Obstruction.	Locality.	Work done, &c.	Cost.
Schr. "L. S. Porter" sunk.	St. Croix bar, P.Q.	Marking wreck by lights. Wreck ultimately raised by owners.	\$ cts. 72 00
Rock in Pallies Cove.	Apple River, N.S.	Removed by harbour master.	6 57
Schr. "Ganges" sunk	Off Pelee Point, Ont.	Blown out by D.G.S. "Petrel" ..	83 00
Str. "Gerona" sunk.	Off Cape Sable, N.S.	Wreck buoyed. Masts removed by D.G.S. "Lansdowne"	76 15
Schr. "Nancy Anna" de- reluct in.	Bay of Fundy, N.S.	Towed into Parrsboro.	60 00
Schr. "Birma" ashore.	Apple River, N.S.	Buoyed and moored. Ultimately broken up by ice and sea	6 50
Obstructions in harbour.	Yarmouth, N.S.	Removed by harbour master.	43 45
Schr. "Mary Amelia" ashore.	Amherstburg, Ont.	Lighting wreck, Removed by D. G.S. "Petrel"	9 00
Schr. "Eliza Smith" sunk.	Great Bras d'Or, N.S.	Buoyed	
SS. "Portia" sunk.	Sambro, N.S.	Buoyed	

A special vote of \$1,000 was granted last session for the removal of piers at the old bridge at Bear River, Nova Scotia, and a contract has been awarded for the work which has not yet been completed.

BUOYAGE.

The number of buoys maintained in Dominion waters steadily increases from year to year. Applications were received for new buoys from many localities. In some cases new buoys were added to the number in districts formerly buoyed and in other cases new districts were buoyed for the first time.

The Montreal ship channel received special attention directly under my superintendence. In the spring ten new conical top steel buoys were made under contract to replace can buoys on the port side of the channel. Subsequently eight more buoys of the same kind were made, and now all buoys except spar buoys on the port side, are conical buoys. Ten can buoys were also made and placed above Quebec in the channel and a number of superior spar buoys were added to the number already in position.

There are now about 330 districts including harbours, bays, rivers and lakes buoyed with over 3,000 buoys. Dangers on the open sea-coast are marked by the department's steamers with about eighty large steel buoys of various kinds, a large number being signal buoys.

All the large buoys on the more exposed portions of the coast and all the gas buoys in Quebec, whistling buoys and bell buoys and a number of can and conical buoys are maintained directly by this department, the Government steamers under the control of our agents being utilized as buoy tenders. In Quebec over fifty buoys, including eleven gas buoys are so maintained; in Nova Scotia thirty-three signal buoys are kept in position and about thirty steel can buoys, directly under the agency; in New Bruns-

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wick ten signal buoys and a number of can buoys are directly under the agency ; in Prince Edward Island three signal buoys and in British Columbia about sixty large buoys of various descriptions are maintained by the agency ; in Ontario four bell buoys and five gas buoys are maintained.

In some districts the harbour masters attend to the buoyage, in others the buoys are under the control of local harbour boards. In the remaining cases, buoys are maintained under a contract system, the contractors undertaking to maintain the buoys according to a strict specification for a bulk sum per annum. The contracts usually run for a period of three years. There are now about 150 contracts in force, a number having recently expired. The office work in connection with the maintenance of the buoy service and preparation of contracts is attended to by Mr. W. W. Stumbles.

Appended (Inclosure B) is a preliminary list of the buoys in the Dominion under departmental control.

In addition to the buoys there are a large number of unlighted day beacons on our coasts, a list of which has not yet been prepared.

LIGHTHOUSE AND BUOY TENDERS.

The system which had been in operation since the care of buoys and beacons between Montreal and Quebec was transferred from the Montreal Harbour Commissioners to this department. of letting the work by contract, did not inspire the confidence of shippers, and the department was urged to undertake the work under Government supervision and with a Government vessel. The existing contract was consequently cancelled in the spring of 1899, the contractor's buoy tender "Shamrock" was purchased by this department and during the season of 1899 the buoys and beacons were maintained under the direct control of this branch ; Mr. U. P. Boucher, the contractor's engineer, being retained to manage the service. The whole system was efficiently maintained during the season of navigation, many additional buoys were placed, in accordance with the understanding with the shipping interests in the autumn of 1898, the sizes and character of the buoys were improved, the moorings were improved, additional beacons were placed and all the large buoys numbered. The result was very satisfactory. During the season not one complaint reached this department of a buoy being out of position or of the service being neglected and the buoys and steamer are in good condition for the opening of next season.

In consequence of the completion of the 14 ft. channel system between Lake Ontario and Montreal, a large increase in traffic is anticipated, and a large increase also in the size of vessels navigating this stretch. The Montreal shipping interests have urged on this department the desirability of removing the aids to navigation in the district affected, out of the hands of the contractors administering them, as was done in the ship channel. This would require the services of a small tug and of an assistant engineer, and is now under consideration. There is no question that the proposed change would increase the efficiency of the service.

The lighthouse service on the upper lakes has always been tended by a chartered steamer. Increased efficiency would result if a serviceable tender, to be maintained during the whole season under the management of this department, could be got. This would doubtless increase the efficiency. The same tender could place and lift all our

gas and other large steel buoys on the upper lakes, saving the amount of the present contracts.

HYDROGRAPHIC SURVEYS.

The hydrographic survey of the Canadian shores of the great lakes has made fair progress during the past season. Mr. Stewart, with his assistants, Messrs. F. Anderson and R. E. Tyrwhitt, and the steamer "Bayfield" completed the survey of the south shore of Manitoulin Island, making connection with the work done by Capt. Boulton, R.N., in 1884, at the entrance to Georgian Bay. He then surveyed the north-east shore of Lake Huron between Cape Hurd and Lyal Island at the entrance to Stokes Bay.

I submit herewith (Inclosure C.) his report of progress to October 31.

The steamer underwent slight repairs last spring and is in fair condition for one thirty-six years old, but hardly fit for the exposed work in the lakes.

A fair sheet of the work done between False Detour Channel and Duck Islands, Lake Huron, was draughted last winter and forwarded to the Hydrographer of the Admiralty. I regret to say no new engraved charts of the work done have been issued since my last report. The old Admiralty chart of Lake Erie has been revised and all our recent work engraved thereon.

The United States Hydrographic Office have issued a very complete new chart of Lake Erie, embodying all our recent survey.

During the coming season it is hoped to complete the survey of Lake Huron as far as necessary at present.

A new and complete edition of the Georgian Bay and North Channel Pilot was published in April last, and is already exhausted. A further edition will be prepared.

Some small harbour surveys were made by Capt. Walbran, master of the D.G. S. "Quadra", and the plans furnished to the Hydrographer of the Admiralty, for inclusion in the Admiralty charts.

TIDAL OBSERVATIONS.

In the survey of tides and currents, the series of principal stations has been maintained; and a further year of tidal record has thus been secured at seven commanding points on our eastern coasts; as well as from the two tidal stations in British Columbia. Tide tables have been prepared and issued as usual, and an important part of the results of the observations in the Bay of Fundy, has been worked out, in time to accompany the tide tables for 1900.

The amount of new work done in the past season has been relatively small, as Mr. Dawson was granted three months leave of absence on account of his health. The tidal stations were all visited and inspected, however, either by himself or Captain Douglas. One secondary tidal station was also established at the outer end of Belle Isle Strait; which will afford a valuable comparison between the open Atlantic tide at that point, and the tide as recorded at the principal station at the inner end of the Strait.

On account of the discontinuance of the tidal station on Anticosti Island, a thorough examination was made of the tidal relations on the Lower St. Lawrence, based upon

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the simultaneous observations obtained from the three principal stations upon it. This serves to indicate the best methods to follow, as regards calculation of the tides and the choice of ports of reference for this region.

The question of the improvement in accuracy, as between the tide tables now issued by the Tidal Survey and such tables as were available in the past, is discussed in Mr. Dawson's report of progress hereto annexed. (Inclosure D.) Comparisons are also given between the tides as predicted in the tide tables and the tides as observed at some of our principal harbours. The amount of tidal record already obtained is shown in tabular form; as well as the progress made in working this up, as a basis for tide tables.

The United States Coast Survey requested permission to establish a station in 1897, at which the tidal currents in Seymour Narrows could be observed; as this information is of the first importance to navigation along the Pacific coast. The observations themselves were kindly communicated to this department; and the results are now given in the tide tables published by the U. S. Coast Survey. The time of slack water, at which alone steamers can pass, is thus given for Seymour Narrows, B.C., and for Sergius Narrows, in Peril Strait, Alaska.

Respectfully submitted,

WM. P. ANDERSON,
Chief Engineer.

January 2, 1900.

[INCLOSURE A.]

CHIEF ENGINEER'S DETAILED REPORT ON CONSTRUCTION AND
MAINTENANCE OF LIGHTHOUSES AND OTHER AIDS TO
NAVIGATION UP TO DECEMBER 31, 1899.

To the Deputy Minister
of Marine and Fisheries.

SIR,—I have the honour to submit the usual annual report of work done in the construction and maintenance of aids to navigation for the year ended December 31 last.

Lighthouses, fog alarms, buoys, beacons, and other aids to navigation throughout the Dominion of Canada are administered by the Department of Marine and Fisheries. The construction of new buildings and the more important repairs are under my direct supervision, the maintenance of existing stations is controlled by the several agents of the department, and the periodical inspection of the stations is made by inspectors resident in the different provinces, the agents in Prince Edward Island and British Columbia fulfilling the double duties. Much of the information contained herein is compiled from the annual reports of those officers.

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The numbers and distribution of the several aids to navigation throughout the Dominion are shown in the following table:—

DISTRICT.	Light-stations.		Keepers.	Light-ships.	Fog-sirens.	Fog-whistles.	Fog-horns.	Fog-bells.	Fog-guns or bombs.	Whistling-buoys.	Bell-buoys.	Gas-buoys.
	Lights.	Lights.										
Province of Ontario.....	196	253	182	3	.....	2	12	4	.....	.....	5	5
Light-ships.....	3	3										
Province of Quebec.....	121	168	143	7	1	4	8	1	8	.....	.....	11
Light-ships.....	7	7	.....	.....	.....	3	.....	.....	.....	.....	.....	4 (with bells)
Province of Nova Scotia.....	177	188	181	1	.....	9	6	2	1	19	16	
Fog-alarms.....	3	3										
Light-ships.....	1	1										
Province of New Brunswick.....	96	121	99	2	.....	4	8	1	1	5	4	
Fog-alarms.....	3	3										
Light-ships.....	2	2										
Province of P. E. Island.....	39	66	46	.....	.....	.....	1	.....	.....	3	1	
Province of British Columbia.....	26	31	25	.....	.....	1	5	6	.....	.....	1	
	674	846	676	13	1	23	40	14	10	27	27	16

* Light-ships and fog-alarms where there are no lights are in these two columns included in the total number of light stations and lights in the Dominion.

Supplies for the lighthouse service are purchased in bulk, under contract, except in the case of articles of which only small quantities are required, in which case they are purchased locally in the open market. These supplies are distributed from the stores at each district headquarters, usually under the personal supervision of the Inspectors of Lights, who inspect the stations when delivering the supplies. They also arrange for all small ordinary repairs and the periodical painting of the buildings. These routine duties are not alluded to in describing the repairs executed at the several stations.

Work of construction and extensive repairs are usually executed under contract; minor repairs are done under the light-keepers' supervision, or by foremen employed in the several districts.

Light-keepers and fog-alarm engineers are expected to make any small repairs that can be reasonably expected of unskilled workmen, without charge, and are also called upon to do all painting required at their stations, being allowed some assistance when the buildings are so high as to require hanging scaffolds.

ONTARIO LIGHTHOUSE DIVISION.

This division includes the lighthouses and other aids to navigation in that part of the province of Quebec lying west of Montreal, all those in the province of Ontario, and those on Lake Winnipeg, in the province of Manitoba.

The number of lighthouses, lighted beacons and light-ships maintained by the Dominion in the Ontario division, as above described, is 242, located at 188 different stations.

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The number of light-keepers in this division paid directly by the Government is 184, but in several cases assistants are employed by keepers and paid by them out of the allowance made by the Government for that purpose.

There are in Ontario 2 fog-whistles, 11 steam fog-horns and 4 fog bells, operated by machinery, all located at light-stations, as well as 5 bell-buoys and 5 gas-buoys.

Besides the lights maintained by this department as above described, there are in Ontario the following aids to navigation: three lights on swing bridges, a system of lights on the Murray Canal, maintained by the Department of Railways and Canals, 5 pairs of range lights on the Detroit and St. Clair rivers, maintained by the American vessel owners principally interested, 11 wharf lights maintained by the municipalities or corporations to which the wharfs belong, and two range lights maintained by local interests at Pine Tree Harbour.

Six of these last described stations are aided by this department to the extent of being furnished with the necessary oil for their maintenance.

A steamer is chartered yearly for the supply of the light-stations on the River St. Lawrence and the great lakes, between Montreal and the head of Lake Superior, and the lighthouses are supplied and the stations inspected on this trip, which occupies about seven weeks, by Mr. Patrick Harty, Superintendent of Lights. The lights on the Ottawa River and a few small lights on isolated waters, including Lake Temiskaming, Lake Nipissing, Lake Simcoe and the Bay of Quinté, were not inspected. The lights on Lake of the Woods have been superintended by Mr. M. Kyle, Fishery officer at Rat Portage.

NEW AIDS TO NAVIGATION.

Burlington Bay inner light.

On May 15 a post double light was established on the inner end of the south pier of Burlington canal, west end of Lake Ontario, to guide to the canal from Hamilton and Burlington Bay.

The post is 20 feet high and with the braces and fittings, is painted white. It stands on the block at the extreme inner end of the south pier and is distant 1,300 feet S. 67° W. from the main tower.

The light is a double light, including a fixed red light shown from a square tubular lantern hoisted to the top of the post, elevated 24 feet above the level of the bay and visible from all points of approach in Burlington Bay; and a fixed white light shown from a similar lantern on the same post 6 feet vertically below the red light, and visible in the same directions. The two lights are adopted to distinguish them from railway or steamer lights.

This work was done by Mr. Thos. Campbell, lightkeeper, at a cost of \$16.42, the necessary lanterns and supplies being sent up from Ottawa stores.

Lighted buoys in approaches to Sault Canal.

This department took charge last spring of the private float light established in 1898, to mark the southern edge of the dredged cut at the turn opposite the front range light at the upper entrance to the Canadian Canal at Sault Ste. Marie. The fixed

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white light stands on a platform buoy or float moored between the black spar buoys marking the turn.

At the same time the department established a fixed red light on the superstructure of the red platform buoy marking the extremity of Vidal shoal ; also a fixed white light on a float near the black buoy marking the turn from the axis of the canal to the alignment of the range lights at the lower entrance to the canal.

These three lights are shown from lens lanterns supported at a height of six feet above water on the superstructures of the platform buoys and should be visible two miles. They will be maintained throughout the season of navigation.

The light below the canal is maintained by the canal officials, this department furnishing the illuminating apparatus and supplies. The two lighted buoys above the canal are attended to by one of the canal tugs, at a contract price of \$70 per annum.

AIDS TO NAVIGATION DISCONTINUED.

The department learned that no private light is maintained at Port Bruce, on Lake Erie, and this aid to navigation was consequently removed from the list of lights.

The fog bell rung by machinery at Michipicoten Island light station, on Lake Superior, broke. As the harbour there is not now frequented by shipping, it was not thought desirable to place a new bell there and the fog alarm was discontinued.

The light on Michael Point, Lake Huron, was discontinued from the close of navigation last year, as indicated in last year's report.

The private range lights formerly maintained by the Lake Carriers' Association at Point Edward, Sarnia, have also been discontinued and their description has been removed from the Canadian list of lights and fog signals.

UNITED STATES WORK IN AND NEAR CANADIAN WATERS.

The United States Government has, like in past seasons, done a great deal of work especially in the channels of the St. Mary River and the stretch of water between Lakes Huron and Erie. Among other improvements made of which mariners were duly informed by printed notices, may be enumerated :—

The establishment of a pole light on the head of Carleton Island, Thousand Islands.

The establishment of a gas buoy on the shoal lying off Galloo Island lighthouse, easterly end of Lake Ontario.

The establishment of range lights leading into the head of Niagara River.

The establishment of gas buoys on Kellys Island south shoal and off Peach Orchard Point, in the westerly part of Lake Erie.

The establishment of a system of lights on the 20-foot channel at the foot of Lake St. Clair, to guide from the lake into the Detroit River and the re-arrangement of the Ile aux Pêches range lights.

The re-establishment of range lights at Fort Gratiot to lead from Lake Huron into the St. Clair River.

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The replacement of the Mud Lake turning gas buoy by a pole light on a crib sunk at the intersection of the Winter Point and Pilot Island ranges.

The establishment of three gas buoys in Vidal shoal channel, in the upper approach to the American canal at the Sault and of a gas buoy off Gros Cap.

The wreck of the *Monitor*, which foundered last year just above Pointe aux Pins, in the River St. Mary, was removed by the United States Government late in the fall of 1898.

IMPROVEMENTS AND REPAIRS AT EXISTING STATIONS.

McTavish Point.—The light was improved by supplying an anchor lens lantern showing a fixed white seventh order dioptric light instead of the lantern with pressed glass lens previously used.

Green Shoal.—The light was improved by replacing the reflectors formerly used by a dioptric lens of the seventh order. The pier of the lighthouse at this station has been for many years in a bad state of repair, and it will be necessary, before next spring's high water, to begin rebuilding operations.

Snake Island.—The lighthouse referred to in last year's report was erected on Snake Island reef during the past season. It will be put in operation on the opening of navigation in 1900. It stands on a cylindrical steel and concrete pier built near the south end of the shoal surrounding Snake Island, at a distance of 850 feet S.E. by E. $\frac{1}{2}$ E. from the existing lighthouse on the shoal. The total cost of the new work has been \$1,309.07.

Murray Canal.—The Department of Railways and Canals have improved the character of the lights at the east and west entrances of the Murray Canal, adjoining the Bay of Quinte and Presqu'ile Bay. The former lights were fixed red lights shown from small lanterns standing on brown pyramidal open frames. The new lights are fixed white lights elevated 27 feet above the level of the water and visible five miles from all points of approach. The light buildings, which stand on the sites of the old frameworks, 30 feet from each end of the north pier of the canal, are inclosed hexagonal galvanized iron cabins, with cylindrical columns surmounted by the lenses rising from the apexes of the roofs. Each is 18 feet high, from the deck of the pier to the lens, and is painted white.

Port Dalhousie.—The new lighthouse tower, mentioned in last year's report, was duly completed at a cost of \$2,943.19.

Pointe Pelée.—The boiler and steam fog alarm unexpectedly gave out October 12, and it was consequently necessary to discontinue the operation of the fog alarm at this station until the 20th of the same month. The boiler was retubed in the interval, at a cost of \$115.84.

Flower Pot Island.—Tenders were invited last fall for the erection of a keeper's dwelling at this station, but the offers received were so high that the erection of the building has been deferred. The keeper has been authorized to build a small wharf to protect the boat harbour, on the east side of the island, and the boat-house, erected near the lighthouse, will be removed to the new harbour on the ice this winter. A site, containing 24.37 acres, and a site for the wharf and boat-house, with right of way between the two properties, have been purchased from the Department of Indian Affairs for \$8.64.

Battle Island.—The revolving machinery broke down on August 6, and the light was shown as a fixed light until repairs were completed on the 21st of the same month.

Port Arthur.—A hand fog horn has been supplied to the light station with which signals from passing vessels will be answered in thick weather.

Rainy River Range.—The mast formerly in use, from which the back range light at the mouth of Rainy River, Lake of the Woods, was exhibited, has been removed, and its place is now filled by a tower on a wooden cribwork pier, standing in the lake at a distance of 800 feet S. E. by S. from the front tower.

The tower is a skeleton wooden square structure with sloping sides, with the side facing the alignment slatted to make it more conspicuous as a day beacon, and with the upper part inclosed to form a lamp room. It is painted white, and is 36 feet high from the pier to the ridge on the roof.

The light is fixed red, elevated 40 feet above the level of the lake, and should be visible nine miles in the line of range. The illuminating apparatus is catoptric.

The front range light remains fixed white as heretofore. The foundation on which the tower stands has been changed from pilework to a wooden cribwork pier.

This work was done under contract by Mr. Wm. McKay, of Beaver Mills, Ont., and cost \$999.

The following minor repairs were made to the lights above Montreal during the year 1899 :—

Light Station.	Repairs.	\$ cts.	Boats.	\$ cts.
Jones Island....	Putting in a new window and building a chimney in one of the rangelights..	17 00		
Kincardine.....	General repairs to tower and dwelling, and removing an old building.....	177 77		
Barryfield.....	Repairs iron work.....	60 90		
Lachine Pier.....			New boat.....	18 00
Lightship No. 2.....	Repairs caused by a collision with tug Glide.....	19 50	".....	18 00
			Rent of boat.....	10 50
Lightship No. 3.....	Cleaning and scraping bottom and stopping leakage at Cantin's dry dock Montreal, with other small repairs...	107 98	2 boats..	36 00
			Rent of boat.....	10 50
Lightship No. 1.....	Repairs to fog horn and deck of vessel.	20 00	New boat.....	18 00
Lamb Island.....	Lumber and shingles for repairing boat house.....	30 05		
Lime Kiln Crossing.....	Painting.....	7 30		
Lindoe Island.....	Repairing and shingling kitchen of dwelling and shingling boat house...	78 61		
Lonely Island.....	Repairs to tower.....	5 25		
Middle Island.....	Painting.....	24 00		
Mississagi Island.....	Lining kitchen, new floor and other small repairs.....	91 20		
" "	Painting tower.....	7 00		

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MINOR repairs to the lights above Montreal during the year 1899.

Light Station.	Repairs	\$ cts.	Boats.	\$ cts.
McKies Point.....	Lumber for fencing.....	20 50		
Beauharnois.....	Painting.....	8 00		
Belleville.....	".....	16 25		
Bois Blanc.....	Repairing boat house.....	14 00		
Burlington Beach.....	Repairs to dwelling.....	12 71	Repairs to boat ...	10 00
Cape Robert.....	Repairs to kitchen.....	28 75	New boat.....	34 00
Chantry Island.....	Whitewashing tower and dwelling....	45 00	Boat rollers.....	5 00
Colchester Reef.....	Repairs and labour to lighthouse.....	48 50	Repairs to boat ...	15 85
Corbay Point.....			New boat.....	35 00
Cabot Head.....	Building new fence around the light- house.....	34 30		
Dorval.....			New boat.....	16 00
Fort William.....	Breakwater to protect lighthouse.....	225 00		
Great Duck Island....	Breakwater for protection of boats....	131 80	New boat.....	150 00
Hope Island.....	Repairs to tower.....	17 31	".....	32 00
Cove Island.....	Whitewashing tower and dwelling....	20 50		
".....	Shingling and flooring kitchen.....	39 25		
Nottawasaga Island....	Whitewashing tower and dwelling....	40 00		
".....	New window sashes for dwelling.....	7 50		
Peninsula Harbour....	Lumber for repairing board walks....	12 50		
Pelee Island.....	Painting top of tower.....	5 00	Repairs to boat.	
Point aux Baril.....	Repairs to rangelight.....	33 20		
Point aux Pins.....	Repairing a dwelling house.....	17 50		
Point Clark.....	Repairing board walk.....	15 30		
Pelee Reef.....	Repairs to fog horn.....	130 10		
Point Pleasant.....	Repairs to lighthouse, dwelling house and barn.....	80 24		
Port Arthur.....			New boat.....	30 00
Port Colborne.....	Repairs to kitchen of dwelling.....	22 40		
Port Credit.....	Repairs to lighthouse foundation.....	54 58		
Presqu'Isle Main Light..	Painting and repairs to kitchen.....	36 75		
Red Rock.....	Painting.....	21 00		
".....	General repairs to lighthouse tower and dwelling.....	111 93		
Channel Island.....	Hardware.....	117 44		
Aylmer.....	Repairs and labour.....	6 60		
Battle Island.....	Repairs to machinery of revolving light	37 71		

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BUOYS AND BEACONS.

New buoys in approach to Kingston.

Three 35-foot spar buoys, were on June 15, 1899, placed by the undersigned in the western approach to Kingston Harbour, foot of Lake Ontario, to mark the deep water channel north of Snake Island. These buoys are located as follows:—

- (1.) A black buoy moored in 30 feet water off the north extremity of the shoal surrounding Snake Island.
- (2.) A buoy painted in red and black horizontal bands, in 30 feet water, off the west end of the small middle ground between Snake Island shoal and Seven-acre shoal.
- (3.) A red buoy in 26 feet of water off the east end of Seven-acre shoal.

Beacons and buoys in Stokes Bay.

The hydrographic survey of Lake Huron having extended to Stokes Bay during the past season, advantage was taken of the presence of the surveying ship to have Mr. Stewart mark the entrance by beacons and buoys. Two beacons and six spar buoys were accordingly placed in position. The latter will hereafter be maintained by the lightkeeper at Lyal Island.

1. The front beacon stands upon the north-west extreme of a group of small islands lying half a mile north of the north-east point of Lyal island. It bears N. 56° E., and is distant 9,700 feet from Lyal Island lighthouse. It consists of a white slatwork triangle 16 feet high, surmounted by a white slatwork diamond, which makes the beacon 25 feet high.

2. The back beacon stands upon the east main shore of the bay. It bears N. 75° E. and is distant 4,050 feet from the front beacon. It consists of a white slatwork square 20 feet high, surmounted by a smaller but similar square, which makes a beacon 35 feet high. A vertical black band, three feet wide, covers the middle of the beacon for its entire height.

These two beacons in one, N. 75° E. leads clear in from the lake to within 1,800 feet of the front one, or 1¼ miles inside the lighthouse, with a least depth of 22 feet water.

The buoys are placed as follow:—

1. A black spar buoy is moored in 22 feet water N. 81° W., 10,650 feet from the lighthouse, or 3½ miles from the front beacon. It lies S. 48° W., 550 feet from a spot with 17 feet water on it.

2. A black spar buoy is moored in 17 feet water off the south side of the bank extending S. 40° W., about 2,400 feet from the dry (Mad) reef in the middle of the entrance. The buoy bears N. 43° W., and is distant 3,700 feet from the lighthouse, and 1½ miles from the front beacon.

3. A red spar buoy is moored in 21 feet water 200 feet west of a small shoal with 14 feet least water upon it, and 1,400 feet S. S. E. of the range. It also bears S. 87° W., 8,600 feet from the lighthouse, and almost 3 miles from the front beacon. This buoy marks the outer dangerous shoal off Lyal island.

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4. A red spar buoy is moored in 21 feet water N. 18° W. 300 feet from a small rock with only $9\frac{1}{2}$ feet water upon it. It bears N. 82° W., and is distant 6,500 feet from the lighthouse, and $2\frac{1}{2}$ miles from the front beacon. It is 570 feet S. S. E. of the range.

5. A red spar buoy is moored in 18 feet water N. 40° W. 125 feet from a shoal spot with $9\frac{1}{2}$ feet water upon it. It bears N. 68° W., and is distant 4,250 feet from the lighthouse and $2\frac{1}{10}$ miles from the front beacon. It lies 500 feet S.S.E. of the range.

6. A red spar buoy is moored in 17 feet water to mark the north edge of a bank from Lyal Island. It bears N. 6° E., and is distant 3,150 feet from the the lighthouse, and $1\frac{1}{3}$ miles from the front beacon.

Platform buoy south of Duck Islands.

A platform buoy surmounted by a pyramidal slatwork painted white, and a white flag was moored last spring in 5 fathoms water off the south end of Jennie Graham shoal, extending southerly from Duck Islands, Lake Huron.

The buoy was placed by Mr. Stewart and will be attended to in future by the lightkeeper.

Bears Rump buoy.—A platform buoy, surmounted by a pyramidal slat work, painted black, and a white flag 20 feet high was moored by Mr. W. J. Stewart, in June last, in $4\frac{1}{3}$ fathoms water off the south end of the shoal running south from Bears Rump Island, in the Georgian Bay. This buoy will be hereafter maintained by the contractor in charge of other Georgian Bay buoys.

Aid to navigation in entrance to Midland.

Two temporary whitewashed day beacons were established on the opening of navigation in 1899, to lead south of the shoals off the south end of Giant's Tomb Island and north of the shoal off Sawlog Point, entrance to Matchedash Bay, Georgian Bay.

The front beacon stands upon the north end of Brebœuf Island on a bare granite rock, elevated 8 feet above the water. It consists of a pole 15 feet high, braced, with horizontal studwork on the pole and braces.

The back beacon stands upon the west shore of Beausoleil Island, and is distant 2,400 feet S. 86° E. from the front one. The ground at the site is 3 feet above the water, and the beacon, similar in construction to the front one, is 24 feet high.

Two similar beacons have been established on the west shore of Matchedash Bay, between Midland point and Sucker Creek Point, to show the best channel in the reach between Pinery Point and Beausoleil Island.

The front beacon stands on the beach 6 cables, S. 54° E. from Sucker Preek Point. The ground is 2 feet above the water and the beacon is 12 feet high.

The back beacon stands on the beach of the point 3,000 feet S. 17° E. from the front one. It is on ground 2 feet above the water and is 15 feet high.

In entering Matchedash Cay Brebœuf Island beacon should be brought in one with Beausoleil Island beacon outside of Bennet Bank bearing S. 86° E. The alignment leads 750 feet south of the black spar buoy off Giant's Tomb lighthouse and 500 feet north of

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the red spar buoy off Sawlog Point. As soon as the inner front beacon shows clear of Adams point it is safe to change the course gradually until the two inner beacons are brought in one, bearing S. 17° E. This alignment should be kept until the first beacon is one-half mile distant, when the beacon should be left on the starboard hand. The shore here is bold, and can be kept close aboard until Midland Point is rounded.

These beacons were placed for the purpose of marking a channel for entering Midland, avoiding all dangers. It is intended to replace them by lights in range towers. The lighthouse now on Gin Island will be moved on to Brebœuf Island to form the front light of the outer range. Tenders have been invited for the necessary new buildings and removal.

Four of the most important buoys in the entrance to the harbour, viz., those on Lottie Wolf rock, Giants Tomb reef, Sawlog point and the Middle ground in the harbour were replaced last season by first class ballasted spar buoys standing up 12 to 15 feet out of the water. This work was done by Mr. John White, harbour master, at a cost of \$228.

Parry Sound buoyage.

On the opening of navigation in the spring of 1899, 17 spar buoys were placed in the main channel entering the harbour from Georgian Bay, and in consequence of the abandonment of the Gordon Rock channel 7 spar buoys previously maintained were not replaced in position. The 3 gas buoys established in the fall of 1898 were kept in successful operation throughout the season of 1899. There was great difficulty in getting them in at the end of the season, and it will be impossible in future years to attempt to leave them out until the close of navigation. It is suggested that November 15 be fixed as the latest date for leaving them out, especially the Seguin Bank buoy.

NEW BRUNSWICK LIGHTHOUSE DIVISION.

The New Brunswick division comprises all the lighthouses and other aids to navigation within the boundaries of the province, both on the Bay of Fundy and on the Gulf of St. Lawrence coast. The large buoys maintained by the Government on the Nova Scotia coast of the Bay of Fundy are attended to by the steamer *Lansdowne*, under the direction of the New Brunswick agent, but are otherwise under the control of the Nova Scotia agent.

This division is under the charge of Mr. F. J. Harding, agent of the department at St. John, N. B.

The lights, &c., were inspected by Mr. John Kelly, inspector of lights.

There are in this agency 121 lighthouses, 2 light-ships and 12 steam fog-alarms.

The number of keepers and engineers in connection with the lighthouses and fog-alarms, is as follows: 87 light-keepers, 7 light-keepers and engineers of fog-alarms, 12 engineers and 6 assistant engineers—112 in all.

The method of supplying the lights varied in accordance with locations. The supplies for the St. John River, Grand Lake and Washademoak Lake lights were shipped by regular local steamers and a separate bill of lading furnished for each station.

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The supplies for the Miramichi River lights were sent by regular lines of steamers or schooners trading to the different points.

The Bay of Fundy lights were supplied by the steamer *Lansdowne*, and those in the Baie des Chaleurs district were supplied by rail. In all cases the supplies have been delivered in the most convenient and economical way.

NEW AIDS TO NAVIGATION.

Lightship in Shediac Harbour.—A lightship was, on October 1, 1899, moored in 19 feet water, 2 cables N.N.E. of Zephyr rock, off Point du Chene, Shediac Harbour. The vessel was hired from the Charlottetown Steam Navigation Co., Ltd., at a rental of \$5 per day. This is a schooner with 2 masts, and is painted blue with black bulwarks. Between the masts two white lights are exhibited with a perpendicular distance of 4 feet between them. The height of the lower light above the water is 21 feet and the lights should be visible 8 miles.

In foggy weather a hand horn answers signals from vessels.

North Tracadie front range light.—The front range light at North Tracadie Gully, which was carried away on November 11, 1897, was replaced and put in operation on September 29, 1899.

The light consists of a lantern on a mast, painted red, from which a fixed white light is shown.

The mast is 161 feet S.E. from the back tower, and the light is 20 feet above high water.

IMPROVEMENTS AND REPAIRS AT EXISTING STATIONS.

Grand Manan.—The old boiler at this fog alarm station was worn out, consequently a large boiler removed from Lepreau fog alarm station was utilized, being removed and set up by the crew of the *Lansdowne*. This work with the necessary connections, repairs made to boiler and machinery during the year, and a new smokestack, cost \$325.84.

The water supply again gave out and water had to be carted for the boilers at a cost of \$172.50.

The ell of the dwelling was reshingled on two sides and the roof repaired.

Extensive repairs are required at this station to improve the draught, secure a sufficient water supply, and improve the machinery. The possibility of replacing the steam engine by an oil engine is being considered.

Green Head.—The illuminating apparatus was improved by substituting a dioptric lens of the 7th order for the pressed lens formerly in use.

Head Harbour.—The fog alarm machinery was overhauled and repaired by Mr. Joseph Thompson, at a cost of \$373.24.

A new pump was supplied and the old one repaired at a cost of \$176.45.

Some plank were renewed in the wharf at the lighthouse.

Indian Point.—To suit a change in the channel into Shippegan Harbour, it was found necessary to move the range lights maintained on Indian Point, stronger lanterns have also been provided.

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The front mast has been moved 1,514 feet east from its previous position and now stands on the sand bank, east of the point, 30 feet back, and 2 feet above, high water mark.

The light is a fixed red light, elevated 28 feet above high water mark, and should be visible 5 miles from all points of approach by water. The illuminating apparatus is dioptric of the seventh order.

The mast is 27 feet high, and, with shed at its base, is painted red.

The back mast has been moved to a new position 134 feet N. 10° W. from the front one. It is 36 feet high, and with the shed at its base, is painted white.

The light is a fixed white seventh order dioptric light, elevated 36 feet above high water mark, and should be visible 10 miles.

The buildings were moved under Mr. Kelly's superintendence, at a cost of \$75. The two new lanterns cost \$178.24.

Jemseg.—The illuminating apparatus has been improved by substituting a dioptric lens for the catoptric lamp formerly in use. The light remains fixed red as hitherto.

The cost of the new lantern, procured from Messrs. Chance Bros. and Company of Birmingham, was \$102.56.

Little Belledune.—The mast with a shed at the base, from which a light is shown on Little Belledune Point, Chaleur Bay, was moved 85 feet south from its original position, and now stands 171 feet inside the line of high water mark. This change was made requisite by the gradual wearing away of the bank.

At the same time the mast was increased in height, and is now 39 feet long. The lantern was also changed, an anchor light, with a lens of the 7th order, being substituted for the smaller lantern with pressed glass lens heretofore used.

The light is fixed white, as heretofore, elevated 52 feet above high water mark, and should be visible 12 miles from all points of approach by water.

The change was made under the supervision of the Inspector of Lights, and cost \$76.84.

Miramichi Bay Lightship.—The old vessel *Jennie* having been condemned by the inspector of hulls, was sold by auction for \$16. The American schooner *Frederick Gerring* which was confiscated for illegal fishing in May, 1896, was put up at auction in April last at an upset price of \$800, and knocked down to the department. Repairs were made by Mr. W. Traer, at a cost of \$200, and the new vessel was placed upon the station on the opening of navigation in 1899.

Pointe du Chêne Wharf.—The back range light mast and hut was moved forward 60 feet in the line of range by the officers of the Intercolonial Railway to accommodate their service. A new lens was provided for one of the lanterns.

Point Lepreau.—The new lighthouse referred to in last year's report to replace that destroyed by fire on January 30, 1898, has been completed, and was put in operation on October 1, 1899.

The lighthouse stands on the low point, 327 feet from its extremity and 250 feet N. by E. $\frac{3}{4}$ E. from the fog alarm building. The tower is an octagonal wooden building, with sloping sides, surmounted by a polygonal iron lantern. It is 54 feet high from the

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sills to the vane on the lantern, and is painted in red and white horizontal bands, with the lantern red.

The light is a revolving white light, the flashes attaining their greatest brilliancy every 30 seconds. It is elevated 80 feet above high water mark, and should be visible 14 miles from all points of approach by water. The illuminating apparatus was made in the shops of the department at Ottawa. The temporary light, maintained since the destruction of the old light, has been discontinued.

The fog alarm machinery is contained in an oblong, wooden building painted gray, with a brown roof. The horn gives blasts of 5 seconds' duration, with intervals of 25 seconds between the blasts.

The tower was erected under contract by Mr. Francis Cassidy, his price being \$1,325. I regret to report that the quality of his work was so inferior that it was necessary to insist on parts of it being done twice, under the inspection of Mr. B. H. Fraser, assistant engineer.

The following repairs have been made to the fog alarm machinery:—New suction pipes to tanks and cisterns placed, and new feed connections; steam heating pipes and new blowers fitted; new 2-inch steam regulator for the trumpet furnished, and new 2½ inch relief pipes from safety valves to cistern.

A new fence has been built around the dwelling lot and ground levelled and drained. The old whistle house, used by the former engineer as a barn, and two old sheds, have been removed and a fence built at the edge of the bank.

All the buildings at the station were put in good repair under Mr. Fraser's supervision, part of the work being done by contract by Messrs. Knight, of Musquash. The amount spent last year on repairs was \$561.83.

Sand Pint.—The illuminating apparatus has been improved by substituting a dioptric lens of the 7th order for the pressed lens formerly in use.

Richibucto.—The inspector of lights having reported that owing to alterations in the channel the range lights at the entrance to Richibucto Harbour do not now safely lead over the bar; that the channel, locally known as Albion Channel, is making southward very fast; that a long bar is also making out from the northward, which causes a sharp turn in the channel; and that, in consequence of the tortuous nature of the present channel, it is impossible to so place the range lights as to give a good lead in, mariners were warned to that effect.

Vessels intending to enter the harbour should keep the lights in range until they reach the outside bar buoy; they should then open the back light to the southward of the front light until a picket beacon is reached. They should then turn the iron can buoy and be guided by the buoys into safe anchorage.

The following less important repairs have been made at light stations in this division:—

Station.	Nature.	Cost.
Andersons Hollow	Partly reshingled	
Beaconlight	Repairs to pier	\$ 210 92
	New boat, old boat and fog-bell apparatus repaired	

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Station.	Nature.	Cost.
Bliss Island	Small repairs	40 80
Belyas Point	New stone foundation	75 00
Big Duck Island	Fog alarm, boiler and machinery repaired	53 64
Belle Isle	Repairs to, damage by freshet	
Belloni Point	New lens	
Cape Enrage	New lamp, pump repaired	34 05
Cape Jourimain	Partly reshingled	
Cassies Point	Two reflectors replated	40 00
	Oil store moved, shed reshingled	
Cape Spencer	Road repaired	25 00
Escuminac	Small repairs	15 93
	New boat	50 00
Fox Island, upper	New boat	50 00
“ lower	One room in dwelling refloored	
Flewellings wharf	Small repairs	4 00
Grindstone Island	Repairs to fog alarm boiler and machinery, and new boiler placed	231 20
Goose Lake	Fence repaired	
Hendrys Point	Foundation strengthened	7 50
Hay Island	Reflector resilvered	
Harper's Point	Riprap placed	4 00
Letete	Cellar cemented	
	Road repaired	10 00
Machias Seal Island	Boiler patched and ninety-nine new tubes placed	231 25
Miscou	New storm doors, new floor laid and small repairs	
Middle Island	Boat repaired	12 00
Musquash Island	New breakwater	42 50
Negro Point	Paid keeper for loss of boat	20 00
Neguac	New floors laid	
Partridge Island	Fog alarm coal shed reroofed	
	Boiler and machinery repaired	232 33
	New pump furnished	
	New boat	51 00
Pea Point	Flag-pole erected	
Passamaquoddy Bay	Foundation strengthened	
	Boat repaired	7 34
Quaco	New boathouse erected	
	Landing repaired	19 92
	Fog-alarm machinery repaired	108 05
	170 feet water pipe laid	
	Cement floor in engine-room	
Quaco breakwater	Lantern reglazed	
Reeds Point	Reglazing	9 20
Richibucto	Boathouse repaired	25 00
Swallowtail	Derrick repaired	7 50

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Station.	Nature.	Cost.
St. Andrews.	Two reflectors resilvered.	\$ 20 00
	Chimney repaired.	
South Wolf	New derrick	
Shippigan.	New door	
S. W. Head	Road repaired	50 00
Tracadie	Brush protection work placed.	149 50

BUOY SERVICE.

The buoy service in most of the ports of the New Brunswick agency was performed under contract, under the supervision of the harbour masters.

The coast buoys of the New Brunswick district and part of Nova Scotia in the Bay of Fundy were attended to by the steamer *Lansdowne*.

Beaver Harbour whistling buoy.—A Courtenay whistling buoy, was, on February 15, 1899, moored in 22 fathoms water one and one-half miles South from Beaver Harbour lighthouse, Charlotte county, as a fairway buoy.

The buoy is painted in red and white vertical stripes, with 'Beaver harbour' in black letters on the side, and is surmounted by a 10 inch whistle sounded by the action of the sea.

It was removed, and replaced again by the *Lansdowne* on May 12.

Cape Tormentine buoys.—Two buoys, maintained since 1895, to protect the approach to the government wharf at Cape Tormentine, have not previously been described. They are a steel bell buoy, painted black, moored in 6 fathoms water, $\frac{3}{4}$ mile east of the outer dry rock of Tormentine reefs, and a conical steel buoy, painted red, moored in 7 feet water off the end of the sand bar running south easterly from Jourimain islands.

Shippigan buoys.—The following changes have been made in the buoyage of Shippigan harbour :—

a. The red spar buoy marking the outer end of the channel over the bar at the south entrance to Shippigan Gully, has been replaced by a red steel can buoy moored in 2 fathoms water.

b. The red spar buoy inside the bar has been replaced by a red barrel buoy moored in 2 fathoms water.

c. The two red spar buoys inside the south entrance, close inside of Alexander Point, have been replaced by red barrel buoys.

d. The black barrel buoy marking the south-east limit of good water in Shippigan Sound, off the point between Canoe Point and Paint Point, has been replaced by a black steele can buoy moored in $3\frac{1}{2}$ fathoms water.

e. The small red barrel buoy off Marcella Point has been replaced by a large red barrel buoy.

f. The black buoy formerly off Grasse Point is no longer maintained.

The following work was done on important buoys in this agency :

Name.	Nature of work.	Cost,
Partridge Island bell boat.	Painted by J. H. Pullen.....	\$144 00
	Kept pumped out, J. Abbott.....	5 80
Black Point whistling	Placed November 26, 1898.....	
	Placed May 25, 1899.....	
	Repairs by Jas. O'Donnell.....	36 06
	Chain supplied	195 89
Blonde Rock whistling.	Drifted into Seal Id., January 14, 1899.	
	Replaced January 19, 1899.	
	Replaced February 7, 1899.....	
	Disappeared March 9, 1899.....	
	New buoy placed March 15, 1899.	
	Drifted buoy towed into Shelburne March 11, 1899.....	
	Removed and replaced September 11, 1899.	
	Repairs.....	22 33
	Advertising.	14 20
	Chain.....	203 41
Cat Rock bell	Upset February 4, 1899.....	
	Changed February 6, 1899.....	
	Found broken and changed May 18, 1899..	
Lurcher whistling.	Lifted and replaced February 3, 1899....	
	Cost of maintenance for year	203 42
North west Ledge whistling.	Adrift January 16.....	
	Salvage paid <i>ss. Westport</i>	100 00
	New buoy placed January 20.....	
	Adrift February 11.	
	Salvage paid Alfred E. Pyne.....	50 00
	New buoy placed February 21	
	Repairs to drifted buoy	120 78
	Adrift March 31.....	
	New buoy placed by <i>Aberdeen</i> April 11.	
	Advertising.....	12 90
Old Man	Cleaned June 5.	
	Tested June 11.	
Old Woman.....	Replaced January 16	
	Changed June 5.....	
	Tested June 11.....	
Peases Ledge.	Upset January 18, righted January 20....	
	Adrift February 13, replaced February 26.	
	Adrift May 15, towed into Harry's Island..	
Lepreau whistling	Lifted and replaced January 13.....	
	Lifted and replaced May 9.	
	Repairs by Jas. O'Donnell.....	65 42

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Name.	Nature of work.	Cost.
Quaco buoys.....	Placed for season May 4, 1899.....	
	Removed for winter December 20, 1899..	
	Can to be replaced by conical spring, 1900..	
	Repairs.....	162 93
Split Rock whistling.....	Replaced January 12, 1899.....	
	Old buoy repaired by Jas. O'Donnell.....	51 79
	Replaced May 9.....	
	Replaced May 23.....	
Southern Wolf whistling.	Movings and maintenance.....	67 04
	Adrift January 9, towed into Trout cove..	
	Salvage paid.....	100 00
	Placed January 23.....	
Trinity Ledge bell.....	Replaced May 12.....	
	Repairs and movings.....	354 98
	Lifted and replaced February 3, 1899.....	
	Adrift February 21.....	
Yarmouth Fairway bell..	Salvage paid the <i>Westport</i>	100 00
	Replaced March 2.....	
	Adrift April 1, towed into Yarmouth.....	
	Replaced by <i>Aberdeen</i>	
Yarmouth S.W. whistling.	Upset January 18, 1899, righted 20th.....	
	Replaced February 3.....	
	Lifted May 16 and changed.....	
Yarmouth N.W. whistling.	Adrift December 19, 1898.....	
	Replaced December 21.....	
	Lifted and replaced June 3.....	
Yarmouth N.W. whistling.	Lifted and replaced.....	
	Lifted and replaced May 18, 1899.....	

QUEBEC LIGHTHOUSE DIVISION.

The Quebec division extends from Montreal to the end of the Strait of Belle-Isle, covering a coast and river service of over 1,200 miles, comprising all the lighthouses in the Richelieu River and Lake Memphremagog, as also the lighthouses, light-ships, gas buoys, beacons and fog-alarms in the River St. Lawrence, Saguenay River, Baie des Chaleurs, Gulf of St. Lawrence, Strait of Belle-Isle, west coast of Newfoundland and Labrador. This division is under the control of Mr. J. U. Gregory, agent of the Department of Marine and Fisheries at Quebec.

The agent is also shipping master; attends to the requirements of the British Board of Trade in connection with shipwrecks and distressed seamen, casualties at sea, is receiver of wrecks and supervisor of wharfs, a fishery officer for the province of Quebec and is superintendent of signal service.

The agent's staff at Quebec consists of Mr. L. A. Blanchet, chief clerk and accountant, also deputy shipping master; Mr. Geo. D. O'Farrell, lighthouse inspector, Mr. Alphonse Hamel, clerk, and Mr. L. L. Dubé, storekeeper and wharfinger.

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The workshops are under Mr. Ernest Roy, master carpenter, and Mr. N. Dufour, master ship-smith. The gas works are under Mr. G. Bélanger.

The steamers at the disposal of the agency during the past year were the *Druid*, which attended to gas and other buoys above and below Quebec, as well as beacon service below Quebec, and the *Aberdeen*, which supplied the lights in the River and Gulf of St. Lawrence, Strait of Belle-Isle, Anticosti, Magdalen Islands and Baie des Chaleurs. The lights above Quebec were supplied by passenger steamers or by rail, as proved most economical or convenient.

There are in this division 168 lights, at 121 stations, 7 light-ships, 3 of which are supplied with powerful steam fog-whistles, 8 explosive bomb signal stations, in connection with lights, 4 steam fog-whistles and 8 fog-horns, 11 gas buoys, 4 of which are supplied with bells, 140 buoys and 59 beacons.

NEW AIDS TO NAVIGATION AND IMPROVEMENTS IN EXISTING AIDS.

Fog Siren at Belle-Isle.

The installation of a fog siren at Belle-Isle light station, referred to in last year's report, was completed by Mr. Noble this year and put in operation, for the first time on September 9, 1899.

The total expenditure in connection with the establishment of this fog alarm, spread over three years, has been \$20,112.64. In this sum is included the cost of the machinery procured from England, viz., \$9,959.07.

The fog-alarm consists of a first order double siren operated by compressed air, giving alternately low and high notes, each of $2\frac{1}{2}$ seconds duration, separated by a silent interval of $2\frac{1}{2}$ seconds every 2 minutes.

The sirens are established in a small white house situated on the hillside at the south-east extremity of the island, midway between the upper and lower lights, at an elevation of 250 feet above high water mark.

The sirens are operated by air compressed in a power house at the landing place 4,000 feet distant from the point where the sirens are erected. The power is obtained from a water wheel driven by water led from lakes on the hill tops and an oil engine is provided for use in case of any failure of the water power.

The work done includes the following :—

The construction of a dam for the protection of the pipe valves and the construction of sluices and waste drains.

The construction of a large dam to increase the area and depth of the lake furnishing water so as to insure a sufficient water supply.

The providing and laying of 600 feet of cast iron 10-inch water pipe and the construction of an embankment to carry and cover the same.

The erection of a power house on the low ground at the landing on the island and the installation in it of machinery including a 36-inch Dodd sigmoidal jet wheel, a 16-B. H. P. Hornsby-Ackroyd oil engine and double set of air compressing pumps and a compressed air receiver.

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The laying of 4,000 feet of 4-inch steel pipe to convey the air from the engine house to the siren house, including the preparation of a bed for and covering of the same.

The erection of a siren house and the installation in it of two compressed air reservoirs and two sirens complete with the erection of trumpets for directing the sound.

The construction of a telephone line with double wires on wooden posts, and the installation of telephones connecting the power house, siren house and lighthouse.

The road leading from the landing to the lighthouse was raised in level two feet where it passes the lake which supplies water to the machinery. This was required in consequence of the raise of level occasioned by damming the lake.

Barre à Bouvard Range Lights.

To mark the axis of the dredged channel through Barre à Bouvard, a lighthouse was built in the winter of 1898-99 on Richelieu islet reef, 1,140 feet N. $23\frac{1}{2}^{\circ}$ E. from Richelieu Islet lighthouse.

It is an octagonal, wooden, pyramidal tower 37 feet high, surmounted by a $7\frac{1}{2}$ feet iron lantern, standing upon a pier built of $\frac{3}{8}$ -inch steel plate casing, 24 feet in diameter at the base, 24 feet in diameter at top and 20 feet high, with a projecting nose of steel plate up stream forming an ice breaker, the whole filled with stone and concrete. The pier is painted red brown, and the tower is painted white, with the iron lantern and the lantern base red. The top of the pier is 10 feet above high water mark. The building of the foundation was a difficult piece of work, as the tides covered the site from 5 to 6 feet deep at high water springs. This made the work of preparing the foundation slow and difficult and added to its cost.

The light is fixed red, elevated 40 feet above high water mark, and should be visible 7 miles from all points of approach by water. The illuminating apparatus is dioptric, of the seventh order.

To range with this lighthouse in the axis of the channel a small light building, showing a face 7 feet wide by 10 feet high painted white, with a black stripe $3\frac{1}{2}$ feet wide down the middle of the side facing the channel, was erected. From a window in the face of this building is shown a fixed red catoptric light, elevated 118 feet above high water mark, which should be visible 11 miles in, and over a small arc on each side of the line of range. This building is located 10,400 feet N. 70° E. from the lighthouse on the reef.

It stands on the hill side at Platon Point and is rendered more conspicuous by having erected over it the beacon which was formerly the front day beacon on the Platon. This was moved 50 feet southwardly from its old position. The back day beacon has been taken down. The work was done under the superintendence of Mr. W. H. Noble, foreman of works, at a total cost of \$5,057.25, and the new lights were put in operation on April 29, 1899.

Upper Traverse Pier.

On October 1, 1899, the lightship heretofore maintained at the upper end of the Traverse of St. Roch, River St. Lawrence below Quebec, was permanently removed from her station, and two lights similar to those previously shown from her were exhibited from a cribwork pier sunk at the edge of the channel.

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The pier is in 4 fathoms low water, and is 95 feet long by 50 feet wide at the base. It is 58 feet high, standing 12 feet above high water, and at the top is 64 feet long by 44 feet wide. The ends are sloping and pointed, and the pier is strongly sheathed with iron.

The lights on the pier were maintained till the close of navigation, a temporary shed having been erected for the keeper. A permanent building with a distinctive light will be established next season. The total cost of the pier to date is \$43,869.10.

Flower Island Lighthouse.—A new lighthouse marking the south side of the western entrance to the Strait of Belleisle was erected during the past summer, and put in operation on November 7. It stands on the point of Flower Island nearest to the channel, on a site about 6 feet above high water mark. The light building is a rectangular wooden building, with a square lighthouse tower rising from the north-east corner of the dwelling house. It is 50 feet high, from the base to the vane on the lantern, and is painted white; the polygonal iron lantern is painted red; the roof of the dwelling is left unpainted.

The light is a revolving bright or white light, the flashes attaining their greatest brilliancy every 30 seconds. It is elevated 51 feet above high water mark, and should be visible, in clear weather, 12 miles from all points of approach by water. The illuminating apparatus is catoptric.

The work was done by the department, under the superintendence of Mr. Kimball Coffin, at a total cost of \$8,801.

Ste. Croix Bar Range Lights.—Range lights to mark the centre of the dredged cut through the Ste. Croix bar in the ship channel between Montreal and Quebec were established during the past season. Temporary lights were maintained during the erection of the towers, which were put in operation on October 4.

Both light buildings are square wooden towers, with sloping sides, surmounted by square wooden lanterns, and are painted white.

The front tower is 23 feet high from its base to the top of the ventilator, and shows a fixed white light elevated 186 feet above high water in and over a small arc on each side of the axis of the dredged cut through Ste. Croix bar. It also shows down stream on its north-eastern face. The illuminating apparatus is catoptric.

The back tower stands 1,400 feet S. E. $\frac{1}{4}$ E. from the front tower, is 54 feet in height from its base to top of the ventilator, and is painted white. From an elevation of 238 feet above low water mark it shows a fixed white light in the line of range, the illuminating apparatus being catoptric.

When the dredging of the bar is completed to the full width of 500 feet the range will be shifted to the centre of the finished cut.

These towers were erected by the department, under the supervision of Mr. C. Auger, at a cost of \$1,667.62.

LIGHT DESTROYED BY FIRE.

The back range lighthouse at Pointe aux Trembles en haut, a fine tower 56 feet high, built by the old Montreal Trinity House, was destroyed by fire on Oct. 14, 1899. A temporary mast light was immediately established. It is intended to replace this by a wooden tower on iron skeleton base.

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PRINCIPAL REPAIRS AT EXISTING STATIONS.

Cape Bauld.—A small pony pump was supplied for the new boiler, and a new flag-staff, made in the departmental workshops, was erected. All the buildings at this station were put in first class order. Total expenditure, \$482.90.

Cape Magdalen.—The repairs authorized last season were completed this year, and the dwelling was clapboarded and roof and foundation repaired, at a cost of \$149.75. The fog alarm boiler was covered with asbestos, cost \$6, and a new boat purchased for \$35.

Cape Norman.—The large wooden tank was repaired, caulked and tarred; cost, \$6. New lumber was supplied for sheathing fog alarm and flooring kitchen, the work being done by the keeper. Cost of lumber, \$31.55. New coal shed erected, cost \$30.

Cape Rosier.—On November 1 last, the steam whistle at this station was put in operation, and the horn in future will be reserved in case of accident to the whistle. Deals for flooring cellar and new smokestack for fog alarm were furnished from stores.

The foundation of the tower was repaired, new windows placed in the fog alarm building, and a new valve fitted to the boiler, at a cost of \$57.15.

Fame Point.—The steps leading from the beach to the lighthouse were repaired by contract with G. Plourde for \$100.13. The kitchen was shingled at a cost of \$6.00.

Green Island.—The cotton powder cartridges at this station are now exploded at 15 minute intervals instead of every 20 minutes as formerly. On a vessel's signal being heard an additional shot will be immediately fired and the firing will be continued at 5 minute intervals until the vessel has passed the station. The ventilators were repaired for \$27, a new fence erected for \$50, and a new boat was procured at a cost of \$60.

Lotbinière, Front.—The wharf under this light was repaired under contract with P. Bernard at a cost \$139.97.

Lotbinière, Back.—The lantern top was renewed at a cost of \$22. Fifteen trees which obstructed the light have been cut down.

Pointe de Monts.—The oil store at this station was clapboarded and new sills and flooring put in. A new floor was laid in the kitchen, the dwelling house windows repaired, and the attic sheathed inside. Total cost \$95.50.

MINOR REPAIRS.

Station.	Nature.	Cost.
Anticosti:—Heath Point.	Dwelling roof repaired.....	\$ 10 00
South Point.....	New whistle valve.....	94 32
	Wharf repaired.....	20 00
West Point.....	Groynes repaired.....	26 88
Ash Island.....	New boat.....	40 00
Bellechasse.....	New chimney cap.....	7 50
Bersimis.....	New boat.....	35 00
Bicquette.....	Stove repaired.....	4 00
Bird Rocks.....	Dwelling reshingled.....	18 00
Cape Salmon.....	Cistern and boat landing repaired.....	261 11
Cap aux Oies.....	Gallery and gangway repaired.....	46 78

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Station.	Nature.	Cost.
Cape Charles.....	Lantern glass renewed.....	12 80
Cape Despair.....	New stove and forcepump, new tongues for hand horn. Fence and gallery repaired.....	27 00
Cape Gaspé.....	Lantern glass placed and firing jib repaired.	5 00
C. de la Madeleine.....	Platform covered with galvanized iron....	15 00
Cape Ray.....	New flooring and inside sheathing.....	61 10
Crane Id.....	Lantern roof repaired.....	25 60
Egg Island.....	Oil store clapboarded.....	29 50
Etang du Nord.....	Dwelling shingled, new doors aud windows.	28 00
Father Point.....	Foundation cemented.....	6 00
Forteau.....	Small repairs.....	
Gaspé Lightship.....	Oil tank repaired.....	2 00
Grande Rivière.....	Masonry repaired.....	5 00
Greenly Island.....	Pump repaired and tank caulked.....	89 29
Grondines.....	New door frame and foundation repaired.	8 00
Ile à la Bague.....	New mast.....	5 00
Ile à la Pierre.....	Lightning rod and steps repaired.....	25 00
Ile aux Prunes.....	Shed repaired.....	5 00
Ile aux Raisins.....	Lantern repaired. New stove. Road improved.....	32 50
Ile Ste. Thérèse (Lower).....	Foundation strengthened, new boat.....	36 00
Ile Ste. Thérèse (Upper).....	New boat.....	18 00
Kamouraska.....	Well repaired, furnace removed.....	10 00
Lacolle.....	New sill.....	2 50
Lark Id.....	Sail boat repaired.....	4 50
Lavaltrie.....	New boat.....	15 00
Lightship No 2.....	do.....	8 00
Martin River.....	Small shed built.....	4 00
Matane.....	Three new ladders.....	12 00
Montmagny.....	New oil store.....	35 00
Paspebiac.....	New stove and small repairs.....	12 00
Percé.....	New canvas on gallery.....	6 00
Pilgrims.....	New boat and salvage.....	47 00
Pillars.....	Boat landing repaired and lantern glazed..	28 31
Pte. aux Citrouilles.....	Bridge over gully.....	5 00
Pte. aux Originaux.....	Small repairs.....	6 00
Pte. du Lac.....	New stove supplied. New foundation and floor.....	36 00
Pte. St. Jean.....	New oil store.....	64 10
Portneuf (Below).....	New signal flagstaff.....	
Port St. François.....	Pier repaired.....	5 25
St. Antoine.....	New mast.....	12 00
Ste. Croix.....	Small repairs.....	11 00
Seven Islands.....	Small general repairs.....	30 00

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BUOY AND BEACON SERVICE.

Gas Buoys.—The Quebec division has in operation 11 gas buoys, four of which are supplied with fog-bells operated by hammers put in motion by the action of the waves. Each of these buoys has the name of its respective station painted on its side.

There is one spare spherical gas buoy kept on the Queen's wharf, where are also situated the gas works, supply tanks, etc.

St. Thomas Bank Gas Buoy.—On May 23 last, a spherical gas buoy was placed on St. Thomas bank, River St. Lawrence below Quebec, instead of the can buoy hitherto maintained.

The buoy is painted black with "St. Thomas Bank" in white letters on the side.

An occulting light showing bright for 8 seconds with intervals of 7 seconds is exhibited from the buoy and should be visible 4 miles from all points of approach.

With a view to greater efficiency the following changes have been made in the gas buoys below Quebec:—

Crane Island flats :

From fixed pink, to occulting white.

Grosse Isle :

From fixed pink, to fixed white.

Madame Island :

From fixed white to occulting white.

With the above changes the use of pink lights as aids to navigation is discontinued.

The total cost of this service for 1898-99 was \$2,675.29.

Wooden, Can and Spar Buoys and Beacons.—The buoys and beacons under the Quebec Agency comprise all those situated in the Richelieu, Saguenay and St. Lawrence rivers, Baie des Chaleurs, Gaspé Coast and Magdalen Islands harbours.

The total cost of this service, including contracts for wintering, repairing, replacing, taking up and renewing buoys and beacons for 1898-99 was \$4,039.54, or \$293.05 less than in the previous year.

The usual number of buoys and beacons were repaired, painted and renewed, and nine spar buoys for the latest service to outward bound vessels were built as usual and placed in the following stations, to replace larger buoys when taken up for the winter, viz. :—Beaujeu Bank, west end ; Crane Island Flats, Crane Island Patch, Middle Ground, St. Roch, Channel Patch, Pilgrims Shoals, Barrett Ledge and St. Thomas Bank.

AIDS TO NAVIGATION IN THE SHIP CHANNEL.

Extensive additions and improvement have been made to the aids in the ship channel between Montreal and Quebec, during the past season as already mentioned in the first part of this report.

Between Quebec and Portneuf, two new can buoys and ten new spars were placed, of which latter five were afterwards replaced by can buoys. Two buoys previously maintained were moved to more suitable positions.

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Between Portneuf and Montreal, sixteen new spar buoys were placed and four spar buoys and one cylinder buoy changed in position, all red can buoys were replaced by conical ones and black conical buoys by cans.

The ship channel was divided into four districts as follows:—

1. Quebec to Batiscan (Quebec district, lettered Q.)
2. Batiscan to Three Rivers (Champlain district, lettered C.)
3. Three Rivers to Sorel (Lake St. Peter district, lettered L.)
4. Sorel to Montreal (Montreal district, lettered M.)

All buoys were numbered according to international regulations and a complete list published.

A new buoy was placed at Three Rivers to mark the outer edge of a bar formed by silt carried down by the St. Maurice River.

Bécancour day Beacon.—A beacon was erected in September last at the west side of the mouth of the Bécancour River, which in line with the spire of Ste. Angèle church, shows the middle of the channel between Bécancour Point and Isle Bigot. Its position has since been changed in the same alignment and it now stands 14,100 feet N. 64° 15' E. (mag.) from the church. It is diamond shaped, 50 feet high and is black with a white border.

Cap Santé Semaphore.—The semaphore at Cap Santé was operated by the department as usual. Considerable repairs were necessary and were carried out under the superintendence of the operator. The total cost of maintenance was \$408.36.

St. Jean Semaphore.—This semaphore is maintained by the department of Public Works. It was out of operation for a month in June and July owing to damage by storm.

SIGNAL SERVICE.

All the stations in the Strait of Belle Isle are now supplied with complete sets of signal flags, international code books and lists of vessels, so that all the keepers may communicate with passing ships.

ANTICOSTI BEACONS DISCONTINUED.

The day beacons heretofore maintained on the coasts of the Island of Anticosti, in the Gulf of St. Lawrence, have become unnecessary, in consequence of the establishment of lighthouses, the maintenance of a telegraph line along the south shore and the gradual extension of settlement, and will therefore be left unpainted and allowed to fall into decay.

SHOAL LOCATED.

A shoal, the existence of which was reported to the department by Major E. L. Bond, marine underwriter, Montreal, nearly one mile from shore, northward from Ste. Félicité parish church, on the south shore of the St. Lawrence, county of Rimouski, has been located by Commander Wakeham, of the Dominion Government steamship *La Canadienne*.—Latitude, N. 48° 55' 18"; longitude, W. 67° 20' 52".

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The shoal, which will be known as Roix shoal, is of rock, about 500 feet long, east and west, by about 400 feet wide. It rises abruptly from a muddy bottom. The least water found on it is 4 fathoms, the average being about 5 fathoms; the soundings drop suddenly into 9 fathoms all round.

Fishermen report that the sea seldom breaks on this shoal, although there is often a heavy curl on it. Commander Wakeham suggests that deep draught vessels should give this shore a berth of at least 2 miles.

NOVA SCOTIA LIGHTHOUSE DIVISION.

This division, in charge of Mr. J. Parsons, agent of the department in this province, comprises 188 lighthouses, exhibiting 199 lights, 1 light vessel, 15 steam fog-alarms, 25 hand fog-horn stations, 2 fog-bells, 19 automatic whistling buoys, 15 automatic bell buoys, 115 iron or steel buoys, about 780 spar and other small buoys, 9 stationary beacons, 16 life-saving stations, 3 humane establishments, 4 signal stations, 2 carrier pigeon stations and 1 steamship, the *Newfield*.

The stations have been inspected by Mr. C. A. Hutchins, superintendent of lights, the boilers and machinery at the fog-alarm stations by Mr. D. Stevens, inspector of Government steamboats, and the life saving stations by Capt. B. Douglas, R.N.R., naval assistant.

All the automatic buoys (bell and whistling) have been placed and cared for by the *Newfield* aided during part of the autumn of 1898 by the Dominion Government Steamer *Lansdowne*. About 50 of the spar buoys and 75 iron cans are placed and replaced directly by us; the others in the different harbours are cared for and kept in position by persons holding three year contracts obtained by public competition.

NEW LIGHTS.

Halifax Harbour.

Private lights have been established by Messrs. Furness, Withy & Co., at the head of their pier in the above harbour. They consist of two red lights 4 feet apart vertically, and will be regularly maintained.

Neal Harbour.

A lighthouse established on the outer edge of the head on the eastern side of the entrance to Neal harbour north-eastern coast of Cape Breton Island, was put in operation on September 1 last.

The lighthouse is an inclosed wooden building square in plan, with sloping sides, painted white, surmounted by an octagonal iron lantern painted red. It is 34 feet in height from its base to the ventilator on the lantern. The lighthouse stands on ground elevated 46 feet above high water mark, and is 65 feet back from the edge of the bank.

The light is fixed red, elevated 73 feet above high water, and visible 8 miles from all points of approach by water. The illuminating apparatus is dioptric of the seventh order.

The work was done by Mr. P. McFarlane, of Baddeck, under contract for \$725.

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Negro Harbour Range.

Two range lights, established for the purpose of guiding vessels into Negro Harbour, on the south coast, were put in operation on September 2, 1899.

Both light buildings are square wooden towers, with sloping sides, surmounted by square wooden lanterns. They are painted white, and stand on the shingle beach about 6 feet above high water mark and about 30 feet back from the water's edge.

The front tower is 34 feet high from its base to the vane on the lantern, and shows a fixed white light elevated 34 feet above high water mark in, and over a small arc on each side of, the line of range. The illuminating apparatus is catoptric.

The back tower stands 850 feet north-west from the front tower and is 44 feet high. It shows a fixed white light from an elevation of 44 feet above high water mark in the line of range and also towards the western entrance to the harbour. The illuminating apparatus is dioptric of the seventh order.

The work was done by the department, under the superintendence of Mr. E. P. Greenwood, at a cost of \$1,786.65.

Port Medway.

A lighthouse established on the eastern end of the breakwater in Port Medway harbour, on the south coast, was put in operation on April 1, 1899.

The lighthouse is a square wooden tower, with sloping sides, surmounted by a square wooden lantern, the whole painted white, and is 33 feet high from its base to the vane on the lantern.

The light is fixed red, elevated 31 feet above high water mark and visible 6 miles.

The illuminating apparatus is dioptric of the seventh order.

Sambro Harbour.

A lighthouse established on Bull point, on the south-west side of the entrance to Sambro harbour, on the southern coast, for the purpose of guiding small vessels to a safe anchorage in Sambro harbour, was put in operation December 1, 1899.

The lighthouse stands about 30 feet back from the water's edge on the extremity of the point, and is a square wooden tower with sloping sides, surmounted by a square wooden lantern, the whole painted white. It is 33 feet high from its base to the vane on the lantern.

The light is a fixed red light, elevated 38 feet above high water mark, and visible seven miles from all points of approach by water. The illuminating apparatus is dioptric of the seventh order.

The tower was built by the department under the supervision of foreman carpenter McLellan and cost \$676.04.

IMPROVEMENTS AND REPAIRS.

Cape d'Or Fog alarm—A new bell has been supplied for the whistle and the conical roof of the cistern has been reshingled. The road to the landing as well as the

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road down the mountain side have been repaired, and two bridges on the former have been repaired.

Cape Fourchu.—The fog alarm chimney at this station has been taken down and rebuilt in a position where it would not obstruct sound seawards. The work was done by Mr. T. C. Redding, under contract for \$168.

The storehouse roof has been resheathed with 2 inch spruce, and the lightroom in the tower has been relined.

Cape George.—Stone foundations were built under the oil store and a portion of the dwelling. On the east side of the building a new sill was placed and a portion of the framing was renewed. Part of this side was also sheathed and shingled and a new cornice was fitted. The south side was flushed and shingled and fitted with a new cornice. A tar roof was laid over the bedroom and the lantern roof and deck covering were renewed. The lantern base was rebuilt and flushed. The lightroom, two bed-rooms and the porch were lined with spruce and the kitchen and porch floors were relaid. A new door was fitted and all doors and windows cased. The work was done under supervision of foreman McLellan.

Cranberry Head.—The fog alarm boiler was patched and fitted with a new set of tubes and furnace bars. A new reed box and 6 reeds were supplied.

Crow Harbour.—The foundation was cemented and new stays fitted to the tower. The porch was repaired and new steps placed. Inside the cistern and plastering were repaired and new locks fitted to doors. The boat house was repaired, the slip renewed and a new boat furnished.

Egg Island.—A new bridge was built between the dwelling and the lighthouse, the boatslip and breakwater repaired, and the boathouse and oil store partly reshingled. The revolving gear had a new centre fitted.

Glasgow Point.—A new storm door was fitted and the chimney was repaired. A new boat was supplied and a w. c. built.

Grand Digue.—The mast and shed were moved to a safer position.

Gull Rock.—The stone protection work on the east side has been repaired and the lighthouse foundation sheathed with plank. New doors to cellar and new water spouts were fitted and the oil store was reshingled.

Guyon Island.—The foundation and chimney were pointed with cement, portions of the framing renewed and the building reshingled and leadflushed; lantern deck renewed and covered with canvas; doors and steps repaired and new shed built.

Hobson Island.—Thirty feet of west end of breakwater was repaired and 30 feet added to east end at landing place; old breakwater extended 30 feet eastward and 60 feet westward; new sills and sheathing on boathouse; three storm sashes and two new ladders furnished and new waterspouts fitted.

Jerseyman Island.—Cellar floor cemented, brick wall built in cellar, and kitchen chimney rebuilt; porch repaired, and three rooms sheathed inside; lantern completely repaired, covered with galvanized iron; lead flashed, and 2 panes of glass reset.

Little Hope.—Boat landing cleared of rocks and slip repaired; one side of dwelling reshingled, chimney repaired and crock fitted; two sills and part of shingling renewed on oil store.

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Meaghers Beach.—In January, 1898, the breakwater at this station was extensively repaired, refilled with ballast, and resheathed where necessary. In November, 1898, three new groynes were built on the south side; 60 feet of breakwater was ballasted, 150 feet strengthened by ties, 150 feet of walling renewed, and 400 feet sheathed; 30 feet of plankwalk and railing was also renewed.

In October, 1899, about 80 tons of ballast were placed, 13 new piles driven, and 15 iron ties inserted, 5 groynes being repaired and ballasted, and new sheathing being placed where necessary.

North Canso.—Portions of framing renewed and building shingled; front door changed from a north to south side, porch built and storm door fitted; chimney rebuilt.

Parrsboro.—Cellar, shingling and ventilator repaired; saddle boards placed and window caps covered with zinc; new coal shed and chimney built; a hand fog horn was established at this station.

Peggy Point.—The 5th order dioptric apparatus at this station has been removed and the catoptric apparatus formerly in use has been re-established.

Point Prim.—Foundation wall repaired and oilshed and dwelling roofs shingled. New entrance porch and cellar doors, lantern glass renewed and w. c. built. The fog alarm boiler was patched, a new set of fire bars supplied and a new bell fitted to whistle.

Saint Esprit.—New sills placed and a large part of framing and outside sheathing renewed. Building completely papered, shingled and had flashed. Cellar door, windows front door steps and railing, gutters and spouts repaired. Lantern deck repaired and covered with canvas. Foundation wall pointed and breakwater repaired and ballasted.

Sambro.—New roof put on rocket house and front shingled. Magazine made weathertight.

From and after August 15, 1899, the cotton powder cartridges exploded at this station will be fired every ten minutes, instead of every twenty minutes, as heretofore.

Sheet Rock.—Roof shingled, chimney repaired, lantern deck repaired, and covered with canvass and new porch built. Breakwater on southside of tower rebuilt; 165 feet of walk laid; boatslip repaired and 20 feet renewed.

West Ironbound.—Lantern deck covered with canvass and glass reset. Oilstore shingled and new door fitted.

Whitehead.—Foundation and chimney pointed; roof repaired and one room wainscotted. Oilstore foundation rebuilt, framing renewed and roof shingled. A new boat was supplied.

ST. PAULS ISLAND.

Extensive repairs have been made at the stations during the past season, comprising as follows:—

At Fog Alarm.—New circular wooden tank 30 feet in diameter and 10 feet high; new coal shed on east side of whistle house; new workshop.

The boilers were covered with asbestos, fitted with Crosby machines; a new iron tank was placed, and new tools and necessary fittings were supplied.

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At Main Station.—Boat shed enlarged and roof shingled; barn repaired and shingled; new floors and spouting in dwelling; new foundation under coal shed and a new derrick erected.

The work was carried out under the supervision of Supt. Campbell.

SABLE ISLAND.

The following repairs were carried out during the past season:—

No. 1 Station.—Small repairs to buildings.

No. 3 Station.—Buildings repaired, boat tramway raised, and new lookout, 50 feet high, built.

No. 4 Station.—Buildings repaired and new shafts built for wagons.

No. 2 Station.—New dresser and kitchen floor.

East End Light.—Lantern deck repaired and new floor laid in kitchen.

North-East Bar.—New refuge hut, 13 feet square, built.

MINOR REPAIRS.

Station.	Nature.
Advocate Harbour	Small repairs to dwelling and boat.
Amet Island	Breakwater repaired.
Argyle	Chimney and eave finish repaired.
Arichat	Small repairs; new boat and stove.
Arisaig	New railing on gallery; shed moved.
Baccaro	Foundation sheathed; new storm doors and sashes.
Barrington Lightship	New sail, dory and compass.
Beaver Island	New boat.
Bird Island	New down spouts and storm doors.
Black Rock Point	Small repairs to building and breakwater.
Boars Head	Road repaired.
Bon Portage	General repairs; new boat.
Brier Island	Whistle valve repaired.
Brooklyn Pier	Mast moved to a safer position on pier.
Bunker Island	New skids for boat; bell striking apparatus repaired
Candlebox Island	New boat.
Canso Harbour	New boat.
Cape La Ronde	New stove; new storm sashes, and plaster repaired.
Cape Race	Fog whistle repaired and new boiler fittings supplied.
Cape Roseway	Fog alarm boiler patched.
Cape Sable	Dwelling and fog-alarm boiler repaired.
Cape St. Lawrence	Two new ladders furnished.
Careys Point	New sills under frame.
Caveau Point	Two new ladders.
Chebucto Head	New boat.
Church Point	Seven new storm sashes.
Coffin Island	Lantern deck repaired.
Cranberry Island	Cistern repaired; new boat.

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Station.	Nature.
Crichton Head	Breakwater repaired.
Crouchers Island	New boat.
Devils Island	Boatslip repaired.
Dover	New storm door.
Fish Island	New gutters and water tank.
Fort Point	Chimney and oil store repaired ; new ventilator.
Freestone Island	New boat.
Guysboro	New ladder.
Harbour au Bouche	Foundation walls repaired.
Ingonish Island	Small repairs ; new boat furnished.
Isaac Harbour	New storm doors.
Isle Haute	New capstan ; boat repaired.
Isle Ouetique	Small repairs to tower and breakwater.
Jeddore Rock	Small general repairs.
Jerome Point	Lantern repaired ; new tackle furnished.
Kidston Island	Small repairs ; new boat.
Louisburg	New well dug ; tower sheathed inside.
Louisburg Range	Two new ladders.
Low Point	Coal shed door repaired.
Margarets Bay	Small repairs.
Marjories Island	Foundations renewed.
Mullins Point	Masonry repaired.
Pages Island	New pump ; roof repaired.
Petitdegrat	Two rooms sheathed ; broken glass replaced.
Pictou Bar	Dwelling and walk repaired.
Pipers Cove	Small repairs.
Pt. Aconi	Lantern rail repaired ; new stove.
Pomquet	New floor in kitchen.
Popes Harbour	New platform around dwelling ; new boat.
Port Mouton	Dwelling repaired and shingled.
Pubnico	Breakwater repaired ; five new storm sashes.
Pugwash	New well.
Quaker Island	New well.
St. Anns	New boat ; new glass in lantern.
Scatterie	Repairs to fog-alarm machinery ; fences repaired.
Seal I.	New fittings for fog-alarm machinery.
Sydney Har.	New stove.
Three Top I.	Lantern repaired and glass renewed.
Tor Bay	Small repairs ; new boat.
Wedge I.	Revolving apparatus repaired.
Westhaver I.	Boathouse shingled ; new boat.
Whitehead	Repairs to oil store and dwelling ; new boat.

HAND FOG HORNS.

Hand fog horns have been established at the following stations :—

Cape Sharp, Pages Island, Parrsboro, Pubnico, Sand Point and Shelburne.

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BUOY SERVICE.

Additional coast buoys placed during last season.

Neil Point, Port Medway.—A black iron can buoy has been re-established outside the point of flats off Neil Point.

Jack shoal.—A red conical iron buoy, with "Jack shoal" in white letters on the side has been re-established to mark the outside of the shoal off Cape Jack, near the northern entrance to the gut of Canso.

Liscomb buoy.—A Courtenay automatic whistling buoy was established on July 19, 1899, to serve as a fairway coast buoy, 5 miles S. $\frac{3}{4}$ from Liscomb light, on the Atlantic coast on Nova Scotia. The buoy is striped black and white vertically with "Liscomb" in white letters on the black parts.

Schooner Passage.—An iron can buoy, painted in alternate red and black horizontal bands, has been established to mark Schooner Passage rock, S.W. extremity of Nova Scotia.

Owls Head.—A black iron can buoy has been established off Owls Head, at the north end of Schooner Passage.

Pennant Automatic buoy.—An automatic whistling buoy has been established off Pennant Point, on the southern coast of Nova Scotia. It is a black conical buoy, with "Pennant" in white letters on the side.

Additional harbour buoys placed during last season.

West Dublin Bay, Crooked Channel.—The channels in West Dublin Bay and Crooked Channel, near the mouth of La Have river, N.S., have been marked by the establishment of 6 black spar buoys, 5 red spar buoys and 2 red and black spar buoys.

Neal harbour.—A spar buoy has been placed to mark the shoal on the port hand entering Neal harbour, eastern coast of Cape Breton.

Johns island beacon.—An iron spindle, surmounted by a black slatwork sphere 20 feet above high water has been established off the extremity of the bar off the north-east end of Johns island, Cockerwit passage, south-west extremity of Nova Scotia.

The following buoys were carried away during the season and have not since been found or reported :—

Sisters Bell Buoy.

Sambro automatic.

Louisburg automatic.

The colour of Pease's Island Fairway buoy has been changed from red and black horizontal bands to black and white vertical stripes.

HALIFAX PILOTS.

Pilots for this district cruise in schooners within a radius of 15 miles outside Chebucto Head. There are no shore pilot stations.

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PRINCE EDWARD ISLAND LIGHTHOUSE DIVISION.

This division is under the charge of Mr. Artemas Lord, who is agent of the department at Charlottetown, and also acts as inspector of lights for the district which embraces the whole province. The general routine of the office work has been, as formerly, performed by the agent, assisted by Mr. H. W. Mutch as clerk and messenger. The work of building new lighthouses and superintending the more extensive repairs at existing stations has been done under the personal superintendence of Mr. M. Walsh as foreman of works. Under the agent's instruction Mr. Walsh is also warehouseman for the lighthouse stores in Charlottetown.

There are in the division 66 lights at 39 stations, and one fog-horn, under the charge of 46 keepers. There are three automatic whistling buoys and one bell buoy. The majority of the lights are situated on headlands and serve the general purposes of navigation, the remainder being harbour lights intended particularly for the benefit of fishermen. There are thirty harbours buoyed under the system of three-year contracts, and seven in which buoys are maintained by the department under the local harbour masters.

All the stations on the island were inspected by the agent and Mr. Walsh on the annual supply trip in July last, which was made on the new D.G.S. "Grant."

IMPROVEMENTS AND REPAIRS.

North Rustico.—The lighthouse tower at this station was undermined and capsized during a heavy north-east gale on January 12, 1899, and the close pile and protection work were badly damaged at the same time.

The tower was moved back and erected on firm ground and is now used as a coast light only, a mast light having been erected to serve as a back range.

The total cost of the work which was done under Mr. M. Walsh's supervision was \$608.46.

Cape Bear.—The dwelling at this station was thoroughly repaired and an addition of 21 feet built on, at a cost of \$463.85.

Sandy Island.—Owing to the dangerous position occupied by the tower it was last winter removed to a new site selected on the sand hills outside the harbour and south of the entrance, 2,280 feet S. by S. from its former position.

The tower, with the dwelling attached, now stands on a low terrace on the inner face of the south sand hills, and will in future be known as "Cascompec main lighthouse." In its new position the light is elevated 48 feet above high water mark and should be visible 12 miles from all points of approach by water. The height of the tower from base to vane is 46 feet. In other respects the light and building are unchanged.

The work was done by local labour under the superintendence of Mr. M. Walsh, at a total cost of \$576.62.

Savage Island.—The mast lights heretofore maintained on Savage Island have been moved on to the sand hills south of the entrance to Cascompec harbour where they mark the best channel over the bar at present.

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The front mast stands on the sand hills near the beach, 2,700 feet S.S.E. from the Cascumpec main lighthouse. It is 22 feet high, has a hut at its base and a small, diamond-shaped slatwork day mark at its head. The whole structure is painted white.

It shows a fixed white catoptric light from a lantern hoisted to the top of the mast, about 35 feet above high water mark, which should be visible 5 miles in the line of range.

The back range light is a similar light, shown from a similar mast, established 1,200 feet, S.W. by W. from the front light. It is elevated 40 feet above high water mark, on a mast 26 feet high.

It is proposed, next season, to replace these mast lights by lights shown from small inclosed towers.

North Point.—The machinery reaching the light broke down on December 18th 1899, and the light was discontinued until the opening of navigation in 1900.

Murray Harbour.—It was necessary to remove the outer tower in consequence of the rotting of the block under it. An arrangement was concluded with Hon. D. Davies by which the tower was placed upon his land and breastwork, the side being provided free of charge in consideration of the Department assisting in building the necessary protection work. This was done at a cost of \$154.43.

BUOY SERVICE.

Summerside Harbour.—Three of the iron buoys marking the entrance to Summerside harbour have been moved to better indicate the best water in the channel; all the buoys now mark turns in the channel, and all have been numbered in accordance with the international rules.

West Point.—The whistling buoy on this station was carried away by ice in the winter of 1898-99. A new buoy was provided on June 9, 1899. This buoy went adrift in September, and was not again replaced before the close of navigation.

BRITISH COLUMBIA LIGHTHOUSE DIVISION.

This division comprises all Canadian waters on the Pacific coast and the inland navigation systems of British Columbia, and is under the charge of Captain James Gaudin, agent of the department at Victoria, who also acts as inspector of lights.

There are in this province 26 light-stations, at 6 of which are steam fog-alarms, and at 6 others bells are rung by machinery. There are also 2 beacon lights in Victoria harbour, and two similar lights in Nanaimo harbour, which, as aids to navigation, are highly appreciated.

The lights are in charge of 25 light-keepers, some of whom supply assistance out of the salaries allowed.

The lights are supplied by the Dominion steamer *Quadra*, Capt. J. T. Walbran, master, and the fog-alarm machinery at the several stations was periodically inspected by the engineers of the *Quadra*.

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NEW LIGHTS ESTABLISHED.

Pointer Island.—A lighthouse erected on Pointer Island, Fitzhugh Sound, east entrance to Lama passage, was put in operation on November 5, 1899. The lighthouse stands on the south-east end of the small island south of the entrance. It is a white square wooden building with a red roof, surmounted by a red, square, wooden lantern, and is 30 feet high.

The light is fixed white, elevated 42 feet above high water, and visible 12 miles. The illuminating apparatus is dioptric of the 7th order. The building was erected by day's work by the department, under the foremanship of Mr. D. M. Fraser of Vancouver.

Dryad Point.—A lighthouse erected on Dryad Point, (formerly Turn Point) Campbell Island, northern entrance of Main Passage, Seaforth Channel, was put in operation on November 7, 1899.

The building is a white square wooden tower, standing on a red foundation and surmounted by a red lantern. It is 39 feet high from base to vane.

The light is fixed white elevated 36 feet and is visible 11 miles. The illuminating apparatus is dioptric of the seventh order.

A small dwelling house was also provided at this station. The work was done by the department, M. Fraser as foreman of works.

IMPROVEMENTS AND REPAIRS AT EXISTING STATIONS.

Fisgard.—The dwelling house at this station was sheathed inside throughout at a cost of \$200. This was necessitated by the fact that the concussion caused by the firing of heavy guns at Rodd hill had loosened the plaster.

Fiddle Reef.—The boat house and boat at this station were destroyed in a heavy gale on January 20, 1899. A new boat house was erected at a cost of \$123, and a new boat was supplied. Red sectors were added to the fixed white light heretofore shown, to mark the foul ground on the western side of the channel approaching the light.

Prospect Point.—The fog bell at this station now gives one stroke every twenty seconds instead of two strokes in quick succession every minute. A boat and boat-house have been supplied to this station.

Sisters.—The light at this station has been changed in character from a fixed white to an occulting white light, visible twenty seconds and eclipsed ten seconds alternately. A new boat was supplied at a cost of \$70.

Egg Island.—It was found necessary to build a new foundation for the boat house, and a new boat slip, both of solid masonry, as well as a breakwater for the protection of the building. The total cost was \$370 for labour and material. A new boat was supplied at a cost of \$70, to replace one lost in making the very exposed landing.

Garry Point.—The fishing light at the station was destroyed by fire on April 14, 1899. It was immediately rebuilt and again put in operation on April 20.

Gallows Point.—The group of piles from which a red light was shown off Gallows Point, on the south side of the entrance to Nanaimo Harbour was carried away by the sea, and has been replaced by a platform buoy, surmounted by a slat work pyramid.

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The buoy and superstructure are painted black and numbered '1.' The red light has been removed to a post erected on the extremity of the dump on Gallows Point on the opposite or northern side of the entrance to the harbour. The light is, as heretofore, a fixed red light shown from a small lens lantern, 8 feet above high water-mark, and is visible 2 miles.

MINOR REPAIRS.

Name	Nature.	Cost.
Cape Beale.....	Trail repaired.....	\$100 00
Berens Island.....	Verandah and plank walks renewed.....	56 50
Discovery Island.....	Boat slip repairs.....	12 50
East Point.....	Small repairs.....	15 00
Sand Heads.....	New store.....	16 00
	New lamps.....	75 00
Point Atkinson.....	Reservoir wall repaired.....	85 00
Brockton Point.....	Boat supplied.....	54 00
Entrance Island.....	do.....	70 00
Cape Mudge.....	do.....	54 00

BUOYS AND BEACONS.

New Buoys and Beacons.

Atkins Reef.—A stone beacon, surmounted by a staff carrying a lattice work ball 6 feet in diameter the whole painted black and showing 9 feet above high water, has been erected on Atkins Reef, Trincomali Channel. The cost of erection was \$350. The work was done principally by the crew of the *Quadra*.

Celia Reef.—A 4-foot red steel can buoy has been established off Celia Reef, Shute Passage.

Danger Reef.—A conical wooden beacon, 25 feet across at the base, surmounted by a staff carrying a lattice work ball, 6 feet in diameter, the whole painted black and showing 40 feet above high water, has been erected on the north end of the easternmost rock of Danger Reef, in the channel between Valdes and Vancouver Islands. The work was done by the crew of the *Quadra*.

Esquimalt Harbour.—A small platform buoy with a lattice work cone on top has been moored in 11 feet water close to and northward of the rock eastward of Patterson Point, Esquimalt Harbour.

Gabriola Reef.—A conspicuous square stone beacon, surmounted by a staff carrying a lattice work ball 10 feet in diameter, the whole painted black and showing 22 feet above high water, has been erected on Thrasher Rock, at the north-easterly extremity of Gabriola Reef. The total cost of erection was \$2,492.35. The work was done by day's work, the *Quadra* acting as construction tender. The buoy previously marking the reef was withdrawn on the completion of the beacon.

Johnstone Reef.—A 4-foot black steel can buoy has been moored on the eastern extremity of Johnstone Reef, Haro Channel.

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North Reef.—A pyramidal wooden beacon, 19 feet square at the base, surmounted by a staff carrying a lattice work ball 9 feet in diameter, the whole painted white and showing 40 feet above high water, has been erected on North Reef, Stuart Channel, by the *Quadra*.

Nanaimo Harbour.—A red spar buoy has been moored in Nanaimo Harbour to mark the north west shoulder of the middle bank.

Shute Reef.—A stone beacon, surmounted by a staff carrying a lattice work ball 8 feet in diameter, the whole painted black and showing 8 feet above high water, has been erected on Shute Reef, Satellite Channel, off the south-east coast of Vancouver Island. The cost of erection was \$1,407.

Shark Spit.—A pile beacon was in May last established on Shark Spit, Mary Island, and Channel rock marked by an iron drum on top, showing 3 feet at high water.

Virago Rock.—A large black spar buoy has been moored off Virago rock in Portier pass between Valdes and Galiano islands.

West Rock.—A 5-foot steel can buoy has been established on West Rock, off Sydney Spit.

Changes in existing Buoys and Beacons.

Governor Rock.—The black can buoy missing from Governor Rock, Trincomalie Channel, was replaced in May, 1899.

Hodgson Reefs.—The buoy on Hodgson Reefs, Chatham Sound, was moved to the northward and westward, kelp having been seen outside the old location, and was changed in colour from red to black to conform with the international rules in November, 1899.

Indian Reef.—The spar buoy, heretofore moored off Indian Reef, Shoal Islands, Stuart Channel, has been replaced by a 5-foot black steel can.

Baynes Sound.—The inner beacon on Kelp Bar, north entrance to Baynes Sound, was re-erected in May, but having been again carried away, has been finally discontinued, and is now replaced by a red spar buoy. The tide gauges, mentioned in last year's report as having been established on the Kelp bar beacons are no longer maintained. The beacons on the shore to guide over Kelp bar, have been renewed, and the beacon on Union Spit was re-erected. The 5-pile beacon on the end of Maple Spit, which was carried away last winter has been replaced. It is painted black and surmounted by a lattice work ball, 6 feet in diameter painted white.

Sturgeon and Spanish Banks.—The beacons on Sturgeon Bank and Spanish Bank, Straits of Georgia, mentioned in last year's report as having been carried away, have been replaced.

Buoys discontinued.—The can buoys, for some time maintained on Hewitt Rock, Hiekish Narrows, Finlayson Channel; on Nimpkish Bank, Broughton Strait, and on Ripple Rock, Race Passage, Johnstone Strait, have been discontinued, as, in consequence of the strong currents, it was found impossible to keep them reliably in position.

HYDROGRAPHIC NOTES.

Much information respecting dangers in British Columbia waters and in United States waters contiguous to the international boundary line has been published

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the past year. Capt. J. T. Walbran, master of the D.G.S. *Quadra* has been given opportunities of examining the location of reported dangers, and examinations have also been made by officers of H.M. ships, and by other mariners. The following may be enumerated amongst the work done :

The location of a shoal off White Rock, Cole Bay, and of shoals off White Rock, Trincomalie Channel, by H.M.S. *Egeria* : of two rocks off Kinghorn Island, fairway to Desolation Sound, of a rocky ledge off Three Islets, east of Cortes Island ; of uncharted shoals or rocks off Halibut Island, Miners Channel ; near Flat Top Islands, off Gabriola Island ; off DeCourcy Group, Pylades Channel ; in Metlahcatlah Bay ; and off Lizard Islet Mayne Island.

The listing of possible dangers off the west coast of Vancouver Island.

The selection and description of new clearing marks for Burnaby Reef, Vancouver Harbour.

Examinations of Portier Pass and location of dangers therein.

Correction of the positions of rocks in Lama Passage, and of the coast line near Dryad point lighthouse.

The location of dangerous rocks in Rosario Strait by the United States Coast and Geodetic steamer *Gedney*.

Surveys were made and plans prepared of Oyster Harbour, Hope Bay, Sturt Bay, and Van Anda Cove.

As predicted in last year's report, it was not found necessary to resume the semaphore service on the Stikine River during the season of navigation of 1899, and the equipment has been taken into store.

Respectfully submitted,

WM. P. ANDERSON,
General Superintendent of Lighthouses.

January 2, 1900.

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[Inclosure B.]

LIST OF BUOYS MAINTAINED BY THE DEPARTMENT OF MARINE AND FISHERIES IN CANADIAN WATERS IN 1899.

ONTARIO.

Amherstburg, including Bois Blanc.....	44	Pembroke.....	20
Bay of Quinte (three contracts).....	32	Point Pelee, gas buoys.....	2
Burlington Bay.....	1	Port Rowan.....	10
Collingwood.....	14	River Thames.....	7
Fiddlers Elbow.....	1	Rondeau.....	6
Gananoque Narrows.....	5	Lake Nipissing.....	32
Georgian Bay.....	11	Sault Ste. Marie.....	20
Green Shoal.....	1	“ canal approaches.....	25
Grecian Shoal.....	1	South Baymouth.....	4
Grosse Point.....	6	Lake Superior.....	7
Kaministiquia.....	19	Trenton.....	11
Kennedy Shoal.....	1	Point au Baril..... 15 beacons and	4
Kingston.....	19	Surprise Shoal, bell buoy.....	1
Little Current.....	6	Penetanguishene.....	10
Lake of the Woods.....	144	Red Horse Rock.....	1
Lone Rock; bell buoy.....	1	St. Joseph Channel.....	4
Midland.....	7	Port Arthur.....	1
Murray Canal and Presqu'île Bay.....	23	Lake Simcoe.....	8
North Sisters Rock, Ont.....	4	Pancake Shoal, bell buoy.....	1
Napanee.....	14	Tin Cap Shoal.....	2
Niagara, bell buoy.....	1	Byng Inlet.....	7
Orillia.....	6	Stokes Bay.....	6
Parry Sound.....	24	Bears Rump.....	1
“ gas buoys.....	3		

QUEBEC.

House Harbour, Magdalen Islands.....	6	St. Ann River.....	1
Bersimis and Outard Bay.....	10	St. Thomas.....	8
Cap Chatte.....	1	St. Placide, stakes.....	40 or 50
Carleton Point.....	1	St. Adelaide de Pabos.....	1
Chicoutimi.....	13	North Channel, Island of Orleans.....	10
Cock Point.....	1	Cape Cove.....	1
Fox River.....	1	Bonaventure.....	1
Gaspé.....	5	St. Lawrence River between Montreal and	
Lachine and Lake St. Louis.....	23	Quebec.....	258
Lake St. Francis.....	36	Eschourie Rock.....	2
Matane.....	3	Grand Entry.....	5
New Richmond.....	4	Amherst Harbour.....	8
Paspebiac.....	1	Richelieu Rapids, bushes.....	
Percé.....	2	Maintained by Agency, gas buoys.....	11
Richelieu River (two contracts).....	47	“ “ smaller buoys.....	40
Rivière des Prairies.....	10		

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LIST OF BUOYS maintained by the Department of Marine and Fisheries, &c.—*Continued.*

NEW BRUNSWICK.

Bathurst.....	26	Oak Bay and Restigouche	6
Bay Verte.....	36	Oromocto.....	7
Beaver and Blacks Harbour	9	Pisarinco.....	2
Bay du Vin.....	4	Pokemouche.....	5
St. John River.....	68	Quaco.....	3
Black Brook, Miramichi River.....	3	Richibucto and Albion.....	28
Black Land Gully	12	Richibucto, Kingston and Brown's Yard ..	30
Buctouche.....	16	Shediac.....	11
Campobello.....	10	Shippegan.....	19
Caraquet.....	20	St. Andrews.....	15
Cocagne, stakes, 50.....	11	St. Croix Ledge.....	11
Dalhousie and Restigouche.....	10	Tabusintac.....	17
Didgequash.....	5	Tracadie.....	19
Dorchester.....	3	Washadamoak.....	2
Grand Lake and Salmon River	73	West Isles.....	22
Grand Manan.....	30	Maquapit and French Lakes.....	24
Great Shemogue.....	7	Grande Anse.....	4
Harvey.....	7	Petit Rocher.....	
Letete and Black Bay.....	21	North-west Arm, Miramichi.....	6
Lepreaux.....	3	Marsh Point.....	1
Little Shemogue.....	6	Dipper Harbour.....	3
Little Shippegan and Miscou	12	Buctouche River.....	18
Magaguadavic.....	13	Tynemouth Creek.....	2
Miramichi.....	18	Maintained by Agency, signal buoys.....	9
Musquash.....	7	“ “ can buoys.....	
Neguac.....	16		

PRINCE EDWARD ISLAND.

Bay Fortune.....	3	Montague.....	6
Beach Point.....	3	Murray Harbour.....	33
Bedeque.....	11	New London.....	20
Cardigan, Lower.....	5	Orwell and Vernon River.....	6
“ Upper.....	11	Pinette.....	5
Cascumpec.....	26	Port Hill.....	9
Charlottetown.....	42	Pownal.....	7
Cove Head.....	2	Rollo Bay.....	3
Crapaud.....	6	Rustico.....	5
East River (Hillsboro).....	17	Savage Harbour.....	2
Egmont Bay.....	10	Souris.....	4
Georgetown.....	13	St. Peters Harbour.....	8
Goose Harbour.....	2	Summerside.....	11
Grand River.....	10	Tracadie.....	3
Grand River, Lot 14.....	8	West Point.....	1
Indian Rocks.....	1	Wood Island.....	1
Malpeque.....	16	Egmont Bay.....	2
Miminegash.....	3	Brae Harbour.....	5
Little Channel.....	2	Maintained by Agency, signal buoys.....	3

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LIST of Buoys maintained by the Department of Marine and Fisheries, &c.—Continued

NOVA SCOTIA.

Advocate Harbour.....	5	McKinnons Harbour.....	4
Apple River.....	8	Musquodoboit.....	7
Arichat.....	16	Northport.....	11
Avon River.....	5	North Sydney.....	5
Barrington.....	35	Parrsboro.....	6
Bear River.....	12	Petit de Grat.....	11
Beaver Harbour.....	2	Pictou.....	3
Birchton.....	5	Popes Harbour.....	3
Bridgewater.....	10	Port Hood.....	6
Canso and St. Andrews Passage.....	28	Port Le Tour.....	11
Cape Negro or North-East Harbour.....	14	Port Medway.....	9
Caribou.....	6	Port Morien.....	2
Cheticamp.....	12	Pubnico.....	16
Chezzecook and Petpiswick.....	6	Pugwash.....	8
Christmas Island and Barra Strait.....	11	Prospect, Lower.....	10
Clarks Cove, West Bay.....	3	River John.....	3
Clarks Harbour.....	17	St. Anns.....	2
Cockerwit Pass and Woods Harbour.....	15	St. Marys River.....	8
Crow Harbour.....	3	St. Peters Bay.....	16
D'Ecousse.....	8	St. Peters Inlet.....	11
Chester.....	5	Sambro.....	9
Digby and Annapolis.....	7	Shag Harbour.....	12
Dover.....	5	Sheet Harbour.....	9
Dipper Harbour.....	3	Shelburne.....	10
Great Bras d'Or.....	7	Tatamagouche.....	18
Guysborough.....	3	Terrence Bay.....	3
Hay Cove.....	8	Tor Bay.....	16
Harbour au Bouche.....	1	Three Fathom Harbour.....	5
Ingonish, South Bay.....	8	Tidnish.....	5
Isaacs Harbour.....	1	Tusket.....	17
Janvrin.....	4	Upper Prospect.....	4
Jeddore.....	11	Wallace.....	5
Judique.....	1	West Bay.....	3
Ketch Harbour.....	13	Westport.....	3
L'Ardoise.....	3	Weymouth.....	13
La Have.....	8	Whitehead.....	9
Lennox Passage.....	16	West Dublin and Crooked Channel.....	13
Little Narrows.....	10	Yarmouth.....	50
Liverpool.....	3	Smiths Island.....	1
Lockeport.....	6	Ship Rock.....	1
Lunenburg.....	9	Sydney.....	2
Lunenburg, South.....	9	Shulee.....	8
Lunenburg, Middle South.....	16	East Bay Bras d'Or.....	2
Louisbourg.....	6	Port Félix.....	7
Mabou.....	12	Chester Martin's Pt.....	3
Mahone Bay and Chester.....	13	Gillis Point, Boulaceet Harbour.....	1
Main-à-Dieu.....	6	Tangier.....	4
Margaree Harbour.....	9	Maintained by Agency (Whistling buoys)	17
Martins Brook.....	6	" " (Bell buoys)	14
Merigonish.....	6	" " (Can buoys)	24
Monsellier.....	10		

BRITISH COLUMBIA.

Gossip Reef..... (Wooden Can)	1	Kelp Point, Baynes Sound..... (Spar)	1
Gabriola Reef..... (Iron can)	1	Village Point, "..... (")	1
Lighthouse Island..... (Wooden can)	1	Somass R., Alberni..... (")	5
Point Grey..... (Iron can)	1	Victoria Harbour..... (Wooden cage)	3
Spanish Bank..... (Wooden can)	1	" "..... (Wooden can)	1
Sturgeon Bank..... (Iron nun)	3	Esquimalt Harbour..... (")	2
Jesse Island..... (Wooden can)	1	" "..... (Iron nun)	1
Horsewell Reef..... (")	1	Nanaimo..... (Wooden cage)	11
Reef Point, M. I..... (")	1	Sand Heads, Fraser River..... (Iron)	10
Clarke Rock..... (")	1	Sydney Channel..... (Steel buoy)	1
Qualicum..... (")	1	Rosedale Rock..... (")	1
Comox Bar 1..... (")	1	Johns one Reef..... (")	1
Comox Bar 2..... (")	1	Celia Reef..... (")	1
Kelp Reef..... (Spar)	2	Shoal Island..... (")	1
Burnaby Reef..... (")	1	Virago Rock, Portier Pass... (Spar buoy)	1

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[Inclosure C.]

ANNUAL REPORT OF THE OFFICER IN CHARGE OF THE HYDROGRAPHIC SURVEY OF THE GREAT LAKES.

HYDROGRAPHIC SURVEY,

OTTAWA, December 30, 1899.

The Chief Engineer,
Department of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to report as follows upon the work of the Hydrographic Survey during the past year :—

Last winter a fair sheet of the portion of Lake Huron extending from Drummond Island (State of Michigan, U.S.A.) to Duck Islands, and including False Detour Channel and Mississagi Strait, was prepared and forwarded to the Hydrographer of the Admiralty for engraving and publication.

I regret to say this chart has not yet been issued.

The season was late in opening, it being May 3rd before a start could be made. May and June were poor months for work as we had fogs, rain and wind nearly continuously. July and August were very fair, but September and October were again very bad.

Work was further delayed, for a fortnight, in June, by the breaking of the steamer's main shaft. Whilst undergoing repairs I detached Messrs Anderson and Tyrwhitt with a boat's crew to work near South Baymouth, Manitoulin Island.

The survey of the south shore of Manitoulin Island, from Providence Bay to the entrance to Georgian Bay was completed by July 1. (About half of this was done in 1898.)

I then undertook the survey of the south and west shores of the Saugeen Peninsula, completing as far as and including Stokes Bay and carrying the triangulation as far as Southampton, a distance of 60 miles from Cove Island lighthouse.

This survey is an extension of Capt. Boulton's work at the entrance to Georgian Bay in 1884. A check base was measured in Stokes Bay and extended to a side of the main triangulation with an almost perfect agreement.

The offshore sounding was carried to an average distance of 11 miles from shore and to a depth of from 40 to 60 fathoms.

There were surveyed 525 square miles of water, in which soundings were taken from the steamer's deck over 1,150 lineal miles, and from the boats, over 850 miles. Seventy-five miles of traversing were done.

The shore surveyed this season is not a dangerous one for ordinary trade, there being no far outlying shoals, but for the coasting trade the shore is very foul, the harbours few, small and shallow with no anchorages except in Stokes Bay.

A careful examination of this latter bay and its entrance was made. Six spar buoys were placed to mark the channel and two beacons erected, which in line lead fairly into the bay.

Stokes Bay is really the only safe harbour on the Canadian shore of Lake Huron from St. Clair River to Tobermory, a distance of 160 miles. It is quite large, the anchorage is both good and safe, and were the beacons replaced by lights it could be made by any ordinary vessel in any weather. I also placed buoys to mark the south end of the shoal off Duck Islands, Lake Huron; the south end of Bears Rump shoal, Georgian Bay; and the entrance to South Bay, Manitoulin Island.

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Careful observations for the variation of the magnetic needle were made, with a field unifilar magnetometer, at various points along the shore. These show a larger variation, at the entrance to Georgian Bay than is usually allowed.

The season closed on October 25.

During the winter copies of the season's work will be prepared, in two sheets, for Hydrographer of the Admiralty, who has all our charts engraved free of charge. These sheets should be published for the opening of navigation in 1901.

During next season the survey should be completed as far south as Clark Point and triangulation carried as far as Goderich, the latitude and longitude of which have been very carefully determined.

The shore of the lake from Clark Point to Cape Ipperwash (the termination of the survey by the U. S. Corps of Engineers) is nearly straight and free from dangers. Its survey could be left for more pressing work.

The demand for the last edition (300 copies) of the Georgian Bay and North Channel Pilot has been so great that it has been cleared out. A new one is in course of preparation.

With the close of next season, the survey of Lake Huron should be completed. There will then remain only Lakes Ontario and Superior of the great lakes to be surveyed.

The former has very little unsurveyed dangerous water in the line of through traffic and its survey is therefore not pressing.

On the other hand a resurvey of Lake Superior is urgently required and for this purpose the steamer *Bayfield* is totally unfit. She cost \$15,000 in 1884 and about the same amount has been spent, at various times, upon repairs to her. She is a wooden screw tug, of about 100 tons, built in 1863 and had very hard service before we acquired her. The original high pressure engine, very much worn, is still in her, and her boiler, 17 years old, is weakening. In 1893 she was condemned, but has been pressed into service each year since for the summer weather only. Lake Superior is much larger than any waters we have yet surveyed, the seas are heavier, and there is no doubt a vessel of the *Bayfield's* age and condition should not be placed in such dangerous work.

The distances, too, are much greater and much valuable time would be lost by a boat that cannot make better than seven knots per hour.

I would therefore strongly recommend that the survey be provided with a more suitable, larger, stronger, faster and more economical vessel. If this be not done the work of the survey will have to be abandoned as the *Bayfield* is no longer fit for work on exposed shores, similar to the Canadian shores of the great lakes upon which the prevailing winds beat so much.

I have the honour to be, sir,

Your obedient servant,

WM. J. STEWART,
Officer in charge of Hydrographic Survey.

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[Inclosure D].

ANNUAL REPORT OF THE ENGINEER IN CHARGE OF THE SURVEY
OF TIDES AND CURRENTS IN CANADIAN WATERS
FOR THE YEAR 1899.

OTTAWA, December 20, 1899.

W. P. ANDERSON, Esq., C.E.,
Chief Engineer, Department of Marine and Fisheries.

SIR,—I have the honour to submit the following report on the progress of this Survey. All the tide tables have been prepared and issued as usual, with the improvements referred to in my last report; and considerable progress has been made in working out practical results from the tidal observations which have been secured. In this work, I have had the assistance of Mr. R. Angus and Mr. S. C. Hayden; who also attended to the office work while I was away; as leave of absence for three months was granted to me on account of my health. Because of this also, it was not possible to undertake much in the way of new work this season. The principal tidal stations have continued in operation under the charge of the observers; and nearly all of them have been visited this season by myself or Captain Douglas. One secondary tidal station has also been established this season at the outer end of Belle Isle Strait.

The last report, containing information as to the tides of the Bay of Fundy with observations on the tidal bore in the Petitcodiac River, has met with much appreciation. As the survey becomes more widely known, the requests for information and the correspondence resulting, continue to increase. Many examples could be given of the accessory ways in which this survey often proves of value, in addition to its direct service to the shipping interest. The tide-levels especially, which require to be carefully worked out for the reduction of the tidal observations themselves, have been of important service in connection with harbour works, in several instances during the past year.

The total expenditure on this Survey during the fiscal year from June, 1898 to June, 1899, was \$5,186.35. This includes, in addition to the ordinary fixed charges, the sum of \$973.22 for the tidal observations in the Bay of Fundy in the summer of 1898; and \$834.15 for repairs to the crib-work of the gauges at Forteau Bay and St. Paul Island.

THE PRINCIPAL TIDAL STATIONS.

These stations have been in continuous operation throughout the past year, with the exception of Yarmouth; although some interruptions of a minor character occurred also at other stations.

The gauge at Yarmouth, N.S., was fitted up originally in 1898, as a summer station; without any provision for heating in winter, which requires a much more elaborate construction. As it is milder there in winter than at any of the other principal stations, the gauge was continued in operation to obtain as much tidal record as possible. At Yarmouth the mean temperature for January and February is $26\frac{1}{2}^{\circ}$ Fahr., which is $3\frac{1}{2}^{\circ}$ higher than at Halifax. The tide-column is of wood which is non-conducting; and some thick oil on the surface of the water in the tide-column, protects the water from the cold air; and thus, as it rises and falls with the tide, the oil keeps the ice from adhering to the inside of the column as much as it otherwise would. Notwithstanding such precautions, more than a month of record was lost during the first winter, in 1899 on account of frost; namely, from February 2 to March 10.

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At Father Point the outer end of the inlet pipe was again carried away by ice on December 16, 1898; and when this occurs, the lowest of the low waters are not recorded on the gauge. This pipe could not be replaced until the early spring; and some of the low waters were accordingly lost during the winter. In relaying it, it was made more secure than before; so that the ice grounding upon it, might not shift it. There was also an interruption of six days at the end of January; for repair to the gauge clock. The balance-wheel escapement had to be removed and sent to Quebec for this repair.

At St. Paul Island, some trouble again occurred because of the partial chokage of the inlet to the gauge, by the accumulation of gravel in the autumn storms. This accumulation is due to the shallow water in the bay where the tide gauge is situated, and the severe exposure on the eastern side of the island. On the western side the water is deep, close to the rocks; but if the gauge were placed there, it would be necessary to have a special observer, and to build a house for him and provision it; as there is no habitation on that side of the island. It is more economical therefore, to persevere under the existing difficulties.

There was also an interruption here of three days in August, owing to the difficulties of communication. Supplies shipped on April 20 were not delivered on the island till August 10. Meanwhile, on July 13, the observer cabled for additional tide sheets for the recording instrument; but with the best arrangements that could be made, the last tide sheets on hand were used before new ones were received.

At South-west Point, Anticosti, the crib-work and tide-well of the gauge were damaged in a severe storm in December, 1897. The observer succeeded in getting it to work again in February. As the expense of repairs could not be afforded in the ensuing season of 1898, it was decided to let the gauge go on as it was, as long as it would work. It so continued until January, 1899; when the sand and gravel accumulating within the damaged crib-work, caused partial chokage of the inlet to the tide-pipes; and the record became in consequence unreliable.

After careful consideration, it was decided to discontinue the tide gauge at this station; the reasons being as follows:—It was found from the extensive series of tidal observations of 1896, that no large area in the Gulf of St. Lawrence can be referred with advantage to South-west Point as a port of reference. It must therefore be considered chiefly as a station commanding the entrance to the Lower St. Lawrence; and its record chiefly for use as a basis for tidal differences and ratios. The record already obtained, comprising more than three complete years, is sufficient for these purposes; for which it is extremely valuable in being simultaneous with the observations at Father Point and Quebec. The tidal relations between these three stations, are examined and discussed further on in this report.

When the observations were discontinued at this station, an exchange of time with Quebec Observatory was made by cable, in order to check the diploidoscope on which the accuracy of the time used throughout the period of the observations, has depended. It was found correct.

The station was not completely dismantled; but was left in condition to fit up as a summer station at any time, for reference when the tidal currents on the Lower St. Lawrence come to be more fully investigated.

The causes of interruption above cited will serve as examples of the nature of the difficulties to be met, against which foresight is required. The difficulty of obtaining a uniform datum level for the height of the tide, when open tide-scales cannot be used in winter, and the special appliances and office methods which have been devised for this purpose, need not be detailed here.

INSPECTION OF TIDAL STATIONS.

The tide gauges at Quebec and Father Point were inspected by myself in August, on the expiry of my leave of absence. At Father Point, an extensive series of levels was taken instrumentally, to compare the actual rise and fall of the tide on the beach with the record on the gauge; as this gauge works by siphoning through an inlet pipe

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nearly 400 feet long. The results need not here be detailed. They will afford a table of correction to be applied to the readings of the height of the tide, to allow for the siphoning action; which is essential in the reduction of the observations.

The gauges at St John and Halifax were also visited in October; and careful instrumental levels were taken to check the elevation of the datum used. This is the more needful as both gauges are supported by timberwork; and check levels had not been taken for two years. At St. John the wharf against which the gauge is placed, floats up three inches at the higher tides. The column of the gauge itself, stands free of the wharf however, and rests directly on the bottom. It had not altered quarter of an inch in level since 1896. At Halifax the column of the gauge is set in a pile wharf; and it was found that no vertical movement had occurred of as much as quarter of an inch in two years, although the gauge sways with the piling when vessels moor to the wharf. The determination of these levels for datum is essential to the reduction of the observations.

The gauges at Forteau Bay and St. Paul Island were visited by Captain Douglas in the course of the season. Some important improvements were made; the levels were taken, and the dipeidoscopes, on which time for the observations depends, were adjusted by astronomical observations. The data for time and height are the two necessities at the tidal stations.

At the outer end of Belle Isle Strait a summer tidal station was established in July. The site chosen was in Henley Harbour, at the mouth of Chateau Bay. The record began on July 24, and is to continue as late as possible in the autumn. The reasons for the establishment of this station need not be discussed at length, although the best location for the purposes in view was carefully considered. By recording the tide of the open Atlantic at the outer end of the strait, it will afford a valuable comparison with Forteau Bay at the inner end, and possibly also with other Atlantic tidal stations.

OTHER TIDAL OBSERVATIONS RECEIVED.

We have to acknowledge during the year the receipt of the following information:—

Shubenacadie River.—Observations of the speed and the time of turning of the tidal current in the Shubenacadie River, Nova Scotia, were received from Mr. J. F. Armstrong, Assistant Engineer on the Midland Railway, now under construction.

Moncton.—The level reached by an exceptional tide at Moncton was noted by Mr. E. P. Cook, the Harbour master. It occurred on August 21, 1899, and reached a level only $4\frac{1}{2}$ inches below the exceptional tide of October 12, 1887, which is the highest tide there recorded, next to the Saxby tide of October, 1869. These levels are important with reference to the dyked lands around the head of the Bay of Fundy. Mr. Cook kindly sent also several observations of the time of arrival of the tidal bore.

Chicoutimi.—Tidal observations at Chicoutimi for a period of two months in 1897 have been received from Mr. F. W. Cowie, C.E., of the Public Works Department. These were obtained by means of a self-registering gauge loaned by this Survey. As Chicoutimi is at the head of tide-water on the Saguenay River, this record will be valuable in furnishing a basis for the Saguenay tides, which will be of advantage for the growing trade of that river. Chicoutimi is 75 miles inland from Tadousac, at the mouth of the Saguenay.

Annapolis.—The level of the highest known tide at Annapolis, Nova Scotia, was determined and referred to a permanent bench-mark by Mr. J. S. Hodgson, C.E., of Wellington, Massachusetts, while engaged in a survey for the sewerage of that town. This information he kindly took the trouble to communicate. Unfortunately it does not at present afford a comparison with the tidal observations obtained at Digby, at the other end of Annapolis Basin, as continuous levels are wanting; but meanwhile it is locally important.

Seymour Narrows, B.C.—The original observations obtained here in 1897 by the United States Coast Survey have been kindly communicated to this department. These observations show the time of the turn of the current for a period extending from April to October in that year. Similar observations were also taken in Sergius

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Narrows, Alaska. The turn of the current has thus been brought into relation with the tide, and the results are now published in the Tide Tables issued by the United States Coast Survey.

TIDE TABLES FOR 1899 ; PUBLICATION, ETC.

Quebec, Halifax, and St. John, N.B.—The tide tables for these principal harbours were again furnished to the leading British and Canadian Almanacs, as far as they were willing to publish them. These tables give the time and height of the tide, the depth of water on dock sills, &c. ; and they are accompanied as before by tidal differences by which the time of the tide at a large number of other ports, becomes known. The manner of publication was the same as described in last report ; and it will therefore be sufficient to give a list of the almanacs in which they appear, in whole or in part :—

Canadian Almanac.—All the above, in full.—The Copp, Clark Co., Toronto.
 Greenwood's Almanac.— “ “ —Capt. W. N. Greenwood, Lancaster, Eng.
 Brown's Almanac.—Halifax tide tables.—Messrs. J. Brown & Son, Glasgow.
 Belcher's Almanac.—Halifax tide tables.—The McAlpine Co., Halifax.
 Cogswell's Almanac.—Halifax ; time only.—Mr. R. H. Cogswell, Halifax.
 McMillan's Almanac.—St. John ; time only.—Messrs. J. & A. McMillan, St. John.
 Moore's Tide Tables.—Quebec ; time only.—Messrs. T. J. Moore & Co., Quebec.
 The *Quebec Chronicle*.—Quebec tide tables in full ; one month at a time.
 The *St. John Telegraph*.—St. John tide tables in full ; one month at a time.

It was arranged to have these tide tables reprinted from *Greenwood's Almanac*, as a neat pamphlet ; and 450 copies of this, were widely distributed. This is a step in advance of last year's publication. It served to make these tide tables more widely known, and it also enabled all applications for copies of the tables to be met.

The other tide tables issued were as follows :—

Charlottetown, Pictou, and St. Paul Island.—Accompanied by tidal differences for Northumberland Strait, and the south-western side of the Gulf of St. Lawrence. These tide tables were computed by the Tidal Survey and printed by the Department ; and 350 copies were distributed as widely as possible.

Father Point.—Prepared in manuscript only ; and posted at the Lighthouse at Father Point. As this is the Pilot Station for the Lower St. Lawrence, they are there accessible to the pilots.

Ste. Croix Bar.—Tide tables were again computed for this locality, as it is still the shallowest point in the tidal portion of the St. Lawrence above Quebec, pending the completion of the dredging operations. These tables were published in company with the tide tables for Quebec, by the Montreal Harbour Commissioners ; in the publication they prepare annually for the information of the St. Lawrence pilots.

TIDE TABLES FOR 1900 AND 1901.

As the principal tide tables for Quebec, Halifax, St. John, N.B., and St. Paul Island, for the year 1900, are still based upon the same length of tidal record as before, there is no further improvement in their accuracy. It is also improbable that there will be any in the tide tables for 1901, which are already in hand for calculation.

It may be well here to review the amount of tidal record secured up to date ; and also to consider the question of the degree of accuracy of the tide tables as they stand at present.

TIDAL RECORD OBTAINED TO DATE.

The tidal record obtained at the principal stations, up to the end of 1898, is given in a summary form in Table D. appended. The reasons of the more important interruptions are also indicated. The table further shows how far the record has yet been

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worked up, as a basis for tide tables, and for the purposes of tidal comparison. The dotted lines in the table indicate that the work to which they refer, has not yet been done.

A considerable amount of tidal record, as indicated, has now been reduced and tabulated, and thus made ready for harmonic analysis. This analysis is only partially made as yet, for want of means to meet the necessary cost. It is only when this is done, that further improvement in the accuracy of the tide tables themselves will be secured. The additional record thus prepared, comprises two years at Quebec; two years at St. John, N.B.; and one year at St. Paul Island.

Besides the stations indicated on the Atlantic coast, two good series of tidal observations are being secured on the Pacific coast, from the tidal stations established by the Department of Public Works. These are at Victoria, B.C.; and at Sand Heads at the mouth of the Fraser River in the Gulf of Georgia. One full year of tidal record from each of these stations has now been tabulated, ready for harmonic analysis. Tide tables might thus be prepared at once for these Pacific ports, if means were available to meet the cost of the calculations required.

The shorter tidal records obtained in the summer seasons, are not shown in the table. These now comprise nine secondary stations in the Gulf of St. Lawrence, eight secondary stations in the Bay of Fundy, and one at the outer end of Belle Isle Strait. The tidal record obtained at these, has already been detailed in the annual reports of progress, referring to the work of the seasons during which they were in operation.

Besides the use of this record as a basis for tide tables, the tides at the principal stations have been largely used also for comparison with those at the secondary stations, in working out tidal differences, by which the time of the tide at a number of other ports becomes known.

In addition to the tidal record itself, full meteorological data are being secured for comparison, throughout the period of these observations. A continuous barograph record has been obtained from the three tidal stations which command the Atlantic seaboard; namely, Forteau Bay in Belle Isle Strait; St. Paul Island; and St. John, N. B. The daily weather charts issued by the Meteorological Service since 1896, are also received regularly and fyled. This service has also supplied since 1893, when the tidal observations themselves were commenced, a daily abstract of wind and barometer from ten meteorological stations throughout the area in question; namely, from Quebec, Father Point, South-west Point of Anticosti, Belle Isle, Chatham in Miramichi Bay, Magdalen Islands, Sydney in Cape Breton, Halifax, St. John, N.B., and Yarmouth, N.S. Also since 1893, a complete set has been kept of the monthly Pilot Charts of the North Atlantic, issued by the U.S. Hydrographic Office. These charts show the tracks of all the important storms, and are very convenient for reference. The monthly weather charts for Canada have also been kept on file since their first issue in 1896.

TIDE TABLES.—IMPROVEMENT IN ACCURACY ALREADY SECURED.

The following condensed summaries show the improvement in the accuracy of tide tables for our principal harbours, as already obtained by this Survey, when compared with other sources of information. This by no means represents all the progress made, however. Such tide tables as were available in the past, gave only the time of high water and low water; but in the tidal predictions now issued by this Survey as annual tide tables for Halifax, Quebec, and St. John, N.B., the height of the tide is given as well as the time. This is important, as at two of these harbours the range of the tide is about thirty feet.

For our present purpose, in testing the accuracy of the tide tables as now calculated, a sufficient basis is afforded by a comparison between the time of high water as predicted in the tables, and the time as actually observed.

HALIFAX.—The earliest tide tables issued by the Tidal Survey were for this port. They were based upon constants derived from the harmonic analysis of two years of old record, obtained in 1860 and 1861. These tide tables were issued as a booklet as early as 1891, before the plan was taken of supplying the information direct to the

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almanacs, adopted on account of the very limited circulation which this booklet secured. It was not until the year 1897 however, that the local almanacs adopted the tables of this Survey, and republished them.

Up to 1896 therefore, the tide tables in common use for Halifax, were those published by *Belcher's Almanac*; based upon a constant difference of time with Brest, France. When the recording gauge had been established at Halifax, a comparison was made between the time of the tide as shown in these tables and the actual tide as recorded on the gauge, during the month of January, 1896. The result was as follows, for the time of high water:—

Extreme variation between the time of H. W. as given in these tide tables, and the actual time as observed: 0 h. 46 m. early to 0 h. 31 m. late.

Average error during this month, 20 minutes.

Tide Tables of U. S. Coast Survey.—The tide tables for Halifax since 1896, given in this publication, have been calculated from tidal constants furnished by this Survey, which were derived from the two years of the old record, first submitted to analysis.

Tidal Survey tables.—The tide tables for Halifax issued by this Survey, are now based upon the harmonic analysis of five years of tidal record; comprising four years of old record, and one year from the present tide gauge. To test the accuracy of these tables, a comparison was made between the time of the tide as there given, and the observed tides as recorded on the gauge. This comparison was made for a period of one month in the summer season; from July 18 to August 18 in 1898; it is given in Table A. herewith. The condensed result is as follows:—

Extreme variation between the predicted time of H. W. in the tide tables, and the actual time as observed: 14 m. early to 14 m. late.

Average variation during this month, 6 minutes.

Although the Halifax tables show the least irregularity of any of our ports when computed from the tides on the other side of the Atlantic, the improvement already obtained by basing them upon observations taken in the port itself, is marked. The average error in the time of the tide has thus been reduced to less than one-third, as compared with the old method of computation; or in other words, 70 per cent of improvement in the accuracy of the tide tables has been secured.

The harmonic constants for Halifax as they now stand, were published in the last report; from which it will be seen that the monthly and fortnightly components among the long-period tides, are not yet satisfactorily determined. An improvement in this respect will be secured, as further tidal record is obtained and submitted to analysis, in the future.

ST. JOHN, N.B.—The only tide tables formerly available were those given in *McMillan's Almanac*, published at St. John, and computed by means of a constant difference in time from Brest, France. These tables gave only the time of high water, without any reference to the height of the tide; although the range at St. John is greater than at any other harbour of the same importance in North America.

The tide curves at St. John were found to be so uniformly regular, that several series of comparisons were made in the early days of this Survey, in the hope of obtaining some constant difference in time, which would serve to compute reliable tide tables. Brest had already been used in the computations; and as it is one of the best established tidal harbours in the world, its tide tables are unusually accurate. A comparison was therefore made between these tables and the observed tides at St. John, which extended over a continuous period of eleven months in 1893. The difference in the time of high water, which had been assumed to be a constant one, was found by this comparison to vary through a range of more than an hour and a half. The use of a constant difference would thus leave a margin of error which is too wide to be desirable. It is not therefore necessary to give the comparison in a tabular form.

A comparison was next made between the observed tides at St. John, and the tide tables for Eastport; the nearest port in the United States for which tide tables are published. This comparison extended over eight months in 1893; and after omitting a few exceptional values, the difference in time of high water was found to range from 29 minutes earlier to 37 minutes later; which is also too wide a variation to be considered

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satisfactory as a basis of computation. It is also unnecessary to give this comparison in a tabular form.

It was accordingly thought better to wait until the tidal record at St. John itself could be submitted to analysis; rather than to issue tables which would embody errors corresponding with these variations. Hence although the early record began in 1893, the first tide tables issued for St. John were for the year 1898. The advantage of this course is now apparent; as the tide tables now issued by this Survey, prove to be much more correct than could be obtained by either of the above methods; although they are as yet based upon two years only of tidal record. This also attests the value of St. John as a port of reference, owing to the unusual regularity of its tides.

Tide Tables of U.S. Coast Survey.—Up to 1896, the method given in these tables was to compute the St. John tide from Eastport, by a small constant difference in time. The difference first given was 2 minutes, which was afterwards altered by 5 minutes. Subsequently, since 1897, the tide at St. John has been referred to Liverpool, England; the difference in time for high water being 22 minutes to be added.

To test the result of the present method of referring these tides to Liverpool, a comparison was made for the month of September, 1897. The time of high water computed by the difference given, was compared with the time of the tide at St. John as observed, the result being as follows:—

Extreme variation between the time of H. W. as found by this method, and the actual time as observed, 1 h. 02 m. early to 0 h. 16 m. late.

Average error during this month, 17 minutes.

It would thus appear that little if any improvement is secured by this method, over the old plan of computing by a constant difference from Brest. Also, to ascertain whether this reference to Liverpool gave any advantage over the former method in the United States tide tables, of referring the St. John tide to Eastport, a further comparison was made for this month of September, 1897. The time of high water at St. John, computed from Eastport by the difference formerly given, as above, was compared with the tide as there observed. The average error during this month was thus found to be only 9 minutes; from which it would at least appear that no advantage has been secured by referring the St. John tide to the more distant port of Liverpool, instead of to Eastport. The reason for the preference appears to be that the Liverpool tide tables are based upon a record extending over seven years, whereas the tides for Eastport are calculated from a tidal record of a single year.

In order to show for comparison the actual variation which may be expected between two neighbouring places, such as St. John and Eastport, distant 60 miles, the result of the simultaneous observations of 1898 may be cited. These extend over two and a half months, from the middle of August to the end of October. After omitting three days in October on which there was disturbance from a heavy storm, the tides as observed simultaneously at St. John, and at Welchpool on Campobello Island opposite Eastport, are found actually to vary as follows:—

Extreme variation of the difference in the time of high water as observed at the two places: from 10 minutes early to 10 minutes late, as compared with the average difference in time as found from the whole series of observations.

Mean variation from the average difference, $3\frac{1}{2}$ minutes; during one lunar month from August 17 to September 16. This is given for one month only, to correspond with all the other comparisons, which are also for one month.

Tidal Survey tables.—These are based upon the harmonic analysis of two years of the tidal record at St. John itself. To test their accuracy, the time of high water in the tables was compared with the tide as observed during one month, from July 18 to August 18, 1898. This comparison is given as Table B. herewith; the result when summarized being as follows:—

Extreme variation between the predicted time of H. W. in the tide tables, and the actual time as observed: 16 m. early to 5 m. late.

Average variation during this month, 6 minutes.

This shows an improvement in accuracy of 65 per cent as compared with the method at present given in the United States tide tables; as well as a distinct improvement over the method of computing from Eastport.

QUEBEC.—The Montreal Harbour Commissioners have issued tide tables for Quebec for a number of years back ; and in the absence of better data, these were computed by adding a constant difference of 4 h. 36 m. to the time of the tide as given in the tide tables for London Bridge. A comparison of these tables with the observed tides at Quebec, during the month of August, 1894, shows the following error in the time of high water :—

Extreme variation between the time of H. W. as given in these tables, and the actual time as observed : 1 h. 06 m. early to 0 h. 28 m. late.

Average error in the tables during the month, 17 minutes.

Tide Tables of U. S. Coast Survey.—In the comprehensive tide tables issued by the United States Survey since 1896, the method of obtaining the time of high water at Quebec is to subtract the constant difference 10 h. 05 m. from the time of the tide at Rangoon, Burma. A comparison of the time of high water as computed in this way, with the observed tide at Quebec, for the month of June, 1897, gives the following result :—

Extreme variation between the time of H. W. as found by this method, and the actual time as observed : 14 m. early to 54 m. late.

Average error during this month, 22 minutes.

It would appear from this average error, that no improvement is secured by this method, as compared with the old plan of adding a constant difference to the time of high water at London Bridge.

Tidal Survey tables.—These are based upon two years of tidal record at Quebec. The time of high water in the tables was compared with the tide as observed during one month, from July 18 to August 18, 1898 ; the comparison being given as Table C. herewith. The result when summarized is as follows :—

Extreme variation between the predicted time of H. W. in the tide tables, and the actual time as observed : 26 m. early to 3 m. late.

Average error during this month, 12½ minutes.

This indicates the improvement already secured by basing tide tables upon observations at Quebec itself, as compared with the old method of computing from London Bridge, which was in use up to 1896, when tide tables for Quebec were first issued by the Tidal Survey, and were adopted by the Montreal Harbour Commissioners. This improvement is equivalent to a decrease in error of 26 per cent. The improvement in accuracy is even greater than this, when compared with the method in the United States tide tables, which is still given in the tables for 1900. Although the comparisons are made for different months, they nevertheless show that the Tidal Survey tables are distinctly superior in accuracy to tide tables computed in either of the other ways indicated.

It may seem unsatisfactory that tide tables based upon two years of direct observation still present so appreciable an error as the above average shows ; an error twice as great as at St. John or Halifax. This must be attributed to the irregularities in a tide at the head of a long estuary, which are probably due in some measure to wind disturbance. In such circumstances, more than two years of tidal record are required to eliminate the irregularities. Several additional years of tidal record have been obtained at Quebec, since the original analysis was made which forms the basis of the tide tables at present ; but the comparatively small sum required for the analysis of further record, could not be afforded out of the appropriation for this Survey, during the last few years, for the improvement of the basis of the tide tables.

CHARLOTTETOWN AND PICTOU.—The region of Northumberland Strait in which these ports are situated, is now referred to the principal tidal station at St Paul Island, as explained fully in a previous report. The method used is first to deduce the time of the tide at Pictou from St. Paul Island, by means of a series of variable differences ; and the tides at other harbours in the strait are then computed from Pictou. We may thus take Pictou itself as the test port for this region, in examining the accuracy of tide tables.

In the only other publications and almanacs in which tide tables for this region appear, the method employed is to refer the tides at Pictou to some Atlantic harbour,

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by means of a constant difference in time. This leads to serious error, chiefly because of the large diurnal inequality in the tides in this strait.

In *Belcher's Almanac*, which is extensively used throughout the provinces bordering on this strait, a tide table for Pictou is given. A comparison was made for the month of July, 1896, between the time of high water in this table, and the tide at Pictou as recorded on a self-registering gauge. The result shows the following wide range of error in this tide table :—

Extreme variation between the time of H. W. as given, and the actual time as observed : 1 h. 13 m. early to 1 h. 35 m. late.

Average error in the tables during this month, 45 minutes.

Tide Tables of U.S. Coast Survey.—In these tables, the tide at Pictou is referred to Sandy Hook at the entrance to New York harbour. The difference for the time of high water at Pictou, as revised in 1896, is given as 2 h. 34 m. to be added to the time at Sandy Hook. A comparison was made for a period of one month, July 16 to August 16, 1897, between the time of high water at Pictou computed in this way, and the time as there observed, with the following result :—

Extreme variation between the time of H. W. as found by this method, and the actual time as observed : 1 h. 45 m. early to 1 h. 11 m. late.

Average error during this month, 38 minutes.

In both these instances, it is the method used that is at fault ; because it is not possible to refer the tides of Northumberland strait to an Atlantic port by a *constant* difference in time, without a large error resulting ; on account of the essential difference in the nature or type of the tide. This is clear from the following table, which gives the error in the time of individual tides, when computed by the method given in the United States tables. The alternation from early to late, is a feature of diurnal inequality, which is most conspicuous when the moon's declination is high.

TIDES AT PICTOU, N.S. (Northumberland Strait.)		ERROR IN THE TIME OF HIGH WATER.		Moon's declination.
		Early.	Late.	
		H. M.	H. M.	
1897. Sun..	July 25 ; afternoon.....	1 34		Maximum north ; on 25th.
Mon.	" 26 ; morning.....		1 11	
"	" 26 ; afternoon.....	1 42		
Tues.	" 27 ; morning.....		0 40	
"	" 27 ; afternoon.....	1 22		
Wed.	" 28 ; morning.....		0 43	
"	" 28 ; afternoon.....	1 23		
Thurs.	" 29 ; morning.....		0 14	
"	" 29 ; afternoon.....	1 21		

Tidal Survey tables.—After observations of the tide were obtained in this region in the summer of 1896, a number of trial calculations were made, to arrive at the best method by which the above source of error could be avoided. The method above indicated was finally adopted. The improvement thus obtained appears from a comparison made for the month of August, 1897 ; in which the time of high water as now calculated for the Tidal Survey tables, is compared with the tide as observed at Pictou. In the following summary of the result, three tides which are disturbed by the wind are omitted.

Extreme variation between the predicted time of H. W. in the tide tables, and the actual time as observed : 35 m. early to 30 m. late.

Average variation during this month, 15 minutes.

This shows an improvement in accuracy of 61 per cent as compared with the United States tide tables, and an improvement of 67 per cent as compared with *Belcher's*

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Almanac. The tide tables thus become of practical value; as is attested by Mr. H. M. Mackay, a resident of Pictou, and formerly an assistant in this Survey, who superintended the tidal observations in this region in 1896. He thus writes in September last:—'You will be pleased to know that the tide tables for Pictou are regarded as very reliable. Those formerly in use, were, as might be expected, quite unsatisfactory.' It is also reported by residents of Charlottetown, that the same holds with regard to the tide tables for that port; these being computed from the Pictou tides.

Further improvement in the accuracy of these tables can only be obtained by the analysis of additional tidal record from St. Paul Island, on which they ultimately depend. This is the more needful, because the tides there have not a large range, and are consequently the more affected by wind disturbance; and a longer period of observation is therefore required as a basis of calculation. It has also been found best to refer to that station the tides in a large section of the south-western portion of the Gulf of St. Lawrence; and these tides would thus obtain the advantage of any improvement secured, as well as Northumberland Strait.

TIDES ON THE LOWER ST. LAWRENCE REFERRED TO QUEBEC.

The desirability of obtaining the best tidal data possible in this region need not be enlarged upon, not only because of the importance of the tides themselves to navigation, but also to obtain an adequate basis for the examination of the strong tidal currents on a route traversed by so large a volume of commerce.

On account of the discontinuance of the tidal station at South-west Point, Anticosti, a very thorough examination was made of the difference in the time of the tide based upon the simultaneous records obtained from the three principal stations at South-west Point, Father Point and Quebec, at the extreme ends and the middle of the estuary, a distance of 450 miles.

The time of the tide at South-west Point and Father Point can now be deduced from the Quebec tide tables by means of constant differences, which have been derived from a long series of simultaneous observations, as explained in previous reports. The tide tables for Father Point are computed from the Quebec tables in this way, one difference being used for high water and another for low water. With regard to the accuracy of the result as thus obtained, the point of importance is to know how far the differences in time for individual tides will vary from the average value, which is used as a constant difference. The range in the difference for high water between Father Point and Quebec is 56 minutes during the course of the year, and the range in the difference for low water is 1 hour 19 minutes. The extreme variation from the average value may be taken as half of this range in each case; and the limit of error in the present tide tables for Father Point, based upon the averages, is thus 28 minutes for high water and 40 minutes for low water. It is to be understood, however, that this is the limit; as usually the tides will be much nearer than this to their average value, especially in the summer season; and it is only occasionally that these more exceptional values will occur.

With a view to allow in the calculations for this variation in the difference, and thus to reduce the error, much labour has been expended, the object being to arrive at such relations between these three St. Lawrence stations as would enable the variation in the difference to be reduced to law. The investigations made need not be given here even in outline, as they may be considered technical. It may therefore be sufficient to say that no one law could be discovered under which a series of variable differences could be constructed, to allow for the greater part of the error resulting from this variation.

The outcome of the investigation was to show that improvement in the present method of the use of constant differences will only be secured when the means are available to make an analysis of the Father Point record itself, and to base tide tables directly upon this. It will probably be found that an improvement will then be obtained by making Father Point, instead of Quebec, the port of reference for other points in the open estuary for some distance above it. Also in the other direction, an improvement in accuracy as far as Anticosti Island and its vicinity will be obtained.

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The differences show that the outstanding error in the time of the tide at South-west Point would thus be reduced by 20 per cent.

The analysis of the tidal record for Father Point itself, would be in accord with the modern view taken by the most eminent authorities on tidal questions. When the means available for this Survey are so limited, however, that the analysis of tidal record for the principal harbours of the country has to be deferred from year to year, the hope of doing similar work for Father Point would seem a long way off. It is because of this that the exhaustive examination into the tidal relations on the Lower St. Lawrence, above referred to, was undertaken, in the hope of securing improvement in the meantime.

BAY OF FUNDY.—TIDAL DIFFERENCES.

In the summer of 1898, eight secondary stations were established around the Bay of Fundy, in order to extend the usefulness of the tables for St. John, N.B., to the whole of this region. The extent of the region is 210 miles, from Yarmouth to Moncton.

The reasons for the selection of the stations chosen, have been explained in the last report; as well as the levels of the tide as ascertained by the observations. The station at Welchpool on Campobello Island, opposite Eastport, Maine, affords a valuable connection between the work of this Survey, and the United States Coast Survey. At the four stations in the lower part of the bay, Yarmouth, Westport in Grand Passage, Digby, and Campobello, the whole range of the tide was obtained; from which results for both high and low water can be deduced. At the other four stations in the upper part of the bay, Windsor, Parrsboro', Hopewell Cape, and Moncton, only the upper part of the tide was obtained; as a record of the whole tide could not be secured where the range is so great, without very largely increasing the expenditure.

In deriving tidal differences from these observations, it was first necessary to ascertain whether any part of the region at the mouth of the Bay of Fundy, could better be referred to Halifax than to St. John as its port of reference. With this object, a trial comparison was made for a period of one month, between the time of high water at Yarmouth, at the mouth of the bay, and Halifax on the one hand and St. John on the other. The month selected was July 18 to August 18, 1898; and the condensed result of the comparison is as follows, when reduced to the same standard time:—

Yarmouth and Halifax. Difference in time of high water varies from 2 h. 26 m. to 3 h. 0 m. later; showing a range of 34 minutes.

Yarmouth and St. John. Difference in time of high water varies from 1 h. 01 m. to 1 h. 14 m. earlier; showing a range of only 13 minutes.

It thus appears that if the tide at Yarmouth is referred to St. John rather than to Halifax, much greater accuracy can be secured; as the error corresponding to the above variation, is only one-third as much.

The tide on the south-eastern coast of Nova Scotia as far as Cape Sable, can well be referred to Halifax; but from that cape to Yarmouth it changes rapidly in character, though the distance is only fifty miles. The greater variation in the difference of time with Halifax, in the above comparison, is due to modification in the diurnal inequality in the tide, as between Halifax and Yarmouth. It may therefore be concluded from this comparison, that the tides throughout the Bay of Fundy above Yarmouth, can best be referred to St. John.

In the earlier part of the record at some of the secondary stations of 1898, there is a little uncertainty in the accuracy of the time used. The resulting tidal differences are therefore based upon the parts of the record which are thoroughly trustworthy, as follows:—

Yarmouth, N.S.—From July 15 to December 31; affording a series of 319 simultaneous observations for the difference in time of high water with St. John; and 314 for low water.

Westport, in Grand Passage.—From August 8 to December 29, with an interruption of twenty days from November 24; affording 195 differences for H. W. and 212 for L. W.

Digby.—From August 3 to December 18; affording 238 differences for H. W. and 244 for L. W.

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Campobello Island. (At Welchpool).—From August 11 to November 14; affording 176 differences for H. W. and 162 for L. W.

Windsor, N.S.—From August 18 to October 12; affording 88 differences for the time of H. W.

Parrsboro'.—From July 24 to October 13; affording 148 differences for the time of H. W.

Hopewell Cape.—From July 30 to November 15; affording 203 differences for the time of H. W.

Moncton.—From August 11 to November 18; affording 180 differences for the time of H. W.

The Bore.—A number of observations of the time of arrival of the tidal bore at Moncton, were also secured, by the method of siphoning into a tide-well from the low-water channel of the river, as described in the last report. The arrival of the bore was thus recorded automatically on the tide gauge. The time as thus recorded was carefully compared and checked, by means of such direct observations as were obtained during the season; and any that were affected by irregularity in the working of the siphon, were thrown out. A set of 145 reliable observations was thus obtained; extending from August 24 to November 14.

It was discovered that the relation with the tide at St. John is more nearly constant, if the difference in time is taken between the arrival of the bore at Moncton and the *next following* high water at St. John. This is the more natural way, as the arrival of the bore corresponds in time with half tide at Moncton; and the following high water at St. John is caused by the summit of the same tidal undulation.

The differences given below are in standard time, and thus show the true differences in absolute time. They are derived from a tabulation of the observations in accordance with the moon's phases.

Time of arrival of the bore at Moncton, before the time of high water at St. John; from 145 observations:—

At Spring tides, 2 h. 09 m.

At Neap tides, 2 h. 33 m.

Average throughout the month, 2 h. 21 m.

It may be interesting to note that from twenty-three occasions during the season, on which the arrival of the bore was directly timed, the average value found was the same as above; namely, 2 h. 21 m. before high water at St. John.

This determination enables the time of the arrival of the bore to be found from the St. John tide tables. The difference between the values for spring and neap tides respectively, serves also to show the relation between the vulgar and the mean Establishment. This is a valuable indication with regard to the nature of the tide throughout the Bay of Fundy; being derived from observation at the extreme head of the bay.

Tidal differences.—The results obtained for the ports at which the tidal stations were placed, have been published as a slip accompanying the tide tables for 1900, already issued. In addition to the tidal differences which enable the time of the tide to be found, the available draught of water at spring and neap tides is given, for points in the upper part of the bay.

A more complete set of tidal differences for the whole Bay of Fundy will be prepared before the next tide tables are printed; based upon a comparison with the Establishments as already determined by the Admiralty for intermediate points. The observations now obtained, afford a valuable check upon these; and place the time of the tide throughout this bay upon a reliable basis.

The importance to navigation of a correct knowledge of the tide in this bay is evident, when the range of the tide is so great. In the upper part of the bay, navigation may be said to be entirely dependent on the tide, as the wharves do not extend beyond the half-tide mark, and vessels can therefore only reach their berths at high water.

I have the honour to be,

Your obedient servant,

W. BELL DAWSON,

In Charge of Tidal Survey.

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TABLE A.

HALIFAX.—Comparison of Tide Tables with Tides as observed.

Tide Tables based upon five years of tidal record; 1851, 1852, 1860, 1861 and 1896; compared with tides as recorded by tide gauge.

Date. 1898.	Day of week.	HIGH WATER.		LOW WATER.		MOON.	
		Time in Tables.	Variation from actual time.	Time in Tables.	Variation from actual time.		
July 18	M.	8 00	2 early.	2 04	14 late.	New Moon.	
" 19	Tu.	19 55	10 late.	14 08	10 "		
" 20	W.	8 33	2 early.	2 39	11 "		
" 21	Th.	20 31	6 "	14 43	8 "		
" 22	F.	9 07	3 "	3 10	8 "		
" 23	Sa.	21 08	3 late.	15 16	10 "		
" 24	SUN.	9 42	3 early.	3 39	5 "		
" 25	M.	21 46	2 late.	15 51	4 "		
" 26	Tu.	10 18	1 "	4 09	1 "		
" 27	W.	22 25	2 "	16 30	3 early.		First Quarter.
" 28	Th.	10 56	1 "	4 42	3 "		
" 29	F.	23 06	8 "	17 14	1 late.		
" 30	Sa.	11 37	9 "	5 21	6 early.		
" 31	SUN.	23 50	5 "	18 03	1 late.		
Aug. 1	M.	12 21	11 late.	6 06	8 "		
" 2	Tu.	0 40	5 "	18 57	2 "		
" 3	W.	13 09	11 "	6 58	8 "		
" 4	Th.	1 42	7 "	19 58	8 "		
" 5	F.	14 05	3 "	8 00	4 "		
" 6	Sa.	2 48	3 "	21 02	5 "		
" 7	SUN.	15 08	8 "	9 04	6 "		
" 8	M.	3 58	2 early.	22 03	0 "		
" 9	Tu.	16 14	2 "	10 08	5 "	Maximum declina- tion south.	
" 10	W.	5 10	4 "	23 03	3 "		
" 11	Th.	17 19	2 late.	11 11	4 early.		
" 12	F.	6 14	14 "	0 01	2 late.		
" 13	Sa.	18 20	3 "	12 12	4 early.		
" 14	SUN.	7 09	10 "	0 55	3 late.		
" 15	M.	19 15	0 "	13 09	3 early.		Perigee. Full Moon.
" 16	Tu.	7 56	3 early.	1 46	3 late.		
" 17	W.	20 06	4 "	14 04	9 "		
" 18	Th.	8 41	3 "	2 36	5 early.		
" 19	F.	20 54	3 "	14 57	16 "		
" 20	Sa.	9 25	8 "	3 25	6 "		
" 21	SUN.	21 40	3 "	15 49	4 "		
" 22	M.	10 08	4 late.	4 13	7 "		
" 23	Tu.	22 25	6 early.	16 40	11 "		
" 24	W.	10 50	14 "	5 00	2 "		
" 25	Th.	23 11	2 "	17 30	7 "		
" 26	F.	11 33	7 "	5 48	10 late.	Last Quarter.	
" 27	Sa.	23 59	11 "	18 22	10 early.		
" 28	SUN.	12 19	4 early.	6 38	17 late.		
" 29	M.	6 49	7 "	19 19	3 early.		
" 30	Tu.	13 09	13 "	7 32	2 late.		
" 31	W.	1 44	2 "	20 22	3 early.		
Aug. 1	Th.	14 05	10 "	8 30	3 late.		
" 2	F.	2 52	2 "	21 27	2 "		
" 3	Sa.	15 08	6 "	9 33	5 early.		
" 4	SUN.	4 27	7 late.	22 30	14 late.		
" 5	M.	16 16	9 "	10 54	3 "		
" 6	Tu.	5 30	7 "	23 26	24 "		
" 7	W.	17 18	10 "	11 28	0 "		
" 8	Th.	6 18	5 "	0 13	15 late.	Apogee.	
" 9	F.	18 09	7 "	12 18	3 "		
" 10	Sa.	6 58	8 "	0 54	18 "		
" 11	SUN.	18 53	12 "	13 02	10 "		
" 12	M.	7 34	4 "	1 31	14 "		
" 13	Tu.	19 33	9 early.	13 41	6 "		
" 14	W.	8 08	1 late.	2 04	16 "		
" 15	Th.	20 12	2 "	14 17	12 "		
" 16	F.	8 41	9 early.	2 35	2 "		
" 17	Sa.	20 50	10 late.	14 52	7 "		

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TABLE B.

ST. JOHN, N.B.—*Comparison of Tide Tables with Tides as observed.*

Tide Tables based upon harmonic analysis of two years of tidal record, compared with observed tides as recorded by self-registering tide gauge.

Date. 1898.	Day of week.	HIGH WATER.		LOW WATER.		Moon.
		Time in Tables.	Variation from actual time.	Time in Tables.	Variation from actual time.	
July 18	M.	H. M. 11 40	Minutes. 1 late.	H. M. 5 26	Minutes. 8 early.	New moon.
" 19	Tu.	23 42	7 early.	17 40	8 "	
" 20	W.	12 14	0 early.	6 00	12 "	
" 21	Th.	0 15	6 "	6 32	14 "	First quarter.
" 22	F.	12 46	0 "	18 50	6 "	
" 23	Sat.	0 49	5 "	7 04	15 "	
" 24	SUN.	13 17	3 "	19 23	8 "	Perigee.
" 25	M.	1 25	9 "	7 38	16 "	
" 26	Tu.	13 50	11 "	19 57	14 "	
" 27	W.	2 04	11 "	8 15	19 "	Maximum declina- tion south.
" 28	Th.	14 27	12 "	20 34	19 "	
" 29	F.	2 45	13 "	8 55	19 "	
" 30	Sat.	15 08	14 "	21 15	24 "	Full moon.
" 31	SUN.	3 29	15 "	9 39	21 "	
Aug. 1	M.	15 53	16 "	22 03	24 "	
" 2	Tu.	4 18	16 "	10 29	15 "	Last quarter.
" 3	W.	16 43	11 "	23 00	19 "	
" 4	Th.	5 15	14 "	11 25	16 "	
" 5	F.	17 39	10 "	0 03	14 early.	Apogee.
" 6	Sat.	6 17	7 "	12 28	11 "	
" 7	SUN.	18 42	10 "	1 10	14 "	
" 8	M.	7 21	13 "	13 36	12 "	Maximum declina- tion north.
" 9	Tu.	19 50	9 "	2 16	13 "	
" 10	W.	8 27	12 "	14 43	0 "	
" 11	Th.	20 56	6 "	3 19	15 "	New moon.
" 12	F.	9 30	14 "	15 47	12 "	
" 13	Sat.	21 57	5 "	4 17	18 "	
" 14	SUN.	10 29	11 "	16 44	15 "	Apogee.
" 15	M.	22 55	6 "	5 12	18 "	
" 16	Tu.	11 24	6 "	17 37	14 "	
" 17	W.	23 47	5 "	6 05	17 "	Maximum declina- tion north.
" 18	Th.	12 17	7 early.	18 27	14 "	
" 19	F.	0 39	3 "	6 56	14 "	
" 20	Sat.	13 08	4 "	19 16	15 "	Apogee.
" 21	SUN.	1 28	4 "	7 44	13 "	
" 22	M.	13 57	5 "	20 04	17 "	
" 23	Tu.	2 16	12 "	8 31	13 "	New moon.
" 24	W.	14 45	0 "	20 53	14 "	
" 25	Th.	3 06	8 "	9 20	12 "	
" 26	F.	15 34	2 "	21 45	14 "	Apogee.
" 27	Sat.	3 59	7 "	10 11	12 "	
" 28	SUN.	16 26	3 "	22 39	8 "	
" 29	M.	4 55	4 "	11 06	4 "	Maximum declina- tion north.
" 30	Tu.	17 21	0 "	23 36	6 "	
" 31	W.	5 53	4 "	12 05	0 early.	
" 1	Th.	18 19	0 "	0 37	4 "	Apogee.
" 2	F.	6 54	4 "	13 09	5 late.	
" 3	Sat.	19 22	1 late.	1 40	6 early.	
" 4	SUN.	7 57	0 "	14 12	3 late.	New moon.
" 5	M.	20 22	5 "	2 40	6 early.	
" 6	Tu.	8 57	0 "	15 08	0 "	
" 7	W.	21 16	0 "	3 31	11 "	Apogee.
" 8	Th.	9 49	0 "	15 56	2 "	
" 9	F.	22 03	1 early.	4 16	13 "	
" 10	Sat.	10 33	0 "	16 38	4 "	New moon.
" 11	SUN.	22 43	1 "	4 57	12 "	
" 12	M.	11 10	1 late.	17 16	5 "	
" 13	Tu.	23 19	1 early.	5 33	7 "	Apogee.
" 14	W.	11 43	0 "	17 51	1 "	
" 15	Th.	23 52	0 "	6 07	10 "	
" 16	F.	12 15	2 early.	18 24	7 "	

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TABLE C.

QUEBEC.—*Comparison of Tide Tables with tide as observed.*

Tide Tables based upon harmonic analysis of two years of tidal record, compared with observed tides as recorded by self-registering tide gauge.

Date. 1898.	Day of week.	HIGH WATER.		LOW WATER.		Moon.
		Time in Tables.	Variation from actual time.	Time in Tables.	Variation from actual time.	
July 18	M.	H. M. 5 49	Minutes. 14 early.	H. M. 0 16	Minutes. 31 early.	New moon.
" 19	Tu.	18 27	6 "	13 07	40 "	
" 20	W.	6 27	17 "	1 00	37 "	" 21
" 21	Th.	19 05	0 "	13 45	40 "	
" 22	F.	7 02	15 "	1 42	28 "	" 23
" 23	Sat.	19 39	3 "	14 21	34 "	
" 24	SUN.	7 35	16 "	2 22	24 "	" 25
" 25	M.	20 09	4 "	14 56	34 "	
" 26	Tu.	8 07	—	3 01	24 "	" 27
" 27	W.	20 38	—	15 30	—	
" 28	Th.	8 40	—	3 40	—	" 29
" 29	F.	21 08	17 early.	16 04	26 early.	
" 30	Sat.	9 18	22 "	4 21	26 "	" 31
" 31	SUN.	21 42	25 "	16 40	25 "	
Aug. 1	M.	10 03	17 "	5 05	17 "	First quarter.
" 2	Tu.	22 25	10 "	17 21	15 "	
" 3	W.	10 58	14 "	5 56	10 "	Maximum declina- tion south.
" 4	Th.	23 22	15 "	18 10	6 "	
" 5	F.	12 10	7 early.	7 00	10 "	Perigee.
" 6	Sat.	0 32	10 "	19 09	4 "	
" 7	SUN.	13 53	3 late.	8 13	15 "	Full moon.
" 8	M.	1 45	2 early.	20 18	8 late.	
" 9	Tu.	14 44	0 "	9 23	17 early.	Last quarter.
" 10	W.	2 54	8 "	21 31	6 late.	
" 11	Th.	15 46	13 "	10 30	28 early.	Apogee.
" 12	F.	3 56	18 "	22 36	16 "	
" 13	Sat.	16 42	9 "	11 32	36 "	New moon.
" 14	SUN.	4 50	—	23 34	—	
" 15	M.	17 33	13 early.	12 26	43 early.	" 16
" 16	Tu.	5 40	26 "	0 25	30 "	
" 17	W.	18 21	10 "	13 15	47 "	" 17
" 18	Th.	6 28	22 "	1 15	40 "	
" 19	F.	19 06	8 "	14 01	47 "	" 18
" 20	Sat.	7 14	24 "	2 04	36 "	
" 21	SUN.	19 49	9 "	14 44	46 "	" 19
" 22	M.	7 59	21 "	2 52	45 "	
" 23	Tu.	20 30	16 "	15 24	37 "	" 20
" 24	W.	8 46	22 "	3 39	41 "	
" 25	Th.	21 14	14 "	16 03	27 "	" 21
" 26	F.	9 36	6 "	4 25	30 "	
" 27	Sat.	22 02	2 late.	16 41	23 "	" 22
" 28	SUN.	10 30	7 early.	5 12	32 "	
" 29	M.	22 53	5 "	17 20	20 "	" 23
" 30	Tu.	11 29	6 "	6 01	24 "	
" 31	W.	23 49	3 "	18 01	21 "	" 24
" 1	Th.	12 34	3 late.	6 53	27 "	
" 2	F.	0 54	0 "	18 47	26 "	" 25
" 3	Sat.	13 45	3 early.	7 56	36 "	
" 4	SUN.	2 01	12 "	19 51	26 "	" 26
" 5	M.	14 50	25 "	9 09	40 "	
" 6	Tu.	3 03	19 "	21 00	31 "	" 27
" 7	W.	15 47	18 "	10 10	60 "	
" 8	Th.	3 56	24 "	22 03	39 "	" 28
" 9	F.	16 35	20 "	11 05	65 "	
" 10	Sat.	4 43	22 "	22 59	45 "	" 29
" 11	SUN.	17 20	18 "	11 53	58 "	
" 12	M.	5 24	16 "	23 49	42 "	" 30
" 13	Tu.	18 01	14 "	12 35	50 early.	
" 14	W.	6 00	15 "	0 34	39 "	" 31
" 15	Th.	18 36	4 "	13 13	42 "	
" 16	F.	6 33	20 "	1 16	31 "	" 1
" 17	Sat.	19 05	12 "	13 49	41 "	

TABLE D.

SUMMARY of Tidal Record obtained at Principal Stations; showing also how far it is worked up.

Principal Tidal Stations.	Period.	TIDAL RECORD OBTAINED. Date.	FOR TIDAL DIFFERENCES.		FOR HARMONIC ANALYSIS.		Remarks.
			Time of High Water Tabulated.	Time of Low Water Tabulated.	Tabulated in Hourly Ordinates.	Analysis made.	
Quebec.....	Year 1894..	1893, Nov. 7; to 1895, Jan. 15.	Tide Tables for Quebec, up to 1900, are based upon these two years of analysis.
	" 1895..	1895, Jan. 15; to 1896, Jan. 31	.....	.....	.....	.....
	" 1896..	1896, Feb. 1; to 1897, Jan. 31	.....	.....	.....	.....
	" 1897..	1897, Feb. 1; to 1898, Jan. 31	.....	.....	.....	.....
" 1898..	1898, Feb. 1; to 1899, Jan. 31	.....	.....	.....	.....	.....
Halifax	Year 1896..	1895, Oct. 15; to 1896, Nov. 30	Tide Tables for Halifax are based upon this one year; and upon old record.
	" 1897..	1896, Dec. 1; to 1897, Nov. 30	.....	.....	.....	.....
	" 1898..	1897, Dec. 1; to 1898, Nov. 30	.....	.....	.....	.....
St. John, N. B.....	Year 1893 } to 1894 }	1892, Dec. 5; to 1894, Mar. 12..... Gauge column renewed; March, 1894.	Unreliable. Gauge not working satisfactorily. Tide Tables for St. John are based upon these two years of analysis, at present.
	" 1894..	1894, April 30; to 1895, May 15	.....	.....	.....	.....
	" 1895..	1895, May 15; to 1896, May 15	.....	.....	.....	.....
	" 1896..	1896, May 15; to 1897, May 15	.....	.....	.....	.....
	" 1897..	1897, May 15; to 1898, May 15	.....	.....	.....	.....
	" 1898..	1898, May 16, and onward.....	.....	.....	.....	.....
	" 1899..	1898, Sept. 25; to 1894, Jan. 21..... January.—Clock of Gauge failed. August.—Improved Gauge put in. February.—Gauge carried away; instrument lost. September.—Rebuilt.	
Year 1895..	1894, Aug. 20; to 1895, Feb. 4.....	.....	.....	.....	.....
" 1896..	1895, Sept. 15; to 1896, Nov. 30	.....	.....	.....	.....
" 1897..	1896, Dec. 1; to 1897, Sept. 20	.....	.....	.....	.....
" 1898..	1897, Oct. and Nov.—Record unreliable.	.....	.....	.....	.....
" 1899..	1897, Dec. 11; to 1898, Dec. 31		
" 1900..	1899, Jan. 1, and onward.....		
St. Paul Island. (Cabot Strait)							

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Father Point.....	1895, Feb. 4; to 1896, Jan. 6 1896, Jan. 6; to 1897, Jan. 25 1897, Jan. 25; to 1898, Jan. 31 1898, Jan. 31, and onward	Done..... Done.....	Done..... Done.....	(Lost on S.S. "Labrador")	The difference in time of H. W. and L. W. from Quebec, is used as a basis for Tide Tables for Father Point.
South-west Point..... (Anticosti)	1893, July 17; to 1894, Sept. 17. Nov.—Improved gauge put in. 1894, Nov. 12; to 1895, Oct. 7. Oct.—Inlet fittings improved. 1895, Nov. 11; to 1896, Oct. 26. 1896, Oct. 26; to 1897, Dec. 25 Dec.—Gauge damaged by storm. 1898, Feb. 3; to 1899, Jan. 16. Jan.—Inlet partially choked; record unreliable. April.—Station closed.	Part..... Done..... Done.....	Part..... Part.....	(Early record, unsatisfactory.) The difference in time of H. W. from Quebec, is used as a basis for Tidal Differences in the Lowest St. Lawrence.	
Forteau Bay..... (Strait of Belle Isle)	1894, Aug. 11; to 1895, Sept. 7. 1895, Sept. 7; to 1896, Sept. 19 1896, Sept. 19; to 1897, Jan. 9 Jan. to April.—Pencil of gauge not marking; record not obtained. 1897, May 15; to 1897, Nov. 13. Nov.—Gauge damaged by storm. July.—Gauge refitted; and protected by new crib-work in September. 1898, July 9, and onward	Part..... Done.....	Part..... Done.....	(Lost on S.S. "Labrador")	The time of H. W. has been used for comparison with the current in the Strait; and for tidal differences with other ports.
Yarmouth, N. S. . . .	1898, June 25; to 1899, Feb. 2 Gauge not heated. Record in Feb. and Mar. not obtained because of frost. 1899, Mar. 10, and onward	Part.....	Part.....		The time of H. W. and L. W. used for comparison with other ports, for Tidal Difference.

PART II

STATEMENT OF EXPENDITURE—STATEMENT OF REVENUE—METEOR-
OLOGICAL SERVICE—MAGNETIC OBSERVATORIES—SIGNAL SER-
VICE—BOARD OF EXAMINERS OF MASTERS AND MATES—
LIVE STOCK SHIPMENTS—STATEMENT OF WHARFS—LIFE-
BOAT STATIONS—STATEMENT OF SICK MARINERS'
DUES—MESSENGER PIGEONS—REWARDS FOR
HUMANE SERVICE—STEAMBOAT INSPEC-
TION—LIST OF LIGHT-KEEPERS AND
LIGHT STATIONS.

APPENDIX No. 1.

GENERAL SUMMARY of Expenditure for Fiscal Year ended June 30, 1899.

Service.	Amount.	Total.
	\$ cts.	\$ cts.
Ocean and River—		
Maintenance and repairs to Dominion steamers	145,270 75	
Construction of new steamer to replace "Stanley"	143,365 26	
Examination of masters and mates	3,568 26	
Rewards for saving life, &c.	7,049 07	
Investigations into wrecks	982 17	
Registry of shipping	966 48	
Tidal service	5,186 35	
Removal of obstructions in navigable rivers	745 49	
Winter mail service	8,434 70	
Marine biological station	4,709 10	
Export cattle trade	2,757 85	
		323,035 48
Lighthouse and Coast—		
Salaries and allowance of lightkeepers	206,592 58	
Agencies, rents and contingencies	15,618 35	
Maintenance and repairs to lights	250,541 00	
Construction of lights	64,705 63	
Signal service	6,067 49	
Repairs to wharfs	1,392 60	
		544,917 65
Scientific Institution—		
Observatory, Toronto	2,762 18	
New observatory, Agincourt	2,222 42	
Meteorological service	68,163 45	
Hydrographic survey	13,664 97	
		86,813 02
Marine Hospitals—		
Treatment of sick and disabled seamen	34,960 04	
Shipwrecked and distressed seamen	2,393 25	
		37,353 29
Miscellaneous—		
Steamboat inspection		28,035 49
		1,020,154 93
FISHERIES.		
Salaries, &c. of fisheries, overseers and wardens	95,278 59	
Fish-breeding	34,522 57	
Fisheries protection service	104,743 27	
Building fishways	876 28	
Legal and incidental expenses	861 05	
Canadian fishery exhibit	904 81	
Oyster culture	4,261 33	
Distributing bounty	5,034 73	
Licenses to United States fishing vessels	398 71	
John S. Hall, Q.C.	1,100 00	
Gratuities to Wm. Wakeham \$500, Widow F. Ménard \$300, John Chisholm \$250, Mrs. R. Muirhead \$250, R. N. Venning \$750, Judge W. H. Wilkinson \$227 25	2,277 25	
		250,258 59
Unforeseen expenses	6,969 62	
Parliamentary returns	202 33	
		7,171 95
Carried forward		1,277,585 47

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GENERAL SUMMARY of Expenditure for Fiscal Year ended June 30, 1899—*Concluded.*

Service.	Amount.		Total.	
	§	cts.	§	cts.
Brought forward.....			1,277,585	47
<i>FISHERIES—Concluded.</i>				
Behring Sea arbitration.....				3,802 62
Fishing bounty.....				159,459 00
Civil government salaries.....	61,426	16		
" contingencies.....	11,407	81		
			72,833	97
			1,513,481	06

A. W. OWEN,
Accountant.

F. GOURDEAU,
Deputy Minister of Marine and Fisheries.

APPENDIX No. 2.

STATEMENT of Revenue of Marine and Fisheries Department for the Fiscal Year ended June 30, 1899.

Service.	Amount.
	\$ cts.
Casual revenue (sale shipping forms, \$103.75; sundries, \$5768.47).....	5,872 22
Capes mail service.....	242 42
Dominion steamers.....	12,370 74
Examinations masters and mates.....	4,486 50
Fines and forfeitures.....	207 40
Harbours, piers and wharfs.....	9,006 61
Cattle inspection.....	2,082 52
Steamboat engineers' certificates.....	910 00
Tow barges, inspection of.....	130 00
	35,308 41

A. W. OWEN,
Accountant.

F. GOURDEAU,
Deputy Minister of Marine and Fisheries.

APPENDIX No. 3.

METEOROLOGICAL SERVICE.

METEOROLOGICAL OFFICE,

TORONTO, October 12, 1899.

Major F. GOURDEAU,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit the twenty-eighth annual report of the Meteorological Service of Canada, this report being for the fiscal year July 1, 1898, to June 30, 1899, with Appendices A and B, reports on the Quebec and St. John Observatories.

On June 30, 163 persons were in receipt of pay from the Meteorological Service for various duties performed in connection therewith. Part of this number devote the whole of their time to the work, others are occupied in observing during only a short portion of each day, and a third portion is employed only to attend to the display of storm signals when notified. In addition to those who are thus employed there are 254 voluntary observers scattered throughout the provinces who make regular meteorological returns to the Central Office without remuneration. The patriotic spirit displayed by these latter observers is much to be commended and it is with much pleasure that I place on record my acknowledgment of their valuable co-operation.

Since the issue of my last annual report the following stations have been opened :

BRITISH COLUMBIA.

- Class II.—Nelson, A. H. Holdich.
- “ II.—Vancouver, A. Ufford.
- “ II.—Clinton, J. E. N. Smith.
- “ II.—Kelowna, F. E. R. Wollaston.
- “ II.—Atlin, Robert Patrick.
- “ II.—Matsqui Prairie, W. S. Maher.

NORTH-WEST TERRITORIES.

- Class I.—York Factory, Alex. Milne.
- “ I.—Mosquito Creek, A. M. McCaskill.
- “ II.—Tagish Lake, H. Keenan.
- “ II.—Selkirk, George Service.
- “ II.—Red Deer, Robert Gray.
- “ II.—Colles, A. R. Vickery.
- “ II.—Saskatoon, Thos. Copeland.
- “ II.—Crane Lake, D. N. Andrews.
- “ III.—Dirt Hills, J. Nutter.
- “ III.—Saltcoats, F. W. Anglin.
- “ III.—Didsbury, J. B. Detwiler.
- “ III.—Innisfail, H. George.
- “ III.—Coutts, J. G. Brymner.
- “ III.—Sterling, Thos. Brandley.
- “ III.—Estevan, E. H. Scott.

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MANITOBA.

- Class II.—Hillview, F. N. Stevenson.
 “ III.—Clear Springs, W. O. Laing.

ONTARIO.

- Class I.—Guelph, J. B. Reynolds.
 “ II.—N. Sister Rock, W. Weightman.
 “ II.—Meaford, Rev. D. J. Caswell, B.D.
 “ II.—Roy Mines, Roy Sweeney.
 “ II.—Gosfield S., H. Smith.
 “ II.—Dalhousie Mills, Rev. James Mackinnon.
 “ II.—Listowel, T. Male.
 “ III.—Lyndoch, John Dowswell.
 “ III.—Uxbridge, John J. Reditt.
 “ III.—Pentanguishene, W. R. Johnston.
 “ III.—Port Burwell, M. J. Burwell.

The station at Barkerville has been enlarged from Class II. to Class I. Reporting Telegraph Station, and the same change has been made at New Westminster.

The stations at Spence and Zurich, Ontario (Class II.) have been closed from the inability of the observers to report regularly.

The Departments of Agriculture of Ontario, Manitoba, the North-west Territories and British Columbia all co-operate with this service in the collection of meteorological data and have done much in securing the assistance of voluntary observers.

CENTRAL OFFICE.

It is with deep regret that we have to record the removal by death of Mr. J. W. Carroll, who entered this service in 1880 and who as computer had served this office so faithfully and well. Mr. Carroll had been ailing for some time, but the disease afflicting him did not develop until near the last, when he declined rapidly and passed away almost suddenly on August 3.

Another change in the staff of the Central Office was the appointment of Mr. F. N. Denison as assistant to Mr. E. B. Reed, meteorological official at Victoria, B.C., his knowledge of forecast work especially qualifying him for the position. The only addition to the staff was the appointment of Mr. W. D. Allan, and in order to keep abreast with the work, which is continually increasing, further assistance will be necessary.

The publication of the annual reports, monthly weather reviews, monthly and daily weather charts has continued with regularity, the latter charts, containing 10 a. m. forecasts of the weather, being posted at conspicuous places in Toronto in addition to 32 which are posted at various places in the province.

FORECASTS AND STORM WARNINGS.

As in the past, warnings of approaching storms for the use of shipping were transmitted by telegraph to the various lake and sea ports where signals were duly displayed. Daily forecasts were issued to the railways during the summer months as usual, these forecasts being indicated by signal discs carried by the trains. Warnings of expected heavy falls of snow were also issued to the railways during the winter months as heretofore. Special forecasts by telegraph and telephone, also meteorological data for use in the settlement of legal questions and other purposes were supplied upon application.

In addition to the storm warnings issued to 71 stations at which signals are displayed, they were also telegraphed to 20 stations of the signal service in the gulf for use

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of passing ships. Forecasts for 36 hours are also telegraphed at 10 a. m. to many lake and sea ports where they are posted, and these are published by most afternoon papers. As heretofore special information and forecasts were telegraphed each morning to St. John and Halifax, from which points bulletins of the expected conditions were disseminated as far as possible throughout the Maritime Provinces.

In accordance with instructions from the department arrangements were made early in the year for the issue of daily weather forecasts and storm warnings for British Columbia. This entailed a bi-daily synoptic chart at Victoria, and through the courtesy of the Chief of the United States Weather Bureau arrangements were made for telegraphing to Victoria twice each day reports from twelve United States meteorological stations on the Pacific Slope. In addition to these reports those from the Canadian stations in British Columbia are also telegraphed to Victoria. These reports though barely sufficient will be added to as other places further north in the Yukon and Alaska are placed in telegraphed communication with Victoria. The chief observer in British Columbia, Mr. E. Baynes Reed, was placed in charge with Mr. F. N. Denison as assistant, and the first forecasts were issued in November, 1898. Although material improvement will doubtless be made in these forecasts as the peculiar and diverse meteorological conditions of our Pacific Coast become better known, it is very gratifying to be able to state that already the work performed, as shown by comments thereon, is much appreciated by the people of British Columbia.

TABLE I.

THE following table shows the total number of warnings issued and the percentage verified.

Years.	Number Issued.	Number Verified.	Percentage Verified.
1877.....	743	510	68.6
1878.....	860	673	78.3
1879.....	712	591	83.0
1880.....	889	736	82.8
1881.....	854	727	85.1
1882.....	841	658	78.2
1883.....	1,085	858	79.1
1884.....	798	663	83.2
1885.....	830	741	89.3
1886.....	906	799	88.2
1887.....	1,093	972	88.9
1888.....	897	758	84.5
1889.....	1,126	926	81.3
1890.....	1,199	987	82.3
1891.....	1,017	826	81.2
1892.....	1,161	888	80.7
1893.....	1,317	1,118	84.9
1894.....	1,333	1,149	86.2
1895.....	1,307	1,168	89.4
1896.....	1,181	1,015	85.9
1897.....	1,368	1,248	91.2
1898.....	1,230	1,039	84.5
1899, six months, January 1 to June 30.....	309	238	77.0

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TABLE II.—METEOROLOGICAL SERVICE—Number of forecasts and percentage of fulfilment in each district, in each month and in the year July, 1898, to June, 1899, inclusive.

MONTH.	MANITOBA.				LAKE SUPERIOR.				GEORGIAN BAY.				LOWER LAKE REGION.				OTTAWA VALLEY.								
	Number of forecasts.	Verified.			Number of forecasts.	Verified.			Number of forecasts.	Verified.			Number of forecasts.	Verified.			Number of forecasts.	Verified.							
Number fully.		Number partly.	Number not.	Percentage.		Number fully.	Number partly.	Number not.		Percentage.	Number fully.	Number partly.		Number not.	Percentage.	Number fully.		Number partly.	Number not.	Percentage.					
1898.																									
July	91	61	21	9	78.6	68	29	5	80.9	127	109	10	8	89.8	128	112	11	3	93.3	116	104	8	4	93.1	
August	83	55	19	9	77.7	72	23	7	81.9	112	85	18	9	84.0	112	87	21	4	87.1	106	88	11	7	88.2	
September	101	58	27	16	70.8	120	70	37	13	73.8	125	86	29	10	80.4	125	89	25	11	81.2	103	77	19	7	84.0
October	88	56	20	12	75.0	94	56	24	14	72.3	110	74	23	13	77.7	113	76	24	13	77.9	94	74	12	8	85.1
November	99	82	10	7	87.9	110	87	15	8	86.0	124	100	19	5	88.3	128	103	21	4	88.7	108	89	6	13	85.2
December	102	79	15	8	84.8	115	92	17	6	87.4	122	89	24	9	82.8	125	98	19	8	86.0	113	81	16	16	78.8
1899.																									
January	84	61	11	12	79.1	85	63	18	4	84.7	101	66	21	14	75.7	107	71	25	11	78.0	90	68	11	11	81.7
February	84	75	5	4	92.3	88	73	6	9	86.4	96	79	12	5	88.5	97	78	13	6	87.1	91	78	9	4	90.7
March	87	51	19	17	69.5	89	63	21	6	82.0	103	67	17	19	73.3	108	69	27	12	76.4	102	71	13	18	76.0
April	87	60	22	5	81.6	86	59	21	6	80.8	103	85	13	7	87.2	108	80	19	9	80.9	92	67	11	14	78.8
May	89	70	13	6	86.0	93	58	30	5	78.5	111	80	21	10	81.5	111	80	21	10	81.5	94	84	3	7	91.0
June	81	44	26	11	70.4	90	62	20	8	80.8	115	89	19	7	85.7	117	93	19	5	87.6	105	88	6	11	86.7
Totals	1,076	752	208	116	79.6	1,174	823	260	91	81.2	1,351	1,020	216	115	83.5	1,377	1,036	245	96	84.1	1,214	969	125	120	85.0

TABLE II.—METEOROLOGICAL SERVICE—Number of forecasts and percentage of fulfilment in each district, &c.—Continued.

MONTH.	UPPER ST. LAWRENCE VALLEY.				LOWER ST. LAWRENCE VALLEY.				GULF.				MARITIME.				TOTAL.									
	Verified.				Verified.				Verified.				Verified.				Verified.									
	Number forecasts.	Number fully.	Number partly.	Number not.	Percentage.	Number forecasts.	Number fully.	Number partly.	Number not.	Percentage.	Number forecasts.	Number fully.	Number partly.	Number not.	Percentage.	Number forecasts.	Number fully.	Number partly.	Number not.	Percentage.						
1888.																										
July.....	116	104	9	3	84.9	110	97	16	7	86.4	117	90	16	11	83.8	117	88	24	5	85.5	1,022	823	144	55	87.6	
August.....	103	87	12	4	90.3	98	76	16	6	85.7	100	72	20	8	82.0	107	73	27	7	80.8	923	695	167	51	84.3	
September.....	103	74	18	11	80.6	105	74	19	12	79.5	125	89	24	12	80.8	124	82	24	14	77.4	1,031	699	226	106	78.8	
October.....	95	70	18	7	83.2	93	70	15	8	83.3	95	76	11	8	85.8	106	65	33	8	76.7	888	617	180	91	79.6	
November.....	109	90	10	9	87.2	110	92	11	7	88.6	116	91	14	11	84.5	116	78	28	10	79.3	1,020	812	134	74	86.2	
December.....	114	83	17	14	80.3	110	91	13	6	88.6	107	90	13	4	90.2	123	81	29	13	77.6	1,031	784	163	84	83.9	
1889.																										
January.....	91	70	14	7	84.6	91	74	6	11	84.6	92	70	13	9	83.2	116	77	26	13	77.6	857	620	145	92	80.8	
February.....	91	76	11	4	89.5	97	83	10	4	90.7	104	91	8	5	91.3	111	92	10	9	87.4	859	725	84	50	89.3	
March.....	102	69	19	14	76.9	97	62	20	15	74.2	98	73	9	16	79.1	120	74	34	12	75.8	1,065	599	178	129	75.9	
April.....	90	67	14	9	82.2	88	74	7	7	88.1	89	70	13	6	86.0	95	73	18	4	86.3	840	635	138	67	83.8	
May.....	93	73	10	4	90.3	89	73	8	8	89.5	95	72	13	10	82.7	102	80	19	3	87.7	877	687	128	62	85.6	
June.....	106	92	8	6	90.6	94	75	18	5	85.7	97	70	19	8	82.0	98	75	17	6	85.2	907	688	152	67	84.2	
Total.....	1,213	961	160	92	85.8	1,186	931	159	96	85.2	1,235	954	173	108	84.3	1,335	938	293	104	81.2	11,161	8,384	1,839	938	83.3	

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UNITED STATES WEATHER BUREAU.

The Chief of the United States Weather Bureau has continued to interchange reports with this office, and I desire to express my warm appreciation of the uniform courtesy that has characterized all communications from that office.

LIBRARY.

The number of publications received during the year was 309, being for the most part annual, quarterly, monthly, weekly, and daily reports and periodicals, from the principal astronomical, meteorological, and magnetic observatories of the world.

PUBLICATIONS.

Seven hundred and forty-four copies of the Annual Report and seven hundred and fifty copies of the Monthly Weather Review and the same number of the Toronto General Meteorological Register were distributed to all parts of the world. Five hundred and fifty copies of the Monthly Weather Chart were distributed to persons in Canada and the United States, and seventy copies of the Daily Weather Chart were distributed each day.

TIME SERVICE.

During the year ended June 30, 1899, one hundred and five observations for time were made in the meridian with the transit instrument, in which 265 standard stars were observed, also five solar observations were taken. The position of the stars used were those given in the 'Berliner Jahrbuch'.

The collimation error of the transit instrument has been frequently determined from micrometrical measurements on the collimating telescope and by reversal on stars. This error has changed very little during the year. The azimuth and level errors also show very little change.

With the equatorial telescope the sun has been mapped on 170 days showing the sun's surface four inches in diameter. On 35 days no spots were visible.

The time exchanges with Montreal, Quebec and St. John have all been registered on the chronograph at Toronto. The errors of the Toronto clock and of the timepieces used by the different observers elsewhere are computed from the latest observations. The mean time clock of the Toronto Observatory has throughout the year been adjusted to show absolute standard time of the 75th meridian. This is done by means of raising or lowering the centre of gravity of the pendulum by placing on and taking off small weights of different values as occasion requires. This adjustment is effected without stopping the clock. Time has been given weekly to the Magnetical Observatory at Agincourt. The make circuit electrical contacts of both sidereal and mean time clock have performed very satisfactorily, requiring no adjustment. The automatic break circuit attachment to the mean time clock has also performed exceedingly well.

In accordance with instructions from the department, arrangements were made early in 1898 for the installation of a time signal at Deadmans Island, Vancouver. It was decided to fire a dynamite cartridge hoisted at the end of a jib and connected by wire with the C. P. R. Telegraph office in Vancouver each day at noon, but it was subsequently found that the noise of the city drowned the sound and therefore it has since been fired at 9 p.m. The cartridge is prepared and placed in position for firing by Wm. Jones, keeper of the bell tower at Brockton Point and at the proper instant an electric contact is made at the telegraph office by the chief operator who rates a chronometer, provided by this service, by time signals given each morning over direct wire from McGill University, Montreal, by Professor C. H. McLeod. The accuracy of the signal is therefore dependent on three things: firstly, the accuracy of the time as given from Montreal; secondly, the uniform rate of a chronometer during twelve hours from 9 a.m. to 9 p.m.,

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and thirdly, the trustworthiness of the operator at Vancouver. It is proposed very shortly to instal a gun in place of the dynamite cartridge as the fire of a gun will probably be heard more generally. When in Vancouver during the past summer I was informed that the time signal was giving much satisfaction to the shipping people and the citizens generally.

The following table shows the difference between the time by 'standard observer' and that given at the various exchanges. The sign + indicates that the time as sent from the different observatories is faster than that by the "standard observer."

The time of 'standard observer' is obtained by taking the arithmetical mean of the times as determined at Toronto and Montreal.

	Toronto.	Montreal.	Quebec.	St. John.
1898.	Seconds.	Seconds.	Seconds.	Seconds.
July 7.....	-0·21	+0·21	-0·92	-0·04
" 26.....	-0·17	+0·17	-1·28	+3·22
August 29.....	-0·12	+0·12	+1·15	+0·65
September 22.....	-0·33	+0·33	+1·16	+0·18
October 25.....	-0·05	+0·05	-0·76	+0·06
November 16.....	-0·39	+0·39	+0·24	+0·15
December 15.....	-0·12	+0·12	+0·19	+0·50
" 29.....	-0·18	+0·18	+0·23	+1·43
1899.				
January 12.....	-0·26	+0·26	-0·27	+0·29
" 30.....	-0·26	+0·26	+0·45	-0·44
February 16.....	-0·35	+0·35	+3·09	-0·20
" 28.....	-0·22	+0·22	+2·61	+1·67
March 17.....	-0·44	+0·44	-0·33	+0·70
" 30.....	0·00	0·00	-0·50	+1·18
April 14.....	-0·13	+0·13	+0·49	-0·09
" 28.....	-0·19	+0·19	+0·55	+0·59
May 12.....	-0·18	+0·18	+0·26	+1·06
" 26.....	-0·24	+0·24	+0·43	+1·59
June 9.....	+0·06	-0·06	+0·62	+0·32
" 23.....	-0·01	+0·01	-0·02	.....

INSPECTION OF STATIONS.

Forty-seven stations were inspected by B. C. Webber who reports that 'barometers were cleaned and adjusted at all places where it was found necessary and instruments were overhauled and tested. At Paspébiac it was not considered advisable to erect a new drum house, but at Gaspé a suitable mast and drum house were erected on a point of land commanding the view to the entrance of the harbour. At Percé the fishermen ask that one lamp be utilized at night to denote a moderate gale and the two used only when a heavy gale is expected, as if a moderate gale only is likely they do not haul up their boats. At Tignish, Summerside, Port Hood, and Port Hastings new observers were instructed in the duties required. At Souris the mast has been removed to the bluff overlooking the wharf, a much more commanding position. At Charlottetown the instruments have been removed from the Provincial Government Buildings to the observer's private dwelling-house; the position is equally good and more convenient. At Liscomb the present position of the signal mast is in all respects the best to be obtained. A new mast is required at Port Hastings. At Sydney the wind gauge is much worn. At St. John's, Newfoundland, an electrical wind gauge was placed in position. At Shippegan the fishing industry has been of late removed to the village, proper consequently the signal site now commands the anchorage. At Bathurst everything was in very bad shape and gross carelessness was evident. At Port Hope the mast is now on the steamboat wharf, a much more desirable place than it was in. I fail to see the

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utility of a signal at Picton, but the townspeople do not wish it removed. A short slim pole at the top of the railway station now does duty as a mast at Deseronto. The exposure is very poor at Kingston and the anemometer useless. The new signal mast is excellent. At Port Dalhousie, Goderich and Amherstburg the colour of the mast was changed from a dirty red to the regulation white. The masts at Port Colborne, Port Burwell, and Port Dover are poor flimsy affairs. The anemometer tower at Port Stanley is vastly improved in appearance since the application to it of two coats of white lead paint. The mast at Kincardine is getting pretty well worn, and that at Midland is a wretched affair and worn out; further, the view of it from the harbour is hidden to a great extent by a large elevator and vessels passing outside of the harbour cannot see it.' It is proposed to erect a suitable mast on the high land to the southward of the town, the council having generously granted a site, and the mast is to be placed in such a position that it will be seen by all mariners.

Three stations were inspected by Mr. H. V. Payne who reports that 'at Parry Sound all the instruments were in good order and observations well taken. The storm signal mast and shed require painting badly, and this was ordered to be done. At Collingwood everything was in good order. At Owen Sound the mast will soon require painting. Signals were in good order.'

I have the honour to be, sir,

Your obedient servant,

R. F. STUPART,
Director.

APPENDIX A.

QUEBEC OBSERVATORY,

QUEBEC, August 31, 1899.

To the Director,
Meteorological Service,
Toronto.

SIR,—I have the honour to transmit my annual report for the year 1898–9.

The meteorological observations have been taken daily at the observatory, with the exception of the bi-hourly temperatures which were as usual registered at the Citadel.

The standard time has been given to mariners and to the city everywhere as heretofore. The correct time was also given to watchmakers and other persons nearly every day by means of the telephone, also chronometers have been rated at this observatory.

The repairs to the buildings which I had the honour to report last year as being necessary, have been made during the summer 1898.

I have the honour to be, sir,

Your obedient servant,

ARTHUR SMITH,
Director.

APPENDIX B.

ST. JOHN OBSERVATORY,

ST. JOHN, N.B., October 4, 1899.

SIR,—I have the honour to present the annual report of the St. John Observatory for the fiscal year ending June 30, 1899.

The chief station routine of meteorological work has been continued without change from my former report.

The issue of the daily weather bulletin has been largely extended and demands are frequently made for a further increase. Reports of the weather conditions prevailing at coast stations published in the bulletin, are very useful to those interested in shipping;

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the forecasts and synopsis have proved of much value to mariners and others concerned in weather changes. Telephone messages and personal calls are frequently made at this office before the bulletin can be sent out.

The morning forecasts are sent to St. Martins, where they are publicly posted at the telephone office. Storm warnings also continue to be telephoned to St. Martins and signals are displayed at Quaco Lighthouse.

The daily weather bulletin as well as a report of local meteorological conditions are published by all of our daily papers.

Demands for information from the office records are very frequent and considerable time is consumed in answering these requests.

The daily time signal has been given to the shipping and others by dropping the time ball as formerly at 1 p.m. local time.

Observations of stars with the transit instrument for the correction of errors and rates of the observatory clocks, have been continued, as heretofore reported.

The clock formerly used as a sidereal standard was dismantled in May, was thoroughly repaired, and fitted with a break circuit attachment for the automatic transmission of time signals. It is now running on standard time of the 75th meridian.

I have the honour to be, sir,

Your obedient servant,

D. L. HUTCHINSON,

Director, St. John Observatory,

MAGNETIC OBSERVATORY,

TORONTO, October 13, 1899.

Major F. GOURDEAU,

Deputy Minister of Marine and Fisheries,
Ottawa.

SIR:—I have the honour to submit herewith the report of this observatory for the fiscal year ended June 30, 1899.

Since my last report the magnetic photographic instruments have been removed from the old stone observatory in Toronto to the new building near the village of Agincourt, Ontario. The new observatory which was commenced in June and finished during the early days of September, consists of two parts—a circular stone cellar, and a rough cast building above ground placed on a heavy foundation. The cellar is nineteen feet in diameter, the walls two feet in thickness, the floor concrete, and the roof covered with felt and gravel, in which, on stone piers sunk in concrete to the depth of six feet below the floor, are placed the self-recording photographic instruments; namely, the declinometer for recording changes in the direction of the magnetic needle, and the bifilar and vertical force instruments for registering, respectively, changes in the horizontal and vertical components of the earth's magnetism. The above ground building which is connected with the cellar by a flight of steps, is divided into two portions, in the larger of which absolute magnetic determinations will be made, piers being provided on which to place the necessary instruments, and an adjustable opening on the roof for transit work; the smaller portion is an office, which will be heated by a copper stove.

Very great care has been taken in selecting materials for the building. Every stone used was tested for magnetic effect, and none but copper or zinc nails and fastenings have been used.

Observations were first made in the new observatory on September 10, and by October 1 all the instruments had been adjusted in their new position, and everything

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was running smoothly. Results already obtained show that values will differ but slightly from those obtained at the old observatory, and a very careful comparison was made before dismantling the old eye-reading instruments in Toronto.

There appears to be every prospect that the new observatory will be admirably suited for the purpose for which it was designed, and there is strong reason to think that the series of observations at Agincourt will be practically a continuation of the old and valuable series of observations made in Toronto. All the photographic records will be sent for development to the Toronto Observatory, which continues to be the Central Office of the Meteorological Service of Canada.

Mr. Menzies has been deputed to reside at Agincourt and attend to the routine work, such as keeping the lights burning, changing the photographic papers, &c. He also makes weekly determination of the absolute declination, and of the dip, measures the hourly ordinates of all the traces and tabulates them in the books provided for that purpose. The adjustment of the various instruments and the determination of scale values has been performed by myself, as have also up to the present the various determinations of the horizontal force.

In the spring of 1898 we found it possible to lease a house in the village to serve as a dwelling for Mr. Menzies and this lease was on April 1 last renewed for two years. There is a strong probability, however, that at the expiration of the present lease the owner may wish to return to her own dwelling. It would, therefore, in my opinion, be well that a small suitable dwelling house be erected on the observatory block of land, the officer in charge would then be near his duties and also be in a position to see that the building is not injured or instruments tampered with by tramps or mischievous boys. The present rented house, even if it be possible to retain it, is about a mile from the observatory, and during the winter and early spring the countryside roads are almost impassable. The new observatory has been visited by the President of the University of Toronto, the Principal of the School of Practical Science, and by the officers of the Astronomical and Physical Society of Toronto, all of which gentlemen expressed themselves as very pleased with the new building.

After the installation of the seismograph at the observatory, Professor Milne, the Secretary of the Committee of the British Association for Seismological Investigations, informed me that his committee wished to place an instrument near the western coast of Canada, that they were willing to supply the instrument, but there were no funds available to pay an observer. It was, therefore, decided to place it in charge of our meteorological observer at Victoria, and since last September Mr. Reed has had charge of it, and has obtained the very best results, fully equal to those obtained from the Toronto instrument.

In the printed report of the Seismological Committee at the Dover meeting of the British Association this year will be found the following regarding our Canadian Seismological work:—'The purchase money for the Toronto instrument and the funds required for the installation and maintenance of the same, and also for the installation of a seismograph at Victoria, have been provided by the Dominion Government. The excellent series of results obtained from these stations, amongst other things, throw light upon changes taking place along the eastern and western Canadian seaboard. They have already attracted the attention of scientific men, and will undoubtedly act as an incentive for other governments to work on similar lines.'

When the magnetic instruments were removed to Agincourt the old stone observatory became vacant and during last autumn a small addition and various internal alterations were made, and since December the offices of the Meteorological Service have been within its walls. The frame and rough-cast building which had served as an office building since 1878 has been converted into a director's residence, and makes a very sightly and comfortable dwelling.

I have the honour to be, sir,

Your obedient servant,

R. F. STUPART,

Director.

APPENDIX No. 4.

SIGNAL SERVICE, CANADA,

OFFICE OF THE SUPERINTENDENT,

QUEBEC, November 7, 1899.

F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to inclose herewith the annual report for the Signal Service, for the year ending June 30, 1899.

As in preceding seasons, reports have been received from the stations in the lower part of the river and gulf, recording the weather, wind, condition, location and movement of the ice during the winter and spring months, and during the season of navigation all inward and outward bound vessels as signaled when passing each station.

From the 1st to the 20th April, three reports per week were obtained and forwarded to the Board of Trade, Montreal, St. John, N.B., and Quebec, and to the Chamber of Commerce, Halifax, N.S., also to the press of Montreal and Quebec, to the Agent of the Department, Quebec to the Custom-house and Immigration Agent, to agents of steamship lines, tug owners, to the pilots for below and above Quebec, also to Messrs. H. Fry & Co., Lloyd's agents, Quebec.

From the 21st April reports were received daily and forwarded as above, and in addition to the Harbour Commissioners, North Sydney, during the season of navigation.

The Chief Superintendent of the Quarantine station at Grosse Isle is also supplied with full information as to weather, wind and the incoming of all transatlantic or foreign vessels.

The Quarantine doctor at Rimouski is also supplied with a report of the incoming mail steamers, name of station and hour of passing being given when vessel was first signaled.

Information was supplied from the bureau here as in past seasons to the agents at Anticosti, Magdalen Islands, Meat Cove, C.B., Cape Ray and Cape Race, Newfoundland, and to St. Pierre Miquelon, from the 13th April, as to weather, wind, movement and condition of the ice in the gulf and river of St. Lawrence up to Montreal for the guidance of any vessel calling for information.

Information as to wind, weather and ice in the vicinity of Anticosti, Magdalen Islands, Meat Cove, St. Paul's Island and Cape Ray, Newfoundland, is also sent to Point aux Esquimaux in March for the guidance of the sealing fleet.

Grosse Isle quarantine station reported all transatlantic vessels, which has proved very satisfactory to the shipping interests.

These reports are free to the department being transmitted over the Government telegraph line to Quebec.

LAST OUTWARD BOUND VESSELS—1898.

November 26, 1898.—The last Royal Mail Steamer, the SS. "Lake Ontario" sailed on this date.

November 26, 1898.—The SS. "Montrose" and the SS. "Norman" sailed on this date.

November 29, 1898.—The SS. "Guildhall" sailed on this date.

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FIRST INWARD BOUND VESSELS—1899.

April 22, 1899.—The first inward bound vessel, the SS. "St. Marnock", arrived on this date.

April 23, 1899.—The SS. "Dominion" and the SS. "Fremona", arrived on this date.

The services of Mr. H. J. McHugh, Superintendent of Signal Service, were dispensed with by Order in Council, dated 6th of June, 1899; the duties being since performed by the agent of the department with the assistance of Mr. Henry McGreevy.

Respectfully submitted.

I have the honour to be, sir,

Your obedient servant,

J. U. GREGORY,
Agent, Department of Marine and Fisheries.

APPENDIX A.

REPORT on ice, &c., in the Straits of Belle Isle and Coast of Newfoundland, as noted by the Agent of the Department at Belle Isle, Cape Bauld, Cape Norman and Greenly Island.

BELLE ISLE.

December 9, 1898.—Three icebergs were sighted, one off Cape Norman, one to the north-west, and the other off White Islands. The wind during this month was mostly west-north-west. On the 31st, a good deal of sheet ice came out from the north-east.

January 1 to 15, 1899.—This part of the month was very cold, the thermometer averaging from 5° to 20° below zero, also strong gales of wind prevailed, the weather being very severe. Straits full of sheet ice in all directions, the wind has at times attained a velocity of 75 miles an hour. From the 15th to 31st, the weather was not so cold, but strong gales of wind prevailed, mostly from the West to WNW. Straits full of large sheet ice all through, three icebergs in sight from here.

February 1 to 6, of this month the weather was very cold and the Straits were full of ice in all directions, the prevailing winds were WNW. from the 6th to 15th, the weather was cold with strong gales from the WNW. with snow and the Straits were full of ice, very little clear water to be seen. Towards the latter part of this month the ice got very heavy, owing to the cold weather.

March.—The Straits were full of heavy ice during the whole of this month, the forepart the weather was clear and west-north-west winds prevailed, during the latter part the Straits were blocked with very heavy ice and the winds were mostly from the north-east. A great number of icebergs were sighted this month.

April.—All through this month the Straits were blocked with heavy ice, no vessel could have passed through in any direction. One sealing steamer was seen outside the eastern end of the ice on the 22nd of April. For 21 days north to north-east winds prevailed, which kept the ice packed in the Straits. On the 15th of the month an immense body of ice passed south and numerous large icebergs; 44 icebergs in sight.

May.—From the 1st to the 8th of this month, strong gales of north-east wind prevailed, the force of the wind was 70 miles an hour at times. The straits were packed with heavy northern ice, no clear water to be seen anywhere; 47 icebergs in sight.

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For 37 years as assistant and keeper I have never seen the Straits so continually blocked with ice as it has been the past winter and spring, scarcely a lake to be seen anywhere, it is simply one solid sea of ice. The Straits remained blocked until the 24th of this month when west winds set in, and the ice moved eastwards, on the 28th there was clear water between here and the Labrador coast.

June 2.—First vessel to pass through, steamer "Neptune", Capt. Blandford, bound to Blanc Sablon with fishing crews, 5th, Straits clear to west and about 20 miles east. 6th, schooner "Fidelle" from Change Islands arrived to land fishing crews, reports left Change Islands on April 11, for here and were blocked ever since. On the coast shore along east it was all blocked with ice and the people was in a state of starvation. On the 18th one Dominion line steamer passed through outward bound, first steamer seen passing through.

CAPE BAULD, NEWFOUNDLAND.

As stated in previous reports, the distance from Belle Isle being but 14 miles, the observations as to wind, weather, &c., vary but little with the latter place. The first snow fell on October 6, 1898.

November.—This month was fine and clear, south winds prevailing mostly, snow fell on one occasion only.

December.—A considerable amount of snow fell this month, first slob ice made its appearance on the 14th.

January, 1899.—The first half of this month was very cold; the latter part, the weather was rather mild, snow fell on two occasions only.

February.—The first part of this month was clear and fine, hardly any snow fell; 28 icebergs were sighted from here during the month.

March.—The first half of this month was very fine, west-north-west winds prevailing; from the 12th to the 23rd the weather was very bad, strong north-easterly gales prevailing. The rest of the month was fine; 8 to 15 icebergs were sighted daily here during this month.

April.—About 20 icebergs were sighted daily here this month.

May.—A very large number of icebergs were sighted here this month, averaging about 40 daily.

June.—About twenty-five icebergs were sighted daily here this month. On the 14th seven schooners crossed over. On the 16th the first steamer was sighted from here, outward bound. On the 18th another steamer passed out. On the 19th a number of schooners passed in.

CAPE NORMAN.

October 6, 1898.—First fall of snow, north-east wind; snow fell on six occasions; north-east winds prevailed the whole of this month. Two to three icebergs seen daily.

November, 1898.—Snow fell on four occasions this month; north-east winds prevailed. From the 1st to the 20th about one iceberg seen daily.

December, 1898.—A large quantity of snow fell this month; variable winds; first ice made its appearance on the 13th. About two icebergs seen daily.

January, 1899.—Snow fell on several days; east wind prevailed; light close packed ice inshore throughout the month. About one iceberg seen daily.

February, 1899.—Snow fell nearly every day this month; north-west and north-east winds prevailed; heavy close packed ice inshore throughout the month. About one iceberg seen daily.

March, 1899.—Snow fell on nine occasions; north east and north-west winds prevailed; heavy close packed ice throughout the month. About two icebergs seen daily.

April, 1899.—Hardly any snow fell this month; the first half of the month east winds prevailed; and the latter part, west winds; heavy close packed ice throughout the month. About one iceberg seen daily.

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May, 1899.—No snow worth talking about fell this month ; variable winds prevailed ; heavy closed packed ice in shore throughout the month ; from four to six icebergs seen daily.

June, 1899. — On the 14th of this month the ice disappeared ; about seven icebergs seen daily.

GREENLY ISLAND—1898-1899.

1898.—First snow fell on October 11, first ice formed on January 1, 1899, and from this date, heavy open to heavy close packed ice filled the Strait until about the end of May when it all disappeared. No seals sighted this year.

I have the honour to be, sir,

Your obedient servant,

JOHN U. GREGORY,
Agent, Department of Marine and Fisheries.

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APPENDIX B.

THERMOMETER Readings at Belle Isle, from January 1, 1899, to March 31, 1899.

Date.	Degrees.	Date.	Degrees.	Date.	Degrees.
1899.		1899.		1899.	
January 1	17	February 1	21	March 1	16
" 2	22	" 2	15	" 2	19
" 3	14	" 3	21	" 3	9
" 4	2	" 4	14	" 4	8
" 5	17	" 5	4	" 5	12
" 6	12	" 6	4	" 6	27
" 7	7	" 7	0	" 7	15
" 8	0	" 8	3	" 8	14
" 9	14	" 9	18	" 9	3
" 10	17	" 10	2	" 10	6
" 11	8	" 11	4	" 11	7
" 12	8	" 12	6	" 12	3
" 13	5	" 13	6	" 13	17
" 14	4	" 14	12	" 14	18
" 15	5	" 15	14	" 15	10
" 16	8	" 16	4	" 16	1
" 17	13	" 17	8	" 17	16
" 18	18	" 18	3	" 18	17
" 19	8	" 19	4	" 19	14
" 20	10	" 20	8	" 20	20
" 21	19	" 21	3	" 21	14
" 22	20	" 22	4	" 22	20
" 23	8	" 23	4	" 23	17
" 24	7	" 24	29	" 24	32
" 25	22	" 25	32	" 25	29
" 26	7	" 26	10	" 26	31
" 27	3	" 27	9	" 27	26
" 28	15	" 28	16	" 28	18
" 29	9			" 29	25
" 30	10			" 30	27
" 31	14			" 31	28

Lowest temperature in January, 1899, 2nd January; highest, 25th January. Lowest in February, 1st and 3rd February; highest, 25th February. Lowest in March, 14th March; highest, 24th March.

Respectfully submitted,

MICHAEL COLTON,
Lightkeeper.

I have the honour to be, sir,

Your obedient servant,

J. U. GREGORY,
Agent, Department of Marine and Fisheries.

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SIGNAL STATION, CITADEL.

HALIFAX, N.S., August 14, 1899.

J. PARSONS, Esq.,
Agent, Marine and Fisheries,
Halifax, N.S.

SIR,—I have the honour to forward herewith a return of the number of vessels reported at this station during the twelve months ending June 30th, 1899.

The service has been carried out satisfactorily on the whole, though considerable inconvenience is experienced by reason of the frequent changes in the personnel of the signal staff, which are necessary owing to regimental requirements. There is no doubt that this inconvenience would be considerably reduced if a permanent hand could be employed at Camperdown. The desirability of this was pointed out in last year's annual report. Such a man would have to be a civilian, preferably a man-of-war's man, who could instruct the regimental signalmen in identifying vessels and in communicating with them by means of the International Code of Signals.

The illustrated diagrams of the code of signals have been published since last year's annual report.

I have the honour to be, sir,

Your obedient servant,

H. B. ROBERTS, Major, R.E.,
Superintendent of Signals.

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PORT OF HALIFAX, N.S.,

PARTICULARS of Vessels Signalled during

MONTH.	English Men-of-War.			Foreign Men-of-War.			Steamers, 1st class.			Steamers, 2nd class		
	Passed.	Arrived.	Reported.	Passed.	Arrived.	Reported.	Passed.	Arrived.	Reported.	Passed.	Arrived.	Reported.
1898.												
July	0	0	0	0	0	0	0	26	26	6	56	62
August	0	3	3	0	1	1	0	14	14	4	69	73
September	0	4	4	0	0	0	2	19	21	9	64	73
October ..	0	7	7	0	0	0	3	21	24	5	57	62
November.....	0	1	1	0	0	0	7	19	26	0	65	65
December.....	0	2	2	0	0	0	4	34	38	0	70	70
1899.												
January	0	1	1	0	0	0	5	46	51	5	42	47
February	0	0	0	0	0	0	2	30	32	1	46	47
March	0	0	0	0	0	0	1	30	31	3	42	45
April.....	0	1	1	0	0	0	7	29	36	3	48	51
May.....	0	2	2	0	0	0	5	51	26	2	49	51
June.....	0	6	6	0	0	0	8	18	26	5	67	72
Totals... ..	0	27	27	0	1	1	44	307	351	43	675	718

P.S.—Besides those sailing vessels reported, a large number arrived during the night of which no

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SIGNAL SERVICE.

the Year ending June 30, 1899.

Ships.			Barques.			Barquentines.			Brigs.			Brigantines.			Schooners, 3-masted or wearing Pri- vate Signals.			Monthly Totals.		
Passed.	Arrived.	Reported.	Passed.	Arrived.	Reported.	Passed.	Arrived.	Reported.	Passed.	Arrived.	Reported.	Passed.	Arrived.	Reported.	Passed.	Arrived.	Reported.	Passed.	Arrived.	Reported.
0	1	1	2	10	12	0	2	2	0	0	0	1	3	4	3	8	11	12	106	118
0	0	0	1	9	10	1	4	5	0	0	0	0	0	0	1	5	6	7	105	112
1	1	2	4	6	10	0	0	0	0	0	0	2	0	2	4	6	10	22	100	122
0	0	0	0	2	2	1	1	2	0	0	0	0	1	1	1	5	6	10	94	104
0	0	0	2	1	3	0	0	0	0	0	0	1	2	3	1	3	4	11	91	102
0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	3	4	5	109	114
0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	10	91	101
0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	3	79	82
0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	5	5	8	79	87
0	2	2	0	2	2	0	0	0	0	0	0	0	5	5	0	4	4	10	91	101
0	0	0	0	8	8	0	0	0	1	2	3	0	0	0	0	2	2	8	84	92
0	0	0	3	6	9	0	3	3	0	0	0	0	3	3	0	3	3	16	106	122
1	4	5	12	44	56	2	12	14	1	5	6	4	16	20	11	46	57	122	1135	1257

notice was taken.

H. B. ROBERTS, Major, R.E.,
Superintendent of Signals.

APPENDIX No. 5.

BOARD OF EXAMINERS OF MASTERS AND MATES.

HALIFAX, N.S., December 12, 1899.

The Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit the annual report of the proceedings of the Board of Examiners of Masters and Mates from June 30, 1898, to June 30, 1899, the end of the fiscal year.

The Board met for examination of foreign-going candidates as follows :—

	Times.
At the port of Halifax	10
“ “ St. John	6
“ “ Yarmouth	2
“ “ Quebec	1
Total	19

There were also three examinations held at Victoria, B.C., before the local Examiner at that port, the papers of the candidates having been returned to me for inspection and approval.

At Halifax nine applications were made for foreign-going certificates of competency as master, and nineteen for coasting and inland ; eight foreign-going and sixteen coasting and inland masters received certificates. Seven applications were made for foreign-going certificates of competency as mate, and three for coasting and inland, and all were successful.

At St. John four applications were made for foreign-going certificates of competency as master and one for coasting. Four foreign-going and one coasting master were granted certificates. Twelve applications were made for foreign-going certificates of competency as mate, and eight mates received certificates.

At Yarmouth two applications were made for foreign-going certificates as Masters, and two for mates, and two Masters and one mate received certificates.

At Quebec two candidates applied for mates certificates foreign-going, and both were successful.

At Victoria four applications were made for mates certificates foreign-going, and three mates were granted certificates.

Fifteen applications were made for masters certificates of competency, foreign-going, and twenty-seven for mates during the year, and fourteen masters and twenty-one mates received certificates ; also twenty applications for certificates as masters competency coasting were made to the Board of Examiners, and three for mates ; seventeen masters and three mates received certificates.

Three certificates of service were issued through the Halifax office for masters coasting, and four renewal certificates.

The total number of certificates issued by the Department of Marine and Fisheries, including competency, service and renewal, upon applications made to the Board of Examiners at Halifax, was sixty-two, and fees to the amount of \$675 collected.

At St. John, the local member of the Board holds examinations for coasting certificates, and make his returns direct to the department, in the same manner as the coasting examiners at other ports.

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Amongst the applicants enumerated above, some have presented themselves a second or third time for examination, having previously failed to pass. A second trial, however, is allowed any candidate without any further fee being charged.

I am of opinion that it is most desirable in the interest of commerce, and for the safety of navigation, that the standard of examination to test the qualifications of applicants for certificates of competency as masters and mates in the coasting trade, should be raised at as early a date as possible.

In 1898, acting upon instructions from the department, I drafted a new set of rules and regulations for these examinations, which contained, among other matter, the problems in navigation and questions in seamanship, I deemed necessary.

The new examination in navigation proposed, was not much more difficult than that prescribed for the second mate of a sea-going vessel. I have not yet been informed if it has been taken into consideration.

At present, masters and officers employed in the passenger steamer trade between Canadian ports and Bermuda, Jamaica, Demerrara, etc., or any of the West Indian or South American ports, as well as those officers attached to large steam vessels carrying numerous passengers to Boston and New York, are only required to pass a similar examination in navigation to that authorized for the same grade of officer in a fore-and-aft rigged schooner, engaged in the cargo trade from one port to another on our coast.

The mate has to work the latitude by meridian altitude of the sun, take a bearing of an object by compass, determine the ship's position by cross-bearings on the chart, and to shape a course by compass and determine the distance run from any given departure.

The master has no other problem in navigation to work, but in addition has to explain how he would shape a course to counteract the effect of a current, and find the distance made good towards a certain point in a given time.

The qualifications required of these officers, are therefore very low.

The progress of the age has brought out many improvements in the practice of navigation, and much more professional knowledge is required of officers connected with large steamers carrying passengers, than formerly, and greater care is necessary on account of the high speed maintained by some of the steamers upon the coast, the risk of collision in fog being annually augmented by the ever-increasing number of ships moving about.

Men in charge of large passenger steamers, engaged in the coasting trade, frequently run them at a high rate of speed in fog, trusting implicitly to the compass course being correctly steered and make good, taking it for granted that the assumed position of the vessel is correct, although no opportunity has been offered to verify it.

This over-confidence has been the source of many casualties entailing serious loss upon the owners of ships, and insurance companies, and in many cases the destruction of the passengers' baggage.

It is proper for steamers to be run carefully along our coast in fog, and for safety the speed must be reduced, the lead should be constantly employed in sounding, as a line of soundings will assist the master in fixing the position of his ship in a more accurate manner than if only an occasional cast of the lead had been taken.

Although the term "coasting" is used in the rules and regulations, it may be observed that the certificate obtained after such a meagre and wholly inadequate examination, is at present deemed sufficient to enable an officer to take charge of or serve on board the largest passenger steamer employed, not only upon our own coast, but to make voyages as before mentioned to the West Indies and the east coast of South America, which I am of opinion ought in every respect to be considered as foreign-going voyages.

Vessels so engaged do not in any case keep in sight of the coast for any length of time, but are for days many miles from land.

It can, therefore, be seen that the position of the ship must be daily ascertained by observation or by dead reckoning.

If the sun or stars appear, the longitude by chronometer should be found. This problem is not included in the examination.

When the sun is obscured, the ship's position is to be ascertained by dead reckoning, that is by the course and distance run from the preceding noon. For this purpose, the deviation of the compass upon the particular courses steered, should be known and

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applied, as the various disturbing influences affecting the compasses of iron or steel vessels, is a most important factor to be taken into consideration.

Men in command of large iron or steel steamers, are compelled to be constantly watching the movements of their compasses, to ascertain the amount of attraction exerted upon them, in order that due allowance should be made for the errors upon any change of course. A knowledge of this is not at present called for in the coasting examination.

I again beg respectfully to bring to the notice of the department the necessity of doing away with the issue of service certificates.

Men who may be entitled to such certificates, have had more than ample time to apply for them since the year 1882.

There has frequently been much difficulty for applicants asking for these certificates, to give proof of their service, either as master or mate, as the case may be, prior to the first day of January, 1883.

In some cases it is known these officers have not been going to sea for many years, and are, therefore, not familiar with the changes in the rules and regulations for the navigation of Canadian waters, and they possess very little knowledge of navigation.

Occasionally, when a position as master is obtained on board a ship, they are obliged to take an officer of ability to navigate her for them.

I am also of opinion that the certificates of masters and officers of passenger ferry boats, should be limited to the waters they intend to ply on, and the examination should have in view the special dangers which might be encountered upon their particular ferry route, otherwise they should be requested to undergo the ordinary examination for certificates for passenger steamers on the inland waters.

I have the honour to be, sir,

Your obedient servant,

WM. H. SMITH,

Chairman of the Board of Examiners of Masters and Mates.

APPENDIX No. 6.

LIVE STOCK SHIPMENTS

SESSIONAL PAPER No. 11

30	"	25	Pinemore	Liverpool	970	14 55	39	279
31	"	26	Bellona	Newcastle	280	3 90	10	
32	"	28	Glasgow	Glasgow	284	4 26	11	135
33	"	30	Monteagle	Bristol	360	6 95	16	200
34	"	30	Pomeranian	Glasgow	305	8 37	16	15
35	"	31	Escalona	Newcastle	160	2 40	6	
36	"	31	Concordia	Glasgow	28	2 89	3	28
		Total for May, 1899			12,983	245 36	573	4,728
46			Same date, 1898		15,563	318 51		698
39			"		18,073	284 89		
37			"		14,827	252 09		
37			"		15,887	521 11		

POPE & MORGAN,
Inspectors.

MONTREAL, May 31, 1899.

SESSIONAL PAPER No. 11

								1	2	0 10								
70	Torr Head.....	Belfast.....	457					12		6 90							170	
71	Salacia.....	Glasgow.....				307		27		9 96							270	
72	Virginian.....	Liverpool.....				664		25		9 51							444	
73	Seigniore.....	".....	176			405		22		11 00							200	
74	Monteagle.....	Bristol.....	261			283		19		11 41							241	
75	Cervona.....	London.....																
	Total for June.....		8,470	17		15,854		781		324 24		4,043,487		1,399,427		3,074		
	Previously reported.....		3,365			12,983		573		245 36		3,234,680		1,047,015		4,728		
	Total to date.....		11,835			28,837		1,304		569 00		7,308,177		2,446,442		7,802		
85	Same date 1898.....		2,682			28,899				591 72						1,723		
81	" 1897.....		6,566			37,011				588 19						*		
71	" 1896.....		9,066			28,780				477 22						*		
70	" 1895.....		18,720			29,830				1,082 10						*		

* None, not allowed.

POPE & MORGAN,
Inspectors.

MONTREAL, June 30, 1899.

SESSIONAL PAPER No. 11

109	"	27	Montfort.....	Bristol	408	7 82	34	18
110	"	27	Kastalia.....	Glasgow	337	6 00	19	15
111	"	27	Lord Charlemont.....	Cardiff	250	3 75		10
112	"	28	Maplemore.....	Liverpool	764	11 53		31
113	"	29	Ottoman.....	"	620	14 65		30
114	"	30	Fremona.....	Newcastle..	308	4 62		12
			Total for July.....		14,689	30	800	736
			Previously reported.....		28,837	35	1,533	1,304
			Total to date.....		43,526	65	2,353	2,040
132			Same date, 1898.....		48,885		3,665	4,343
129			" 1897.....		56,047		4,788	*
112			" 1896.....		44,499		5,950	*
110			" 1895.....		44,627		6,442	*
			Total for July.....		3,902,900		1,229,530	736
			Previously reported.....		7,308,177		2,446,442	1,304
			Total to date.....		11,211,077		3,675,972	2,040
			Same date, 1898.....					11,077

* Not allowed.

POPE & MORGAN,
Inspectors.

MONTREAL, July 31, 1899.

Record of Live Stock shipped from Port of Montreal during month of August, 1899.

Number.	Date.	Steamer.	Destination.	SHEEP.		CATTLE.			Fees collected.	HORSES.		SWINE.		Number of Men.	United States Cattle in Bond.
				Shipped.	Lost.	Fat.	Stockers.	Total.		Lost.	Shipped.	Lost.	Shipped.			Lost.
115	1899.														
116	1 Aug.	Buenos Ayreul	Glasgow	75				305		2				13	
117	"	Rosarian	"	426				30						3	
118	"	Roman	Liverpool	1,371				436		30				26	
119	"	Devona	London	46				208		108				21	
120	"	Manchester Trader	Manchester					353						8	
121	"	Monteagle	Bristol	375				109		76				19	
122	"	Lake Huron	Liverpool	165				362						5	
123	"	Sedgmore	"					328						13	
124	"	Virginian	"					287						11	125
125	"	Aleides	Glasgow					311						18	
126	"	Pomeranian	"	1,219				300						13	
127	"	Lord Iveigh	Cardiff	171				284						13	
128	"	Mennon	London	308				305						14	125
129	"	Lakonia	Glasgow	20						18				34	
130	"	Philadelphia	Liverpool					830		16				23	
131	"	Laurentian	"	522				983		129				5	
132	"	Montrey	Bristol	171				100						36	
133	"	Manchester City	Manchester	219				910						17	
134	"	Pneumore	Liverpool					211		75				8	
135	"	Hurona	London	804				60						15	125
136	"	Brazilian	"	1,164				306		35				10	
137	"	Fritonia	Glasgow	278				283						15	
138	"	Bellona	London					312		22				18	
139	"	Sardinian	Glasgow	339				448		1				2	
140	"	Iktbal	Bristol											16	
141	"	Cambroman	Liverpool											16	
142	"	Sarmatian	Glasgow	435				309		31				16	
143	"	Cervona	London	715				221		77				26	159
144	"	Anarynthia	Glasgow					236						12	
145	"	Milwaukee	London	1,229				499		20				26	
146	"	Manr. Enterprise	Manchester	64				578		19				28	
147	"	Scotsman	Liverpool					689						11	
		Mary Park	London	610				199							

SESSIONAL PAPER No. 11

148	Grecian	Glasgow	511		313	7 25							15
149	Lake Superior	Liverpool			182	3 73	20						8
150	Maplemore	"			440	6 60							31
151	Kastalea	Glasgow			296	5 44	20						9
152	Montfort	Bristol	150		386	9 49	59						14
	Total for August		11,417		12,714	287 32	790					3,865,915	609
	Reported July 31, 1899		19,393		43,526	867 80	2,353					11,211,077	2,040
	Total to date		30,810		56,240	1,155 12	3,143					15,076,992	2,649
176	Same date, 1898		14,110	78	59,360	56 1,180 13	4,312						4,533
174	1897		29,118		75,176	206 1,405 22	6,309						8,942
156	1896		41,393		62,312	1,145 24	7,255						
147	1895		72,341		60,216	2,729 89	8,281						

POPE & MORGAN,
Inspectors.

MONTREAL, August 31, 1899.

SESSIONAL PAPER No. 11

	250	3 75	10	10	10	10	10	10	10
186 " 28. Amarynthia (Haugow									
Total for September	9,254	231 21	508	57	2,888	779			
Reported August 31, 1899	36,240	70 1,155 12	4,608,482	11,636	342				
Total to date	65,494	1,386 33	5,517,892	11,693	3,230	779			
214 Same date, 1898	72,421			4,961					
220 " 1897	91,396			10,356					
194 " 1896	56,789			None					
188 " 1895	112,165			2,059					

* On Sedgmore.

POPE & MORGAN,
Inspectors.

MONTREAL, September 30, 1899.

RECORD of Live Stock shipped from Port of Montreal during month of October, 1899.

Number.	Date.	Steamer.	Destination.	SHEEP.		CATTLE.			Fees collected. % cts	HORSES.		Hay for Feed.	Grain for Feed.	Number of Men.	U. S. Cattle.	SENT TO QUEBEC.	
				Shipped.	Lost.	Fat.	Stockers.	Total.		Lost.	Shipped.					Lost.	Cattle.	Sheep.
187	Oct. 3.	Cervona.	London.	170				240	9 35	498				14			
188	" 4.	Grecian.	Glasgow.	257				303	6 78	19				14			
189	" 4.	Lake Superior.	Liverpool.	224				167	5 58	39				10			
190	" 5.	Ottoman.	"	1,131				724	10 02	50				35			
191	" 5.	Montfort.	Bristol.	287				372	10 87	77				19			
192	" 5.	Kastalia.	Glasgow.					300	5 30	16				13			
193	" 7.	Mary Park.	London.	2,136				243	14 33					19			
194	" 8.	Manchs tr Enterprise	Manchester.	200				440	7 50					18			
195	" 11.	Iona.	London.	87				244	9 92	68				13			
196	" 11.	Maplenore.	Liverpool.					661	4 03					26			
197	" 11.	Buenos Ayrean	London.	170				224	4 21					11			
198	" 12.	Montevidean.	London.	150				407	7 70	17				10			
199	" 12.	Monteagle	Bristol.	294				300	5 47					19			
200	" 12.	Salacia.	Glasgow.	1,233				696	16 61					33			
201	" 14.	Roman.	Liverpool.					731	10 97					29			
202	" 15.	Virginian.	"	81				300	6 36	19				14	52		
203	" 17.	Lakonia.	Glasgow.					160	2 40					6			
204	" 17.	Escalonia.	London.	359				151	7 36	46				12			
205	" 18.	Pomeranian.	Glasgow.					470	7 05					19			
206	" 19.	Fremonia.	London.	170				451	13 57	119				28			
207	" 19.	Montrose.	Bristol.	758				165	6 27					9			
208	" 20.	Rosarian.	London.					143	2 15					25		467	
209	" 21.	Sedgiamore.	Liverpool.					284	4 26					11			
210	" 21.	Alicides.	Glasgow.	150				427	14 31	155				23			
211	" 26.	Monterey	Bristol.	730				300	9 40	25				17			
212	" 26.	Tritonia.	Glasgow.					321	5 17	7				37			596
213	" 28.	Pinemore.	Liverpool.					84	1 35	2				4			
214	" 28.	Canturman		161				302	5 34					13			
215	" 31.	Lord Iveigh	Cardiff.					9,879	230 34	757				514	52	1,063	
		Total for the month.		8,848				65,494	1,386 33	3,695				3,157	11,693	3,230	779
		Reported Sept. 30, 1899.		43,758										3,517,392			

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260	Total to date.....	52,606	75,373	1,616 67	4,452	21,924,111	6,247,682	3,671,117,745	4,263	779
269	Same date, 1898	28,900	87,540					4,045	1,875	1,085
242	" 1897	54,828	106,681	1,727 07				4,045	1,430	
224	" 1896	70,112	87,479					10,742	3,541	3,756
	" 1895	171,252	88,400							

POPE & MORGAN,
Inspectors.

MONTREAL, October 31, 1899.

SESSIONAL PAPER No. 11

Number.	Date.	Years.	SHEEP.		CATTLE.			HORSES.		SWINE.		Hay for Feed.	Grain for Feed.	Number of Men.	FROM QUEBEC.	
			Shipped.	Lost.	Pat.	Stockers.	Total.	Lost.	Fees collected.	Shipped.	Lost.				Shipped.	Lost.	U.S. Cattle.	Cattle.	Sheep.
298	Nov.	Total shipments	1899	1899												
304	" 24	"	38,277	481			1,755 88	4,739	68					11,745	4,298	779
242	" 24	"	34,991	481			1,964 61	5,827	68					3,719	2,187	1,065
224	" 22	"	60,638	252			2,381 34	10,051	76					12,221	1,941	616
224	" 25	"	76,529	438			1,830 18	10,421	78						3,541	3,756
229	" 24	"	210,607	1914			4,955 23	13,303							1,401	7,541
235	" 24	"	139,780				5,623	5,623								
235	" 22	"	3,743				1,666	1,666								
250	" 22	"	15,914				1,739	1,739								

POPE & MORGAN,
Inspectors.

MONTREAL, November 28, 1899.

RECORD of Live Stock shipped from Port of St. John, N.B., during season of 1898-9.

Number.	Date.	Steamer.	Destination.	SHEEP.		CATTLE.			HORSES.		SWINE.		Hay for Feed. Lbs.	Grain for Feed. Lbs.	Number of Men.
				Shipped.	Lost.	Bar.	Stockers.	Total.	Lost.	Shipped.	Lost.	Shipped.				Lost.
	1898.														
	December			856	4	1,547		1,547	28	37			481,420	147,249	70
	1899.														
	January			319	2	1,284		1,284	48	50	2		383,812	104,532	49
	February			149	3	1,372		1,372	71	48	17		390,605	118,384	59
	March			150	0	2,067		2,067	91	81			588,278	185,800	87
	April			150	3	2,309		2,309	7	87			655,490	199,610	99
	Total			1,624	12	8,579		8,579	245	303	19		2,499,605	755,575	364

RECORD of Live Stock shipped from Port of Halifax, N.S., during month of December, 1898.

14	Dec. 15	Labrador	Liverpool											4500	4300	1
										*3						

*The horses are the property of Col. Anstrathur Duncan, R.A., and shipped in charge of a groom. †100 lbs. carrots, 100 lbs. bran.

DAVID HUNTER,
Port Warden.

SESSICAL PAPER No. 11

RECORD of Live Stock shipped from Port of Halifax, N.S., during the Year 1898.

Number.	Date.	Steamer.	Destination.	SHEEP.		CATTLE.			HORSES.		SWINE.		Hay for Feed. Lbs.	Grain for Feed. Lbs.	Number of men.
				Shipped.	Lost.	Fat.	Stockers.	Total.	Lost.	Shipped.	Lost.	Shipped.				Lost.
13	1898. Jan. 30.	St. John City								2					1
									Fees collected. \$ cts.						
									0 10						

DAVID HUNTER,
Port Warden.

RECORD of Live Stock shipped from Port of Halifax, N.S., during month of April, 1899.

15	April 15.	Scotsman	Liverpool						0 05	*1				Sufficient.	
----	-----------	----------	-----------	--	--	--	--	--	------	----	--	--	--	-------------	--

*This horse was the property of an officer in the Imperial Army returning to Great Britain.

DAVID HUNTER,
Port Warden.

RECORD of Live Stock shipped from Port of Charlottetown, during month of October, 1899.

1	Oct. 26.	Lake Huron	Liverpool	1,383	82	91			9 33				19 tons	*630 Bush.	10
---	----------	------------	-----------	-------	----	----	--	--	------	--	--	--	---------	------------	----

*1,008 bushels turnips and mangel wurzel

H. P. WELSH,
Inspector.

63 VICTORIA, A. 1900

APPENDIX

STATEMENT of Expenditure by the Marine Department

	1868.	1869.	1870.	1871.	1872.	1873.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Maintenance of lights—						
Above Montreal	40,561 28	42,306 69	46,289 05	44,054 01	57,609 16	61,036 47
Montreal District	23,053 56	25,762 54	21,669 49	22,453 52	22,369 00	31,143 14
Below Quebec	45,615 35	41,651 73	43,730 61	31,582 75	41,936 00	65,645 00
Nova Scotia	46,460 72	56,394 88	43,682 86	76,230 77	67,862 24	100,953 80
New Brunswick	20,488 00	23,893 00	27,485 14	20,542 29	23,369 12	29,266 85
Prince Edward Island						
British Columbia						13,207 09
Construction—						
Above Montreal	3,136 15		2,976 83	8,770 55	6,940 45	18,999 38
Quebec	7,323 75	7,492 59	1,543 06		57,818 35	39,303 87
Nova Scotia	22,041 42	6,905 80	18,967 23	10,948 31	34,760 12	90,181 79
New Brunswick			11,555 91	8,735 73	9,561 14	16,691 06
Prince Edward Island						
British Columbia						
Dominion steamers—						
Quebec	69,026 73	37,176 02	34,549 49	59,797 05	47,500 00	51,758 05
Nova Scotia	14,778 92	26,603 94	19,759 96	13,130 86	20,999 63	24,999 57
New Brunswick						
Prince Edward Island						
British Columbia					12,115 96	15,984 72
Examinations of masters and mates			908 12	1,407 66	4,312 07	6,466 18
Hudson's Bay expedition						
Investigations into wrecks			140 00		874 00	1,068 89
Marine Hospital, Quebec	19,977 36	19,221 45	21,618 73	19,823 18	21,000 00	21,000 00
Marine Hospitals	1,070 86	15,615 71	15,652 62	15,728 93	53,536 16	27,150 43
Meteorological Service	8,200 00	8,950 00	8,950 00	9,379 82	12,618 15	18,830 54
Registration of Canadian shipping						
Removal of obstructions			2,350 07	1,000 00		
Rewards for saving life					2,284 32	1,975 13
Signal Service						
Steamboat inspection	7,106 93	7,999 00	7,396 96	8,321 00	8,500 00	13,266 00
Survey, Georgian Bay						
Water Police, Montreal	27,445 35	10,238 71	9,323 31	8,030 00	10,000 00	14,453 87
" Quebec		12,633 59	9,038 62	9,370 73	10,348 00	18,200 00
Civil Government	15,083 88	18,064 25	19,401 05	20,220 96	22,644 52	25,336 04
Steam communication—						
Between Quebec and Maritime Provinces						
Between Prince Edward Island and Mainland						
Purchase of steamer to replace—						
'Glendon'						
'Lady Head'						
Winter Mail Service, P. E. I.						
Tidal observations						
Gratuities						
Survey, Burrard Inlet						
Export cattle trade						
	371,070 56	360,899 90	367,129 11	389,537 12	518,958 49	706,817 92

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No. 7.

from Confederation to June 30, 1899.

1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
60,798 75	71,937 18	68,344 18	65,421 00	73,175 11	74,587 78	65,518 61	65,541 21	71,048 50
20,939 13	15,000 00	12,999 48	15,998 00	15,996 09	14,917 95	16,523 88	14,326 36	21,643 05
102,056 09	110,362 00	98,792 93	89,980 41	96,904 00	93,178 61	96,703 87	89,781 29	91,068 66
114,711 91	114,344 51	145,125 56	128,496 00	132,888 95	120,951 33	116,189 60	128,918 59	137,846 15
53,439 04	60,119 02	62,551 61	50,998 00	58,989 00	57,499 02	61,252 82	63,921 90	66,073 00
3,357 71	12,584 64	13,730 53	11,817 00	16,986 66	12,158 72	15,288 17	12,997 36	16,985 72
18,519 50	15,983 72	17,175 97	15,853 00	18,948 78	15,152 73	15,576 99	17,570 72	17,808 00
24,461 86	14,286 65	13,320 40	16,267 98	7,207 96	11,993 75	13,297 81	14,180 02	13,581 00
41,950 82	19,325 00	24,336 47	12,945 29	12,776 47	4,154 58	7,797 75	7,539 76	3,731 31
51,867 94	43,898 63	42,214 55	25,550 00	13,500 00	17,386 97	7,069 01	7,757 52	13,355 00
31,572 60	8,842 97	17,819 85	7,083 82	12,028 13	22,598 14	4,985 53	4,578 52	2,253 80
4,353 93	8,799 07	8,477 67	29 66	2,504 47	2,560 88	6,074 50	8,150 06	3,092 00
64,490 00	79,043 70	62,971 49	49,987 66	42,683 00	44,972 79	49,318 93	64,973 00	44,923 98
30,008 99	22,992 62	133,826 08	38,739 39	46,027 00	42,016 53	49,318 93	64,700 00	31,049 74
10,555 67	41,796 74	16,241 26	61,782 63	28,933 63	16,332 05	14,429 52	15,139 95	23,911 97
4,520 19	5,696 62	4,672 08	16,095 90	12,193 40	7,460 68	9,733 34	11,788 09	8,504 61
2,313 31	366 00	466 41	342 65	500 00	1,691 00	676 73	310 48	863 19
20,456 45	21,994 75	23,795 85	19,965 97	19,987 50	20,791 77	12,991 23	19,964 33	19,938 12
45,986 87	37,111 67	37,155 72	42,449 55	37,487 10	37,445 57	35,040 00	32,218 94	33,162 45
36,700 59	33,580 00	45,560 03	44,871 38	46,050 24	45,706 13	45,554 51	46,163 54	47,464 07
272 30	1,096 46	412 06	842 14	1,435 10	239 26	257 75	607 43	2,013 28
4,931 78	450 00	2,292 20	203 00	462 00	305 86	825 00	150 00	1,116 51
1,000 00	3,552 86	2,292 20	1,958 55	4,071 00	2,533 10	2,263 15	1,806 13	2,212 00
10,291 58	12,200 00	13,081 86	13,073 01	13,228 38	13,076 46	11,854 34	12,211 65	14,835 00
12,370 86	13,395 00	14,090 00	13,524 29	14,062 00	13,462 74	13,131 06	21,953 26	21,994 74
26,526 66	24,500 00	27,136 68	21,482 08	23,498 06	23,023 26	22,094 48	13,497 81	20,221 82
30,087 23	31,326 18	32,789 18	32,304 12	32,682 50	33,610 19	35,083 95	36,447 50	36,789 46
15,000 00	10,000 00	10,000 00						
		750 00						
845,150 09	844,586 09	970,146 27	820,054 38	786,156 23	755,359 47	723,360 89	761,730 62	774,831 53

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APPENDIX

STATEMENT of Expenditure by the Marine Department

	1883.	1884.	1885.	1886.	1887.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Maintenance of lights—					
Above Montreal.....	70,116 68	70,788 27	70,697 89	85,713 98	75,690 74
Montreal District.....	22,260 32	22,946 43	23,262 94	33,289 28	16,735 49
Below Quebec.....	102,784 99	101,302 35	118,856 94	131,095 29	131,540 80
Nova Scotia.....	150,793 17	142,909 72	137,439 40	143,153 24	117,708 53
New Brunswick.....	75,946 92	86,670 70	92,130 28	76,046 63	96,425 28
Prince Edward Island.....	17,907 27	19,059 62	20,218 83	22,282 52	17,852 13
British Columbia.....	18,349 06	18,107 54	15,497 76	14,783 75	16,230 43
Cape Race.....					4,453 25
Construction—					
Above Montreal.....	9,792 27	18,432 63	27,977 42	36,678 16	18,383 20
Quebec.....	9,672 50	3,168 48	4,354 87	5,877 84	1,260 00
Nova Scotia.....	9,422 75	12,489 35	4,352 42	5,905 17	5,350 89
New Brunswick.....	1,022 57	2,868 70	7,667 42	2,421 66	5,280 75
Prince Edward Island.....	1,934 49	2,158 60	879 40		384 60
British Columbia.....	1,005 26	9,830 38	5,223 11	4,942 70	321 84
Queen's Printer.....					26 58
Dominion steamers—					
Quebec.....	45,156 13	43,019 13	51,092 98	51,485 03	50,714 52
Nova Scotia.....	37,841 07	27,726 60	42,921 27	39,283 27	32,287 10
New Brunswick.....					14,337 23
Prince Edward Island.....	19,680 00	19,539 52	33,962 54	20,927 58	19,987 67
British Columbia.....	25,484 00	16,111 83	12,485 07	13,430 69	10,809 07
Department					13,288 83
Examinations of masters and mates.....	4,021 20	5,580 79	6,656 44	5,239 28	4,858 98
Hudson's Bay expedition.....		480 69	71,374 69	35,217 10	14,762 61
Investigation into wrecks.....	875 64	830 12	385 15	592 63	520 14
Marine Hospital, Quebec.....	19,998 53	19,990 34	19,996 68	16,047 95	19,706 96
Marine Hospitals.....	29,880 78	31,401 30	45,371 29	32,229 02	32,545 35
Meteorological Service.....	51,990 25	56,418 16	56,625 40	56,898 33	57,140 74
Registration of Canadian shipping.....	168 84	189 27	237 88	157 13	233 13
Removal of obstructions.....	35 80	342 76	2,259 21	1,237 34	4,190 83
Rewards for saving life.....	2,534 60	2,614 91	5,221 15	8,147 22	7,363 94
Signal Service.....	3,365 33	6,704 17	3,881 05	4,622 00	5,082 17
Steamboat inspection.....	16,209 00	21,893 28	23,235 04	21,775 57	22,837 80
Hydrographic surveys.....	77 81	26,745 54	20,454 68	17,759 36	21,592 55
Water Police, Montreal.....	15,798 24	19,021 93	17,683 59	20,933 75	17,413 47
" Quebec.....	22,520 41	22,958 79	20,399 33	22,922 82	22,935 65
Civil Government.....	37,988 39	38,775 00	29,900 83	30,453 57	37,193 62
Steam communication—					
Between Quebec and Maritime Provinces.....					
Between Prince Edward Island and Mainland.....					
Repairs to wharf.....					
Purchase of steamers to replace—					
"Stanley".....					
"Glendon".....	395 53	56,164 71	47,238 03		
"Lady Head".....					
Winter Mail Service, P.E.I.....				5,985 42	6,312 93
Tidal observations.....					
Gratuities.....					
Survey, Burrard Inlet.....					
Export cattle trade.....					
Survey, Bay of Quinté.....					
Relief of distressed Canadians.....					
Manning ships.....					
Widow of late A. Warner.....					
McDonald Bros.....					
Parliamentary Returns.....					
Investigating effect of Chicago drainage canal.....					
John McDonald.....					
Longitude, Montreal.....					
Marine Biological Station.....					
	825,010 82	927,241 61	1,129,901 14	980,120 59	917,557 31

SESSIONAL PAPER No. 11

No. 7—Continued.

from Confederation to June 30, 1899—Continued.

1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895
§ cts.	§ cts.	§ cts.	§ cts.	§ cts.	§ cts.	§ cts.	§ cts.
85,588 70	72,721 23	84,035 65	93,180 72	87,033 61	87,598 15	78,090 69	82,541 16
17,510 17	12,285 79						
108,278 67	112,690 20	118,750 70	122,471 89	116,531 27	120,404 19	124,348 80	124,763 81
133,009 92	140,197 15	139,459 56	139,916 83	148,815 26	150,445 26	137,339 73	140,977 53
73,465 49	78,285 79	61,608 91	61,089 31	66,886 69	71,079 46	59,917 96	69,654 46
14,796 62	19,118 51	16,968 80	19,000 46	17,069 98	16,819 64	15,569 39	17,976 67
19,604 63	16,877 12	16,411 49	19,595 22	20,858 68	24,413 27	27,240 77	21,734 18
5,124 20	7,358 01						
6,341 97	8,623 76		9,796 28	21,704 05	8,766 62	12,581 15	2,699 40
2,287 86	12,203 06		3,723 14	809 27	10,097 18	4,743 13	3,004 14
5,533 48	6,039 91		4,596 94	1,965 16	4,381 24	3,104 77	4,737 03
1,542 61	2,966 36	23,863 09	208 16	1,845 35	1,271 15	115 45	1,597 80
			410 00	1 56		1,604 00	
5,918 00	1,890 00		14,417 25	9,478 81	2,958 61	6,356 43	180 83
	40 14						
150,659 19	126,629 33	114,956 20	111,437 03	145,899 61	163,097 46	178,183 97	169,661 64
5,063 96	4,381 04	4,117 83	4,255 24	6,363 88	4,116 99	3,745 33	2,757 29
165 00							
513 91	516 67	888 94	1,172 77	603 21	643 49	850 81	351 15
18,777 62	18,643 14	10,279 08	751 75				
30,667 67	33,089 20	31,450 03	33,303 37	34,106 83	35,757 07	38,403 94	38,589 05
59,986 10	58,577 07	58,452 10	62,457 10	67,138 06	64,165 60	66,440 96	64,588 34
897 02	179 21	647 52	1,207 07	462 59	1,476 19	394 00	207 40
2,500 94	3,603 65	5,737 26	3,633 65	2,878 68	1,554 53	202 02	2,217 36
6,825 48	5,503 44	8,150 92	4,952 20	6,398 93	7,432 64	8,014 67	6,591 34
4,441 59	5,092 54	4,976 80	4,700 79	5,014 42	5,040 58	4,668 93	5,311 74
21,430 45	22,213 03	20,989 52	22,183 76	22,736 59	24,386 95	25,961 36	26,385 88
19,424 14	17,808 46	17,969 23	17,677 51	16,451 10	17,542 11	31,461 76	12,653 28
18,725 95	16,948 82	13,164 00	573 80				
18,553 57	14,698 68	8,620 61	7,279 85	6,161 60	5,436 23		
32,728 78	43,501 96	42,835 78	43,253 67	43,195 31	56,477 23	54,988 88	71,373 82
	143,505 60				84 90	1,007 67	824 38
7,740 25	1,842 47	2,752 67	7,012 70	3,309 44	4,376 96	6,497 03	6,138 18
		244 75	1,888 71	711 59	5,099 17	10,172 61	11,507 24
	200 00	80 00	1,025 00			3,261 32	
			1,690 12	2,580 45			
			520 85	1,411 57	1,711 73	1,350 83	2,268 74
					2,085 45		
							7 30
							500 00
							160 00
							4,000 00
883,250 85	1,023,801 34	807,417 53	885,410 11	861,426 80	898,720 03	905,654 34	895,828 28

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APPENDIX No. 7—*Concluded.*STATEMENT of Expenditure by the Marine Department from Confederation
to June 30, 1899—*Concluded.*

	1896.	1897.	1898.	1899.
	§ cts.	§ cts.	§ cts.	§ cts.
Maintenance of lights—				
Above Montreal	87,256 28	80,961 06	87,841 22	92,751 23
Montreal District				
Below Quebec	124,143 66	126,186 00	116,279 88	136,134 79
Nova Scotia	123,234 65	124,671 19	126,386 00	65,072 35
New Brunswick	63,018 64	50,771 02	67,369 98	128,674 15
Prince Edward Island	17,988 15	16,429 23	18,112 93	20,589 81
British Columbia	24,770 44	25,679 52	26,862 03	29,530 20
Cape Race				
Construction—				
Above Montreal	11,993 84	9,527 84	6,867 69	3,729 62
Quebec	3,300 00	296 26	3,649 90	37,838 80
Nova Scotia	1,842 94	61 71	4,067 99	3,123 16
New Brunswick	200 00	1 60	1,423 34	91 49
Prince Edward Island		452 90	1,409 60	616 96
British Columbia	225 50	569 99	6,414 19	19,305 60
Queen's Printer				
Dominion steamers—				
Quebec				
Nova Scotia				
New Brunswick				
Prince Edward Island	145,315 28	136,940 11	117,644 39	145,270 75
British Columbia				
Department				
Examinations of masters and mates	4,062 82	3,536 29	3,335 40	3,568 26
Hudson's Bay expedition		19,091 32	27,050 66	
Investigation into wrecks	483 98	565 25	312 77	982 17
Marine Hospital, Quebec				
Marine Hospitals	36,682 96	37,984 71	38,162 56	37,353 29
Meteorological Service	66,600 29	67,397 71	64,135 71	73,148 05
Registration of Canadian shipping	517 60	531 55	818 33	966 48
Removal of obstructions	456 38	631 86	704 17	745 49
Rewards for saving life	8,004 38	5,955 19	5,081 40	7,049 09
Signal Service	5,338 76	5,986 12	5,993 88	6,067 49
Steamboat inspection	26,321 27	26,837 83	26,342 29	28,035 49
Hydrographic surveys	15,099 63	12,352 99	15,306 66	13,664 97
Water Police, Montreal				
Water Police, Quebec				
Civil Government		74,801 37	74,644 05	72,833 97
Steam communication—				
Between Quebec and Maritime Provinces				
Between Prince Edward Island and Mainland				
Repairs to wharf	2,644 69	1,795 56	1,618 97	
Purchase of steamer to replace—				
"Stanley"				143,365 26
"Glendon"				
"Lady Head"				
Winter Mail Service, P. E. I.	7,779 69	21,931 05	9,575 31	8,439 70
Tidal observations	9,627 45	13,166 20	3,081 45	5,186 35
Gratuities				
Survey, Burrard Inlet				
Export cattle trade	2,887 24		2,499 80	2,757 85
Survey, Bay of Quinte				
Relief of distressed Canadians				
Manning ships	746 89			
Widow of late A. Warner				
McDonald Bros.				
Parliamentary Returns	291 08			
Investigating effect of Chicago drainage canal	2,506 00			
John McDonald	200 00	243 42		
Longitude, Montreal				
Marine Biological Station				5,709 10
	793,634 49	867,772 90	856,192 50	1,102,601 92

APPENDIX No. 8.

STATEMENT relating to the Wharfs under the control of the Department, on
June 30, 1899.

Locality.	Wharfinger.	Date of Appointment of Wharfinger.	Remuneration allowed.	Amount deposited to credit of Receiver General.
<i>Ontario.</i>				\$ cts.
Cockburn Island	Alfred Monck	May 30, 1889	25 p.c. of collections	75 97
Goderich	W. Marlton	Feb. 14, 1894	25 do	381 70
Hilton, St. Joseph Id., Algoma	E. Stubbs	June 20, 1898	50 do	220 12
Kingsville	A. E. Malott	Nov. 6, 1895	25 do	37 99
Morpeth	C. Stammers	Aug. 1, 1894	25 do	3 06
Port Rowan	John Collett	May 2, 1898	25 do	
Richard's Landing Algoma	R. Armstrong	Mar. 11, 1897	25 do	70 36
Rondeau	W. R. Fellowes	Dec. 17, 1888	25 do	76 63
Sault Ste. Marie	Geo. A. Boyd	April 9, 1897	\$112 per month for eight months, during season of navigation	279 87
Southampton	Geo. McVittie	Aug. 16, 1895	25 p.c. of collections	37 25
Summerstown	Under lease			
Thessalon, Algoma	F. Leighfield	May 28, 1897	25 p.c. of collections	
Warton	H. R. A. Eby	Dec. 10, 1890	25 do	98 50
Total				1,282 45
<i>Quebec.</i>				
Agnes	L. A. Roy	Nov. 27, 1891	25 p.c. of collections	
Anse St. Jean	F. Savoie	Mar. 13, 1895	25 do *	
Baie St. Paul	Vacant		25 do	
Baie St. Paul, Isolated Block	A. Simard	Aug. 25, 1891	25 do	
Beauport	D. Giroux	Nov. 11, 1896	25 do	78 84
Berthier	E. Gaumont	July 5, 1897	50 do	78 35
Cap-à-l'Aigle	Jos. Guay	Oct. 7, 1896	25 do	
Carleton	Jos. E. Cullen	Mar. 25, 1896	\$50 per annum	27 36
Cascades	Moise Moreau	Oct. 20, 1897	25 p.c. of collections	
Cedars	J. Reay	April 20, 1898	25 do	43 90
Chicoutimi	T. E. Saucier	May 16, 1898	25 do	
Coteau du Lac	M. St. Amour	Sept. 21, 1896	25 do	97 47
Coteau Landing	J. A. Prieur	May 25, 1897	25 do	116 51
Echo Vale, Lake Megantic	D. P. Matheson	May 16, 1894	25 do	
Grand River	Geo. Beaudin	Nov. 16, 1896	25 do	157 25
Isle aux Grues	Jos. Painchaud	Feb. 17, 1890	25 do	1 17
Isle Perrot	Roger Leduc	Oct. 20, 1897	25 do	
Knowlton's Landing	L. Knowlton	Nov. 26, 1897	25 do	
Lacolle	R. J. Robinson	Mar. 8, 1894	25 do	23 82
Les Eboulements	M. Tremblay	Sept. 4, 1894	25 do	
L'Islet	Octave Morin	Feb. 3, 1893	25 do	
Longueuil	Chas. Poirier	Oct. 22, 1896	25 do	33 20
Magog	Edward Addy	June 20, 1898	25 do	
Matane	David Banville	April 20, 1898	25 do	
Murray Bay	Elie Maltais	Aug. 15, 1893	25 do	
New Carlisle	John C. Hall	June 4, 1889	25 do	181 44
Percé	T. W. Flynn	Jan. 19, 1893	25 do *	13 24
Port Daniel	John Enright	Sept. 11, 1890	\$50 per annum	58 32
Rimouski	Chas. Lepage	July 24, 1894	25 p.c. of collections	
Rivière Ouelle	J. H. dit Beaulieu	Nov. 28, 1892	25 do	0 80
Rivière du Loup	Louis Piuze	Sept. 16, 1891	25 do	117 93
St. Anicet	S. Dupuis	Sept. 14, 1896	25 do	74 63
St. Alphonse de Bagotville	Abel Tremblay	July 7, 1891	25 do	27 41

* Commission on collections not to exceed \$200 per annum.

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STATEMENT relating to Wharfs, &c.—Continued.

Locality.	Wharfinger.	Date of Appointment of Wharfinger.	Remuneration allowed.	Amount deposited to credit of Receiver General.
				\$ cts.
<i>Quebec—Con.</i>				
St. Jean d'Orléans	L. Lachance	Sept. 26, 1896	25 p. c. of collections	116 54
St. Jean Port Joli	J. Pelletier	Sept. 14, 1896	25 do	
Ste. Cécile du Bic.	L. N. Côté	July 20, 1891	25 do	164 71
St. Laurent d'Orléans	Ed. Chabot	Aug. 25, 1894	25 do	12 30
St. Thomas de Montmagny	L. L. Dionne	Oct. 22, 1896	25 do	2 38
St. Zotique	J. M. Leroux	Sept. 21, 1896	25 do	36 25
Tadousac	A. Christiansen	Oct. 20, 1897	25 do	
Trois Pistoles	D. Damour	May 10, 1895	25 do	
Valois Point	L. Gastonguay	Oct. 20, 1897	25 do	
Ville Marie	Jules Maillard	Feb. 2, 1899	25 do	
Total				1,463 82
<i>Nova Scotia.</i>				
Amisag	H. R. McAdam	Dec. 30, 1898	25 p. c. of collections	
Avonport	Robert Shaw	Nov. 23, 1888	25 do	
Babbins Cove	Alex. Thomas	Oct. 20, 1897	25 do	
Barrington	J. H. Christie	Aug. 31, 1896	25 do	171 33
Bass River	Jotham Fulton	Jan. 6, 1898	25 do	
Bayfield	W. McDonald	Oct. 30, 1894	25 do	28 58
Belleveau Cove	St. Clair Thérieau	Nov. 24, 1892	25 do	80 81
Broad Cove	John Teal	June 12, 1893	25 do	
Broad Cove Marsh	Hugh McDonald	Oct. 19, 1892	25 do	
Brooklyn	F. T. Gardiner	do 20, 1882	20 do	
Canada Creek	C. E. Eaton	Nov. 23, 1888	25 do	
Cape Cove	J. A. Ellis	May 14, 1897	25 do	22 12
Centreville	Alfred Ward	do 29, 1897	25 do	100 84
Chipman's Brook	Jas. Misaner	Nov. 23, 1888	25 do	
Church Point	Chas. F. Belliveau	Aug. 20, 1892	25 do	127 91
Cow Bay	John McAulay	Dec. 10, 1896	7½ do	169 98
Cranberry Head	Abram Thurston	Feb. 16, 1889	25 do	
Cribbens Pier	A. R. Boyd	Oct. 2, 1895	25 do	
Delap's Cove	B. W. McCaul	Nov. 28, 1889	25 do	6 00
Descousse	John Pertus	Sep. 10, 1898	25 do	35 84
Digby	W. W. Hayden	Apr. 20, 1897	25 do	1,817 32
Eagle Head	Nathan Leslie	do 9, 1889	25 do	
East Bay	Donald McInnis (Ronald's son.)	Apr. 5, 1886	50 do	
East River, Sheet Harbour	Malcolm McFarlane	May 20, 1890	25 do	
Grand Narrows, Victoria Co.	F. X. McNeil	Nov. 11, 1896	25 do	
Grand Narrows, Cape Breton Co.	Neil McNeil, jr.	June 7, 1894	25 do	37 98
Hall's Harbour	T. A. Neville	Jan. 8, 1897	25 do	3 16
Hampton	Judson Foster	Aug. 25, 1888	25 do	15 08
Harbourville	Isaac Cook	May 28, 1897	25 do	25 00
Horton Landing	F. G. Curry	Apr. 30, 1898	25 do	8 60
Irish Cove	Colin Cash	May 28, 1895	25 do	41 19
Jordan Bay	Wm. Martin	Aug. 25, 1896	25 do	48 34
Kelly Cove	Jos. B. Huskins	Apr. 11, 1899	25 do	
Lismore	D. A. McKinnon	July 5, 1-95	25 do	
Maitland, Hants Co.	W. B. Smith	June 8, 1894	25 do	
Maitland, Yarmouth Co.	J. Ellis	Dec. 10, 1896	25 do	34 61
Margaretsville	C. S. McLean	May 7, 1897	25 do	95 42
Meteghan Cove	H. F. Robicheau	do 28, 1897	25 do	26 64
Meteghan River	D. D'Entremont	do 14, 1897	25 do	45 00
Militia Point	D. McIntosh	Aug. 25, 1892	25 do	
Morden	John Redgate	Nov. 16, 1893	25 do	18 67
Northside, Boularderie	Dun. McKenzie	do 26, 1897	25 do	
Oak Point (Kingsport)	Rent from Railway Company			399 50
Ogilvie	M. Donnellan	July 13, 1893	25 p. c. of collections	16 81
Parrsboro'	Thompson Tipping	do 26, 1888	25 do	38 04

SESSIONAL PAPER No. 11

STATEMENT relating to Wharfs, &c.—Continued.

Locality.	Wharfinger.	Date of Appointment of Wharfinger.	Remuneration allowed.	Amount deposited credit of Receiver General.
<i>Nova Scotia—Con.</i>				\$ cts.
Pickett's Wharf	Andrew Bishop	Dec. 24, 1884.	25 p. c. of collections	31 46
Plympton	Wm. Smith	Aug. 8, 1890.	25 do	
Point Brule	Alex. Craig	Dec. 26, 1898.	25 do	10 84
Port George	W. Crawford	June 7, 1894.	25 do	57 03
Port Hood	John D. McIsaac	Dec. 26, 1898.	25 do	
Port Lorne	Freeman Beardsley	June 27, 1897.	25 do	33 25
Salmon River, Digby Co	J. M. Deveau	Nov. 25, 1890.	25 do	
Salmon River, Halifax Co	H. J. Balcon	Feb. 17, 1899.	25 do	
Saulniersville	John T. Saulnier	Aug. 25, 1888.	25 do	25 33
Tancook Island	Amos Stevens	Mar. 11, 1898.	25 do	0 45
Tidnish	A. E. Sampson	Aug. 20, 1896.	25 do	
Tracadie	J. M. Hall	Nov. 6, 1888.	25 do	
Tusket Wedge	Jas. Cothreau	Feb. 16, 1899.	25 do	
Victoria	William Brown	do 11, 1889.	25 do	10 20
Wallace	Don. McKenzie	Dec. 16, 1892.	25 do	
West Pubnico	Chas. C. D'Entremont	Mar. 28, 1898.	25 do	18 53
West River, Sheet Harbour	Malcolm McFarlane	Sep. 3, 1889.	25 do	
White Point	Elisha West	Jan. 9, 1889.	25 do	
White Waters	C. V. Anthony	Feb. 14, 1898.	25 do	63 23
Total				3,665 09
<i>New Brunswick.</i>				
Anderson's Hollow	W. C. Anderson	Feb. 13, 1889.	25 p. c. of collections	7 95
Black River	Robt. McLeod	Mar. 28, 1898.	25 do	71 00
Buctouche	J. J. LeBlanc	May 2, 1892.	25 do	301 64
Campbellton	Alfred J. Venner	June 10, 1893.	25 do	416 59
Cape Tormentine	E. T. Allen	Oct. 20, 1897.	25 do	16 51
Clifton, Stonehaven	S. Faynes	Nov. 9, 1894.	25 do	97 01
Dalhousie	W. J. Smith	June 27, 1891.	25 do	26 79
Edgett's Landing	Thos. Barnett	July 5, 1895.	25 do	82 80
Hopewell Cape	Geo. D. Wilson	Apr. 10, 1899.	25 do	24 11
Kingston	Jas. Gordon	Apr. 9, 1898.	25 do	
Neguaq	B. Poirier	June 17, 1897.	25 do	
Quaco	Jas. Delong	Mar. 29, 1898.	25 do	
St. Louis	C. Frigand	Oct. 29, 1895.	25 do	
St. Mary's	M. J. S. LeBlanc	Mar. 1, 1897.	25 do	
Tracadie	Xavier Robichaud	Apr. 14, 1897.	25 do	
Total				1,044 40
<i>Prince Edward Island.</i>				
Annandale	W. C. Jenkins	May 4, 1897.	25 p. c. of collections	22 17
Bay View	Joseph Harrington	Oct. 2, 1885.	25 do	11 81
Belfast	Thos. McLennan	July 21, 1890.	25 do	101 65
Brush Wharf	Levi R. Ings	Sept. 18, 1885.	25 do	83 66
Campbell's Cove	Angus McIntyre	Oct. 17, 1888.	25 do	
Chapel Point	Roland McCormack	Sept. 1, 1885.	25 do	11 00
China Point	W. S. N. Crane	do 18, 1885.	25 do	
Clifton	Wm. McKay	do 22, 1886.	25 do	5 70
Cranberry, East River	James Hughes	Mar. 11, 1898.	25 do	
Crapaud and Victoria Pier	E. McKinnon	July 7, 1897.	25 do	142 71
Georgetown	James Bourke	do 2, 1885.	25 do	10 25
Haggerty's Wharf	M. Burnett	Feb. 14, 1898.	25 do	
Hickey's Wharf	Mark Webster	Oct. 22, 1896.	25 do	7 50
Higgin's Shore	G. G. Henry	Nov. 9, 1891.	25 do	
Hurd's Point	R. Robblee	Oct. 6, 1888.	25 do	30 11
Kier's Shore	W. Hodgson	June 10, 1895.	25 do	92 59
Lambert	Angus McQueen	Oct. 24, 1891.	25 do	
Lewis Point	J. G. Scrimigeour	do 14, 1896.	25 do	14 51
McGee's Wharf	Norman Gallant	Nov. 9, 1891.	25 do	
Mink River	Wm. Miller	Mar. 27, 1899.	25 do	

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STATEMENT relating to Wharfs, &c.—*Concluded.*

Locality.	Wharfinger.	Date of Appointment of Wharfinger.	Remuneration allowed.	Amount deposited to credit of Receiver General.
<i>Prince Edward Island—Con.</i>				\$ cts.
Murray Harbour, South	J. McKinnon	Jan. 27, 1896	25 p. c. of collections	14 52
Nine Mile Creek	Edward Harrington	Oct. 29, 1885	25 do	
North Cardigan	Donald McIntyre	July 2, 1885	25 do	24 24
Pinette	A. H. Hubley	Dec. 18, 1897	25 do	10 51
Pownal	M. M. Haley	Oct. 13, 1896	25 do	85 84
Red Point	Alex. McEachern	Mar. 7, 1898	25 do	
St. Mary's Bay	John Dickson	Dec. 10, 1896	25 do	13 76
South Rustico, Oyster Bed				
Bridge	D. Gallant	Feb. 23, 1895	25 do	10 76
Stevens and Montague	Angus McQueen	Oct. 24, 1891	25 do	47 12
Sturgeon River	Bernard Kearney	Sept. 18, 1885	25 do	38 23
Tignish	A. J. Gaudet	Aug. 28, 1898	25 do	24 78
Vernon River	J. G. McKenzie	do 19, 1885	25 do	83 16
Wood Island	Jas. Young	Apr. 10, 1899	25 do	10 18
			Total	896 76

RECAPITULATION.

	\$ cts.
Ontario	1,282 45
Quebec	1,463 82
Nova Scotia	3,665 09
New Brunswick	1,044 40
Prince Edward Island	896 76

Total wharfage dues collected and placed to credit Receiver General. . . . \$8,352 52

ADD—Fees received by undermentioned harbour masters in excess of remuneration allowed:—

Harbour Master—Fort William, Ont.	\$ 80 00
do Midland, Ont.	6 87
do St. Johns, Que.	70 50
do International Pier, N.S.	110 00
do Louisburg, N.S.	139 00
do Pugwash do	36 00
do Chatham, N.B.	2 00
do Hillsboro' do	62 22
do Nanaimo & Departure Bay, B.C.	107 00
do Victoria and Esquimalt do	40 50

654 09

Total Revenue from Wharfs and Harbours. . . .

\$9,006 61

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APPENDIX No. 9

STATEMENT of Sick Mariners' Dues collected for the fiscal year ended June 30, 1899.

<i>Québec.</i>		<i>\$ cts.</i>	<i>Nova Scotia—Continued.</i>		<i>\$ cts.</i>
Gaspé.....		80 86	Halifax.....		9,929 46
Montréal.....		8,550 16	Kentville.....		113 74
Paspébiac.....		442 96	Liverpool.....		123 56
Perce.....		64 54	Lockeport.....		24 36
Québec.....		6,053 90	Lunenburg.....		612 60
Rimouski.....		423 69	Middleton.....		2 78
St. Armand.....		11 32	North Sydney.....		812 18
St. Johns.....		1,211 00	Parrsboro'.....		864 26
Sorel.....		114 59	Pictou.....		477 64
Stanstead.....		44 55	Port Hawkesbury.....		266 54
Three Rivers.....		480 84	Port Hood.....		15 68
Total.....		17,478 41	Shelburne.....		114 14
			Sydney.....		4,712 66
			Truro.....		2 62
			Weymouth.....		151 74
			Windsor.....		604 80
			Yarmouth.....		595 48
<i>Nor Brunswick.</i>			Total.....		20,719 42
Bathurst.....		182 96			
Chatham.....		1,446 62			
Dalhousie.....		1,057 50			
Moncton.....		1,270 26	<i>Prince Edward Island.</i>		
Newcastle.....		885 64	Charlottetown.....		292 82
Sackville.....		176 12	Summerside.....		90 28
St. John.....		5,400 64	Total.....		383 10
St. Stephen.....		118 50			
Total.....		10,538 24	<i>British Columbia.</i>		
<i>Nova Scotia.</i>			Nanaimo.....		3,243 70
Amherst.....		628 34	New Westminster.....		66 32
Annapolis.....		178 22	Vancouver.....		1,539 58
Arichat.....		65 22	Victoria.....		3,397 02
Antigonish.....		4 72	Total.....		8,246 62
Baddeck.....		42 62	Grand Total.....		57,365 79
Barrington.....		10 40			
Canso.....		197 36			
Digby.....		168 30			

APPENDIX No. 10.

REPORT ON LIFE-SAVING STATIONS.

HALIFAX, N.S., December 5, 1899.

To F. GOURDEAU, Esq.,
Deputy Minister, Marine and Fisheries Department,
Ottawa.

SIR,—In compliance with your instructions I have the honour to forward my annual report on the life-saving service of the department for the year ended June 30, 1899.

During that year I visited all the life saving stations in Nova Scotia and New Brunswick with the exception of those at Sable Island, which are now placed by your orders under the inspection of Mr. Hutchins, Lighthouse inspector for the province.

I also visited all the stations in the province of Ontario, with the exception of Poplar Point, having been informed by Mr. W. V. Pettet, M. P. for Prince Edward, that no coxswain was in charge, and that the station was not in operation.

Under your instructions I also visited one of the United States life-saving stations, Chatham, Cape Cod, in December, 1898, shortly after the disastrous wreck of the steamer *Portland* near that part of the coast.

I was shown much courtesy and every information respecting the service in the United States was freely afforded me.

Comparing Chatham, a most important station, with Sable Island which I inspected in May, 1898, I was gratified by our service bearing a satisfactory comparison with that of the United States.

HERRING COVE STATION, N.S.

Coxswain : I. Dempsey.

This station is now in excellent order, the old metallic lifeboat having been condemned and replaced by a self-righting, self-bailing boat on the Dobbin system.

The station has been inspected by me frequently in the course of the financial year, the crew mustered and seen afloat.

The coxswain and crew are able, active men, and take great interest in their duties.

DEVILS ISLAND STATION, N.S.

Coxswain : G. de Young.

This station has been personally inspected on two occasions by me.

The lifeboat is in excellent order.

The coxswain and crew efficient and active.

The launching ways have been recently refitted and repaired.

DUNCAN'S COVE STATION, N.S.

Coxswain : John Holland.

A new coxswain was appointed in lieu of Lawrence Johnson.

The lifeboat and station were inspected by me in 1898; the whole station is in excellent order.

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A Lyell gun and apparatus will shortly be established in compliance with a recommendation of the Halifax Board of Trade.

WHITEHEAD STATION, N.S.

Coxswain : H. P. Munroe.

This station was inspected by me in July, 1898.

The shelter crib-work was washed away by the late winter gales in 1898-9 and has now been reconstructed.

The lifeboat and station I found in excellent order. The coxswain and crew, active and able boatmen.

SABLE ISLAND STATION, N.S.

I have not inspected this station during the financial year ending June 30 last.

In May, 1898, I visited the island and found boats, apparatus and the whole service in the highest order.

The station under your recent orders is now placed under the inspection of Mr. Hutchins, lighthouse inspector for the province of Nova Scotia.

PICTOU ISLAND STATION, N.S.

Coxswain : Alexr. Currie.

I visited this station in July, 1898, when I carefully inspected it. The crew were mustered.

The station is complete, and was in excellent order.

PORT MOUTON STATION, N.S.

Coxswain : J. Fransel.

Visited in July, 1898.

The coxswain and crew were mustered, and the station inspected. I found it efficient and in very creditable order.

Some necessary repairs have recently been effected.

SCATTARIE STATION, N.S.

Coxswain : A. Martel.

It was late in the evening in July, 1898, when I visited this station in the Dominion Government steamer *Newfield*.

I had no opportunity of mustering the crew, but the coxswain appeared active and efficient.

The station is in good order and effective.

ST. PAUL'S ISLAND, N.S.

Superintendent : Samuel Campbell.

This station is under the able and efficient control of that experienced officer.

A new self-bailing boat, built on a model submitted by me to the department, by Mr. John Morrison, of Shelburne, has been established here.

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Recently she was tested by Mr. Campbell in the heavy breakers, broadside on; she filled several times without capsizing and emptied herself quickly by the delivery scuppers.

Mr. Campbell reports the boat as being well adapted for the service.

A Lyell gun and complete apparatus will shortly be placed at this station, making it complete.

BLANCHE STATION, N.S.

Coxswain: W. A. Smith.

This station was visited and inspected by me in July, 1898.

It was proposed to transfer it to Negro Island, which I visited, but recently it was decided by the department to retain the present station at Blanche.

On my visit I found the station in excellent order, the coxswain and crew able and efficient boatmen.

CAPE SABLE, N.S.

I visited this station in 1898, and found that the old metallic boat and the position of the boathouse were unsuitable to the requirements of the service.

A new self-bailing Beeby McClellan boat, built on my model, is now ready to be sent to this station to be placed in an available position with launching ways to the eastward and westward, when a coxswain and crew of six men will have to be appointed

SEAL ISLAND STATION, N.S.

Coxswain: H. Hitchins.

I landed at this station at a very early hour in July, 1898, and unexpectedly summoned the coxswain, who responded to my call without delay.

The station was carefully inspected and found to be in a most creditable state of efficiency: the coxswain and crew being active, well-trained boatmen.

WIND ISLAND STATION, N.S.

Coxswain: I. Pitman.

The station in its modified state is probably equal to any demand that may be made on it.

The number of wrecks that have taken place on this part of the coast during a long series of years do not indicate that any larger expenditure than that now incurred on the service is necessary,

The men on the island are active and appear to be desirous of laudably helping in case a wreck should occur.

YARMOUTH STATION, N.S.

Coxswain: A. Cain.

When I visited this station in 1898 I made a very careful inspection of it; and ordered the lifeboat, one on the Dobbin plan to be launched with her crew complete. I proceeded in her to the harbour at Yarmouth; took out the gear, parbuckled and capsize her in the presence of the coxswain and crew.

She righted instantly, and in a few seconds emptied herself of the water on the deck through the scuppers.

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The trial was an excellent one and enabled me to assure the coxswain and crews of all similar boats, that they could fully depend on the self-righting and self-bailing qualities of these boats.

CAPE TORMENTINE STATION, N.B.

I visited this station in November, 1898, and under your instructions gave orders for the removal of the lifeboat and gear to Halifax, the station being abandoned. The boat was repaired and refitted and is now at Herring Cove, N.S.

COBOURG, ONTARIO.

Coxswain : D. Rooney.

This station was visited by me in October, 1898, the coxswain and crew mustered, the lifeboat launched and inspected afloat.

I found everything in excellent order, the coxswain and crew efficient men.

PORT HOPE STATION, ONTARIO.

This station was visited and inspected in October, 1898.

As it is only seven miles to the westward of Cobourg, there did not appear any necessity for its maintenance under the usual rate of expenditure for a paid coxswain and crew.

Under the orders of the department the station has been placed in the charge of the harbour authorities, who will doubtless maintain it to meet any requirement likely to be made upon it.

PELEE ISLAND, ONTARIO.

Visited by me in October, 1898.

I found the station in abeyance, its removal to another more eligible position being under the consideration of the department.

The coxswain, Mr. A. Henning, although unpaid retains the charge of the lifeboat, stores and appliances.

Everything was in very good order.

Pelee Point on the mainland was reported to me to be the most eligible site, there now being more shipping plying in that part of the lake than near Pelee Island where the trade by sailing vessels is inconsiderable.

COLLINGWOOD STATION, ONTARIO.

I also visited this station in October, 1898.

The coxswain P. Doherty.

It was blowing hard with a heavy sea outside the harbour.

The coxswain and crew were mustered promptly, and I took the boat outside in the sea-way.

She answered very well, the coxswain and crew being efficient.

The station is in excellent order.

GODERICH, ONTARIO.

Coxswain : W. Babb (since superseded).

This station was visited in October, 1898. Since then a new coxswain has been appointed.

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The lifeboat and gear were in good order.

I had no opportunity of mustering the crew, or testing their qualifications, being pressed for time.

PORT ROWAN STATION, ONTARIO.

Coxswain : R. Clark.

This station was also visited in October, 1898.

The boat although not one of the Dobbin, or Beeby McClennan class is fully equal to the requirements of the locality.

The boat-house is small and inconvenient, but as the owners of the land on which it stands have applied to have it removed a new one will have to be built on the established plan which will afford the requisite accommodation.

The boat and gear were in good order and fit for the service.

PORT STANLEY STATION, ONTARIO.

Coxswain : W. Berry.

When I visited this station the lifeboat was under extensive repairs.

The station was in good order, and the coxswain and crew quite competent to perform their duties satisfactorily.

TORONTO STATION, ONTARIO.

Coxswain : W. Ward.

This station was visited and inspected in October, 1898. The coxswain and crew were mustered, the boat launched.

Everything was in good order and fit for service.

HALIFAX, N.S.

Under your instructions a Dobbin lifeboat is now under repair, to be stationed here, ready for service to be sent to vessels in distress by steam tug or other vessel when the boats at Devil's Island, Herring Cove, or Duncan's Cove are not available.

A Lyell gun and apparatus is also ordered to be maintained here in readiness to be sent to any part of the coast when occasion requires.

These have been authorized by the department, in compliance with the recommendation of the Halifax Board of Trade, with whom I had the pleasure of co-operating early in the spring of this year.

My recommendation as to effecting improvements or changes in the life saving service, will be submitted to you with the general regulations now under my revision in pursuance of your orders.

I have the honour to remain, sir,

Your most obedient servant,

BLOOMFIELD DOUGLAS, R.N.R.,
Naval Assistant, Marine and Fisheries Department.

STATEMENT

RELATIVE TO

LIFE-BOAT STATIONS

STATEMENT relative to Life-Boat Stations

Number.	Stations.	Established.	Coxswain.	Number of Crew.	Salary of Coxswain.	Wages of Crew.
1	Blanche, N.S.	Sept. 2, 1895	W. A. Smith	6	\$75 per annum and \$1.50 each drill	\$1.50 each drill twice a month for 7 months.
2	Cape Sable, N.S.	New self-bailing boat built				
3	Cobourg, Ont.	Nov. 2, 1882	D. Rooney	6	\$75 per ann. \$1.50 each drill	\$1.50 each drill twice a month for 7 months.
4	Collingwood, Ont.	Sep. —, 1885	P. Doherty	6	" " "	" ..
5	Consecon, Ont.	Mar. —, 1883	H. McCullough	6	" " "	" ..
6	Devil's Island, N.S.	1885	G. de Young	6	" " "	" ..
7	Duncan's Cove, N.S.	1886	J. Holland	6	" " "	" ..
8	Goderich, Ont.	Oct. 2, 1886		6	" " "	" ..
9	Herring Cove, N.S.		J. Dempsey	6	" " "	" ..
10	Mud Island, N.S.		J. Pitman	No organized crew.	\$80 per annum	" ..
11	Pelee Island, Ont.		A. Henning	Nil		
12	Pictou Island, N.S.	Nov. 2, 1889	Alex. Currie	6	\$75 per annum \$1.50 each drill	\$1.50 each drill twice a month for 7 months.
13	Poplar Point, Ont.	April—, 1883			Station in obedience	
14	Port Hope, Ont.	Nov. 2, 1889				
15	Port Mouton, N.S.	" —, 1889	J. Frausel	6	\$75 per annum \$1.50 each drill	\$1.50 each drill twice a month for 7 months.
16	Port Rowan, Ont.	Oct. 2, 1883	R. Clark	6	" " "	" ..
17	Port Stanley, Ont.	June—, 1885	W. Berry	6	" " "	" ..
18	Sable Island, N.S.	1885	Supt. Humane Establishment.	Paid as staff	Humane Establishment	Paid as staff Humane Establishment
19	Scatterie, N.S.	1885	F. Martel	6	\$75 per annum \$1.50 each drill	\$1.50 each drill twice a month for 7 months.
20	Seal Island, N.S.	1880	H. Hitchins	7	\$250 per annum	\$100 each per annum
21	Seal Cove, N.B. Grand Manan	Dec. 2, 1898	F. Benson	6	\$75 per annum \$1.50 each drill	\$1.50 each drill twice a month for 7 months.
22	St. Paul Id., N.S.		Supt. Humane Establishment.	Paid as staff Humane Establ'm't.	Humane Establishment	Paid as staff Humane Establishment
23	Toronto, Ont.	Mar. —, 1883	W. Ward	6	\$75 per annum \$1.50 each drill	\$1.50 each drill twice a month for 7 months.
24	Whitehead, N.S.	June —, 1890	H. P. Munroe	6	" " "	" ..
25	Yarmouth, N.S.	1886	A. Cain	6	" " "	" ..

HALIFAX, N.S., December 5, 1899.

SESSIONAL PAPER No. 11

maintained by the Dominion Government.

Description of Boat.	Equipment.	Where Built.	Cost.	Remarks.
Self-righting and self-bailing, 25 feet over all, 8 feet beam Dobbin's pattern. Station in course of establishment. The old metallic boat condemned. New boathouse, &c., proposed.	Full equipment required boat-house.	Dartmouth, N.S.	\$ 575	
Self-righting, self-bailing, 25 feet over all, 8 feet beam, Dobbin's pattern.	Full regulation	Goderich, Ont.	575	
Self-bailing, 27 feet over all, 8 feet beam.	" "	Collingwood, Ont	360	
Self-bailing, self-righting, Dobbin's pattern.	" "	Dartmouth, N.S.	1,400	Including carriage.
" "	" "	"	575	
" "	" "	"	575	A Lyell gun, and apparatus to be established here.
" "	" "	"	575	
" "	" "	"	575	
Fishing boats, and dories, one fitting with air cases.				
Removal of self-righting, self-bailing, boat and service under consideration.		Goderich, Ont.	575	
Self-bailing, self-righting, Dobbin's pattern.	Full regulation	Dartmouth, N.S.	595	
" "	"	Buffalo, N.S.	550	
Self-righting, self-bailing boat under the care of the Harbour authorities.		Goderich, Ont.	620	
Self-righting and bailing, Dobbin's pattern.	Full regulation	Dartmouth, N.S.	575	
Surf-boat, 26 ft. long. 6½ beam	" "	Buffalo, N.S.	375	
Self-righting, self-bailing Dobbin's pattern.	" "	Goderich, Ont.	575	
Two Dobbin's, self-righting and bailing boats one Beebe-McClellan self bailing boat.	" "	Halifax, N.S.	1,100	Lyell guns and rocket apparatus at this station.
Self-righting and bailing Dobbin life-boat on east side, and one clinker built ship's life-boat, west side.	" "	Dartmouth, N.S.	550	
Beebe-McClellan boat on east side surf-boat on west side.	" "	Halifax, N.S.	375	
Beebe-McClellan self-bailing, boat 25 feet, 7 feet beam.	" "	Shelburne, N.S.	250	
Beebe-McClellan boat, 24 feet, 6½ feet beam.	" "	"	250	A Lyell gun and apparatus to be established here.
Beebe-McClellan self-bailing boat, 27 feet over all, 7 feet beam.	" "	Halifax, N.S.	250	
Self-righting, self-bailing, boat, Dobbin's pattern.	" "	Dartmouth, N.S.	575	
" "	" "	"	575	

BLOOMFIELD DOUGLAS, R.N.R., *Naval Assistant,*
Marine and Fisheries Dept.

APPENDIX No. II.

MESSENGER PIGEONS.

HAZEL HILL, GUYSBORO' CO., N.S., December 5, 1899.

The Deputy Minister of Marine and Fisheries,
Ottawa, Ont.

SIR,—During the past season, the training of the messenger pigeons has been entered into more thoroughly than during any previous season since the birds have been located here, and the results, on the whole, have been more satisfactory than those hitherto attained.

I am, however, again forced to the conclusion that we cannot hope by such means to secure communication between here and Sable Island, which would be to the smallest extent reliable, or of any service to your department.

Birds have been flown as in the accompanying statement.

On October 28, six birds were sent to Guysboro', and flown from there, but of these only one returned to Hazel Hill. Upon my return journey from Guysboro to Hazel Hill on the 29th, I saw two of these birds in the woods about 8 miles from Guysboro, but they flew off in the opposite direction to their home. This is the longest distance we have flown them, and considering that the distance was only 30 miles, I do not think the result promises well for the much greater distance to Sable Island.

On October 4, the Halifax agent of your department wired me that SS. *Minto* en route to Sable Island would call here for birds. Sixteen well trained birds were promptly got ready for transportation to Sable Island, but as the *Minto* failed to call, the only result was that the birds were kept in cramped quarters for 48 hours. It is much to be regretted, that such an opportunity to make a valuable test should have been lost.

Captain Kelley of the SS. *John L. Cann*, has rendered valuable service in taking birds across and flying them from the opposite side of the Chedabucto Bay, and in this way the most satisfactory results have been obtained, but I have found difficulty in getting the birds taken in other directions, as whilst people do not mind carrying a basket occasionally, they demur at doing so as a regular thing, and consequently, a systematic long distance training in all directions, will necessitate your department defraying transportation expenses.

If your department wishes the training to be continued, I must ask them to vote a more liberal amount for the purpose. During the past two years, my time has been so fully occupied, and business has called me from home so often, that I have been able to devote but little of my time to the pigeons. Mr. F. Lawson, who manages them very thoroughly, has practically had complete charge of the birds, but they occupy the whole time of one person, and your department can scarcely expect to receive the services of a competent man for eleven dollars per month.

Whilst dealing with the subject, you will perhaps pardon me for expressing the opinion, that I think your department might profitably direct its attention to wireless telegraphy as a mean of establishing communication with Sable Island. Within the past few months, Signor Marconi has amply demonstrated, that his system of wireless telegraphy is both practicable and reliable, as a means of obtaining communication between points separated by considerable stretches of water. Within a distance of about eighty miles, it is no longer an experiment, and Signor Marconi firmly believes that he can increase this distance. I consider Hazel Hill a very favourable point from which to operate such a system, as it stands at an elevation of about 150 feet above sea level with no intervening high land between it and Sable Island, and this initial eleva-

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tion would prove decidedly advantageous. I am quite sure that the company, which I have the honour to represent, would render the Government every possible assistance in endeavouring to establishing such a means of communication, and its maintenance could from this point receive the attention of expert electricians and telegraphists. The system of wireless telegraphy as installed on and operated from our cable repairing steamer *Mackay-Bennett*, for the purpose of reporting the recent international nacht races, was quite a success.

I beg to remain, sir,

Yours truly,

S. S. DICKINSON.

NOTES.

There are now about 120 pigeons in the house, seventy old and fifty young.

Thirty birds were hatched in May and June, had no rings to put on them when hatched. Have put split rings on them since, twenty young birds flying. The old birds do not seem to go out much. The birds have been sent to Arichat, C.B., and Guysboro', N.S., and various points between, and the majority of them have returned. Have lost about ten in training. The birds are now in good condition. We want about four training baskets to hold two birds each. I find when a number of birds are put in a basket together they fight and tumble over each other and get tired and much soiled.

A register book is required. The one here is all filled up. If the birds remain here this winter will require six barrels, food, four of corn and two of pease.

I am not allowing the birds to breed as there are too many now. Less of them would be better. The twenty young birds flying daily are making good progress in training for the opportunities offered. It is difficult to transport the birds to the various points just at the time required, thus impeding the advance I would like.

(Extracts from notebook of F. Lawson, caretaker.)

S. S. DICKINSON.

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Number	Sex	Age	Color	Wings	Tail	Bill	Feet	Other	Remarks
566									
568									
569									
573									
575									
631									
637									
640									
670									
671									
672									
710									
717									
719									
721									
655									
658									
*5									
*2									
*6									
*4									
*5									
*4									
*3									
*3									
*3									
*4									
*2									
*3									
*5									
*3									

* Birds without rings.

S. S. DICKENSON.

APPENDIX No. 12.

REPORT OF THE CHAIRMAN OF THE BOARD OF STEAMBOAT INSPECTION.

CHAIRMAN'S OFFICE,

OTTAWA, November, 1899.

Sir LOUIS H. DAVIES,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of the Steamboat Inspection Service for the fiscal year ended June 30, 1899.

The report contains statement of board meetings held during the year; the casualties reported as having occurred, and prosecutions for violation of the Steamboat Inspection Act with the number of steamboats registered in the Dominion as known to the inspectors; form No. 1, showing the steamboats which were inspected; form No. 2, steamboats not inspected; form No. 4, the number of steamboats added to the Dominion; form No. 5, the number of steamboats lost, broken up or otherwise put out of service; and form No. 1 A, showing the number of steamers inspected, being registered elsewhere than in the Dominion.

Table A shows the number of steamers as reported by the inspectors in the several divisions, with their gross tonnage; also, the number of steamers inspected but not registered in the Dominion, with their tonnage; table B the amount of dues and fees collected on account of steamboat inspection; and table C the number of steamboats added to the Dominion, with their gross and registered tonnage.

In addition to the steamboats inspected at the port of Montreal; the hoisting gear and ships' tackle of 459 vessels, used for the purpose of loading and unloading those vessels, was inspected by Mr. Louis Arpin, who was appointed for said purpose, and also that of a steamboat boiler and machinery inspector, when not otherwise employed.

A.—NUMBER of Steam Vessels as reported by the Inspectors of Steamboats in the Dominion, and their gross tonnage, for the year ended June 30, 1899. Also, the number of Vessels inspected but not registered in the Dominion for same date.

Division.	Total number of Dominion Steamers.	Gross tonnage of Dominion Steamers.	Number of Steamers inspected but not registered in the Dominion.	Gross tonnage of Steamers inspected but not registered in the Dominion.
West Ontario, Huron and Superior.....	375	71,568 00	33	15,535 00
Kingston.....	166	26,224 15	37	4,851 52
Montreal.....	207	21,476 67	Nil	.....
Quebec.....	129	33,726 00	1	1,091 00
Nova Scotia.....	126	23,438 99	19	26,019 19
New Brunswick and Prince Edward Island.....	132	15,839 38	3	5,009 39
British Columbia.....	178	38,176 19	30	35,278 45
Manitoba, Keewatin and North-west Territories.....	114	5,808 55	1	329 00
	1,427	236,257 93	124	88,113 55

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B.—DUES and Fees collected on account of Steamboat Inspection during the year ended June 30, 1899.

Division.	Amount.
	\$ cts.
West Ontario, Huron and Superior.....	8,490 90
Kingston.....	3,544 20
Montreal.....	2,652 59
Quebec.....	3,506 04
Nova Scotia.....	4,556 24
New Brunswick and Prince Edward Island.....	2,218 40
British Columbia.....	7,395 10
Manitoba, Keewatin and North-west Territories.....	756 20
Inspecting tow barges.....	130 00
Engineers' certificates.....	910 00
	34,159 67

C.—NUMBER of Steam Vessels added to the Dominion during the year ended June 30, 1899.

Division.	Number of Vessels.	Gross Tonnage.	Register Tonnage.
West Ontario, Huron and Superior.....	18	4,791 00	2,656 00
Kingston.....	11	1,818 80	1,016 73
Montreal.....	11	1,646 11	894 08
Quebec.....	8	1,173 78	919 58
Nova Scotia.....	7	578 53	307 13
New Brunswick and Prince Edward Island.....	Nil	.....	.....
British Columbia.....	43	11,310 33	6,880 34
Manitoba, Keewatin and North-west Territories.....	14	472 54	278 51
	112	21,791 09	12,952 37

BOARD MEETINGS.

A meeting of a quorum of the Board of Steamboat Inspection was held at Kingston from 20th to 28th March inclusive, being composed of Mr. I. J. Olive of St. John, N.B., and Mr. Wm. Evans, of Toronto, hull inspectors, with the chairman E. Adams.

The meeting was for the purpose of examining candidates for the position of hull inspector for East Ontario Division, rendered vacant by the retirement of Mr. T. Donnelly who formerly retained the office.

Mr. Alex. Horn, who passed a satisfactory examination, with proofs as to fitness; was recommended as qualified for the position, and was appointed by Order in Council of May 10, 1899, at a salary of \$1,000 per annum.

A meeting of the Board was also held at Toronto, from 29th to 31st May inclusive, composed of Jas. Johnston and John Dodds, boiler and machinery inspectors of Toronto, with the chairman E. Adams.

The meeting was held for the purpose of considering a revision of the rules governing the strength of circular machine-made furnaces; to meet in conformity with British Board of Trade rules; together with rules for determining a standard for strength of spherical heads, as existing in steam drums of modern water tube boilers.

Rules being formulated, were submitted under sec. 6, 61 Vict., chap. 46 of the Steamboat Inspection Act, for consideration and approval of the Governor in Council.

CASUALTIES.

The following are the casualties reported from the several divisions as having occurred ; in which it is shown, by the foundering of steamer *City of Hinsworth* in a strong gale on Kootenay Lake, nine lives were lost, six of whom were the crew, and three passengers. Also by the burning of tug *H. F. Bronson* on River St. Lawrence, two of the crew who jumped overboard were drowned.

West Ontario and Huron Division.

August 5, 1898.—Steam tug *P. M. Campbell* of Collingwood, was totally destroyed by fire at Manitowaning ; cause of fire unknown.

August 13, 1898.—Steam tug *Ainsley* of Owen Sound, was totally destroyed by fire at South Bay, Manitoulin Island ; cause of fire unknown.

September 17, 1898.—Steamer *J. H. Jones* of Goderich, while coming out of Kagawong, Manitoulin Island, collided with the steamer *Pacific* of Owen Sound, and sank ; was again raised, and taken to Owen Sound dry dock, where the necessary repairs were made.

November 2, 1898.—Steamer *Pacific* of Owen Sound, was totally destroyed by fire at Collingwood, while lying at the Grand Trunk Railway wharf, from the cause of warehouse on the wharf taking fire, which extended to the steamer.

November 7, 1898.—Steamer *Northern Belle* of Collingwood, while entering Byng Inlet, took on fire, and was totally destroyed ; cause of fire unknown.

May 13, 1899.—Steamer *Hamilton* of Montreal, while on Lake Ontario en route for Toronto, broke the cross-head of engine ; temporary repairs were made permitting her to proceed on to Toronto, where a new one was provided.

East Ontario Division.

August 23, 1898.—Steamer *Golden City* of Peterboro, while lying at Lakefield wharf was totally destroyed by fire ; cause unknown.

October 22, 1898.—Tug *James A. Walker* of Kingston, while on a trip from Charlotte to Kingston, encountered a heavy gale on Lake Ontario, was swamped, and sank off Nicholson's Island ; no lives were lost.

December 5, 1898.—Steamer *Arabian* of Hamilton, on a voyage from Fort William to Prescott, when on Lake Ontario broke the connecting rod on high-pressure cylinder, which caused the breaking of the cross-head, starboard column, and cylinder bottom. The steamer was towed to Kingston, where the necessary repairs were made.

June 22, 1899.—Tug *H. F. Bronson* of Montreal, on a trip from Montreal to Kingston took on fire near Alexandria Bay, River St. Lawrence, and was run aground to save the lives of the crew, two of whom jumped overboard and were drowned. The fire was extinguished, and boat was towed back to Kingston for repairs. Cause of fire unknown.

Montreal Division.

July 8, 1898.—Tug *Monarque* of Montreal, while towing from Carillon to St. Ann's on the Ottawa River, broke her port paddle shaft which was of cast iron, and showing a flaw where broken, it was replaced by one of wrought iron.

August 29, 1898.—Grain Elevator No. 4, whilst lying alongside of SS. *Hurona* of Dundee, in the port of Montreal ; caught fire from some unknown cause and was partially destroyed. Damage about \$800.

September 8, 1898.—Tug *Ida* of Quebec, while proceeding from Lachine to Beauharnois with barges in tow, collided with the passenger steamer *Algerian* of Montreal, destroying the tug's upper works, but causing no damage to the *Algerian*. No loss of life. Cause, the tug's signal lights were not lit.

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June 25, 1899.—Tug *Dandy* of Montreal, while crossing from Coteau Landing to Valleyfield with a tow of barges, broke her crank pin, owing to a flaw in the metal; it was replaced with a new one.

Quebec Division.

November 19, 1898.—SS. *Otter*, while on a voyage from Natasquan to Quebec, was stranded on White Island reef and became a total loss. No loss of life.

February, 1899.—SS. *Acadian*, on a voyage from Halifax to Louisbourg, ran on a rock and became a total wreck. No loss of life.

March, 1899.—The steam wrecking schooner *Anna McGee* when leaving the wreck of steamer *Castilian* on Garnet Rock, N.S., struck on a reef, and became a total loss.

July 21, 1899.—Paddle steamer *Mistassini*, plying on Lake St. John, while lying at her wharf at Roberval, took fire, and was burned to the water's edge.

Nova Scotia Division.

October 7, 1898.—Steamer *Blue Hill* of Sydney, N.S., while on a voyage from Baddeck to Grand Narrows, broke the port propeller shaft close to after coupling, was worked into port with the starboard engine, when a new shaft was fitted.

January 5, 1899.—Steamer *Alpha* of Windsor, N.S., while on a voyage from Yarmouth to Halifax, broke her shaft close to propeller wheel; was towed to Halifax, and fitted with a new shaft and propeller wheel.

New Brunswick and Prince Edward Island Division.

July 29, 1899.—SS. *David Weston* broke the pin in cylinder end of walking beam, while on her trip from St. John to Fredericton; was towed to St. John, and repaired.

September 12, 1899.—SS. *Miramichi* broke her crank shaft, while on her regular route; was replaced with a new one.

October 15, 1898.—Steam tug *Captain* sunk at Marble Cove, caused by a cock having been left open; was lifted again and repaired.

November 30, 1898.—SS. *Olivette* was burned while lying on Hilyard's Marine Dock, on the blocks; a total loss.

March 22, 1899.—SS. *Storm King* broke her crank shaft while at work in St. John Harbour; a new one was fitted.

April 24, 1899.—SS. *Prince Rupert* broke her port paddle-wheel, and started both cranks on low-pressure shaft, by striking some floating obstruction, when about six miles from Digby Gut; finished her trip and returned to St. John with one paddle-wheel, where she was repaired.

Manitoba, Keewatin and North-west Territories.

July 22, 1898.—Steamer *D. L. Mather* while moored to the wharf at Keewatin, caught fire from some unknown cause; the boat was scuttled, and sank; was afterwards raised and repaired; the estimated loss was about \$3,000.

British Columbia Division.

July 2, 1898.—Steamer *Marquis of Dufferin* in tow from Victoria to Yukon River, foundered in a gale off Cape Beale, Vancouver Island; no loss of life.

August 1, 1898.—Steamer *Stickeen Chief* in tow from Wrangel to Yukon River, foundered in gale off Yankutat, N. Pacific; no loss of life.

September 8, 1898.—Steamer *Rosslund* 2.15 a.m., on passage from Robson to Arrowhead, Columbia River, struck tug *Fawn* forward of pilot-house, cutting her in two. The signal lights of *Fawn* were not burning; *Rosslund* uninjured, *Fawn* since repaired.

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September 11, 1898.—Steamers *Edgar*, *Bon Accord* and *Gladys*; fire at New Westminster wharfs and water front, destroyed above steamers, which burned to water's edge; filled and sank in deep water; no lives lost.

September 16, 1898.—Steamer *Barbara Boscowitz*, on passage to Fort Simpson, struck on reef about three miles from Kitkathla, remained and filled, was afterwards raised, brought to Victoria and repaired.

November 29, 1898.—Steamer *City of Ainsworth*, 7.30 p.m., foundered in a strong gale, six miles south of Pilot Bay, Kootenay Lake; nine lives were lost, three passengers, and six of the crew.

February 1, 1899.—Steamer *Greenwood*, laid up on account of ice at 'Okanagan Falls' Dog Lake, caught fire from an overheated stove, and was destroyed.

March 25, 1899.—Steamer *Lees*, 1.30 a.m., stranded on Thorburn Island, Seaforth Channel, remained twenty-two hours, floated off without assistance, proceeded to Victoria, was placed on marine ways and repaired.

June 19, 1899.—Steamer *Danube* struck on Kelp Bar, north end of Denman Island, filled and sank to main deck, was raised, brought to Victoria, and placed on marine railway; damage seven plates on starboard side fractured and dented, which were renewed.

PROSECUTIONS WITH PENALTIES ENFORCED FOR VIOLATION OF THE STEAMBOAT INSPECTION ACT.

September 21, 1898.—Steamer *Temiscamingue* of Ottawa was seized at Temiscamingue by orders of collector of customs for violation of the Steamboat Inspection Act, by carrying passengers without having the necessary certificate for so doing.

The Department of Marine and Fisheries took steps to institute proceedings for the infliction of the penalty, when the owner voluntarily agreed to pay a modified fine of \$100, which was deposited to the credit of the Receiver General, in Bank of Montreal, November 16, 1898.

August 29, 1898.—Steam tugs *Pinafore* and *Merina* violated the Steamboat Inspection Law, by towing a barge with passengers on board from Round Hill to Digby, N.S., the barge not having been certificated for such as required by law.

The matter was brought to the attention of the department, who on investigation found it had been done through ignorance of the law, and as it was their first offence brought to the notice of the department; under the circumstances a nominal fine of \$10 each was imposed, which was forwarded to the department by draft No. 301, November 1, 1898.

April 6, 1899.—Proceedings were ordered to be taken against steamer *Clinton* for violation of the Steamboat Inspection Law, by having in charge an engineer not having the necessary certificate required, qualifying for such class of vessel.

Information was laid against the owner, captain and engineer. The case was tried before the county judge at Toronto, who found the owner and engineer guilty; and inflicted on each a fine of \$50 and costs, amounting in all to \$107.40 which was received by deposit receipt, Bank of Montreal, to the department by letter of July 18, 1899.

I am, sir,

Your obedient servant,

EDWARD ADAMS,
Chairman Board of Steamboat Inspection.

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STEAM Vessels Inspected for the Year ended June 30, 1899.

WEST ONTARIO DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899		\$ cts.	
Conqueror	40	July 11.	25	7 00	Screw, Orillia to Barrie.
Annie C. Hill	Yacht	" 11.	14	6 12	" " Lake Simcoe.
Sea Flower	"	" 12.	7	5 56	" " "
Mink	40	" 13.	13	6 04	" " Muskoka Lakes
Wanda	Yacht	" 13.	12	5 96	" " "
Nymoca	40	" 13.	25	7 00	" " "
Jennie Wilson	Tug.	" 14.	7	5 56	" " "
Rosseau	"	" 14.	53	9 24	" " "
Flyer	17	" 14.	4	5 32	" " "
Wapenao	Yacht	" 14.	5	5 40	" " "
Onaganoh	20	" 15.	19	6 52	" " "
Southwood	Tug.	" 15.	19	6 52	" " "
Bertha May	"	" 15.	20	6 60	" " "
Naiad	Yacht	" 15.	29	7 32	" " "
Allena May	Tug.	Not issued	16	6 28	" " "
Ontario	"	July 16.	11	5 88	" " "
Ethel May	Yacht	" 16.	13	6 04	" " "
Lake Joseph	Tug.	" 16.	28	7 24	" " "
Maple Leaf	Yacht	" 18.	12	5 96	" " "
*Wawonaissa	"	Not issued	7	11 12	" " "
Empress Victoria	100	July 20.	106	16 48	" Lakes at Huntsville.
Sylvester	Tug.	" 20.	27	7 16	" " "
Gem	"	" 21.	9	5 72	" " "
Erastus Wiman	"	" 21.	54	9 32	" " "
Florence	"	" 22.	27	7 16	" Lake of Bays.
Mary Louise	40	" 22.	64	10 12	" Portage Lake.
Lady of the Lake	Tug.	" 22.	10	5 80	" Lake of Bays.
Equal Rights	Yacht	" 22.	6	5 48	" " "
Waubashene	Tug.	Aug. 15.	97	12 76	" Georgian Bay.
J. C. Else	"	" 16.	33	7 64	Paddle, Sturgeon Bay.
Sea Gull	"	" 16.	9	5 72	Screw, Georgian Bay.
John William	"	" 17.	14	6 12	" " "
Queen City	328	" 19.	312	32 96	" Toronto and Niagara.
Jessie L. McEdwards	Tug.	" 22.	21	6 68	" Lake Ontario.
Lillian	Yacht	" 29.	5	5 40	" Georgian Bay.
Stiletto	30	" 16.	14	6 12	" Waubashene to Moon River.
May Flower	Tug.	" 16.	14	6 12	" Georgian Bay.
Home Rule	Yacht	June 24.	3	5 28	" " "
Chub	Freight	Sept. 1.	57	9 56	" Lake Ontario.
Severn	Tug.	" 12.	44	8 52	" Georgian Bay.
J. S. Blazier	"	Not issued	89	12 12	" The Lakes.
W. A. Rooth	"	Sept. 20.	52	9 16	" " "
Edgar P. Sawyer	"	" 20.	52	9 16	" Lake and River.
Philadelphia	35	" 21.	148	19 84	" Montreal and Duluth.
Herbert	Tug.	" 21.	21	6 68	" St. Mary's River.
Sea Gull	"	" 22.	41	8 28	" " "
Hattie Vinton	"	" 24.	55	9 40	" Lake Superior.
Gordon Gauthier	"	" 24.	26	7 08	" " "
Ann Clark	"	" 24.	51	9 08	" " "
Susan C. Doty	"	" 26.	26	7 08	" " "
Islander	"	Not issued	6	5 48	" St. Mary's River.
Delight	"	Sept. 29.	26	7 08	" Lake Huron
Agnes C.	"	" 30.	20	6 60	" North Channel.
Bertha Endress	"	" 30.	32	7 56	" St. Mary's River.
M. G. McDonald	"	Oct. 3.	29	7 32	" Lake Huron.
James McKeon	"	" 3.	36	7 88	" do
Stella	"	" 3.	16	6 28	" do
P. S. Hiesordt	"	" 3.	45	8 60	" do

* Fees and dues for 1897 and 1898.

STEAM Vessels Inspected, &c.—West Ontario Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Camilla.....	15.....	Oct. 3..	54	9 32	Screw, Pt. aux Pins to Thessalon.
Scotch Thistle.....	30.....	" 4..	17	6 36	" Killarney to Algoma Mills.
Georgia.....	Tug ..	" 4..	28	7 24	" Lake Huron.
Alpha.....	" ..	" 4..	34	7 72	" Georgian Bay.
Fanny Arnold.....	25.....	" 4..	73	10 84	" Kiliarney to Soo.
John Harrison.....	Tug.....	" 6..	44	8 52	" Lake Huron.
Evangeline.....	Yacht.....	" 6..	24	6 92	" "
Gertrude A. Rennie.....	Tug.....	" 6..	14	6 12	" "
Maggie May.....	40.....	" 7..	46	8 68	" Killarney and Thessalon.
Creole.....	Tug.....	" 7..	21	6 68	" Lake Huron.
Uncle Jim.....	" ..	" 7..	11	5 88	" North Channel.
Ethel.....	" ..	" 8..	13	6 04	" Georgian Bay.
Cynthia.....	" ..	" 8..	35	7 80	" "
Maida.....	Yacht.....	" 8..	2	5 24	" "
Surprise.....	10.....	" 10..	19	6 52	" Meldrum Bay to Little Current.
Tecumseh.....	Tug.....	Not issued	9	5 80	" Lake Huron.
Huron Belle.....	" ..	Oct. 11..	27	7 16	" "
		1898.			
City of Windsor.....	300.....	Dec. 30..	511	44 88	" Collingwood to Soo.
		1899.			
Edna.....		Not issued	55	9 40	" "
Mascot.....	Tug.....	Nov. 29..	21	6 68	" Georgian Bay.
James Playfair.....	" ..	" 29..	26	7 08	" "
Laura M.....	" ..	" 30..	18	6 44	" "
Mizpah.....	Yacht.....	" 30..	18	6 44	" "
James Storey.....	Freight.....	Dec. 1..	49	8 92	" "
		1900.			
Ada Alice.....	100.....	March 2..	53	9 24	" Toronto and Island.
Eurydice.....	300.....	April 15..	319	33 52	Paddle, Lakes and River.
Luella.....	125.....	" 20..	38	8 04	Screw, Toronto and Island.
Bob Foote.....	Tug.....	" 22..	39	8 12	" Georgian Bay.
Hugh S.....	" ..	" 22..	24	6 92	" "
Orcadia.....	" ..	" 22..	26	7 08	" "
Saucy Jim.....	" ..	" 22..	93	12 44	" "
Dalton McCarthy.....	" ..	" 22..	54	9 32	" "
Telegram.....		Not issued	198	23 84	" Lake Superior.
Dredge Dalt. McCarthy.....		Not registered			
Maud S.....	Tug.....	April 24..	14	6 92	" Georgian Bay.
City of London.....	308.....	" 24..	516	49 28	" Kingston to Quebec.
Fred A. Hodgson.....	Tug.....	" 24..	63	10 04	" Georgian Bay.
Lillie.....	" ..	" 24..	50	9 00	" "
Dredge No. 1.....	Dredge ..	Not registered			
City of Toronto.....	400.....	April 25..	782	70 56	Paddle, Penetang and Soo.
W. J. Aikens.....	Tug.....	" 25..	42	8 36	Screw, The Lakes.
City of Parry Sound.....	280.....	" 25..	491	47 28	" Collingwood and Soo.
City of Midland.....	375.....	" 26..	974	85 92	" " "
Majestic.....	763.....	" 26..	1,578	134 24	" " and Duluth.
Atlantic.....	300.....	" 26..	683	62 64	" " and Soo.
City of Collingwood.....	650.....	" 26..	1,387	118 96	" " and Duluth.
Athabasca.....	500.....	" 27..	2,269	189 52	" O. Sound and Ft. William.
Alberta.....	500.....	" 27..	2,282	190 56	" " "
Manitoba.....	500.....	" 27..	2,616	217 28	" " "
Rosedale.....	Freight.....	" 27..	1,507	125 56	" The Lakes.
*Heather Belle.....	Tug.....	" 28..	20	13 20	" Georgian Bay.
Algonquin.....	Freight.....	" 28..	1,806	149 48	" The Lakes.
Rover.....	Tug.....	" 29..	51	9 08	" Georgian Bay

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, &c.—West Ontario Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Dredge No. 9.	Dredge.	Not issued	187	19 96	
C. W. Chamberlain	Freight	May 2.	385	35 80	Screw, Kingston and Duluth.
Metamora	Tug.	" 3.	239	24 12	" The Lakes.
Magnolia	"	" 3.	367	34 36	" "
Mimintaga	"	" 3.	73	10 84	" "
Topsy	Yacht	" 4.	9	5 72	" Georgian Bay.
Superior	Tug.	" 4.	89	12 12	" The Lakes.
* Lilly	"	" 4.	22	13 52	" Georgian Bay.
Masonic.	40	" 5.	39	8 12	" Penetang and Pt au Baril.
Roy	Yacht	" 5.	6	5 50	" Georgian Bay.
Ida	"	" 5.	21	6 68	" "
Shawanaga	Tug.	" 5.	96	12 68	" "
Reliance	"	" 6.	311	29 88	" The Lakes.
Fred. Davidson	125	May 6.	43	8 46	" Penetang and Pt. aux Baril.
*Lillie May	Tug	" 6	10	17 40	" Georgian Bay.
Maud	40	" 8.	40	8 20	" Penetang and Pt. aux Baril.
Harvey Neelon	Tug	" 10.	65	10 20	" The Lakes.
Chicora	872	" 11.	931	82 48	Paddle, Lake Ontario.
Chippewa	2000	" 11.	1514	129 12	" Toronto and Lewiston.
Corona	1456	" 11.	1274	109 92	" " "
Ongiara	244	" 11.	98	12 84	" Niagara and "
White Star	624	" 19.	451	44 08	" Lake Ontario.
A. Seaman	Tug	" 25.	76	11 16	Screw, The Lakes.
Port Elgin Queen	"	" 25.	37	7 96	" Georgian Bay.
Arbutus	Freight.	" 25.	49	9 00	" "
Joe Milton	200	" 26.	93	12 52	" Geo. Bay and L. Huron.
Rambler	Tug	Not issued	6	5 48	" Georgian Bay.
J. H. Jones	30	May 26.	152	20 24	" Geo. Bay and L. Huron.
John Hanlan	100	June 1.	37	7 96	" Toronto Bay.
Dominion	Freight	" 6.	478	43 24	" Geo. Bay and L. Huron,
Agnes	Tug	April 27	23	6 84	" Georgian Bay.
Thos. Maitland	"	" 27.	107	13 48	" The Lakes.
Constance	40	June 15.	42	8 36	" Muskoka Lakes.
Oriole	97	" 15.	75	11 00	" "
Muskoka	301	" 15.	197	23 76	" "
Medora	505	" 15.	299	31 92	" "
Nipissing	394	" 16.	275	30 00	Paddle,
Mink	40	" 16.	56	9 48	Screw,
Queen of the Isles	Tug	" 16.	40	8 20	" "
Priscilla	Yacht	" 16.	20	6 60	" "
Kenoyha	363	" 17.	225	26 00	" "
Ahmic	39	" 17.	43	8 44	" "
Charlie M.	39	" 17.	50	9 00	" "
Gypsy	Yacht	" 19.	20	6 60	" "
Comet	Tug	" 19.	20	6 60	" "
Devenish	Yacht	" 20.	3	5 24	" "
Wanita	125	" 20.	44	8 52	" Burks Falls and Ahmic Harbour.
Emulator	Yacht	" 21.	25	7 00	Maganetawan River.
Glenrosa	Tug	" 21.	63	10 04	Screw, Burks Falls and Ahmic Harbour.
Wenonah	108	" 21.	161	20 88	" "
Longford	150	" 22.	53	9 24	" Lake Couchiching.
Lorna Doone	Yacht	" 22.	5	5 40	" Lake Simcoe.
Islay	344	" 23.	175	22 00	" Orillia and Barrie.
Edna	40	" 24.	55	9 40	" Penetang and Pt. aux Baril.
Marie	Tug	" 24.	12	6 04	" Georgian Bay.
Herold Gauthier	"	" 24.	9	5 72	" "
Lorna Doone	38	" 24.	18	6 52	" Pt. aux Baril and Moon River.
Bertha	38	" 24.	18	6 44	" "

* Fees and dues for 1898 and 1899.

* Fees and dues for 1897, 1898 and 1899.

63 VICTORIA, A. 1900

STEAM Vessels Inspected, &c.—West Ontario Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Geraldine.....	Tug.....	June 26..	65	10 28	Screw, Georgian Bay.
Emma.....	150.....	" 26..	75	11 00	" Penetang. and Pt. aux Baril.
Alfred Morrell.....	Tug.....	" 26..	40	8 76	" Georgian Bay.
Halcro.....	Yacht.....	" 26..	8	5 64	" "
Carlton.....	26.....	" 26..	8	5 72	" Pt. aux Baril and Moon River.
Mabel G.....	Yacht.....	" 27..	10	5 80	" Georgian Bay.
Una.....	".....	" 28..	22	6 76	" "
Odessa.....	30.....	" 28..	12	5 96	" Midland and vicinity.
D. L. White.....	Tug.....	" 29..	56	9 48	" Georgian Bay.
Bruce.....	".....	" 29..	16	6 28	" "
Total.....			30,823	3,464 52	

JAMES JOHNSTON, *Toronto.*

STEAM Vessels Inspected in Canada but Registered Elsewhere for the Year ended 30th June, 1899.

WEST ONTARIO DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
International.....	380.....	Sept. 22..	144	19 52	Screw, Soo to Thessalon.
J. L. Beckwith.....		Not issued	104	16 32	" "
City of Green Bay.....	84.....	Sept. 27..	257	28 56	" Lake Superior.
Total.....			505	64 40	

JAMES JOHNSTON,
Toronto.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, for the Year ended June 30, 1899.

WEST ONTARIO DIVISION.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date. Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1900.		\$ cts.	
Welcome.....	Fish'g tug.	July 19..	21	6 68	Screw, Lake Huron.
Gilphie.....	Yacht.....	" 19..	19	6 52	" "
Mary Arnott.....	Tug.....	" 19..	8	5 64	" "
C. M. Bowman.....	".....	" 19..	88	12 04	" "
* Sarah E. Day.....	".....	" 20..	5	10 80	" "
Elmer.....	".....	" 20..	38	8 04	" "
A. Chambers.....	Fish'g tug.	" 20..	23	6 84	" "
John Logie.....	".....	" 21..	29	7 32	" "
Earl.....	".....	" 21..	18	6 44	" "
Phoenix.....	Tug.....	" 21..	37	7 96	" "
Sea Shell.....	".....	" 22..	7	5 56	" "
Winnie.....	".....	" 22..	14	6 12	" "
Eleanor.....	Fish'g tug.	" 27..	26	7 10	Lake Erie.
Osprey.....	".....	" 28..	6	5 48	" "
Ivey Alderson.....	".....	" 28..	39	8 12	Long Point Bay.
Lena.....	Yacht.....	" 29..	14	6 12	" "
Geo. Swann.....	Fish'g tug.	Aug. 2..	18	6 44	Lake Huron.
Evelyn.....	".....	" 3..	32	7 56	" "
W. H. Seibold.....	".....	" 3..	22	6 76	" "
Sea King.....	".....	" 3..	26	7 08	" "
Hazard.....	".....	July 29..	34	7 72	Lake Erie.
W. M. German.....	".....	" 29..	28	7 24	" "
* Caponaning.....	Tug.....	Aug. 17..	18	12 88	French River.
Nocross.....	".....	" 18..	20	6 60	" "
Maggie McLean.....	".....	" 18..	37	7 96	" "
Evelyn.....	".....	" 19..	85	11 80	" "
Frank G. McAulay.....	Fish'g tug.	" 22..	43	8 44	Lake Huron.
Juno.....	".....	" 22..	28	7 24	" "
Clucas.....	".....	" 22..	28	7 24	" "
Lizzie May.....	Tug.....	" 23..	18	6 44	" "
Sea Gull.....	Fish'g tug.	" 23..	19	6 52	" "
Sea Queen.....	".....	" 24..	18	6 44	" "
Killarney Belle.....	".....	" 24..	28	7 24	" "
Arbutus.....	Tug.....	" 25..	49	8 92	Georgian Bay.
Snowstorm.....	Fish'g tug.	" 29..	17	6 36	Lake Erie.
A. H. Jennie.....	Freight.....	" 31..	148	16 84	Lakes.
Enterprise.....	Fish'g tug.	" 31..	18	6 44	Lake Erie.
Uncle Tom.....	".....	" 31..	8	5 72	" "
Swan.....	".....	Sept. 1..	14	6 12	" "
Belle.....	".....	" 1..	16	6 28	" "
Ida Belle.....	".....	" 1..	6	5 48	" "
Verva.....	40.....	" 13..	55	9 40	Wahnapiatae Lake.
Great Western.....	200.....	" 22..	1,080	94 40	Paddle, Windsor and Detroit.
Lansdowne.....	200.....	" 27..	1,571	133 68	" "
Monarch.....	330.....	" 20..	2,017	169 36	Screw, Windsor and Duluth.
E. Windsor.....	Freight.....	Oct. 8..	86	11 88	Wallaceburg and Vicinity.
Nina.....	Tug.....	" 13..	11	5 88	" "
W. S. Ireland.....	Freight.....	" 13..	105	13 40	" "
John Lee, sr.....	220.....	" 14..	52	9 16	Between Lakes Erie & Huron.
Ariadne.....	Tug.....	" 14..	38	8 04	Wallaceburg and Vicinity.
City of Mt Clemens.....	Freight.....	" 14..	102	13 16	" "
Ripple.....	Tug.....	" 14..	15	6 20	" "
T. J. Collop.....	Freight.....	" 15..	63	10 04	" "
Willie Scagel.....	Tug.....	" 15..	22	6 76	" "
Frankie.....	Yacht.....	" 15..	24	6 92	" "
Huron.....	Tug.....	Aug. 3..	55	9 40	Lake Huron.
†Eagle.....	Yacht.....	" 3..	12	23 84	" "
Daisy.....	Tug.....	Not issued	11	5 88	" "
A. V. Crawford.....	".....	Aug. 29..	51	9 08	Lake Erie.

* Dues and fees for 1897 and 1898.

† Dues and fees for 1895, 1896, 1897 and 1898.

63 VICTORIA, A. 1900

STEAM Vessels Inspected, &c.—West Ontario Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Michigan.....	500.....	Mar. 16..	1,730	146 40	Paddle, Windsor and Detroit.
Ontario—Coasting..	{ 500..... 524..... }	" 16..	1,615	137 20	" " "
Lakeside Lake.....	349.....	" 20..	348	35 84	Screw, Lake Ontario.
Mascassa.....	616.....	April 8..	459	44 72	Twin screw, Hamilton and Toronto.
Acacia.....	200.....	" 8..	107	16 54	Screw, Hamilton and Burlington.
Daniel Lamb.....	Dredge	Not issued			Toronto Bay.
*Sandford.....	Tug.....	April 11..	56	18 96	Screw, lakes.
Seguin.....	20.....	" 17..	818	73 44	" Prescott and Duluth.
Cuba.....	109.....	" 19..	931	82 48	" Toledo and Montreal.
Persia.....	150.....	" 19..	757	68 56	" Hamilton and Montreal.
Lake Michigan.....	12.....	" 19..	573	53 84	" Duluth and Montreal.
Sir S. L. Tilley.....	Freight	" 19..	1,178	102 24	" " Quebec.
Alert.....	Tug.....	" 20..	47	8 76	" Welland Canal.
Inez.....	".....	" 20..	59	9 72	" "
Chas. E. Armstrong..	".....	" 21..	49	8 92	" "
A. D. Cross.....	".....	" 21..	47	8 76	" "
Mary R.....	".....	" 21..	44	8 52	" "
Golden City.....	".....	" 21..	35	7 80	" "
Escort.....	".....	" 21..	40	8 20	" "
S. Kneeland.....	".....	" 22..	46	8 68	" "
Ocean.....	125.....	" 24..	684	62 72	" Montreal and Sarnia.
Erin.....	Freight	" 25..	651	60 08	" " Duluth.
Tecumseh.....	".....	" 25..	840	72 20	" Prescott and "
Saginaw.....	Tug.....	" 26..	357	33 56	" Lakes.
Home Rule.....	".....	" 26..	81	11 48	" "
Wales.....	".....	" 26..	350	33 00	" "
Juno.....	Freight	" 27..	288	28 04	" Montreal and Duluth.
Sunshine.....	Yacht	" 27..	66	10 28	" Lakes.
Imperial.....	220.....	" 28..	150	20 00	" Sarnia and Sandusky.
Onaping.....	Tug.....	" 28..	256	25 48	" Lakes.
United Lumberman..	Freight	" 29..	399	36 92	" Montreal and Duluth.
Charlton.....	Tug.....	" 29..	389	36 12	" Lakes.
Niagara.....	Freight	May 2..	468	42 44	" Montreal and Duluth.
*Lillie Smith.....	".....	" 3..	275	54 00	" " "
United Empire.....	295.....	" 3..	1,961	164 88	" Windsor and "
Tepiakian.....	Fish'g tug	" 4..	29	7 32	" Lake Huron.
Ontario.....	Freight	Not issued	655	57 40	" "
Comfort.....	40.....	May 5..	14	6 12	" Sombra and Marine City.
Mayflower.....	900.....	" 8..	189	23 12	Paddle, Toronto Bay.
Primrose.....	900.....	" 8..	189	23 12	" " "
Arlington.....	100.....	" 8..	23	6 84	Screw " "
Thistle.....	345.....	" 8..	78	11 24	Paddle " "
Shamrock.....	383.....	" 8..	154	20 32	" " "
Kathleen.....	196.....	" 8..	110	16 80	Screw " "
Electric.....	Yacht	" 8..	49	8 92	" Lakes.
Clinton.....	Freight	" 8..	430	39 40	" Montreal and Duluth.
Hiawatha, coasting..	{ Yacht.. 733..... }	" 8..	46	8 68	" Toronto Bay.
Garden City Lake	500.....	" 9..	637	59 04	Paddle, Lake Ontario.
Jubilee.....	40.....	" 9..	10	5 80	Screw, Welland Canal.
Augusta.....	Tug.....	" 10..	57	9 56	" " "
Heward McMaugh.....	".....	" 10..	42	8 36	" " "
Jas. Norris.....	".....	" 10..	50	9 00	" " "
M. R. Mitchell.....	".....	" 10..	40	8 20	" " "
Nellie Bly.....	Fish'g tug	" 11..	13	6 04	" Lake Ontario.
Ella Taylor.....	Tug.....	" 11..	34	7 72	" Welland Canal.
Maid of the Mist.....	80.....	" 12..	62	9 96	" Nia. Falls, Ont. & Nia. Falls, N. Y.
Modjeska.....	801.....	" 13..	678	62 24	Twin screw, Hamilton and Toronto.
Myles.....	Freight	" 15..	1,199	100 92	Screw, Quebec and Duluth.
Victoria.....	300.....	" 16..	181	22 48	" Ottawa and Montreal.
Clark Bros.....	66.....	" 16..	33	7 64	" Toronto Bay.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, &c.—West Ontario Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Nessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Cleopatra.....	Yacht.....	May 16..	104	13 32	Screw, Lakes.
Island Queen.....	140.....	" 16..	23	6 84	" Toronto Bay.
City of Chatham.....	580.....	" 18..	341	35 28	" Chatham and Detroit.
Owen.....	Freight.....	" 19..	103	13 24	" " vicinity.
Euna.....	Tug.....	" 19..	6	5 48	" " "
Vick.....	".....	" 19..	13	6 04	" " "
W. S. Ireland.....	Freight.....	Not issued	105	.....	" " "
A. J. Tymon, coasting lake.....	300.....	May 22..	194	23 52	" Lake Ontario.
Union.....	300.....	" 23..	267	29 36	Paddle, Ft. Erie and Black Rock.
Lincoln.....	500.....	June 1..	337	34 96	Screw, Niagara and Toronto.
St. Andrew.....	10.....	" 3..	1,113	97 04	" Prescott and Duluth.
Toronto.....	1,000.....	" 8..	2,779	230 32	Paddle, " Hamilton.
Wm. Booth.....	36.....	" 8..	46	8 68	Screw, Belleville and Adolphustown.
Urania.....	500.....	" 9..	898	79 84	Paddle, Lake Erie.
Carmona.....	400.....	" 10..	980	86 40	" Cleveland and Sault St. Marie.
Manolia.....	Yacht.....	Not issued	6	.....	Screw, Toronto and vicinity.
City of Windsor.....	.....	"	511	48 88	" Owen Sound and Sault St. Marie.
Abino.....	40.....	June 19..	8	5 64	" Youngstown and Niagara.
Mazeppa.....	300.....	" 23..	146	19 65	" Hamilton and Toronto.
M. A. Bennett.....	Tug.....	" 24..	34	7 72	" Lakes.
Hope.....	300.....	" 26..	170	21 60	" Buffalo and Fort Erie.
Adrelixa.....	40.....	" 27..	15	6 20	" Pt. Abino and Crystal Beach.
Gordon Jerry.....	Freight.....	" 30..	124	14 92	" Lake Ontario.
Queen City.....	328.....	" 30..	312	32 96	" Niagara and Toronto.
*Morning Star.....	Tug.....	" 30..	5	10 80	" Toronto Bay.
		Total.....	36,336	3,782 73	

* Dues and fees for 1898-9.

JOHN DODDS,
Toronto.

63 VICTORIA, A. 1900

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended
June 30, 1899.

WEST ONTARIO DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Niagara.....	100	July 13..	214	25 12	Screw, Buffalo and Fort Erie.
Gazelle.....	512	" 14..	183	22 64	" " Crystal Beach.
Puritan.....	725	" 15..	409	40 72	Twin screw " "
Pearl.....	845	" 16..	552	52 16	Paddle, Buffalo and Pt. Colborne.
Columbia.....	671	" 25..	399	39 92	Screw, " "
Riverside.....		Not issued	125	18 00	" " Niagara River.
Idlehour.....	746	July 26..	348	35 84	" " Buffalo and Chippewa, ry. car ferry.
Chenango No. 1.....		Not issued	1,942	163 36	Twin screw, Lake Erie.
Annie F. Owen.....	40	June 21..	50	9 00	Screw, Niagara River.
Flora.....		Not issued	562	52 96	Paddle, Lake Erie.
Transfer.....	248	Sept. 16..	1,511	128 88	" " Windsor and Detroit, ry. car ferry.
Michigan Central.....	300	" 18..	1,522	129 76	" " " "
Wyandotte.....	904	" 21..	320	33 60	Screw, Detroit and Sugar Island.
City of Toledo.....	1,120	" 22..	1,004	88 31	Paddle, Toledo and Sarnia.
Newsboy.....	351	" 24..	200	24 00	Screw, Amherstburg and Sarnia.
Transport.....	256	" 26..	1,595	135 60	Paddle, Windsor and Detroit, ry. car ferry.
Sappho.....	558	" 26..	224	25 92	Screw, between Lakes Erie and Huron
Promise.....	769	" 28..	473	45 84	" " " "
Idlewild.....	806	" 29..	363	37 07	Paddle, Toledo and Port Huron.
Darius Cole.....	1,088	" 30..	538	51 06	" " between Lakes Erie and Huron
Omar D. Conger.....	398	Oct. 10..	347	35 76	Screw " " "
James Beard.....	150	" 10..	87	14 96	" " Sarnia and Port Huron.
Grace Dormer.....	162	" 11..	66	13 28	" " " "
Welcome.....	266	" 12..	213	25 04	" " Port Huron and Detroit.
Fortune.....	502	Sept. 26..	200	24 00	" " Windsor and Detroit.
Excelsior.....	181	" 26..	229	26 32	" " " "
Ariel.....	226	" 26..	202	24 16	" " Walkerville and Detroit.
Victoria.....	182	" 26..	192	23 36	" " Windsor and Detroit.
		1900.			
Excelsior.....	560	April 25..	229	26 32	Screw, " " " "
Promise.....	1,000	" 28..	473	45 84	" " between Lakes Erie and Huron
Sappho.....	700	" 29..	224	25 92	" " " "
Greyhound.....	1,353	June 10..	621	57 70	" " " "
Arundell.....	600 } Coasting 300 } Lake.....	" 12..	339	35 12	Screw, Sarnia and Ogdensburg.
Idlewild.....	800	" 12..	363	37 07	Paddle, Toledo and Port Huron.
Annie F. Owen.....	40	" 19..	50	9 00	Screw, Niagara River.
Pearl.....	845	" 21..	552	52 16	Paddle, Buffalo and Pt. Colborne.
Puritan.....	725	" 21..	409	40 72	Twin screw, Buffalo and Crystal Beach
Gazelle.....	512	" 22..	183	22 64	Screw " " "
Total.....			17,513	1,699 13	

JOHN DODDS,
Toronto.

SESSIONAL PAPER No. 11

STEAM Vessels not Inspected, for the Year ended June 30, 1899.

WEST ONTARIO DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not inspected and class of vessel.
Huron.....	1,338	900	Twin screw, ry. car ferry.
International.....	1,052	638	" " " " " "
J. C. Clark.....	145	99	Screw, passenger. "
Gertrude.....	76	51	" " " "
Queen.....	7	5	" " " "
Meteor.....	337	181	Paddle, tug.
Luther Westover.....	127	80	" " " "
Cecebe.....	11	8	Screw " " "
Herbert M.....	21	18	" " " "
Signal.....	94	64	" " " "
H. L. Lovering.....	55	38	" " " "
Frank Reid.....	34	23	" " " "
L. Shickluna.....	16	11	" " " "
Harry Sewell.....	25	17	" " " "
Albert Wright.....	29	21	" " " "
Grace Darling.....	26	18	" " " "
St. George.....	21	14	" " " "
Clara Hickler.....	42	32	" " " "
W. L. Davis.....	46	34	" " " "
Purvis.....	13	9	" fishing tug.
Abeona.....	46	31	" yacht.
Sonntag.....	7	5	" " " "
Ripple.....	5	4	" " " "
Curlew.....	3	3	" " " "
A. M. Petrie.....	20	13	" " " "
Viola.....	68	46	" " " "
Kate Murray.....	3	2	" " " "
Siesta.....	3	2	" " " "
R. Kendrick.....	15	12	" freight.
La Belle.....	75	58	" " " "
Maybird.....	46	32	" " " "
*Enterprise.....	148	99	" passenger.
*Agnes.....	14	10	" " " "
*Hiawatha.....	163	111	" " " "
*City of Dresden.....	194	124	" " " "
*Scotia.....	13	9	" " " "
J. V. O'Brien.....	59	31	" " " "
Ocean Lily.....	3	2	" tug.
Island Belle.....	31	21	" " " "
*Nautilus.....	8	5	" " " "
Iota.....	6	4	" " " "
*Despatch.....	33	22	" " " "
*Energy.....	116	70	" freight.
Walter Scott.....	26	18	" tug
*Sweet Mary.....	13	9	" " " "
Albani.....	5	4	" yacht.
*Minota.....	29	19	" " " "
*Secret.....	9	6	" " " "
*Ranger.....	8	5	" fishing tug.
John J. Long.....	201	137	" passenger
Minnie Martin.....	10	7	" tug
G. P. McIntosh.....	58	41	" " " "
Elite.....	22	15	" fishing tug.
Advance.....	72	49	" " " "
Shamrock.....	14	10	" " " "
Vixen.....	68	53	" " " "
Totals.....	5,129	3,360	

Not running.

No application.

Out of reach.

*These steamers have been inspected since July 1, 1899.

JAMES JOHNSTON.
JOHN DODDS,
Toronto.

63 VICTORIA, A. 1900

STEAM Vessels Inspected, for the Year ended June 30, 1899.

WEST ONTARIO DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Carmona.....	300	July 5.	980	86 40	Side wheel, Sandusky to Soo.
City of Chatham.....	580	" 5.	341	35 28	Screw, Chatham and Detroit.
Scotia.....	30	" 6.	13	6 04	" Amherstburg and Bois Blanc
John Lee, sr.....	200	" 7.	52	9 16	" Detroit River.
Jubilee.....	40	" 7.	10	5 80	" Rondeau Bay.
City of Dresden.....	100	" 7.	194	23 52	" Lake Erie ports.
John Hanlan.....	173	" 20.	37	7 96	" Toronto Bay.
Charlie M.....	39	" 31.	50	9 00	" Muskoka Lakes.
Conqueror.....	40	" 21.	25	7 00	" Lake Simcoe.
Longford.....	40	" 22.	53	9 24	" "
Islay.....	348	" 22.	175	22 00	" "
Stiletto.....	30	" 22.	14	6 12	" Waubaushene and Moose Point.
Agnes.....	25	" 23.	14	6 12	" Belle Ewart and Roach's Point.
Medora.....	416	Aug. 16.	299	31 92	" Muskoka Lake.
Nipissing.....	396	" 17.	275	30 00	" "
Oriole.....	97	" 17.	75	11 00	" "
Mink.....	40	" 18.	13	6 04	" "
Onaganoh.....	20	" 18.	19	6 52	" "
Flyer.....	17	" 18.	4	5 32	" "
Kenoyha.....	363	" 18.	225	26 00	" "
Ahmie.....	40	" 19.	43	8 44	" "
Muskoka.....	248	" 20.	99	12 92	" "
Constance.....	40	" 20.	42	8 36	" "
Queen of the Isles.....	35	" 22.	40	8 20	" "
Nymoca.....	40	" 22.	25	7 00	" "
Empress Victoria.....	100	" 23.	106	16 48	" Huntsville and Portage.
Mary Louise.....	40	" 23.	64	10 12	" Dorset and Portage.
Wanita.....	125	" 24.	44	8 52	" Burks Fall and Ahmic Harbour.
Glenrosa.....		Not gra't'd			" "
Wenonah.....	108	Aug. 24.	161	20 88	Paddle and screw, Magnettawan.
Queen City.....	328	" 29.	312	32 96	Screw, Lake Ontario.
Gypsy.....	40	" 17.	20	6 60	" Muskoka Lakes.
Scow Vladmir.....		Not gra't'd			" "
Verva.....	40	Sept. 13.	55	9 40	" Wahnapatatae Lake.
Monarch.....	330	" 20.	2,017	169 36	" Windsor and Duluth.
Juno.....	Freight	" 24.	288	28 04	" Montreal and Duluth.
Great Western.....	200	" 23.	1,080	94 40	Paddle, Windsor and Detroit.
Lansdowne.....	200	" 24.	1,571	133 68	" "
Edna.....	110	June 23.	55	9 40	Screw, Penetang. Pt. aux Baril.
Julian V. O'Brien.....	25	Sept. 30.	59	9 72	" Georgian Bay ports.
* Coponaning.....		Not gra't'd	18	12 88	" French River.
Maggie May.....	40	Sept. 30.	46	8 68	" Killarney and Thessalon.
Scotch Thistle.....	30	" 30.	17	6 36	" Algoma Mills.
Lillie Smith.....	Freight	" 22.	275	27 00	" Montreal and Duluth.
Camilla.....	135	" 30.	54	9 32	" Pt. aux Pins and Thessalon.
Philadelphia.....	35	" 29.	148	19 84	" Montreal and Duluth.
City of Windsor.....	300	" 29.	511	48 88	" Collingwood and Soo.
Telegram.....	(L. 200) (R. 330)	" 29.	198	23 84	" Soo and Peninsular Harbour.
Fanny Arnold.....	25	" 30.	73	10 84	" Killarney and Soo.
Surprise.....	10	" 30.	19	6 52	" Meldrum Bay and Little Current.
		1900.			
Lakeside.....	524	April 10.	348	35 84	" Toronto and Lake Ontario ports.
Macassa.....	616	" 13.	459	44 72	" Toronto and Hamilton.
Ada Alice.....	100	" 18.	53	9 24	" Toronto Bay.
Michigan.....	500	" 19.	1,730	146 40	Paddle, Windsor and Detroit.
Ontario.....	500	" 20.	1,615	137 20	" "
Tecumseh.....	Freight	" 20.	840	72 20	Screw, Prescott and Duluth.

* Fees and dues for 1897 and 1898.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, &c.—West Ontario Division—Continued.

HULL INSPECTION—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
1900.					
Erin.....	Freight.....	April 21..	651	60 08	Screw, Montreal and Duluth.
United Lumberman...	"	" 21..	399	36 92	" " "
Imperial.....	220	" 20..	150	20 00	" Sarnia and Sandusky.
Niagara.....	Freight	" 22..	468	42 44	" Montreal and Duluth.
Ocean.....	125	" 22..	684	62 72	" Montreal and Sarnia.
Cuba.....	109	" 22..	931	82 48	" Montreal and Toledo.
Luella.....	125	" 22..	38	8 04	" Toronto Bay.
Persia.....	150	" 24..	757	68 56	" Montreal and Duluth.
Sir L. Tilley.....	14	" 24..	1,178	102 24	" Duluth and Quebec.
Lake Michigan.....	12	" 24..	573	53 84	" Duluth and Montreal.
Majestic.....	763	" 25..	1,578	134 24	" all Lakes.
Atlantic.....	300	" 25..	683	62 64	" Collingwood and Soo.
City of Collingwood.....	650	" 25..	1,387	118 96	" all Lakes.
City of Toronto.....	400	" 26..	782	70 56	Paddle, Penetang and Soo.
City of London.....	308	" 26..	516	49 28	Screw, Kingston and Quebec.
City of Midland.....	375	" 26..	974	85 92	" Collingwood and Lake ports.
City of Parry Sound.....	280	" 26..	491	47 28	" " and Soo.
Athabasca.....	500	" 27..	2,269	189 52	" Owen Sound and Fort William.
Alberta.....	500	" 27..	2,282	190 56	" " "
Manitoba.....	500	" 28..	2,616	217 28	" " "
Joe Milton.....	200	" 28..	93	12 52	" Georgian Bay and Lake Huron.
Rosedale.....	Freight	" 29..	1,507	125 56	" Duluth and Prescott. W.I.M.
Algonquin.....	"	" 29..	1,806	149 48	" " " W.I.M.
John J. Long.....	65	May 1..	201	24 08	" Georgian Bay and Lake Huron.
United Empire.....	295	" 5..	1,961	164 88	" Windsor and Duluth. W.I.M.
Seguin.....	20	" 5..	818	73 44	" Prescott and Duluth. W.I.M.
Comfort.....	40	" 6..	14	6 12	" Sombra and Marine City.
Hiawatha.....	300	" 6..	163	21 04	" Sarnia and St. Clair River.
Island Queen.....	140	" 8..	23	6 84	" Toronto Bay.
Clinton.....	Freight	" 8..	430	39 40	" Montreal and Duluth.
Chicora.....	872	" 11..	931	82 48	Paddle, Lake Ontario.
Chippewa.....	2,000	" 11..	1,514	129 12	" " "
Corona.....	1,456	" 11..	1,274	109 92	" " "
Ongiara.....	244	" 11..	98	12 84	Screw, Niagara River.
Garden City { Lake..... } { Coasting 733..... }	500..... 733.....	" 12..	637	59 04	Paddle, Lake Ontario.
Shamrock.....	383	" 13..	154	20 32	" Toronto Bay.
May Flower.....	900	" 13..	189	23 12	" " "
Clark Bros.....	40	" 13..	33	7 64	Screw, " "
Myles.....	Freight	" 15..	1,199	100 92	" Montreal and Duluth.
C. W. Chamberlain.....	"	" 16..	385	35 80	" " "
Primrose.....	900	" 17..	189	23 12	Paddle, Toronto Bay.
Kathleen.....	196	" 17..	110	16 80	Screw, " "
Victoria.....	333	" 18..	181	22 48	" Ottawa River.
White Star. { Lake..... } { Coasting 624..... }	464..... 624.....	" 19..	451	44 08	Paddle, Lake Ontario.
Thistle.....	345	" 25..	78	11 24	" Toronto Bay.
Acacia.....	200	" 20..	107	16 54	Screw, Hamilton and Burlington.
Modjeska.....	801	" 20..	678	62 24	" Toronto and Hamilton.
A. J. Tymon { Lake..... } { Coasting 448..... }	300..... 448.....	" 27..	194	23 52	" Lake Ontario.
Union.....	300	" 29..	267	29 36	Paddle, Fort Erie and Black Rock.
Maid of the Mist.....	80	" 30..	62	9 96	Screw, Niagara Falls.
Lincoln..... { Lake..... } { Coasting 498..... }	330..... 498.....	" 30..	337	34 96	" Toronto and St. Catharines.
Gem.....	40	June 1..	9	5 72	" Portage and Pt. Sydney.
1899.					
J. H. Jones.....	30	Oct 1..	152	20 24	" Lake Huron and Georgian Bay.

63 VICTORIA, A. 1900

STEAM Vessels Inspected, &c.—West Ontario Division—*Continued.*HULL INSPECTION—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		§ cts.	
Toronto	1,000.. 1	June 15..	2,779	230 32	Paddle, Hamilton and Prescott.
William Booth.....	36.....	" 8..	46	8 68	Screw, Bay of Quinté.
Carmona	400.....	" 10..	980	86 40	Paddle, Cleveland and Soo.
Dominion.....	Freight ..	" 6..	478	43 24	Screw, Lake Huron and Georgian Bay.
		1899.			
Mink	40	Aug. 17..	56	9 48	" Muskoka Lakes.
		1900.			
St. Andrew.....	10.....	June 19..	1,113	97 04	" Prescott and Duluth.
Urania.....	500.....	" 22..	898	79 84	Paddle, Lake Erie.
Hope	300.....	" 1..	170	21 60	Screw, Buffalo and Ft. Erie.
Abma	40.....	" 27..	8	5 64	" Niagara River.
Mazepa	300.....	" 28..	146	19 65	" Toronto and Hamilton.
Britannic.....	277.....	May 1..	428	42 24	Paddle, Georgian Bay.
Emma.....	150.....	June 30..	75	11 00	Screw, Penetang. and Pt. aux Baril.
Edna	40.....	" 30..	55	9 40	" " "

WM. EVANS.
Hull Inspector.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended June 30, 1899.

WEST ONTARIO DIVISION..

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
1899.				\$ cts.	
Columbia.....	671	July 25..	399	39 92	Screw, Lake Erie.
Riverside.....		Not issued	125	18 00	" "
Idlehour.....	746	July 26..	348	35 84	" "
Puritan.....	725	" 26..	409	40 72	" "
Pearl.....	845	" 27..	552	52 16	Paddle, "
Gazelle.....	512	" 27..	183	22 64	Screw, "
Victoria.....	182	" 28..	192	23 36	" Detroit and Windsor.
Excelsior.....	560	" 29..	229	26 32	" "
Promise.....	769	" 29..	473	45 84	" between Lakes Erie and Huron.
Sappho.....	558	" 29..	224	25 92	" " "
Fortune.....	502	" 30..	200	24 00	" " "
Idlewild.....	806	" 30..	363	37 07	Paddle, Toledo and Pt. Huron.
Darius Cole.....	1,088	" 30..	538	51 06	" Lake Erie and Lake Huron.
City of Toledo.....	1,120	Aug. 1..	1,004	88 31	" Toledo and Sarnia.
Greyhound.....	1,353	" 3..	621	57 70	" Detroit and Port Huron.
Ariel.....	226	" 1..	202	24 16	" Windsor and Detroit.
Wyandotte.....	904	" 2..	320	33 60	" Detroit and Sugar Island.
Omer D. Conger.....	398	" 4..	347	35 16	" Lakes Erie and Huron.
* Grace Dormer.....	162	" 4..	66	13 28	" Sarnia and Port Huron.
* James Beard.....	150	" 5..	87	14 96	" " "
Transfer.....	248	Sept. 21..	1,511	128 88	" Windsor and Detroit.
Transport.....	256	" 21..	1,595	135 60	" " "
Michigan Central.....	300	" 22..	1,522	129 76	" " "
News Boy.....	381	" 22..	200	24 00	Screw, Amherstburg and Sarnia.
International.....	380	" 29..	144	19 52	" Soo and Thessalon.
City of Green Bay.....	84	" 29..	257	28 56	" Soo and Cariboo Island.
Niagara.....	100	May 25..	214	25 12	" Buffalo and Fort Erie.
1900.					
Arundell.....	{ Lake 300 } { Riv. 600 }	June 12..	339	35 12	" Sarnia and Ogdensburg.
Annie F. Owen.....	40	June 27..	50	9 00	" Niagara River.

* Overpaid \$3.00 each for inspection fee.

WM. EVANS,
Hull Inspector.

63 VICTORIA, A. 1900

STEAM Vessels not Inspected for the Year ended 30th June, 1899.

WEST ONTARIO DIVISION.

HULL INSPECTION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not inspected and class of vessel.
Ontario	655	445	No application.
Gilphie	19	18	"
J. C. Clark	145	99	"
City of Mt. Clemens	102	69	"
Queen	7	5	"
Maple Leaf	12	8	"
Advance	72	49	"
Gordon Gauthier	26	18	"
Walter S. Davis	46	37	"
Carlton	8	6	
Lorna Doone	18	12	
Geraldine	65	45	
Bertha	18	12	Inspected during first week in July, 1899.
Maud	40	27	
Fred Davidson	43	29	
Masonic	39	26	
Odessa	12	8	
Arlington	23	16	No application.

WM. EVANS,
Hull Inspector.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected for the Year ended December 30, 1899.

EAST ONTARIO DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
				\$ cts.	
		1899.			
Rosedale		July 2.	1,506 93	128 56	Freight, great lakes.
Dorothy	30	" 2.	10 09	5 80	Trenton and Prescott.
Sophy	30	" 2.	25 73	7 08	" " "
Edmond		June 1.	39 10	8 12	Tug, Rideau Canal.
Miltonia		July 11.	32 18	7 56	Pleasure yacht.
Madge		" 16.	9 49	2nd Insp.	" " "
Jopl	40	" 16.	10 54	5 88	Kingston and Ottawa.
North Star	165	" 18.	39 60	8 20	Rice Lake and tributaries.
Beaver	75	" 19.	18 00	6 44	" " "
Eclipse	100	" 19.	17 94	6 44	" " "
City of Peterborough.	300	" 20.	287 60	31 04	" " "
Sunbeam	210	" 21.	104 92	16 40	Cos. Victoria and Peterboro.
Golden City	175	" 21.	68 02	10 44	" " "
Majestic	185	" 22.	67 77	10 44	" " "
Alice Ethel	190	" 23.	71 75	10 76	" " "
Grey Hound	40	" 25.	37 35	7 96	" " "
Marie Louise	110	" 25.	39 02	8 12	" " "
Maple Leaf	70	" 26.	26 08	7 08	" " "
Myrtle		" 26.	91 50	{ 12 32* 12 32	} Tug " "
Crandella	400	" 27.	266 20	29 28	" " "
Water Witch		" 27.	9 20	5 72	Tug, Lindsay waters.
Comet	35	" 28.	7 60	5 64	Cos. Victoria and Peterboro.
Express	20	" 28.	3 90	5 32	Scugog Lake and river.
Nouna Roy		" 29.	4 14	5 32	Pleasure yacht.
Dawn	40	" 29.	20 20	6 60	Cos. Victoria and Peterboro.
Beaubocage	150	" 30.	129 00	18 32	" " "
Calumet		" 30.	21 87	6 76	Pleasure yacht.
Esturian	297	Aug. 1.	139 39	19 12	Cos. Victoria ond Peterboro.
Undine	22	" 1.	13 81	6 12	" " "
Lady of the Lake	40	" 2.	32 95	7 64	" " "
Rainbow	40	" 3.	25 92	7 08	Rice Lake and tributaries.
Albani		" 5.	57 83	9 64	Pleasure yacht.
Olga	25	" 5.	5 28	5 40	Kingston and Prescott.
Ingomar		" 6.	22 48	6 76	Pleasure yacht.
International	200	" 15.	395 31	39 60	Brockville and Prescott.
C. F. Dunbar		" 16.	32 86	7 64	Tug, Cornwall Canal.
Princess Louise	100	" 16.	26 36	7 08	Kingston and Montreal.
Mona		" 17.	24 87	7 00	Tug, Cornwall Canal.
Ivy	30	" 17.	7 43	5 56	Cornwall and Lake St. Francis.
Sandy		" 18.	29 57	7 32	Tug, canal.
Grenada	175	" 18.	57 00	9 56	Kingston and Montreal.
Beaver		" 22.	40 88	8 28	Tug, canal and river.
Alaska		" 22.	48 74	8 92	" River St. Lawrence.
Maggie A. Bennett		" 23.	33 85	7 72	" river and canal.
H. C. Curtis		" 23.	36 19	7 96	" " "
Mary Ellen		" 24.	20 22	6 60	" " "
W. J. Poupore		Sept. 13.	46 54	8 76	" " "
Hubert Larkin		Aug. 31.	48 73	8 92	" " "
Montmorency		" 31.	17 81	6 44	" " "
Fearless		" 31.	46 38	8 68	" " "
D. P. Dey		" 31.	11 26	5 88	" " "
A. B. Cooke		" 31.	34 17	7 72	" " "
John Hunter		" 31.	32 14	7 56	" " "
Umbria		" 31.	42 98	8 44	" " "
Wm. Davis		" 31.	40 23	8 20	" " "
Mabel		" 31.	11 24	5 88	" " "
Myra		" 31.	73 21	10 84	" River St. Lawrence.

*For 1897.

63 VICTORIA, A. 1900

STEAM Vessels Inspected, &c.—East Ontario Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Name of Vessel and where employed.
1899.					
Aberdeen	40	Sept. 22	12 65	6 04	Kingston and Ottawa.
Eva Belle	10	" 22	10 10	5 80	" "
Kilbirnie		Aug. 31	15 23	6 20	Pleasure yacht.
Nellie	20	Sept. 24	6 82	5 56	Kingston and Ottawa.
Tropic	15	" 26	8 86	5 72	" "
Commodore	25	Sept. 27	3 06	5 24	Carleton Place and Innesville.
Gilbert		Aug. 31	40 83	8 28	Tug, canal and river.
Prince Edward		Oct. 14	18 22	6 44	Ferry, Tyendinaga and Sophiasburg.
1900.					
Resolute	25	Mar. 30	371 86	37 76	All lakes and rivers.
Pierrepoint	415	April 4	251 98	28 16	Cape Vincent and Prescott.
David G. Thomson		" 7	185 05	19 80	Tug, lake and river.
Jessie Hall		" 7	56 54	9 56	" River St. Lawrence.
Hero (to Montreal 300)	475	" 8	342 12	35 36	Trenton and Montreal.
Deseronto	85	" 10	54 57	9 40	Trenton and Prescott.
Rescue	25	" 10	52 29	9 16	" "
Ella Ross	300	" 11	324 88	34 00	Brighton "
Nile		" 11	96 30	12 68	Freight, Bay of Quinté.
Ranger	25	" 12	13 83	6 12	Trenton and Picton.
Glengarry		" 12	732 41	63 56	Freight, all lakes.
Rosemount	10	" 13	1,580 37	134 40	" and passengers, all lakes.
Bannockburn	15	" 13	1,619 56	137 60	" " "
Bothnia		" 14	883 36	71 64	" " "
Reginald		" 14	186 26	19 88	Tug, lake and river.
D. D. Calvin		" 14	749 53	65 00	Freight, all lakes.
Arabian	13	" 15	1,073 49	93 84	" and passengers, all lakes.
Valeria	135	" 15	51 55	9 16	Trenton and Prescott.
Orion		" 17	846 43	72 68	Freight, all lakes.
Petrel		" 17	345 76	32 68	Tug, all lakes.
Aberdeen		" 19	144 86	16 36	Freight, lake and river.
Water Lily		" 19	95 09	12 60	" "
Alexandria (450 on Lake)	600	" 20	863 15	77 04	Charlotte and Montreal.
H. F. Bronson		" 21	137 12	15 96	Tug, lake and river.
Active		" 21	301 70	29 16	" "
Chieftain		" 22	434 68	39 80	" "
William Johnston		" 22	94 72	12 60	" "
Hector		" 22	20 64	6 68	" "
Frank Jackman		" 22	38 90	8 12	" canal and river.
Antelope		" 24	82 84	11 64	" "
St. George		" 24	67 85	10 44	" "
Armenia		" 25	623 68	54 92	Freight, all lakes.
North King	525	" 29	872 95	77 84	Lake Ontario and River St. Lawrence
James Swift	125	May 1	265 92	29 28	Kingston and Ottawa.
John Milne		" 1	108 53	13 72	Freight, lake and river.
Parthia		" 2	198 13	20 84	Tug "
John Haggart	250	" 3	201 60	24 16	Ottawa and Montreal.
Dredge No. 5		" 4	100 00	13 00	St. Lawrence Canals.
Quebec		" 4	108 31	13 64	Freight, River St. Lawrence.
Mary A. Laughlin		" 5	22 62	6 84	Tug, canal and river.
1899.					
Gracie	40	Aug. 15	10 50	5 88	Massena and Valleyfield.
Dredge Sir Hector					St. Lawrence Canals.
Dredge Central City					" "
Dredge Pontiac					" "
1900.					
D. R. Van Allen		May 8	317 95	30 44	Freight, lake and river.
Saturn	15	" 8	883 09	78 64	" and passengers, all lakes.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, &c.—East Ontario Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
1900.				\$ cts.	
Rival.....	40	May 8..	125·14	18 00	Tug and passen.. River St. Lawrence.
Glide.....	"	" 9..	77·90	11 24	" lake and river.
Ruth.....	"	" 9..	36·45	7 88	" canal and river.
Jubilee.....	140	" 9..	53·94	9 32	Valleyfield and Massena.
America (to Montreal) 590	698	" 9..	553·03	52 24	Trenton and Montreal.
Skylark.....	"	" 20..	43·29	8 44	Pleasure yacht.
Alberta.....	"	" 15..	122·43	14 76	Freight, River St. Lawrence.
J. G. Nichols.....	"	" 15..	139·15	16 12	" " "
Maud L.....	"	" 15..	14·05	6 12	Tug, River St. Lawrence.
C. H. Merritt.....	350	" 17..	121·58	17 76	Brighton and Prescott.
King Ben.....	"	" 22..	145·36	16 60	Freight, River St. Lawrence.
Geraldine.....	"	" 22..	17·90	6 44	Pleasure yacht.
Antelope.....	40	" 25..	24·98	7 00	Trenton and Prescott.
Naiad.....	"	June 17..	15·41	6 20	Pleasure yacht.
Reindeer.....	245	May 21..	58·29	9 64	Trenton and Prescott.
Varuna.....	240	" 21..	134·04	18 72	Brighton and Prescott.
Brockville.....	375	June 20..	190·75	23 28	Kingston and Cornwall.
Curlew.....	20	May 20..	8·55	5 72	Trenton and Prescott.
Jessie Forward.....	25	" 20..	5·64	5 48	" " "
Annie Lake.....	40	" 20..	18·52	6 52	Brighton and Prescott.
Madge.....	"	" 20..	9·49	5 72	Pleasure yacht.
Kismet.....	"	" 20..	5·42	5 40	" " "
Carmana.....	"	" 20..	56·08	9 48	" " "
Marmora.....	10	June 1..	12·96	6 04	Marn.ora and Trent River.
Dorothy.....	30	" 2..	10·09	5 80	Trenton and Prescott.
Stranger.....	"	July 31..	53·41	9 24	Tug, Lindsay waters.
Edmond.....	"	June 1..	39·10	8 12	" canal and river.
Blue Bell.....	"	" 6..	11·97	5 96	Pleasure yacht.
Where Now.....	"	" 7..	47·78	8 84	" " "
Nellie Cuthbert.....	125	" 7..	59·03	9 72	Kingston and Ottawa.
Cambria (Lake 400)....	600	" 12..	937·25	82 96	Toronto and Prescott.
1899.					
Stranger.....	"	Aug. 20	49·58	9 00	Tug, Cornwall Canal.
1900.					
Argyle..... (Lake 535).	750	May 20..	800·29	64 00	Toronto and Prescott.
Maggie May.....	"	June 1..	29·03	7 32	Tug, canal and river.
Albani.....	"	" 19..	57·83	9 64	Pleasure yacht.
Lee.....	"	" 19..	8·73	5 72	" " "
Kenneth.....	15	" 19..	4·11	5 32	Prescott and Gananoque.
Illicellewaet.....	"	" 20..	15·69	6 28	Pleasure yacht.
Corrella.....	20	" 20..	3·81	5 32	Kingston and Prescott.
Dortha.....	"	" 21..	50·98	9 08	Pleasure yacht.
International.....	200	" 23..	395·31	39 60	Prescott and Ogdensburg.
City of Belleville.....	250	" 23..	101·17	16 08	Kingston and Prescott.
Columbian (Lake 400)...	950	" 24..	703·90	64 32	Toronto and Quebec.
Wenonah.....	"	" 24..	5·59	5 48	Pleasure yacht.
Reliance.....	25	April 1..	299·14	27 12	Freight and passengers, all lakes.
Armenia.....	275	June 29..	109·39	16 80	Trenton and Dickinson's Landing.
Siesta.....	"	" 29..	14·96	6 20	Pleasure yacht.
Hydra.....	"	" 29..	5·70	5 48	Fish tug, Bay of Quinté.
1899.					
Lillian B.....	15	Sept. 25..	3·76	5 32	Carleton Place and Innesville.
Total.....			25,995·64	2,960 40	

THOMAS P. THOMPSON,
Steamboat Inspector.

63 VICTORIA, A. 1900

STEAM Vessels Inspected in Canada but Registered elsewhere, &c.—East Ontario Division.

BOILERS AND MACHINERY.

Name of Vessel	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Valetta	40	July 5	27 84	7 24	Screw, Kingston and Ogdensburg.
Gen'l W. B. Franklin	25	" 5	10 20	5 80	" " "
Sophia	60	" 5	16 36	6 28	" Trenton and Ft. Covington.
Sirius	46	" 6	17 80	6 44	" Kingston and "
Minnie			9 74		
Nettie	25	July 6	11 02	5 88	" Kingston and Ogdensburg.
Claude S.	25	" 7	15 55	6 28	" " "
Virginia	50	" 7	21 72	6 76	" " "
H. P. Bigelow	100	" 7	46 67	8 76	" Trenton and "
Naiad	12	" 8	6 00	5 48	" Kingston and "
I. Wonder					
Spry	25	July 8	4 39	5 32	" " "
Ariel			7 74		
Junita	45	July 9	20 24	6 60	" Trenton and "
Island Belle	335	" 9	89 77	12 20	" Kingston and "
Arundell	Lake 250	" 12	339 39	35 12	" Sarnia and "
Badger State					
Empire State	404	Aug. 6	1,115 52	97 28	" Duluth and Prescott.
			1,116 53	97 36	" " "
		1900.			
Islander	416	April 13	118 61	17 52	Paddle, Kingston and Ogdensburg.
New Island Wanderer	400	" 15	195 63	23 68	Screw, " "
Outing	25	May 12	15 87	6 28	" Prescott and Ft. Covington.
St. Lawrence	645	" 16	312 90	33 04	Paddle, Kingston and Montreal.
Empire (to Montr'l) State (600)	863	" 16	379 74	38 40	" " "
New York	730	" 16	294 87	31 60	" " "
Jessie Bain	150	" 16	44 37	8 52	Screw, Kingston and Ogdensburg.
Sophia	45	June 12	16 36	6 28	" Trenton and Ft. Covington.
Wm Armstrong	25	" 20	181 24	22 48	" car, ferry, Brockville and Ogdensburg.
Capt. Visgar	80	" 21	29 23	7 42	Screw, Kingston and Ogdensburg.
Island Belle	335	" 21	89 77	12 20	" " "
Milton	45	" 22	19 42	6 52	" Cape Vincent & Ft. Covington.
Dean	22	" 22	11 19	5 88	" " "
Cresco	65	" 22	62 00	9 96	" " "
Messina	250	" 23	89 67	12 12	" " Cornwall.
Spencer Meade	35	" 24	17 94	6 44	" Cape Vincent & Ft. Covington.
Valetta	40	" 26	27 84	7 24	" Kingston and Ogdensburg.
Virginia	50	April 15	21 72	6 76	" " "
H. P. Bigelow			46 67	8 76	" Trenton and Ogdensburg.
Total			4,851 52	583 80	

THOS. P. THOMPSON,
Steamboat Inspector.

SESSIONAL PAPER No. 11

STEAM Vessels not Inspected for the year ended June 30, 1899.

EAST ONTARIO DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	REMARKS.
			Why not Inspected and Class of Vessel.
Dolce.....	4 74	3 22	Passenger, screw ; no application.
Pilgrim.....	262 49	165 37	" paddle "
Rescue.....	7 23	4 92	" screw "
Caribou.....	144 19	97 49	" " "
Mary Ethel.....	98 61	56 13	" paddle "
Startled Fawn.....	25 49	17 34	" screw "
Mildred.....	4 50	3 06	Yacht, screw "
Anna.....	7 89	6 49	Tug " "
Olga.....	5 28	3 84	Passenger, screw "
Transit.....	140 81	92 93	" tug, screw "
	701 23	450 79	

THOS. P. THOMPSON,
Steamboat Inspector.

STEAM Vessels Inspected for the Year ended June 30, 1899.

EAST ONTARIO DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Dorothy	30	July 2	10 09	5 80	Screw, Trenton and Prescott.
Sophy	30	" 2	25 73	7 08	" " "
Jopl	40	" 16	10 54	5 88	" Kingston and Ottawa.
North Star	165	" 18	39 60	8 20	" Rice Lake and its tributaries.
Beaver	75	" 19	18 00	6 44	" " "
Eclipse	100	" 19	17 94	6 44	" " "
City of Peterborough	300	" 21	287 60	31 04	Paddle " "
Majestic	185	" 21	67 74	10 44	Screw, Cos. Victoria and Peterboro.
Sunbeam	210	" 22	104 92	16 40	" " "
Golden City	175	" 22	68 02	10 44	" " "
Alice Ethel	190	" 23	71 75	10 76	Paddle " "
Grey Hound	40	" 25	37 35	7 96	Screw " "
Marie Louise	110	" 25	39 02	8 12	" " "
Maple Leaf	70	" 26	26 08	7 08	" " "
Comet	35	" 27	7 60	5 64	" " "
Crandella	400	" 27	266 20	29 28	Paddle " "
Express	20	" 28	3 90	5 32	Screw, Scugog Lake and River.
Dawn	40	" 29	20 20	6 60	" Cos. Victoria and Peterboro.
Beaubocage	150	" 30	129 00	18 32	Paddle " "
Esturion	297	Aug. 1	139 39	19 12	" " "
Undine	22	" 1	13 81	6 12	Screw " "
Lady of the Lake	40	" 2	32 95	7 64	" " "
Rainbow	40	" 3	25 92	7 08	" Rice Lake and its tributaries.
Ivy	30	" 17	7 43	5 56	" Cornwall and Lake St. Francis.
Grenada	175	" 18	57 00	9 56	" Kingston and Montreal.
International	200	" 22	395 31	39 60	Twin screw, Brockville and Prescott.
Meteor	350	" 24	299 43	31 92	Screw, Gordon Creek and North Temiscamingue.
Clyde	60	" 24	29 16	7 32	" " "
Wenoway	40	" 26	98 96	12 92	Paddle, Lake Quinze.
Dora	25	" 27	48 32	8 84	Screw, Gordon Creek and North Temiscamingue.
Argo	75	" 27	154 06	17 32	Paddle, Gordon Creek and North Temiscamingue.
Temiscamingue	400	" 29	412 89	41 04	" " "
Charlotte	30	" 30	13 86	6 12	Screw, Kippewa Lake.
R. Hurdman	40	" 31	93 12	12 44	" " "
Maid of the Mill	20	Sept. 1	8 18	5 64	" Wahnapiatae Lake.
Dauntless	20	" 3	7 93	5 64	" Lake Nipissing.
Gracie	40	" 17	10 50	5 88	Paddle, Massena and Valleyfield.
Princess Louise	100	" 17	26 36	7 08	Screw, Kingston and Montreal.
Commodore		Not issued	3 06	5 24	" " "
Tropic	15	Sept. 24	8 86	5 72	" " Ottawa.
Nellie	20	" 24	6 82	5 56	" " "
Aberdeen	40	" 26	12 65	6 04	" " "
Prince Edward	Ferry	Oct. 15	18 22	6 44	Centre paddle, Tyendingaga and Sophiasburg.
Thistle	15	" 19	2 18	5 16	Screw, Barry's Bay and Havergal.
		1900.			
Pierrepoint	415	April 3	251 98	28 16	Paddle, Trenton and C. Vincent and Prescott.
America	(Prescott... 698) (Montreal... 500)	" 7	553 03	52 24	" " "
Hero	(Prescott... 475) (Montreal... 300)	" 10	342 12	35 36	Paddle, Trenton and Montreal.
Resolute	25	" 15	371 86	37 76	Screw, all lakes and rivers.
Bannockburn	15	" 17	1,619 56	137 60	" " "
Glengarry	Freight	" 19	732 41	63 56	" " "
Rosemount	10	" 17	1,580 37	134 40	" " "

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, &c.—East Ontario Division—*Concluded.*HULL INSPECTION—*Concluded.*

Name of Vessel	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
1900.					
Ella Ross	300	April 18..	324 88	34 00	Paddle, Brighton and Prescott.
Deseronto	85	" 18..	54 57	9 46	Screw, Trenton and Prescott.
D. D. Calvin	Freight...	" 20..	749 53	65 00	" all lakes and rivers.
Arabian	13	" 22..	1,073 49	93 84	" Duluth and Quebec.
Armenia	Freight...	" 26..	623 68	54 92	" all lakes and rivers.
Bothnia	"	" 26..	833 36	71 64	" "
Orion	"	" 27..	846 43	72 68	" "
Alexandria.. { Lake River.. }	450 600 }	" 27..	863 15	77 04	Paddle, Charlotte and Montreal.
Valeria	135	" 28..	51 55	9 16	Screw, Trenton and Prescott.
North King	525	" 29..	872 95	77 84	Paddle, L. Ontario and R. St. Lawrence.
James Swift	125	May 1 .	265 92	29 28	Screw, Kingston and Ottawa.
John Haggart	250	" 3 .	201 60	24 16	Screw, Ottawa and Montreal.
Saturn	15	" 4 .	883 09	78 64	" all lakes and rivers.
D. R. Vanallen	Freight...	" 5 .	317 95	30 44	" "
Jubilee	140	" 9 .	53 94	9 32	" Vleyfield, Cornwall & Massena.
Eva Bell	10	" 18..	10 10	5 80	" Kingston and Ottawa.
C. H. Merritt	350	" 19..	121 58	17 76	" Brighton and Prescott.
Varuna	240	" 19..	134 04	18 72	" "
Reindeer	165	" 19..	58 29	9 64	" Trenton and Prescott.
Antelope	40	" 25..	24 98	7 00	" "
Brockville	375	June 20..	190 75	23 28	" Kingston and Cornwall.
Annie Lake	40	May 29 .	18 52	6 52	" Brighton and Prescott.
Jessie Forward	25	" 29..	5 64	5 48	" Trenton and Prescott.
Curlew	20	" 29..	8 55	5 72	" "
Marmora	10	" 30..	12 96	6 04	" Marmora and Trent River.
Sparrow	40	June 6 .	38 17	8 04	" Callender and Franks Bay.
Dauntless	20	" 6 .	7 93	5 64	" Lake Nipissing.
Ladas	40	" 6 .	54 47	9 32	" Callender and Chaudière.
Booth	40	" 6 .	346 55	35 76	Paddle, Wisawasa & Sturgeon Falls.
Queen	40	" 6 .	15 37	6 20	Screw, North Bay and South River.
Verva	40	" 8 .	54 54	9 40	" Wahnipitae Lake.
Maid of the Mill	20	" 8 .	8 18	5 64	" "
Victoria	400	" 10..	187 58	23 04	Paddle, Pembroke & Des Joachims.
D. B. Mulligan	40	" 10..	76 69	11 16	Screw, Pembroke & Allumette Id.
Cambria.. { Lake... Coasting.. }	400 600 }	" 12..	937 25	82 96	Paddle, Toronto and Prescott.
Iona	15	" 12..	231 53	26 56	Screw, all lakes and rivers.
Argyle.. { Lake... River Excn.. }	535 750 }	" 14..	700 29	64 00	Paddle, Toronto and Prescott.
Rival	40	" 17..	125 14	18 00	" Brighton and Montreal.
Corella	20	" 19..	3 81	5 32	Screw, Kingston and Prescott.
Kenneth	15	" 19..	4 11	5 32	" Prescott and Gananoque.
International	200	" 23..	395 31	39 60	Twin-screw, Prescott & Ogdensburg.
City of Belleville	250	" 23..	101 17	16 08	Screw, Kingston and Prescott.
Columbian.. { Lake... Coasting.. }	400 950 }	" 24..	703 90	64 32	Twin-screw, Toronto and Quebec.
Mahigama	40	" 27..	19 91	6 60	Screw, Pembroke and Ft. William.
Lillian B.	15	" 27..	3 76	5 32	" Carleton Place & Innesville.
1899.					
Commodore	25	Sept. 27..	3 06	5 24	" Carleton Place & Innesville.
1900.					
Reliance	25	June 29..	239 14	27 12	" all lakes and rivers.
Armenia	275	" 30..	109 99	16 80	" Trenton & Dickensons Luding.
Ranger	25	" 30..	13 83	6 12	" Trenton and Picton.
Rescue	25	" 30..	52 29	9 16	" Trenton and Prescott.

ALEXANDER HORN,
Hull Inspector.

63 VICTORIA, A. 1900

STEAMS Vessels Inspected in Canada but Registered elsewhere for the Year ended
June 30, 1899.

EAST ONTARIO DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
1899.					
Sirius	46	July 6..	17 80	6 44	Screw, Kingston and Ft. Covington
Sophia	60	" 6..	16 36	6 28	" Trenton and Ft. Covington.
Valetta	40	" 6..	27 84	7 24	" Kingston and Ogdensburg.
Minnie		Not issued	9 74		
H. P. Bigelow	100	July 7..	46 67	8 76	" Trenton and Ogdensburg.
Nettie	25	" 7..	11 02	5 88	" Kingston and Ogdensburg.
Spry	24	" 7..	4 39	5 32	" " "
Naiad	12	" 8..	6 00	5 48	" " "
Claude S.	25	" 8..	15 55	6 28	" " "
Gen. W. B. Franklin..	25	" 8..	10 20	5 80	" " "
Virginia	50	" 9..	21 72	6 76	" " "
I. Wonder		Not issued			
Ariel		" "			
Junita	45	July 11..	20 24	6 60	" Trenton and Ogdensburg.
Island Belle	335	" 11..	89 77	12 20	" Kingston and Ogdensburg.
Arundell	{ L. 250 R. 600 }	" 12..	339 39	35 12	" Samia and Ogdensburg.
Badger State	{ Ex. 404 Reg. 153 }	Aug. 6..	1,115 52	97 28	" Duluth and Prescott.
Empire State		Not issued	1,116 53	97 36	" all lakes, rivers and bays.
1900.					
Islander	416	April 8..	118 61	17 52	Paddle, Kingston, Cape Vincent and Ogdensburg.
Outing	25	May 12..	15 87	6 28	Screw, Cape Vincent & Ft. Covington.
New Island Wanderer	400	" 15..	123 00	23 68	" Kingston, Cape Vincent and Ogdensburg.
New York	730	" 17..	294 00	31 60	Paddle, Kingston and Montreal.
St. Lawrence	645	" 16..	312 90	33 04	" Kingston, Cape Vincent and Montreal.
Empire (Montreal... State.. (Ogdensburgh	{ 600 863 }	" 17..	379 74	38 40	" " "
Jessie Bain	150	" 16..	44 37	8 52	Screw, Kingston and Ogdensburg.
Sophia	45	June 12..	16 36	6 28	" Trenton and Ft. Covington.
Wm. Armstrong	Ferry 25	" 20..	181 24	22 48	" Brockville and Ogdensburg.
Capt. Visgar	80	" 21..	29 23	7 32	" Ogdensburg and Kingston.
Island Belle	335	" 21..	89 77	12 20	" " "
Milton	45	" 22..	19 42	6 52	" C. Vincent and Ft. Covington.
Dean	22	" 22..	11 19	5 88	" " "
Cresco	65	" 22..	62 00	9 96	" " "
Massena	250	" 23..	89 67	12 12	" Cape Vincent and Cornwall.
Spencer Meade	35	" 24..	17 94	6 44	" C. Vincent and Ft. Covington.

ALEXANDER HORN,
Hull Inspector.

SESSIONAL PAPER No. 11

STEAM Vessels not Inspected for the Year ended June 30, 1899.

EAST ONTARIO DIVISION.

HULL INSPECTION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not Inspected and Class of Vessel.
Dolce	4 74	3 22	Screw ; no application.
Pilgrim	262 49	165 37	Paddle "
Rescue	7 23	4 92	Screw "
Caribou	144 19	97 49	" "
Mary Ethel	98 61	56 13	Paddle "
Startled Fawn	25 49	17 34	Screw "
Olga	5 28	3 84	" "
Transit	140 81	92 93	Twin screw "

ALEXANDER HORN,
Hull Inspector.

STATEMENT of Tow Barges Inspected, and of Certificates of Inspection Issued to Tow Barges, for the Year ended June 30, 1899.

EAST ONTARIO DIVISION.

Name of Vessel.	Number of Passengers.	Port of Inspection.	Date of Inspection		Date of Issue of Certificate	Gross Tonnage.	Inspection Fees.	Date of Payment.
			1898.	1899.				
Sultana	200	Peterborough	July 19	July 19	Aug. 12	40 00	10 00	July 19
Eclipse	200	Lakefield	" 22	" 22	" 12	37 50	10 00	" 22
Lindsay	500	Lindsay	" 25	" 25	" 12	75 00	10 00	" 23
Chemong	400	Fenelon Falls	" 29	" 29	" 12	103 23	10 00	" 29
City of Peterboro' ..	200	Peterborough	Aug. 3	Aug. 3	" 12	49 50	10 00	Aug. 3
Otonabee	200	"	" 3	" 3	" 12	49 00	10 00	" 3
John Loughrin	80	Turtle Portage	" 30	" 30	Sept. 8	35 92	10 00	" 30
Chaudiere	150	Sturgeon Falls	Sept. 2	Sept. 2	" 8	71 70	10 00	Sept. 2
Carleton	200	Carleton Place	" 23	" 23	Oct. 4	67 94	10 00	Oct. 4
			1899.	1900.	1899.		\$ cts.	1899.
Hastings	125	Birdsall	May 30	May 30	June 24	35 58	10 00	May 30
Chaudiere	150	Sturgeon Falls	June 9	June 9	" 16	71 70	10 00	June 8
Total						637 07	110 00	

ALEXANDER HORN,
Steamboat Inspector.

63 VICTORIA, A. 1900

STEAM Vessels Inspected for the Year ended June 30, 1899.

MONTREAL DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Winona		July 29.	12 00	5 96	Screw tug, Ottawa River.
Clyde	60	" 30.	29 16	7 32	" pass., Temiscamingue Lake.
Meteor	350	" 30.	299 43	31 92	" " " "
H. Trudel		Augt. 1.	13 38	6 04	Warp tug, Quinze.
John Thompson		" 1.	5 15	5 40	Screw yacht " "
Wenoway	40	" 2.	98 96	12 92	Paddle pass. " "
Ballantyne		" 2.	13 82	6 04	Warp tug " "
Quinze		" 2.	32 46	7 56	Screw " " "
Argo	75	" 5.	154 06	17 32	Paddle pass., Temiscamingue Lake.
D. ra.	25	" 5.	48 32	8 84	Screw " " "
Temiscamingue	400	" 6.	412 89	41 04	Paddle " " "
Otter		" 6.	21 16	6 68	Warp tug, Kippewa Lake.
D. A. Martin		" 6.	77 60	11 24	Screw " North River.
Charlotte	30	" 8.	13 86	6 12	" " passenger, Kippewa Lake.
R. Hurdman	40	" 8.	93 12	12 44	" " " "
North River		" 8.	13 61	6 12	Warp tug, North River.
Beaver		" 9.	13 09	6 04	" " Temiscamingue Lake.
Mink		" 9.	13 82	6 12	" " " "
Maid of the Mill	20	" 10.	8 18	5 64	Screw pass., Wahnapiatae "
Turtle		" 11.	33 12	7 64	Warp tug, Nipissing "
River Belle		" 12.	14 14	6 12	Screw tug, Combermere and Barry's Bay.
Weslemkoon		" 13.	17 00	6 36	Warp tug, Nipissing Lake.
Monarque		" 15.	136 41	15 88	Paddle tug, Ottawa River.
Lake		" 20.	145 00	16 60	Screw " St. Lawrence River.
Owl		" 25.	3 69	5 32	" yacht.
Janet Craig		Not issued	11 73	5 96	" passenger, Chats Lake.
Richelieu		" "	33 67	7 72	" " Richelieu Lake.
W. Ross		Sept. 30.	14 19	6 12	" tug, Ottawa River.
Alcyone		Oct. 20.	38 44	8 04	" yacht.
Thistle	15	" 26.	2 18	5 16	pass., Barry's Bay and Havergal
Wild Rose		Nov. 9.	9 97	5 80	" yacht.
1900.					
Longueuil	300	April 11.	365 42	37 20	Paddle ferry, Montreal & Longueuil.
Hochelaga	600	" 11.	419 00	41 52	" " " Boucherville.
Melbourne	125	" 24.	894 43	79 52	Screw passenger, Montreal & Toledo.
Duchess of York	700	" 25.	489 74	47 20	Paddle " Ottawa River.
Chateauguay	40	" 25.	222 27	25 76	" " Montreal & Chateauguay
Nora		" 26.	28 13	7 24	Screw tug, St. Lawrence River.
McNaughton		" 27.	137 19	15 96	" " " "
Florence		" 27.	112 94	14 04	" " " "
Archie Stewart		" 28.	79 62	11 40	" " Ottawa " "
E. B. Eddy		" 28.	78 44	11 24	" " " "
Dolphin		" 28.	69 66	10 60	" " " "
Florence		" 28.	61 53	9 96	" " " "
G. H. Notter		" 28.	14 00	6 12	" " " "
Sir Hector		" 28.	39 72	8 20	" " " "
Rockland		" 29.	77 56	11 24	" " " "
Ida	140	" 29.	247 26	27 76	" passenger, Montreal and Ottawa.
Hall	50	" 29.	246 92	27 76	" " " "
Welshman	25	" 29.	143 43	19 44	" " " "
Harry Bate	50	" 29.	253 71	28 32	" " " "
D. B. Mulligan	40	May 1.	76 69	11 16	" ferry, Pembroke and Desjardins
Victoria	400	" 1.	187 58	23 04	Paddle pass., " Des Joachins
C. B. Powell		" 1.	272 34	26 76	" tug, Upper Ottawa River.
Alex. Fraser		" 2.	320 20	30 60	" " " "
E. H. Bronson		" 2.	285 22	27 80	" " " "
Pembroke		" 2.	194 21	20 52	" " " "

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, &c.—Montreal Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Nama.....		May 3..	41 86	8 36	Screw yacht.
Bonito.....	30	" 3..	17 35	6 36	" ferry, Calumet and L'Original.
F. W. McRae.....		" 5..	46 00	8 68	" tug, St. Lawrence River.
Mansfield.....	60	" 6..	169 06	21 52	" ferry, Charlemagne and Bout de l'Isle.
Charlemagne.....		" 6..	76 38	11 08	" tug St. Lawrence River.
Bonenfant.....	20	May 6..	21 34	6 68	Paddle, ferry, Charlemagne and Bout de l'Isle.
Sovereign.....	700	" 9..	637 29	58 96	" pass., Montreal and Carillon.
Garnet.....	200	" 9..	152 05	20 16	" " Valleyfield.
Filgate.....	189	" 9..	425 00	42 00	" " Cornwall.
G. H. Harris.....		" 9..	87 46	11 96	Screw, tug, Ottawa River.
*Rocket.....	277	" 11..	428 50	42 24	Paddle, pass., Collingwood and Georgian Bay ports.
Princess.....	443	" 11..	579 96	54 32	Paddle, pass., Montreal and Carillon.
Richelieu.....		" 11..	113 38	17 04	" " " "
Empress.....	800	" 12..	677 60	62 16	" " " Grenville.
Albert.....		" 13..	216 98	22 36	" tug, Upper Ottawa River.
Junco.....		" 13..	17 09	6 36	Screw, yacht.
G. B. Pattee.....		" 13..	30 38	7 40	" tug, Upper Ottawa River.
G. B. Green.....	565	" 13..	254 81	28 40	Paddle, pass., Aylmer and Chats Rap.
Samson.....		" 15..	15 27	6 20	" tug, Upper Ottawa River.
J. L. Murphy.....		" 15..	173 05	18 84	Screw " " " "
Madawaska.....		" 15..	14 57	6 20	Warp " " " "
Amable du Fond.....		" 15..	17 40	6 36	" " " " "
Hamilton.....		" 15..	319 88	30 60	Paddle " " " "
Princess Louise.....	200	" 16..	114 88	17 20	Screw, pass., Ottawa and Grenville.
E. G. Laverdure.....	100	" 16..	54 00	9 32	" " " " "
Beatrice B.....	40	" 16..	58 63	9 72	" ferry, Ottawa and Hull.
Marquis of Lorne.....		" 16..	20 19	6 60	" " " " "
Emile.....	40	" 16..	11 80	5 96	" pass., Ottawa and Montreal.
Ada.....		" 17..	28 52	7 24	" tug, Ottawa River.
Russell.....		" 17..	76 49	11 16	" " " " "
Bella Ritchie.....	100	" 17..	68 52	10 52	Paddle, pass., Ottawa & Papineauville
Minnie Bell.....		" 17..	21 74	6 76	Screw, tug, Rideau Canal.
Robert Anglin.....		" 17..	97 18	12 76	" freight, Ottawa and St. Lawrence River.
Agnes.....	40	" 18..	29 37	7 32	" pass., Buckingham and High Falls.
Leon.....	20	" 18..	14 57	6 29	Screw, pass., High Falls and Notre Dame de la Garde.
Thurso.....	40	" 19..	20 07	6 60	Paddle, ferry, Thurso and Clarence.
Winona.....		" 19..	12 00	5 96	Screw, tug, Ottawa River.
Ishaway.....		" 25..	6 76	5 56	" yacht.
Hiram Easton.....		" 29..	34 00	7 72	" tug, Ottawa River.
Glide.....	40	" 29..	80 48	11 40	" ferry, Hawkesbury and Calumet
T. Osborne.....		" 29..	24 97	7 00	" tug, Ottawa River.
Laurier.....	40	June 1..	18 66	6 52	" pass., Montreal and Vaudreuil.
Olive.....	60	" 1..	213 00	25 04	" " " Portland.
St. Michael.....		" 2..	15 65	6 28	Paddle, tug, Ottawa River.
Col. By.....		" 2..	9 31	5 72	Screw, tug, Rideau Canal.
Napierville.....	40	" 3..	165 44	21 20	Paddle, ferry, Cote Ste. Catherine and Verdun.
Nosbonsing.....		" 5..	24 53	7 00	Screw, tug, Nosbonsing Lake.
Booth.....	40	" 5..	347 00	35 76	Paddle, pass., Wisawasa and Sturgeon Falls.
Zephyr.....		" 5..	2 78	5 24	Screw, tug, Nipissing Lake.
Ladas.....	40	" 5..	54 47	9 32	" pass., Callander and Chaudiere.
Dauntless.....	20	" 6..	7 93	5 64	" " Nipissing Lake.

* Name changed to Britannic.

63 VICTORIA, A. 1900

STEAM Vessels Inspected, &c.—Montreal Division—*Concluded.*BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Sparrow.....	40	June 6..	38·17	8 04	Screw, pass. Callander and Frank's Bay
Shoofly.....		" 6..	9 99	5 80	" tug, Trout Lake.
Queen.....		" 7..	15 37	6 20	" pass., North Bay & South River.
Verva.....	40	" 8..	54 54	9 40	" " Wahnapiatae Lake.
Maid of the Mill.....	20	" 8..	8 18	5 64	" " " Lake."
Empress.....		" 9..	35 57	7 88	" tug, Nipissing Lake."
Turtle.....		" 9..	33 12	7 64	Warp " " "
Hebron.....		" 13..	149 00	16 92	Screw, freight, " St. Lawrence and Ottawa River.
Maude.....	350	" 16..	269 23	29 52	Paddle, pass., Montreal and Ottawa.
Lady of the Lake.....	700	" 24..	607 00	56 56	" " Newport and Magog.
Owl.....	10	" 24..	3 69	5 32	Screw " " "
Annie C.....	10	" 24..	6 33	5 51	" " " "
John A.....		" 24..	19 70	6 60	" tug, Memphremagog Lake.
Prefontaine.....	40	" 26..	433 83	42 72	" pass., Montreal and Quebec.
Robinault.....	200	" 26..	332 00	34 56	" " Valleyfield.
Chaffey.....	40	" 27..	42 44	8 36	" " Valleyfield and Lancaster.
White Squall.....		" 27..	7 47	5 56	" yacht.
John.....	25	" 28..	35 17	7 80	Paddle, ferry, Carillon and Pointe Fortune.
†Frolic.....		" 29..	15 72	12 56	Screw, yacht.
Total.....			15,432 95	1,957 39	

† Paid dues and fees for 1898 and 1899.

WM. LAURIE,
Steamboat Inspector.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, &c.—Montreal Division.

BOILERS AND MACHINERY.

Name of Vessel	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons,	Tonnage	Class of Vessel and where employed.
				Dues and Inspection Fees Paid.	
		1899.		\$ cts.	
Nellie Reid		July 20.	55 71	9 48	Screw, tug, lake and rivers.
Maggie R. King		Aug. 10.	27 13	7 16	" " canals.
Derrick No. 2.		" 11.	100 00	13 00	Floating derrick, Montreal harbour.
Tim Doyle.		" 19.	14 84	6 20	Screw, tug, canals.
Gracie.	40	" 23.	10 50	5 88	Paddle, pass., Valleyfield & Massena.
*Windermere		Sept. 16.	31 17	14 96	Screw, yacht.
Frank Perew.		Oct. 3.	43 02	8 44	" tug, rivers.
Honoré		" 20.	21 89	6 76	" "
		1900.			
Derrick No. 5.		Mar. 24.	100 00	13 00	Floating derrick, Montreal harbour.
Derrick No. 4.		" 24.	100 00	13 00	" " "
Derrick No. 6.		" 27.	100 00	13 00	" " "
Dredge No. 1.		" 29.	100 00	13 00	Spoon dredge " "
St. Peter.		" 30.	43 00	8 44	Screw, tug " "
Dredge No. 2.		" 30.	100 00	13 00	Spoon dredge " "
Dredge No. 3.		April 7.	100 00	13 00	" " "
Aberdeen		" 7.	86 58	11 96	Screw, tug " "
St. Louis		" 13.	34 00	7 72	" " "
Drill boat		" 17.	100 00	13 00	Floating drill boat, Montreal harbour.
Derrick No. 2.		" 17.	100 00	13 00	" derrick " "
Aurelia.		" 19.	32 05	7 56	Screw, tug, rivers.
Dredge Trenton.		" 19.	100 00	13 00	Spoon dredge " "
Dredge I. X. L.		" 20.	100 00	13 00	" " "
C. W. Jones.		" 20.	47 96	8 84	Screw, tug " "
M. P. Davis		" 21.	11 00	5 88	" " Montreal harbour.
Lucia.		" 27.	41 07	8 28	" " canals.
Hector		May 1.	43 05	8 44	" " lake and rivers.
H. Larosée		" 15.	12 69	6 04	" " canals.
Dama	40	" 15.	54 58	9 40	Screw, pass., rivers.
Robert Stoker		" 16.	13 72	6 12	" " tug, canals.
Mabel Macdonald		" 22.	41 81	8 36	" " tug, rivers.
Dredge No. 4.		" 22.	100 00	13 00	Spoon dredge, Soulanges Canal.
Dredge No. 6.		" 22.	100 00	13 00	" " "
C. W. Dennis.		June 2.	16 91	6 36	Screw, tug, canals.
Plover.		" 2.	40 30	8 20	" " rivers.
W. P. Buckley.		" 2.	26 83	7 16	" " "
Ida		" 2.	26 41	7 08	" " canals.
Vesper		" 7.	7 90	5 64	Screw, yacht.
Dandy.		" 8.	46 00	8 68	" " tug, rivers.
Shickluna		" 8.	66 00	10 28	" " "
Grain Elevator No. 15.		" 12.	212 60	22 04	" " Elevator, Montreal harbour.
Grain Elevator No. 16.		" 12.	210 31	21 80	" " " "
Grain Elevator No. 2.		" 15.	170 00	18 60	" " " "
Grain Elevator No. 8.		" 15.	89 00	11 40	" " " "
Grain Elevator No. 10.		" 15.	173 00	18 84	" " " "
Grain Elevator No. 12.		" 15.	183 00	19 64	" " " "
Grain Elevator No. 11.		" 15.	169 00	18 52	" " " "
H. M. Mixer.		" 16.	30 00	7 40	" " tug, rivers.
Nellie Reid.		" 19.	55 71	9 48	" " tug, lake and rivers.
Grain Elevator No. 14.		" 19.	181 00	19 48	" " Elevator, Montreal harbour.
Grain Elevator No. 1.		" 19.	165 00	18 20	" " " "
Grain Elevator No. 13.		" 20.	178 00	19 24	" " " "
Grain Elevator No. 7.		" 20.	170 00	18 60	" " " "
Grain Elevator No. 9.		" 20.	172 00	18 76	" " " "
Grain Elevator.					
St. Lawrence No. 1.		June 20.	83 00	11 64	" " " "
W. F. Logie.		" 21.	17 32	6 36	" " tug, canals.
Grain Elevator No. 4.		" 21.	188 00	20 04	" " Elevator, Montreal harbour.
Grain Elevator No. 5.		" 21.	80 00	11 40	" " " "
Grain Elevator No. 6.		" 21.	170 00	18 60	" " " "
Asilda.		" 28.	23 72	6 84	" " tug, canals.
Total			4,907 78	695 20	

* Paid dues and fees for 1897 and 1898.

LOUIS ARPIN, Steamboat Inspector.

63 VICTORIA, A. 1900

STEAM Vessels not Inspected for the Year ended June 30, 1899.

MONTREAL DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not Inspected and Class of Vessel.
Hiram Robinson	60.90	38.80	} Not running
Monaco	9.69	6.05	
Daniel McLachlin	22.08	21.47	
Derrick No. 3	100.00		
Hurtubise	46.12	42.52	
Flora	5.18	3.96	
Little Roxy	11.67	6.88	
Union	75.04	66.05	
Tit Willow	16.83	10.64	
Lottie	10.04	8.52	
Mattawan	22.43	15.25	
Dredge No. 6	100.00		
Dredge No. 7	100.00		
Clipper	4.00	3.00	
Gertie	17.05	8.97	
Eileen	11.00	9.00	
High Rock	7.00	5.00	
Elsie Ross	9.83	7.76	
Paul Smith	293.16	184.69	
Chummy	5.37	3.76	
Vesta	14.17	7.56	
Conquerer	233.04	208.57	} Chartered to the Government.
Agnes McMahan	81.48	46.51	
Enterprise	13.43	9.14	
Jeanne	16.12	10.96	
Gladys	26.01	17.69	
Chipmunk	37.00	25.00	
	1,348.64	767.75	

WM. LAURIE.
LOUIS ARPIN.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected for the Year ended June 30, 1899.

QUEBEC DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Jubilé.....		July 7..	25	7 00	Screw, pleasure yacht, Richelieu River
Nile.....		" 7..	28	7 24	" " "
Alleghany.....		" 7..	5	5 40	" " "
Pierreville.....		" 7..	42	8 36	Paddle, freight and tug, " Pierreville and Montreal.
Admiral.....	340	" 11..	682	62 56	Paddle, pass., Gaspé and Dalhousie.
Lena.....		" 19..	22	6 76	Screw, tug, Lake Megantic.
Mecanamac.....		" 19..	4	5 32	" pleasure yacht, Spider Lake.
Campania.....		" 19..	23	6 84	" tug, Lake Megantic.
Polaris.....	450	" 23..	533	50 64	" winter ferry, Quebec and Levis.
Frances.....	40	" 30..	19	6 52	Pad., ferry, Campbellton and Cross Point.
Christiana.....		" 30..	57	9 56	Paddle, tug, Restigouche River.
Oak Bay.....		" 30..	27	7 16	" " "
Fearless.....		Aug. 2..	10	5 80	Screw, tug, Pabos River.
Le Brochu.....					
Queen.....	450	Aug. 8..	367	37 36	Screw, winter ferry, Quebec and Levis.
L'Amie.....		" 9..	16	6 28	" tug, Quebec Harbour.
St. George.....		" 10..	12	5 96	" " "
Two Brothers.....		" 12..	23	6 84	" " "
Cygnet.....		" 18..	12	5 96	" pleas. yacht, Sorel & Montreal.
Lilley H.....		" 29..	14	6 12	" tug, Quebec Harbour.
Batiscan.....		Sept. 5..	40	8 20	Paddle, tug, Quebec and Batiscan.
Sjesta.....		" 8..	99	12 92	Screw, pleasure yacht.
Savoy.....	25	" 12..	348	35 84	" pass., Quebec and Anticosti.
Belle.....		" 27..	50	9 08	" tug, Saguenay River.
Marie Louise.....	40	" 29..	99	12 92	Paddle, ferry, Chicoutimi & Ste. Anne.
Kinogami.....		" 28..	21	6 68	Screw, tug, Saguenay River.
Forest.....					
Thor.....			323	30 84	Paddle, tug, Saguenay River.
Johanna B.....			17	6 36	Screw, tug, "
Shamrock.....		Oct. 17..	237	26 96	" tug, Buoy service, Quebec and Montreal.
Mersey.....		Nov. 3..	60	9 80	Screw, tug, Quebec and Montreal.
Almanda.....	Crew	" 4..	11	5 88	
		1900.			
Rhoda.....	150	April 8..	182	22 56	Paddle, pass., Quebec and Rimouk
Victoria.....	30	" 10..	196	23 68	Montreal and St. Jean d'Iberville.
St. James.....	Crew	" 12..			Department of Public Works.
Chambly.....	600	" 12..	535	50 80	Montreal and Chambly.
Arthur.....	Crew	" 11..	78	11 24	Paddle, tug, Sorel and Napierville.
John Pratt.....	"	" 11..			Screw, tug, attending dredge.
Cartier.....	"	" 11..			" " "
Terrebonne.....	450	" 13..	636	58 88	Montreal and Contrecoeur pass.
Laprairie.....	350	" 13..	600	56 00	" and Laprairie pass.
Berthier.....	600	" 14..	934	82 72	" and Three Rivers pass.
Sorel.....	40	" 14..	158	20 64	Sorel and St. Thomas de Pierreville.
Shamrock.....	Crew	" 15..			Dept. of Marine, laying buoys in River St. Lawrence.
Fire Fly.....	40	" 15..	214	25 12	Paddle, ferry, Sorel and Berthier.
Champion.....	612	" 17..	482	46 56	Paddle, Quebec and Berthier.
Levis.....	350	" 17..	156	20 48	Screw, Quebec and St. Romuald.
Solino.....	30	" 18..	807	72 56	" Montreal and St. John's Nfld.
Orleans.....	359	" 18..	269	29 52	" ferry, Quebec & Isle of Orleans.
Savoy.....	25	" 19..	348	35 84	" pass. & ft., Quebec & Anticosti.
North.....	450	" 19..	289	31 12	Paddle, pass., Quebec and Levis.
South.....	450	" 19..	349	35 92	" " "

63 VICTORIA, A. 1900

STEAM Vessels Inspected, &c.—Quebec Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Lenora.....	Crew.....	April 20..	8	5 64	Screw, pleasure yacht.
Hosanna.....	185	" 21..	89	12 12	" pass., Montreal and Longueuil.
Carolina.....	600	" 21..	977	86 16	Pad. pass., Montreal and Chicoutimi.
Ethel.....	Crew.....	" 22..	72	10 76	Screw, Montreal harbour tug.
Montreal.....	800	" 22..	2,068	173 44	Pad. pass. Montreal and Quebec.
Hudson.....	Crew.....	" 24..	158	17 64	" " "
Spray.....	"	" 24..	107	13 56	Screw " "
Saguenay.....	433	" 24..	992	87 36	Pad. pass., Quebec and Chicoutimi.
Hamilton.....	375	" 24..	938	83 04	" " Montreal and Hamilton.
Rivière du Loup.....	40	" 25..	199	23 92	Paddle, ferry, Varennes & L'Assomption.
Ottawa.....	Crew.....	" 25..			Dept. of Public Works, screw tug attending dredge.
W. C. Frances.....	"	" 25..	37	7 96	Screw, Montreal harbour tug.
T. H. Nasmith.....	"	" 25..	49	8 92	" " "
Rodolphe.....	"	" 26..	116	14 28	Paddle, tug, Sorel and Three Rivers.
Georgiana.....	"	" 26..	53	9 24	Screw, Montreal harbour tug.
Sincennes.....	"	" 26..	228	23 24	Paddle, tug, Montreal and Quebec.
Campana.....	400	" 27..	1,697	143 76	Screw, pass. and frgt, Mont'l & Pictou
Admiral.....	340	" 28..	682	62 56	" " Gaspé & Dalhousie
Spray of Quebec.....	Crew.....	May 4..	24	6 92	Screw, Quebec harbour tug.
Charlevoix.....	75	" 1..	212	24 96	Screw, pass. and ft., Quebec & Malbaie.
Lord Stanley.....	30	" 2..	276	30 08	" wrecker, Montreal and Gulf St. Lawrence.
Etoile.....	591	" 8..	560	52 80	Paddle, pass. and ft., Quebec and St. Jean Deschaillons.
Alma.....	Crew.....	" 9..	12	5 96	Screw, tug, Quebec and Portneuf.
St. Croix.....	550	" 9..	506	48 48	Paddle, pass. and ft., Que. & St Croix.
Temiscouata.....	Crew.....	" 10..	11	5 88	Screw, tug, Quebec harbour.
Hope.....	"	" 12..	19	6 52	" " "
Druid.....	"	" 11..			Dept. of Marine and Fisheries, buoys and lighthouse service.
Cultivateur.....	750	" 18..	362	36 96	Paddle, ferry, Mont'l & St. Helen Id.
Canada.....	600	" 18..	1,768	149 44	" pass., Mont'l and Chicoutimi.
Caspian.....	400	" 19..	968	85 44	" " & ft., Mont'l & Toronto.
Trois Rivières.....	1,000	" 19..	1,552	132 16	" " Ste. Anne de Beaupré.
St. Anne.....	40	" 19..	14	6 12	Screw, ferry, Sorel and Berthier.
Julia.....	Crew.....	" 20..	91	12 28	Twin-screw, tug, Montreal & Chambly
Quebec.....	800	" 20..	2,656	220 48	Paddle, pass. & ft., Montreal & Quebec.
Corsican.....	400	" 30..	946	83 68	" " " Toronto
Spartan.....	400	" 30..	628	58 24	" " " "
Daisy.....	Crew.....	June 1..	4	5 32	Screw, tug, Lake Edouard.
Grace.....	"	" 1..	4	5 32	" Pleasure yacht.
Algerian.....	400	May 18..	914	81 12	Paddle, pass., Montreal & Hamilton.
Victor.....	27	June 6..	35	7 80	Screw tender in Quebec harbour.
Diver.....	Crew.....	" 9..	86	11 88	Screw wrecking schooner, Gulf.
Contest.....	150	" 9..	274	29 92	Pad., pass., Quebec & Gulf St. Lawrence
St. Louis.....	504	" 12..	428	42 24	Pad., screw & ft., Que. & St. Jean Desch.
Alice.....	Crew.....	" 22..	67	10 36	Screw, Montreal harbour tug.
Richard.....	6	" 23..	448	43 84	Screw, pass. & ft., Quebec & upper lakes.
M. E. Hacket.....	Crew.....	" 5..	78	11 24	" tender in harbour of Quebec.
Lilly H.....	"	" 8..	20	6 60	" tug, Quebec harbour.
Two Brothers.....	"	" 10..	23	6 84	" " "
Pilot.....	450	" 24..	426	42 08	Screw, winter ferry, Quebec and Lévis.
St. Roch.....	Crew.....	" 10..	18	6 44	" tug, Quebec harbour.
Brothers.....	150	" 27..	367	37 34	Pad., pass. & ft., Montreal & Berthier.
St. Francis.....					Government tug attending dredge of Public Works.
Como.....	40	June 28..	75	11 00	Paddle, ferry, Three Rivers & Nicolet.
Bourgeois.....	40	" 28..	94	12 52	" " St. Grégoire
Glacial.....	100	" 28..	109	16 72	Screw, " St. Angèle

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, &c.—Quebec Division—*Continued.*BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Blanford.....	Crew.....	June 29..	65	10 20	Paddle, tug, St. Maurice River.
Beatrice.....	".....	" 29..	40	8 20	" " "
Ivan R.....	39	" 30..	18	6 44	Screw, pass., Piles and La Tuque.
Florence.....	Crew.....	" 30..	18	6 44	" tug, "
St. George.....	".....	" 24..	12	5 96	" Quebec harbour tug.
Marie Josephine.....	".....	" 23..	117	14 36	wrecking schooner, Gulf St. Lawrence.
Polaris.....	450	" 6..	533	50 64	Screw, ferry, Quebec and Lévis.
Maud.....	Crew.....	May 28..	50	9 00	Paddle, tug, attending dredge.
St. Pierre (Dredge).....	".....	" 28..		5 00	Dredging at Louiseville River.
Mersey.....	".....	June 3..	60	9 80	Screw, tug, Quebec harbour.
Florence (Schooner).....	".....	May 12..	133	15 64	" wrecking schooner.
			33,997	3,410 76	

JOS. SAMSON,

Boiler and Machinery Inspector.

63 VICTORIA, A. 1900

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended,
June 30, 1899.

QUEBEC DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Greetlands	40	May 8..	10·90	95 28	Screw, pass. and freight between Montreal and foreign ports.

JOS. SAMSON,
Boiler and Machinery Inspector.

STEAM Vessels not Inspected for the Year ended June 30, 1899.

QUEBEC DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not Inspected and Class of Vessel.
Dot	9·85	6·70	Screw, tug, not running.
Beaver	373·	104·	Paddle, tug, did not run till July 14; inspected her since.
Eureka	163·42	12·22	Screw, tug, sold to Dept. of Public Works, Ottawa.
Jessie Hume	58·13	39·53	" " has not been fitted up this year.
Neptune	11·38	7·74	" " " "
Swan	5·19	4·85	" pleasure yacht, engine taken out of her.
Mistassini	248·79	176·73	Paddle, passenger, burnt at her wharf, L. St. John.
Peribonca	178·79	112·65	" " want of water to run; inspected her since.
Le Colon	173·14	109·07	" " " "
Undine	17·	15·	Screw " " "
Eva	4·08	2·77	" " pleasure yacht, engine taken out of her.
Commodore H.	10·	3·	" tug, not running this year.
Five Brothers	11·	7·	" " " "
Cuckoo	6·	4·	" " " "
Canadien	25·	15·	" " broken up.
Victory	42·	15·	" " not running.
Frank	58·	39·	Stern-wheel, tug, not running.
Genereux	7·	6·	Screw, tug " "
	1,401·78	681·16	

JOS. SAMSON,
Boiler and Machinery Inspector.

PIERRE D. BRUNELLE,
Hull Inspector.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected for the Year ended June 30, 1899.

QUEBEC AND MONTREAL DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Jubilé.....	40	July 6.	25	7 00	Screw, pass., Quebec & Montreal.
Robinault.....	200	" 26.	192	23 36	" " Montreal & Valleyfield.
Bonenfant.....	20	" 26.	21	6 68	Pad., fy, Charlemagne & Bout de l'Isle
Admiral.....	340	" 26.	682	62 56	Pad., pass. & ft., Montreal & Gaspé.
Harry Bate.....	Freight.	" 27.	254	28 32	Screw, freight, Montreal & Ottawa.
Olive.....	60	" 27.	213	25 04	Screw, pass. & ft., Montreal & Perth.
Isle Héron.....	40	" 27.	160	20 80	Pad., fy, Verdun & C. Ste. Catherine.
Ida.....	140	" 27.	247	27 76	Screw, pass. & ft., Montreal & Ottawa
Chaffey.....	40	" 30.	42	8 36	" ferry, Valleyfield & Lancaster.
C. Anderson.....	60	" 25.	125	15 00	" pass. & ft., Quebec & Chicoutimi.
Ivan R.....	39	Aug. 4.	18	6 44	" " Piles & La Tuque.
*Undine.....			17	6 36	" " Roberval & G'de Décharge
+Peribonca.....			179	22 32	Pad. " " "
Mistassini.....	40	Aug. 10.	249	27 92	" " " "
Le Colon.....	40	" 10.	173	21 84	" " " Mistassini.
Marie-Louise.....	40	" 10.	99	12 92	" ferry, Chicoutimi & Ste. Anne.
Francis.....	40	" 10.	19	6 52	" " Campbellton & Cross Pt.
Lena.....	20	Condemn.	22	6 76	Screw, ferry, Lake Megantic & 3 Lakes
Tiber.....	80	Aug. 24.	1,735	146 80	" pass. & ft., Mont. & Newf'dland
John.....	30	" 2.	35	7 80	Pad., ferry, Carillon & Pt. Fortune.
Polaris.....	450	Sept. 6.	533	50 64	Screw, ferry, Quebec & Levis.
Queen.....	450	" 7.	367	37 36	" " " "
Pilot.....	450	" 8.	426	42 08	" " " "
Victor.....	27	" 8.	35	7 80	" tender, Quebec Harbour.
Savoy.....	25	" 16.	348	35 84	" pass. and freight, Quebec and Isle Anticosti.
Rhoda.....	150	April 1.	182	22 56	Paddle, pass., Quebec & Rimouski.
Polino.....	30	" 1.	807	72 56	Screw, pass. & ft., Mont. & Newf'dland
Campana.....	400	" 1.	1,697	143 76	" " Montreal & Pictou.
Savoy.....	25	" 19.	348	35 84	" " Quebec & Isle Anticosti.
Orleans.....	530	" 19.	269	29 52	Screw, ferry, Quebec & Isle Orleans.
Admiral.....	340	" 19.	682	62 56	Pad., pass. & ft., Dalhousie & Gaspé.
Melbourne.....	125	" 22.	894	79 52	Screw, pass. & ft., Montreal & Toledo
Berthier.....	600	May 25.	934	82 72	Pad., pass., Montreal & Three Rivers.
Chambly.....	600	" 25.	535	50 80	" " Chambly.
Terrebonne.....	450	" 25.	636	58 88	" " Sorel.
Hamilton.....	375	" 26.	938	83 04	" " Hamilton.
Montreal.....	800	" 26.	2,068	173 44	" " Quebec.
Fire Fly.....	40	" 26.	214	25 12	" Sorel and Berthier.
Sorel.....	40	" 26.	158	20 64	" " St. Thomas.
Laprairie.....	350	" 26.	600	56 00	" Montreal & Laprairie.
Lord Stanley.....	30	" 19.	276	30 08	Screw, wrecking str., Montreal & Gulf.
Charlevoix.....	75	" 29.	212	24 96	" pass. & ft., Quebec & Malbaie.
Carolina.....	600	" 1.	977	86 16	Pad., pass., Montreal & Chicoutimi.
Canada.....	600	" 2.	1,768	149 44	" " " "
Levis.....	350	" 25.	156	20 48	Screw, ferry, Quebec & St. Romuald.
Champion.....	612	" 4.	482	46 56	Pad., pass., Quebec & Berthier.
Saguenay.....	438	" 5.	992	87 36	" " Saguenay.
North.....	450	" 6.	289	31 12	Paddle, ferry, Quebec & Levis.
South.....	454	" 6.	349	35 92	" " " "
Etoile.....	591	" 8.	560	52 80	" passenger, Quebec & St. Jean Déchaillons.
Ste. Croix.....	550	" 9.	506	48 48	Screw, pass., Quebec & Ste. Croix.
Hosanna.....	185	" 15.	89	12 12	" ferry, Montreal & Longueuil.
Longueuil.....	300	" 15.	365	37 20	Pad., ferry, Hochelaga " "
Hochelaga.....	600	" 15.	419	41 52	" " Boucherville.
Empress.....	800	" 16.	677	62 16	Pad., pass., Ottawa & Grenville.
Maud.....	350	" 16.	269	29 52	" Montreal & Ottawa.
Beatrice B.....	40	" 16.	59	9 72	Screw, ferry, Ottawa & Hull.
Princess Louise.....	200	" 16.	115	17 20	" pass., " Grenville.

* Unfit to carry passengers. † Unfit to carry passengers.

63 VICTORIA, A. 1900

STEAM Vessels Inspected, &c.—Quebec and Montreal Division.—Continued.

HULL INSPECTION—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employ'd.
				\$	cts.
1900.					
Bella Ritchie.....	100	May 16..	69	10 52	Pad., pass., Ottawa & Papineauville.
Harry Bat.....	50	" 16..	254	28 32	Screw, pass. & ft., Ottawa & Montreal
Emile.....	40	" 16..	12	5 96	" " Montreal & Ottawa.
E. G. Laverdure.....	100	" 17..	54	9 32	Screw, pass., Ottawa and Grenville.
Marquis de Lorne.....	40	" 17..	20	6 60	" " ferry, Ottawa and Hull.
G. B. Greene.....	565	" 17..	255	28 40	Pad., pas., Aylmer & Shats Rapids.
Agnes.....	40	" 18..	29	7 32	Screw, ferry, Buck'ham & High Rock.
Mildred.....	25	" 18..	15	6 20	" " " "
Léon.....	20	" 18..	15	6 20	Screw, ferry, High Rock and Notre Dame de la Garde.
Thurso.....	40	" 19..	20	6 60	Paddle, ferry, Thurso and Clarence.
Bonito.....	30	" 19..	17	6 36	Screw, ferry, Calumet and L'Original.
Glide.....	40	" 19..	80	11 40	" " Hawkesbury.
Robinault.....	200	" 22..	332	34 56	Screw, pass., Montreal & Valleyfield.
Welshman.....	25	" 22..	143	19 44	" " Ottawa
Algerian.....	400	June 23..	914	81 12	Pad., pass., Montreal & Hamilton.
Corsican.....	400	May 23..	946	83 68	" " " Toronto.
Caspian.....	400	" 23..	968	85 44	" " " "
Quebec.....	800	" 23..	2,656	220 48	" " " Quebec.
Mansfield.....	60	" 24..	169	21 52	Screw, ferry, Charlemagne and Bout de l'Isle.
Trois Rivières.....	1,000	" 30..	1,552	132 16	Pad., pas., Montreal and Ste. Anne de Beauré.
Spartan.....	400	" 30..	946	83 68	Pad., pass., Montreal and Toronto.
Bohemian.....	200	" 30..	628	58 24	" " Prescott.
Brothers.....	150	" 29..	367	37 36	" " Berthier.
Ste. Anne.....	40	" 31..	14	6 12	Screw, ferry, Sorel and Berthier.
Greetlands.....	40	" 20..	1,091	95 28	Screw, pas. & ft, Montreal & Frgn ports
Missawippi.....	25	June 23..	4	5 32	Screw, pleasure yacht, Lake Mississippi
Lady of the Lake.....	700	" 24..	607	56 56	Paddle, pass, Newport & Magog.
Owl.....	10	" 24..	4	5 32	Screw, pleasure yacht, Lake Magog.
Annie C.....	10	" 24..	633	5 51	" " " "
Sovereign.....	700	" 26..	637	58 96	Paddle, pass., Montreal & Carillon.
John.....	30	" 26..	35	7 80	" " ferry, Carillon & Pt. Fortune.
Chaffey.....	40	" 27..	42	8 36	Screw, ferry, Valleyfield & Lancaster
Filgate.....	189	" 27..	425	42 00	Paddle, pass., Montreal and Cornwall
Laurier.....	40	" 27..	19	6 52	Screw, pass., Montreal & Vaudreuil.
Prefontaine.....	40	" 29..	434	42 78	" " & frt, " Quebec.
Victoria.....	30	" 30..	196	23 68	" " " St. Jean Iberville
Duchess of York.....	700	May 25..	490	47 20	Pad., pass., Montreal and Carillon.
St. Louis.....	514	June 10..	428	42 24	" " Quebec and St. Jean Deschallions.
Victor.....	27	" 12..	35	7 80	Screw, tender, harbour of Quebec.
Olive.....	60	" 14..	213	25 04	Screw, pas. & ft, Mont. & Portland Ont.
Rivière du Loup.....	40	" 14..	199	23 92	Pad., ferry, Varennes & l'Assomption
Bonenfant.....	20	" 14..	21	6 68	" " Charlemagne & Bout de l'Isle
Hall.....	50	" 15..	247	27 76	Screw, pass. & ft., Mont. & Ottawa.
Ida.....	140	" 15..	247	27 76	" " " "
Dama.....	40	" 16..	55	9 40	Screw, pas., Montreal and Quebec.
Garnet.....	200	" 16..	152	20 16	Pad., pass., Montreal and Valleyfield.
Princess.....	443	" 16..	579	54 32	" " " Carillon.
Island Queen.....	250	" 17..	98	12 84	Screw, ferry, Montreal & Longueuil.
Richard.....	6	" 22..	448	43 84	Screw, pas., Quebec and upper lakes.
Chateauguay.....	40	May 25..	222	26 76	Pad., pas., Montreal and Chateauguay
Cultivateur.....	730	" 22..	362	36 96	Pad., ferry, Montreal & St. Helen Isl
Contest.....	150	July 3..	274	29 92	Pad., pas., Quebec & Gulf of St. Law.
Como.....	40	" 15..	75	11 00	Pad., ferry, Three Rivers & Nicolet.
Glacial.....	100	" 15..	109	16 72	Screw, " Three Rivers & Ste. Angèle
Bourgeois.....	40	" 15..	94	12 52	Pad., " ferry, Three Rivers & St. Greg.

PIERRE D. BRUNELLE,
Hull Inspector.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended
June 30, 1899.

QUEBEC AND MONTREAL DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
Greetlands.....	40	1900. May 8...	1,091	\$ cts. 95 28	Screw, pass. and frt., between Montreal and foreign ports.

PIERRE D. BRUNELLE,
Hull Inspector.

STEAM Vessels not Inspected for the Year ended June 30, 1899.

QUEBEC AND MONTREAL DIVISION.

HULL INSPECTION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. — Why not Inspected and Class of Vessel.
Paul Smith	293 16	184 69	Pad., pas., not running this year.
Lena	22 05	14 99	Screw, ferry, condemned and laid up.
Reindeer.....	498 33	325 51	Pad., pas., on Lake Champlain, not requested to be inspected.
Maquaur	370 13	240 35	Pad., pas., on Lake Champlain, not requested to be inspected.
	1,383 83	765 54	

PIERRE D. BRUNELLE,
Hull Inspector.

63 VICTORIA, A. 1900

STEAM Vessels Inspected for the Year ended June 30, 1899.

NOVA SCOTIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Dolphin		July 6.	8 07	5 64	Screw, fish boat, Yarmouth & coast.
Ida Lue	30	" 8.	44 51	8 60	" pass., Yarmouth & coastwise.
Alpha		" 9.	61 20	9 88	" freight, Avon River & coast.
Trusty	150	" 11.	57 60	9 64	" pass., La Have River.
Sea Bird		" 14.	41 28	8 28	" freight, Halifax & coastwise.
Yuba	20	" 15.	12 04	5 96	" ferry, Barrington & C. Island
Aid		" 18.	98 55	12 84	" lighter, Liverpool & coast.
St. Michael	15	" 18.	39 20	8 12	" pass., Liverpool & P. Mouton
Fairy		" 18.	15 55	6 28	" water boat, Lunenburg Hrb'r
Maggie	40	" 19.	19 26	6 52	" pass., Lunenburg and South.
Carrie	40	" 19.	14 83	6 20	" pass., Mahone Bay & Chester
Commodore	30	" 23.	12 84	6 04	" pass., Halifax Harbour.
Mulgrave	275	" 25.	484 86	Gov. prot'y	" ferry, Strait of Canso.
Zulieka		" 26.	12 38	5 96	" yacht, Bras d'Or Lake.
Eleanor M. Cates		Aug. 2.	58 81	9 72	" tug, Louisburg & coastwise.
Jessie Gray		" 3.	76 01	11 08	Stern-wheel, lighter, Bras d'Or Lake.
Lennox	25	" 4.	66 29	10 28	Paddle, ferry, Lennox Passage.
Vulcan		" 5.	18 40	6 44	Screw, tug, Canso & coastwise.
Collector		" 11.	52 02	9 16	" lighter, Halifax Harbour.
Anticosti		" 12.	19 00	6 52	" yacht, Halifax Harbour.
Malcom Cann	125	" 17.	211 81	24 96	" pass., Mulgrave & coastwise.
David Duncan		" 18.	20 59	6 68	" tug, St. Mary's Bay.
Centreville		" 18.	59 71	9 80	" freight, Centreville & coast.
Bessie and Harry		" 22.	22 00	6 76	" water boat, Halifax Harbour.
L. Boyer	100	" 24.	60 00	9 80	" pass., Halifax Harbor.
Bessie	20	May 1.	10 45	5 80	" pass., Minor waters N. S. & C. B.
Mascotte	20	Sept. 13.	35 40	7 80	" pass., Halifax Harbour.
* Dolphin	15	" 17.	12 78	* 12 08	" tug & pass., Meat Harbour & Moser's River.
La Have		" 23.	49 27	8 92	" tug, Halifax & coastwise.
Annie		Oct. 10.	42 12	8 36	" water boat, Halifax Harbour.
Wilfred C	60	" 26.	99 26	12 92	" pass., Halifax & coastwise.
Bridgewater	225	" 28.	207 79	24 64	" " " "
Mic-Mac	40	" 29.	150 63	20 08	Paddle, ferry, Halifax Harbour.
Wanda		Nov. 1.	38 48	8 04	Screw, tug, Yarmouth & coastwise.
Nereid		" 1.	12 24	5 96	" fish boat, Yarmouth & coast.
Edna R.		" 2.	49 66	8 92	" " " "
Island Gem		" 2.	15 62	6 28	" " " "
Westport	25	" 2.	80 69	11 40	" pass., Yarmouth & coast.
La Tour	70	" 3.	154 43	20 32	" " " "
Halifax	250	" 10.	338 42	35 04	Paddle, ferry, Halifax Harbour.
Henry Hoover		" 26.	54 64	9 40	Screw, tug, Halifax Harbour & coast.
Ralph E. S.		Dec. 10.	27 82	7 24	" fish boat, Halifax & coast.
Salvor		" 31.	44 93	8 60	" lighter, Halifax Harbour.
		1900.			
Newfoundland		Feb. 10.	918 75	78 52	" freight, foreign.
Harlaw	60	" 25.	451 36	44 08	" passenger, foreign.
Lenore		March 6.	15 23	6 20	" fish boat, Halifax & coast.
Sea Bird		" 9.	41 28	8 28	" " " "
Active		" 10.	59 91	9 80	" " " "
Serena E.		" 16.	24 94	7 00	" freight, Yarmouth & coast.
Gertrude M.	40	" 16.	47 58	8 84	" pass., " "
Marina	40	" 16.	32 46	7 56	" tug & pass., " "
Louisburg		" 23.	1,815 60	150 28	" freight, foreign.
Florence C.		" 31.	38 98	8 12	" freight & fish boat, Halifax & coastwise.

* Paid for 2 years.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, &c.—Nova Scotia Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Cape Breton.....		April 12..	1,764·19	146 12	Screw, freight, foreign.
Mary Jane.....		" 12..	25 86	7 08	" freight & fish boat, Halifax & coastwise.
Coban.....	37	" 12..	1,063·30	93 04	" freight and pass., foreign.
Bonavista.....	50	" 20..	1,306·33	112 48	" "
St. Olaf.....	150	March 1..	305·27	32 40	" pass., Pictou & coastwise.
Rimouski.....	40	April 24..	124·70	18 00	" " Halifax "
Chester.....		" 25..	79·50	11 40	" tug, Hantsport "
Rob Roy.....		" 25..	13·97	6 12	" tug, Avon & Shubenacadie Riv.
Avon.....	40	" 25..	64·66	10 12	" pass., Windsor & Parrsboro.
Falmouth.....		" 25..	43·03	8 44	" tug, & Avon River.
W. M. Weatherspoon.....		" 26..	59·29	9 72	" "
Alpha.....	20	Nov. 27..	306·91	32 48	Screw, pass., Yarmouth & coastwise.
		1900.			
Yarmouth.....	450	April 27..	1,451·92	124 16	" " foreign.
Halifax.....	500	" 29..	1,738·45	147 04	" "
Cacouna.....		May 3..	1,450·78	121 08	Screw, freight "
May Queen.....	35	" 4..	35·92	7 88	" tug, fr'g't, & p., Pictou & coast.
Arcadia.....	40	" 4..	61·64	9 96	" pass., Pictou & coastwise.
Marion.....	40	" 4..	11·57	5 96	" pass., Pictou Harbour.
Bessie.....	20	" 4..	10·45	5 80	" pass., Minor waters of N. S.
		1899.			
Mayflower.....	70	July 1..	392·05	39 36	Twin-screw, p., Pictou & coastwise.
		1900.			
Diamond.....		May 5..	22·65	6 84	Screw, tug, Pictou & coastwise.
Shannon.....		" 5..	75·11	11 00	" " " "
Dartmouth.....	300	" 9..	311·23	32 88	Paddle, ferry, " Halifax & Dartmouth.
Nereus.....		" 9..	16·39	6 28	Screw, yacht, Halifax & coastwise.
Anita.....		" 11..	26·50	7 16	" fish boat " "
Petrel.....	25	" 12..	6·36	5 48	" ferry, Halifax & Dartmouth.
Percy Cann.....	35	" 18..	80·06	11 40	" pass., Halifax & coastwise.
Lunenburg.....	40	" 18..	265·55	29 28	" pass., Pictou "
Ulala.....		" 1..	13·70	6 12	" yacht, Halifax "
Peerless.....	200	" 23..	94·27	12 52	" pass., Sydney & Bras d'Or Lake.
Hygeia.....	75	" 24..	57·69	9 64	" " " "
C. M. Winch.....		" 24..	87·72	12 04	" tug, Sydney & coastwise.
		1899.			
Weymouth.....	150	Dec. 31..	153·93	20 32	" pass. " "
		1900.			
Gladiator.....		May 24..	70·40	10 60	" tug " "
Merrimac.....		" 25..	85·80	11 80	" " " "
Daisy.....		" 25..	10·74	5 88	" water boat, Sydney Harbour.
Marion.....	400	" 25..	478·49	46 24	Paddle, p., Sydney & Strait of Canso.
Zaidee.....		" 25..	18·63	6 44	Screw, tug, Sydney Harbour.
Blue Hill.....	140	" 26..	195·83	23 68	Twin-screw, p., Sydney & Mulgrave.
John L. Cann.....	125	" 26..	165·55	21 28	Screw, pass., Mulgrave & coastwise.
Vega.....	90	" 26..	132·22	18 56	" pass., Mulgrave & Sydney.
Mary O. Dell.....		" 27..	28·92	7 32	" tug & fish boat, Mulgrave and coastwise.
Robbie Burns.....	200	June 7..	88·95	12 12	Twin-screw, lighter & pass., Halifax Harbour.
Highland Mary.....	160	" 7..	73·73	10 92	" " " "
Gæmbrinus.....		May 1..	28·36	7 24	Screw, lighter, Halifax Harbour.
A. C. Whitney.....	150	June 1..	62·67	10 04	" tug & pass., Halifax Harbour.
Pastime.....	160	" 14..	67·71	10 44	Twin-screw, lighter & p., "

63 VICTORIA, A. 1900

STEAM Vessels Inspected, &c.—Nova Scotia Division—*Concluded.*BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Juno.....	40	June 16..	9 29	5 72	Screw, ferry, Yarmouth & Bay View.
Boston.....	550	" 17..	1,694 60	143 52	" pass., Yarmouth & Boston.
Freddie V.....		" 16..	26 69	7 08	" tug, Yarmouth & coastwise.
Albatross.....		" 17..	31 38	* 14 96	" yacht " "
Ida Lue.....	30	" 17..	44 51	8 60	" tug & p. " "
Dolphin.....		" 17..	8 07	5 64	" fish boat " "
Glencoe.....	40	" 19..	32 21	7 56	" ferry, Annapolis River.
Beaver.....	160	" 21..	84 73	11 80	" pass., Canning & coastwise.
Evanzeline.....	160	" 21..	78 74	11 32	Twin-screw, pass., Kingsport & coast.
Nyanza.....		April 25..	83 21	11 64	Screw, freight, Hantsport & coastwise.
		1899.			
Acadia.....	150	Nov. 1..	74 21	10 92	" pass., Halifax & Lunenburg.
Total.....			21,673 52	2,322 56	

* Paid for 2 years.

JOHN P. ESDAILE.

Steamboat Inspector, Halifax, N.S.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended June 30, 1899.

NOVA SCOTIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Express.....	300	July 8..	550 23	52 00	Paddle, pass., Yarmouth & coastwise.
Bruce.....	300	" 30..	1,154 59	100 40	Screw, pass., Nova Scotia & Newf'd.
Chebucto.....	232	Aug. 12..	578 48	54 24	" ferry, Halifax Harbour.
Delta.....	15	" 15..	873 21	77 84	" pass. and freight, foreign.
City of Ghent.....	70	" 30..	198 64	23 92	" " Halifax and coastwise.
Prince Edward.....	400	Sept. 8..	1,413 74	121 12	Twin screw, pass., foreign.
Beta.....	75	" 14..	1,086 67	94 96	Screw, pass., foreign.
Ulunda.....	40	" 28..	1,717 09	145 36	" " " "
Dahome.....	50	Oct. 26..	2,469 74	205 60	" " " "
Portia.....	90	Nov. 16..	1,156 40	100 48	" " " "
		1900.			
Erna.....	30	Jan. 6..	1,530 11	130 40	" " " "
Grand Lake.....	100	April 1..	895 89	79 68	" " " "
Taymouth Castle.....	50	" 22..	1,826 54	154 16	" " " "
Douglas H. Thomas.....	15	" 21..	211 91	24 96	" tug & pass., Halifax & coastwise.
City of Monticello.....	350	" 24..	1,033 65	90 72	Paddle, pass., " "
Silvia.....	109	May 13..	1,707 70	144 64	Screw " foreign.
Duart Castle.....	60	" 17..	1,838 59	155 12	" " " "
La Grande Duchesse.....	840	June 14..	5,017 00	409 36	Twin-screw, pass. " "
Pro Patria.....	60	" 10..	759 01	68 72	Screw, pass., Halifax and coastwise.
Total.....			26,019 18	2,233 68	

JOHN P. ESDAILE,
Steamboat Inspector, Halifax, N.S

63 VICTORIA, A. 1900

STEAM Vessels not Inspected for the Year ended June 30, 1899.

NOVA SCOTIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not Inspected and Class of Vessel
Goliah	146·83	99·85	Laid up tug.
Rescue	124·09	84·92	" "
Tusket	3·04	2·00	" "
Alida	64·18	29·52	" "
Scotia	41·58	28·27	" "
Vesta	9·21	5·40	" "
Gem	4·69	2·12	" fish boat.
Havana	470·18	245·86	" passenger.
Maple Leaf	129·06	81·31	" ferry.
Arrow	10·02	7·92	" yacht.
Pinafore	25·86	14·67	" tug.
Meadow Flower	6·56	4·46	" "
Volunda	29·80	13·96	" yacht.
City of St. John	709·12	446·75	" passenger.
Elsie	22·14	15·06	" repairing boiler tug.
Eldon	37·91	21·25	" " " passenger.
Lion	19·82	13·48	Not yet inspected tug.
Victor	9·62	6·41	" " " "
Star	6·07	4·13	" " " passenger.
Total	1,869·78	1,127·34	

JOHN P. ESDAILE,
Steamboat Inspector, Halifax, N.S

SESSIONAL PAPER No. 11

STEAM Vessels Inspected for the year ended June 30, 1899.

NOVA SCOTIA DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed
		1899.		\$ cts.	
Highland Mary.....	160	June 20..	73 73	10 92	Twin-screw, barge, Halifax Harbour.
Ida Lue.....	30	July 8..	44 51	8 60	Screw, pass., Yarmouth & coast.
Robbie Burns.....	200	" 11..	88 95	12 12	Twin-screw, pass., Halifax Harbour.
Yuba.....	20	" 15..	12 04	5 96	Screw, ferry, Barrington Passage.
St. Michael.....	15	" 18..	39 20	8 12	" pass., Liverpool & Port Mouton.
Maggie.....	40	" 19..	19 26	6 52	" pass., Lunenburg and South.
Carrie.....	40	" 19..	14 83	6 20	" pass., Chester and Mahone Bay.
Trusty.....	150	" 19..	57 60	9 64	" pass., Bridgewater & coastwise.
Mulgrave.....	275	Aug. 4..	484 86	Nil.	Govt., screw, ferry, Strait of Canso.
Lennox.....	25	" 5..	66 29	10 28	Screw, ferry, Lennox Passage.
Malcom Cann.....	125	" 17..	211 81	24 96	" pass., Mulgrave and coast.
L. Boyer.....	190	" 24..	60 00	9 80	" excursion, Halifax Harbour.
Bessie.....	20	May 1..	10 45	5 80	" pass., Minor waters N.S. & C.B.
Commodore.....	30	Aug. 26..	12 24	6 04	" " Halifax Harbour.
Mascotte.....	20	Sept. 9..	35 40	7 80	" " "
Dolphin.....	15	Oct. 22..	12 78	6 04	" " Moser's River & Harbour.
Wilfred C.....	60	" 27..	99 26	12 92	" " Halifax & coast.
Bridgewater.....	225	" 28..	207 79	24 64	" " "
Mic-Mac.....	40	" 29..	150 63	20 08	Paddle, pass., Halifax & Dartmouth
Westport.....	75	Nov. 2..	80 09	11 40	Screw, pass., Yarmouth & coastwise
La Tour.....	20	" 3..	154 43	20 32	" " " "
Halifax.....	250	" 9..	338 42	35 04	Paddle, ferry, Halifax & Dartmouth
		1900.			
Newfoundland.....	Nil.....	Feb. 10..	918 75	78 52	Screw, freight, Canadian & foreign.
Gertrude M.....	40	Mar. 16..	47 58	8 84	" pass., Yarmouth and coast
Louisburg.....	Nil.....	" 23..	1,815 60	150 28	" freight, Canadian and foreign.
Cape Breton.....	Nil.....	April 13..	1,764 19	146 12	" " "
Coban.....	37	" 19..	1,063 30	93 04	" " "
St. Olaf.....	150	" 21..	305 27	32 40	" pass., Pictou and coastwise.
Bonavista.....	50	" 24..	1,306 33	112 48	" " Canadian & foreign.
Avon.....	40	" 25..	64 66	10 12	" " Windsor & Parrsboro'
Yarmouth.....	450	" 26..	1,451 92	124 16	" " Canadian & foreign.
		1899.			
Alpha.....	20	Nov. 26..	306 91	32 48	" " Yarmouth & coastwise.
		1900.			
Halifax.....	500	May 2..	1,738 45	147 04	" " Canadian & foreign.
Cacouna.....	Nil.....	" 2..	1,450 78	121 08	" freight, "
Rimouski.....	40	" 1..	124 70	18 00	" pass., Halifax and coast.
Arcadia.....	40	" 4..	61 64	9 96	" " Pictou and coastwise.
Bessie.....	20	" 4..	10 45	5 80	" " Minor waters N.S. & C.B.
Marion.....	40	" 4..	11 57	5 96	" " Pictou Harbour.
Mayflower.....	70	July 1..	392 05	39 36	Twin-screw, pass., Pictou & coastwise.
May Queen.....	35	May 4..	35 92	7 88	Screw, pass., Pictou Harbour.
Dartmouth.....	300	" 12..	311 23	32 88	Paddle, ferry, Halifax & Dartmouth.
Petrel.....	25	" 17..	6 36	5 48	Screw, ferry, Richmond & "
Percy Cann.....	35	" 18..	80 06	11 40	" pass., Halifax and coast.
Peerless.....	200	" 24..	94 27	12 52	Twin-screw, p., Sydney & Bras d'Or Lakes.
Weymouth.....	150	" 24..	153 93	20 32	Screw, pass., Sydney and coast.
Hygiea.....	75	" 24..	57 69	9 64	" ferry, Sydney & North Sydney
Harlaw.....	60	" 25..	451 36	44 08	" pass., Halifax and foreign.
Marion.....	400	" 25..	478 49	46 24	Paddle, pass., Sydney & Strait of Canso
Blue Hill.....	140	" 25..	195 83	23 68	Twin-screw, p., Sydney & Mulgrave.
Vega.....	90	" 26..	132 22	18 56	Screw, pass., Mulgrave and Sydney.
John L. Cann.....	125	" 26..	165 55	21 28	" " " coast.

63 VICTORIA, A. 1900

STEAM Vessels Inspected, &c.—Nova Scotia Division—*Continued.*HULL INSPECTION—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1906.		\$ cts.	
Highland Mary.....	160	June 7..	73·73	10 92	Twin-screw, pass., Halifax Harbour.
Robbie Burns.....	260	" 7..	88·95	12 12	" " "
		1899.			
Lunenburg.....	40	*	256·55	29 28	Screw, pass., Pictou and coastwise.
Pastime.....	160	Sept. 1..	67·71	10 44	Twin-screw, pass., Halifax Harbour.
		1900.			
Ida Lue.....	30	June 17..	44·51	8 60	Screw, pass., Yarmouth & coastwise.
Juno.....	40	" 17..	9·20	5 72	" ferry, Yarmouth & Bay View.
Marina.....	40	" 19..	32·46	7 56	" pass., Digby Basin.
Glencoe.....	40	" 19..	32·21	7 56	" ferry, Annapolis River.
Beaver.....	160	" 20..	84·73	11 80	" pass., Canning and coast.
Evangeline.....	160	" 21..	78·74	11 32	Twin-screw, pass., Kingsport & coast.
		1899.			
Acadia.....	150	Oct. 1..	74·21	10 92	Screw, pass., Halifax and Chester.
		1900.			
Eldon.....	40	May 24..	37·91	8 04	" " Strait of Canso.
Star.....	15	June 23..	6·07	5 48	" ferry, Wallace River.
A. C. Whitney.....	150	" 1..	62·67	10 04	Screw, excursion, Halifax Harbour.

* Closing navigation 1899.

S. R. HILL,
Inspector of Hulls and Equipment.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended June 30, 1899.

NOVA SCOTIA DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed
		1899.		\$ cts.	
Express.....	300	July 8..	550.23	52 00	Paddle, passenger, Yarmouth & Coast.
Bruce.....	300	" 30..	1,154.59	100 40	Screw, passenger, Nova Scotia and Newfoundland.
Chebucto.....	232	Aug. 12..	578.48	54 24	Twin-screw, ferry, Halifax & Dartm'th.
Delta.....	15	" 15..	873.21	77 84	Screw, pass. and frt., Canadian and foreign.
City of Ghent.....	70	" 23..	198.64	23 92	Screw, pass. and frt., Halifax and coast.
Prince Edward.....	400	Sept. 8..	1,413.74	121 12	Twin-screw, passenger, Yarmouth and coastwise.
Beata.....	75	" 10..	1,086.67	94 96	Screw, passenger, Canadian & foreign.
Dahome.....	50	Oct. 25..	2,469.74	205 60	Screw, passenger & freight, Canadian and foreign.
Ulunda.....	40	Sept. 7..	1,717.09	145 36	Screw, passenger & freight, Canadian and foreign.
Portia.....	90	Nov. 16..	1,156.40	100 48	Screw, passenger & freight, Canadian and foreign.
		1900.			
Erna.....	30	Jan. 6..	1,530.11	130 40	Screw, passenger & freight, Canadian and foreign.
Grand Lake.....	100	April 1..	895.89	79 68	Screw, passenger, Canadian & foreign.
Taymouth Castle.....	50	" 20..	1,826.54	154 16	" " " "
City of Monticello.....	350	" 24..	1,033.65	90 72	Paddle, pass., Halifax and coastwise.
Douglas H. Thomas.....	15	" 24..	211.91	24 96	Screw, passenger, Halifax and coast.
Silvia.....	109	May 13..	1,707.70	144 64	Screw, passenger & freight, Canadian and foreign.
Duart Castle.....	60	" 16..	1,838.59	155 12	Screw, passenger & freight, Canadian and foreign.
La Grand Duchesse.....	840	June 14..	5,017.00	409 36	Twin-screw, passenger, Canadian and foreign.
Pro Patria.....	60	" 10..	759.01	68 72	Screw, passenger, Halifax & coastwise.

S. R. HILL, *Inspector of Hulls and Equipment.*

STEAM Vessels not Inspected for the Year ended June 30, 1899.

NOVA SCOTIA DIVISION.

HULL INSPECTION.

Name of Vessel.	Gross Tonnage.	Register'd Tonnage.	Remarks. Why not Inspected and Class of Vessel.
Havana.....	470 18	245 86	Laid up.
City of St. John.....	709 12	446 75	"
Maple Leaf.....	129 06	81 31	"
Boston.....	1,694 50	733 77	Not ready, undergoing repairs.
Total.....	3,002 86	1,507 69	

S. R. HILL, *Inspector of Hulls and Equipment.*

63 VICTORIA, A. 1900

STEAM Vessels Inspected for the Year ended June 30, 1899.

NEW BRUNSWICK AND P. E. ISLAND DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Waring.....		July 4.	28 74	7 32	Screw, tug, St. John.
Calluna.....		" 9.	22 26	6 76	" " and fish boat, Richibucto.
Mary Odell.....		" 9.	28 92	7 32	" " " "
Frederick A.....		" 9.	31 11	7 48	" " " "
St. Kilda.....		" 11.	55 64	9 48	Paddle, Miramichi.
Springhill.....	100	" 16.	189 05	23 12	Screw, tug, coas. ing.
Amanda Green.....		" 25.	19 63	6 60	" " St. John.
Dream.....		" 29.	44 51	8 60	Screw, yacht "
Arbutus.....	86	Aug. 1.	46 76	8 76	" passenger, St. Croix.
Bessie Ardella.....		" 2.	17 44	6 36	" fish boat "
Calla.....	30	" 2.	9 79	5 80	" yacht "
Marguerite.....		" 3.	19 66	6 60	" " "
Gipsy.....		" 11.	16 70	6 36	" tug, Charlottetown.
Flash.....		" 11.	5 59	5 48	" yacht, St. John.
Cricket.....		" 22.	4 85	5 40	" " " "
Lotus.....		" 22.	5 00	5 40	" " " "
Delta.....	40	" 25.	19 93	6 60	" " passenger, Hillsboro.
Victoria.....	456	" 30.	1,001 93	88 16	Paddle " St. John.
Beryl Essie.....		Sept. 1.	28 83	6 92	Screw, tug, Northport.
Wenola.....		" 1.	25 10	7 00	" " Port Elgin.
Western Extension.....	280	" 7.	424 89	41 92	Paddle, ferry, St. John.
Vacuna.....		" 20.	9 52	5 80	Screw, tug, Chiputincook Lake.
Aberdeen.....	400	" 21.	243 86	27 52	Stern-wheel, passenger, St. John.
Kingsville.....		Nov. 2.	36 59	7 88	Screw, tug, St. John.
Elliot.....		" 18.	367 50	34 36	" freight, Charlottetown.
Ouangondy.....	208	" 7.	294 75	31 60	Paddle, ferry, St. John.
		1890.			
Captain.....		Feb. 20.	68 43	10 44	Screw, tug " "
Storm King.....	40	" 21.	107 87	16 64	" pass. " "
Nereid.....		Mar. 6.	30 03	7 40	" tug " "
E. Ross.....	40	" 7.	29 63	7 40	" ferry " "
Prince Rupert.....	850	" 14.	1,158 44	100 64	Paddle, pass. " "
Maggie M.....		" 17.	65 78	10 28	Screw, tug, St. John.
W. H. Murray.....	40	" 17.	72 55	10 84	" " " "
Northumberland.....	350	" 24.	1,255 46	100 40	Twin-screw, passenger, P.E.I.
Princess.....	350	" 25.	541 79	51 36	Screw, passenger, P.E.I.
Jacques Cartier.....	300	" 25.	379 96	38 40	Paddle " " "
Leader.....		April 1.	29 32	7 32	Screw, tug, St. John.
Mildred.....		" 3.	40 11	8 20	" " " "
Fred Glasier.....		" 12.	10 39	5 80	" " " "
Hercules.....		" 12.	87 11	11 96	" " " "
Springfield.....	170	" 12.	232 73	26 56	Stern-wheel, passenger, St. John.
Admiral.....		" 12.	158 20	17 64	Paddle, tug, St. John.
Hero.....		" 12.	127 63	15 24	" " " "
Tilly Glasier.....		" 12.	209 31	21 72	" " " "
Sea King.....		" 12.	128 63	15 32	Screw, tug " "
G. K. King.....		" 12.	45 48	8 60	" " " "
G. D. Hunter.....		" 13.	67 97	10 44	" " " "
Hampstead.....	150	" 13.	234 52	26 80	Screw, pass. " "
Winnie.....		" 13.	12 46	5 96	" tug " "
Fanchon.....	40	" 18.	110 61	16 88	Paddle " " "
Ernest.....		" 18.	12 58	6 04	Screw " " "
Eva Johnson.....		" 18.	15 77	6 28	" " " "
Bismark.....	40	" 21.	49 04	8 92	Paddle " " "
Star.....	300	" 20.	461 03	44 88	" " passenger, St. John.
Victoria.....	680	" 18.	1,001 93	88 16	" " " "
David Weston.....	450	" 20.	765 15	69 20	" " " "
May Queen.....	321	" 20.	539 40	51 12	" " " "

SESSIONAL PAPER No. 11

STEAM Vessel Inspected, &c.—New Brunswick and P. E. Island Division—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Fannie.....		April 21..	33.44	7 64	Screw, tug, St. John.
Clifton.....	200	" 21..	138.21	19 04	Stern-wheel, passenger, St. John.
Champion.....		" 24..	190.14	20 20	Paddle, tug, St. John.
Hope.....		" 24..	305.77	29 48	" " "
Maggie Miller.....	150	" 24..	104.66	16 40	" ferry "
Peri.....		May 1..	11.77	5 96	Screw, tug, St. John.
Viking.....	123	" 1..	127.70	18 24	" passenger, St. Croix.
Martello.....		" 6..	33.65	7 72	" tug, St. John.
Tangent.....		" 9..	3.74	7 88	Twin-screw, tug, St. John.
Lillie.....	65	" 12..	71.64	10 76	Screw " "
Montague.....	75	" 15..	129.55	18 32	Paddle, ferry, Georgetown.
Electra.....	40	" 16..	106.96	16 55	Screw, passenger, Charlottetown.
Nelson.....		" 16..	32.90	7 64	" tug "
Fred. M. Batt.....		" 16..	59.90	9 80	" " "
Flash.....		" 16..	5.59	5 48	" yacht "
Wm. Aitken.....	40	" 17..	74.87	11 00	" tug "
Alameda.....	70	" 17..	62.59	10 04	" passenger "
T. A. Stewart.....		" 17..	35.94	7 88	Twin-screw, tug "
Elfin.....	65	" 17..	122.42	17 76	Paddle, ferry "
Frank C. Batt.....	40	" 18..	32.90	7 64	Screw, ferry, Summerside.
Atlas.....		" 19..	15.79	6 28	" " Point du Chêne.
Flushing.....	250	" 11..	257.09	28 56	" passenger, St. John.
Dirigo.....	40	June 2..	70.13	10 60	" tug "
Ada.....		" 7..	3.66	5 32	" yacht, Fredericton.
Quiddy.....		" 7..	30.59	7 40	Paddle, tug "
Randolph.....		" 7..	8.71	5 72	Twin-screw, yacht "
Meta.....		" 8..	5.05	5 40	Screw, tug "
Carrie Knight.....		" 8..	5.88	5 48	" " "
Neptune.....	40	" 9..	71.15	10 68	" " St. John.
Wee Laddie.....		" 12..	16.60	6 36	" " "
Laura.....		" 20..	13.55	6 12	" " Miramichi.
Irene.....		" 20..	10.32	5 80	" " "
Lady Dufferin.....	40	" 20..	47.48	8 76	Paddle, ferry "
Florence.....		" 20..	19.33	6 52	Screw, yacht "
Bessie.....		" 20..	5.18	5 40	" fish boat "
Rustler.....	200	" 21..	101.54	16 16	Paddle, passenger "
Loyalist.....		" 21..	17.57	6 44	" tug "
Zulu.....		" 21..	17.60	6 44	" " "
Bridgetown.....		" 21..	14.66	6 20	Screw " "
Edith.....		" 22..	21.55	6 76	" " "
St. George.....	200	" 23..	277.78	30 24	Paddle, passenger "
St. Nicholas.....	100	" 22..	62.20	9 96	Screw " "
Miramichi.....	100	" 23..	75.18	11 00	" " "
Jubilee.....		" 22..	16.52	6 32	" tug "
Mascott.....		" 22..	70.50	10 60	" " "
Sybella H.....	40	" 22..	70.68	10 68	Paddle, ferry "
Sarcella.....		" 22..	21.86	6 76	Screw, tug "
Grip.....		" 23..	4.81	5 40	" " "
Lena.....		" 22..	26.40	7 08	" " "
St. Isidore.....		" 23..	141.75	16 36	Paddle, tug "
Nelson.....	100	" 23..	64.34	10 12	Screw, passenger "
Arthur.....		" 23..	4.99	5 40	" yacht "
Marietta.....	25	" 23..	7.04	5 56	" " "
St. Kilda.....		" 23..	55.64	9 48	Paddle, tug "
Waring.....		" 28..	28.74	7 32	Screw, tug, St. John.
Total.....			14,444.06	1,793.60	

W. L. WARING,
Steamboat Inspector.

63 VICTORIA, A. 1900

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended
June 30, 1899.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
State of Maine.....	550	April 1..	1,409 99	120 80	Paddle, passenger, St. John to Boston.
Cumberland.....	550	" 27..	1,605 82	136 48	" " "
St. Croix.....	400	May 25..	1,993 58	167 52	Screw, " "
Total.....			5,009 39	424 80	

W. L. WARING,
Steamboat Inspector.

STEAM Vessels not Inspected for the Year ended June 30, 1899.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not Inspected and Class of Vessel.
City of Monticello.....	1,033 65	565 62	Paddle, out of district.
Rose Standish.....	384 93	216 90	" unable to inspect.
Ada G.....	102 08	30 55	" laid up.
Tourist.....	16 15	10 98	Screw, out of district.
Electric.....	3 74	2 55	" laid up.
General Leavitt.....	22 65	12 11	" unable to inspect.
Lubec.....	50 94	25 47	" "
Nautilus.....	26 58	18 07	" "
Bessie Ardella.....	17 44	11 58	" laid up.
St. Andrew.....	76 64	52 11	" getting new boiler.
Alycane.....	15 05	10 73	" laid up.
Hillsborough.....	228 67	66 13	Paddle, not applied for.
Southport.....	239 92	186 15	" "
May Queen.....	35 92	17 94	Screw, out of district.
Victor.....	45 51	28 67	Paddle, unable to inspect.
Henrietta.....	19 12	13 01	Screw, "
Eva.....	18 01	12 25	" "
Squirrel.....	13 11	8 97	" "
Nellie H.....	7 52	5 12	" "
St. Lawrence.....	50 82	10 51	" "
Alice.....	15 77	10 72	" "
Derby.....	11 66	8 66	Paddle, laid up.
Utopia.....	25 00	17 00	Screw, "
Frances.....	26 34	17 91	" out of district.
Total.....	2,487 22	1,359 71	

W. L. WARING,
Steamboat Inspector.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected for the Year ended June 30, 1899.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Springhill	100	July 16	189 05	23 12	Screw, passenger, coasting.
Arbutus	86	Aug. 1	46 76	8 76	" " St. Croix.
Calla	30	" 2	9 79	5 80	" " " "
Delta	40	" 25	19 93	6 60	" " Hopewell Cape.
Victoria	456	Mar. 30	1,001 93	88 16	Paddle " St. John.
Western Extension	280	Sept. 7	424 89	41 92	" " " "
Aberdeen	400	" 21	243 86	27 44	Stern-wheel " " "
Elliott		Nov. 18	367 48	34 36	Screw, freight, coasting.
Ouangondy	208	Dec. 7	294 75	31 52	Paddle, ferry, St. John.
		1900.			
Storm King	40	Feb. 21	107 87	16 64	Screw, passenger, St. John.
E. Ross	40	Mar. 7	29 63	7 40	" " " "
Prince Rupert	850	" 14	1,158 44	100 64	Paddle " " "
Wm. H. Murray	40	" 17	72 55	10 84	Screw " " "
Northumberland	350	" 24	1,255 46	108 40	Twin-screw " North'd Strait.
Jacques Cartier	300	" 25	379 96	38 40	Paddle " " "
Princess	350	" 25	541 79	51 36	Screw " " "
Springfield	170	April 12	232 73	26 64	Stern-wheel " St. John.
Hampstead	150	" 13	234 52	26 80	Screw " " "
Fanchon	40	" 17	110 61	16 88	Paddle " " "
Victoria	680	" 18	1,001 93	88 16	" " " "
May Queen	321	" 20	539 40	51 12	" " " "
David Weston	450	" 20	765 15	69 20	" " " "
Cliften	200	" 21	138 21	19 04	Stern-wheel " " "
Maggie Miller	150	" 24	104 66	16 40	Paddle, ferry, Millidgeville.
Star	300	" 24	461 03	44 88	" passenger, St. John.
Viking	123	May 1	127 70	18 24	Screw " St. Croix.
Flushing	250	" 11	257 09	28 56	" " St. John.
Lillie	65	" 12	71 64	10 76	" " " "
Montague	75	" 15	129 55	18 32	Paddle, ferry, Georgetown, P. E. I.
Electra	40	" 16	106 96	16 56	Screw, passenger, Ch'town, "
Alameda	70	" 17	62 59	10 04	" " " "
Elfin	65	" 17	122 42	17 76	Paddle, ferry " " "
Wm Aitkens	40	" 17	74 87	11 00	Screw, passenger " " "
Frank C. Batt	40	" 18	32 90	7 64	" " Summerside.
Dirigo	40	June 2	70 13	19 60	" " St. John.
Neptune	40	" 9	71 15	10 68	" " " "
Lady Dufferin	40	" 20	47 48	8 76	Paddle " Miramichi.
Nelson	100	" 21	64 34	10 12	Screw " " "
Miramichi	100	" 21	75 18	11 00	" " " "
St. Nicholas	100	" 22	62 20	9 96	" " " "
Sybella H	49	" 21	70 68	10 68	Paddle, ferry " " "
Victor	35	" 22	45 51	8 68	" passenger, Campbellton.
Eva	40	" 22	18 01	6 44	Screw " Dalhousie.
St. George	200	" 21	277 78	30 24	Paddle " Miramichi.
Marietta	25	" 21	7 04	5 56	Screw " " "
Bismark	40	April 21	49 04	11 92	Paddle " St. John.

I. J. OLIVE,
Hull Inspector, &c.

63 VICTORIA, A. 1900

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended
June 30, 1899.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

HULL INSPECTION,

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
State of Maine	550	April 1..	1,409·99	120 80	Paddle, Boston and St. John.
Cumberland	550	" 27 .	1,605·82	136 48	" " "
St. Croix	400	May 25..	1,993·58	167 52	Screw " "

I. J. OLIVE,
Hull Inspector, &c.

STEAM Vessels not Inspected for the Year ended June 30, 1899.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

HULL INSPECTION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage	Remarks. Why not inspected and class of vessel.
City of Monticello	1,033·65	565 62	Left district ; passenger, paddle.
May Queen	35·92	17·94	" " screw.
Frances	26·34	17·91	" " "
Millsborough	228·67	66·13	Not applied for ; pass., paddle.
Southport	239·92	186·15	" " "
Rustler	101·54	63·97	Not ready " " "
Rose Standish	384·93	216·90	" " "
General Leavitt	22·65	12·11	} Unable to go to them ; passenger, screw.
Lubec	50·94	25·47	
Total	2,124·56	1,172·20	

I. J. OLIVE,
Hull Inspector, &c.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected for the Year ended June 30, 1899.

BRITISH COLUMBIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Hyak	20	July 4..	39 04	8 12	Freight and pass., Upper Columbia R.
Duchess.....	40	" 5..	145 48	19 60	" " "
Gwendoline.....	50	" 9..	90 59	12 28	" " "
Alberta.....	200	" 11..	508 15	48 64	" " Kootenay Lake.
Red Star.....	"	" 11..	14 81	6 20	Freight, Kootenay Lake.
Kokanee.....	200	" 13..	347 50	35 84	" " and pass., Kootenay Lake.
Hercules.....	50	" 14..	64 68	10 20	" " "
Haylis.....	"	" 13..	43 81	8 52	Tug, Kootenay Lake.
Angerona.....	"	" 13..	13 79	6 12	Yacht " "
Nelson.....	125	" 14..	496 01	47 68	Freight and pass., Kootenay Lake.
International.....	300	" 14..	525 55	50 08	" " "
Surprise.....	"	" 14..	14 80	6 12	Tug " "
City of Ainsworth.....	50	" 15..	193 49	23 44	Freight and pass. " "
Marion.....	"	" 15..	14 78	6 20	Freight " "
Denver.....	"	" 15..	8 51	5 72	Tug " "
Kaslo.....	15	" 17..	57 17	9 08	Freight and pass. " "
Lytton.....	125	" 17..	451 66	44 16	" " Columbia River.
Rossland.....	300	" 18..	883 55	78 72	" " "
Wm. Hunter.....	25	" 18..	56 70	9 08	" " Slocan Lake.
Slocan.....	300	" 19..	578 03	54 24	" " "
Kootenay.....	300	" 19..	1,117 09	97 36	" " Columbia River.
Illicillewaet.....	30	" 20..	97 92	12 84	" " "
Columbia.....	"	" 20..	49 84	9 00	Tug " "
Lardeau.....	15	" 20..	9 60	5 80	Passenger " "
Archer.....	"	" 20..	15 32	6 20	Tug " "
Penticton.....	"	" 23..	49 69	9 00	" Okanagan Lake.
Greenwood.....	"	" 23..	142 48	16 36	Freight, Dog Lake.
Aberdeen.....	250	" 24..	554 04	52 32	Freight and pass., Okanagan Lake.
Thompson.....	40	" 26..	149 80	20 00	" " Thompson River.
Ethel Ross.....	"	" 26..	82 05	11 56	Freight " "
Bristol.....	"	" 28..	1,983 15	166 64	" " Pacific Ocean.
Marjorie.....	12	Aug. 4..	19 50	6 60	Passenger, Yukon River.
Islander.....	500	" 8..	1,495 09	127 60	Freight and pass., B.C. waters.
Royal City.....	39	" 10..	200 46	24 00	" " Fraser River.
Mermmaid.....	100	" 13..	128 55	18 32	Ferry, Nanaimo Harbour.
Swan.....	"	" 13..	12 27	5 96	Yacht, Nanaimo.
Joan.....	400	" 11..	821 21	73 68	Freight and pass., B.C. waters.
Mamie.....	12	" 15..	89 60	12 20	" " " & Alaska.
Horsa.....	100	" 17..	741 00	67 28	" " " "
Willapa.....	100	" 9..	373 09	37 84	" " " "
Queen City.....	100	Sept. 12..	391 21	39 28	" " " "
Tees.....	125	" 16..	569 24	53 52	" " " "
City of Nanaimo.....	500	" 19..	761 37	68 88	" " " "
Bouanza.....	"	" 21..	109 04	13 72	Freight " "
City of Tipella.....	17	" 24..	18 89	6 52	Passenger, Harrison Lake.
Willie.....	27	" 25..	82 60	11 64	" " " "
Romona.....	50	" 28..	250 79	28 08	" " and freight, Fraser River.
Pilot.....	22	" 30..	279 05	30 32	" " coast, B.C.
On Time.....	"	Oct. 13..	10 70	5 88	Tug, Fraser River.
Water Lily.....	"	" 18..	73 81	10 92	Water boat, Esquimalt Harbour.
Troubadour.....	"	" 21..	17 61	6 44	Tug, Victoria Harbour.
Mystery.....	20	Nov. 10..	64 80	10 20	Freight and pass., coast, B.C.
Moyie.....	250	July 15..	834 81	74 80	" " Kootenay Lake.
Ymir.....	"	" 15..	69 74	10 60	Tug " "
Sandon.....	50	" 15..	96 22	12 68	" " and pass., Slocan Lake.
Fawn.....	"	" 15..	32 70	7 64	Tug, Columbia River.
Minto.....	250	" 15..	828 91	74 32	Freight and pass., Columbia River.
Trail.....	50	" 15..	662 77	61 04	" " " "
Delta.....	"	Nov. 25..	25 20	7 00	Freight, coast, B.C.
Maude.....	"	Dec. 1..	174 99	22 00	" " " "
Alarm.....	"	" 3..	33 91	7 72	" " " "
Rainbow.....	35	Aug. 20..	207 21	24 64	" " " "
Princess Louise.....	98	Dec. 13..	931 76	82 56	Ft. & pass., B.C. waters and Alaska.
Danube.....	300	Nov. 23..	886 89	78 96	" " " "

63 VICTORIA, A. 1900

STEAM Vessels Inspected, &c.—BRITISH COLUMBIA DIVISION—Continued.

BOILERS AND MACHINERY—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		8 cts.	
Morris.....		Dec. 19..	11·66	5 96	Fishing tug, Naas River.
Mist.....		" 22..	28·68	7 32	" west coast, V. I.
		1900.			
Autolyceus.....		Jan. 22..	25·47	7 00	Yacht, coast, B.C.
Lorne.....	20	Feb. 6..	287·96	31 04	Tug and pass., coast, B.C.
Bessie.....		" 17..	10·90	5 88	Tug, Fraser River.
Thistle.....	50	" 27..	222·36	25 76	Freight and pass., coast, B.C.
Comox.....	140	Mar. 20..	101·17	16 08	" "
Barbara Boscowitz.....	125	" 22..	337·92	35 04	" "
Constance.....	12	" 23..	49·52	9 00	Tug and pass., coast, B.C.
Czar.....		" 25..	152·18	20 16	Tug, coast, B.C.
Daisy.....		" 27..	60·10	9 80	" "
		1899.			
R. P. Rithet.....	81	Oct. 15..	816·69	73 36	Freight & pass, Victoria & Fraser Riv.
		1900.			
Alpha.....	190	April 13..	653·46	*120 48	Freight & pass., coast B.C. & Alaska.
Hope.....	12	" 19..	78·49	11 32	Tug and pass., coast, B.C.
Nell.....	60	" 25..	267·97	24 64	Freight & pass. "
Florence.....		" 26..	30·41	7 40	Fishing tug, Skeena River.
Casca.....	150	May 2..	589·73	55 20	Freight & pass., Stikine River.
Sybil.....	100	" 3..	621·87	57 76	" " Yukon River.
Alert.....	12	" 5..	43·81	8 52	Tug and pass., coast, B.C.
Mermaid.....	100	" 6..	128·55	18 32	Ferry, Nanaimo Harbour.
Swan.....		" 6..	12·27	5 96	Yacht " "
Oscar.....		" 15..	95·42	12 60	Freight, coast, B.C. "
Yosemite.....	500	" 19..	1,525·03	130 00	Freight and pass., coast, B.C.
Comet.....	12	" 27..	85·26	11 80	Tug " "
		1899.			
Katie.....	100	May 27..	46·00	8 68	Pass., Victoria harbour.
		1900.			
San Juan.....		June 3..	21·41	6 68	Fishing tug, Skeena River.
Wellington.....		" 13..	16·30	6 28	" Fraser River.
Magnet.....		" 14..	23·72	6 92	" " "
Stranger.....		" 14..	21·26	6 68	" " "
Fearless.....		" 15..	52·97	9 24	Tug, Fraser River.
Cleeve.....		" 15..	35·94	7 88	" " "
May Queen.....		" 15..	14·10	6 12	" " "
Eva.....		" 15..	34·99	7 80	" " "
Delta.....		" 15..	14·90	6 20	" " "
Surrey.....	50	" 15..	263·26	29 04	Ferry " "
Romona.....	50	" 15..	250·79	28 08	Freight & pass., Fraser River.
Transfer.....	120	" 16..	264·16	29 12	" " "
Beaver.....	150	" 16..	545·44	51 60	" " "
Cutch.....	200	" 17..	675·85	62 08	" " coast, B.C. & Alaska.
Lapwing.....	30	" 19..	150·73	20 08	" " " "
City of Nanaimo.....	500	" 23..	761·37	68 88	" " " "
Selkirk.....		" 23..	141·63	16 36	Freight, coast, B.C., and Alaska.
Fingal.....		" 25..	90·69	12 28	" " "
Clansman.....		" 26..	72·40	10 76	" " "
Rothesay.....	250	" 26..	553·11	52 24	Freight & pass., Burrard Inlet.
Glenora.....	110	" 27..	542·15	51 36	" " Fraser River.
Sadie.....	25	" 3..	49·30	8 92	Tug & pass, coast, B.C.
Lottie.....		" 30..	29·24	7 32	Tug, Fraser River.
Total.....			30,942·66	3,250 96	

* 2 years' dues.

J. A. THOMSON, Steamboat Inspector, Victoria, B.C.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected in Canada but Registered elsewhere for the Year ended June 30, 1899.

BRITISH COLUMBIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
North Star.....	120	July 8..	379 88	38 40	Freight and pass., Kootenay River.
Flirt.....		" 13..	3 58	5 32	Cruising Kootenay Lake.
Rosalie.....	127	" 29..	318 51	33 52	F. and p., Canadian & foreign ports.
Garland.....	50	Aug. 1..	166 61	21 36	" " "
Dirigo.....	240	" 25..	843 55	75 52	" " "
		1900.			
Victoria.....	342	Jan. 4..	3,502 00	288 16	" " "
Tacoma.....	232	" 13..	2,811 00	232 88	" " "
Humboldt.....	325	Mar. 8..	1,075 00	94 00	" " "
Amur.....	112	" 6..	907 16	80 56	" " "
City of Kingston.....	590	April 10..	1,117 40	97 36	" " "
Geo. E. Star.....	100	May 1..	472 66	45 84	" " "
City of Seattle.....	592	" 7..	1,411 00	120 88	" " "
Utopia.....	100	" 10..	423 72	41 84	" " "
Queen.....	402	" 12..	2,727 80	226 24	" " "
Walla Walla.....	401	" 17..	3,069 76	253 60	" " "
* Amur.....	300	" 28..		8 00	" " "
Alice Gertrude.....	342	" 24..	413 17	41 04	" " "
Garonne.....	500	" 26..	3,876 00	318 08	" " "
Cottage City.....	273	" 29..	1,885 11	158 80	" " "
Umatilla.....	400	June 6..	3,069 76	253 60	" " "
North Pacific.....	200	" 6..	488 73	47 12	" " "
Total.....			28,462 40	2,482 12	

* Special inspection increase passenger.

J. A. THOMSON,
Steamboat Inspector, Victoria, B.C.

STEAM Vessels not Inspected for the Year ended June 30, 1899.

BRITISH COLUMBIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not Inspected and Class of Vessel.
Charmer.....	1,044 41	496 58	Screw, freight. and pass., laid up at present.
Spratts Ark.....	307 38	143 04	Twin-screw, freight " "

J. A. THOMSON,
Steamboat Inspector, Victoria, B.C.

63 VICTORIA, A. 1900

STEAM Vessels Inspected for the Year ended June 30, 1899.

BRITISH COLUMBIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Tyrrell	150	July 2..	678 26	62 24	Stern-paddle, Stickine River.
Kildonan	"	" 6..	51 41	9 08	Screw tug, coast, B. C.
Oriole	"	" 11..	4 45	5 32	Pleasure yacht, Columbia River.
Fingal	"	June 24..	90 69	12 28	Freight, coast, B. C.
Chieftain	"	July 16..	64 80	10 20	Fishing tug, Skeena River.
Nora	"	" 16..	19 43	6 50	" " "
Westminster	"	" 16..	18 29	6 44	" " "
Advance	"	" 17..	35 75	7 88	" " "
Florence	"	" 19..	30 41	7 40	" " "
Flora	75	" 28..	100 93	16 08	Stern-wheel, Lake Bennett.
Emma Nott	65	" 28..	134 00	18 72	" " Upper Yukon.
Nora	75	" 29..	100 93	16 08	" " "
Joseph Clossett	100	" 30..	147 00	19 76	" " "
Ora	75	Aug. 6..	100 93	16 08	" " "
Anglian	75	" 10..	161 45	20 88	" " "
Vivian	"	" 11..	54 00	9 32	" " "
Willie Irving	100	" 15..	101 90	16 16	" " Lake Bennett.
Viola	"	" 17..	3 70	5 32	Prospecting yacht, Yukon River.
Yukoner	250	" 23..	731 31	70 48	Stern-wheel, Yukon River.
Jessie Burrows	40	Oct. 1..	131 75	18 56	" " Fraser River.
Belle	12	Aug. 6..	66 62	10 36	Tug, coast, B. C.
Hong Kong	"	" 16..	35 76	7 88	" " "
Halifax	"	" 2..	28 19	7 24	" " "
Etta White	15	Sept. 25..	97 35	12 76	" " "
Leonora	"	Aug. 26..	33 00	7 64	" " Burrard Inlet.
Senator	30	" 11..	27 63	7 24	Ferry, " "
Gipsy	"	Sept. 29..	10 06	5 80	Tug, coast, B. C.
Saturna	"	Oct. 15..	22 05	6 76	" " "
Esperanza	"	" 22..	30 88	7 48	" " "
Ermine	"	" 24..	8 84	5 72	" " Burrard Inlet.
Dreadnought	"	Aug. 8..	32 84	7 64	" " coast, B. C.
Clara Young	"	" 26..	30 75	7 48	" " "
Stella	"	June 1..	16 32	6 30	" " "
		1900.			
Active	20	Jan. 6..	171 74	21 76	" " "
Brunette	"	" 11..	37 03	7 96	" " "
Mamie	"	" 12..	5 30	5 40	Pleasure yacht, Wash., B. C.
Vachie	"	" 17..	9 97	5 80	Tug, coast, B. C.
Iris	"	" 11..	19 52	6 60	" " Fraser River.
Capilano	25	" 24..	231 14	26 48	Freight and pass., coast, B. C.
Robt. Dunsmuir	50	Feb. 1..	231 75	26 56	" " "
Tepic	15	" 16..	70 87	10 68	Tug, " "
		1899.			
Surrey	50	Aug. 20..	263 26	29 04	Ferry, Fraser River.
		1900.			
J. L. Card	"	Feb. 24..	141 06	19 28	Freight, coast, B. C.
Enterprise	"	Mar. 3..	12 02	11 92	Tug, fishing, coast, B. C. 2 yrs. fees dues
Stampede	"	" 4..	11 97	5 96	Tug " "
Gipsy	"	" 3..	49 63	9 00	" " Fraser River.
Vancouver	"	" 7..	49 96	9 00	" " coast, B. C.
Brant	"	" 10..	18 66	6 52	" " "
Lois	12	" 4..	25 15	7 00	" " "
Coquitlam	75	Feb. 21..	256 33	28 48	Freight and pass., coast, B. C.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, &c.—British Columbia Division—Continued.

BOILERS AND MACHINERY.—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
1899.				\$ cts.	
Erie		Mar. 22	26 74	7 16	Tug. coast, B.C.
Burt	25	" 18	50 41	9 60	Freight and pass., coast, B.C.
Courser	50	April 4	160 79	20 88	" " Fraser River.
Chehalis	15	" 23	53 75	9 32	Tug. coast, B.C.
Blonde		" 17	32 64	7 64	" " "
Telephone	25	" 18	80 65	11 48	Freight and pass., Fraser River.
North Star		Feb. 23	8 11	5 64	Tug. Fraser River.
Lily		April 25	8 79	5 72	" " "
Nagasaki		May 5	15 13	6 20	" coast, B.C.
S. S. Bailey	130	" 28	192 56	23 44	Freight and pass., Upper Yukon.
Australian	250	" 29	420 43	41 60	" " "
Linderman	40	" 30	54 00	9 32	" " ferry, Lake Linderm'n
Alert		May 30	7 00	5 56	Tug. Lake Linderman.
Gleaner	100	June 3	241 90	27 36	F. and p., Lake Bennett to Atlin.
Ruth	30	" 10	52 01	9 16	F. and p., Atlin Lake.
Scotia	90	" 7	100 18	13 00	" " "
Clifford Sifton	175	" 13	164 00	21 12	F. and p., Bennett Lake.
Mabe F.	30	" 15	10 18	5 80	F. and p., Atlin Lake.
Nora	75	" 15	100 93	16 08	F. and p., Upper Yukon.
Anglian	75	" 22	161 45	20 88	" " "
Tyrrell	150	" 24	678 26	62 24	" " "
Total			7,476 75	1,031 14	

W. A. RUSSELL,
Steamboat Inspector, Vancouver, B. C.

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended
June 30, 1899.

BRITISH COLUMBIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
1899.				\$ cts.	
Susie	225	Aug. 9	1,121 28	104 88	Stern-wheel, Lower Yukon.
Portius B. Weare	185	" 11	400 32	40 00	" " "
John Cudahay	190	" 11	819 64	73 63	" " "
Linda	190	" 12	692 40	63 36	" " "
Louise	70	" 16	717 19	65 36	" " "
T. C. Power	120	" 18	819 64	73 60	" " "
John J. Healey	220	" 20	550 00	52 00	" " "
Charles H. Hamilton	91	" 20	595 00	55 60	" " "
Rock Island		" 23	553 69	50 72	" " "
John C. Barr		" 24	546 89	51 76	" " "
Total			6,816 05	630 88	

W. A. RUSSELL,
Steamboat Inspector, Vancouver, B. C.

63 VICTORIA, A. 1900

STEAM Vessels Inspected for the Year ended June 30, 1899.

BRITISH COLUMBIA DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		\$ cts.	
Tyrrell..	150	July 2.	678 26	62 24	Stern-wheel, passenger.
Nahleen..	200	June 29.	589 98	55 20	" "
Reindeer..	100	" 30.	357 84	36 64	" "
Bristol..		July 28.	1,983 15	166 64	Screw, freight.
Clayoquot	12	Aug. 3.	87 18	11 96	" passenger.
Marjorie..	12	" 4.	19 50	6 60	Stern-wheel
Islander..	500	" 8.	1,495 09	127 60	Twin-screw
Willapa..	100	" 9.	373 09	37 84	Screw
Royal City	39	" 10.	200 46	24 00	Stern-wheel
Jean..	400	" 11.	821 21	73 68	Twin-screw
Mamie..	12	" 15.	89 60	12 20	Screw
Horsa..	100	" 17.	741 00	67 28	"
Mermaid..	100	" 13.	128 55	18 32	Twin-screw
Senator..	30	" 21.	27 63	7 24	Screw
Belle..	12	" 6.	66 62	10 36	"
Queen City	100	Sept. 12.	391 21	39 08	"
Tees..	125	" 16.	569 24	53 52	"
City of Nanaimo	500	" 19.	761 37	68 80	Twin-screw
City of Tipella	17	" 24.	18 89	6 52	Screw
Willie..	27	" 25.	82 60	11 64	Stern-wheel
Ramona..	50	" 28.	250 79	28 08	"
Pilot..	22	" 30.	279 05	30 32	Screw
Josie Burrows	40	Oct. 1.	131 75	18 56	Stern-wheel
Fitta White	15	" 7.	97 35	12 76	Screw
Mystery..	20	Sept. 26.	64 80	10 20	"
Rainbow..	35	Aug. 26.	207 21	24 64	"
Maude..	None	Dec. 1.	174 99	22 00	" freight.
Princess Louise	98	" 13.	931 76	82 56	Paddle, passenger.
Danube..	300	Nov. 23.	886 89	78 96	Screw
		1900.			
Active..	20	Jan. 6.	171 74	21 76	" "
Capilano	25	" 24.	231 14	26 48	" "
Lorne..	20	Feb. 6.	287 96	31 04	" "
Tepic..	15	" 16.	70 87	10 68	" "
		1899.			
Surrey..	50	Aug. 20.	263 26	29 04	Paddle
		1900.			
Coquitlam	75	Feb. 21.	256 33	28 48	Screw
Robert Dunsuir	50	" 20.	231 75	26 56	Twin-screw
Thistle..	50	" 27.	222 36	25 76	Screw
Lois..	10	Mar. 4.	25 15	7 00	"
Burt..	25	" 18.	50 41	9 00	Twin-screw
Comox..	140	" 20.	101 17	16 08	Screw
Barbara Boscowitz	125	" 22.	337 92	35 04	"
Constance	12	" 23.	49 52	9 00	"
Czar..		" 25.	152 15	20 16	" freight and tug.
Courser..	50	April 3.	160 79	20 88	Stern-wheel, passenger
Alpha..	190	" 13.	653 46	120 40	Screw
		1899.			
R. P. Rithet	81	Oct. 15.	816 69	73 36	Stern-wheel

SESSIONAL PAPER No. 11

STEAM Vessels Inspected, &c.—British Columbia Division—Continued.

HULL INSPECTION—Continued.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Hope	12	April 19..	78 49	11 32	Screw, passenger.
Chehalis	15	" 23..	53 75	9 32	" " "
Telephone	25	" 18..	80 66	11 48	Stern-wheel " "
Nell	60	" 25..	207 97	24 64	Twin-screw " "
Casco	150	May 2..	589 73	55 20	Stern-wheel " "
Sybil	100	" 3..	621 87	57 76	" " " "
Alert	12	" 5..	43 81	8 52	Screw " "
Mermaid	100	" 6..	128 55	18 32	Twin-screw " "
Yosemite	500	" 19..	1,525 03	130 00	Paddle " "
		1899.			
Katie	100	May 27..	46 00	8 68	Screw " "
		1900.			
Comet	12	May 27..	85 26	11 80	" " "
Surrey	50	June 15..	263 26	29 04	Paddle " "
Ramona	50	" 15..	250 79	28 08	Stern-wheel " "
Beaver	150	" 16..	545 44	51 60	" " "
Transfer	120	" 16..	264 16	29 12	" " "
Cutch	200	" 17..	675 85	62 08	Screw " "
Lapwing	30	" 19..	150 73	20 08	" " "
City of Nanaimo	500	" 23..	761 37	68 80	Twin-screw " "
Rothsay	250	" 26..	553 11	52 24	Stern-wheel " "
Glenora	110	" 27..	542 15	51 36	" " "
Sadie	25	May 3..	49 30	8 92	Screw " "

R. COLLISTER,
Hull Inspector.

63 VICTORIA, A. 1900

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended
June 30, 1899.

BRITISH COLUMBIA DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.		8 cts.	
Rosalie	127	July 29.	318.51	33 52	Screw, passenger, northern ports.
Garland	50	Aug. 1.	166.61	21 36	" " Sound ports.
Dirigo	240	" 25.	843.55	75 52	" " northern ports.
		1900.			
Victoria	342	Jan. 4.	3,502.00	288 16	Screw, passenger, China.
Tacoma	232	" 13.	2,811.00	232 88	" " "
Humboldt	325	Mar. 8.	1,075.00	94 00	" " northern ports.
Amur	112	" 6.	907.17	80 56	" " "
City of Kingston	500	April 10.	1,117.40	97 36	" " Sound ports.
George E. Starr	100	May 1.	472.66	45 54	Paddle, " "
City of Seattle	592	" 7.	1,411.05	120 88	" " northern ports.
Utopia	100	" 10.	423.72	41 84	" " Sound ports.
Queen	402	" 12.	2,727.80	226 24	" " northern ports.
Walla Walla	401	" 17.	3,069.76	253 60	" " San Francisco.
		1899.			
Amur	300	May 28.	907.17	8 00	Paddle, passenger, Seattle.
		1900.			
Alice Gertrude	342	May 24.	413.17	41 04	Paddle, passenger, Sound ports.
Garonne	500	" 26.	3,876.00	318 08	" " northern ports.
North Pacific	200	June 6.	488.73	47 12	" " Sound ports.
Umatilla	400	" 6.	3,069.76	253 60	Screw " San Francisco.
Cottage City	273	May 20.	1,885.11	158 80	" " northern ports.

R. COLLISTER,
Hull Inspector.

STEAM Vessels not Inspected for the Year ended June 30, 1899.

BRITISH COLUMBIA DIVISION.

HULL INSPECTION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not inspected and Class of Vessel.
Charmer	1,044.41	496.58	Not running.
Spratts Ark	307.81	143.04	" "
	1,352.22	639.62	

R. COLLISTER,
Hull Inspector.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected for the Year ended June 30, 1899.

KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES DIVISION.

BOILERS, MACHINERY AND HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
				\$ cts.	
Empire		Not issued	3 70		Screw, Mackenzie and Slave River.
Wrigley		"	104 59		" freight, Mackenzie & Slave Riv.
St. Alphonse		"	24 94		" " " "
Lillian B.		"	4 05		" " " "
Norah		"	4 69		" tug, Saskatchewan "
Otter		"	78 99		Stern-paddle " "
Princess Helen		"	2 03		Screw, yacht " "
		1899.			
Widgeon		Oct. 3.	7 95	5 64	Screw, freight, Lake Wabigoon.
Galatia		" 3.	46 10	8 68	" " " "
Josie		Sept. 26.	12 42	5 96	" tug, Lake of the Woods.
Sport		" 29.	16 26	6 28	" " " "
Daisy Moore		" 29.	31 16	7 48	" " " "
Squaw		" 29.	21 60	6 76	" " " "
Chieftain		Oct. 6.	36 26	7 88	" " " "
Majestic		" 10.	135 22	15 80	" pass. and freight, Rainy Lake,
Mohican		" 8.	34 20	7 08	" tug, Rainy Lake.
Heather Bell		" 12.	21 18	6 68	" " Lake of the Woods.
Keenora			486 34	46 88	" pass. and freight, Rat Portage and Fort Francis.
		1900.			
Phantom	40	April 29.	55 88	9 48	Screw, ferry, Rat Portage & Keewatin.
Kemina		40 May 16.	41 86	8 36	" " " "
Shamrock	40	" 17.	79 84	11 40	" pass., Lake of the Woods.
Mary Hatch		" 23.	121 18	14 68	" tug " "
Balmoral	30	" 19.	36 94	7 96	" pass. " "
Mikado		" 15.	24 92	7 00	" tug " "
Catherine S.	35	" 15.	66 60	10 36	" pass. " "
Edna Brydges	40	" 22.	176 05	22 08	" " Rat Portage & Ft. Francis
Frank Burton		" 15.	52 00	9 16	" fish tug, Lake Winnipeg.
Red River	30	" 15.	166 47	21 28	" pass. & frt. " "
City of Selkirk	75	" 15.	457 82	44 64	" " " "
Premier	75	" 15.	413 99	41 12	" " " "
Lady of the Lake	50	" 15.	201 43	24 08	" " " "
Miles		" 15.	63 04	10 04	" fish tug " "
Millie Howell		" 15.	24 11	6 92	" " " "
Fisherman		" 15.	44 22	8 52	" " " "
Idell		" 15.	53 92	9 32	" " " "
Angler		" 15.	16 16	6 28	" " " "
Keewatin		" 15.	41 25	8 28	" tug, Lake of the Woods.
Clipper		" 15.	52 95	9 24	" pass. & frt. " "
Joni		" 18.	12 42	5 96	" tug " "
Pastime		" 29.	4 00	5 32	" priv. yacht " "
Daisy Moore		" 18.	31 16	7 48	" tug " "
Pearl		" 23.	10 00	5 80	" priv. yacht " "
Gem		" 23.	11 08	5 88	" " " "
C. W. Vanhorn	35	" 22.	59 91	9 79	" pass. & frt. " "
Chieftain		" 22.	36 26	4 88	" tug " "
Alma T		" 23.	15 78	6 28	" " " "
Lotta S.	20	" 29.	48 03	8 84	" pass. & frt. " "
Gordon M.		" 29.	3 01	5 24	" tug " "
Empress		June 2.	129 28	15 32	" " " "
Rambler		May 25.	25 83	7 08	" pass. & frt. " "
Nora		" 27.	20 23	6 60	" tug " "
D. L. Mather		" 27.	103 32	13 24	" " " "
Regina	15	" 31.	6 78	5 56	" pass. & frt. " "

63 VICTORIA, A. 1900

STEAM Vessels Inspected, &c.—Keewatin, Manitoba and North-west Territories
Division—*Concluded.*

BOILERS, MACHINERY AND HULL INSPECTION—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Jenny Lind.....		May 29.	5 81	5 40	Screw, priv. yacht Lake of the Woods.
Hudson Bay Messenger.....		" 29..	5 20	5 40	" " " " "
Princess.....		" 27..	7 83	5 64	" tug " " "
Spray.....		" 30..	8 98	5 72	" " " " "
Sultana.....		June 2..	3 35	5 24	" priv. yacht " " "
Heather Bell.....	20	" 5..	21 18	6 68	" pass. & frt. " " "
Monarch.....		" 5..	131 03	15 48	Side-paddle, tug " " "
Zephir.....		Not issued	19 27	6 52	Screw, yacht " " "
Galetia.....		June 22..	46 10	8 68	" freight, Lake Wabigoon.
Wm. Whyte.....		June 8..	17 81	6 44	Screw, tug, Lake Wabigoon.
Widgeon.....	10	" 8..	7 95	5 64	" pass. " " " "
James Mayhew.....		" 9..	16 94	6 36	" fish tug, north shore, Lake Sup.
Mary Ann.....	40	" 13..	86 86	11 96	" pass. & tug " " "
Siskiwett.....	20	" 12..	47 17	8 76	" " " " "
Georgina.....	25	" 14..	43 78	8 52	" " " " "
Almedia.....		" 15..	7 60	5 64	" fish tug " " "
Kate Marks.....		" 16..	54 15	9 32	" tug, Lake Helen.
Maud C.....		Not issued	5 16		" fish tug, north shore, Lake Sup.
Minota.....		June 17..	34 95	7 80	" " " " "
Rosey May.....		" 17..	3 66	5 32	" " " " "
Messanaubie.....		Not issued	15 09		" tug, Dog Lake.
Arcadia.....		June 20..	23 16	6 85	" fish tug, Lake Superior.
Gladys.....		Not issued	7 95	5 64	" " " " "
Fida.....		June 21..	2 37	5 16	" " " " "
Brothers.....		" 22..	17 50	6 44	" " " " "
Annie Mc.....		" 23..	13 42	6 04	" private yacht, Thunder Bay.
Swan.....		" 24..	7 76	5 80	" fish tug, Lake Superior.
Minnehaha.....		Not issued	2 42	5 24	" tug, Lac des Mille Lacs.
Circe.....		"	2 83		" " " " "
Salty Jack.....		"	44 62	8 60	" tug, Lake Superior.
Total.....			4,491 39	721 88	

GEO. P. PHILLIPS,
Steamboat Inspector.

SESSIONAL PAPER No. 11

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended
June 30, 1899.

KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES DIVISION.

BOILERS, MACHINERY AND HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed
		1900.		\$ cts.	
Hiram H. Dixon.....		June 27..	329'00	34 32	Passenger and freight, Port Arthur and Duluth, Minn.

GEO. P. PHILLIPS, *Steamboat Inspector.*

STEAM Vessels not Inspected for the Year ended June 30, 1899.

KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES DIVISION.

BOILERS, MACHINERY AND HULL INSPECTION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. — Why not Inspected and Class of Vessel.
Queen.....	31'65	18'71	Screw tug; to be inspected.
Ethel.....	20'20	17'14	" " "
Widgeon.....	2'29	1'56	" " "
Aurora.....	224'50	141'43	Side-paddle tug, to be inspected.
Lady Ellen.....	18'57	12'36	Screw tug " "
Isabelle.....	60'90	41'41	" " "
Beaver.....	34'15	23'22	" " "
Otter.....	78'99	24'78	Stern-paddle tug " "
Norah.....	4'69	2'44	Screw tug, not in use.
Ida.....	19'37	13'57	" " "
Harry Montgomery.....	3'65	2'19	" " "
Zena.....	6'66	5'00	" " "
Una.....	19'42	11'50	Stern-paddle tug, not in use.
Northern Bell.....	6'97	3'85	Screw tug, not in use.
Klondyke.....	8'05	4'00	" " "
Wm. Cross.....	21'66	16'31	" " "
Ethel Banning.....	37'54	25'35	" " "
Sunbeam.....	2'86	1'94	" " "
Elenore.....	1'79	1'34	" " "
Lily.....	1'61	1'01	" " "
Caro.....	14'47	9'48	" " "
Dolphin.....	12'63	8'59	" " "
Ida.....	18'57	12'63	" " "
Sparrow.....	49'28	27'90	Screw, pass. & freight, too far to go this year.
Graham.....	360'19	232'15	Stern-paddle, too far to go this year.
St. Joseph.....	27'06	16'06	Side " " "
Athabasca.....	166'73	25'85	Stern " " "
Alpha.....	7'50	4'98	Screw tug " " "
Josie.....	25'04	16'88	Side-paddle " " "
Uncle Sam.....	7'79	5'27	Screw, freight " " "
Daisy Bell.....	7'65	6'12	Stern-paddle " " "
Nensongis.....	7'06	5'20	Side-paddle, to be inspected.
Total.....	1,309'49	146'22	

GEO. P. PHILLIPS, *Steamboat Inspector.*

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1899; their Class and Horse-power; whether of Wood or Iron; their Gross and Registered Tonnage; where built; and where and how employed.

WEST ONTARIO DIVISION.

Name of Vessel.	Horse-power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how employed.
Annie C. Hill.....	1·2	Screw.....	Wood.....	14	9	Owen Sound.....	Lake Simcoe, yacht.
Wanda.....	9·95	".....	Composite..	12	8	Toronto.....	Muskoka Lakes, yacht.
Allena May.....	1·63	".....	Wood.....	16	11	Walkers Point.....	" " tug.
Wawonaissa.....	2	".....	".....	7	4	Milford Bay.....	" " yacht.
J. S. Blazier.....	16·46	".....	".....	89	60	East Saginaw, U. S.....	Georgian Bay, tug.
Edna.....	3·33	".....	".....	55	30	Parry Sound.....	" " passenger.
Dredge No. 9.....	4·8	Dredge.....	".....	187	127	Lockeport, U. S.....	Owen Sound Harbour, dredge.
Thos. Maitland.....	30·83	Screw.....	".....	107	75	Owen Sound.....	Georgian Bay, tug.
Una.....	1·63	".....	".....	22	15	Peckskill, U. S.....	" " yacht.
	71·83			509	330		

JAMES JOHNSTON.
Toronto.

SESSIONAL PAPER No. 11

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1899; their Class and Horse-power; whether of Wood or Iron; their Gross and Registered Tonnage; where built; and where and how employed.

WEST ONTARIO DIVISION.

Name of Vessel.	Horse-power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how employed.
Frank G. McAulay.....	6.53	Screw.....	Wood.....	43	29	Saugeen.....	Lake Huron, fishing tug.
Huron.....	8.53	".....	".....	53	37	Goderich.....	" tug
Lena.....	2.13	".....	".....	14	8	St. Williams.....	Long Point Bay, yacht.
Verva.....	4.80	".....	".....	55	37	Wahnapiatae.....	Wahnapiatae Lake, passenger.
Daniel Lamb.....	12.96	Dredge.....	".....	253	18	Toronto.....	Toronto Bay, dredge.
Manolia.....	1.20	Screw.....	".....	6	4	".....	Lake Ontario, yacht.
Toronto.....	273.20	Paddle.....	Steel.....	2,779	1,652	".....	Prescott and Toronto, passenger.
Urania.....	76.80	".....	Wood.....	898	424	Milwaukee, U. S.....	Lake Erie, passenger.
Victoria.....	16.66	Screw.....	".....	181	108	Toronto.....	Ottawa and Montreal, passenger.
	402.51			4,282	2,317		

JOHN DODDS,
Steamboat Inspector, Toronto.

63 VICTORIA, A. 1900

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1899; their Class and Horse-power; whether of Wood or Iron; their Gross and Registered Tonnage; where built; and where and how employed.

EAST ONTARIO DIVISION.

Name of Vessel.	Horse-power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Were Built.	Where and how employed.
Rainbow.....	1 87	Screw.....	Wood.....	25 92	17 63	Birdsall, Ont.....	Passenger, Rice Lake and tributaries.
Dredge "Sir Hector".....	13 00	Non-prop'lg	".....	355 39	183 15	Point Levis.....	Spoon dredge, canals.
Dredge "Central City".....	9 60	".....	".....	223 62	117 01	".....	".....
Dredge "Pontiac".....	13 00	".....	".....	220 90	134 85	Morrisburg, Ont.....	".....
Ruth.....	6 53	Screw.....	".....	36 45	17 94	Kingston, Ont.....	Tug, St. Lawrence River.
Alberta.....	4 80	".....	".....	122 43	88 43	Cape Vincent, U. S.	Freight, ".....
Argyle.....	61 60	Paddle.....	".....	700 29	373 87	Picton, Ont.....	Passenger, Lake Ontario and River St. Lawrence.
Menonah.....	1 20	Screw.....	".....	5 59	3 80	Oliver's Ferry, Ont.....	Pleasure yacht.
Lillian B.....	0 53	".....	".....	3 76	2 99	Ottawa, Ont.....	Passenger, Carleton Place and Innesville.
Beaver.....	6 66	Paddle.....	".....	91 50	57 64	Lindsay, ".....	Tug, Counties Victoria and Peterborough.
Lady of the Lake.....	2 70	Screw.....	".....	32 95	19 42	Bridgenorth, Ont.....	Passenger, ".....
	121 49			1,818 80	1,016 73		

THOMAS P. THOMPSON,
Steamboat Inspector.

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1899; their Class and Horse-power; whether of Wood or Iron; their Gross and Registered Tonnage; where built; and where and how employed.

MONTREAL DIVISION.

Name of Vessel.	Horse-power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how employed.
Temiscamingue.....	16·60	Paddle.....	Wood.....	412·89	236·22	Temiscamingue.....	Lake Temiscamingue, passenger.
Alceyone.....	13·27	Screw.....	".....	38·44	22·21	Chicago, U. S.....	River yacht.
Queen.....	1·66	".....	".....	15·37	12·49	North Bay.....	North Bay and South River, passenger.
Lucia.....	10·08	".....	".....	41·07	27·93	Sorel.....	River tug.
Grain Elevator No. 15.....	16·00	".....	Steel.....	212·60	130·47	Montreal.....	Montreal harbour, grain elevating.
Grain Elevator No. 16.....	16·00	".....	".....	210·31	128·92	".....	".....
Dredge Trenton.....	6·50	Sp'n dredge.	Wood.....	100·00	.....	Morrisburg.....	Rivers, dredging.
Dredge I. X. L.....	13·06	".....	".....	100·00	.....	Welland.....	".....
Hebron.....	7·50	Screw.....	".....	148·97	98·10	Ottawa.....	Rivers and Lakes, freight.
Mahigama.....	2·13	".....	".....	19·91	19·41	Pembroke.....	Pembroke and Fort William, passenger.
Booth.....	22·05	Paddle.....	Wood.....	346·55	218·33	Wisawasa.....	Wisawasa and Sturgeon Falls.
	124·85			1,646·11	894·08		

WM. LAURIE.
LOUIS ARPIN.

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1899; their Class and Horse-power; whether of Wood or Iron; their Gross and Registered Tonnage; where built, and where and how employed.

QUEBEC DIVISION.

Name of Vessel.	Horse-power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how employed.
Richard	33.6	Screw	Wood	448.20	448.20	Sorel, 1890	Freight barge converted into a steam barge and freight on lakes from Montreal.
Tess	1.2	"	"	5.00	4.70	L'Islet, 1896	Pleasure yacht on Lake Megantic.
Johnny H.	2.7	"	"	14.20	5.18	Quebec, 1899	Quebec Harbour, tug.
Shamrock	49.3	"	"	236.73	160.98	" 1898	Steam barge (screw) for buoy service between Quebec and Montreal.
Frontenac	0.48	Twin screw.	Steel	303.63	216.47	Lévis, 1899	Tug, freight, between Quebec and St. Romuald.
Robert McKay	42.68	Screw	"	128.88	87.43	" 1899	Montreal and harbour tug, attending dredges.
Kiskissing	1.16	"	Wood	3.19	2.90	Island of Orleans	Pleasure yacht, Lake Kiskissing.
Green	0.3	"	"	3.95	3.72	" 1899	" Lake Edward.
				1,175.78	919.58		

JOS. SAMSON, Inspector of Boilers and Machinery.
PIERRE D. BRUNELLE, Hull Inspector.

SESSIONAL PAPER No. 11

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1899; their Class and Horse-power; whether of Wood or Iron; their Gross and Registered Tonnage; where built, and where and how employed.

NOVA SCOTIA DIVISION.

Name of Vessel.	Horse-power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how employed.
Alpha	16.60	Screw	Wood	61.20	42.19	Cheverie, N.S.	Freight and tug, coasting.
Trusty	18.37	"	"	57.60	37.76	La Have, N.S.	Passenger and tug, La Have River.
Malcom Cann.	52.67	"	"	211.81	78.08	Lockeport, N.S.	" coasting.
Centreville	8.16	"	"	59.71	32.48	Centreville, N.S.	Freight and tug, coasting.
Serena E.	8.16	"	"	24.94	16.96	Liverpool, N.S.	Fishing boat "
Percy Cann	13.50	"	"	80.66	55.65	Metechan, N.S.	Passenger, coasting, late "Westport."
Nyanza	16.66	"	"	83.21	49.01	Hantsport, N.S.	" "
	184.12			578.53	307.13		

JOHN P. ESDAILE,
Steamboat Inspector, Halifax, N.S.

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1899 ; their Class and Horse-power ; whether of Wood or Iron ; their Gross and Registered Tonnage ; where built, and where and how employed.

BRITISH COLUMBIA.

Name of Vessel.	Horse-power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how employed.
Tyrell.....	17 0	Stern-wheel.	Wood	678 26	408 63	Vancouver.....	Freight and pass., Stikine River.
Flora.....	3 2	"	"	100 93	63 59	Lake Bennett, B.C.	" " " Upper Yukon River.
Emma Nott ..	3 2	"	"	134 00	"	"	" " " " "
Nora.....	3 2	"	"	100 93	63 59	"	" " " " "
Joseph Clossett.	3 2	"	"	147 00	"	"	" " " " "
Ora.....	5 4	"	"	100 93	63 59	Teslin Lake, B.C.	Prospecting Yukon River.
Visnan.....	1 6	"	"	161 45	114 21	Lake Bennett, B.C.	Freight and passenger, Lake Bennett.
Willie Irving	3 2	"	"	54 00	64 20	"	Prospecting yacht, Yukon River.
Viola.....	0 5	Screw	"	101 90	2 69	"	Freight and passenger, Lower Yukon.
Yukoner.....	17 0	Stern-wheel.	"	3 70	492 23	St. Michael, Alaska.	" Fraser River.
Jessie Burrows.	5 4	"	"	781 31	98 15	Aberdeen, Wash., U.S.A.	Fishing tug, Fraser River.
Lily.....	1 6	Screw	"	131 75	6 07	New Westminster.	Freight and passenger, Lake Bennett.
S. S. Bailey ..	6 6	Stern-wheel.	"	192 56	132 56	Lake Bennett, B.C.	Freight and passenger, Lake Bennett.
Australian ..	6 6	"	"	8 79	308 43	"	Upper Yukon River.
Linderman ..	1 6	"	Steel.	420 43	34 00	Lake Linderman, B.C.	ferry, Lake Linderman.
Alert.....	0 8	Screw	Wood	7 00	5 00	"	Tug, Lake Linderman.
Gleaner.....	5 5	Stern-wheel.	"	241 90	149 50	Lake Bennett, B.C.	Freight and passenger, Lake Bennett.
Scotia.....	3 2	"	"	100 18	70 18	"	Freight and passenger, Atlin Lake.
Ruth.....	1 6	"	"	52 00	33 00	"	" " " " "
Clifford Sifton.	6 6	"	"	164 00	"	"	" " " " "
Mable F.....	1 4	Screw	"	10 18	7 08	Atlin Lake, B.C.	Lake Bennett.
Hercules.....	16 6	"	"	64 68	43 99	Nelson, B.C.	Atlin Lake.
Rossland ..	32 2	Stern-wheel.	"	883 55	531 50	Nakusp, B.C.	Tug and passenger, Kootenay Lake.
Aroher.....	3 3	Screw	"	15 32	10 42	Dalles, Ore., U.S.A.	Freight and passenger, Columbia River.
Greenwood ..	4 2	Stern-wheel.	"	142 48	80 77	Okanagan Landing, B.C.	Tug, Columbia River.
Bristol.....	169 5	Screw	Iron	1,983 15	1,274 40	Stockton-on-Tees, Eng.	Freight, Dog Lake.
Marjorie.....	1 0	Stern-wheel.	Wood	19 50	12 33	New Westminster, B.C.	" Pacific ports.
Royal City ..	9 6	"	"	200 46	126 29	Langley, B.C.	Passenger, Yukon River.
Horsa.....	154 0	Screw	Iron.	741 00	459 00	Glasgow.....	Freight and passenger, Fraser River.
Queen City ..	30 7	"	"	391 21	243 70	Victoria, B.C.	B.C. waters and Alaska.
Roncona.....	8 4	Stern-wheel.	Wood	250 79	208 76	Portland, Ore., U.S.A.	" " " Fraser River.
Pilot.....	89 7	Screw	"	279 05	147 64	Chemainus, B.C.	Tug, coast, K.C.
On Time.....	2 1	"	"	10 70	4 40	Ballard, Wash., U.S.A.	" Fraser River.
Toubadour ..	6 8	"	"	17 61	11 98	Victoria, B.C.	" " " Victoria.

SESSIONAL PAPER No. 11

Moyie.....	17 0	Stern-wheel.	"	834 81	525 94	Nelson, B.C.....	Freight and passenger, Kootenay Lake.
Ymir.....	27 3	Screw.....	"	69 74	47 43	"	Tug, Kootenay Lake.
Sandon.....	19 4	"	"	96 22	65 43	Roseberry, Slooan Lake.....	Tug and passenger, Slooan Lake.
Minto.....	17 0	Stern-wheel.	"	828 91	522 22	Nakusp, B.C.....	Freight and passenger, Columbia River.
Mist.....	2 1	Screw.....	"	28 68	19 50	Fontiac, Wash., U.S.A.....	Tug, West coast Vancouver Island.
Bessie.....	1 2	"	"	10 90	6 09	Tacoma, U.S.A.....	Tug, Fraser River.
Sybil.....	17 0	Stern-wheel.	"	621 87	364 22	Victoria, B.C.....	Freight and passenger, Yukon River.
Claasman.....	10 6	Screw.....	"	72 40	49 24	Vancouver.....	Freight, coast, B.C.
	741 2			11, 310 33	6, 880 34		

J. A. THOMSON,
Steamboat Inspector, Victoria, B.C.

63 VICTORIA, A. 1900

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1899 : their Class and Horse-power ; whether of Wood or Iron ; their Gross and Registered Tonnage ; where built, and where and how employed.

KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES.

Name of Vessel.	Horse-power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how employed.
Maple Leaf.....	13.5	Screw.....	Wood.....	81.84	50.02	Rat Portage, Ont.....	Pass. and freight, Rat Portage and Fort Francis.
Pearl.....	1.2	".....	".....	10.00	2.77	Buffalo, N. Y., U.S.A.....	Private yacht, Lake of the Woods.
Balmoral.....	2.13	".....	".....	36.94	23.22	Rat Portage, Ont.....	Pass. and freight "
Majestic.....	4.8	".....	".....	135.22	94.93	Fort Francis, ".....	" " Rainy Lake.
Mohican.....	6.0	".....	".....	34.20	24.08	" ".....	Tug, Rainy Lake.
Almedia.....	0.08	".....	".....	7.68	4.26	Port Arthur, ".....	Fish tug, Lake Superior.
Swan.....	0.08	".....	".....	7.76	5.50	" ".....	" "
Missanaubie.....	1.2	".....	".....	15.09	8.81	Missanaubie.....	Tug, Dog Lake.
Gladys.....	1.2	".....	".....	7.95	4.69	Jack Fish.....	Fish tug, Lake Superior.
Galatia.....	0.6	".....	".....	46.10	30.26	Lake Wabigoon.....	Tug, Lake Wabigoon.
Princess Helen.....	0.53	".....	Steel.....	2.03	0.95	London, England.....	Pleasure yacht, Saskatchewan River.
Norah.....	0.53	".....	Wood.....	4.69	2.44	Edmonton, Alberta.....	Tug, Saskatchewan River.
Lillian B.....	0.53	".....	".....	4.05	1.80	" ".....	Tug and freight, Mackenzie and Slave Rivers.
Otter.....	2.4	Stern-pad.....	".....	78.99	24.78	" ".....	" " Saskatchewan River.
				472.54	278.51		

GEO. P. PHILLIPS,
Steamboat Inspector.

SESSIONAL PAPER No. 11

STATEMENT of Steam Vessels lost, broken up or laid up as unfit for service, in the Dominion during the Year ending June 30, 1899, and where and how employed.

MONTREAL DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Toneata	Upper Ottawa river pass.	14 00	Screw, hull unfit for service.
Emerillon	" " " "	15 00	" " " "
Ottawa	" " " "	116 28	Paddle " " "
Pearl	Lower " " yacht.	5 03	Screw " " "
Emma Munson	St. Lawrence " tug.	32 00	" " " "
Okimawakiawa	Lake Nipissing, yacht.	12 78	" " " "
Booth.....	" " tug.	234 73	Paddle " " "
		429 82	

WM. LAURIE.
LOUIS ARPIN.

STATEMENT of Steam Vessels lost, broken up or laid up, &c.—*Continued.*

QUEBEC DIVISION.

Name of Vessel.	Where and How Last Employed	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Acadian	Screw collier, Mont. & Sydney.	931 33	Stranded and total loss.
Mistassini	Paddle, pass., between Roberval and Grande-Decharge.	248 79	Burnt down at her wharf, Roberval.
Lena	Screw, ferry between Megantic and Three Lakes	22 05	Decayed, unfit for service.
Anglina	Paddle, tug Quebec & Montreal	153 42	" "
Otter	Screw, pass. and freight between Quebec and Netasquan.	198 48	Lost on White Island deaf.
Anny McGee.....	Screw, wrecking schooner between Quebec and Gulf ...	59 70	Lost on the Bay of Fundy.
Swan	Screw, pleasure yacht on Lake Edward	5 19	Decayed, unfit for service.
Canadien.	Screw, pass., and tug between Sorel and Lanaurac.....	22 28	" "

JOS. SAMSON,
Boiler and Machinery Inspector.

PIERRE D. BRUNELLE,
Hull Inspector.

63 VICTORIA, A. 1900

STATEMENT of Steam Vessels lost, broken up or laid up, &c.—*Continued.*

WEST ONTARIO DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Northern Bell.....	Georgian Bay, passenger.	514	Screw, burned.
Pacific.....	" " "	918	" "
Adam Ainslie.....	" tug.	57	" "
P. M. Campbell.....	" "	49	" "
Ann Long.....	" "	45	" dismantled.
Rosamond.....	Long Point Bay, yacht.	23	" "
Mascott.....	Toronto Bay, ferry.	49	" "
Chicoutimi.....	" passenger.	110	Paddle, burned.
		1,765	

JAMES JOHNSTON,
JOHN DODDS,
Toronto.

STATEMENT of Steam Vessels lost, broken up or laid up, &c.—*Continued.*

EAST ONTARIO DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Golden City.....	Cos. Victoria & Peterboro, pas.	68·02	Screw, destroyed by fire.
Myrtle.....	" " " tug.	27·46	Paddle, hull used up.
Empress of India.....	London, O. & River St. L., pas.	579·05	" enlarged and rebuilt.
Carleton.....	Carleton Place, passenger.	67·94	" hull made into a barge.
Lily.....	River St. Lawrence, tug.	16·01	Screw, hull used up.
H. C. Curtis.....	" " "	36·19	" "
		794·67	

THOS. P. THOMPSON,
Steamboat Inspector.

SESSIONAL PAPER No. 11

STATEMENT of Steam Vessels lost, broken up or laid up, &c.—Continued.
NOVA SCOTIA DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Ulunda.....	Passenger, foreign.....	1,717 09	Sold to foreigners.
Barcelona.....	" " ".....	1,801 53	" " "
Caber Feidh.....	" " coasting.....	61 07	" " "
Westport.....	" " ".....	80 06	Name changed to 'Percy Cann'.
St. John.....	Tug " ".....	47 28	Broken up.
		3,707 03	

JOHN P. ESDAILE,
Steamboat Inspector, Halifax, N.S.

STATEMENT of Steam Vessels lost, broken up or laid up, &c.—Continued.
BRITISH COLUMBIA DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Mischief.....	Freight, coast, B.C.....	65 49	Steam schooner, boiler condemned.
Fairy Queen.....	" Fraser River.....	24 94	Stern-wheel, dismantled.
City of Ainsworth.....	Ft. & Pass., Kootenay Lake.....	193 49	" foundered in gale.
Edgar.....	" Fraser River.....	165 13	" burnt and sunk.
Bon Accord.....	" " ".....	84 15	" " "
Gladys.....	" " ".....	211 23	" " "
Marquis of Dufferin.....	Proceeding to Yukon in tow.....	629 33	" foundered in gale.
Stickine Chief.....	" " ".....	846 74	" " "
Greenwood.....	Freight, Dog Lake.....	142 48	" burnt, total loss.
		2,362 98	

J. A. THOMSON,
Steamboat Inspector, Victoria, B.C.

STATEMENT of Steam Vessels lost, broken up or laid up, &c.—Continued.
KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Lady Brooks.....	Passenger, Devil's Lake Banff.....	6 34	Screw, hull condemned.
Mountain Bell.....	" Bow River ".....	1 00	" " " "
North West.....	" Saskatchewan River.....	425 00	Stern-paddle, unfit for service.
Northcote.....	" " ".....	461 02	" " " "
Ogema.....	Tug, Lake Winnipeg.....	62 05	Screw, hull converted into a barge.
Ripple.....	" " ".....	9 83	Side-paddle, hull broken up.
Assiniboina.....	Passenger, Red River.....	102 02	Stern-paddle " "
Upas.....	Freight, Saskatchewan River.....	17 00	Screw, hull broken up in ice.
Clara.....	Fish tug, Lake Superior.....	11 51	" hull condemned.
		1,095 77	

GEO. P. PHILLIPS, *Steamboat Inspector.*

63 VICTORIA, A. 1900

List of Certificates of Competency and Temporary Certificates granted to Engineers of Steamboats, during the Year ended June 30, 1899.

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1898.					\$ cts.
2294	July 11.	Wm. Isaac Vester.	Temporary	Blenheim, Ont.	Rondeau, Ont.	2 00
2295	" 11.	John Wm. McMillan.	"	Niagara, Ont.	Niagara, Ont.	2 00
2296	" 21.	Henry Good.	"	Napanee, Ont.	Kingston, Ont.	2 00
2297	" 21.	Wm. Powles.	"	Tyendinaga, Ont.	"	2 00
2298	" 21.	Mitchell Kinville.	"	Brockville, Ont.	Ottawa, Ont.	2 00
2299	" 21.	Henry M. Bowden.	"	Belleville, Ont.	Belleville, Ont.	2 00
2300	" 21.	John Gonyea.	"	Smith's Falls, Ont.	Kingston, Ont.	2 00
2301	" 22.	Thos. M. Heard.	3rd Class	Vancouver, B.C.	Vancouver, BC	2 00
2302	" 29.	Richard Boyd.	Temporary	Waubushene, Ont.	Toronto, Ont.	2 00
2303	" 29.	Pierre LeBlanc.	"	Carleton, Que.	St. John, N.B.	2 00
2304	Aug. 4.	Joseph Woodhouse.	4th Class	Bracebridge, Ont.	Pt. Carling, O.	5 00
2305	" 3.	Rodney Patnote.	Temporary	Pentanguishene, Ont.	Toronto, Ont.	2 00
2306	" 11.	Oscar Earle.	"	Smith's Falls, Ont.	Kingston, Ont.	2 00
2307	" 20.	M. L. Crandell.	"	Port Perry, Ont.	"	2 00
2308	" 20.	John Allan.	"	Pilot Bay, B.C.	Nelson, B.C.	2 00
2309	" 20.	John Paul.	"	Newboro', Ont.	Kingston, Ont.	2 00
2310	" 22.	George M. Beecher.	"	Brockville, Ont.	Brockville, Ont.	2 00
2311	" 22.	Timothy Whitred.	"	Hastings, Ont.	Hastings, Ont.	2 00
2312	" 22.	Frank L. Shuring.	"	Sudbury, Ont.	Wahnapitae, O.	2 00
2313	" 27.	Alex. Dupry.	"	Pictou, N.S.	Pictou, N.S.	2 00
2314	Sept. 22.	James W. Gidley.	3rd Class	Vancouver, B.C.	Victoria, B.C.	5 00
2315	" 22.	Charles Baker.	4th "	Victoria, B.C.	"	5 00
2316	" 22.	Wm. Carfrae.	1st " U.K.	Vancouver, B.C.	"	5 00
2317	" 22.	Robert Henderson.	4th Class	Nelson, B.C.	Nelson, B.C.	5 00
2318	" 22.	Isaac Whitworth.	3rd "	Ladners, B.C.	Victoria, B.C.	5 00
2319	" 22.	Robert Waterspoon.	Temporary	Cornwall, Ont.	Cornwall, Ont.	2 00
2320	" 22.	Alex. Anderson.	"	Halifax, N.S.	Halifax, N.S.	2 00
2321	" 22.	George H. Eisner.	"	"	"	2 00
2322	" 26.	Jean B. O. Gendron.	1st Class	Lévis, P.Q.	Lévis, P.Q.	*1 00
2323	" 26.	James Godfrey.	2nd "	Charlottetown, P.E.I.	St. John, N.B.	5 00
2324	" 26.	John E. Hill.	4th "	Victoria, B.C.	Victoria, B.C.	5 00
2325	" 26.	John D. Fullerton.	Temporary	Pictou, N.S.	Pictou, N.S.	2 00
2326	" 27.	Robert Crawford.	"	Rat Portage, Ont.	Rat Portage, O.	2 00
2327	Oct. 1.	Fred. Van Norman.	"	"	"	2 00
2328	" 7.	James A. Gill.	4th Class	Victoria, B.C.	Victoria, B.C.	5 00
2329	" 7.	John V. G. Clark.	3rd "	St. John, N.B.	St. John, N.B.	5 00
2330	" 13.	Patk. James Hunt.	2nd " U.K.	Brooklyn, N.Y.	"	5 00
2331	" 13.	Chas. H. Jennings.	3rd "	Victoria, B.C.	Vancouver, BC	5 00
2332	" 22.	W. J. Macfarlane.	2nd " U.K.	Vancouver, B.C.	Victoria, B.C.	5 00
2333	" 22.	George Allan.	4th "	Victoria, B.C.	"	5 00
2334	" 27.	George C. Webster.	2nd " U.K.	Halifax, N.S.	Halifax, N.S.	5 00
2335	" 27.	James Young.	Temporary	Gore Bay, Ont.	Gore Bay, Ont.	2 00
2336	" 27.	Roderick Morrison.	3rd Class.	Victoria, B.C.	Victoria, B.C.	5 00
2337	" 28.	Sam. P. James.	Temporary.	Combermere, Ont.	Combermere O.	2 00
2338	Nov. 13.	John J. Ewing.	1st Class, U.K.	Halifax, N.S.	Halifax, N.S.	5 00
2339	" 10.	John K. Sutherland.	4th "	Charlottetown, P.E.I.	St. John, N.B.	5 00
2340	" 10.	Albert Toller.	4th "	Victoria, B.C.	Victoria, B.C.	5 00
2341	" 10.	John Armstrong.	4th "	New Westminster, B.C.	Vancouver, BC	5 00
2342	" 10.	Jules Lefebvre.	1st " U.K.	Montreal, P.Q.	Montreal, P.Q.	5 00
2343	" 16.	John H. Jones.	4th "	Dartmouth, N.S.	Halifax, N.S.	5 00
2344	" 30.	Isaac N. Kendall.	3rd "	New Westminster, B.C.	Vancouver, BC	5 00
2345	Dec. 2.	Gilbert G. Elliott.	4th "	Vancouver, B.C.	"	5 00
2346	" 2.	Alex. D. Cameron.	4th "	Chance Harbour, N.S.	Halifax, N.S.	5 00
2347	" 13.	Francis Allard.	3rd "	Bonaventure, P.Q.	Quebec.	5 00
2348	" 13.	Alfred Perron.	3rd "	Grondines, P.Q.	Montreal.	5 00
2349	" 13.	Thomas Stewart.	3rd "	Arnprior, Ont.	"	5 00
2350	" 14.	George Edwards.	Temporary	Annapolis, N.S.	Halifax, N.S.	2 00
2351	" 16.	Edward F. Barnes.	2nd Class, U.K.	Vancouver, R.C.	Vancouver, B.C.	5 00
2352	" 16.	Robert Blair.	1st "	"	"	5 00
2353	" 27.	Hugh Harold.	4th "	Rideau Centre, Ont.	Kingston, Ont.	5 00
2354	" 27.	M. F. Hennelly.	3rd "	Victoria, B.C.	Victoria, B.C.	5 00

* Exchanged Certificate.

SESSIONAL PAPER No. 11

List of Certificates of Competency granted to Engineers of Steamboats, &c.—*Con.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1898.					\$ cts.
2355	Dec. 27.	Jean Bordeleau	3rd Class.	Roberval, P.Q.	Quebec.	5 00
2356	" 27.	Elmer Hand	3rd "	Kamloops, B.C.	Victoria, B.C.	5 00
2357	" 27.	George Maynard	4th "	Victoria, B.C.	"	5 00
2358	" 27.	Frederick Webster	2nd "	Vancouver, B.C.	Vancouver, B.C.	5 00
2359	" 28.	Alfred H. Evans	4th "	"	"	5 00
2360	" 28.	James R. P. Gaudin	4th "	Victoria, B.C.	Victoria, B.C.	5 00
2361	" 28.	Adjutor Barras	4th "	Village Lauzon, P.Q.	Quebec.	5 00
2362	" 28.	Wm. John Guthrie	4th "	Meaford, Ont.	Toronto	5 00
	1899.					
2363	Jan. 4	Chas. D. Cooke	2nd Class U.K.	Pictou, N.S.	Halifax, N.S.	*
2364	" 4.	Fred. Beaumont	4th "	Galt, Ont.	Toronto, Ont.	5 00
2365	" 14.	H. A. McWilliam	4th "	Kingston, Ont.	Kingston, Ont.	5 00
2366	" 14.	James Geo. Fisher	3rd "	Collingwood, Ont.	Toronto, Ont.	5 00
2367	" 17.	Robert H. Grierson	4th "	"	"	5 00
2368	" 17.	William Terry	4th "	Little Current, Ont.	"	5 00
2369	" 17.	Victor W. Barnes	1st " U.K.	Hampton, N.B.	St. John, N.B.	5 00
2370	" 17.	Thomas W. Whitely	Temporary	Sombra, Ont.	Sombra, Ont.	2 00
2371	" 17.	James H. Ewing	2nd Class, U.K.	Vancouver, B.C.	Vancouver, B.C.	5 00
2372	" 23.	Adelard Lapointe	3rd "	Village Lauzon	Quebec.	5 00
2373	" 27.	Benj. Madigan	1st " U.K.	Victoria, B.C.	Victoria, B.C.	5 00
2374	" 27.	Wm. Frederick Wilson	4th "	Midland, Ont.	Toronto, Ont.	5 00
2375	" 27.	Eugène Bélanger, jr	3rd "	Village Bienville	Quebec.	5 00
2376	" 27.	Alphonse Desrocher	3rd "	St. Agapit	"	5 00
2377	" 27.	Joseph Blanchet	3rd "	Village Lauzon	"	5 00
2378	" 27.	Frederick Henderson	4th "	Kingston, Ont.	Kingston, Ont.	†
2379	Feb. 7.	Arthur Martin	3rd "	Village Bienville	Quebec.	5 00
2380	" 7.	G. A. Atkinson	3rd "	McLeod's Mills, N.B.	St. John, N.B.	5 00
2381	" 7.	Arthur Abbey	4th "	Toronto, Ont.	Toronto, Ont.	5 00
2382	" 14.	Sam. C. Beatty	2nd "	Collingwood, Ont.	"	5 00
2383	" 14.	Robt. C. Morrison	4th "	St. Peters, N.S.	Halifax, N.S.	5 00
2384	" 14.	James C. Kelly	4th "	Halifax, N.S.	"	5 00
2385	" 14.	Wm. Stockall	4th "	Allenford, Ont.	Toronto, Ont.	5 00
2386	" 16.	N. Protomastro	3rd "	Village Bienville	Quebec.	5 00
2387	" 16.	Frederick Spain	3rd "	Windsor, Ont.	Toronto, Ont.	5 00
2388	" 16.	Thos. Theriault	3rd "	Village Lauzon	Quebec.	5 00
2389	" 16.	Albert Martin	4th "	Sorel, P.Q.	Sorel, P.Q.	5 00
2390	" 16.	Hawman Arthur	4th "	Collingwood, Ont.	Toronto, Ont.	5 00
2391	" 16.	Andrew Townsley	4th "	Victoria, B.C.	Victoria, B.C.	5 00
2392	" 16.	William Nahl	4th "	Arrowhead, B.C.	"	5 00
2393	" 20.	Robert S. Riley	4th "	Vancouver, B.C.	"	5 00
2394	" 20.	Wm. Dunn	4th "	Sorel, P.Q.	Sorel, P.Q.	5 00
2395	" 22.	Wm. Tilley Pitt	3rd "	St. John, N.B.	St. John, N.B.	5 00
2396	" 22.	Chas. E. Dalton	2nd " U.K.	Fairville, N.B.	"	5 00
2397	" 22.	Elijah Y. Drinkwalter	4th "	Warton, Ont.	Toronto, Ont.	5 00
2398	" 22.	Walter Brydon	4th "	Bracebridge, Ont.	"	5 00
2399	" 22.	James Morrey	4th "	Denorwic, Ont.	Rat Portage, O	5 00
2400	" 22.	John Gray	2nd "	Toronto, Ont.	Toronto, Ont.	5 00
2401	" 24.	Wm. Tracey	Temporary	Barrie, Ont.	"	2 00
2402	" 24.	John J. McDonald	"	Charlottetown, P.E.I.	St. John, N.B.	2 00
2403	" 24.	Hedley V. Pye	"	Hopewell Cape, N.B.	"	2 00
2404	" 24.	Edgar P. Strang	"	Charlottetown	"	2 00
2405	" 24.	L. P. Lavalee	4th Class	Sorel, P.Q.	Sorel	5 00
2406	Mar. 2.	Wm. H. Turnbull	4th Class	Victoria, B.C.	Victoria, B.C.	5 00
2407	" 2.	James Colin	2nd "	Sorel, P.Q.	Quebec.	5 00
2408	" 2.	Burton F. Dunn	3rd "	Vancouver, B.C.	Victoria, B.C.	5 00
2409	" 6.	Alex. L. de Martigny	2nd "	Sorel, P.Q.	Sorel, P.Q.	5 00
2410	" 6.	John J. Mark	2nd " U.K.	Empress of Japan	Vancouver, B.C.	5 00
2411	" 6.	Fred. W. Richardson	Temporary	Lord's Cove, N.B.	St. John, N.B.	2 00
2412	" 10.	Hector Dow	4th Class	Victoria, B.C.	Victoria, B.C.	5 00
2413	" 10.	Chas. D. Hawkins	4th "	"	"	5 00

* Exchanged certificate.

† Second examination.

List of Certificates of Competency granted to Engineers of Steamboats, &c.—*Con.*

Number of Certificate.	Date of Certificate.	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1899.					\$ cts.
2414	Mar. 10.	James Lamb.	4th Class.	Vancouver, B.C.	Vancouver, B.C.	5 00
2415	" 10.	Timothy Collins	4th "	Victoria, B.C.	Victoria, B.C.	5 00
2416	" 10.	Arthur Davis.	Temporary	Poole's Resort, Ont.	Kingston, Ont.	2 00
2417	" 11.	Alphonse Lalonde	2nd Class.	Montreal, P.Q.	Montreal, P.Q.	5 00
2418	" 13.	Arch. McLaren.	3rd "	Warton, Ont.	Toronto, Ont.	5 00
2419	" 13.	George North	3rd "	Halifax, N.S.	Halifax, N.S.	5 00
2420	" 13.	Christian Knudsen.	1st " U.K.	Dartmouth, N.S.	"	5 00
2421	" 13.	Clovis Bellefeuille, jr.	Temporary	Valleyfield, P.Q.	Montreal, P.Q.	2 00
2422	" 20.	John Leonard	"	St. John, N.B.	St. John, N.B.	2 00
2423	April 4.	Ovide Mongeon.	4th Class.	Sorel, P.Q.	Sorel, P.Q.	5 00
2424	" 4.	Joseph Guilbault	4th "	"	"	5 00
2425	" 4.	H. G. J. Hawkins	4th "	Toronto, Ont.	Toronto, Ont.	5 00
2426	" 4.	James D. Brown.	4th "	Collingwood, Ont.	"	5 00
2427	" 4.	John G. Clark	2nd "	Charlottetown, P.E.I.	Halifax, N.S.	5 00
2428	" 4.	Frank McDonald.	Temporary	Cornwall, Ont.	Montreal, P.Q.	2 00
2429	" 4.	Frank Naas	"	Lunenburg, N.S.	Halifax, N.S.	2 00
2430	" 4.	James Campbell	"	St. John, N.B.	St. John, N.B.	2 00
2431	" 4.	Timothy Whitred.	"	Hastings, Ont.	Hastings, Ont.	2 00
2432	" 4.	James Logan.	"	Peterboro, Ont.	Kingston, Ont.	2 00
2433	" 4.	Lawrence Black	"	Brockville, Ont.	"	2 00
2434	" 6.	Henry A. Dawson	4th Class.	St. Catharines, Ont.	Toronto, Ont.	5 00
2435	" 6.	Richard McLaren.	4th "	Windsor, Ont.	Windsor, Ont.	5 00
2436	" 6.	Walter Scott.	4th "	"	"	5 00
2437	" 5.	Andrew R. Anderson.	4th "	Victoria, B.C.	Victoria, B.C.	5 00
2438	" 6.	David Smith.	4th "	Rat Portage, Ont.	Rat Portage, O.	5 00
2439	" 6.	James E. B. Tyson.	4th "	Victoria, B.C.	Victoria, B.C.	5 00
2440	" 6.	David P. Wilson.	4th "	Metlakatla, B.C.	"	5 00
2441	" 6.	Duncan A. Macdonald.	4th "	Windsor, Ont.	Windsor, Ont.	5 00
2442	" 6.	Alex. Fenton.	4th "	Victoria, B.C.	Victoria, B.C.	5 00
2443	" 6.	Alfred F. Laurie.	4th "	Montreal, P.Q.	Montreal, P.Q.	5 00
2444	" 6.	Wm. J. McIntyre	Temporary	Port Sydney, Ont.	Toronto, Ont.	2 00
2445	" 26.	Richard Dennison.	4th Class.	Victoria, B.C.	Victoria, B.C.	5 00
2446	" 26.	John H. Smith.	4th "	Vancouver, B.C.	Vancouver, B.C.	5 00
2447	" 26.	August Pendola.	4th "	"	"	5 00
2448	" 26.	Jos. A. McGuire.	4th "	"	"	5 00
2449	" 26.	Eugene Bélanger.	1st "	Village Bienville.	Quebec.	5 00
2450	" 26.	Louis Ouellet.	2nd "	Village Lauzon.	"	5 00
2451	" 26.	A. E. Booker.	Temporary	Rat Portage, Ont.	Rat Portage, O.	2 00
2452	" 26.	William Terry	"	Little Current, Ont.	Toronto, Ont.	2 00
2453	" 27.	Geo. Henry Parker.	2nd Class, U.K.	Halifax, N.S.	Halifax, N.S.	5 00
2454	" 27.	Ernest Goldthorp.	4th "	Huntsville, Ont.	Toronto, Ont.	5 00
2455	" 27.	Joseph H. White.	2nd " U.K.	Halifax, N.S.	Halifax, N.S.	5 00
2456	" 27.	George Boucher.	3rd Class.	Sorel, P.Q.	Sorel, P.Q.	5 00
2457	" 27.	Alex. McIvor.	3rd "	Collins Inlet, Ont.	Toronto, Ont.	5 00
2458	May 4.	Théophile Bellefeuille.	Temporary	Rat Portage, Ont.	Rat Portage, O.	2 00
2459	" 15.	Geo. W. Mitchell.	4th Class.	Montreal, P.Q.	Montreal, P.Q.	5 00
2460	" 15.	Wm. Drury	3rd "	Chute à Blondeau, Ont.	Ottawa.	5 00
2461	" 15.	Alex. Drury	3rd "	"	"	5 00
2462	" 15.	F. St. Germain	3rd "	Rigaud, P.Q.	Montreal, P.Q.	5 00
2463	" 15.	G. Bellefeuille.	Temporary	Rat Portage, Ont.	Rat Portage, O.	2 00
2464	" 15.	James C. Ollard	"	Victoria, B.C.	Vancouver, B.C.	5 00
2465	" 15.	Jos. H. Daball.	"	Parry Sound, Ont.	Parry Sound, O.	2 00
2466	" 15.	Thomas Doan.	Temporary	Sombra, Ont.	Sombra, Ont.	2 00
2467	" 16.	J. M. Pendrigh.	1st Class, U.K.	Yarmouth, N.S.	Halifax, N.S.	5 00
2468	" 16.	Clark W. Gamble.	4th "	Victoria, B.C.	Victoria, B.C.	5 00
2469	" 17.	Wm. Morok	4th "	"	"	5 00
2470	" 17.	Joseph W. Davies	4th "	"	"	5 00
2471	" 17.	John Monany.	Temporary	Halifax, N.S.	Halifax, N.S.	2 00
2472	June 7.	Hugh Gold.	"	Rat Portage, Ont.	Rat Portage.	2 00
2473	" 7.	Moise Racette.	"	Hull, P.Q.	Hull, P.Q.	2 00
2474	" 7.	Rosarie Derry.	"	Rat Portage, Ont.	Rat Portage.	2 00
2475	" 7.	Geo. Thomas Leach.	"	Montreal, P. Q.	Montreal, P.Q.	2 00
2476	" 7.	Clement Mondeville.	"	Thurso, P. Q.	"	2 00

SESSIONAL PAPER No. 11

List of Certificates of Competency granted to Engineers of Steamboats, &c.—*Con.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1899.					\$ cts.
2477	June 7.	Frank H. Judge	4th Class	Halifax, N.S.	Halifax, N.S.	5 00
2478	" 7.	John Hislop	3rd "	Winnipeg, Man.	Selkirk, Man.	5 00
2479	" 7.	James F. Paige	2nd " U.K.	Truro, N.S.	Halifax, N.S.	5 00
2480	" 8.	Peter F. Goldthorpe	Temporary	Rat Portage, Ont.	Rat Portage	2 00
2481	" 8.	Rodney Patnote	"	Parry Sound, "	Toronto, Ont.	2 00
2482	" 12.	Alfred McCall	"	Rat Portage, Ont.	Rat Portage	2 00
2483	" 12.	John Paul	"	Newboro, Ont	Kingston, Ont	2 00
2484	" 12.	Joseph Bark	"	Cornwall, "	"	2 00
2485	" 12.	F. J. Coleman	"	Rat Portage, Ont.	Rat Portage	2 00
2486	" 12.	Henry W. Clark	"	St. John, N.B.	St. John, N.B.	2 00
2487	" 13.	Wilmott Johnson	"	Rat Portage, Ont.	Rat Portage	2 00
2488	" 13.	Arthur McCann	"	Wallace, N.S.	Halifax, N.S.	2 00
2489	" 13.	Richard B. Proutt	"	Marmora, Ont	Marmora, Ont	2 00
2490	" 13.	Andrew Lajeunesse	"	Peterboro, Ont	Peterboro, "	2 00
2491	" 13.	John F. Roblin	"	Belleville, "	Belleville, "	2 00
2492	" 13.	Wm. Albert Rice	"	Buckingham, P. Q.	Montreal, P. Q.	2 00
2493	" 19.	James Grier	3rd Class	New Westminster	Vancouver, B.C.	5 00
2494	" 19.	Charles Taylor	4th "	Albani, B.C.	Victoria, "	5 00
2495	" 19.	F. G. Wilbur	4th "	Owen Sound, Ont.	Toronto, Ont.	5 00
2496	" 21.	Frederick C. Cone	Temporary	North Bay, "	North Bay "	2 00
2497	" 21.	George Field	"	Wabigoon, Ont	Wabigoon, Ont	2 00
2498	" 21.	Charles McLean	"	Dryden, "	"	2 00
2499	" 21.	Oscar Earle	"	Smith's Falls, Ont.	Kingston "	2 00
2500	" 21.	Alphonse Hamel	"	Nipissing, Ont	Wahnapitae, O	2 00
2501	" 21.	Albert Wheeler	"	Belleville, Ont	Kingston, Ont.	2 00
2502	" 21.	Emil Peterson	4th Class	Vancouver, B.C.	Victoria, B.C.	5 00
2503	" 23.	Achille Fontaine	4th "	Village Lauzon	Quebec	5 00

APPENDIX No. 13.

STATEMENT giving Names and Stations of Light-keepers, &c., in the Dominion.

ABOVE MONTREAL.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Acton, Jas. A.	Burnt Island	April 12, 1890	250 00
Armstrong, John	Kaministiquia River	" 28, 1894	200 00
Alexander, Andrew	Lamb Island	May 1, 1897	400 00
Baker, Henry F.	Clapperton Island.	December 2, 1895	350 00
Boyd, Robert P.	Cole Shoal	April 9, 1884	250 00
Boyd, Wm. S.	Griffith Island	May 14, 1889	350 00
Burlingham, James	Point Peter Light and Fog Alarm	" 1, 1876	650 00
Butler, Silas L.	Port Dover	July 15, 1897	300 00
Baxter, Wm. I.	Gin Rock	November 23, 1885	300 00
Barr, Robert	Nipissing, South River Beacon Light.	May 22, 1889	80 00
Borron, Edward	French River	September 13, 1875	500 00
Beaulieu, Octave	Point à Cadieux	July 26, 1892	150 00
Boucher, François	Aylmer Island	November 17, 1882	175 00
Bamford, Robert	Wilson's Channel, Algoma	June 21, 1888	250 00
Bertrand, Félix	Lower End Coulonge Lake	March 16, 1885	100 00
Boyd, Wm. M.	Kagawong	April 13, 1893	72 00
Boyer, Napoléon	Lake St. Louis Light-ship No. 3	" 13, 1898	300 00
Boyter, A. B.	Narrow Island	January 3, 1898	200 00
Brown, Adam	Red Rock, Parry Sound	May 25, 1899	450 00
Campbell, Thos.	Burlington Beach	April 1, 1875	350 00
Collins, Allen	Christian Island	March 25, 1891	*425 00
Cross, Manly R.	Gananoque Narrows and Jack Straw Shoal	August 25, 1896	480 00
Campbell, Robert	Goderich	June 9, 1886	400 00
Currie, Geo.	Isle of Coves	April 1, 1878	+650 00
Craig, Wm	Thunder Cape	May 17, 1892	600 00
Cook, Seldon B.	Long Point Light and Fog Alarm	June 9, 1897	700 00
Cullis, William	Manitoulin Island	October 1, 1877	740 00
Campbell, John	McTavish Point	November 18, 1896	100 00
Clark, Arthur Geo.	Nottawasaga Island	July 5, 1890	500 00
Crevier, Dolphis	Point Claire	May 11, 1888	200 00
Cartier, H. J.	River Thames	October 19, 1884	425 00
Cooper, John	Prince Arthur's Landing	" 14, 1882	300 00
Cosgrove, George	Victoria Island, Lake Superior	November 14, 1889	350 00
Colombus, Christopher	Penetanguishene and Whiskey Island	March 18, 1893	300 00
Conover, Forrest H. C.	Leamington	April 24, 1883	150 00
Covert, John	Belleville	June 1, 1881	200 00
Eox, John	Morrison's or Hawley's Island	" 22, 1887	100 00
Chabot, Joseph	Papineauville Range Lights	" 17, 1897	100 00
Connors, Frank	Point Pleasant	October 13, 1898	200 00
Chase, H. J.	Weller's Bay	November 4, 1898	150 00
Davieux, Joseph	Corbay Point, Batchewana	May 27, 1890	350 00
Durnan, George	Gibraltar Point	" 31, 1884	625 00
Daoust, Daniel	Lake St. Louis Light-ship No. 2	October 20, 1897	300 00
Dickinson, Wm. E.	Long Point, West End	September 30, 1879	*400 00
Davieau, Hyacinth	Michipicoten Island	July 1, 1881	400 00
Daoust, Dosithée	McKie's Point	September 22, 1893	175 00
Davis, John H.	Pidgeon Island	May 6, 1896	350 00
Dick, Andrew	Point Porphyry	August 10, 1880	400 00
Dutcher, Samuel	Meaford	May 7, 1877	150 00
Davis, Henry	Tobermory	November 23, 1895	130 00
Darling, Thomas	Nipissing, South-east Bay Beacon Light	July 1, 1890	50 00
Dixon, Joseph G.	Lake Rosseau	" 21, 1890	100 00

* Allowance \$10.

† Allowance \$100.

SESSIONAL PAPER No. 11

STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

ABOVE MONTREAL—Continued.

Name.	Station.	Appointed.	Salary.	
			\$	cts.
Dempsey, J. Frank.....	Potter's Island Pole Light.....	June 14, 1892.....	*10	00
Demers, Wilbrod.....	Caribou Island, Lake Superior.....	May 10, 1899.....	800	00
Ead, Mrs. C.....	Port Stanley.....	August, 1890.....	300	00
Eby, Henry R. A.....	Warton Pole Light.....	September 14, 1891.....	75	00
Felan, Maurice.....	Oakville Pier.....	April 28, 1894.....	150	00
Fortier, David H. A.....	Port Colborne Range Lights and Fog Alarm.....	" 11, 1865.....	550	00
Fellowes, W. R.....	Rondeau Harbour.....	December 18, 1888.....	300	00
Filiatreault, Thomas.....	Coteau Landing.....	May 27, 1890.....	140	00
Grignon, Xavier.....	Beauharnois.....	March 16, 1885.....	†200	00
Gloude, Benjamin.....	Pointe Claire.....	September 7, 1872.....	300	00
Grubb, W. A.....	Point Pelee Reef Light and Fog Alarm.....	October 21, 1893.....	700	00
Gillespie, Wm.....	Wolfe Island.....	March 16, 1885.....	250	00
Gauthier, Charles.....	St. Placide.....	May 1, 1874.....	100	00
Gordon, Robert.....	Cobourg Pier.....	" 16, 1883.....	180	00
Griffith, Alfred H.....	Giant's Tomb.....	September 17, 1898.....	250	00
Hackett, Andrew.....	Bois Blanc.....	January 13, 1864.....	435	00
Hudgins, James M.....	False Ducks.....	April 28, 1894.....	350	00
Hamilton, John.....	Hamilton's Island.....	September 3, 1873.....	130	00
Hill, Thomas H.....	Lancaster Pier.....	July 1, 1877.....	325	00
Haitze, Jean.....	Lonely Island.....	May 11, 1885.....	450	00
Hunter, David.....	Port Dalhousie.....	October 29, 1879.....	350	00
Hawkins, David B.....	Peninsula Harbour.....	August 31, 1891.....	400	00
Huff, Thomas W.....	Parry Sound Range Lights.....	July 25, 1894.....	550	00
Harvey, James.....	Thessalon.....	November 22, 1897.....	250	00
Hughes, Wm.....	Red River Range Lights.....	1885.....	250	00
Hughes, Amos.....	Point aux Pins.....	May 10, 1899.....	250	00
Hamilton, Thos.....	Pie Island, Port Arthur.....	April 15, 1899.....	75	00
Irving, Mathew.....	Manitowaning.....	May 30, 1887.....	150	00
Johnson, Isaac S.....	Cherry Island.....	November 5, 1883.....	300	00
Jackson, Wm.....	Spectacle Shoal and Red Horse Rock.....	August 1, 1880.....	400	00
Jeffrey, Carson.....	Nigger Island Shoal.....	April 28, 1894.....	200	00
Kinney, James.....	Gore Bay.....	July 27, 1895.....	350	00
Kennedy, James.....	Allumette Island.....	May 23, 1887.....	100	00
Lambert, Wm. McGregor.....	Chantry Island.....	October 1, 1880.....	500	00
Labelle, Louis.....	Deep River Island.....	May 5, 1897.....	100	00
Laberge, Alfred.....	Green Shoal.....	January 26, 1866.....	‡240	00
Lamorandière, Pierre Régis de.....	Killarney.....	September 24, 1880.....	400	00
Léger, Thomas.....	Lachine Pier.....	July 14, 1897.....	200	00
Lamondin, Joseph.....	Byng Inlet.....	April 19, 1884.....	375	00
Lee, John.....	Southampton.....	October 7, 1882.....	150	00
Lock-erbie, Andrew.....	Collingwood Harbour.....	May 4, 1883.....	300	00
Low, Robert.....	Thornbury.....	April 12, 1887.....	80	00
Lowry, Robert M.....	Port Elgin.....	March 14, 1896.....	60	00
Lumsden, A.....	Lake Temiscamingue Lights.....	October 6, 1890.....	200	00
Lidwill, John R.....	Pelee Island.....	July 10, 1899.....	300	00
Lawson, Colin P.....	Middle Island.....	October 17, 1898.....	240	00
Meloche, Simon.....	Lake St. Louis Light-ship No. 1.....	May 1, 1880.....	250	00
Munroe, John Jacob.....	Lancaster Bar.....	June 8, 1892.....	250	00
Moreland, F.....	Nine Mile Point.....	April 1, 1895.....	200	00
Masson, Lucas H.....	Pointe aux Anglais.....	September 4, 1897.....	200	00
Mongeon, Charles A.....	Way Shoal.....	May 23, 1887.....	100	00
Matheson, Norman.....	Cape Robert, Algoma.....	October 7, 1896.....	350	00
Millar, John.....	Port Credit.....	December 16, 1897.....	150	00
Morriseau, John.....	Hooper's Point.....	March 24, 1898.....	150	00

*Per month during season of navigation. †Allowance \$60. ‡Allowance \$10.

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STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

ABOVE MONTREAL—Continued.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Manson, John	Colchester Reef	June 9, 1886	600 00
Morriseau, Michael	Rainy River, Algoma	" 9, 1886	*250 00
Martin, Wm. J.	Spanish River	July 5, 1890	250 00
Malott, Albert E.	Kingsville Range Lights	April 12, 1890	150 00
Miron, Louis	Gargantua	October 26, 1889	450 00
Maguire, James W.	Corunna Range Lights	April 12, 1890	120 00
Miligan, Alexander	Valleyfield Range Lights	" 25, 1892	150 00
Montgomery, Wm	Toronto Harbour, Eastern Channel	October 16, 1895	150 00
Matheson, Daniel	Black Bear Island, Manitoba	June 22, 1899	150 00
Magnusson, August	Gull Harbour, Lake Winnipeg	September 19, 1898	150 00
McKenzie, Donald	Little Current	Sept. 1 1898	350 00
McKillop, John	Campbell's Island	April 2, 1892	150 00
McIntosh, John	Arnprior Island	" 2, 1892	150 00
McLachlan, Mrs. K.	Glengarry, or Stone House Point	" 9, 1890	250 00
McKenzie, John	Owen Sound	July 14, 1873	100 00
McDonald, Murdoch	Point Clark	January 8, 1897	375 00
McDonald, Amos	Salmon Point	July 12, 1897	300 00
McKillop, Donald	St. Anicet Shoal	June 8, 1892	230 00
McLaren, Allan J.	Brown's or Knapp's Point	February 11, 1896	180 00
McKay, Chas S.	Battle Island	August 27, 1877	500 00
McIntosh, Daniel	South Bay Point	October 1, 1881	200 00
McKenzie, Wm	Strawberry Island	May 17, 1893	300 00
McQuestion, Mrs. Maria	McQuestion Point	June 9, 1886	100 00
McAulay, Donald	Saugen River	March 16, 1899	80 00
McDonald, Lauchlin D.	Misissauga Island	May 16, 1896	450 00
McCool, James	Fort William Beacon Light, Ottawa River	" 23, 1887	90 00
McDevitt, Chas	Point au Baril	March 1, 1897	300 00
McKay, John	Lyal Island	October 27, 1884	450 00
McLean, Arch	Owen Sound	December 23, 1897	126 00
McGaw, Thos	Kincardine	June 13, 1899	350 00
Orr, Wm. B.	Snake Island	July 2, 1888	350 00
Ouillette, Godfrey	Buckam's Point	May 1, 1884	180 00
O'Rourke, Michael	Centre Brother Island	June 18, 1894	200 00
O'Brien, Matthew	Frenchman's Bay	October 13, 1898	125 00
O'Connor, P.	Bishop's Bay, Algoma	April 13, 1899	150 00
Plumb, Ward S.	Wind Mill Point	November 18, 1882	180 00
Purvis, John	Great Duck Island Light and Fog Alarm	March 9, 1898	†500 00
Pettypiece, Stephen	Lime Kiln Crossing	May 11, 1888	350 00
Prosser, John	Muskoka or Fox Island	September 14, 1896	250 00
Plunkett, H. E.	Swampy Island, Lake Winnipeg	October 12, 1884	350 00
Proudfoot, Thos.	Neebish, St. Mary's River	November 4, 1898	100 00
Root, Albert	Grenadier Island	December 15, 1863	250 00
Roddick, Robert	Gull Island	March, 1872	500 00
Row, Geo. Albert	Telegraph Island	October 25, 1895	200 00
Repentigny, Toussaint de	Ste. Anne de Bellevue	February 28, 1881	‡125 00
Robillard, Honoré	Isle Perrot	January 25, 1897	100 00
Redmond, William H.	Gravenhurst Narrows	June 18, 1894	100 00
Rains, Evan	Shoal Point, Algoma, Sailor's Encampment	November 24, 1884	250 00
Rains, A. M.	St. Murry's River	August, 1892	‡17 00
Rains, W. W.	St. Mary's River, Westfield Range Light	" 1892	‡7 00
Ritchie, James	South Bay Range Lights	" 20, 1898	150 00
Rowan, James	Victoria Island, Galetta	December 3, 1898	100 00
Shannon, William	Gross Point	September 27, 1866	**425 00
Shannon, George	Assistant	September 27, 1866	175 00
Seguin, Grégoire	L'Original	May 8, 1894	100 00
Smithers, R. O.	Mohawk Island	March 31, 1896	400 00
Sutherland, Jno	Port Burwell	June 18, 1894	225 00
Schofield, Fergus	Port Maitland	April 10, 1871	350 00
Simpson, Hedley V.	Presqu'Isle	May 11, 1888	540 00

* Allowance \$30. † Allowance \$200 attending Fog alarm. ‡ Allowance \$25.—‡ Per month while light in operation, ** Allowance \$10.

SESSIONAL PAPER No. 11

STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

ABOVE MONTREAL—Continued.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Smith, H. E.	Presqu'Isle, Main Light.	April 29, 1898	350 00
Shepperd, Mrs. Wm., acting keeper.	Sulphur Island, Range Light.	August, 1890	300 00
Sullivan, Silas	Baskin's Wharf	December 22, 1896	130 00
Sauvé, Honoré.	Caron's Point	February 16, 1889	60 00
Spence, Bernard.	Paquet Rapids	April 2, 1892	100 00
Stoneburner, John A.	Cornwall Canal, upper entrance.	April 12, 1890	100 00
Smith, Richard	Western Island	March 5, 1896	700 00
Smith, Donald.	Flower Pot Island	November 8, 1897	300 00
Spencer, D. O.	Scotch Bonnet	August 8, 1898	350 00
Veech, Stannes	Nine Mile Point; light-keeper and engineer of fog alarm.	March 7, 1894	450 00
Valee, Charles.	Hope Island	April 20, 1899	450 00
Wallace, John	Lindoe Island.	July 1, 1881	250 00
Winthrop, Robert W.	Head of Dechene Rapids.	April 13, 1891	100 00
Weightman, Wm.	North Sisters Rock, Algoma	November 6, 1886	350 00
Wootton, Edward	Niagara	July 11, 1887	50 00
White, Chas. L.	Snug Harbour, Parry Sound	July 25, 1894	350 00
Webster, Chas.	Cabot's Head Light and Fog Alarm.	May 10, 1898	650 00

BETWEEN MONTREAL AND QUEBEC AND BELOW QUEBEC.

Arcand, Elzéar.	Cap de la Madeleine.	May 17, 1892	80 00
Alarie, Pierre.	Point du Lac.	March 21, 1896	100 00
Ayer, R.	Georgeville, Lake Memphremagog.	From year to year.	*1 50
Arcand, Alfred	Seven Islands.	May 20, 1898	324 00
§ Ascah, James.	Fame Point, Gaspé Co.	September 2, 1880	400 00
Beaudet, Fulgence.	Lotbinière (1).	June 1, 1895	80 00
Beaudet, George.	Lotbinière (2).	January 4, 1883	80 00
Beaudet, Charles.	Platon.	August 24, 1894	120 00
Brassard, Philippe.	Port St. Francis	April 20, 1897	130 00
Bourque, Peter	Bird Rocks.	November 27, 1896	1,300 00
Bouilliane, Pierre	Lark Islet	September 1, 1872	200 00
Bertrand, Auguste.	Macquereau Point	December 21, 1877	300 00
Banville, Joseph.	Matane.	February 1, 1897	†250 00
Bourget, F.	Percé Roadstead.	March 18, 1893	200 00
Babin, Louis D.	Pillars.	February 26, 1874	450 00
Babin, Louis D.	Algernon Rock	February 23, 1874	200 00
Breton, Narcisse.	Point Rich.	May 16, 1896	500 00
Bourget, Charles.	Cape Despair.	November 1, 1897	**400 00
Bisson, Wm.	Grand River.	October 22, 1896	**150 00
Bergeron, George	River Valee.	J nne 16, 1885	70 00
Bouchard, Louis.	Cap au Saumon Lighthouse and Fog Alarm.	May 16, 1896	600 00
Beaulieu, Jos. Hudon dit.	Point aux Origneaux	April 7, 1875	250 00
Boucher, Louis.	Isle aux Raisins	April 13, 1898	240 00
Belanger, H.	St. Thomas Wharf.	April 4, 1898	80 00
Bujold, Louis.	Carleton Point.	May 25, 1899	250 00
Carignan, L. P.	Champlain Main Light.	October 1, 1892	80 00
Cormier, William.	Amherst Island.	April 26, 1871	††300 00
Coltin, Michael	Belleisle.	April 1, 1882	††300 00
Côte, Louis T.	Cape Chatte	September 10, 1874	†††300 00
Campbell, John W.	Cape Norman Lighthouse and Fog Alarm.	April 12, 1890	720 00
Costin, Eugène.	Cape Rosier	November 4, 1890	800 00
Cassidy, James	Entry Island.	September 22, 1873	***300 00
Côté, Paul.	Egg Island	November 3, 1871	500 00

* Per week. † Per month. ‡ Allowance \$50. ** Allowance \$30.

§† Allowance \$50. †† Allowance \$100. ††† Allowance \$200. *** Allowance \$20.

†A light-ship is maintained, under contract, at Peninsula Bank, Gaspé Basin.—The present contractor is Thomas Kennedy, sr, of Douglstown, Gaspé County.

63 VICTORIA, A. 1900

STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

BETWEEN MONTREAL AND QUEBEC AND BELOW QUEBEC—Continued.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Chabot, Edouard.....	Pointe St. Laurent.....	August 1, 1880.....	300 00
Chiasson, Edward.....	Etang du Nord.....	October 22, 1896.....	350 00
Dubreuil, Hector.....	Pointe aux Trembles.....	February 18, 1897.....	130 00
Desmarais, Phileas.....	River St. Francis.....	July 2, 1897.....	††20 00
Desjardins, Jean B.....	Kamouraska.....	August 23, 1887.....	400 00
Duperie, Alfred J.....	Pointe aux Jones.....	May, 1873.....	40 00
Dubois, Octave.....	Flower Island, Strait of Belle Isle.....	October 14, 1899.....	500 00
Eden, François.....	Gaspé Wharf.....	May 2, 1888.....	42 00
Electric Light Company.....	Roberval Beacon Lights (2).....	June, 1898.....	60 00
Fugère, Léandre.....	Batiscan (1).....	April 19, 1868.....	80 00
Fugère, Napoléon.....	Batiscan (2).....	January 10, 1887.....	80 00
Fiset, Jean H.....	Lake St. Peter Light-ship No. 2.....	April 22, 1875.....	500 00
Francoeur, Siméon C.....	St. Pierre les Becquets.....	September 24, 1862.....	70 00
Fontaine, Edouard.....	Cape Bauld Lighthouse and Fog Alarm.....	November 1, 1892.....	800 00
Faffard, Victor.....	Pointe de Monts.....	August 1, 1889.....	*400 00
Fraser, Pierre T.....	Red Island.....	April 12, 1890.....	450 00
Fagot, George.....	Greenly Island Lighthouse and Fog Alarm.....	June 30, 1890.....	800 00
Gervais, Ovilas.....	Contrecoeur (1).....	March 1, 1877.....	100 00
Giguère, Denis.....	Lavaltrie.....	April 24, 1870.....	300 00
Gagné, Joseph Z.....	Anticosti East or Heath Point.....	July 5, 1890.....	†600 00
Galibois, Jean B.....	Bellechasse.....	June 23, 1880.....	320 00
Gourdeau, Isaac.....	Lower Traverse Light-ship.....	May 8, 1866.....	2,300 00
Gauthier, Jean.....	Martin River.....	February 21, 1876.....	\$300 00
Godreault, Jos. M.....	River Caribou.....	—1874.....	40 00
Gauthier, Francis.....	Point aux Jones.....	April, 1872.....	40 00
Goudreault, Abraham.....	Eboulements Pole Light.....	May 10, 1882.....	40 00
Grenier, Solomon.....	Newport.....	June 3, 1897.....	100 00
Guyon, Philip.....	Isle aux Prunes.....	March 22, 1898.....	120 00
Houde, Athanase.....	Cape Charles.....	November 4, 1890.....	150 00
Hébert, Moïse M.....	Cap de la Madeleine.....	May 11, 1888.....	80 00
Heppel, Elzear.....	Bicquet Lighthouse and Fog Alarm.....	April 17, 1891.....	700 00
Harvey, André.....	Chicoutimi Wharf.....	May 30, 1889.....	40 00
Huot, Joseph.....	L'Ange Gardien.....	August 1, 1885.....	70 00
Heroux, Didié.....	Lake St. Peter Light-ship No. 3.....	April 13, 1898.....	400 00
Laféche, Désiré.....	Lake St. Peter Light-ship No. 1.....	April 12, 1887.....	400 00
Lachapelle, Jean B.....	Repentigny (2).....	February 1, 1861.....	75 00
Langlois, Antoine.....	River du Chêne.....	July 11, 1888.....	100 00
Laliberté, Arthur.....	Ste. Emelie, Front Range.....	September 24, 1880.....	70 00
Leclerc, P. M.....	Ste. Emelie, Back Range.....	April 8, 1899.....	80 00
Lavoie, M.....	St. Fulgence.....	—1893.....	70 00
Le Huguét, François.....	Gaspé Cape.....	October 22, 1896.....	650 00
Lindsay, Irénée.....	Green Island.....	September 25, 1888.....	600 00
Loisel, John.....	Point Paspebiac.....	August 27, 1894.....	150 00
Leclerc, A.....	St. Antoine.....	February 6, 1899.....	175 00
Lebel, Eadras.....	Upper Traverse Light-ship.....	April 13, 1893.....	1,400 00
LeBlanc, Régis.....	White Island Light-ship.....	January 11, 1878.....	1500 00
Lachance, Louis.....	Port of St. John.....	September 26, 1896.....	300 00
Lavoie, F.....	Anse St. Jean Wharf.....	—1889.....	40 00
Montplaisir, Antoine E.....	Cap de la Madeleine.....	August 6, 1877.....	175 00
Martineau, Valerie.....	Champlain Pole Light.....	" 2, 1889.....	60 00
Mercier, O.....	Isle à la Bague.....	" 31, 1883.....	150 00
Malo, Joseph.....	Isle Ste. Thérèse (1).....	February 1, 1897.....	130 00
Ménard, Denis.....	North of Halfway Point.....	September 12, 1890.....	170 00
Marchand, Ferdinand.....	Pointe aux Citrouilles.....	April 27, 1896.....	200 00
Martin, Paul.....	St. Valentine.....	" 28, 1873.....	150 00
Molson, Mrs. Alexander.....	Molson's Island, Lake Memphremagog.....	From year to year.....	**2 50
Malouin, Alfred.....	Anticosti, West Point.....	July 1, 1877.....	††450 00

*200 for attending signal gun, &c. †Allowance \$50. ††Allowance, \$2,300.

**Per week. †††Allowance, \$250.00. ††††Per month.

§Allowance \$25.

SESSIONAL PAPER No. 11

STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

BETWEEN MONTREAL AND QUEBEC AND BELOW QUÉBEC—Continued.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Martin, Jule G.	Little Metis.	December 23, 1879.	\$300 00
Marceau, Louis.	St. Francis.	April 1, 1884.	75 00
Maltais, Eli.	Murray Bay.	May 10, 1882.	50 00
Myrick, John.	Cape Race, Newfoundland, Lighthouse and Fog Whistle.	November 1, 1897.	1,000 00
Morin, Hypolite.	Pilgrims.	April 29, 1898.	340 00
Marcotte, P. L.	Point Bleue, Lake St. John.	November 28, 1898.	40 00
McWilliams, John J.	Father Point.	June 1, 1876.	200 00
McLaren, Donald.	River du Moulin.	September 19, 1889.	35 00
Nadeau, Alphonse.	Anticosti, South Point.	June 18, 1894.	800 00
Noel, Edouard.	Richelieu Light, Lotbinière.	April 10, 1899.	150 00
Paul, Edouard.	Isle de Grace.	September 7, 1871.	*30 00
Page, Celestin.	L'Islet Richelieu.	January 9, 1895.	150 00
Peters, D. E.	Witch Rock, Lake Memphremagog.	From year to year.	+2 50
Peters, J. H.	Green Point.	"	+1 50
Patterson, J. C.	Wadleigh.	"	+1 50
Pope, Herbert.	Anticosti, South-west Point.	October 22, 1892.	‡400 00
Painchaud, Joseph.	Crane Island.	" 1, 1864.	320 00
Paquet, Pierre.	St. Famille.	" 19, 1885.	70 00
Poitras, Alexander.	Bersimis Range Light.	September 21, 1891.	100 00
Pedneau, Pierre.	Isle aux Condres Pole Light.	April 6, 1896.	40 00
	Red Island Light-ship.	"	**500 00
Poulin, Alfred.	Ste. Famille.	" 26, 1898.	70 00
Reeves, Samuel.	Isle Ste. Thérèse (2).	October 12, 1870.	270 00
Rivet, Léon L.	Repentigny (1).	April 28, 1894.	75 00
Robinson, George L.	Ash and Bloody Islands.	June 18, 1894.	200 00
Richard, Alphonse.	Brandy Pots.	October 7, 1878.	400 00
Rennie, E. H.	Cape Ray Lighthouse and Fog Whistle.	" 19, 1884.	800 00
Robere, C. Honore.	St. Pierre Island.	" 19, 1885.	70 00
Rodrique, F. F.	Portneuf.	January 22, 1858.	250 00
St. Onge, Thomas.	Contrecoeur.	June 14, 1886.	75 00
Salvail, Omer.	Isle à la Pierre.	May 6, 1897.	220 00
Simard, Edward.	Montée du Lac, and Cape Rouge Beacons.	October 28, 1870.	400 00
Sasseville, F. J.	Cape Magdalen, Lighthouse and Fog Whistle.	June 9, 1886.	700 00
Simard, Arthur.	River Caribou.	" 9, 1870.	40 00
Savard, Xavier.	"	May 1, 1873.	40 00
St. Croix, George.	Plateau Rock.	October 22, 1896.	400 00
Trottier, Widow J.	Grondines (1).	August 1, 1872.	100 00
Trottier, Ephrem.	Grondines (2).	May 17, 1892.	100 00
Thurber, Wm.	Ste. Croix.	October 5, 1878.	175 00
Tremblay, W. T.	Goose Cape.	April 4, 1888.	250 00
Tremblay, Dorilas.	Portneuf (2).	February 18, 1875.	350 00
Tremblay, George.	River du Moulin.	September 9, 1889.	35 00
Trudelle, Ambroise.	L'Ange Gardien.	October 19, 1885.	70 00
Tremblay, Pitre.	St. Alphonse Wharf.	June 19, 1895.	40 00
Tremblay, Henry.	Cape l'Aigle Pole Light.	February 6, 1896.	40 00
Tremblay, Thomas.	Bay St. Paul.	October 25, 1898.	250 00
Vigneau, Placide.	Perroquet Island.	September 19, 1892.	600 00
Vézina, Oliver.	St. Pierre.	October 28, 1897.	70 00
Whitman, Robert H.	Lacolle.	May 14, 1883.	150 00
Wheeler, W.	Lead Mines, Lake Memphremagog.	From year to year.	+1 50
Wyatt, Thomas.	Forteau, Lighthouse and Fog Whistle.	October 18, 1889.	‡‡800 00

* Per month. † Per week. ‡ \$250 for assistance. ** Allowance \$1,900.

‡‡ Allowance \$75. § Allowance \$20 for fuel and \$20 for horse.

63 VICTORIA, A. 1900

STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

NEW BRUNSWICK.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Arseneau, James	Dalhousie	June 18, 1894	100 00
Archer, Wm	North Tracadie	November 7, 1872	275 00
Allain, Joseph	Hay Island, Beacon Light	May 21, 1895	150 00
Barbour, Jas. G.	Cape Enrage Lighthouse and Fog Signal	May, 11, 1888	800 00
Bent, A. W.	Cape Jourmain or Cape Tormentine	September 15, 1875	300 00
Blacklock, Fred G.	Cape Spencer	March 5, 1888	400 00
Brown, Charles	Quaco	November 25, 1884	400 00
Bradshaw, L. B.	Quaco Fog Alarm	September 3, 1887	400 00
Brune, John David	Goose Lake	May 11, 1888	250 00
Boyd, B. G.	Spruce Point	September, 1892	120 00
Boudreau, Jos. B.	Petit Rocher	February 26, 1896	150 00
Blakley, Lawrence	Harper's Point	September 9, 1887	75 00
Bellmore, Fredk.	Dipper Harbour	March 12, 1895	100 00
Belleveau, Philip T.	Folly Point	November 29, 1897	175 00
Cochran, Fredk. M.	St. Martin's Wharf, Quaco	March 25, 1892	100 00
Clark, Geo. H.	St. John Harbour	October 2, 1893	350 00
Conley, John C.	Beaver Harbour	April 2, 1892	250 00
Cummings, Geo.	Campbellton Beacon Light	January 1, 1880	100 00
Chapman, James	Baie du Vin Island	July 24, 1882	200 00
Dixon, Elias C.	Pea Point	November 16, 1898	250 00
Delarey, John	Grant's Beach	October 7, 1880	125 00
Drake, Jeremiah	St. John Signal Station	March 24, 1881	650 00
Dunaresq, Francis X.	Shippegan	November 7, 1872	280 00
Dalzell, Geo. Y.	Swallow Tail	March 18, 1893	400 00
Dutch, John	Heron Island	" 7, 1875	200 00
Daggett, Mark	Grand Harbour	November 15, 1883	*400 00
Dinsmore, Samuel G.	Big Duck Island Fog Alarm	July 5, 1886	550 00
DeGrace, John	Indian Point	June 4, 1889	150 00
Davidson, Warren P.	Southern Wolves	January 14, 1897	500 00
Day, W. A.	Belyea's Point	September 20, 1899	90 00
Egan, Edward	Bellonie's Point	May 17, 1892	100 00
Frawley, Frank	Point Lepreau Fog Alarm	June 15, 1898	400 00
Flewelling, M.	Flewelling's Wharf	April 12, 1890	80 00
Fanjoy, William	Fanjoy's Point	December 15, 1897	80 00
Ferguson, W. G.	South Tracadie Gully	March 23, 1898	150 00
Gillard, John	Point DuChene Range Lights	June 13, 1888	90 00
Gillespie, David	Hillsborough Pier	December 31, 1892	75 00
Hayden, Michael	Pokemouche	October 17, 1888	200 00
Henderson, Arthur	Midjic Bluff	" 5, 1894	200 00
Hamm, Chas. P.	Musquash	January 14, 1879	†300 00
Helms, Geo.	Petit Passage Fog Whistle	May 5, 1882	‡400 00
Hachey, Octave	Pokesudie Island	July 12, 1881	180 00
Hagan, E.	Ward's Point	April 12, 1890	80 00
Harvey, W. L.	Gannet Rock	May 20, 1898	700 00
Kilpatrick, Joseph	Passamaquoddy Bay	February 3, 1898	350 00
Lantaigne, Gervais	Caraget Island	June 16, 1888	200 00
Leblanc, Charles P.	Cassie's Point	May 4, 1872	250 00
Looney, Thos. E.	Greenhead, St. John River	October 14, 1896	80 00
Lacy, Lebaron	Oak Point	February 23, 1897	80 00
Mills, George	Lower Fox Island	June 23, 1897	200 00
Morrison, Peter	Oak Point	" 24, 1882	100 00
Morrison, Peter, jr.	Portage Island	July 1, 1892	200 02
Morrison, Duucan	Sheldrake Island	February 25, 1880	300 00
Maillet, D. O.	Indian Point, Buctouche	July 7, 1883	150 00
Moore, Rev. S. C.	Anderson's Hollow	May 14, 1889	100 00

* Allowance \$20.

† Allowance \$45.

‡ Allowance \$180.

SESSIONAL PAPER No. 11

STATEMENT giving Names and Stations of Light-keepers, &c.—Continued

NEW BRUNSWICK—Concluded.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Matheson, R. B.	Newcastle	April 18, 1898	100 00
McGee, Mrs. Jos. E.	Bliss Island	March 3, 1899	300 00
McLennan, Kenneth	Escuminac Lighthouse and Fog Whistle	" 7, 1892	750 00
McEwen, David	Middle Island	July 22, 1875	300 00
McIntosh, Chas	Neguac Range Lights	December 19, 1892	100 00
McBaine, Alex	Cox's Point	May 6, 1893	80 00
McMonagle, Miles	Oromocto Shoals	" 26, 1891	80 00
McDonald, Whitfield	Musquash Island	June 1, 1888	80 00
McMann, Robert	McMann's Point	September 7, 1876	80 00
McLaughlin, Walter B.	South-west Head	October 29, 1879	500 00
McNeill, Henry H.	Dalhousie Beacon Lights and Douglas Island Light	January 1, 1880	150 00
McConnell, Robert	Miscou Gully	September 9, 1887	100 00
Nevers, George	Jemseg	November 24, 1884	80 00
Nobles, Israel	Belleisle Point	" 23, 1885	80 00
Purvis, David	No Man's Friend	June 2, 1897	80 00
Preston, S.	Preston's Beach	July 11, 1889	125 00
Pendlebury, Wm. J.	St. Andrews	April 10, 1889	250 00
Pickett, Robert E.	Farmers' Point	May 11, 1897	80 00
Parker, Malachi	Mulholland's Point	April 4, 1885	200 00
Quinton, Wm. M.	Mark's Point	" 12, 1890	120 00
Russell, James R.	Grindstone Island	January 13, 1899	700 00
Ryan, William	Miramichi Light-ship	May 22, 1889	*400 00
Rivers, Robert	Miscou L. H. & F. W.	April 24, 1877	800 00
Robinson, John	Neguac Beach	June 30, 1896	150 00
Richard, Peter F.	Richibucto	May 30, 1895	185 00
Robertson, Chas. M.	Robertson's Point	June 30, 1897	80 00
Robertson, Meier	Shediac Island Beacons	December 29, 1873	250 00
Ross, Elijah	Negro Point	March 5, 1873	400 00
Robichaud, Jude	Richibucto Beacon	December 5, 1891	225 00
Robicheau, Henry B.	Dixon Point	June 21, 1884	150 00
Roberty, A.	Belledune	February 5, 1895	100 00
Sutherland, George A.	Bathurst Harbour	March 20, 1882	+200 00
Seely, Chas. F.	Machias Seal Island L. H. & F. W.	June 14, 1883	1,000 00
Seely, Neil	Head Harbour Lighthouse and Fog Whistle	May 3, 1882	800 00
Scott, Chas. F.	Stonehaven	July 20, 1885	100 00
Thomas, George H.	Point Lepreau	August 29, 1884	400 00
Tatton, George H.	Grand Manan Fog Whistle	October 16, 1886	550 00
True, John Howard	Wilnot's Bluff	September 12, 1899	80 00
Upton, Robert	Bridge's Point	September 11, 1899	80 00
Williston, Wm. W.	Fox Island	May 31, 1873	300 00
Wilson, James	Partridge Lighthouse and Fog Whistle	December 5, 1857	†800 00
Wagner, Richard	Sand Point	June 7, 1883	80 00
Williams, Forrest W.	William's Wharf	May 11, 1897	80 00

* Allowance \$300.

† Allowance \$10.

‡ Allowance \$100.

NOVA SCOTIA.

Amero, George D.	Pubnico	February 6, 1893	240 00
Amirault, James	Sissisbo	July 11, 1899	200 00
Amero, Chas. A.	Whitehead Island	November 9, 1897	200 00
Beaman, Edwin	Digby Pier	May 29, 1897	100 00
Bancroft, Joseph E.	Brier Island	April 19, 1884	400 00
Burke, James	Main-a-Dieu	May 2, 1871	300 00
Bonner, George	Point Aconi	April 18, 1874	200 00
Burgess, Watson	Port l'Hébert	July 26, 1892	150 00

63 VICTORIA, A. 1900

STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

NOVA SCOTIA—Continued.

Name.	Station.	Appointed.	Salary.	
			\$	cts.
Boutillier, R. J.	Superintendent of Sable Island	November 13, 1884.		*450 00
Bollong, James.	Pope's Harbour	August 6, 1877.	300	00
Bourgeois, Philip	Cheticamp Range Lights	May 23, 1898.	150	00
Baker, Thomas	Pease's Island	" 19, 1879.	350	00
Burns, Wm. H.	Wedge Island	April 2, 1892.	400	00
Brckett, Wm	Herring Cove	August 28, 1897.	100	00
Belleveau, John H.	Belleveau's Cove	February 16, 1889.	80	00
Brownell, Alfred	Cold Spring Head	May 26, 1891.	120	00
Brown, James	Cranberry Head Fog Alarm	June 22, 1898.	500	00
Buchanan, Angus A.	Neil's Harbour	August 14, 1899.	150	00
Chiasson, Gernan.	Caveau Point Range Lights	August 20, 1897.	120	00
Crichton, H. H.	Crichton's Head	May 6, 1874.	200	00
Crooks, Demas	Liscomb	October 5, 1894.	300	00
Connington, Thomas.	Louisburg Range Lights	" 26, 1897.	150	00
Crowell, John.	Seal Island Lighthouse and Fog Whistle.	" 14, 1899.	800	00
Campbell, Samuel C.	St. Paul's Island, Superintendent.	July 17, 1897.	†700	00
Campbell, J. O.	Port Mouton	April 29, 1898.	300	00
Comeau, Louis C.	Meteghan River Wharf	October 12, 1875.	100	00
Campbell, R. J.	Red Islands	August 28, 1899.	120	00
Croucher, George A.	Croucher's Island.	January 1, 1883.	300	00
Clough, Daniel	Grandique Pole Light	July 4, 1884.	70	00
Clory, Abraham	Glasgies Point Pole Light.	" 25, 1894.	150	00
Coolin, Joseph	Westhaver's Point	August 5, 1885.	250	00
Carey, James.	Carey's Beach	" 18, 1886.	60	00
Cameron, John.	Beaver Point	September 29, 1896.	150	00
Crowell, Benjamin S.	Pagis Island, Port LaTour	June 30, 1890.	150	00
Campbell, John M.	Engineer Fog Alarm, St. Paul's Island.	October 26, 1898.	400	00
Dunlap, Wm. H.	Bird Island	June 26, 1897.	400	00
Doane, Isaac	Cape Sable	July 1, 1871.	800	00
Duane, Wm	Green Island	October 30, 1871.	500	00
Doody, James	Meagher's Beach, L. H. & F. W.	February 19, 1896.	800	00
Dunn, James M.	Fort Williams	October 26, 1859.	260	00
Doane, John H.	Yarmouth Fourchu, L. H. & F. W.	July 1, 1874.	800	00
Doane, Joshua	Yarmouth Harbour	February 23, 1874.	‡350	00
Doyle, Edward.	Mabou Range Lights	June 14, 1897.	70	00
D'Entremont, W. H.	Abbott's Harbour.	May 22, 1888.	75	00
Dewis, F. H. P.	Cape d'Or.	April 13, 1898.	500	00
Dorion, Frank Gould or	Shediac Range Lights.	January 13, 1899.	20	00
Ellis, Wm. E.	Annapolis, Pt. Prim or Digby L. H. & F. W.	March 8, 1875.	800	00
Early, John	Margaretville.	February 19, 1887.	230	00
Fowler, James E.	Apple River Lighthouse and Fog Whistle.	July 25, 1894.	700	00
Fisher, Joel W.	Baccaro or Barrington.	August 8, 1893.	350	00
Fulker, Wm. G.	Devil's Island.	July 1, 1886.	420	00
Firth, Charles M.	Coffin Island, Liverpool	June 30, 1880.	400	00
Foster, Israel C.	Port Medway.	October 13, 1892.	260	00
Foster, Samuel T.	Port Medway Breakwater.	February 17, 1899.	100	00
Foster, Geo. M.	Port George.	November 5, 1897.	100	00
Fraser, John A.	Callaghan's Island	December 31, 1892.	200	00
Faulker, W. G.	Burnt Coat.	June 22, 1898.	250	00
Griffin, Spencer H.	Country Harbour.	September 18, 1883.	400	00
Gilkie, Henry A.	Sambro	January 8, 1877.	800	00
Giffin, Ira L.	Holly Point, Isaac's Harbour.	April 28, 1894.	200	00
Goudock, Edward.	Shelburne Sand Point.	December 3, 1880.	280	00
Gardner, Frederick T.	Brooklyn Pier.	February 6, 1885.	100	00
Gould or Dorion, Frank.	Shediac Range Light	January 13, 1899.	20	00
Helm, William.	Flint Island.	July 31, 1883.	450	00
Hopkins, Leslie.	Bon Portage Island.	October 20, 1897.	350	00
Huntley, Charles.	Kingsport Pier.	June 30, 1890.	100	00
Hensbee, David S.	Crowe Harbour.	November 10, 1897.	300	00
Hawley, Matthew	South Bay	May 13, 1897.	140	00
Hardy, John	Gabarus.	November 22, 1890.	200	00
Hennesey, W. P.	Highland Village Pole Light.	April 6, 1899.	25	00

* With board of self and family. † Allowance \$1,200. ‡

SESSIONAL PAPER No. 11

STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

NOVA SCOTIA—Continued.

Name.	Station.	Appointed.	Salary.	
			\$	cts.
Jackson, David	Ingonish Island	April 13, 1898	300	00
Johnson, Edward	Chebucto Head L. H. & F. W.	May 14 1872	800	00
Joyce, Simon	Seal Island Pole Light	July 4, 1884	100	00
Jollimore, Peter	Terence Bay	September 1, 1884	100	00
Jamieson, Charles	Cape St. Lawrence	" 21, 1893	400	00
Jamieson, Geo. C.	Cole Harbour Range Lights	October 21, 1898	120	00
Long, Joseph	Canso Harbour	December 31, 1896	200	00
LeBlanc, Severin	Fish Island	July 1, 1889	250	00
Lowden, David	Pictou Harbour Range Lights	" 12, 1897	150	00
LeVashe, Wm.	Arichat	October 17, 1898	250	00
Lyons, John W.	Barrington Light-ship	June 18, 1897	500	00
Landry, Edward	Big Arrow Island	February 23, 1897	200	00
Larkin, Ephraim	Shag Harbour, Stoddart's Island	March 18, 1896	150	00
Livingstone, George S.	Advocate Harbour	May 8, 1884	250	00
LeBlanc, Benjamin	Tusket Wedge	November 1, 1892	300	00
Landry, Jude	Shediac Range Light	January 13, 1899	20	00
Morrison, Charles	Amet Island	October 5, 1894	320	00
Morrison, M. D.	Black Rock Point	June 8, 1892	250	00
Muise, Marcellin	Cheticamp	November 27, 1896	300	00
Misner, John E.	Fort Point	May 16, 1896	150	00
Moser, Samuel	Moser's Island	November 6, 1885	450	00
Mullins, James	Mullins Point	June 8, 1892	250	00
Munro, William	Pictou	November 22, 1890	460	00
Murphy, Michael	Pomket Island	December 18, 1890	350	00
Mundell, Joseph	Sand Point	October 18, 1869	400	00
Martell, John T.	Scatterie Lighthouse and Fog Whistle	July 30, 1897	800	00
Murray, John	Cape George	November 3, 1882	200	00
Munroe, William L.	Three Top Island	October 28, 1879	300	00
Mitchell, John W.	Jeddore Rock	September 29, 1882	400	00
Mitchell, William A.	Quaker Island	February 19, 1896	300	00
Matheson, Murdoch	Whycocomah Pole Light	September 11, 1884	60	00
Morrison, Widow	Freestone Pole Light	June 5, 1897	150	00
Mauger, John T.	Cape LaRonde	November 16, 1898	300	00
McDonald, Robert	Carter's Island	January, 1885	250	00
McKenzie, R.	Gull Rock, Carribou Island	August 1, 1881	300	00
McDonald, Henry S.	Little Hope Island	April 3, 1897	500	00
McRae, Roderick	Margaree or Sea Wolf Island	February 3, 1898	400	00
McFarlane, Alex.	Margaree Harbour	August 18, 1886	60	00
McKay, R.	North Canso	February 4, 1882	350	00
McFarlane, Andrew	Pictou Island	June 8, 1892	400	00
McDonald, John A.	Port Hood	May 10, 1880	280	00
McDonald, James	Point Tupper	March 15, 1870	300	00
McAskell, Donald	St. Anne's Harbour	June 26, 1889	140	00
McLean, H.	Gillis Point	December 18, 1897	120	00
McRae, Hector	McKenzie Point, Plaster Harbour	August 20, 1890	160	00
McLeod, Norman	Cape North	October 14, 1899	400	00
McRae, Donald	Kidston's Island	May 17, 1892	200	00
McLeod, Angus	St. Esprit	October 27, 1880	400	00
McDonald, Charles L.	Little Narrows	January 17, 1896	120	00
McDonald, Norman	Marjorie's Isle Pole Light	July 4, 1884	100	00
McAskill, James	Jerome Point	November 8, 1897	250	00
McNeill, John C.	Piper's Cove	December 18, 1897	120	00
McNeil, Laughlin	McNeil's Back Pole Light	August 6, 1884	60	00
McFadyen, M.	Mabou Range Light	April 17, 1891	50	00
McVickar, Archibald	Cow Bay Breakwater	July 3, 1896	70	00
McDonald, Donald	Clark's Harbour Pole Light	April 25, 1892	60	00
McNeil, Neil	Campbell's Island, Victoria Co.	December 1, 1897	100	00
McEachern, A. L.	Cape St. George	September 8, 1898	450	00
McLeod, Murdoch	Pugwash	December 10, 1897	250	00
McKenna, John L.	McNutt's Island, Shelburne Harbour L. H. & F. W.	March 31, 1899	800	00
Mackintosh, James	Egg Island	July 28, 1899	500	00

63 VICTORIA, A. 1900

STATEMENT giving Names and Stations of Light-keepers, &c—Continued.

NOVA SCOTIA—Concluded.

Name.	Station.	Appointed.	Salary.
McLellan, Ingersoll L.	Economy Pole Light	May 16, 1899	*6 00
McAdam, Hugh R.	Arisaig	November 14, 1898	60 00
Nass, Henry	Lunenburg	May 12, 1897	300 00
Nickerson, Byron	Negro Island	July 26, 1897	250 00
Nunn, George	Sydney South Bar	June 20, 1872	300 00
O'Leary, John F.	Beaver Island	March 7 1894	350 00
Orchard, L. D.	Gull Rock	January 1 1877	400 00
Pearl, Albert	Green Island	December 29, 1873	500 00
Price, Philip	Louisburg	November 8, 1897	350 00
Peters, John G.	Low Point	October 1, 1865	460 00
Pettis, William	Parrsboro'	December 6, 1888	340 00
Palmer, Howard	Wolfe Point	October 14, 1899	250 00
Palmer, H. W.	Fort Point	May 22, 1878	200 00
Perry, John	Sheet Harbour	December 17, 1878	500 00
Phinney, Elisha	Cape Sharp, Diligent River	July 6, 1893	250 00
Perry, Levi	North East Harbour Range Lights	June 17, 1899	200 00
Quinn, James	Lingan	April 13, 1874	200 00
Robinson, Charles	Black Rock	March 16, 1885	330 00
Ruggles, H. M.	Boar's Head	December 1, 1864	425 00
Robicheau, B. H.	Cape St. Mary's	July 5, 1886	350 00
Rathburn, S. M.	Horton Bluff	October 26, 1879	250 00
Reid, George J.	Isle Haute	" 18, 1889	500 00
Roas, Robert	George's Island	January 18, 1876	250 00
Robblee, Jacob V.	Shafner's Point	May 29, 1897	150 00
Riley, Simon W.	Annapolis Royal	March 7, 1892	100 00
Sullivan, James	Cape Canso, Cranberry Island, L. H. & F. W.	May 23, 1887	800 00
Scott, M. C.	Guysborough	April 19, 1884	220 00
Swinehammer, George	Peggy's Cove Point	January 4, 1883	350 00
Spencer, Robert A.	Spencer's Point	April 1, 1870	125 00
Suthern, Edward W.	Westport	" 12, 1890	300 00
Suthern, John F.	Brier Island Fog Whistle	October 1 1874	500 00
Saulnier, John H.	Church Point	August 8, 1878	200 00
Sampson, C.	Quetique Island	December 1, 1874	350 00
Strum, James A.	Westhaver Island	September 23, 1888	200 00
Sollows, Walter	Green Cove Pole Light	August 15, 1884	60 00
Sampson, Theodore	South Beaver Harbour Pole Light	October 15, 1892	80 00
Smith, Caleb	Salter's Head Beacon Light	June 21, 1888	60 00
Smith, William B.	Westhead Barrington	April 12, 1890	200 00
Simpson, W. H.	Pictou Custom House Light	December 21, 1897	100 00
Vigneau, George	Jerseyman's Island	March 23, 1883	300 00
Vance, George	Masstown	June 29, 1898	25 00
Wolfe, Howard M.	Iron Bound	June 22, 1895	250 00
Wheadon, Burton	Walton Harbour	May 26, 1891	125 00
Wells, James	Whitehead	October 20, 1897	510 00
Winton, Robert B.	Guion Island	April 28, 1877	450 00
Wambold, James	Sheet Harbour Passage	May 11, 1887	50 00
Webb, Patrick	Harbour-au-Bouche	February 19, 1896	250 00
Webber, James M.	Torbay	May 10, 1898	300 00
Wynacht, W. H.	Cross Island Lighthouse and Fog Whistle	April 13, 1898	800 00
Young, Uriah	Chester, Quaker Island	February 15, 1884	460 00
Zinck, Jeremiah	Mahone Bay, Hobson's Nose	December 2, 1895	300 00

* Per month during season of navigation.

SESSIONAL PAPER No. 11

STATEMENT giving Names and Stations of Light-keepers, &c—*Continued.*

PRINCE EDWARD ISLAND.

Name.	Station.	Appointed.	Salary.
Allen, Joel S.	Indian Point Pier.	May 18, 1898.	350 00
Champion, Wm.	Cascumpec Harbour.	October 25, 1897.	80 00
Costain, Frederick.	Miminegash, Rix Point Range Light.	May 19, 1897.	40 00
Fraser, John.	Summerside Wharf.	April 12, 1897.	100 00
Gaudet, Agape.	Tignish.	August 30, 1897.	130 00
Gillis, Donald.	Point Prim.	December 10, 1897.	300 00
Hardy, Wm.	Little Channel.	July 26, 1875.	100 00
Howatt, Abner J.	Crapaud Outer Range Light.	" 22, 1893.	100 00
Harris, Wm.	Cape Bear.	November 11, 1896.	350 00
Kennedy, Alexander.	Haszard's Inner Range Light.	June 27, 1890.	60 00
Leard, Solomon J.	Crapaud Inner Range Light.	May 14, 1889.	100 00
Lewis, James.	Brighton Beach Range Lights.	March 1, 1899.	100 00
Munn, Duncan.	Little Sands.	May 1, 1877.	30 00
Morrison, Angus.	Cardigan.	September 21, 1883.	100 00
McLaine, Archibald.	Block House, Charlottetown.	April 3, 1867.	340 00
McDonald, Lauchlin.	East Point Lighthouse and Fog Whistle.	February 23, 1897.	500 00
McDonald, Wm.	Panmure Island.	November 20, 1863.	300 00
McGraith, Wm. W.	St. Peter's Harbour.	May, 8, 1872.	130 00
McDonald, Chas. E.	St. Andrew's Point Outer Range.	July 18, 1887.	125 00
McDonald, John.	Orwell.	June 25, 1879.	80 00
McLeod, James H.	New London.	January 29, 1896.	100 00
McDonald, Wm.	West Point.	December 1, 1875.	300 00
McKay, John.	Wood Island.	September 12, 1898.	250 00
McMillan, Donald.	Covehead Range Lights.	October 21, 1893.	90 00
McDonald, Angus.	Souris.	November 13, 1880.	300 00
McDonald, Jas. A.	Savage Harbour.	July 11, 1889.	100 00
McLeod, Lemuel.	Murray Harbour Beach Light.	December 21, 1897.	50 00
McPherson, Daniel W.	Brush Wharf, Orwell, Range Light.	January 13, 1899.	60 00
Oulton, Robert T.	Savage Island, Cascumpec.	June 14, 1897.	80 00
O'Brien, Patrick.	Miminegash Range Light.	May 14, 1897.	60 00
Phee, James.	North Cape.	September 4, 1897.	300 00
Penny, Robert.	Murray Harbour, Penny's Light.	November 11, 1897.	50 00
Pino, Joseph N.	North Rustico.	February 6, 1897.	100 00
Perry, Bruno.	Cape Egmont.	July 21, 1884.	200 00
Ranaghan, Peter.	Sea Cow Head.	April 21, 1873.	250 00
Ready, Michael.	Tracadie.	August 1867.	100 00
Robertson, Alfred.	Annandale Range Lights.	October 5, 1898.	100 00
Sinclair, Wm.	Fish Island.	March 8, 1897.	250 00
Stewart, Geo.	Summerside Harbour Back Range Light.	September 5, 1895.	80 00
Tuplin, Jas. C.	Sandy Island, Cascumpec.	May 5, 1897.	200 00
Taylor, Chas.	Darnley Basin Range Lights.	June 14, 1897.	60 00
Taylor, James W.	St. Peter's Island.	May 1, 1897.	200 00
Wood, George.	Haszard's Outer Range Light.	May, 4, 1893.	70 00
Westaway, Roger D.	St. Andrew Point Inner Range.	" 19, 1883.	125 00
Wiggins, G. W. J.	Darnley Point Range Lights.	October 16, 1896.	100 00
Wright, Charles L.	Wright's Range Light, Crapaud.	June 14, 1894.	100 00

63 VICTORIA, A. 1900

STATEMENT giving Names and Stations of Light-keepers, &c.—*Concluded.*

BRITISH COLUMBIA.

Name.	Station.	Appointed.	Salary.	
			\$	cts.
Erinn, Richard.....	Discovery Island L. H. & F. W.	June 14, 1886	900	00
Brown, William.....	Egg Island.....	June 15, 1898	500	00
Cummins, H. C.	Balfour	July 10, 1897	*20	00
Crozier, James.....	Bare Point, Chemainus	June 12, 1897.....	120	00
Clark, M. G.	Entrance Island L. H. & F. W.	November 26, 1897..	900	00
Daykin, William P.	Carmanah Point L. H. & F. W.	November 4, 1890... ..	1,200	00
Davidson, John.....	Cape Mudge	June 27, 1898.....	360	00
Davies, John.....	Fiddle Reef, Victoria.....	December 2, 1898... ..	*25	00
Eastwood, F. M.	Race Rocks	January 31, 1891.	1,200	00
Erwin, Walter.....	Point Atkinson L. H. & F. W.	October 5, 1880.....	1,000	00
Georgeson, Henry	Plumper Pass L. H. & F. W.	July 21, 1884.....	900	00
Georgeson, James.....	Saturna Island, East Point	October 22, 1889.....	500	00
Grove, John.....	Prospect Point.....	June 21, 1898.....	300	00
Harrison, S. G.	Beren's Island	November 4, 1897... ..	300	00
Harvey, Thos. W.	Sands Head	April 13, 1898.....	900	00
Higgins, Harry.....	Sister's Rock, Vancouver.....	October 1, 1899.....	500	00
Jones, William D.	Brockton Point, Burrard Inlet.....	August 20, 1890	300	00
McKenzie, Douglas.....	Fisgard	September 1, 1898... ..	500	00
McDonagh, William.....	Yellow Island.....	" 16, 1898.....	500	00
McColl, Wm.....	Garry Point.....	August 4, 1898.....	*10	00
Patterson, Thomas.....	Cape Beale.....	March 2, 1895.....	†500	00
Richardson, John.....	Portlock Point L. H. & F. A.	December 2, 1895... ..	460	00
Thompson, J. C.	Ivory Island.....	June 27, 1899.....	450	00

*Per month. †Allowance, \$700.

DEPARTMENT OF MARINE AND FISHERIES,

OTTAWA, 15th October, 1899.

SESSIONAL PAPER No. 11

APPENDIX No. 14.

REWARDS FOR SAVING LIFE.

LIST of persons to whom rewards have been granted by the Government of Canada for the fiscal year ended June 30, 1899, for the gallant and humane services rendered in life-saving from shipwrecked vessels, or by British and Foreign Governments for similar services rendered by Canadian vessels in saving life from shipwrecked British and Foreign vessels for the same period.

Names and Designations of Persons.	Nature of Services rendered.	Date of Services rendered.	Description of Reward.
John McLeod, late Superintendent of the Humane Establishment on St. Paul's Island, N.S.	Services rendered to the surviving members of the crew of the Norwegian barque "Brodreue," and noble conduct in the recovery and burial of the bodies of the master, his son and three of the crew.	May 26, 1896.	A silver goblet, granted by Royal Resolution of the Government of Sweden and Norway.
Captain John Campbell, master; Albert Craig, 1st officer; Alfred Plank, Peter Grunberg Thomas King and H. Brough, seamen, of the British SS. "City of Venice."	Humane and gallant services in the rescue of the schooner "Neva" of Charlottetown, P.E.I., abandoned at sea in a sinking condition.	March 6, 1897.	A binocular glass to master, a gold watch to 1st officer, and a silver watch to each of the four seamen.
George D. Young, coxswain; James Henneberry, Kenneth Faulkner, Charles Henneberry, crew of Life Saving Station at Devil's Island, N.S.; and Henry Henneberry, Alexander Henneberry and Edward Walsh, volunteers.	Services in rescue of master and crew of schooner "Olivette," ashore on the Thrum Cap Shoal, off Halifax Harbour, N.S.	March 30, 1898	\$3 to each man—\$21.00 in all.
John Dempsey, coxswain; Edward Dempsey, Patrick Dempsey, James Dempsey, Frank Hayes, Martin Fillis and John Power, crew; of Life Saving Station at Her-ring Cove, N.S.	Rescue of two fishermen who had gone to try and get on board the schooner "Olivette," ashore on the Thrum Cap Shoal, off Halifax Harbour, N.S.	March 30, 1898	\$1.50 to each man—\$10.50 in all.
Captain Louis Auguste Galène, of the brig "Père Jacques," of St. Servan, France.	Humanity and kindness to the shipwrecked crew of the schooner "Grace" of Lunenburg, N.S.	July 1, 1898.	A binocular glass.
G. Glenton, steward of SS. "Turret Chief."	Bravery in rescue of a little child from drowning at Sydney, N.S.	Aug. 3, 1898.	A bronze medal by the Royal Canadian Humane Society, of Hamilton, Ont.
Wm. Berry, coxswain; G. Stanton, J. Jennings, B. Berry, L. Berry, Chas. Laing, crew of Life Saving Station at Port Stanley, Ont., and Geo. O. Brown, engineer of the steam barge "A. H. Jennie."	Rescue of two women on Lake Erie, 3 miles east of Port Stanley, Ont., whose boat had upset and who had been in the water for hours hanging to boat.	Sept. 3, 1898.	\$1.50 to each man—\$10.50 in all.
Captain John G. Kiah, master; James H. Holman, chief mate; Ernest Goodwin, 2nd mate; Peter Pedersen, boatswain; Andrew Anderson and A. Fornezza, seamen; of SS. "Simonside," of Sunderland, Eng.	Humane services in the rescue of the shipwrecked crew of the schooner "Nevada" of Lunenburg, N.S., abandoned at sea.	Sept. 22, 1898.	A binocular to master; a gold watch to 1st officer; a gold watch to 2nd officer; a silver watch to boatswain, and £2 to each of the two seamen.

63 VICTORIA, A. 1900

REWARDS for Saving Life—*Concluded.*

Names and Designations of Persons.	Nature of Services rendered.	Date of Services rendered.	Description of Reward.
Murdoch Bouchard, fisherman, and Jas. McDonald, farmer.	Bravery in saving two persons from drowning in Launching Bay, P.E.I.	Oct. 5, 1898.	A binocular glass to the first man, and a silver watch to the other.
Wm. Berry, coxswain; C. Parker, H. Thorn, L. Berry, J. Rose, J. Jennings, and E. Berry, crew; of the Port Stanley, Ont., Life Saving Station.	Active service in the rescue of the shipwrecked schooner "H. G. Cleveland."	Oct. 21, 1898.	\$5 to each man; \$35 in all.
Geo. D. Young, coxswain; Jas. Henneberry, Geo. Williams, crew of Life Saving Station at Devil's Island, N.S., and Thomas Henneberry, John Henneberry, Henry Henneberry and Charles Faulkner, volunteers.	Two days' service to brigantine "Irma," of Charlottetown, P.E.I., wrecked on the Thrum Cap Shoal, off Halifax Harbour, N.S.	Oct. 23 and 24, 1898.	\$6 to each man; \$41 in all. Messrs. F. D. Corbett & Co. were also allowed \$63 for towing service of their tug boat, "A. C. Whitney."
Joseph Dempsey, coxswain; Jas. Bracket, Thos. Brown, Francis Hayes, John Darrah, Daniel Gorman, Richard Neagle, crew; of the Life Saving Station at Herring Cove, N.S.	Humane services in searching for wreck of schooner "Sussex," and recovery and burial of two bodies found.	Nov. 28, 1898.	\$1.50 to each; \$10.50 in all.
Messrs J. & A. Allan, owners of SS. "Sarmatian," of Glasgow, Scotland.	Three seamen of the ship "Annie G.," of Yarmouth, N.S., picked up at sea off Cape Sable, N.S.	Dec. 31, 1898.	Paid owners subsistence expenses of seamen on "Sarmatian," £6 6s. Also subsistence on SS. "Austrian," conveyance of seamen to Halifax, N.S., £10 16s. Also indemnity for boat and equipment lost in the rescue, £40; in all £57 2s.
Captain Wm. Aitkenhead, master; E. Gibson, 2nd officer; A. Baldetta, boatswain; G. Baldetta, G. Giovanni, D. Virza and G. Dominici, seamen; of the SS. "Pawnee," of Liverpool, Eng.	Gallant rescue of the passengers and crew of the schr. "Deer Hill," of St. John, N.B.	Dec. 12, 1898.	A gold watch to captain; a gold watch to the second officer; a silver watch to boatswain; £2 to each of the four seamen.
Captain Henry Nelson, master; Thomas Smith, Patrick J. Quin, George Morgan, John W. Keefe, Nels. Soneson, Patrick Fitzpatrick, Andrew Meade and John E. Belong, fishermen; of the American schooner "Hiram Lowell."	Humanity and kindness in the rescue of the crew of the wrecked schr. "Narcissus," of Lunenburg, N.S., at sea, about 100 miles out from Boston, Mass., U.S.	Dec. 28, 1898.	A gold watch to captain, and \$10 gold piece to each of the eight fishermen; \$80 in all.

THIRTY-SECOND ANNUAL REPORT

OF THE

DEPARTMENT OF MARINE AND FISHERIES

1899

FISHERIES

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

PRINTED BY S. E. DAWSON, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY

1900

[No. 11a—1900.]

To His Excellency the Right Honourable SIR GILBERT JOHN ELLIOT, EARL OF MINTO,
Governor General of Canada, etc., etc.

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit herewith, for the information of Your Excellency and the Legislature of Canada, the Thirty-Second Annual Report of the Department of Marine and Fisheries, Fisheries Branch.

I have the honour to be,

Your Excellency's most obedient servant,

LOUIS HENRY DAVIES,
Minister of Marine and Fisheries.

DEPARTMENT OF MARINE AND FISHERIES,
OTTAWA, December 30, 1899.

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1899

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REPORT

OF THE

DEPUTY MINISTER.

To the Honourable

Sir LOUIS H. DAVIES, K.C.M.G., &c.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit the annual report upon the transactions of the Fisheries branch of the Department of Marine and Fisheries, embracing the fiscal year ending on the 30th of June last. The Fisheries Protection Service, Fisheries Intelligence, Fish Culture and Behring Sea Question reports comprise the whole calendar year 1899, and the statistics, as usual, are those covering the previous year. The preliminary reports of the various inspectors give a general idea of the fishing operations and the state of the fisheries in the different provinces during the year now closed.

Three Special Reports are appended by Professor Prince, Commissioner of Fisheries, treating of:—

1. Water pollution as affecting fisheries.
2. Neglected structural features in young fry.
3. The object of a close time for fish.

Reference was made in last year's report to the judgment of the Lords of the Judicial Committee of the Privy Council in London, and its probable effect upon the methods of fishery regulation in the various provinces. The changes following the legal determination of the respective fishery rights of the Dominion and the individual provinces have up to this time been less marked than might have been anticipated. The province of Ontario, it is true, has taken over the work of leasing and licensing fisheries, and of carrying out a system of protection by means of a staff of local fishery officers appointed by the provincial authorities, leaving to the Department of Marine and Fisheries such a general supervision as is demanded by the legislative jurisdiction still belonging to the Dominion Government. A patrol, upon the Great Lakes, through which the international boundary line passes, and three Dominion Inspectors of Fisheries, have sufficed for this general supervision. The province of Quebec, as was mentioned in the thirty-first annual report, took steps to take over the work entailed upon it by the fisheries' decision, and during the past year has by its Department of Lands, Forests and Fisheries, and the staff of fishery officers employed by that department, issued licenses and enforced the fishery laws, so far as the river and inland fisheries, and the estuarine fisheries proper, are concerned. The important sea-shore fisheries carried on below low-

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water mark, falling within the limits of Dominion jurisdiction, and in many cases inseparable from grave international questions, have necessitated the employment of Dominion fishery officers along the north shore of the Gulf of St. Lawrence and elsewhere, in addition to the Fisheries' Protection Service. In the other provinces the course pursued has, by an amicable understanding with the authorities in the several provinces, been simply to continue the administration of the fisheries as in the past, with the exception of the granting of exclusive fishery privileges such as those conveyed in oyster leases for tidal areas, which in future the maritime provincial authorities will issue. Essentially, therefore, the work of fisheries administration and protection has been carried on without interruption in New Brunswick, Nova Scotia, Prince Edward Island and British Columbia—no question, of course, having arisen in the North-west Territories and Manitoba regarding these matters.

In order to set at rest any doubts created by the Privy Council decision with regard to the jurisdiction of the Dominion and Provincial Governments respectively, along the sea-coast below low-water mark, it has been deemed of the highest importance that the opinion of the Judicial Committee should be obtained on the point. Steps, indeed, have already been taken to this end.

LOBSTER COMMISSION.

The Lobster Commission appointed by Order in Council dated September 27, 1898, had completed a large part of its work at the close of that year, but it was not until April, 1899, that the final conclusions of the commissioners had been reached. These were published in the form of a Supplement to the Thirty-first Annual Report and upon them was based a code of regulations designed to come into force towards the close of the year. These new regulations, with certain modifications demanded by urgent local exigencies, became law on December 7, 1899, and they consist of the following eleven clauses.

Lobster Fishery Regulations.

1. No one shall fish for, catch, kill, buy, sell, or have in his possession, lobsters between the last day of May and the fourteenth day of December in each year, both days inclusive, on and along that part of the coast or the waters thereof, of the province of New Brunswick, embraced and included within the county of Charlotte, and also on and along that part of the coasts or the waters thereof, of the province of Nova Scotia, embraced and included within the counties of Yarmouth, Shelburne, Queen's, Lunenburg, and that part of the county of Halifax, west of a line running S.S.E. from St. George's Island, Halifax Harbour, Nova Scotia, and coinciding with the fairway buoys in the entrance of the said harbour; nor shall any person within the above described limits, *at any time*, fish for, catch, kill, buy, sell, or have in his possession, any lobster or lobsters under nine inches in length, measuring from head to tail, exclusive of claws or feelers.

2. No one shall fish for, catch, kill, buy, sell, or have in his possession, lobsters between the last day of June in each year, and the fourteenth day of January then next following, both days inclusive, in any part of the Bay of Fundy, or on any part of the coasts or waters thereof, inside of a line drawn from the division line of the

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counties of Charlotte and St. John, near Point Lepreau, running outside of Brier Island, to the boundary line between the counties of Digby and Yarmouth, in the province of Nova Scotia; nor shall any person, within the above described limits, at any time, fish for, catch, kill, buy, sell, or have in his possession, any lobster or lobsters under 10½ inches in length, measuring from head to tail, exclusive of claws or feelers.

3. No one shall fish for, catch, kill, buy, sell, or have in his possession, lobsters between the first day of July in each year, and the thirty-first day of March then next following, both days inclusive, on and along that part of the coast of the province of Nova Scotia or the waters thereof, from the aforesaid line, running S.S.E. from St. George's Island, Halifax Harbour, Nova Scotia, and coinciding with the fairway buoys in the entrance of the said harbour, extending easwardly and following the coast line, as far as Red Point, between Martin Point and Point Michaud, in the Island of Cape Breton, and including Chedabucto Bay and St. Peter's Bay, and the coasts and waters of all the islands lying in and adjacent to these bays, and including the coasts and waters of the Gut of Canso, as far as a line passing from Flat Point in Inverness County, to the lighthouse in Antigonish County opposite.

4. No one shall fish for, catch, kill, buy, sell, or have in his possession, lobsters between the first day of August in each year, and the last day of April then next following, both days inclusive, on and along that part of the coast of Cape Breton Island, in the province of Nova Scotia, or the waters thereof, from Red Point, between Martin Point and Point Michaud, in the Island of Cape Breton, and extending to, and around Cape North, as far as and including Cape St. Lawrence; also the coasts and waters of all the islands known as the Magdalen Islands, including Bird Rocks and Bryon Island; also the north shore of the Gulf of St. Lawrence, from the Bay of Blancs Sablons, in the province of Quebec, westward to the head of tide, embracing the coasts and waters of all the islands adjacent to the said shore, and including the Island of Anticosti.

5. No one shall fish for, catch, buy, kill, sell, or have in his possession, lobsters between the eleventh day of August in each year, and the twenty-fourth day of May then next following, both days inclusive, along the coasts and in the waters of Northumberland Straits, between a line, on the north-west, drawn from Chockfish River in New Brunswick, to West Point in Prince Edward Island, and a line on the south-east, drawn from Indian Point, near Cape Tormentine in New Brunswick, to Cape Traverse, in Prince Edward Island.

6. No one shall fish for, catch, kill, buy, sell, or have in his possession, lobsters from the eleventh day of July in each year, to the nineteenth day of April then next following, both days inclusive, in any part of Canada or the coasts or waters thereof, not embraced within the limits described in the foregoing regulations.

7. Excepting as provided by regulations Nos. 1 and 2 as above, in which the size limits are fixed at 9 inches and 10½ inches respectively, no one shall, in any part of Canada, or the coasts or waters thereof, at any time, fish for, catch, kill, buy, sell, or have in his possession, any lobster or lobsters under 8 inches in length, measuring from head to tail, exclusive of claws or feelers.

8. No one shall fish for, catch, kill, buy, sell, or have in his possession, for any purpose whatever, any berried lobster or lobsters, or any soft-shell lobster or lobsters. Such lobsters when caught shall be liberated alive.

9. No one shall set or place lobster traps, or other fishing apparatus, for the purpose of taking lobsters in any waters of the depth of two fathoms or under.

10. No one shall set or place lobster traps, or other fishing apparatus, for the purpose of taking lobsters, at a distance of less than one hundred yards from any stationary salmon net, set for the purpose of taking salmon.

11. No one shall for canning purposes offer for sale, sell, barter, supply or purchase any fragments of lobsters, lobsters purposely mutilated or broken up, or any broken lobster meat, and all fragments of lobsters, lobsters purposely mutilated or broken up, or broken lobster meat, so offered for sale, sold, bartered, supplied or purchased, shall be liable to seizure and confiscation, *unless* possessed for the purpose of *domestic consumption* only, and not for canning, the proof whereof shall devolve on the owner or possessor.

The Lobster Commission practically ceased with the concluding sitting in Ottawa on April 25. From April 10 to April 25 the commissioners met daily (Sundays excepted) to discuss the voluminous evidence placed before them and formulate their recommendations. No less than sixty-five sittings were held in the Maritime Provinces, the places visited embracing the following:—Digby, Yarmouth, Lower East Pubnico, Lower Woods Harbour, Barrington Passage, Clark's Harbour, Halifax, Shelburne, Lockeport, Liverpool, Port Mouton, Lunenburg, Jeddore, Tangier, Salmon River, Sherbrooke, Goldborough, (Isaac's Harbour), Canso, Guysborough, Arichat, Lower L'Ardoise, Louisburg, North Sydney, Neil's Harbour, North Ingonish, C. B., Bathurst, N. B., Shippegan, Douglstown, Newport, Percé, Port Daniel, P.Q., Chatham, N.B., Richibucto, Kingston, Buctouche, Shediac, Summerside, P.E.I., Egmont Bay, Tignish, Cape Bald, N.B., Port Elgin, Pictou, Antigonish, River John, Port Hood, Margaree Harbour, Cheticamp, C.B., Pugwash and Wallace, N.S. On the north shore of the Gulf of St. Lawrence and the Magdalen Islands, where the lobster industry is of considerable proportions, sittings were not held, but at some of the sittings a certain amount of evidence in regard to these localities was obtained. Had it been possible, the commissioners felt that they would have been considerably aided by visits to these two localities. It must be admitted, however, that on the whole the sittings were well attended and excited very general interest. In some cases the sittings were crowded, and the fishermen and packers exhibited the utmost willingness in aiding the commission's work, by giving valuable evidence.

The work of the commission was divided into two sections. Three of the commissioners, Messrs. Moses H. Nickerson, of Clark's Harbour, William Whitman, of Guysborough, and Henry C.V. LeVatte, of Louisburg, Cape Breton, with the chairman (Professor Prince), commencing their work early in October and holding the opening sitting on October 6, at Digby, N.S., and proceeding around the coast of western Nova Scotia from Digby to Halifax, and thence eastward to Guysborough and onward to Neil's Harbour in Cape Breton, concluding the first series of sittings at North Ingonish, C.B., on November 5. The remaining members of the commission,

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Messrs. Archibald Currie of Souris, P.E.I.; Patrick J. Sweeney, Shediac, New Brunswick; Stephen E. Gallant, Richmond, P.E.I.; Robert Lindsay, Gaspé, P.Q.; Donald Campbell, Margaree Forks, Cape Breton, and the chairman, commencing the second series of sittings at Bathurst, N.B., on November 17, and holding over thirty sittings at various points on the coasts of Nova Scotia, New Brunswick, Quebec and Prince Edward Island, the sittings being held during the months of October, November and December, and the concluding ones in the months of March and April.

The work of the commission was followed with unusual interest not only in Canada, along the shores of the maritime provinces, but also in the neighbouring republic indeed a United States journal, the leading authority upon fishery matters, said:—'We cannot but admire the conscientious work of the commission. Unlike most of the investigators that we have in this part of the world they have not made the work an occasion for pleasure at public expense, but have with diligence and perseverance prosecuted the inquiry with unremitting earnestness.'

REVISED REGULATIONS OF WESTERN PROVINCES.

For some years it has been apparent that the fishery regulations in force upon the Pacific coast and in the interior of British Columbia, as well as those for the North-west Territories and the province of Manitoba, required thorough revision. The conditions under which the fisheries in these western waters are carried on, have been largely transformed, and the system of protective regulation which might have been suitable to the provinces named, ten years ago, or even five years ago, have been shown to be unsuitable to present conditions in many important respects. Since the Fraser River salmon canning industry commenced nearly thirty years ago with the establishment of two small canneries putting up a little over 7,000 cases, the total pack in British Columbia has increased a hundred-fold, the number of cases for the season just closed being 679,600 and realizing in the markets over three million dollars. The fisheries of Manitoba and the North-west Territories have risen in value from \$30,590 in 1876, to \$745,500 in 1896.

The enormous development of this industry implies changes of the most momentous character, the capital invested, the men employed, the gear used have all increased as the growth of the fisheries has been accomplished. In 1892 a special commission, appointed by Order in Council, made a full investigation of the salmon fisheries of the Fraser River, and the mass of evidence, with the conclusions of the three commissioners was issued as a special report in 1893. The Superintendent of Fish Culture (the late Mr. S. Wilmot) had in 1890 visited the Fraser River and reported upon the salmon fisheries, and a revised code of regulations, based upon the information obtained by officers of the department, and the members of the commission referred to, was issued in 1894. In the same year special British Columbia sturgeon regulations were also framed. The regulations which had been in force prior to these, dated back to 1889, and it was generally admitted that the new regulations were calculated to meet the new conditions which had arisen in the industry.

These conditions, however, continued to change from year to year, and in many details the law appeared to be unsatisfactory; hence in 1895 the Commissioner of Fisheries was instructed to make a complete investigation of the Pacific coast fisheries.

All the principal rivers, and important fishing localities of British Columbia were visited for the first time by a trained specialist. Every cannery on the coast was inspected from the Fraser River on the south, to the Naas River on the north, and the various runs of salmon, their breeding habits, and some of the most important spawning grounds were examined and reported upon. Meetings of fishermen were arranged and conferences with various Boards of Trade were held so that the department became possessed of a very large amount of information of an accurate and reliable nature. As a consequence various modifications in the regulations were adopted, and the president of the New Westminster Board of Trade at its meeting on August 19, 1895, said that 'the relaxation by the Dominion government of late of the salmon fishing regulations, he was glad to say, had made those regulations fairly satisfactory.'

In 1896 Mr. Richard Rathbun and Dr. William Wakeham representing the United States and the British governments respectively, and forming the joint commission to report on the preservation of the fisheries in waters contiguous to Canada and the United States, made a thorough investigation into the salmon fisheries of the Fraser River, of the Columbia River and of the Straits of Georgia and Puget Sound. In their report (dated Dec. 31, 1896,) they stated in detail the further changes that these Pacific salmon fisheries had undergone, and drew attention specially to the use of trap-nets by United States fishermen. A trap-net, it is stated, was erected at Point Roberts, Washington Territory, so early as 1885, but it is only during the last five or six years that this method of fishing has assumed serious proportions. There are now five times as many United States traps as there were in 1895. Respecting them the International Commissioners said:—

'Trap-nets have been found to be the most effective form of apparatus for the capture of the sockeye salmon in the clear open waters of the gulf and sound, but they are of recent origin in this region, and are still employed in only a few localities, although the tendency now is to increase their number rapidly. Their use has thus far been almost entirely restricted to the zone traversed by the sockeye, and to the season when that species is present therein, but at times one or more of the other species may be taken in large quantities in conjunction with it.

'The distribution and number of the trap-nets in 1895, was as follows: Point Roberts including two in the Canadian waters of Boundary Bay, 15; Village Point, Lummi Island, 2; Cattle Point, San Juan Island, 3; Point Demock, Camano Island, 1; Hunot Point, Fidalgo Island, 1; total 21. This is probably the largest number that has been fished in any one year. Additional locations have been occupied, but have been abandoned after trial, and more or less changes in position have everywhere taken place each season. Outside of Point Roberts the use of these nets does not seem to date before 1893, and the majority of those above enumerated were established in 1893 or 1894. We were informed that the building of at least seven new ones in several different places was contemplated for 1896.

'Trap-net fishing has been carried on chiefly and for the greatest length of time in the waters immediately surrounding Point Roberts, where the sockeye salmon appear to strike in greater abundance than elsewhere near the shore in United States territory. There are about thirty-two trap-net locations, so-called, in this region, that is to say, places where such nets have been constructed, but less than one

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' half of them were occupied in 1895. Experience has indicated the most favourable situations for operating traps, and these have been taken possession of by those in a position to control the ground, while others have to be satisfied with inferior sites, and some experimenting is still going on in the hope of securing good results in other places.'

In 1897, the Commissioner of Fisheries again visited British Columbia, but confined his attention mainly to the Fraser River and the rivers on Vancouver Island. The canners and commercial men took the opportunity of fully discussing with Professor Prince the various aspects of the industry, and the fishermen held several large meetings which were attended by the Commissioner. In order to meet the new order of things it appeared that the regulations required to be thoroughly recast, and in 1898 a provisional code of entirely new and revised regulations was drawn up. Opposing interests in the fishing industry led to the postponement of the consideration of these suggested regulations as a whole, and a new and partial series of clauses (nine in number) was adopted and became law on August 3, 1898. This year it was apparent that certain points regarding the fisheries which had assumed a new phase demanded attention, and advantage was taken of the visit to the province of an officer of the department, Mr. W. W. Stumbles. Mr. Stumbles has supplemented in various ways the mass of information accumulated, and has made reports on the operation of the existing fishery regulations, and on an obstruction at the head waters of the Fraser River, viz., a dam and extensive mining operations on the South Fork of the Quesnelle River, an important resort for the salmon of the Fraser River.

In the Straits of Juan de Fuca and Puget Sound the number of U.S. trap-nets built was greatly in excess of the number erected in 1898, which in turn had a larger number of traps than had been in operation before, indeed Mr. Stumbles in his reports gives the number in 1899 as 120, of which 80 or 90 were operated practically the whole season. The number of boats engaged in the U.S. salmon fishing also greatly increased, and the time has come when the question of licensing Canadian salmon trap nets in the Straits of Juan de Fuca must be seriously regarded. The department has been collecting all available information on the effects and possibilities of salmon trap nets in the straits, and has under careful consideration the propriety of licensing such trap-nets to British Columbia fishermen.

What has been said of the British Columbia fisheries applies in a large degree to the fisheries of Manitoba and the North-west Territories, the increase of the immigrant population, the opening up and transformation of the Yukon District, and the consequent impetus given to the fisheries, has rendered the existing regulations more or less inapplicable to the vast western area comprised within the limits of Manitoba and the North-west. The very fact that one set of regulations, dating back to May 8th, 1894, obtain for the province of Manitoba and for the North-west Territories, is an indication of their inadequacy. Various amendments have, from time to time, been made to render the regulations more appropriate to the actual conditions prevailing, but a thorough revision of these regulations has been in hand, and three separate series have been provisionally drawn up, which will require the most careful consideration before being embodied in law. These three sets of new regulations will apply to the province of Manitoba, the North-west Territories, and the District of Yukon respectively. As was pointed out in last

year's report, the fishery legislation of the Dominion, like that of almost all other countries, has been a slow growth, rather than a defined and compact product of official experience and knowledge, and so long as the rights and prerogatives of the federal government and of the provincial governments awaited final definition, by the highest judicial tribunal in the empire, it was not advisable or even possible to enter upon such a revision of the fishery regulations in all the various provinces, as was generally admitted to be necessary.

BAIT COLD STORAGE.

One of the most important schemes which has occupied the attention of the department has been inaugurated this year, viz., the establishment of bait freezers or refrigerators for the storage of fresh bait by the government in co-operation with associations of fishermen along the coast. This scheme, devised in the interests of the fishing population, aims to meet a need which has been profoundly felt by the fishermen, viz., the ensuring of supplies of bait which will be available when needed. Season after season the complaint arises that bait is scarce precisely when it is most urgently required, yet such bait can, as a rule, be obtained in abundance earlier in the season when the men are not in immediate need of it. The Lobster Commission of 1898 made reference, in their report, to a proposal for providing cold storage for bait, and during the year the matter was prominently brought forward in the Provincial Legislature of Nova Scotia. In no way could our fishing population in the Maritime Provinces be more effectively assisted, and the furtherance of the fishing industries be aided than by enabling the fishermen to acquire the means of securing and preserving supplies of bait in cold storage. A project for building bait freezers was fully considered and the details rapidly completed early in the year. Before the end of April practical measures were on foot, a complete scheme for the formation of local bait associations was formulated, and printed circulars were issued giving full information respecting fishermen's bait associations, the erection of refrigerator buildings and directions for their successful operation. Valuable aid was rendered by Professor J.W. Robertson, Commissioner of Agriculture, in developing the scheme, and in disseminating information amongst fishermen and parties interested. The parliamentary appropriation of \$25,000 enabled the department to carry out this valuable and comprehensive movement at once. A special officer was authorized to take the necessary steps, both in regard to the organization of bait associations in various localities and the construction of freezers under the combined auspices of the Dominion Government and the local associations. Mr. J. F. Fraser, C.E., was detailed to prepare plans, and supervise the erection of the buildings which have been authorized. A beginning was thus made, without loss of time and as the scheme extends it must prove an inestimable benefit to the coast fishermen. Amongst the more important features characterising the fisherman's bait associations are: their entirely voluntary nature, the co-operative method of conducting them, the assistance by the Dominion Government to the extent of 50 per cent of the cost of building the freezers, and the payment of a proportion of the cost of operating the freezers, in accordance with specified conditions announced in a departmental bulletin or circular. Each local association is required to receive, freeze and store for every shareholder a quantity of bait up to 400 lbs. for each share hold by such shareholder and to furnish it during the fishing season as it is needed. Each fisherman pays a nominal charge for freezing and storage and the association has the option of storing

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surplus bait, and of disposing of it on terms agreed upon by the association. Thus while the rules of such associations must conform to the general plan, a certain amount of elasticity is provided for.

The scheme has appealed very strongly to the fishermen, who have realized all along the Atlantic coast of the Dominion the immense benefits and advantages offered by this Government project. Meetings of the fishermen have been held in numerous places in every Maritime Province and in the Magdalen Islands. The initial freezer was commenced in November and has been completed at Ballantyne's Cove near Cape George, Antigonish Co., Nova Scotia, but associations have been formed, and considerable progress in some cases made in the building of freezers at a number of different points along the coast. At Drum Head, Guysborough County, the freezer is complete, at Gabarus, C.B., it is in an advanced condition, while the work under the local bait associations at Whitehead, at Larry's River and at Charlo's Cove is in various stages of progress. Mention must be made of the active work carried on with the department's co-operation on Prince Edward Island where freezers are either nearly completed, or schemes for the erection of refrigerators have assumed final shape, at Tignish, Murray Harbour, Souris and Rustico. In Western Nova Scotia there is similar activity, and the movement is rapidly spreading in New Brunswick. It is impossible to foresee how far-reaching the benefits of the bait cold storage system may be and as already pointed out, an important feature in the scheme is the fact that the fishermen themselves must co-operate, and share in the responsibility under government auspices and superintendence.

MARINE BIOLOGICAL STATION.

This important institution, the first of the kind on Dominion shores, was erected during the summer, and temporarily located at St. Andrews, N.B. The parliamentary vote of \$5,000 for founding this scientific laboratory, and the sum of \$2,000 per annum to be provided for carrying on the institution has made possible the prosecution of fishery and marine researches similar to those promoted with signal success in other countries. Before the station was completely equipped, several eminent scientific workers commenced their labours, and during the summer and fall valuable researches were carried on by Professor Knight, of Queen's University, Kingston; Professor A. B. Macallum, University of Toronto; Dr. R. R. Bensley, Demonstrator in Biology, Toronto University; Dr. J. Stafford, Fellow in Biology, Toronto; Mr. B. A. Bensley, Toronto University, and Mr. F. S. Jackson, Demonstrator in Biology, McGill University, Montreal. Professor L. W. Bailey, of the University of New Brunswick, Fredericton, N.B., came over to St. Andrews for a few days in August, and Professor Prince, Commissioner of Fisheries, also spent some time in July, August and September at the marine station. Amongst other studies taken up were the food of various economic fishes in the adjacent waters, really part of the Bay of Fundy, the nature of the catches in the sardine weirs or brush-traps, and the determination of the so-called sardine, the catches of which range in some years between \$100,000 and \$200,000 in annual value. The clam fishery, especially the food, habits and life-history of these shell-fish, and the details of the industry in Passamaquoddy Bay, the study of the eggs and young of fishes, also the histology of medusæ, and especially the identification and tabulation of the various species of

marine animals in the locality occupied the workers during the first season. A small launch, row-boat, dredge and other gear are now part of the station's equipment, and in spite of many disadvantages during the initial stages, the work done has on the whole been highly satisfactory, and many able specialists have signified their intention of conducting investigations in the station during next season. The station, being provided with a large scow, can be moved from place to place along the coast as may be determined by the managing board, and the fisheries of the Dominion will ere long receive the benefits of the discoveries made and the information obtained.

Other countries have realized the extreme value of this technical work. The United States for many years has carried on splendidly equipped marine stations, such as that at Wood's Holl, and most important information has been obtained by the studies and experiments on sea fish and marine life generally carried on in these laboratories. France was one of the earliest to see the value of such experimental stations, and at various points along her coast has fourteen or fifteen such institutions. Germany has taken the same course, and when the Island of Heligoland was handed over to Germany by the British government the first thing that was done was the building of a marine station for fishery investigations. In Norway, Dr. Nansen was the means of starting similar work, and the Bergen marine station was built. In Britain active steps have been taken during the last fifteen years, and ten marine stations have been built—a large and important one at Plymouth which cost over \$100,000, and others like the unique and interesting marine laboratory in the old city of St. Andrews, in Scotland, and the capital little station on the Isle of Man. Even Russia has founded a number of these institutions. But Italy possesses the finest of all, viz., the famous Zoological marine station at Naples, which has been resorted to by scientific and fishery authorities from every part of the globe. Dr. Dohrn, its brilliant director, prophesied twenty years ago that as different countries learned the value of such work as marine laboratories perform, a circle of such buildings would ere long circumscribe the globe. This prophecy has now come true, and the last of these institutions, viz., the Canadian biological station has as great, or even a greater field than almost any other.

The building is a neat structure of wood, and consists of a main workroom with tables, shelving for scientific apparatus, glass and books, and all the appliances necessary. Three small rooms contain tanks for sea water and fresh water (about three hundred gallons in all) and there is a storeroom with accommodation for the director, and a dark room for photographic work. Two small pumps and a one horse engine, with large supply pipes reaching to high water, form part of the fittings, while nets, dredges and a large stock of chemical agents complete the equipment. The suggestion that such a station was desirable is due to Prof. Knight, of Queen's University, Kingston, Ont., and it was also strongly urged by the Dominion Commissioner of Fisheries (Prof. Prince, Ottawa). The Royal Society of Canada, especially through the efforts of Prof. Penhallow, of McGill College, Montreal, took up the question, which was also warmly supported by Prof. Ramsay Wright, of Toronto University. The British Association had also appointed a committee to urge the matter. As the biological station is floated season after season from one suitable location to another along the Atlantic shore, the fishery problems of each district will thus be grappled with and their complete solution, as far as possible, attained.

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EXPENDITURE AND REVENUE.

The details of the total expenditure for the different fisheries services during the last fiscal period amounting to \$417,601, form the first appendix of this report. This comprises fisheries proper \$95,278, fish culture \$34,522, fisheries protection service \$105,133, miscellaneous expenses \$23,207 and the \$159,459 distributed as fishing bounties.

The total amount received during the same period as revenue from fishery licenses, fines, &c., is given at \$85,502.

This sum includes the \$9,062 collected from United States fishing vessels as fees for the *Modus vivendi* licenses granted to their owners.

FISHING BOUNTIES.

For the season 1898, the sum of \$159,459 was distributed as fishing bounties to the deep sea fishermen of the Maritime Provinces. Of this amount \$63,461 was divided amongst the crews of 784 schooners, and the balance \$95,998 was shared by 23,500 boat fishermen. These different amounts entailed the payment of 14,531 claims. For the last year Nova Scotia received about two-thirds of the bounty fund amounting to \$103,730, Quebec \$31,795, New Brunswick \$13,746 and Prince Edward Island \$10,188.

Since its inception (1882) the total sum of \$2,681,368 has been paid in such fishing bounties to the deep sea fishermen of the above mentioned provinces.

GENERAL STATISTICS OF FISHERIES.

EXTENT OF COAST.

The fisheries of Canada are the most extensive in the world, comprising an immense sea-coast line, besides innumerable lakes and rivers. The eastern sea-coast of the Maritime Provinces from the Bay of Fundy to the Straits of Belle Isle exceeds 5,600 miles, while the western coast of British Columbia is given at 7,180 miles, that is more than double that of Great Britain and Ireland.

While the salt water inshore area, not including minor indentations, cover more than 1,500 square miles, the fresh water area of the part of the great lakes within Canada is reckoned at 72,700 square miles, not including the numerous lakes of Manitoba and the North-west Territories all stocked with excellent species of food fishes.

CAPITAL INVESTED IN THE FISHERIES OF CANADA AND NUMBER OF FISHERMEN.

The following table shows that eighty thousand men were engaged during the season of 1898 in our fishing industry, using boats, nets and other fishing implements aggregating a value of \$9,860,000. About 1,150 schooners manned by 8,657 sailors, besides the 72,877 fishermen, using 38,675 boats and 6,228,000 fathoms of nets, all found employment in this vast industry.

The lobster plant alone is valued at \$1,334,120. This amount comprises 814 canneries, with their 1,335,640 traps, giving employment to 16,548 persons.

RECAPITULATION
 SHOWING the value of Vessels, Boats, Nets, &c., as well as the number of Fishermen in Canada, 1898.

PROVINCE.	FISHERMEN IN		VESSELS.			BOATS.		GILL-NETS AND SKINES.		Value of pound and trap nets, weirs, trawls, etc.	Value of Lobster plant.	Approximate value of freezers, ice and smoke houses, and other fixtures, not itemized.	TOTAL VALUE.
	Vessels.	Boats.	Number.	Tonnage.	Value.	Number.	Value.	Fathoms.	Value.				
Nova Scotia.....	5,434	20,801	537	23,718	837,590	15,358	323,989	2,087,440	563,055	220,786	567,420	459,760	2,972,000
New Brunswick	997	11,276	282	3,674	114,500	6,203	249,833	962,030	540,827	275,753	358,375	450,215	1,989,503
Prince Edward Island.....	117	4,287	29	658	15,900	3,147	62,346	147,389	33,023	16,785	267,712	24,140	419,906
Quebec.....	163	12,169	28	1,119	21,250	6,890	172,030	302,263	177,440	169,763	140,613	205,384	886,489
Ontario.....	430	2,417	483	2,257	105,100	1,262	82,428	1,846,555	220,510	119,270	.....	102,470	628,778
British Columbia	*1,419	†20,695	*178	4,700	497,240	5,182	228,500	670,000	512,100	8,750	.....	119,650	2,706,240
Manitoba and N. W. Territories.	97	1,232	417	1,885	115,600	633	17,808	213,075	28,973	.....	.....	94,200	256,581
Totals.....	8,657	72,877	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	81,534	1,154	38,011	1,707,180	38,675	1,136,943	6,228,732	2,075,928	810,107	1,334,120	2,795,819	9,860,097

NOTE.—* This includes sealing fleet and crews.
 † This includes the cannery hands.
 ‡ Mostly tugs.
 || Value of the sixty-seven salmon canneries.

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STATEMENT of the Lobster industry in Canada, 1898.

PROVINCE.	PLANT.				CATCH.						
	Number of Persons Employed.	Number of Canneries.	Value. \$	Number of Traps.	Value. \$	Total Value of Plant.	Number of 1 lb. Cans.	Value.	Fresh or Alive.	Value. \$	Total Value of Catch.
Nova Scotia	5,185	231	206,010	645,107	361,410	587,420	5,210,284	1,042,059	326,313	1,631,565	2,673,624
New Brunswick	5,474	199	144,100	243,719	214,275	358,375	2,113,222	422,644	21,776	108,880	531,524
Prince Edward Island	3,120	230	126,829	284,285	140,883	267,712	2,342,020	468,004	74	370	468,374
Quebec	2,769	154	54,074	162,470	86,539	140,613	1,067,058	213,412	201	1,005	214,417
Totals	16,548	814	531,013	1,335,641	808,107	1,334,120	10,732,594	2,146,119	348,364	1,741,820	3,887,939

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COMPARATIVE TABLE showing Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries of Canada, together with the Value of Fishing Materials employed, from 1879 to 1898.

YEAR.	VESSELS.			BOATS.		Value of Nets and Seines.	Value of other Fishing Material.	Total of Capital Invested.
	No.	Tonnage.	Value.	No.	Value.			
			\$		\$	\$	\$	\$
1879	1,183	43,873	1,714,917	25,616	854,289	988,698	456,617	4,014,521
1880	1,181	45,323	1,814,688	25,266	716,352	985,978	419,564	3,936,582
1881	1,120	48,389	1,765,870	26,108	696,710	970,617	679,852	4,113,049
1882	1,140	42,845	1,749,717	26,747	833,137	1,351,193	823,938	4,757,985
1883	1,198	48,106	2,023,045	25,825	783,186	1,243,366	1,070,930	5,120,527
1884	1,182	42,747	1,866,711	24,287	741,727	1,191,579	1,224,646	5,014,663
1885	1,177	48,728	2,021,633	28,472	852,257	1,219,284	2,604,285	6,697,459
1886	1,133	44,605	1,890,411	28,187	850,545	1,263,152	2,720,187	6,814,295
1887	1,168	44,845	1,989,840	28,092	875,316	1,499,328	2,384,356	6,748,840
1888	1,137	33,247	2,017,558	27,384	859,953	1,594,992	2,390,502	6,863,005
1889	1,100	44,936	2,064,918	29,555	965,010	1,591,085	2,149,138	6,770,151
1890	1,069	43,084	2,152,790	29,803	924,346	1,695,358	2,600,147	7,372,641
1891	1,027	39,377	2,125,355	30,438	1,007,815	1,644,892	2,598,124	7,376,186
1892	988	37,205	2,112,875	30,513	1,041,972	1,475,043	3,017,945	7,647,835
1893	1,104	40,096	2,246,373	31,508	955,109	1,637,707	3,174,404	8,681,557
1894	1,178	41,768	2,409,029	34,102	1,009,189	1,921,352	4,099,546	9,439,116
1895	1,221	37,829	2,318,290	34,268	1,014,057	1,713,190	4,208,311	9,253,848
1896	1,217	42,447	2,041,130	35,398	1,110,920	2,146,934	4,527,267	9,826,251
1897	1,184	40,679	1,701,239	37,693	1,128,682	1,955,304	4,585,569	9,370,794
1898	1,154	38,011	1,707,180	38,675	1,136,943	2,075,928	4,940,046	9,860,097

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COMPARATIVE TABLE showing the number of men employed in the Fishing Industry since 1879.

Years.	Number of Persons in Lobster Canneries.	Number of Men in Vessels.	Number of Men in Boats.	Total Number of Fishermen.
1879.....		8,818	52,577	61,395
1880.....		8,757	51,900	60,657
1881.....		8,359	50,679	59,056
1882.....		8,498	52,785	61,283
1883.....		9,966	52,259	62,225
1884.....		9,968	51,854	61,822
1885.....		9,539	53,282	62,821
1886.....		8,927	53,073	62,000
1887.....		8,911	55,247	64,158
1888.....		9,574	53,109	62,683
1889.....		9,621	55,382	65,003
1890.....		8,726	55,000	63,726
1891.....		8,666	56,909	65,575
1892.....		8,330	55,348	63,678
1893.....		8,899	58,854	67,753
1894.....		9,525	61,194	70,719
1895.....	13,030	9,804	61,530	71,334
1896.....	14,175	9,735	65,502	75,237
1897.....	15,165	8,879	70,080	78,959
1898.....	16,548	8,657	72,877	81,534

VALUE OF THE FISHERIES.

The total value of the Canadian catch of fish for the year 1898 amounts to \$19,667,126, being a decrease of over *three million dollars* as compared with the unprecedented yield of 1897, but which is near the average of the previous eight years. This amount is subdivided by provinces as follows :—

Provinces.	Value.	Increase.	Decrease.
	\$	\$	\$
Nova Scotia.....	7,226,035		864,312
New Brunswick.....	3,849,357		84,778
British Columbia.....	3,713,101		2,425,764
Quebec.....	1,761,440	24,429	
Ontario.....	1,433,632	143,810	
Prince Edward Island.....	1,070,206	115,257	
Manitoba and North-west Territories.....	613,355		25,061

It is easily seen that the large surplus of last year was made up in British Columbia and Nova Scotia, and this year the same provinces furnish deficits exceeding three million dollars. The fluctuations of the other provinces are not so pronounced. Ontario and Prince Edward Island both show an increase of over \$100,000, the others yielded about the same as the previous year. These different phases are fully explained in the appendices by the inspectors in their respective provinces. The above figures do not include the enormous quantity of fish consumed by the Indians of British Columbia.

The following table shows the relative values of the principal kinds of commercial fishes (above \$100,000) for the year 1898 as compared with those of the previous year:—

Kinds of Fish.	Value.	Increase.	Decrease.
	\$	\$	\$
Lobsters.....	3,887,939	402,674	
Salmon.....	3,159,306		2,520,868
Cod.....	2,996,583		912,511
Herring.....	1,987,454		111,623
Mackerel.....	694,591	97,285	
Trout.....	693,826	158,954	
Haddock.....	681,557		200,926
Whitefish.....	622,173		29,256
Sardines.....	429,022	72,225	
Smelts.....	420,142		8,027
Hake.....	391,550	32,472	
Halibut.....	291,276	71,938	
Pickarel.....	235,995		80,600
Oysters.....	217,024	36,536	
Sturgeon.....	199,160	9,182	
Alewives.....	159,424		30,236
Pollock.....	144,708		232,604
Bass.....	124,845	27,629	
Eels.....	118,620		15,209
Shad.....	108,013		3,560
Tom-cod.....	102,426		4,576

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The quantity of fish used as bait is reckoned at \$345,388, that of fish oil at \$199,787 and the produce of the fur seals skins realized \$285,520.

A glance at the above table shows that salmon, which last year had usurped the first place held by the cod, has this year been surpassed by the lobster. The enormous decline of two and a half million dollars in the value of salmon is due entirely to the diminished pack of the Fraser River for that season. The other parts of the western province yielded fairly well.

The surplus of \$400,000 in the value of lobsters is not attributed to the packing industry which, on the contrary, has a shortage of over one million cans, but to the rapid growth of the live lobster trade with the United States markets especially in the western counties of Nova Scotia, which have exceeded their previous shipments by over 100,000 cwt. Where such facilities exist to dispose of our large size lobsters in such markets as Boston and New York at remunerative prices, the packing in cans might well be restricted by at least enforcing a large size or length limit, as has been done in the new lobster regulation so far as the greater part of the Bay of Fundy is concerned.

Another most marked fluctuation is the shortage of \$900,000 in the value of cod as compared with the take of 1897. This falling off is mostly felt in Nova Scotia. Prices were low and somewhat contributed to limiting the supply. The same remark applies to haddock and pollock which both show a large decline.

It is gratifying to notice the improvement of \$100,000 in the value of mackerel which has again resumed the fifth place in the list of principal kinds of fish.

Of the fresh water species, while trout shows a fair increase, whitefish has fallen off.

Owing to the development of sardine canning in Charlotte county, New Brunswick, this industry indicates a considerable improvement over the previous output.

Halibut fishing is steadily improving especially in British Columbia.

From the year 1869 to 1898 inclusive the five principal commercial fishes have shown a total return as follows:—

Cod.....	\$113,768,153
Herring.....	58,500,866
Lobsters.....	56,338,075
Salmon.....	54,569,151
Mackerel.....	38,881,733

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STATEMENT of the production of each Branch of the Fisheries

No.	KINDS OF FISH.	NOVA SCOTIA.		NEW BRUNSWICK.		BRITISH
		Quantity.	Value.	Quantity.	Value.	Quantity.
			\$		\$	
1	{ Cod, dried Cwt.	442,946	1,891,784	77,424	309,696	5,225
	{ " tongues and sounds Brls.	483	4,830	163	1,630	
	{ Haddock, dried Cwt.	106,348	319,044	9,225	27,675	
2	{ " fresh Lbs.	4,399,632	131,988	1,250,000	37,500	
	{ " smoked, (finnan haddies) Lbs.	1,360,291	81,616	929,100	56,290	
3	{ Hake, dried Cwt.	108,528	244,187	25,452	57,267	
	{ " sounds Lbs.	73,457	36,728	19,280	9,640	
4	Pollock Cwt.	54,552	109,104	17,802	35,604	
5	Tom cod or frost fish Lbs.	146,120	7,306	1,733,100	86,655	
6	Halibut Lbs.	1,635,325	163,533	111,000	11,100	1,970,000
7	Flounders Lbs.	419,000	20,950	161,700	8,085	
	{ Salmon, preserved lb Cans.	13,668	2,050	11,600	1,740	23,642,452
	{ " fresh Lbs.	390,742	78,148	1,175,167	235,033	914,850
8	{ " smoked Lbs.	5,145	1,029	10,000	2,000	201,000
	{ " pickled Brls.	330	4,950	15	225	18,600
9	Trout Lbs.	91,330	9,133	185,480	18,548	328,800
10	Ouananiche Lbs.					
11	Whitefish Lbs.					
12	Smelts Lbs.	303,558	15,178	7,021,000	351,050	78,500
13	Oulachans B. C. Lbs.					919,500
	{ Herring, salted Brls.	76,828	307,312	163,854	655,416	
	{ " fresh Lbs.	4,592,453	45,925	21,013,750	210,138	565,000
14	{ " smoked Lbs.	428,100	8,562	8,937,255	178,745	127,000
	{ " kippered Cans.			265,000	26,500	
15	{ Sardines, preserved Cans.			1,616,000	80,800	
	{ " " Brls.			171,995	342,543	
16	Shad Brls.	4,125	41,250	5,805	58,050	
17	Alewives Brls.	10,946	43,784	27,860	111,440	
18	Pike Lbs.					
19	Maskinonge Lbs.					
20	{ Eels, salted Brls.	2,333	23,330	2,757	27,570	
	{ " " Lbs.					
21	Perch Lbs.			30,000	1,500	
22	Pickarel Lbs.			142,000	7,100	
23	Bass Lbs.	15,650	1,565	349,900	34,990	
24	{ Mackerel, salted Brls.	15,938	239,070	250	3,750	
	{ " fresh, &c. Lbs.	2,371,042	284,524	276,900	33,228	
25	{ Sturgeon Lbs.			15,000	1,050	750,000
	{ " caviare Lbs.			910	455	24,778
26	{ Lobsters, preserved Lbs.	5,210,294	1,042,059	2,113,222	422,644	
	{ " fresh Cwt.	326,313	1,631,565	21,776	108,880	
27	Oysters Brls.	2,097	8,388	22,675	90,700	2,400
28	Clams Brls.	1,641	3,282		28,227	
29	Squid Brls.	8,467	33,868	39	156	
30	{ Coarse and mixed fish Brls.	64,359	128,249	4,087	8,174	110
	{ " " Lbs.			41,700	3,685	
31	Home consumption (not included above)					
32	Fur seal skins, B. C. No.					28,552
33	Hair " " No.	302	372	22	49	7,600
34	Sea otter " B. C. No.					50
35	Beluga (white whales) No.					
36	Fish, oil Galls.	322,277	96,682	60,090	18,027	124,525
37	Fish used a bait Brls.	92,885	139,329	69,350	107,775	
38	" " manure Brls.	50,720	25,360	75,255	37,627	
39	" " guano Tons.					200
	Totals		7,226,035		3,849,357	

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in the different Provinces of Canada, for the Year 1898.

COLUMBIA.		QUEBEC.		ONTARIO.		PRINCE ED. ISLAND.		MANITOBA AND N.-W. TERRITORIES.		No.
Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.		
\$		\$		\$		\$		\$		
26,125	163,716	657,420				25,372	101,488		1	
	278	2,780				83	830			
	2,563	7,689				6,335	19,005		2	
	12,000	360				13,000	390			
	214	481				13,205	29,711		3	
						27,070	13,535			
	131,800	6,590				37,500	1,875		4	
98,500	171,140	17,114				10,300	1,030		5	
	90,500	1,525							6	
2,364,245									7	
91,485	836,401	167,280							8	
20,100						8,900	1,780			
186,000	216	3,240							9	
32,880	397,050	39,705	5,972,005	582,431	49,300	4,930	124,000	6,200		
	95,000	5,700							10	
	72,675	5,814	2,926,035	232,763			7,671,941	383,597	11	
3,925	351,292	17,564				648,489	32,424		12	
47,200									13	
	36,755	147,020	1,775	7,100	44,924	179,696			14	
16,950	4,825,300	48,253	6,309,000	126,180	251,800	2,518				
12,706	54,000	1,080	668,000	13,360						
	1,760	5,280							15	
	868	8,683				3	30		16	
						1,050	4,200		17	
	261,920	10,477	859,783	34,391			2,532,278	50,646	18	
	70,930	4,256	774,320	46,459					19	
	217	2,170			644	40			20	
	857,840	51,470	127,325	7,639						
	211,560	6,347	753,380	22,601			77,591	776	21	
	336,515	16,826	2,715,340	135,767			2,543,422	76,303	22	
	133,255	10,660	970,375	77,630					23	
	6,497	97,455				2,228	33,420		24	
						26,200	3,144			
37,500	421,370	25,282	1,171,580	70,295			688,510	34,425	25	
7,433			36,520	18,460			8,520	4,260		
	1,067,058	213,412			2,342,020	468,004			26	
	201	1,005			74	370				
12,000					26,484	105,936			27	
9,080					505	1,010			28	
	2,765	11,060			510	2,040			29	
1,100	860	4,720			1,218	1,272				
51,300	3,559,210	37,729	2,327,760	58,555			4,353,113	47,627	30	
350,000							952,100	9,221		
285,520									31	
5,700	10,008	12,510			20	40			32	
10,000									33	
	452	1,808							34	
37,358	139,644	41,893			19,425	5,828				
	33,793	50,689			31,730	47,595			35	
	41,183	21,092							36	
6,000					1,665	1,665			37	
									38	
									39	
3,713,101		1,761,440		1,433,632		1,070,206		613,355		

RECAPITULATION

Of the Yield and Value of the Fisheries in the Dominion of Canada for the Year 1898.

	Kinds of Fish.	Quantity.	Value.		Total Value.	
			\$	cts.	\$	cts.
1	Cod, dried	cwt.	714,683	2,986,513	00	
	Cod, Tongues and Sounds	brls.	1,007	10,070	00	2,996,583 00
2	Haddock, dried	cwt.	124,471	373,413	00	
	" fresh	lbs.	5,674,632	170,238	00	
	" smoked (Finnan haddies)	"	2,289,391	137,906	06	681,557 06
3	Hake, dried	cwt.	147,399	331,646	50	
	" sounds	lbs.	119,807	59,903	50	391,550 00
4	Pollock	cwt.	72,354			144,708 00
5	Tom Cod or Frost Fish	lbs.	2,048,520			102,426 00
6	Halibut	"	3,897,765			291,276 50
7	Flounders	"	611,200			30,560 00
	Salmon, preserved	lb. cans	23,667,720	2,368,035	40	
8	" fresh	lbs.	3,317,160	571,946	60	
	" smoked	"	225,045	24,909	00	
	" pickled	brls.	19,161	194,415	00	3,159,306 00
9	Trout	lbs.	7,147,965			693,826 50
10	Ouananiche	"	95,000			5,700 00
11	Whitefish	"	10,670,651			622,173 80
12	Sinelts	"	8,403,839			420,141 95
13	Oulachans (B.C.)	"	919,500			47,200 00
	Herring, salted	brls.	224,136	1,296,544	00	
14	" fresh	lbs.	37,557,303	449,963	00	
	" smoked	"	10,214,355	214,447	10	
	" kippered	cans.	265,000	26,500	00	1,987,454 10
15	Sardines, preserved	"	1,616,000	80,800	00	
	"	brls.	173,755	348,222	50	429,022 50
17	Shad	"	10,801			108,013 50
16	Alewives	"	39,856			159,424 00
18	Pike	lbs.	3,653,981			95,514 12
19	Maskinonge	"	845,250			50,715 00
20	Eels, salted	brls.	5,951	59,510	00	
	" fresh	lbs.	985,165	59,109	90	118,619 90
21	Perch	"	1,072,531			31,224 20
22	Pickarel	"	5,737,277			235,995 75
23	Bass	"	1,469,180			124,845 40
24	Mackerel, salted	brls.	24,913	373,695	00	
	" fresh	lbs.	2,674,142	320,896	24	694,591 24
25	Sturgeon	"	3,046,460	168,552	00	
	" caviare	"	70,728	30,608	40	199,160 40
26	Lobsters, preserved	"	10,732,594	2,146,118	80	
	" fresh or alive	cwt.	348,364	1,741,820	00	3,887,938 80
27	Oysters	brls.	53,656			217,024 00
28	Clams	"	2,146			41,599 00
29	Squid	"	11,781			47,124 00
30	Coarse and mixed fish	"	70,634	140,515	50	
	"	lbs.	10,281,783	198,895	80	339,411 30
31	Home consumption (not included above)	"				359,521 00
32	Fur seal skins, B.C.	No.	28,552			285,520 00
33	Hair seal skins	"	17,952			18,671 25
34	Sea-otter skins, B.C.	"	50			10,000 00
35	Beluga skins (white whale)	"	452			1,808 00
36	Fish oil	galls.	665,961			199,787 40
37	Fish used as bait	brls.	227,758			345,388 50
38	" manure	"	167,158			84,079 50
39	Fish guano	tons.	1,865			7,665 00
	Total for 1898					19,667,126 67
	" " 1897					22,783,546 21
	Decrease					3,116,419 54

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RECAPITULATION.

SHOWING the Total Value of the Fisheries in the respective Provinces of Canada, from 1870 to 1898, inclusive, as compiled from the Annual Reports of the Department of Fisheries.

Year.	Nova Scotia.	New Brunswick.	Prince Edward Island.	Quebec.	Ontario.	British Columbia.	Manitoba and North-west Territories.	Total for Canada.
1870.	4,019,425	1,131,433	No data.	1,161,551	264,982	No data.	No data.	6,577,391
1871.	5,101,030	1,185,033	"	1,083,612	193,524	"	"	7,573,199
1872.	6,016,835	1,965,439	"	1,320,189	267,633	"	"	9,570,116
1873.	6,577,037	2,285,662	207,595	1,391,564	293,091	"	"	10,754,997
1874.	6,652,302	2,685,794	288,863	1,608,660	446,267	"	"	11,681,886
1875.	5,573,851	2,427,654	298,927	1,596,759	453,194	"	"	10,350,385
1876.	6,022,050	1,953,389	494,967	2,097,668	437,220	104,697	"	11,117,000
1877.	5,527,858	2,133,237	763,036	2,560,147	438,223	583,433	"	12,003,934
1878.	6,131,600	2,305,790	840,344	2,664,055	348,122	925,767	"	13,295,678
1879.	5,752,937	2,554,722	1,402,301	2,820,395	367,133	631,766	"	13,529,254
1880.	6,291,061	2,744,477	1,675,089	2,631,556	444,491	713,335	"	14,499,979
1881.	6,214,782	2,930,404	1,955,290	2,731,962	500,903	1,454,321	"	15,817,152
1882.	7,131,418	3,192,339	1,855,687	1,976,516	825,457	1,842,675	"	16,824,082
1883.	7,689,374	3,185,674	1,272,468	2,138,997	1,027,033	1,644,646	"	16,938,192
1884.	8,763,779	3,730,454	1,085,619	1,694,561	1,133,724	1,358,267	"	17,752,973
1885.	8,283,922	4,005,431	1,293,430	1,719,460	1,342,692	1,078,038	"	17,766,404
1886.	8,415,362	4,180,227	1,141,901	1,741,382	1,435,998	1,577,348	186,980	18,679,288
1887.	8,379,752	3,559,507	1,037,426	1,773,567	1,531,830	1,974,887	123,084	18,386,103
1888.	7,817,030	2,941,163	876,862	1,860,012	1,839,869	1,902,195	180,677	17,418,510
1889.	6,346,722	3,067,039	886,430	1,876,194	1,963,123	3,348,067	107,679	17,055,256
1890.	6,636,444	2,639,055	1,041,109	1,615,119	2,009,637	3,481,432	232,104	17,714,902
1891.	7,011,300	3,371,050	1,238,733	2,008,678	1,806,380	3,008,755	332,969	18,977,878
1892.	6,340,724	3,203,922	1,179,856	2,236,732	2,042,198	2,443,483	1,088,254	18,941,171
1893.	6,407,279	3,746,121	1,133,368	2,218,905	1,694,930	4,443,963	1,042,093	20,719,573
1894.	6,547,387	4,351,526	1,119,738	2,303,386	1,659,968	3,950,478	787,087	20,199,338
1895.	6,213,131	4,403,158	976,836	1,867,920	1,854,473	4,401,354	752,466	20,407,425
1896.	6,070,895	4,739,433	976,126	2,025,754	1,605,674	4,183,990	745,543	22,783,546
1897.	8,090,346	3,934,949	954,949	1,737,011	1,489,822	6,138,865	638,416	19,667,121
1898.	7,226,634	3,849,357	1,070,202	1,761,440	1,433,632	3,713,101	613,355	19,667,121
Totals	193,258,747	88,723,815	27,047,242	56,353,752	30,630,261	55,310,872	6,896,617	458,197,322

FISH CULTURE.

The fish culture report for the year 1899 by Professor E. E. Prince, Commissioner of Fisheries, will be found in Appendix 11 of this publication. It includes a complete description of the various fish breeding operations such as the capture of parent fish, collection of eggs, etc., at the different hatcheries by their respective officers in charge.

During the year no less than 222,000,000 fry were hatched and distributed in Canadian waters, nearly half of which were lobsters, the balance consisting of salmon, great lake trout and whitefish.

For the first time a quantity of Rainbow trout have been procured and hatched in a Dominion establishment, viz., Bedford Hatchery, N.S. This Pacific species is reported to reach a large size, to be of superior edible qualities, and is a fine game fish, so that its introduction into Nova Scotia waters, with the co-operation of the Nova Scotia Game and Fish Society is a matter of unusual interest. The New Brunswick authorities have again placed Brook Trout eggs in the Miramichi Hatchery and the fry have been distributed all over the province. The New Zealand Government also obtained a supply of B.C. salmon eggs, and report that the shipment of whitefish eggs in 1898 proved successful.

Reference is made in the Commissioner's report (Appendix 11) to the lamentable destruction of the famous Restigouche Hatchery, which was regarded by pisciculturists all over the world as a model institution. The hatchery was destroyed by fire in August, without doubt at the hands of an incendiary, but the Department immediately secured another site, admirable in every respect, and a new building has been completed, at Flat lands on the Restigouche, so that the work of salmon hatching on that river suffered no interruption. Plans have been prepared, and sites selected for new hatcheries in Inverness County, Cape Breton, Gaspé, P.Q., New Westminster and the Skeena River B. C. Thus the work of fish culture has not only been carried on during the year with undiminished activity and success, but steps have been taken to extend the operations and to vastly increase the benefits which it is admitted accrues from the Government fish-breeding operations.

OYSTER CULTURE.

A full report of last season's work on the culture of oysters by the Department's Expert, Mr. Ernest Kemp follows the fish culture report of which it forms an annex

Mr. Kemp's time was taken up during most of the summer at Murray Harbour and River in P.E. Island, preparing grounds and planting young oysters. From one thousand loads of oyster mud spread out and dried, the shells were all picked out and laid on the beds previously cleared for the purpose of planting young oysters.

He also examined the conditions of Tracadie, Savage Harbour, Morell and Midgell rivers, also part of Fortune River which are fully explained. In Bedeque Bay an area was laid off for the fishermen and one for mud diggers to work upon without interfering or injuring each other's area.

He recommends the division of the natural fishing areas into sections to be fished alternately; the enforcement of size limit; the leasing of water areas, where oysters do not now exist for their cultivation, and the date of the fishing season now as the proper one.

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FISHERIES PROTECTION SERVICE.

The report of the operations of the Fisheries Protection Service during the season of 1899 by Commander O.G.V. Spain forms Appendix 12 of this volume. It is pleasing to note that this service has again been carried on without accidents and in a very satisfactory manner.

With the exception of the *Dolphin* which was disposed of, the fleet of cruisers consisted of the same ships as the previous year, viz, the *Acadia*, *La Canadienne*, *Curlew*, *Osprey*, *Kingfisher*, *Constance*, *Aberdeen* and *Petrel*. The latter cruising in the Ontario great lakes and the others on the Gulf St. Lawrence and Atlantic coast. The *Quadra* is also partly employed for the protection of our fisheries on the British Columbia coast.

The number of United States fishing vessels taking advantage of the *modus vivendi* licenses was in excess of any previous year since 1892.

A glance at the long list of foreign fishing schooners calling at our ports shows of what importance these places are to them.

Towards the end of the season, Commander Spain and his officers devoted much of their time to the protection of the lobster industry and many thousand traps found in close season were seized and destroyed. The high prices quoted for this crustacean seemed to have stimulated the efforts of the poachers.

FISHERIES INTELLIGENCE BUREAU.

A full report of this branch of the service by Mr. T. O'Brien, clerk in charge at Halifax forms annex A to the Fisheries Protection Report.

Daily compilations of the reports from the fifty-three stations now dispersed on our extensive sea-board, are telegraphed to the principal fishing localities of the Maritime Provinces.

THE BEHRING SEA QUESTION.

No material change has taken place with regard to this question since the publication of the Departmental Annual Report for last year, from which the following is extracted, which is as applicable as at the time of publication.

* * * * *

As the Behring Sea question is one of those receiving the consideration of the Joint High Commission, it has passed, for the time being, out of the ordinary channel of correspondence between the different governments, hence the past year has been marked by an absence of proposals and arrangements hitherto obtaining each season in the prosecution of the sealing industry, and the application of the legislation under which it is conducted.

By the terms of the Paris Award, the regulations for the government of the seal fishing in Behring Sea and the North Pacific Ocean, were to be subjected to a new examination every five years, so as to enable both interested Governments to consider whether, in the light of the past experience, there was occasion for any modification thereof.

The representations made to the Canadian Government by those engaged in the sealing industry in British Columbia, were to the effect that no modifications of

these regulations should be agreed to in the nature of further limitations to the business, but that, on the contrary, the successful prosecution of the industry demanded that the existing restrictions should be curtailed alike as to the close season and as to the protective zone around the Pribyloff Islands.

As the United States Government would not entertain any proposals in either of these directions, and it did not seem to the Canadian Government possible for them, having due regard for the interests of those engaged in the sealing industry, to consent to any further limitations upon the operations of the sealers, it was found impossible to agree upon any change in the Paris Award regulations.

* * * * *

No diplomatic correspondence of any importance calculated to change the condition of affairs has occurred during the year. It was announced in April last, by the United States Revenue Department, that the cruisers, *Bear*, *Rush*, *Corwin*, *Grant* and *Perry* had been designated by the President to cruise in the waters of the North Pacific Ocean during the season of 1899, for the enforcement of the Act of Congress of 1897, and the regulations of the Paris Tribunal, decreed in August, 1893, for the preservation of the fur seals.

On the other hand, Her Majesty's Government announced to the Government of Canada, that Her Majesty's ships *Icarus* and *Pheasant* were detailed for patrol duty, under the Paris Award regulations, for the season.

In March, 1899, the United States Treasury Department issued the usual regulations governing the vessels employed in the fur seal fishing during the season. After quoting the Act of Congress approved December 29, 1897, and which came into force during the year 1898, prohibiting pelagic sealing in the North Pacific Ocean, etc., by any citizen of the United States, or persons owing duty or obedience to the laws or treaties of the United States, the instructions gave the text of the Behring Sea Award regulations, which are still in force, as applicable to British vessels. The close season for pelagic sealing was explained, as well as the sixty-mile zone around the Pribyloff Islands, and it was added that it should be the duty of vessels of the revenue cutter service, to patrol the waters in question, to seize any British vessels found violating the Paris regulations, and to send or bring the vessel so offending, with all persons on board, together with the proofs and declarations of the officers making the seizure, to Unalaska, deliver her to the British naval officer present, or to a more convenient port in British Columbia, and there to deliver her to the proper authorities of Great Britain, or to the commanding officer of any British vessel charged with the enforcement of the said regulations.

These regulations called for no comment as they did not seek to extend in any degree the legislation already provided, or the terms of the Paris regulations, nor to increase the powers of United States officers over British ships at sea, beyond those given them by Imperial legislation and regulations.

On the November 30, last, the Department was notified, of the issue of a circular by the Treasury Department to collectors of customs, amending the Act of 1897, with reference to the regulations in force, regarding the importation of fur seal skin garments. The change was one merely for the convenience of the fur trade, and had no significance, so far as Canada is concerned, from a diplomatic or interna-

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tional point of view. The circular itself is prefaced by the statement, that representations had been made that the requirements of the report of a Treasury Agent to accompany each invoice of seal skin garments shipped to the United States, seriously embarrassed trade, on account of the delay incident to the procuring of such reports, under the original regulations, and they were thus amended so as to dispense with the reports, and the certificate of a consul was regarded as sufficient.

In July, the United States authorities complying with the requirements of Article 5 of the Behring Sea Award, notified Her Majesty's Government, that but one American vessel was engaged in pelagic sealing, during the season of 1898, namely the *Kate and Anna*, whose arrival was reported by the collector at San Francisco. The collector stated that he was satisfied that the skins taken by this vessel were all secured south of the 35° of north latitude, as shown by her log, and therefore, outside the area in which the United States has prohibited pelagic sealing by their own vessels. This vessel took 336 seals.

The total Behring sea fleet, comprised this year of twenty-six vessels, representing 1,894 tons register, crews,—213 white men and 587 Indians,—68 boats and 285 canoes, the total catch of the vessels being 34,454 skins, augmented by an Indian catch of 892 on the coast, bringing the total Canadian seal catch for the year 1899 up to 35,346, being larger than that of 1898 and 1897, represented respectively by thirty-five and forty-one vessels. Of these twenty-six vessels, twenty operated on the British Columbian and Alaskan coast, while these same twenty and five others operated in Behring sea, and only one on the Asiatic side. The coast catch was 10,471 skins; the Behring sea catch 23,284; the Asiatic catch 699 and the Indian catch 892.

Separating the Indian catch from that of the vessels proper, the following figures show the catches from the year 1889 to 1899 inclusive:—

Year.	Vessels.	Catch.	Average per Vessel.
1889.....	23	29,570	1,285
1890.....	29	39,351	1,357
1891.....	51	50,437	989
1892.....	65	46,362	713
1893.....	55	67,797	1,233
1894.....	59	90,485	1,533
1895.....	61	66,962	1,097
1896.....	64	53,324	833
1897.....	41	29,392	717
1898.....	35	27,452	784
1899.....	26	34,454	1,325

It will thus be seen, that from 1892 to 1896, there was an average of over sixty vessels annually engaged in the sealing business, and that in the latter year, sixty-four vessels secured only 53,234 skins, whereas in the year 1891, fifty-one vessels secured 50,437. In 1897 the fleet dropped to forty-one vessels, securing 29,342, and in the present year 1899, twenty-six vessels secured 34,454 skins.

A glance at the above figures will show that in the whole history of the Canadian pelagic sealing business, the average catch per vessel of the present year, has been surpassed only twice, in 1890 and 1894, whereas, it has in no other year been approached very closely. It is also to be borne in mind that the phenomenal catch of the year 1894 was principally taken on the Asiatic side, hence the high average cannot be attributed to what has been called the Pribyloff herd of seals. It would also appear that the Asiatic waters have ceased to be exploited by the sealers, they now confining themselves to the North American waters of the North Pacific Ocean.

It is somewhat significant, after all that has been said on the subject, that so comparatively small a fleet as was engaged in the present year, should have made the largest catch of the past three years, and the largest average catch of any but two years in the history of the Canadian sealing industry.

For the season of 1899, many of the vessels cleared from Victoria earlier than usual, and proceeded southward to the California coast, as considerable success attended some vessels there, during the previous year.

Towards the close of April, the sealers encountered violent gales, which prevailed along the whole western coast, and although the spring catch proved a fairly good one, it would undoubtedly have been much better but for unpropitious weather, which interfered with the work of the hunters.

The sealers are reported to have carefully observed their obligations under the regulations provided by the Paris Award, and the year has been marked by an entire absence of any seizures, or undue interferences by patrolling vessels.

A report that the schooner *Mermaid* had been shooting seals in Behring Sea, upon investigation proved to be without foundation.

The masters of the sealing vessels say that in the neighbourhood of the Fair-weather grounds where the seals congregate prior to entering Behring Sea, through the Aleutian Passes, they are seemingly as numerous as in former years, and it is said that generally speaking their number at sea is undiminished, but they are growing more timid and migratory.

It being reported that the seals were found most numerous to the north-east of the Pribyloff Islands instead of the north-west as formerly, the data available in the department has been examined, and it has been demonstrated that in the earlier years the best sealing grounds in Behring Sea, and, in fact, where the majority of the seals were secured, was principally south of the islands trending westward, very few attempts being made to go north, and comparatively few catches being made there.

A careful examination of the positions at sea, where the vessels have taken seals for the past four years, shows that there has been a decided change in the localities of hunting, and that on the coasts, the vessels have increased their areas

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very materially in a southerly direction, while in Behring Sea there is a distinct, trend north and east, bringing them principally to the north-east of the Pribyloff Islands.

This has been accounted for by some, as being due to the disturbance of the seals upon the islands, and a consequent incentive to seek other hauling and breeding grounds; while others consider the movement of the food fishes have much more to do with the distribution of the seals. However this may be, it is a fact that some vessels made good catches west of the islands notwithstanding.

Reference has been made to the process of branding seals by the United States authorities on the island, and the expedient has been regarded by some as having an injurious effect upon the herd. From the sealers' standpoint, the effect cannot be very great, unless the branded seals die, inasmuch as out of a total take of 35,346 skins, only 16 branded ones were found, and they were distributed among 11 vessels out of 26, one vessel taking as many as 3, the others, 2 and 1 each.

These facts apparently show that the branding of seals forms no factor in pelagic sealing, and whatever purpose branding may serve for scientific observation or otherwise, it cannot have a salutary effect upon the herd which visits the islands, since it necessarily changes the normal conditions. It might therefore reasonably be expected that the practice is not unlikely to be discontinued.

Altogether, the season has been a very favourable one for the sealers. Added to the large catch, there was a decided increase in the price of the skins, most of them being sold at Victoria for \$11 each; but those which were sent to the London sales by the owners, realized a much higher figure.

ARBITRATION OF SEIZURES OF SEALING VESSELS BY RUSSIA IN 1892.

Diplomatic correspondence is still proceeding between Her Majesty's Government and that of Russia in connection with this case, the principal features being a discussion of the terms of reference of the sealers' claims as filed, to the arbitrator. The final text of the note to be exchanged, embodying these terms of reference, has not yet been decided upon, but it is expected that a settlement will be reached, which will enable a reference before long.

The work in connection with the preparation of the claims has been pushed with all possible speed, and counsel to represent Her Majesty's case have been appointed by the Canadian Government.

THE STAFF.

The outside staff of fishery officers connected with the department during the year ending December 31, 1899, aggregate 801 men including the crews of the fisheries protection fleet, which form nearly half of the total number.

These officers were dispersed by provinces as follows :

Ontario.....	3
Quebec	11
Nova Scotia.....	60
New Brunswick	29
Prince Edward Island.. ..	5
Manitoba.....	5
North-west Territories.....	7
British Columbia.....	9
Fishery guardians employed in 1899.....	275
Officers and crews of the Fisheries Protection Vessels.....	397
Total	801

The following are inspectors of fisheries in the different provinces of the Dominion :

Name.	P. O. Address.	Extent of Jurisdiction.
Bertram, A. C.....	North Sydney, N.S.	District No. 1.—Cape Breton Island.
Hockin, Robt.....	Pictou, N.S.	District No. 2.—Cumberland, Colchester, Pictou, Antigonish, Guysboro' Halifax and Hants counties.
Ford, L. S.	Milton, N.S.	District No. 3.—Lunenburg, Queen's, Shelburne, Yarmouth, Digby, Annapolis and King's counties.
Pratt, J. H.	St. Andrews, N.B.	District No. 1.—The county of Charlotte.
Chapman, Robt. A	Moncton, N.B.	District No. 2.—Restigouche, Gloucester, Northumberland, Kent, Westmorland and Albert counties.
Miles, H. S.	Oromocto, N.B.	District No. 3.—St. John, King's, Queen's, Sunbury, York, Carleton and Victoria counties.
Matheson, J. A.	Campbellton, P. E. I.	Prince Edward Island.
Wakeham, Wm., M.D.	Gaspé Basin, Que.	Lower St. Lawrence River and Gulf.
Lavoie, N., M.D.	L'Islet, Q.	That portion of Quebec, south of River St. Lawrence and north and east of and including county of Bellechasse.
Belliveau, A. H.	Ottawa.....	Province of Quebec, north of River St. Lawrence and west from and including River Saugenay, and the portion south of River St. Lawrence which lies west and south of the county of Bellechasse.
Cunningham, F. H.	Ottawa.....	That portion of Ontario east of the western boundary line of the counties of Durham, Victoria and Haliburton including Lake Scugog and the eastern boundary of Muskoka and Parry Sound districts.
Sheppard, O. B.	Toronto, Ont.	That part of the province of Ontario, west of the eastern boundaries of the county of Ontario, and the districts of Muskoka and Parry Sound along the Mattawa and Ottawa Rivers and northward along the north eastern boundary line of said province to James Bay.
Duncan, A. G.	Marksville, Ont.	That portion of Ontario lying west and north of Lake Nipissing, the Rivers Mattawa and Ottawa and the north-east boundary line of the province to James Bay, embracing Nipissing, Algoma, Thunder Bay and Rainy River districts, Lake Superior and such portions of Lake Huron and Georgian Bay as lie adjacent or opposite to the part of Ontario above described.
Colcleugh, F. W.	Selkirk, Man.	Province of Manitoba.
Miller, E. W.	Qu'Appelle, N. W. T.	All the North-west Territories.
Stewart, Theophilus....	Dawson City	Yukon District, N. W. Territories.
Sword, C. B.	N. Westminster, B. C.	Province of British Columbia.

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The following are the officers in charge of the Government Fish Hatcheries :

Name.	Rank.	P. O. Address.
Armstrong, Wm.....	Officer in charge of Government Fish Hatchery.....	Newcastle, Ont.
Parker, Wm.....	" ".....	Sandwich, Ont.
Walker, John.....	" ".....	Ottawa, Ont.
Finlayson, Alex.....	Asst. officer in charge of Government Fish Hatchery.....	Magog, Que.
Catellier, L. N.....	Officer in charge of Government Fish Hatchery.....	Tadoussac, Que.
.....	" ".....	Gaspé Basin, Que.
Mowat, Alex.....	" ".....	Campbellton, N.B.
McCluskey, Chas.....	" ".....	Grand Falls, N.B.
Sheasgreen, Isaac.....	" ".....	South Esk, Miramichi, N.B.
Ogden, A.....	" ".....	Bedford Basin, N.S.
".....	Government Lobster Hatchery.....	Pictou, N.S.
.....	Asst. officer in charge of Government Fish Hatchery.....	Sydney, C.B., N.S.
Sword, C. B.....	Officer in charge of Government Fish Hatchery.....	New Westminster, B.C.
Colcleugh, F. W.....	" ".....	Selkirk, Man.
Kemp, Ernest.....	Oyster culture.....	Ottawa, Ont.

NOTE.—The list of the commanders of cruisers will be found in Appendix No. 12, page 267.

PRELIMINARY REPORTS ON THE FISHING SEASON OF 1899.

Since the adoption of the system of publishing the statistics of fisheries for the year previous to the date of publication, our inspectors have been requested to report briefly on the general prospects of the recent fishery operations in their respective districts or provinces. A glance at these concise reports (herewith appended) will give a fair impression of the principal fluctuations of the various species in the different provinces as compared with previous quantities or values. The prospects that the total value of the Canadian fisheries will exceed that of 1898 are encouraging. The substantial increase in the pack of the British Columbia salmon industry alone would justify such expectations. It is therefore safe enough to estimate this total value of our catch for the season just closed at *twenty million dollars*.

NOVA SCOTIA.

CAPE BRETON ISLAND.

Inspector A. C. Bertram, of North Sydney, C.B., states that the fishery statistics for the year 1899 will show a marked increase in the catch of cod, haddock and lobsters, and a decrease in the catch of salmon and mackerel. The statistics in the other branches will vary but little from those of previous years. Not for years in the inshore waters have cod and haddock been found so plentiful. Although scarcity of bait in some localities and the presence of dog-fish militated against a great catch of cod and haddock, still the statistics will show an increase of at least 45 per cent over those of the three previous years. Towards autumn, squid, which is the best known cod and haddock bait, was found plentiful in the inshore waters, which proved of great benefit to the fishermen who were engaged in prosecuting the cod and haddock fishery. The market for this class of dry and pickled fish was good and the prices in advance of last year. The system of cold storage for the preserva-

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tion of bait about being inaugurated by your department in the principal fishing districts in the maritime provinces, will be of incalculable advantage to the fishing industry. The system is so good that it appears to me that all that is now necessary is the co-operation of the fishermen themselves. The Government seems to be doing its duty for the promotion of the fishing industry and the fishermen should not be slow in taking advantage of the benefits conferred. I regret having to report a great failure in the mackerel fishery this season. These fish were conspicuous for their absence in our inshore waters throughout the whole year. Whether in their journey to and from the spawning grounds this season, mackerel, for some unexplained cause, proceeded through deep water instead of following the shoal waters of the coast line and visiting the bays as heretofore, or these fish are disappearing as a result of the destructive purse-seine in former years, particularly while en route to the spawning grounds, I am not in a position in this preliminary report to state; one fact is clear, however, namely, mackerel are becoming scarcer every year in our inshore waters. The statistics will show also a marked falling off in the salmon fishery. Strange, but nevertheless true, every alternate year this fishery is good. Last year salmon were plentiful, but this year scarce. Next year the probabilities are there will be a good salmon catch in Cape Breton district. The reason for this is unexplained, but quite noticeable to those engaged in this fishery. There was an increase of one lobster cannery over the previous year. The returns in this branch will show an increased catch, which may be attributed to the extension given on the eastern and northern coast of Cape Breton. The industry is being more vigorously prosecuted year by year and the supply is being fairly well kept up.

This being only a preliminary report I am not in a position to discuss as accurately the fishery "crop" of 1899 as when writing my annual report as I will then have the statistics to aid me in doing so.

DISTRICT NO. 2, N.S.

Inspector Robt. Hockin, of Pictou, reports that the results of the operations of fishermen in this district during the past season, have been more favourable than for some years past. The catch of lobsters has not been equal to that of last year. The shortage will be about 5 per cent, but the increased prices obtained for the fish more than made up the difference. The cod, haddock, hake and pollock fisheries will show a yield from 10 to 20 per cent over that of last year, with much better prices obtained for those caught. The herring fishery has not been equal to last year, probably 25 per cent short, but the increase in the catch of mackerel will more than make up the difference to the net fishermen. Salmon were unusually plentiful in the Bay of Fundy, and on the Atlantic coast more were taken than last year. On the Straits of Northumberland, there is a shortage. Over the whole district, the catch will show a yield of about 10 per cent over that of last year. Shad (taken mostly in the Bay of Fundy) have been more plentiful than for many years, the catch being the largest since 1879. Gaspercaux seems to be becoming scarcer each year, and unless they have free access to the lakes where they spawn, they will gradually become extinct. The yield of the halibut fishery will be about the same as last year. Other fisheries will not show any great variation in the catch from previous years.

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NEW BRUNSWICK.

Inspector J. H. Pratt, of St. Andrews, says that the same good fishing of all kinds enjoyed by our fishermen during 1898, was continued during the season of 1899. The statistics will not show as great a catch of sardine herring as in 1898, but better prices prevailed this year. The catch of large herring will also show a decrease. Owing to the two sardine canning syndicates at Eastport, Maine, competing against each other for herring to keep their factories running, our weir owners realized better prices for their sardine herring than they did during the previous season. The catch of cod, pollock, haddock and hake will show a decrease when compared with last season, owing partly to an increase in the schools of dog-fish frequenting the Bay of Fundy, and also to more men working at weir fishing and in the neighbouring sardine canneries. However, the line fish of all kinds brought excellent prices at the markets. The lobster catch will show about the same result as in 1898, with an increased demand from all the markets.

DISTRICT NO. 2.

Inspector R. A. Chapman of Moncton says that the aggregate of fish caught in this district will be a little larger than in 1898. Salmon were more plentiful in the Miramichi districts, but the catch was smaller on the Restigouche River and coasts of the Baie des Chaleurs than during the previous year.

Spring herring were taken for bait, food, &c., in usual immense quantities, but those caught in August and September on the banks between Caraquet and Miscou were not as plentiful as usual.

The catch of codfish was very large and prices higher than for many years which made this a most profitable season for those engaged in this important fishery, and will lead to considerable additions to the number of vessels and boats employed.

Smelts were plentiful but want of frost at the first of the fishing season as in 1898, makes the catch only about an average one, and goes to show that it is impossible to depend upon a fixed date to commence, as while some years fishing could safely begin on or even a little before December 1, in other years (as in past two or three) considerable quantities of fish caught on and after this date are lost for want of cold weather. This is certainly a very important fishery realizing hundreds of thousands of dollars in cash at a time of the year when there is very little other employment for many of those engaged in it.

The quantity of oysters taken will be rather under the average, but several thousand barrels of hard shell clams (quahaugs) have been raked at Buctouche for the American market. The high prices prevailing for lobsters has still further stimulated this fishery, and more traps and gear were put out than ever before, the result was an increased catch in the Straits of Northumberland, but scarcely as many on the other parts of the coast, making the aggregate pack a little above that of last year.

Mackerel were even scarcer than usual, very few of these fish are now taken except off the coasts of Kent county where a large number of boats and several steam tugs are employed fishing and collecting the fish.

The catch of bass will be somewhat smaller than in 1898.

Outside of these several kinds named, which are the principal fish taken, there will be not much change from former years.

PRINCE EDWARD ISLAND.

Inspector J. A. Matheson, of Charlottetown, states that the values of the fisheries of this province will be in excess of last season's. Owing to the high prices of cod and hake, that branch of the industry has been more vigorously prosecuted. The catch of lobsters in Queen's and King's counties has been larger than last year, but in Prince the catch will be below the average. Mackerel still continues scarce, but a few small fish appeared on the coast, which may be an indication of those fish again returning to our waters, which would be a great boon to our fishermen. The oyster catch in Prince county has been larger than last season, and the beds appear to be well stocked. Prices were sustained throughout the season, and those engaged in the business have been well remunerated, but in other parts of the province the catch was below the average. All other kinds of fish were taken in about the usual quantities.

PROVINCE OF QUEBEC.

Comdr. Wakeham, M.D., the officer in charge of the Gulf of St. Lawrence Division, reports an increase in the general return from the fisheries for the season of 1899, over both the previous years. This will be due entirely to the improvement in the cod and herring fishery in Gaspé and Bonaventure. On the Labrador the summer cod fishery failed as in 1898, but in August and September the off shore fishing was good, had it not been for this there would have been considerable distress on the Labrador. The salmon fishery on the north shore of the gulf was about an average, but in Gaspé and Bonaventure, it was much below an average run. As the rivers are reported well stocked with breeding fish, it is the general opinion that the bulk of the fish ran in after the netting season was over. No salmon nets were fished on the Quebec side of the Restigouche, the Restigouche Salmon Club having purchased the net fishing rights from the Quebec Government. On the New Brunswick side of the estuary, the nets were fished as usual. The lobster pack will show a very decided falling off. Mackerel were abundant at the Magdalen Islands in the spring, and a good fall fishing was looked for, but an unusually heavy north-east gale occurring on September 4, the fish seemed to be driven off and never returned. The smelt fishing has been good. Prices paid for fish have been high. The crops have been abundant. The fall has been open and free from heavy storms.

Inspector Nap. Lavoie, M.D., of L'Islet, reports: On that part of the counties of Bonaventure and Gaspé fronting on Bay des Chaleurs, cod fishing was good. Bait was abundant at all times, and very few heavy storms occurred during the fishing season. Prices were almost double. The fish also appear to have returned in numbers to banks which they had forsaken for several years past. Salmon net fishing was comparatively poor, but prices ruled high. Salmon angling was far from being a success. The prevalence of east winds, and the slow disappearance of ice from the shores are instanced as reasons for this ill success. Herring fishing was excellent, and prices were one hundred per cent better. Lobster fishing, about the same as

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last year, although the results are far from comparison with those of fifteen or eighteen years ago. The reason lies in the fact that these crustaceans have been overfished, and that some grounds are completely exhausted. There were in operation last year, 31 canneries in Gaspé and 9 in Bonaventure. Some of these did no more than cover men's wages. Trout, halibut and smelt fishing were good.

Most of the above remarks apply to that part of my division which extends from Gaspé to Matane. Cod and herring especially were abundant, and prices most remunerative.

On the south shore of the River St. Lawrence, from Matane to Beaumont, the scanty information which I was able to procure leads me to believe that the total yield of the fisheries is somewhat better than last year; Herring and eels especially turned out well, while mackerel and shad failed in several localities. Salmon and bar fish seemed to be less abundant than in 1898.

Inspector A. H. Belliveau, of Ottawa, who has charge of the western division of the province of Quebec, reports as follows: After the province of Quebec assumed control of its inland fisheries, according to the decision of the Privy Council Judicial Committee, I was one of the three inspectors of fisheries appointed by the Federal Government to replace the large staff of overseers whose services had recently been dispensed with. This district comprises that part of the province lying south-west of the Saguenay River and Bellechasse county, including 56 constituencies.

While the issuing of fishery permits is conceded to the provincial authorities the regulation of the close season, the reservation of certain waters, as well as the particular conformation of fishing implements, etc., is still vested in the federal power, hence the necessity of continuing a few officers in charge. If the protection of fisheries is our mutual object, it becomes most important that friendly feeling should prevail between both authorities. For my part, I may be here permitted to testify that I have been well received everywhere by the provincial officials from the Hon. Commissioner to the humblest of his fish and game keepers. It will be beneficial to the general protection of fish, as well as advantageous to officials, that they should meet occasionally. In a few moments of conversation, the inspector may impart to the new officers more explanations respecting his duties, &c., than could be accomplished by months of correspondence. The inspector, at the same time, acquires practical knowledge *re* habits of certain species, or the make up of different fishing gear, &c. For over twenty years, I had been issuing licenses for fishing implements with which I was not familiar, and I was very much interested in seeing them in operation last summer. No doubt that occasional visits from the inspector also strengthens the hands of the conscientious officer who may feel somewhat reluctant or indifferent in enforcing obnoxious enactments, perhaps against his immediate neighbours. Thus he will inform these fishermen that instructions received must be enforced, as he knows not when the inspector might return and censure him for neglect of duty. This moral suasion will have the double beneficial effect of awakening the apathy of the indifferent overseer, as well as deterring a great many from participating in illegalities which otherwise they would not have refrained from. Overseers, who had been under our regime, expressed regrets that our acquaintance should have been deferred until after our official separation. However, it convinces me all the more of the usefulness

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of a personal inspection of subordinates. It is true I had no direct orders to give to the employees of the local government. Although serving different masters, our aim and object should be identical, and I could at least advise most of them, by answering their questions, at the same time judging who were best adapted or fitted to perform the fisheries protective duties entrusted to their charge. Unfortunately a few of these officers with magisterial powers were found quite illiterate not able even to sign their names. It would be difficult for such to institute legal proceedings against offenders as well as inspire the respect due to their positions in their respective localities. During my visit I found an overseer living over thirty miles from his division, who would thus have a sixty mile drive to commence the inspection of the insignificant stream under his charge passing by another officer whose salary would perhaps have been curtailed to pay this useless guardian. The Provincial Government should utilize the services of every game keeper as a fish warden, by giving them special instructions respecting the protection of fish life. Some of the local officers receive no other compensation than the occasional fines they might impose upon convicted poachers. I do not believe this system of remuneration conducive to efficiency. Let the emolument be ever so small, but let it be a fixed one, otherwise the official is looked upon as a spy and informer; and as such, is despised by nearly the entire community, instead of receiving the assistance of well disposed citizens to secure convicting evidence. Poorly remunerated officers will render poor services in the protection of either fish or game.

As the season was rather advanced when my appointment was confirmed, I found it impossible to visit every part of the large district confided to my supervision during the first summer. However, I visited many fishing localities on the mighty St. Lawrence from the United States boundary line to the Saguenay River with its principal tributaries, such as the Ottawa, the Richelieu, the Yamaska, &c., which form the main portion of my district. The large lakes of St. Francois, St. Louis and St. Pierre, merely enlargements of the St. Lawrence, are still considered important fishing centres, especially the latter.

Notwithstanding their apparent insignificant importance to the casual observer even in their somewhat exhausted condition, the yield of the fisheries of this district exceeds annually \$150,000. It is useless to attempt denying that, not only fish are becoming scarcer in the old settled localities and are also falling off in size, but that the finer grades are making way to coarser species now frequenting our public waters. A visit to the fish markets of our large cities, especially the Canadian Metropolis will convince any one of the above facts. So small are some kinds of fish, that it seems a regrettable shortsightedness on the part of the fisherman who captures them alive, not to have liberated them; but so long as he is tolerated in his offering for sale such immature fish with impunity, so long will he continue to sacrifice quality to quantity. For instance, it is pitiable to see on the markets sturgeon under twelve inches in length, a fish that grows so rapidly, and which would become so valuable in a few years, if only allowed to escape the small meshed gear. The same remark applies to pickerel, pike and other species. On several occasions large quantities, mostly from the Sorel district, have been seized and condemned as unfit for food by our officer Mr. Riendeau, who keeps a close watch on the Montreal fish markets as well as on the different boats supplying them from Chateauguay to Yamaska. Sub-

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section 9 of section 14 of the Fisheries Act, chap. 95, should be so amended as to specify a minimum length or weight of the species it seeks to protect. Once the fishermen are duly notified that certain kinds of fish of a stated length or weight are liable to confiscation on sight, there would be less tendency to decrease the size of mesh in their gear and the market supply would at once improve. On the Bonsecours market, one meets fishermen from Valleyfield to Nicolet, and it is amusing to note how the Chateauguay and Boucherville seiners will complain of and protest against the *verveux* of the Sorel and Grand-Nord divisions, while the owners of the latter complain against the use of the seine. To a certain extent, both contentions are right. The seine is a destructive engine, the use of which if not entirely prohibited should at least be confined to certain localities where no game fish are known to spawn and limited to early spring and late fall fishing when the water is cold and the coarse fish is firm and in good condition. The *verveux* or hoop net is only objectionable in the abuse of its conformation, either in its small mesh, length of wings, leaders, etc., or to its being set so as to bar the passage of fish in narrow streams. In both these fishing engines, the fish are captured alive and there is no excuse for not liberating any immature or game fish which the law chooses to protect.

Judging from the number seen around the residences of fishermen as well as those still set in the bays of Lake St. Pierre, I am of opinion that most of the fishermen own eight, ten or twelve of these *verveux* each, and some had even as many as twenty-five, while nobody held license for more than four or five. As they bear no marks of being licensed implements, it is difficult for the officer to discriminate which are illicit or not, but it is quite certain that the licensee of a couple of *verveux* uses four or five perhaps more, while many have no licenses at all. These are set in such a way that the indicating pole is cut under the water, thus nothing appears to the unobservant. It is estimated that there are no less than 3,000 such fishing engines around Lake St. Pierre and it is doubtful whether 300 pay license fees. The shallow bays in the vicinity of Sorel as well as those of Yamaska County, all in Lake St. Pierre, are well adapted to this kind of fishing. Some stringent regulations should be adopted once for all to preserve this mode of fishing to be strictly enforced. I made a special report on this subject when visiting Lake St. Pierre, which is on the proper file of the department.

Special reports were also made after my visits to the Chateauguay division, where, owing to a misunderstanding, more licenses were issued than formerly, as of recent years it was the intention of our department to curtail netting as much as possible in both Lakes St. Francis and St. Louis. The Federal Government kept these waters for angling, trolling and night lines purposes only. Their proximity to the boundary line makes the upper part of Lake St. Francis a fashionable summer resort, so the residents in the vicinity of Dundee were more than surprised to learn of the issue of a license to a privileged individual for twenty-five hoop-nets and four gill-nets, who also claimed exclusive fishing privileges for about twelve miles of the lake coast. One night fourteen of these hoop-nets disappeared, and were either destroyed or perhaps used by the poachers in remote bays or creeks where they could more easily escape detection in their nefarious work. I also reported on the fishing districts of Yamaska, Richelieu and Ottawa rivers suggesting the recommendations I thought best for their preservation.

The different close seasons are now better observed especially in the Montreal districts. No fisherman would dare to bring any protected fish there during its close time. Generally fishermen now better understand that such protection is carried on for their best interest.

Without pretention of being an authority respecting close season for fish, I cannot help alluding to what seems an anomaly in the time fixed for maskinonge in Quebec, commencing on May 25 and ending on July 1, while in Ontario the season begins on April 15. That is, on one side of the Ottawa River, for instance, one can fish for maskinonge during five weeks of the close season on the other side. From what I have heard, these fish are done spawning by the time the close season commences. The Ontario season seems the right one, as these fish are reported spawning the last week of April and the first two in May.

I inspected several saw mills especially in the counties of Montmorency and Levis with regard to the escaping of saw-dust and rubbish in the streams, reporting specially in each case.

I took a hand at the distribution of fry in the lakes of Terrebonne county, and labelled some lobster cases for shipment from Montreal.

As instructed, I also held an investigation in the county of Rimouski respecting the payment of bounty claims for that district. As a result, over twenty-five per cent of the claimants were refused bounty for that year, the principal objections being that these parties were not genuine fishermen fishing for three consecutive months, but held other occupations, although capturing the required quantity.

ONTARIO.

Inspector A. G. Duncan of Marksville, who has been appointed for the Western division of Ontario, reports a falling off in the fisheries of the North Channel of Lake Huron from St. Joseph's Island to Little Current, where whitefish and salmon-trout are steadily declining and sturgeon being almost depleted, while pickerel are becoming the staple fish of the locality. This diminution is ascribed to overfishing with pound-nets of too small a mesh. On the south side of Manitoulin Island in the vicinity of Duck, Squaw, Fitzwilliam and Bustard Islands there will be an increase in the yield of whitefish and trout. Lake Superior will also show an improvement in the catch of its staple fishes. In Lake of the Woods district, the yield will be about equal to the previous one. Sturgeon seem as plentiful there as ever and it is stated that most of the caviare exported from the Dominion, now comes from that district.

Mr. Duncan recommends that a fish hatching establishment be located at Sault Ste. Marie, so well situated to serve both Lakes Superior and Huron. Many poachers took advantage of the unorganized state in which was the license system and enjoyed the best part of the spring fishing unmolested. The most of the illegal fishing in the eastern part of his division was carried on between Little Current and Bad River and in the vicinity of the Bustard Islands, also between Bruce Mines and the west end of St. Joseph's Island. On a single day four seines were seized and many doubtful boats in sight could not be overhauled, he is of opinion that he has somewhat checked the violations perpetrated in this vicinity.

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At Rosseau's Point, Port Caldwell and in Jackfish Bay he found different parties with tugs and nets fishing openly. These were genuine fishermen, ready to pay license fees when called upon to do so by the properly authorized officer. He does not believe that the fall close season was well observed as nets of all kinds were used. Two boats and some nets were seized during this time. According to Mr. Duncan no nets of any kind should be allowed to be used during the close season for whitefish.

Inspector F. H. Cunningham, of Ottawa, submits the following report on the fisheries of the Eastern division of the Province of Ontario for the year ended 31st December last.

This division was formulated by order in council and comprises all that part of the province of Ontario east of a line coinciding with the western boundary of the counties of Durham, Victoria, Haliburton (including the waters of Lake Scngog) and the eastern boundary of the district of Muskoka and Parry Sound.

This division, whilst not so important from a commercial point of view, is very important from the angler's standpoint, the waters being frequented by nearly all the varieties of sporting fish of the finest kinds. It is important not only for rod fishermen that these fish should be protected but the community at large benefit very materially from the influx of sportsmen to the various fishery resorts, especially those opened up by the Parry Sound railway. Not only are these waters worthy of the best protection that can be provided, but artificial means should be taken by the department to increase the supply of sporting fish in these inland lakes. The Bay of Quinte affords splendid bass fishing and the neighbourhood affords good facilities for artificial reproduction of this species at a small cost.

The fisheries of the province being handed over to the local government just previous to the spring close season, the difficulties connected with the organization and appointment of an entirely new staff of officers made it impossible to prevent illegal fishing. Consequently all through the eastern division illegal work was done, This was especially the case at Rice Lake, where, owing to the location of the spawning grounds, fish can be very easily secured by poachers unless efficient protection is afforded. Fishing throughout this division has been good during the past season. Glowing reports have been received of the excellent fishing in Charleston Lake. This is attributed to the fact that considerable quantities of fry have been placed in these waters for some years past, and points to the success of artificial fish culture.

Whilst the most important fishing points of this district have been visited during the summer, a considerable portion has yet to be inspected, this refers mostly to inland lakes.

Considerable inconvenience has been caused, and in fact the work of the Dominion inspector has been retarded through the action of the provincial fisheries branch in neglecting to supply this department with a list of their officers, and also a list of the licenses issued. This information would greatly facilitate in the proper performance of the duties of a Dominion inspector.

Numerous objections have been made to the present close season for salmon trout, the claim being made that the first of November is too late, and the close

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season should commence on October 15 and end on November 15. This would cover the spawning season for this species in the eastern district. From such proofs as I have been able to procure, I am strongly under the impression that steps towards changing this close season should be taken, and, if approved, I will make further inquiries in this direction during the coming summer, and will take some definite means to ascertain the exact time of spawning next fall.

Inspector O. B. Sheppard, of Toronto, says: The catch of commercial fish this year has been an exceptionally good one. In the Lake Huron and Georgian Bay district, the catch of trout has been considerably above the average, while that of whitefish, pickerel, herring and sturgeon has been fully up to the average. In Lake Erie the catch has been exceptionally good, the catch of sturgeon being considerably above the average, while all other kinds have been fully up to former years. The long open season has made the herring fisheries specially good, the late run being the best for years. Herring season usually closing about the last of November, this year has been prolonged on account of mild weather till the end of December, with very satisfactory results to the fishermen. The prices of all commercial fish have been maintained, and the fishermen in my district have had an excellent financial result. The good fishing this year can no doubt be traced to the excellent protection service of the Dominion government during past years, and I am sorry to say the provincial government has not during the past season taken such active and drastic steps to protect the fisheries as has been done heretofore, and if this is not remedied in the near future, we may speedily look for a diminution of the catch in this district. Of course the provincial government has only recently taken hold of the protection of the fisheries, and had not the experience of the Dominion government in this matter, and will probably, as the requirements become known to them, take more active steps than has been done in the past year.

Rod fishing for black bass, maskinonge and brook trout has not been nearly so good as in former years, due, in my opinion, almost entirely to the want of proper protection. This part of the protective service has been sadly neglected in the inland lakes and Georgian Bay district, and if not looked after more carefully in the very near future, will result in thousands of tourists staying away from our northern inland lakes, and the loss of a great amount of money which they yearly spend for fishermen, guides, boatmen, hotelmen, and other expenses.

NORTH WEST TERRITORIES.

Inspector E. W. Miller, of Qu'Appelle, says:—'The general condition of the fisheries in the North-west Territories is reported on favorably by nearly all the local officers; but there has been a falling off in the amount of fishing done in the more settled districts owing principally to the great demand for labour in other branches of industry. The heavy rainfall of the season cannot fail to have a very beneficial effect on fish life in the smaller rivers and lakes, many of which had become so diminished in volume as to drive all fish from them. The rivers continued in flood for a lengthy period and the usual destruction of spawning fish by traps, &c., was thus almost wholly prevented. The few whitefish lakes in Assiniboia are much in need of restocking with fry, former adverse reasons and persistent fishing having much

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depleted them. The large Northern Alberta lakes, particularly lakes Ste. Anne and La Biche, have made most satisfactory progress and promise to soon recover their old time prolificness. The fisheries in the Prince Albert district are in good condition but owing to the cessation of the export trade, considerably less fishing is done than formerly. It was found necessary to close the Cedar Lake sturgeon fishery for the summer, the great demand for caviare tending to encourage more fishing than is consistent with the permanent preservation of this valuable fishery.'

BRITISH COLUMBIA.

C. B. Sword, the recently appointed inspector of fisheries for British Columbia reports as follows:—'The pack of salmon for this year has been considerably (more than 50 per cent) above that of 1898 though not reaching the pack of 1897 by 250,000 cases. There has as in 1898, been a considerable shipment to Japan of dry salted salmon of varieties (the 'dog-salmon' and 'humpback') formerly looked upon as of no commercial value. Some of these have been put up by some of the packers in cases as an experiment with very encouraging results. The business of exporting fresh salmon in cold storage also shows a satisfactory development, there being an increase of about 1,000,000 lbs. over the amount exported in 1898. Of barrelled salt salmon the amount is 850 barrels more than in 1898. The catch of sturgeon has fallen off considerably, being only 278,650 lbs. as against 1,137,000 lbs. in 1897, and 770,000 lbs. in 1898. Only one company is engaged in the business of shipping halibut. They report the result of their year's operations as very satisfactory. Four additional canneries were established on the Fraser River in 1899, and there will probably be several built at different points on the northern coasts during the coming season. The salmon fishing is the only fishery in British Columbia which can be considered as having been prosecuted to anything like its capacity, our deep sea fisheries being still practically untouched.'

PARIS EXHIBITION, 1900.

The Department of Marine and Fisheries is taking its part in preparations for an adequate display of Canada's vast piscine wealth at the Paris Exhibition, 1900. Several shipments of cases containing specimens of fish, aquatic birds, fishing products in great variety, have already been made to France, and the exhibit is not only designed to be illustrative of all the marine and fishery resources of the Dominion, but will be so arranged and displayed as to attract wide attention, and to form, it is anticipated, a notable feature in the representative displays of all nations, thus acting as an educational agency, and a means of disseminating broadcast a knowledge of the products of the Dominion.

I have the honour to be, sir,

Your obedient servant,

F. GOURDEAU,
Deputy Minister of Marine and Fisheries.

SPECIAL
APPENDED REPORTS

BY

PROFESSOR E. E. PRINCE

Dominion Commissioner of Fisheries

1. WATER POLLUTIONS AS AFFECTING FISHERIES.
 2. NEGLECTED STRUCTURAL FEATURES IN YOUNG FRY.
 3. THE OBJECT OF A CLOSE TIME FOR FISH.
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1899

SPECIAL APPENDED REPORTS

I

WATER-POLLUTIONS AS AFFECTING FISHERIES

BY PROFESSOR PRINCE, COMMISSIONER OF FISHERIES, OTTAWA.

Fishery legislation in different countries bears testimony to the importance universally attached to the evil effects of water-pollution upon fish life. Clauses are, as a rule, found embodied in codes of fishery regulations, with the object of directly or indirectly preventing the poisoning and polluting of waters inhabited by fishes. Yet the true relations of the various polluting agencies to the conditions of fish-life are little understood generally, and the nature of diverse injurious influences, the different modes in which foreign matters affect the finny tribes, that is to say, the comparative harmfulness or harmless of what are known as deleterious matters, have never been thoroughly and exhaustively tested and investigated. There can be little doubt that many ideas which are prevalent upon this subject have little basis in fact, and it is unquestionable that many well-meant attempts to cope with the supposed evils of river- and lake-pollution have been made without adequate knowledge. The object, of course, is to prevent the wasteful and wholesale destruction of fish, whether by design, or by negligent poisoning of waters: but the question remains to be decided as to what agencies, usually called pollutions, are really harmful to fishes and harmful in such a degree that serious and extensive destruction results. In England the existing laws are extremely severe upon this matter, but no doubt cases continually occur in which it is difficult, if not impossible, to prove clearly that the fisheries are injured, and, as Sir Frederick Pollock has pointed out, offenders may evade the law, or at any rate escape the penalties, if steps have been taken to render innocuous the alleged deleterious substances which have caused the pollution. As the authority named says:

"Dynamite or other explosives must not be used to catch or destroy fish in a public fishery in any part of the United Kingdom, or in the adjacent seas within a marine league of the coast, nor in a private fishery in England, on pain of fine up to £20 or imprisonment, which may be with hard labour, up to two months. The poisoning of any salmon rivers, as well as of any waters where there is a private right of fishery, with "any lime or other noxious material," in order to destroy fish, is an offence punishable with penal servitude up to seven years. Pollution of salmon rivers "to such an extent as to cause the waters to poison or kill fish" (though not intended to have that effect) is punishable by fine on an increasing scale, ending in £20 a day after a third conviction. But the party may escape these penalties, if his act in sending refuse, or whatever it may be, into the river, is not otherwise unlawful, and he can show that, being thus in the exercise of his right, 'he has used the best practicable means, within a reasonable cost, to render harmless the liquid or solid matter so permitted to flow or to be put into waters.' Probably it is not difficult to satisfy justices of this in a manufacturing district; again, if the stuff poured into the river is so noxious that there are not any practicable means at all of rendering it harmless, it is by no means clear whether any penalty is incurred. The person complained of may also, if a decision against him would cost him more than £100, require an action to be brought in the High Court of

justice to settle the question whether he has used the "best practicable means," and it is not hard to guess what, on such a question, the bias of jurymen in a manufacturing country is likely to be."

Briefly stated, pollutions, so far as rivers, lakes and tidal waters are concerned, may, in their nature and effects, be physically or mechanically deleterious, like sawdust or the mud and gravel resulting from hydraulic mining, or they may be chemically injurious, and in a larger or less degree poisonous, like lime, drugs, waste of dye works, pulp and paper mills, etc., or they may be physiologically deleterious, but not toxic in the gravest sense, inducing unhealthy conditions in the fish, such as appears to result from putrescent matter, sewage, decaying animal and vegetable substances, etc. The Canadian Fisheries Act aims to include all these, and subjects to specified penalties every person who causes or knowingly permits to pass into, or puts or knowingly permits to be put lime, chemical substances or drugs, poisonous matter, dead or decaying fish, or remnants thereof, mill rubbish or sawdust or any other deleterious substance, in any water frequented by any of the kinds of fish mentioned in the Act, Chap. 95, 1886, s. 15, ss. 2, amended by chap. 51, 57-58 Vict., s. 6.

It is not necessary to prove the deadly character of the polluting substances. The provision does not, however, apply if it can be shown that the fish inhabiting polluted waters are of inferior kinds, not mentioned in the Act or regulations under it. Thus, injury to eels or fresh-water ling is not included, but the prohibition applies in waters inhabited by salmon, trout, etc., and it is interesting to note that it embraces the triple division of injurious substances, to which I have alluded, for lime, chemical substances and drugs belong to the essentially toxic or poisonous group, sawdust is really a physically deleterious agent, and the other undesirable substances may be said to include pollutions which affect fish life in ways differing from those directly destructive to life, or physically noxious and morbid in effect.

For many years it was thought that the deadly fungus, commonly called salmon disease (*Saprolegnia*), was due to river pollutions, which were supposed to encourage if not to originate the aquatic saprophyte. Researches have shown that this is not the case, and outbreaks of salmon disease have repeatedly occurred in waters in which there was no special pollution whatever. Not only so, but the detested fungus frequently appears first in the upper waters, and it is indisputable that salmon on entering rivers from the sea are without exception in a healthy condition. Water in which lime is present in appreciable quantities appears very favourable to the growth and development of fish fungus, but the plant cannot originate unless the spores are there either as minute oospores, or as zoospores, which are really a very early stage of the fungus growth. The spore germs multiply and disperse so rapidly that the infection of every fish in a salmon river may be effected in a comparatively short period—healthy fish as well as weakly and injured fish, though the latter are attacked more readily.

But deleterious substances differ not only in themselves, so far as their direct influence upon fish life is concerned, they also vary in their injurious potency according to the circumstances and the places where introduced. Substances may be seriously harmful in a slow-running river, which are comparatively harmless in a swift stream, and I cannot fully agree with the view of certain eminent authorities that it is little or no advantage to keep pure and free from pollution the upper waters if the lower waters and estuaries are allowed to be filled with impurities. Indeed there is force in the contention of Boccia that 'the true cause of the depletion of rivers originated and begun in the destruction of the egg, and not in the fish, when once brought into being.' The experiments of Mr. A. Hansen, on the Norwegian River Soli, in 1872, prove that unfavourable conditions in the lower waters are of far less moment than they are in the shallow headwaters, as Prof. Rasch has pointed out in his paper entitled 'Is sawdust an obstacle to the ascent of fish?' The estuaries of certain rivers on this continent are polluted with saw-mill waste, etc., yet the injury done does not compare with that which would follow the pouring of saw dust, edgings, etc., from the mills into the upper waters. Such waste would cover the spawning areas, where the eggs are deposited and where the fry pass their first days. The Fraser River, B.C., has for twenty years been polluted to a frightful extent with

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the refuse and offal from dozens of large salmon canneries. This offal, composed of heads, fins, tails, entrails and fragments, which it does not pay to utilize, is dumped into the water near each cannery. At first it sinks, and then it rises to the surface, chiefly on account of the expansion of the gases formed in the swim-bladders and intestines. A prominent New Westminster fisherman, who gave evidence before the British Columbia Fishery Commission, 1892, (printed at Ottawa, 1893), said: 'I think at the mouth of the river its effect is very bad. Down there it floats and lines the banks and gets foul of the nets—heads, guts, etc. It destroys the nets more than the salmon do and makes the water filthy—not fit for use unless cooked.' Many fishermen on the Fraser River hold these views, and claim that it deters the fish from coming in. But it is by no means established that it is detrimental to the incoming schools of fish. The Joint Fisheries Commission, 1896, indeed reported as follows on this question:—'The cannery people everywhere are confident that no harm results from their method of disposing of the offal, unless it be in certain restricted areas where the eddies cause its retention for a time. During the greater part of the canning season the volume of water in the Fraser River is large, its temperature is low and the current strong. The offal in a fresh condition is said to sink at once and to disappear. The inhabitants, generally, along the river oppose the practice on the ground that it is injurious to health, from which standpoint, however, the question is not of international significance. With respect to the open waters of the Sound, we have heard of no complaints regarding this matter, although some of the offal is known to wash ashore in places. No evidence has been obtained which shows that the throwing in of the offal has had a pernicious effect upon the movements or the abundance of the salmon. If such an effect has actually been produced, as may be the case it has not, up to the present time, made itself sufficiently manifest to bring it within the scope of observation. We are led, however, to deprecate the continuance of the practice for local reasons at least, and would urge further experiments looking to the utilization of the offal as an incentive to its retention on land.'

In the cod and mackerel fisheries, as well as in the lobster canning industry, great quantities of offal are as a rule accumulated, which are dumped into the sea close to the places where the fishing or the canning is carried on. So vast was the quantity thrown into the inshore waters along the Labrador coast and the north shore of the Gulf of St. Lawrence that a special prohibition was enacted to prevent the abuse which, it was claimed, was driving the schools of cod away. Along the shore referred to the cod come in very close in immense schools, and are taken to a large extent in fixed traps or pounds. A similar injury was said to have been done to the schools of mackerel off the Atlantic coast of Canada, especially by United States mackerel schooners, which cleaned and split their fish on board and threw over the 'gurry.' The harm done by lobster canneries has no doubt been exaggerated, as the quantity of foul refuse is limited as compared with the 'gurry' from fish curing operations.

Taking up the question of water pollution as produced by agents which are essentially physical or mechanical in their effects, and which do not in any degree, or in a very small degree, act as chemical poisons, or as physiologically harmful, it is doubtful to what precise extent such physical agents, say, suspended particles of sawdust, or gravel, injuriously, affect fishes in the adult condition. It is true a widespread impression prevails that such suspended foreign matters are most harmful. This impression has little accurate or scientific basis, but it has been stated and restated with the utmost confidence. Thus in a report of this department published in 1889, Part II, p. 12, the following emphatic expression of opinion appeared:

The poisonous effects of sawdust, when allowed to pass into rivers and streams, are so manifold and self-evident to the rational or practical observer, that it would appear almost needless, in the present enlightened state of the world, to require any special pleas or arguments to convince even the most sceptical person of its disastrous workings upon all aquatic life, of an animal or vegetable character, found in the tidal, lacustrine or fluvial waters of any country. Wherever mill-dams have been built across streams, and where sawdust, mill rubbish and other deleterious substances have been cast into the water from saw-mills and other manufactories,

fish-life and vegetation of all kinds have been greatly lessened, and in many instances wholly destroyed. This is particularly noticeable amongst the higher order of fishes, especially the salmon family, which are largely of a migratory nature, many of them ascending rivers and other streams for breeding purposes. These waters are usually of the purest, coldest and most limpid description, and therefore best adapted for the propagation of the salmon species. These fish at the time of the first settlements of Canada were found frequenting almost every river and stream emptying into the sea, and the great lakes also. So plentiful were they in many of our waters, before the lumbering industry took such a strong hold in the erection of dams and saw-mills, with the consequent injurious effects from them upon fish-life that fish of all kinds were in great abundance. They were freely used by the inhabitants generally for domestic purposes, and also produced a large amount of traffic and commercial wealth for the country. But as the saw-mills and mill-dams increased in numbers with greater capacity for their work, the mill-dams formed impassable barriers to the ascent of salmon and other fishes to their natural spawning grounds above—and then the hurtful and pernicious effects arising from the sawdust and mill rubbish being constantly cast into the streams poisoned the spawning beds below, and stayed the growth of all vegetation, thus driving away insect life, which is the principal sustenance for fish in their younger stages of existence. As this improvident work of the mills increased in magnitude, so did the yield of all kinds of fish decrease in these waters until it has been found in some cases that, after stripping the neighbourhoods of all lumbering material and destroying all fish-life, these mills have gone into ruin and decay, leaving sorrowful mementos only of their destructive workings in the waters of the country for the inhabitants who follow after. It is, therefore, of the greatest importance that any law which provides 'that sawdust or mill rubbish shall not be drifted or thrown into any streams or other waters frequented by fish, should be maintained and strictly enforced wherever the continuance of fish life is held to be of any benefit to the people. There are yet to be found sufficient numbers of fish, natives of the rivers and other waters, left, from which, by proper protection and good husbandry, an immense supply of fish food and commercial wealth would be readily obtained for the general benefit of the inhabitants of the several sections of the country. Sawdust, as previously stated, is manifold in its range of destruction when allowed to be cast into waters to which fish are indigenous, or where animal or vegetable life is to be sustained. It is an artificial product, alien to and engendering latent diseases of various kinds, with fatal results in all waters where fish life exists.'

That mill-dams and other obstructions seriously damage rivers and waters resorted to by fish cannot be questioned; but this damage would be done even though no sawdust whatever were thrown in them. Further, the contention that sawdust in the streams is offensive to the fish and has caused them to forsake their accustomed haunts, as Dr. Milner some years ago claimed, has never been proved, whereas there is abundant proof that most fishes are not deterred by the floating particles of saw-mill waste. In the New Hampshire Fishery Commissioner's Report for 1885, it is asserted that harm arises from 'the sawdust getting into the gills of the parent-fish'; but there is no case on record of salmon, or shad, or any other healthy adult fish, being found choked with sawdust or in any way fatally injured by the floating particles.

When I accompanied for a time in 1893 the International Commissioners, at the request of the Hon. the Minister of Marine and Fisheries, nothing astonished me more than the extent and serious nature of the sawdust pollution on certain tributaries of the St. John River in New Brunswick. The main river is largely subject to this pollution, but not in any degree to the extent that obtains on some of the tributary rivers. The Aroostook River, which for over 100 miles runs through the State of Maine, and only during the last four miles of its course passes through New Brunswick is a flagrant example. Some of the largest lumber mills in that part of the country occur on its banks, and the lumber industry is of immense extent. Nothing could be worse than the condition of this fine salmon river, and a common opinion prevailed that no salmon could or would ascend it. Yet at the time of the commissioners' visit quite a number of salmon had been noticed a little above Cariboo and a

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fish-ladder had been provided to enable them to ascend an impassable dam at that point. Fairly large catches of salmon have been made in recent years, notwithstanding the view common a few years ago that sawdust pollution had driven them all away. This pollution is excessive, and, 'except for the small amount consumed by the steam mills, the river is made the common dumping ground for all the waste of this character,' said the Commissioners 'as the most convenient way of disposing of it, no regard being had to the public interests which are thus impaired.' Robust species like the salmon, sea-trout, brook trout, striped bass might not suffer harm, provided, as they are, with capacious mouth and branchial cavities: but it might be different with members of the herring tribe (*Clupeidae*), the shad, gaspereau, etc., with their small mouth-aperture studded with rows of erect teeth on both jaws, on the palatine bones, the vomer and the tongue, and provided with small rod-like gill-rakers, all combining to form a cage or sifting apparatus for retaining small shrimps and crustacea upon which they so largely subsist, for these fishes might apparently be readily choked by particles of sawdust clogging up their delicate oral structures. I have not been able to find, however, that any shad, gaspereaux or other migratory members of the herring family have been found dead in quantities on account of sawdust suffocation. In other words, so far as our present knowledge goes sawdust pollution if it does not affect the upper waters, the shallow spawning and hatching grounds, appears to do little harm to the adult fish in their passage up from the sea.

This opinion I find on reference to the Report of the United States Fish Commission Part VI, 1878, was expressed by Dr. H. Rasch when treating of the sawdust question in Norway. Professor Rasch is very explicit in the statement of his views, and does not shrink from claiming that 'while it is asserted that the sawdust introduced into the river from the saw-mills causes the salmon coming from the sea either to forsake its foster stream because of meeting the sawdust, to seek another river not polluted, or else, when the fish attempts to pass through the areas quite filled with sawdust, then this, by fixing itself in the gill-openings or between the gills, causes its death, yet later experience seems to entitle us to the assumption that sawdust neither causes the salmon to forsake its native stream nor produces any great mortality among the ascending fishes. The hurtfulness of the sawdust to the reproduction of the salmon is not so direct, but is exceedingly great in this, that it partly limits and partly destroys the spawning-grounds of the river.'

He goes on to give certain details of an experiment upon the effect of sawdust on young salmon transplanted from one river to another which was much polluted with this waste product. He says:—

'That young salmon bred from a race of salmon which has its own river, when they are set free in a strange river and one which is in an unusual degree polluted by sawdust, will not be prevented by this circumstance from returning to this last-named stream after their wandering in the sea, one had a convincing illustration in the great experiment instituted last year by Director A. Hanson. In olden times the salmon-shoal which had its spawning-place in Soli River could ascend to it through the then passable Soli cataract, but when they, for the sake of the increased mill-business, erected above the cataract a dam so high that the salmon could not ascend to their spawning-grounds, this salmon shoal gradually died out entirely.'

The conclusion to be drawn from such statements and experiments is this, that the gravest cause of the decline in most salmon rivers is due less to sawdust pollution which except in the breeding grounds, has principally a merely mechanical or physical effect, than to the mill-dams and other obstructions which prevent the parent fish from ascending and successfully depositing their eggs. If access is free to upper portions of salmon rivers usually less affected by sawdust and mill waste, the parent fish are not readily deterred by the pollution of the lower reaches of such rivers. The ruthless destruction of spawning fish by poachers and reckless netting is largely responsible for the decline of salmon in most cases. The question of decayed sawdust, and the effluvia resulting therefrom, is another matter. Aquatic vegetation and the minute forms of life dependant thereon are seriously injured and indeed killed off. That admits of no doubt, but this is not of great moment in regard to salmon and similar fishes, which cease to take food after entering fresh water. How far sawdust affects the smaller species of fishes is an interesting

question, and the late Frank Buckland, in some notes in which he bitterly opposed the pollution of rivers wrote:

'How very important, then, is it to keep pollutions out of salmon rivers; they may not be actually strong enough to poison or kill the fish, yet it is very likely they will deter many from ascending the river.

I think different fish must have different powers of smell; thus gudgeon, roach, &c., assemble at the mouths of drains—the largest I ever caught was in the drain that carries the abominations of the town of Winchester down into the river. Scavenger fish, therefore, I dare say, would not care much about stinking water, but the lordly salmon will not put in an appearance in localities where his regal nose is likely to be offended by unsavoury smells.'

The presence of small species of fish indicates the presence of microscopic food, and if that kind of food be present there is little doubt that the young salmon, if the upper waters be kept pure and unpolluted will survive their journey down to the sea when one or two years old.

On the whole therefore it cannot be maintained as proven that such pollutions as sawdust are seriously detrimental to the ascent and welfare of adult fishes. In the North-west Territories certain coal mines have begun to pour out dust and coal refuse into tributaries of the Bow River and other trout waters. It remains to be seen what kind of injury, if any, will be done to the various species of trout frequenting the rivers flowing from the Rocky Mountain Range.

Certainly it is hardly possible that any rivers in the world are more densely charged with physical impurities than the Fraser, the Skeena and other Pacific rivers. The muddy character of these great rivers always surprises the visitor, who has heard of their pre-eminence as salmon rivers, and the ideal salmon rivers are sparkling crystal waters. These Pacific rivers are vast streams of dilute yellowish brown mud. No contrast could be greater than that of these western salmon rivers and the bright and clear waters of Eastern Canada, or of Scotland and Ireland. Yet the physical impurities of the Pacific rivers have no apparent effect upon the fish, which blindly push their way up the beclouded current until they reach the purer upper waters. The fish can practically see nothing in their ascent, nor can they be seen by man except in some shallow eddy, where their black backs are visible protruding from the mud-laden water in which they are living. The muddy character of these salmon rivers enables great quantities of floating drift-nets to be used, and the schools of fish in their endeavour to ascend push their noses against successive walls of nets and as the meshes become filled with noosed fish, the rest descend and pass under the net only to mesh in the next net further up, and only those which pass net after net in this way reach the waters above fishing limits and continue their ascent up the descending murky current for hundreds of miles. These rivers are fed by tributaries which pour through channels of gravel, gravel famous for the rich intermixture of gold, so that the waters are yellow and turbid for great distances and it is only in the lakes and small upper tributaries that the water is free from diluvium.

The evil effect of this diluvium and of deposits of sawdust falling upon spawning grounds must be admitted, and the killing off of fish-food is another serious aspect of the matter, though this latter question, as already pointed out, is of minor account in regard to salmon rivers. An illustration of the alleged far-reaching effect of sawdust pollution may be found in the Bay of Fundy. In the vast upper stretches of this bay immense schools of 'fall' shad resorted in August to feed. The food, it was generally thought consisted of annelids or shad-worms. In recent years the shad have fallen off so seriously that the fishery is of little account compared with its former extent and value. Sawdust it is claimed floating out of the mouths of New Brunswick and Nova Scotia rivers, has been deposited by the tides upon the feeding grounds, and the shad-worms or food of the shad has been destroyed. This may or not be the case, though I have seen the surface of the sea in the Bay of Fundy covered for many miles with floating sawdust; but it must also be remembered that overfishing in the rivers in spring, when the shad are ascending to spawn, the stoppage of their ascent by dams, etc., must have had some effect, while the ruthless

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slaughter of emaciated and weak specimens in their descent after spawning has no doubt had much to do with their decimation.

Chemical pollutions are so varied and complicated, and their evil effects, though admittedly evil, are so diverse that they cannot be dealt with here as briefly as purely physical impurities. Examples could be cited almost without number of the deadly and disastrous effects of deposits of waste chemical substances in rivers. All the rivers in the great manufacturing districts in England and the United States once abounded with excellent fish, but they were used as mere drains for the reception of foul refuse of every description, and these waters were so loaded with offensive and poisonous matter that all fish life has practically disappeared. Scarcely one river can be named in England which is not at some part of its course chemically poisoned, and the inky black noisome rivers of West Yorkshire, of Lancashire and Cheshire are evidence of the direst extreme of chemical pollution, while the southern part of Scotland (except the extreme south-west) and Clyde basin, and the eastern part of Scotland from Dundee to Aberdeen, embrace portions whose rivers are largely contaminated by distillery refuse, tan, fibre, chemical and sewage pollution. The evidences of chemical pollution where it is disastrous should be readily seen. Schools of fish would of necessity be found floating in a dead or dying condition and in course of time the waters would become clearly uninhabitable and denuded of all fish life. The corporation of Newcastle-on-Tyne some years ago poisoned Byker Burn by using a disinfectant of which caustic soda was a principal component. A flood in July carried some of the poisoned water into the Tyne, and for eleven miles every kind of fish was found floating dead or in what was called a 'fuddled' or intoxicated condition. Caustic soda or soda leys is used in many industries, very largely for the purpose of dissolving resinous matters in grass and wood fibres. The dark-coloured fluid (soda and lime) which results is highly poisonous to fish and settles as a deadly putrescent sediment unless swept away by swift currents. If the fish survive, their quality, flavour and colour appear to be transformed. Indeed Mr. Harvie Brown has pointed out that they become utterly unfit for food. The chloride of lime used in bleaching works gives off a pungent and penetrating odour, and has exceedingly disastrous results upon fish life.

Chemical pollutions, as already stated, cannot be dismissed by any inclusive or general statement, though the noxious character of such impurities largely depends upon circumstances. The amount and the possibilities of dispersion and dilution must be taken into account, and it is certain that in some cases (as in bleaching operations) the waste liquids, if commingled, must tend to neutralize mutually their injurious effects. The alkaline and soapy solutions, and the admixture of calcium chloride and of bleaching powder and certain free acids, furnish precisely the elements necessary for neutralization and purification. The chloride of lime will precipitate the soapy solutions, while the free acids will precipitate the alkaline liquids and decompose the bleaching powder solutions. Advantage has been taken by some enlightened firms of this state of things, and without great expense they have adopted an arrangement for purification by mingling in ponds or tanks these antagonistic and neutralizing waste products. The chemical pollutions resulting from various manufactures are too numerous to refer to with any pretention to detail, but a number of more important examples may be mentioned as of special importance. Thus in paper making soda ash or caustic soda is largely used, resulting in a waste fluid of a dark brown hue charged with soda and lime and a certain amount of fibrous and resinous matter. This heavy fluid is harmful both chemically and physically, for it is poisonous, and of a nature so adherent that it lodges in and clings to the gills of fishes. Chloride of lime is also poured out from paper works, where white papers are made, calcium chloride being the bleaching agent used, while colouring matters are added to the waste in factories where blue and tinted papers are made. In recent years many other substances, china clay and mineral matters are mixed with paper pulp, all of which render still more injurious the waste fluids poured into the rivers.

Any one familiar with Yorkshire, Wiltshire and the west of England is well aware that the refuse from the wool-scouring, fulling, and dyeing works is of a most poisonous and polluting nature. The grease and impurities removed from the wool

as removed from the fleece are of a foul character, but still more so the refuse, a disgusting glutinous fluid, full of solid matter and rich in ammonia, which results from the subsequent process in the scouring mills. The streams into which scouring mills empty their waste becoming murky and filthy in the extreme, a stratum of hair slime and effluvium, which must choke even the strongest species of fish. Almost every stage in the various processes of textile manufacture is marked by some additional danger to fish-life. Thus the use of dyes is so extensive in some of the northern and western counties of England, that the rivers flow like streams of variously coloured ink. Many of the dyes, especially the aniline dyes, are less harmful than others, but the waste products of dye works are composed not only of fluids charged with extract of logwood, of indigo etc., but of chemical compounds used in the fixing process, called 'mordants' which may be bi-chromate and bi-tartrate of potash, muriate of tin, copperas, and these together with woolly fibres, and particles of logwood form a mixture of organic and inorganic impurities rendering even the larger streams densely turbid and deadly to fish-life. The bed of such streams becomes saturated with decomposing organic substances, and bubbles of putrescent gases continually rise giving off most offensive odours. Other textile factories such as calico print-works and bleaching houses produce similar waste products including mineral and vegetable dyes, and in a great many cases arsenic, while hydrochloric acid, sulphuric acid and chlorine occur, all of which are inimical to fish-life. Associated with the woollen and cotton-print industries there are others like the flax industry, carried on especially in the north of Ireland, which includes the process of 'retting'. Retting is really the dissolving either by a wet or dry process of the bark and other outer substances from the firm fibrous inner tissue, which is of value for textile purposes. When the flax or hemp is placed, as is largely done, in streams and ponds weighted with stones and allowed to reach a certain stage of fermentation, a dark colour is imparted to the water, and poisonous gases are given off. Professor Reichardt, referring to the retting process said:—

'Taking finally into consideration the fact that 1,000 cubic centimeters of retting water contained sixty-four cubic centimeters gases, whilst repeated experiments with river water showed that the same contained only 30·32 cubic centimeters, the fatal character of the mixture will become still more apparent in its relation to the breathing and life of fish.

'It cannot be doubted, therefore, that retting water will kill fish by its lack of oxygen, if from no other cause. In this all observations made on a large and small scale will agree. The fish immediately gasp for air until they become tired, and finally suffocate. Even leaving this hurtful mixture of gases out of our calculation, it must be granted that putrefying substances must exercise a hurtful influence, both directly by producing changes which are injurious to life, and indirectly by rapidly absorbing oxygen, and thereby depriving the surrounding objects of this gas which is so essential to all life.

'If only small quantities of retting water are mixed with large quantities of running water there may be no immediate evil consequences, whilst if this proportion is reversed the injurious consequences will make themselves felt very soon; in either case, however, poisonous substances are introduced in the water which had better be kept out of it.

'The introduction of retting water into fishing waters should therefore be strictly prohibited, and has actually been prohibited in many places. The retting water may be employed much more suitably in irrigating meadows, where, owing to the loose soil, it loses its putrid character very soon, and aids in forming good food for plants.'

One observer who paid considerable attention to the features observed in 'retting' flax, noted the direct poisonous effects upon the fishes inhabiting the 'retting' waters. He says:—

'As soon as the retting of the flax commences, the water begins to assume a brownish colour and to emit an offensive odour. This colour and odour increase in intensity from day to day, till the water has the colour of coffee, and the odour becomes so repulsive that I have often gone one-half league out of my way so as not to be obliged to pass near such water, especially in the morning and evening. The drier

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and warmer the temperature, the more intense will be the odour and the infection of the water.

'Whenever the water has attained a certain degree of putridity all the fish will strive to reach the bank, gasping for air, and in such a state of torpor that they can easily be caught with the hand. If they do not speedily get fresh, pure water, they die, and remain lying on the bank, where they serve as food for birds, or are caught in the grates of mills, from which they are gathered, only to be thrown away.

'At one station I have known years when fish of all kinds were picked off the mill-grates by the hundred-weight, some dead and some alive.'

Curious cases are on record, happily very few, of the destruction of fish by poisoning or asphyxiation, or in some other way arising from natural causes, specially the impregnation of water with toxic vegetable matters. On the great lakes of Canada there is annually a great devastation of fish, principally a species of *Clupea* commonly called shad or alewife, though the former name is wholly incorrect. The fish are practically identical with the gaspereaux which ascend the St. John River and other rivers on the Atlantic coast. It is stated that the fish were introduced artificially many years ago. To quote from the International Commissioners Report, 1896:—

'The alewife is supposed not to be indigenous to Lake Ontario, and the manner of its introduction is not known, but it now seems to be quite firmly established there, and is exceedingly abundant. It has no market value, although it is used to some extent as bait and fertilizer, and is supposed to furnish a large part of the food supply of the lake trout, wall-eyed pike and other species. It is said to spawn along the shores and to some extent in the creeks during the spring. This species has attracted special attention on account of the remarkable mortality which annually affects the schools. Large quantities of the dead fish become stranded upon the shores to the great annoyance of the inhabitants, and the fishermen believe that the pollution of the water and fouling of the bottom by this cause has had much to do with the depletion of the whitefish.'

Some authorities have thought that an excessive amount of vegetable matter, plant-spores, etc., which so charged the water as to impart to it an opaque green colour for a time in summer, is the cause of this mortality. I have found along the great lakes a similar mortality amongst yellow perch, white and black bass, and many small species, evidently due to a poisonous or noxious condition of the water at particular seasons of the year.

In June, 1895, a Quebec journal *L'Electeur*, published a letter addressed to Sir J. M. Lemoine by Mr. Gustave Ouimet, describing a fatal epidemic which had ravaged the fish in the Richelieu River and neighbouring waters. From the widespread character of the mortality amongst the fishes it would seem justifiable to regard the fatality as due to some temporary noxious condition such as might be expected in sluggish and turbid waters, especially during the hot summer months.

The following extract from Mr. Ouimet's letter shows that the disease or affection was not confined to the skin, upon which large round sores, red and white in colour, appeared; but the viscera and interior of the fish appeared to be destroyed, and there appears little evidence to support his theory that the cartridge and gun-powder factory on the banks of the Richelieu River, Vercheres Co., P. Q. was the primary cause of the malady. If these waters, like the more westerly waters of Ontario are temporarily rendered impure, and unfavourable to fish-life during the warmer months of the year by reason of minute vegetable matter, possibly microscopic spores of algae, and lowly plants, the widespread mortality referred to is explained, and the appearance of whitish or reddish sores upon the exterior of the fish and the decay of the internal organs are to be understood as subsequent and secondary results. The following extract from Mr. Ouimet's letter shows the view taken by that gentleman:—

"Il y a quelques années la cartoucherie de Bélœil faisait des expériences malheureuses dans la rivière Richelieu. Il s'en est suivi que des centaines de poissons de toutes espèces petits et gros ont été détruits. Les rives du Richelieu devinrent bientôt couvertes des cadavres de ces malheureuses victimes et la pêche est devenue de plus en plus rare. Depuis ce temps-là les Campbell avaient fait prendre au filet

des poissons de la rivière pour empoissonner le lac de la Montagne. Aujourd'hui le lac regorge de poissons morts et tous les jours on est employé à enterrer les poissons qui viennent mourir et s'échouer sur ses bords.

Je conclus de là, que les poissons tués jadis par la poudre ont été dévorés par des parasites inconnus et que depuis ce temps-là il s'est déclaré une épidémie sur la gente aquatique de nos parages. Les rares poissons vivants que l'on peut prendre à la ligne sont presque tous atteints du mal que l'on reconnaît à une tache, quelque fois deux, une près de l'épaule et l'autre près de la queue.

Dans ces taches se voient à l'œil nu des myriades de petits rongeurs cancéreux qui certainement sont les principaux auteurs du mal. Tout ce que je trouve de poissons morts sur notre grève je le fais enterrer profondément et couvrir de chaux.

Les parasites ne laissent que la peau—l'intérieur du poisson est complètement mangé. Le résultat de tout ceci est, que nous n'avons plus de pêche, que la chair du poisson de notre rivière est dangereuse à la consommation et que de nos rivages s'exale une odeur putride qui soulève le cœur.

Je regrette de n'être pas assez connaisseur pour apporter un remède au mal, et c'est pour nous un grand malheur d'être privés de la pêche qui était si abondante jadis. J'oubliais de vous dire qu'au lac de la Montagne c'est la barbus qui en souffre le plus, dans la rivière toutes les variétés de poissons sont atteintes: carpes, brochets, dorés, achigans, esturgeons. J'ai vu un cadavre d'esturgeon de près de sept pieds de long et pesant à peu près 80 livres, mort, couché sur le dos et atteint sur le ventre de plusieurs des taches dont je vous parlais plus haut, grandes comme des pièces de dix cents, quelques-unes blanches, les autres blanches et rouges; c'est désolant."

Various investigators have described diseases of the integument of fishes due to extremely small parasites belonging to the myxosporidia. These protozoan parasites, as a rule, cause excrescences in the form of pimples and warts, quite unlike the ulcerated and fungus-covered sores due to vegetable affections or to the special morbid condition of organs due to entozoan parasites. There is ground for regarding the unhealthy state and extensive mortality of fishes in the before-mentioned cases as induced by unfavourable conditions and by an environment not merely morbid but toxic and fatal.

About twenty years ago there was a serious mortality extended over a very wide area amongst the sea fishes in the Atlantic ocean, to the north of the Mexican gulf. This mortality was by many authorities attributed to the poisoning of the water by injurious vegetable matters, though others held that some volcanic or subaqueous disturbance had worked the evil. The captain, who first reported the occurrence, said that on his trip from Cedar Key he encountered a wide streak of poisoned water, covered with all varieties of dead fish, of more than a mile in extent, off Indian Pass, between Clear Water and Egmont Light. A very offensive smell arose from it, and a good many bottom fish, such as eels, were floating dead on the surface. A Tampa journal said:—'We opine that this fact upsets the theory of some as to this poisoned water being fresh water from overflow on the mainland, impregnated with poisoned vegetable matter, as there are no streams of any size flowing into the Gulf near where the fish were found.'

Possibly this event belongs to the same class as that of the destruction of tile-fish on the eastern coast of the United States. In my special report upon 'Fluctuation in Fish,' published last year, I referred to that occurrence in the following terms:—

'The disappearance of the valuable tile-fish which for three years (1879-82) was very abundant on the north-east coasts of the United States, was attributed by some American authorities to volcanic causes. Almost in a single night this fine market fish was completely destroyed and the vessel, authorized by the United States government to investigate this remarkable occurrence, found the sea for over 150 miles in a direct line crowded with the floating bodies of these dead fish. Between six and seven thousand square miles were covered by this wave of destruction, and the schools of tile-fish appear to have been entirely cleaned out of that region, though stray groups of them have been reported occasionally, yet not to be compared with the millions that for the period named abounded in these waters.'

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Professor Verrill pointed out that a cataclysm might effect such changes, in what he called the 'warm belt' of water, as to reduce the temperature and fatally affect the fish. A return of the favourable conditions would bring the tile fish back, and during the months of August and September last between 300 and 400 of these fish were taken on their old ground during the investigation of the Government steamer *Grampus*, thus indicating that the favourable conditions once more existed there.

It is notorious that chemical works affect not merely the waters adjacent to them, but the atmosphere, and often work great harm upon the health of communities. Factories for the manufacture of bi-carbonate of soda (usually known as alkali) and of ammonia, chlorine and bleaching powders, pour into the rivers sulphuret of calcium in quantity, also chloride of maganese, and many other refuse substances. All these are injurious. The manufacture of soap involves the production of glycerine and saline matters, with oily, resinous and fibrous particles in suspension, and the preparation of hides for tanning, also produces as waste discharges, lime, dissolved gelatine and offensive animal compounds, which have the character of a dense slime of a yellowish colour. Indeed every stage in the process of treating the skins as they come from the slaughter house, results in polluting substances, which are as a rule poured into the nearest rivers. The drainage from the scraping and washing operations and the effluvium from the lime-pits and tan-pits in the shape of lime-water and tan-liquor, are a means of serious and widespread pollution.

It cannot be denied that the most extensive and pernicious pollutions from factories of the various kinds, referred to above, occur in great centres of industry, where the rivers are also largely polluted and poisoned from other sources, especially sewage. Chemical and textile works, tan-yards on an extensive scale, and similar industries are rarely situated in what may be termed the 'upper country,' amongst the mountains and hills, where the most noted and productive trout and salmon reaches are found. It is true that Dundee and Aberdeen are on famous salmon rivers, and reference will be made to these special cases on a subsequent page; but rivers like the Aire, the Calder and other tributaries of the Ouse in Yorkshire, the rivers of the black country, and indeed of the manufacturing districts generally where chemicals, metals, and textile fabrics are worked, are in areas densely populated and destitute of the most important conditions favourable to fish-life in the local rivers and streams. There are, however, many industries which are carried on in remoter and less populous regions. Tin and lead mines are located, usually in mountainous regions near watersheds and the sources and upper portions of trout and salmon rivers. Reference has been made to the 'slime' or washings from these mining operations, the effect of which upon the fish, parents and young, and upon the spawning beds, must be inimical in the extreme. 'It is, I believe, generally understood,' reports one authority, 'that if quantities of slime or solid matter from a mine are run into a river, it gets into the gills of the fish and destroys them:' but such slime contains also highly poisonous matters in solution and in suspension. This 'slime', as it is usually styled, washed from the crushed ore after being repeatedly subjected to running water in order to extract every particle of metal except such as is of the nature of impalpable powder, contains barytes and other poisonous mineral matters. The particles of lead are insoluble and not directly poisonous: but the out-pouring of mine water, where lead-ore is being crushed is found to gradually and surely depopulate all the streams adjacent. The fry as well as the parent fish suffer from the contamination. The construction of 'slime-pits' is not difficult or costly where the refuse cannot be conveyed into the sea directly by conduits: and the abuse is capable of ready remedy. Copper mines are even more deadly in their effects than lead mines, as copper is so readily soluble. In one of the Devonshire mines, the waste water from the mine, and the washing floors, passes through a series of pits filled with old iron. One metal precipitates upon the other and the water finally passes out purified from metal pollution. Indeed it is stated in one report in reference to this mine. 'From these pits the water is conveyed to some catch-pits constructed so as to allow such matter from the matrix as may be deleterious to subside, and strange to say the largest

trout found in the neighbourhood are those in the drain which finally discharges the mine water into the River Tamar.'

It may be added that carbonate of lead also occurs in the 'slime' from the dressing floors of lead-mines. Of course the metal occurs in various combinations, sulphides, carbonates, &c., frequently in very small quantities; but, as has been pointed out, the effects of lead poisoning are cumulative, and hence as pernicious if not more so to fish-life than rapid and direct poisoning, the effects of which are apparent immediately.

The mine-water from ironstone mines and from haematite iron mines is to the eye of the ordinary observer offensive and injurious on account of its thick murky character, and the yellow ochreous appearance it presents. The yellow and red tints imparted to the streams is evidence of the amount of foreign matter in suspension which must seriously affect, if not altogether prevent the respiration of fish. The ochre and reddish colour is due of course to oxide of iron, and an exaggerated example is the coloured pollution produced by the decomposition of iron pyrites, which so long as it is unaffected by air or water and not oxidised remains unaltered, but on exposure to either produces ferrous sulphate, which acidifies the water and absorbs oxygen, thus rendering it less supporting to fish-life. Ferruginous mine-water is charged with ochreous matter usually on account of the presence of iron pyrites. Coal mines, again, injure rivers and streams, as already pointed out not only on account of shale and pyrites which in many ways produce polluting effects, but from the fine coal dust carried away into rivers in suspension and acting mechanically in injuring fish-life. Instances might be quoted without number of which the following, from a report of an officer in Wales to H. M. Inspectors of Fisheries, Board of Trade, London. He said: "For a distance of six or seven miles I found the Mawddach seriously discoloured by the matter which was being poured into it from the Gwynfynydd Gold Mine. According to the quantity of stone which was then being crushed the amount of slime poured into the river would not be less than 25,000 tons a year. No attempt whatever was being made to treat the sludge, notwithstanding the representations made to the company by both the Board of Conservators and this Department. The result cannot fail to be of serious importance to the fisheries of the Mawddach, for the slime, whether or not it is in itself actually poisonous to fish, is of a nature to completely smother the spawning beds with a layer of tenacious paste. The tailings of gold mines either hydraulic or gravel-benches, or stamping and crushing mills for treating quartz and other gold-bearing rock, when poured into rivers are harmful mainly where such waste muddy matter is deposited on or near spawning beds. Many of the evils arising from the mining of metal are repeated in a more acute form in the working of metals and their utilisation in factories. Thus the processes of galvanizing and electro-plating involving the use of various acids, muriatic, sulphuric etc., have resulted in the pollution and poisoning of many streams in England. The manufacture of tin-plate, so intensively carried on in South Wales embraces several processes in which sulphuric acid, copperas or green vitriol are used results in waste products highly injurious to fish when poured as has been done almost universally into rivers. Nail factories and allied industries all use various kinds of 'pickle' consisting largely of various poisonous acids.

In recent years the extraction of paraffin from bituminous shale has introduced another source of pollution in the ammoniacal waste, and offensive organic matters. Tarry impurities have worked widespread harm and universal complaints have arisen regarding the injury done. Even the tar used on certain forms of traps or fyke nets called 'verveux' in the Province of Quebec is said to have resulted in a tenacious scum which has destroyed fish or driven them away. The watery waste, however, which results after the distillation of paraffin oil is regarded as most injurious not only because it is charged with organic ingredients; but its odour and taste are pungent and must be offensive to fishes. Indeed some years ago hundreds of salmon, trout, etc., were found dead along several miles of the River Dee in Cheshire poisoned by the refuse from the paraffin and carbolic acid works, this refuse containing pitch or tar, picric and carbolic acids and other injurious matters.

An industry which has attained some proportions in the Dominion, viz.: the production of wood alcohol has, in other countries, been accompanied by the produc-

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tion of poisonous waste, by which rivers have been injured. The processes for obtaining pyroligneous acid, acetic acid and wood naphtha, leaves a tarry residue, and certain alkaline and calcareous products which are poured into adjacent streams when not utilized. Similar oily and tarry refuse has been noticed floating down rivers from gas works, and its tenacious and offensive nature must work harm to fish, though the quantity, as a rule, is small compared with similar waste from extensive chemical and paraffin factories. In several cases of pollution from gas works, a careful investigation did not show that dead fish had been found in the neighbouring waters. Of course, when the production of these waste materials (chiefly ammoniacal, oily and tarry in their nature) is extensive, their utilization is a source of profit, such bye-products yielding valuable substances (staining, saccharine, flavouring, &c.) which are in great demand.

As I have already pointed out in regard to the alleged deadly character of chemical and other pollutions, there is a singular lack of actual demonstration or proof. It is not sufficient to say of a particular stream that fish once abounded there and now they are gone, therefore the factories situated along its banks have killed off the fish with their injurious waste matters. There are numerous cases of depletion of lakes and rivers in Canada, where no such thing as factory pollution has occurred, the decline of the fishery being due either to overfishing, to poaching and destruction of spawning fish, or in some cases apparently to deforestation and cultivation of the land, which has wholly altered the character of the waters.

A clear case of destruction of fish by factory pollution is that of the river Doon, where during the latter part of October (as detailed in the 12th Annual Report of the Scottish Fishery Board), 68 salmon and 62 sea trout, besides a quantity of small fish, were taken out of the river in a dead or dying condition. Dead fish had been noticed by a great many parties, and one party stated that above a certain point very few live fish now occurred. Early in December, outside in the estuary of the river, 135 salmon and 294 sea-trout were picked up apparently poisoned, as there were no indications of fungus, nor were the fish marked or injured in any way. It appeared that the Dalmellington Iron Company, which began in 1893 to manufacture tar, pitch, ammonia, &c., had by an accident allowed a quantity of waste products to escape into the river. A settling pond had been provided, but in October the embankment had given way, and the poisonous products had escaped. The settling pond and certain evaporating contrivances in connection with the works, were arranged to render the wasted matter less poisonous.

Breweries where beer is manufactured in quantities produce waste of a grave noxious character, the acids and other deleterious products, which are produced not only in the brewing of the beverage itself, but in the shape of 'sour beer,' cask-washings, etc., especially in cases where factories are on an immense scale, are inimical, it cannot be doubted, to fish life. Indeed Dr. Tolke in a paper published in 1879 included, as he states 'Among these industries sugar refineries, starch factories, distilleries, breweries and malt-houses whose refuse-water is strongly impregnated with organic matter and causes most of the complaints.

The manufacture of beet-sugar, with which I have been familiar for many years, shall form the subject of a special investigation. This important industry, probably the most important of our agricultural industries, has, thanks to a sensible protective tariff and a rational system of taxation, developed from very small beginnings to its present vast extent.

This important industry certainly deserves to be protected in the interest of the national finances and agriculture; but it cannot be denied that this growing industry is the very one which contributes the largest share to the pollution of our brooks and rivers, particularly as it consumes an enormous amount of water.

It will be easily understood, therefore, why the complaints from the beet-sugar manufacturing districts are so numerous and well founded, and every impartial witness will have to concede that the brooks and rivers of those districts produce a very disagreeable impression not only on the eyes, but also on the olfactory organs. Such polluted brooks and rivers are, of course, entirely unfit for fish; but, what is worse, their water cannot be used for drinking and for agricultural purposes.

The manufacture of beet-sugar, though carried on in Canada, has not yet in any way endangered river and inland fisheries.

In such a country as Scotland where distilleries are frequently situated in the high mountainous country, in order amongst other things, to secure a supply of water suitable for the production of whiskey, the danger of pollution at the very head-waters of important streams and the sources of salmon rivers, is vastly increased. The Fisheries Superintendent for the Spey district, who has many times reported in an interesting way upon the condition of the many salmon resorts in that famous angling area, five or six years ago, gave the following facts in regard to the Fiddich—a branch of the Spey:—

'Last season on this stream there was an increase of about 50 per cent., of sea-trout beds when compared with the previous season; consequently when we deduct the sea-trout beds, which numbered 210, from the grilse and salmon beds, the real grilse and salmon beds for last season will only count 356. The average number of sea-trout beds on Fiddich during previous years would run to about 100 for the season. The best season's spawning that I have seen on this stream was during the season of 1888-89, when the total number of beds was 1045. During the two following seasons—1889-90 and 1890-91—the total number of spawning beds counted on the Fiddich was even behind that of last season, but, on these occasions, the deficiency was easily explained and understood by the fact that the other tributaries were proportionally behind in numbers. There are now 5 distilleries on the banks of Fiddich in the Dufftown district, all of which discharge their spent wash, spent lees, washings, and 'steep water' into said stream, thus polluting the stream from Dufftown down to Spey, a distance of upwards of four miles. Three of these distilleries—Parkmore, Balvenie, and Convalmore—have commenced work within the last 18 months. It is not unreasonable to assume that the deficiency in the salmon spawning on this stream during the last two seasons is attributable wholly to the pollution of the stream by said distilleries. That the refuse thus allowed to run into the stream from the distilleries is of a deleterious nature to fish was clearly demonstrated by experiments I carried out during the month of June last. I took four samples of water from the Fiddich below the distilleries during the time that a discharge of refuse was running, corked and sealed the bottles; then took a sample from Fiddich above distilleries, and corked and sealed that also. I then took all the samples to Fochaber's Salmon Hatchery, and filled four tumblers with the polluted water and one with the clean sample. From the hatchery boxes I took 25 fine healthy salmon fry, putting 5 into each glass. Result—fry in polluted water died in from one to two and a half hours, while the fry in the clean sample seemed as much at home as if in the hatchery boxes.'

This interesting experiment he followed up later and placed fifteen six-week salmon fry in three vessels, five in each. The first vessel he filled with water taken from the Spey three or four yards from the mouth of the Fiddich stream, which is charged with distillery waste; they were poisoned in an hour and fifteen minutes, while in the second vessel he placed water taken thirty yards below the point where the Fiddich pours in; and the fish died in a little less than two hours; but the third vessel was filled with water taken from the Spey thirty yards above the junction of the stream, and the little salmon continued in a healthy and lively condition. The poisonous nature of distillery waste was thus demonstrated, yet it must be admitted that the number of spawning salmon and spawning beds up the Fiddich showed a remarkable increase in the same year and above the distilleries the eggs and fry could suffer no harm, but all below would no doubt perish.

The manufacture of wood-pulp has attained, in recent years, vast proportions in Canada, and is likely to develop to an extent so enormously increased, in the future, that the effect of the waste matters resulting from such manufacture is of vital concern. In the first place the floating of pulp-wood, which consists of short lengths of very small lumber, is stated to be in many respects more injurious than the great 'sticks' or trunks of large trees which have been hitherto mainly conveyed along Canadian water-courses. The friction of the lengths of pulp-wood, it is said, tears off the epidermis, the corky bark and the fibrous bast tissue, leaving an offensive deposit in the beds of rivers. The trees being small, comparatively young, and of

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various species containing more sap and slimy matter than older mature wood of larger growth, there may be increased danger to the fisheries from the development of the pulp industry in this aspect of the matter. The towing and floating of large saw-logs down rivers and over famous fishing grounds in the great lakes has long been a source of complaint amongst Canadian fishermen. These logs, some of huge dimensions, often remained for months in the water, and a large amount of organic matter must have been extracted and permeated the adjacent water. In some cases, especially in the case of hemlock, these pollutions are poisonous in the extreme, and certainly the bark and slimy fibrous debris, scraped off the 'sticks' in their voyage on the water, must be regarded as seriously injurious. The International Commissioners referred to this in the Report in 1896, saying:—

'Among the minor causes to which we may attribute the failure in the whitefish and trout is the deposition of bark from the rafts of saw logs which are constantly being towed across the bay and north channel from some of the larger rivers, especially French River and Spanish River, to the milling ports on the Michigan side of Lake Huron. The grinding of the logs against each other in the booms sets free the fine inner bark which settles on the bottom, forming a thick covering. When this happens to occur on the spawning or feeding grounds of the fish there can be no doubt that a serious injury is caused.

Some of the inshore spawning grounds are said to have suffered from the saw-dust and other mill refuse which has been carried down the streams from the mills; but little injury can have been done in this way, as many of the spawning grounds are offshore or remote from the neighbourhood of the mills, and of late years the regulation prohibiting the letting adrift of this refuse has been well observed. The fishermen seem to have been careful about the disposition of refuse fish and fish offal and have generally landed it on the rocks. As the shores of the bay are not extensively settled other pollutions cannot have occurred.'

These observations confirm the views of the fishermen, who had for many years made their complaint to the Dominion Government, and in 1893 stated their case to the Special Commission, which visited the great lakes in that year, and reported upon this abuse, and on other fishery matters in those waters. One of the witnesses said, speaking of Georgian Bay and the North Channel:—'There are eight different streams and each one used for the floating of logs. The French River, I am told, passed even more logs than the Spanish, and my opinion is that the bottom of the whole lake from Georgian Bay to Mississauga is teeming with bark. It is eighteen miles across to the Manitoulin, and rafts pass in three different directions, so that the bark is spread every way. This bark in the course of time rots and forms into a kind of slime and fish will not stay on that ground. There were five skiffs fishing from here four years ago, since then they have left, as fish got so scarce, and in a very short time I believe there will be no fish at all.

'On September 26 of this year I had thirty-six pieces of net utterly destroyed by this bark. Each piece of net was 180 yards long, and was loaded so heavily with bark as to break the web', and, amongst the additional evidence, it was stated by a prominent firm on the northern shore of the Lake Huron waters, that this abuse was the most serious that the fishermen had to contend with, special stress being laid, however, upon the injury done to the nets. It was stated that bark and the soft wood on the logs which has been found to be very plentiful in the water since the exportation of saw-logs has taken place, is injurious. The stuff rubs off by the motion of the logs while being towed across the bay to the United States, or elsewhere, or even from the rivers when brought down to the saw mills. The rafts are very large, and great damage is done to the meshes of the nets. This is very injurious to the fisheries and clings to the meshes of the nets. It is much more injurious to gill-nets than pound-nets. If these logs are allowed to be towed over our waters, this difficulty will increase, and the prospects for any improvement in the fisheries will not be very encouraging to the fishermen. If the present fishing laws had been in the past carried out as fully as they have been in the past two seasons, and the evils spoken of, and the saw log difficulty were overcome, then fishermen it is claimed would become prosperous again, and would increase

After the raw material, used for pulp manufacture, has reached the mills, it is subjected to the various mechanical, thermic and chemical processes, and it is claimed that the liquid waste flowing from the mills during those processes is injurious to fish. Widespread alarm, indeed, was caused upon some of the principal rivers of Eastern Canada—rivers, perhaps, the most productive in the world for salmon fishermen, it being alleged that the acids used, and the floating debris, resulted in a polluting waste-product, poisonous and mechanically harmful to fish-life. The actual tests hitherto applied have not borne out these alarming contentions, and it must not be forgotten that the pulp mills spare no efforts to save every particle of waste pulp matter. They use the most recent and scientific apparatus to prevent loss, either of chemical or paper-pulp materials. One of the best biological workers in the Maritime Provinces—a man thoroughly posted in the fish fauna, and the conditions of fish-life in that part of the Dominion, Dr. Philip Cox, made an experiment with a view to deciding the effect of pulp refuse upon living fishes. The experiment does not profess to be final or scientifically conclusive, as the opportunity did not occur to make a full and accurate analysis of the waste materials, which differ at different stages of the pulp-making process, (and the proportions of the components of the waste no doubt vary), but the experiment suffices to show that delicate fish like *Osmerus mordax* are not seriously affected, and salmon, sea-bass, trout, etc., would be even less liable to injurious effects.

DR. COX'S EXPERIMENT.

Tests made April 14, 1899, with waste discharge from the Fibre Company's factory, Chatham, N.B., to ascertain its effects on fish life in the river.

Three vessels of 620 oz. capacity each were used, and were at the beginning of each test filled with water taken directly from the river, the acidulous waste being added.

First Test.

Vessel A, cap. 620 oz. + 2 oz. waste.....	10.45 a.m.
“ B, “ 620 oz. + 4 oz. “	10.48 “
“ C, “ 620 oz. + no waste	10.48 “

Freshly caught and uninjured smelt (*Osmerus mordax*) were put one in each vessel, at the time mentioned. At 12 noon all were active and apparently unaffected.

Second Test.

Vessel A, cap. 620 oz. + 6 oz. waste	12.00
“ B, “ 620 oz. + 8 oz. “	12.01
“ C, “ 620 oz. + 12 oz. “	12.05

At 2 p.m. the fish in C died, but the others were unaffected. I suspected injury to the one that died before it was put in, so in next test I put some quantity of waste in vessel C.

Third Test.

Vessel A, cap. 620 oz. + 12 oz. waste.....	2.26 p.m.
“ B, “ 620 oz. + 16 oz. “	2.27 “
“ C, “ 620 oz. + 24 oz. “	2.28 “

At 3.26 p.m. all active and unaffected. Vessel A was then replenished with fresh water, 48 oz. waste added, and a freshly caught smelt placed therein.

At 4.10 the latter and B and C of the third test were alive and well.

Hence it is seen that a mixture containing 8 or 10 per cent of the waste has no apparently injurious effect.

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It is surprising that so little has been done in the way of direct experiment upon living fishes, along the line indicated by Dr. Cox's three tests. I find, however, that some years ago an English chemist confined some small cyprinoids in a vessel of water, polluted by the tarry and acid waste poured into the Dee in Cheshire, by petroleum works and carbolic acid factories. On account of the presence of picric and carbolic acids, the water was yellowish, and it was found that in one gallon of the water there was no less than $7\frac{1}{2}$ oz. of tarry substances. It was found necessary in the experiment to add a quantity (100 per cent) of fresh water, or the fish experimented upon would have died at once. That the water was highly poisonous to fish was proved by its action, even when diluted with an equal volume of tap water. A minnow placed in it made violent efforts to escape, but became still and floated on its side in a few minutes, and in twenty minutes was quite dead. Actual tests and experiments of this kind are urgently needed, in order that prevalent opinions respecting various kinds of pollution may be either confirmed beyond cavil or disproved.

Perhaps the most widespread, and to the general public, the most apparent cause of river-pollution is that due to sewage. Cities have from time immemorial regarded rivers as the appropriate channels for conveying away those offensive kinds of waste matters incident to the congregating of large communities. In what precise way sewage affects fish has never been accurately determined: but its injurious effect is a matter of universal opinion. Thus the Canadian fishermen of the Detroit River five or six years ago complained of the amount of sewage poured into that river by the city of Detroit. This sewage and offensive garbage not only polluted the water: but was deposited, when west and south winds prevailed, upon the Ontario shore. 'Since this garbage has been coming ashore' said the fishermen, 'the catch of fish in our nets has been materially diminishing and, if the same continues, the business will be ruined. The presence of the said garbage drives away the fish and renders our fishing privileges useless.' It is not claimed that the fish were actually poisoned and killed: but that they were driven away to other localities. Some authorities who attribute to the sense of smell the action of fishes in forsaking sewage-polluted water, take the above view, and regard sewage as a deterrent more than a direct poisonous agent. This no doubt was the view of Mr. J. A. Harvie-Brown of Dunipace, Scotland, in regard to the Carron when he stated to the Scottish Fishery Board that salmon and migratory trout will not face pollution. The secretary of the Fisheries Improvement Association of Scotland in 1885 said of the Firth of Forth:—

'To recover a stream from a condition of barrenness and resuscitate its fish-bearing powers may be a work of difficulty and of time; but, in the present instance, there is no reason why it could not be hoped, nay, expected, that the trout and the salmon will (after the improvements proposed are effected) at no distant period begin again to tenant the Water of Leith. The Firth of Forth is frequented by many migratory fish of the salmon kind. Dr. Parnell, in his *Fishes of the Firth of Forth*, mentions not only the salmon and the sea-trout, but some eight varieties of Bull-trout. The sense of smell is believed by scientists to be highly developed in the salmon family, and whilst quick to detect the poisonous effects of pollution, and to be driven away, they are not slow also to detect symptoms of abatement, and to return. It is known that this fish runs gauntlets in the form of filthy waters in a manner truly astonishing. 'Almost every year,' says Dr. Gunther, "salmon and "sea-trout in the grilse state make their appearance at the mouth of the Thames "(where the migratory salmonoids have been extinct for many years) ready to "reascend and restock this river as soon as its poisoned water shall be sufficiently "purified to allow them a passage "'.

On the west coast of Scotland a similar state of things has been described on the Clyde and smaller streams such as the Cart, etc. Of the last named river one writer says:—

'In 1819, the Cart was a pure unpolluted stream throughout its whole course, from the upper part of Eaglesham, where it has its source, to its junction, at Blythswood, with the Clyde. It abounded in fish, and was, in its upper parts above Paisley, a fine trouting stream. A century further back the river was famous for fish of the

salmon kind, and so abundant were they that no inconsiderable part of the rent of the Saucer Mill, then belonging to the Stewarts of Blackhall,—an old family now represented by the highly respected Lord-Lieutenant of Renfrewshire, Sir Michael Robert Shaw Stewart, Baronet, of Blackhall and Argowan,—was paid in salmon caught in cruives set below the Linn, then and still forming the dam of the Saucer Mill, and which cruives the miller was taken bound in his lease carefully to maintain and uphold. So recently as the year 1815 we have fished and caught trout in the river near to the Old Bridge of Paisley, while in summer crowds of children were to be seen seeking health and recreation in its clear stream,—wading, bathing, and fishing. Below the town every boy in Paisley given to piscatorial pursuits, had a favourite place of fishing at one or other of the many “yetts” on the towing path along the east side of the river, where he set his lines in the hope of being repaid by a good string of eels and flounders, and occasionally a trout. Now, however, and for many years past, the stream has been a large and greatly polluted common sewer, into which every species of destructive or offensive ingredient, as well as the entire sewage of Paisley and the towns and villages further up, are allowed freely to flow. This most destructive change in the condition of the Cart, when looked at in connection with the present mortality bill of the town, is, beyond doubt, a matter for serious consideration, especially in view of that sanitary regulation and improvement which may possibly be applied in these days when the condition of towns and rivers has forced even the Government to adopt the phrase, *sanitus sanitatis*, as indicative of its policy.”

The whole subject of sewage-pollution in its effect on fish-life is a matter requiring thorough investigation. Such investigation might show surprising and unexpected results for at present the views of experts are somewhat contradictory. Thus while on the Thames the pollutions of the lower parts of the river, and the estuary, are said to deter the ascending fish, which linger at the mouth waiting for the coming of a purer current, yet the Tyne, which is even more atrociously polluted, does not deter the salmon and sea-trout, and as Professor Huxley in 1882 said: ‘It is difficult to imagine worse pollutions than those which are poured into the Tyne at Newcastle, yet the salmon run the gauntlet of the sewage, the chemical refuse and other abominations, in sufficient numbers to produce a large annual harvest.’

I notice in a report of H. M. Inspector of Fisheries for England and Wales, that sewage-pollution in a case reported upon had, it was claimed, caused the death of fish. The authority mentioned says in his report in 1892 :

‘Early last year I received particulars of a large “Fordwich trout,” said to have weighed 26 lbs., which had been picked up dead in the River Stour, near Canterbury. The Conservators of this District have however, apparently given up as hopeless the task of protecting the river in consequence of the evil effects of the sewage of the city of Canterbury.’

The city of Canterbury has a very small population, and the alleged poisonous effects of sewage, should be even more extensively observed in the Humber, the Tyne and other large rivers which receive the refuse of populous cities like those of the West Riding of Yorkshire, and of the Durham manufacturing and colliery centres. Gottlieb Boccus in his “Fish in Rivers and Streams” published 60 years ago, speaks of the Thames and the Tyne and points out the special features of the latter river as a resort for salmon. He says ‘I will make a comparison of the Thames with the Tyne’; no salmon are now caught in the Thames, but though the Tyne has many alkali works on its shores from Newcastle downwards—and alkali is death to every species of fish—yet it abounds in salmon. How is it with these destructive manufactories on its banks, and in despite of the swarms of steam-boats and tugs ever passing up and down the river, it is still a good fishery? Why, simply because Salmon and all other fish, migrating from water to water, never stop on their way, but push forward, and that at a fast rate, till their intended journey, for which Nature prepared them, is completed for, as I have said, Salmon being very swift, soon pass through the water which is offensive, and then run for the pure springs fit for spawning.’

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In the report for 1887 of Mr. Fryer, one of Her Majesty's Inspectors of Fisheries in England, to whose able and very comprehensive and detailed reports I am so largely indebted in compiling these notes on pollutions as affecting fishery resources, it is stated that while the Tyne is the most productive of all the salmon rivers of England and Wales and one of the most extensively polluted by sewage, mining refuse and manufacturing waste, liquid and solid, yet its salmon harvest remains wonderfully good. Its productiveness was, however, stated to be on the decline; but whether due to pollutions or to overfishing could not be decided, though it was pointed out that the large body of sea-water pouring up the tideway no doubt did much to counteract the evil results that might otherwise accrue. Certainly the catches of salmon by net and by fly on the Tyne have during the last quarter of a century been wonderfully maintained, and the river has apparently been as well supplied with fish as the most optimistic could expect. Thus in 1886 and in 1887 the takes were 25,696 and 18,835 respectively. Five years later 1891 and 1892 they were 29,298 and 31,080 respectively, and at the end of another five years 1896 and 1897 they were 15,755 and 11,081 respectively. The last published figures 1898 are reported as showing an average catch, the quantity being 11,422. The Tay in spite of the fact that Dundee, Perth and other centres of population occur along its course is by no means denuded of its salmon, though the catches during recent years have been below the average. How far these decreased takes in the river are to be accounted for by the destructive netting and trapping along the estuaries and seashore it is not easy to decide. The Tay like all salmon rivers is subject to remarkable fluctuations and it is interesting to note, as indicating the continued productiveness of the Tay, that its annual rental (that is the amount received by the riparian proprietors for the netting and angling privileges), amounted in 1898 to over \$100,000; in the previous year to over \$85,000; and in 1894 to \$95,000.

What is the conclusion which the intelligent observer must reach, who glances over the series of facts and inferences briefly set forth in the foregoing pages. In the first place it is evident that circumstances modify the effects of all forms of pollution, so that waste matters which would be deadly in one river, will pass away and prove of little harm in another, where the conditions are different. In the second place it shows how varied are the effects of various waste products under the same conditions upon different species of fish. Salmon will survive unharmed where shad and gaspereaux would be killed off.

Further these notes indicate how little is actually known of the effects upon fish-life of these various pollutions from accurate and thoroughly scientific experiment. Common opinion and popular ideas more largely prevail than reliable and demonstrated knowledge. Nor must it be forgotten that, however pure and free from pollution rivers may be made by rigorous enforcement of laws against such offences, it is vain to expect a restoration of the fishery resources, and the re-peopling of depopulated waters, if the parent-fish are shut off and obstructed by mill-dams, canal locks, timber-refuse, log-jams, booms and fallen trees, or any obstacles by which they are prevented from reaching the spawning beds. If the spawning grounds be kept free from pollution and the deposition and fertilization of the eggs be accomplished; and if moreover free and unobstructed access to these grounds be provided for the fish, and, above all, if over-fishing, excessive netting and destruction of the ascending fish be prevented, there need be little fear that our supplies of salmon and valuable migratory species will wholly fail. The assistance of artificial fish-culture will be an effective adjunct.

There may be cases where the erection of mill-dams and pollution by poisonous waste products is of more moment than the destruction of the fisheries in a particular river. The utilitarian motive may be overwhelming, and valuable industries on a large scale may, in some cases, outweigh fishery interests and considerations. Of the serious results to a community from a too rigorous enforcement of fishery laws, a striking example has been recently afforded in King's County, Ireland. In a local journal it was stated that 'the fine mills of Springfield and Belmont, which are owned by Mr. Archibald Coulahan, are to be closed shortly. The owner is taking this course in consequence of the Fishery Conservators compelling him to

do work in the way of putting up gratings, which he considers both unnecessary and impracticable. There is great regret felt in the neighbourhood that those mills—which cost some £50,000—should be closed, as many hands will be put out of employment. It seems a great pity that the rival interests of fishery owners *vs* mill owners should be allowed to clash in this way.

The salmon fisheries of Ireland are no doubt of much importance, but in a county with so very few manufacturing industries it is a fatal mistake to place any obstacles in their way.

The public interest must of course be paramount, but the highest authorities are agreed that such cases if they exist at all must be rare, and it is of prime importance to remember that there are few factory pollutions which cannot be readily and inexpensively rendered innocuous. Indeed I cannot do better than quote, in a concluding sentence, from the Tenth Annual Report of the Scotch Fishery Board, which puts the matter succinctly, and urges considerations which must have weight with every fair and intelligent mind:—

‘Legislation for the prevention and cure of pollution and poisoning in all running waters is most important and urgent. The evil is yearly increasing, and it is time that a remedy was applied. And that such a remedy might be found without injury to manufacturers there seems to be but little doubt; as, more than fifteen years ago, the River Pollution Commissioners wrote as follows in their fifth and last report:—“We have thus already submitted to your Majesty a description of the evils arising from the discharge into river channels of town sewage, and of the various filthy drainage waters from cotton, woollen, silk, flax and jute works, from print and dye-works, from tanneries, paper mills, and bleach works, from alkali, chemical, and soap works, from distilleries, starch and sugar works, and from paraffin oil works. The remedies for the nuisances which these refuse liquids create have been carefully examined, and, after prolonged inquiry and re-search, we have been able to report that in every case efficient remedies exist and are available; so that the present use of rivers and running waters for the purpose of carrying off the sewage of towns and populous places, and the refuse arising from industrial processes and manufactures, can be prevented without risk to the public health or serious injury to such processes or manufactures.”

‘It seems therefore quite evident that the secondary uses of water which the manufacturers enjoy have been too long allowed to usurp the place of the primary uses to which the public are entitled, and that it is high time that stringent measures were taken to check the progress of pollution, which has already converted so many of our streams, once pure and pellucid, into mere fetid sewers. In one way, at least, the public health and the preservation of salmon are immediately connected. The water which will destroy or repel salmon is not fit for human use; and the water fit for human use is attractive and wholesome for salmon.’

The fact cannot be ignored that almost daily such improvements are being made in the methods of treating raw products and of utilizing waste materials that some of the industries referred to in the preceding pages have in recent years undergone total change. To a large extent pollutions which have hitherto been a main source of danger are ceasing. Thus at Ottawa itself where probably over one hundred million feet of waste,* in the shape of sawdust, have for many years been poured into the fine river which flows by the Canadian Capital, a revolution may very soon be effected, and the sawdust hitherto so lightly valued turned to practical use. The utilization of waste products is a hopeful sign, and will do much to rectify the evils arising from industrial pollutions, which have so long afflicted fish and fisheries.

* It is stated that there is one foot of waste to every foot of timber cut in the mills.

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NEGLECTED STRUCTURAL FEATURES IN YOUNG FRY.

BY PROFESSOR E. E. PRINCE, DOMINION COMMISSIONER OF FISHERIES, OTTAWA.

It is a curious circumstance, the explanation of which is not easy to find, that pisciculturists have been almost without exception what are called 'practical' men. By that term is meant men who did not claim to have much professional knowledge or technical training. Many of them, especially the pioneers in artificial fish breeding, did not hide their contempt for theoretical knowledge, and viewed with little favour scientific training, or the opinions and explanations of scientific specialists. Just as the Scottish fishermen frequently claimed that during the sittings of the British Fisheries Commission in 1885, they taught Professor Huxley a good deal about fishes, though that famous biologist was amongst the greatest masters in the science of fish that the world has seen, so the early fish-culturists often congratulated themselves that they adopted courses not fully in accordance with scientific opinion, and proclaimed the sufficiency of 'Practice' without 'Science.' One of the most striking cases of this feeling was that excited when the retention of salmon in tidal ponds was tried. Biologists, on scientific grounds, demurred to the keeping of parent salmon in salt or brackish water, long after they should have ascended into the pure fresh water of the upper reaches or spawning grounds. Physiology would discourage the retention of parent salmon in the midst of conditions not in accord with the conditions which obtain in nature. The experience of the practical man, however, prevailed, and so far as can be judged, tidal ponds are a success, and the eggs and fry do not apparently differ in health, vitality and successful incubation from those secured from parents which have reached the head-waters far from the sea. Of course the question is one of a somewhat complicated and profound nature when thoroughly analyzed, and the biologist must reserve his opinion as to the ultimate effect, through heredity, of the changed parental conditions upon succeeding generations of fish. So far no specially abnormal or undesirable effects have been noticed, and the parent salmon certainly maintain a more robust vitality, and are freer from fungus and disease than fish taken on the spawning beds at the head waters of salmon rivers.

Experience, of course, is the best of all teachers, but practical experience combined with exact scientific knowledge, is better still; for the pupil is no longer simply taught, he becomes a master and can control and command. Experience gives us the 'how,' but accurate knowledge provides us with the 'why,' and the fish-culturist who handles ripe eggs, who vivifies them by the admixture of the fertilizing milt, who is able to recognize living and dying or dead eggs, and who knows when the eyed stage is reached, and can accurately tell when the period of hatching is approaching and the young fish are about to emerge, such a man will feel increased confidence in the progressive steps of his work, and will avoid some mistakes and surmount many difficulties if he has technical and theoretical knowledge added to his valuable and indispensable practical experience.

The complaint has been frequently made that no results appear to have followed from the planting of artificially hatched fry, and doubt has been thrown upon the success of all fish-culture work. Examples might be readily given, but the well-known case of the Delaware River, Pennsylvania, may be referred to. In 1871 a number of gentlemen in Philadelphia and Easton procured 10,000 salmon eggs from the Canadian hatchery at Newcastle, Ont. Under the superintendence of Messrs. H. A. King and Christie about 2,500, all that survived from the incubation of the 10,000 ova, were planted. In 1872 Mr. Thaddeus Norris hatched 11,000 fry out of 13,000 eggs, and the following year Mr. Norris and Dr. Slach planted a considerable number of young salmon. No adequate results were ever seen, and the three attempts to stock the Delaware were looked upon as failures, and the State Fish Commissioners concluded that 'the waters of Pennsylvania are evidently not suited to this fish, however desirable it would be to have it planted and thriving in them.'

There is reason to believe that the non-success arose less from the unsuitability of the waters than from some defects in the method of handling the fry. Indeed the weak condition of the first batch of fry was noted at the time, and it was attributed to the hot weather. It is undeniable, however, that in spite of sultry conditions and untoward circumstances, fry can be successfully planted if knowledge and experience are available, and proper provision made to guard against all harmful influences.

The present brief notes on some neglected features in the newly hatched fry of fishes do not refer to any new scientific or biological points unfamiliar to the trained specialist. Nor are they intended to essentially modify the handling of eggs during incubation or the treatment of young fish after hatching. They refer to some points, familiar enough to the embryologist, and no doubt known to pisciculturists in general, but apt to be overlooked or neglected when the time comes each season for taking care of the newly hatched fry. These points have reference to peculiarities in the structure of the young fishes at the close of incubation, and upon their entrance into free life after leaving the egg. They are of importance, and by ignoring them the health and vitality of the fry may be impaired, and even loss of fry entailed.

First of all it is to be noted that the fry of fishes usually included in fish-culture operations possess enormous eyes. Lake whitefish, great lake trout, brook trout, pike-perch or wall-eyed pike, and other species, exhibit eyes of extraordinary dimensions, occupying in some cases fully one-third of the lateral surface of the head. No doubt the real significance of these large organs of sight, so disproportionate to the size of the microscopic larva must be explained on principals of development and evolution. They are like two black or densely coloured balls, which are readily seen long before hatching, and while the young fish is being formed inside the egg-capsule. They are so prominent and visible that the term "eyed-egg" stage is in common use amongst fish-culturists. To the practical man the possession of a pair of large sensitive organs of sight is a warning to him that the possessors are easily affected by rays of light. It teaches him that as far as possible reflected light should reach the tanks or vessels containing them. Hence direct rays and an excessive amount of light of any kind is not only unsuitable, but is highly injurious.

Glaring light, such as that produced by modern types of gas-burners which increase the luminosity of the inflammable medium, and incandescent electric-light devices, are to be strictly avoided. The sensitive eyes, with their large receptive pupils, cannot bear light so steady and piercing. Pisciculturists, as a rule, have arranged the windows etc., so as to shut out all excess even of day-light, and have done so mainly, because too much light was known to be favourable to vegetable parasites and algoid growths. Fungus has been generally held to be stimulated by abundant light. But the reason which above all should guide the fish-culturist in regard to light in hatcheries is the anatomical and physiological reason, viz: the perilous results to the fry, which excessive light inevitably brings, on account of the great size and unusually sensitive character of young fishes' eyes. As every one knows, the eyes are protruding and prominent and not shaded by eyebrows, eyelashes, or protected by movable eyelids, hence a glaring light which is painful to the visual organs of higher animals, is not merely disagreeable, but productive of morbid and fatal effects, if allowed to shine upon embryo fishes and fish-larvae.

During incubation a suitable amount of light is very necessary, or the development of the eggs will be delayed; but it must be reflected light of the sun, such as reaches them on the gravelly 'redds' or spawning grounds. Eggs of fishes being, in so many species, deposited in shallow parts of the upper reaches of rivers, where the water usually is swiftly running, and broken up into ripples, each ripple and crystalline wave acts as a refracting prism, breaking the glancing bright rays of the sun into scattered reflections of light. Thus the solar rays even at midday are bent by the uneven surface of the rushing water, and directed into the hollows, the interstices, and shadowy ridges of the gravel and boulders beneath the surface. Many pisciculturists have learned to their bitter cost, that, too much light especially, when accompanied by a high temperature is most unfavourable, hastening unduly the progressive stages of development during the incubation of the eggs, and resulting in weak and sickly fry which are unable to survive through the first few

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weeks of larval life. The cylindrical glass jars in which the eggs of many species are hatched, though cleanly and convenient, are wholly unadapted for holding the fry, and the more rapidly the young fish are enabled to pass from the dazzling glare of the crystal vases to the more shady and gloomy surroundings of the large receiving tanks the better for the fish. Assistants in hatching establishments rarely realize the harm that may be done by allowing fry to remain a few hours, or it may be a whole day, exposed to glaring light, and they should be strictly instructed on no account to keep fry longer than can be avoided in the blinding light which beats upon them after they emerge from the eggs in hatching jars. There is not this danger in the case of fry which are hatched out upon trays: but towards the close of the period of egg-incubation, hatchery officers should keep a sharp eye upon the hatching jars in which whitefish, or shad, or pike-perch (*doré*) are developing to see that the current is adjusted sufficiently to carry the fry off without any delay. Experienced men are frequently puzzled by the apparent weakness and lack of vitality in whole batches of fry, while others are robust and strong. The explanation is not far to seek, for in most cases it will be found that the weakly fish were delayed too long in the glaring environment of the hatching jars.

Again, it must be remembered that larval fishes possess extremely delicate hearing organs. The ears, one on each side of the head, a little in front of the breast fins, are of an oval shape, like an egg-shaped sac or chamber, filled with clear fluid or endolymph, and containing one or two, sometimes three, small limy pellets, the ear stones or otoliths. Several sensitive cushions of nervous matter, studded with hairs or delicate bristles, occur inside the chamber of each ear. These cushions are connected with the auditory nerve, or nerve of hearing. The ear is completely closed up, and receives vibrations or sound waves through the delicate walls and skin covering the head. Shaking the fish rudely, rough handling of any kind, and loud hammering, or other violent noises, cause the ear fluids inside the ear-sacs to vibrate too vigorously. This produces concussion of the otoliths or ear stones, which may even be knocked out of their places, damaging the delicate auditory cushions of nervous matter, and producing serious disorganization.

Damage done to the ears may result in sickness and rapid death. The intelligent fish-culturist will take every means to avoid all perils and risks, and will bear in mind that fishes when newly hatched have hearing organs of special delicacy and sensitiveness.

A further point, which is often overlooked in hatcheries, is the character of the skin in young fishes. It is not provided with scales, as in adult fishes generally, or dense and leathery as in catfish, the leather carp and many mature forms, but in all young embryo fishes it is naked and very thin, and often as transparent as glass. Indeed, as the Michigan State Fish Commissioners remark in their 12th Biennial Report, "The fry of whitefish are so transparent for several weeks after hatching that, when confined in glass aquaria in a well lighted room, the presence or absence of food in the stomach may be determined almost at a glance. The presence of their natural food is especially noticeable, as it casts a reddish tinged line throughout the food canal." Many larval fishes, moreover, are provided with external sensory organs arranged in a series along each side of the body. In some the tips of the jaws and the front end of the snout have similar organs of feeling or touch. These organs are usually like small mounds or bunches of nervous cells, surmounted by a group of projecting hairs. I have counted as many as seven to ten pairs of such organs in the body of a young fish. Some fish have more, some less, but in all cases they are so sensitive that they cannot fail to be seriously injured by rough treatment or violent concussion. Hence fish larvae must always be gently manipulated. In emptying large quantities from one vessel to another, they should not be violently poured out, with accompanying splashing and concussion, nor should they be suddenly transferred from a high to a low temperature. The skin and delicate sense organs of fishes are as sensitive as the eyes or the tip of the tongue in ourselves, and all harsh or hurtful influences and trying conditions render the fish less likely to survive, or may even prove immediately fatal.

It is a good provision to test the temperature of the water in which the fry are contained and the temperature of the water into which they are to be emptied. In

the case of lakes and rivers, warm shallows or sheltered eddies can easily be found, if the open water appears to be too cold.

Many other points, known to the scientific specialist, might be mentioned, but in this paper one further point only will be referred to, viz., the presence of a delicate erect fin along the back, and along the under-side of the body as far as the posterior side of the yolk-sac. This transparent fin-membrane is so thin, colourless and clear, in the whitefish, the shad and the alewife, though more dense in the salmon and trout, as to be almost invisible, unless carefully looked for. It is really a broad sheet of extremely thin skin standing up in the middle of the back of the fish, like a delicate crest. It is known to embryologists as the unpaired continuous fin-membrane and is so easily injured that newly-hatched fishes should never be handled. Sharp implements and hard substances rupture it, and most cases of curled, distorted young fishes are found, on examination, to be due to injury of the embryonic fin-membrane. The tail, especially, is liable to curl up on this account, and the fish has a crumpled and whitish appearance. The practical pisciculturist is often puzzled when he sees abnormalities and morbid appearances in his fish and cannot understand why eggs which were so healthy, and hatched so successfully should at times result in disappointing, sickly, and dying embryos. It is often difficult for him to discover the why and the wherefore; but some knowledge of the minute structure of newly-hatched fishes, and some acquaintance with their physiology, will often throw light upon his difficulties and prove in numerous ways most helpful. Indeed some knowledge of the scientific principles of development and embryonic anatomy is necessary for the successful handling and proper treatment of young fishes incubated and hatched under artificial conditions.

THE OBJECT OF A CLOSE TIME FOR FISH.

BY PROFESSOR EDWARD E. PRINCE, COMMISSIONER OF FISHERIES, OTTAWA.

The question is often asked "what is the object of a close time for fish?" and the answer is by no means so simple or easy as is generally imagined. The object of a close time varies greatly according to circumstances, and the criticism often urged against legal enactments which specify certain seasons or periods as times during which the taking of particular species of fish is prohibited, are frequently misdirected and mistaken. Thus it is often said of some fishery regulation, embodying a close time, that it does not cover the whole period of spawning and that many fish are found, before and after the limits of the period, in a ripe or spawning condition. The critics in such case base their remarks upon the supposition that a close time of necessity aims to cover the period during which the fish spawn—the fish that is to say contemplated by the regulation. But such is not at all the sole object of a close time or close season. Again, it is said that in some cases the period of prohibition antedates or precedes the spawning time, while in other cases it protects the fish after spawning. In other words the close time is too early, or it is too late.

Fishery authorities in framing regulations defining close times for various kinds of fishes often have had very different aims in view. Indeed, at least a dozen wholly diverse objects have been aimed at in existing laws upon this subject in the Dominion, and a comparison of the laws in other countries defining close times would increase the number to over a score. It is rarely, however, that a close season is enforced so unjustifiable and futile as that which was passed by a local legislature in the United States, according to whose enactment no whitefish could be captured in Lake Erie during the month of June by any fisherman in that State. The main reason for this law, which it was proposed to rigorously enforce, being that no fisherman could ever catch any lake whitefish in paying quantities at that time of the year. Further reasons were that the weather being hot the few fish, that might be taken, would not keep in good condition for the market, and the fishermen lost money because their nets became foul and rotted away during the height of summer. In the State referred to there was no protective close time in November when the whitefish could be captured crowded together on the spawning grounds in immense schools. The sole object of a close season for whitefish in that case was to meet the desire of the fishing firms and the fishermen for a prohibition to be enforced during a part of the year when they would not feel it. Some years ago a large number of lobster fishermen in the Maritime Provinces urged that a close season for lobsters be enforced all along the coast at the end of June, because they had to go to cod, haddock, and mackerel fishing, and could not go on any longer with lobster trapping. They desired that no other fishermen should be permitted to fish for lobsters, when another more important fishery demanded their own attention. In all such views, on the matter of a prohibited period for fishing operations, the protection of the fish is left entirely out of account.

There can be no doubt that the main object of close seasons in the majority of cases, has been the preservation from destruction of the breeding fish at the most momentous period, viz: when just about to deposit or incubate their eggs. If this object can be accomplished it is the most effective measure possible for the perpetuation of the fish supply. The destruction of the breeding fish, at the very time they are engaged in spawning, is the surest step to the extermination of the future supply. Yet this destruction has in past times been almost universal and those engaged in fishing for a living, those to whom a continued supply is of chief importance, are often the most impatient of restrictive laws, and frequently

complain that the law stops them just when the fish are running or schooling in easily accessible areas, and when therefore the greatest hauls can be made.

The fishery officer is not unfrequently taunted with this remark 'if you kill a female fish six months before spawning, you just destroy as many eggs as if you killed her six days or six hours before depositing her eggs, nay in the act of depositing her eggs.' It does not demand much intelligence to see that this is wholly untrue. An artist painting a picture experiences a far greater loss if his painted canvas be destroyed after he has expended many months labour upon it and when just about finished, than he would if his canvas were destroyed after he had merely put a few touches upon it, on the first day of his work. Out of a thousand fish in June, it may be that not more than 200 survive until November to spawn, hence a spawning fish in November, in such a case, is of the value of five fish in June, from the fishery protection point of view. The value and importance of a breeding fish is vastly increased with the approach of the breeding season. Thus there is necessity for protecting the parent fish of valuable species, with the utmost strictness, at spawning time. As there is always some slight variation in the spawning operation in different individuals, a close season rarely attempts to cover all possible spawning specimens. The lake whitefish which is one of the most regular and rapid spawning fish varies a little in different years, but on the whole the month of November covers the main period in most provinces of the Dominion. This year in the Detroit River the season was at least two weeks later than usual, and in the North-west Territories some whitefish have been found containing ripe spawn in October, and again others in December. The so-called lake-herring or lesser whitefish, usually regarded as spawning in November, has been found carrying ripe eggs in June, a specimen four or five years ago being sent to me from Lake Erie by Mr. Edward Harris, of Port Dover. It is usually most desirable to protect every spawning fish possible, of valuable kinds; but in other cases as in the great lake trout or salmon-trout of the lakes there is much to be said in favour of the present season, viz: November, in Canada. Their main spawning period is late in October, and as the law stands great numbers of ripe spawning fish are taken annually although this year they were later than usual. The great lake trout is a strong, predacious and in some respects, undesirable fish, making war upon whitefish and all other kinds. It does not require the same amount of legal protection as a defenceless weak species, like the toothless whitefish, hence it suffices for the 'fresh-water shark', as the great lake trout has been called, to be partially protected only, so that they may not exterminate equally valuable kinds and over-run the waters. The present close season for the great lake trout is perhaps too short, but it has sufficed in Lake Huron and Georgian Bay at any rate to ensure the maintenance of a fair supply of these fish. It is plain that predacious species call for less protection than more harmless and defenceless species. A similar observation may be applied to the speckled-trout or brook-trout. It spawns over a very long period from November until April, but a close time of six months or more could only be justified on the ground that the species requires the preservation of every spawning specimen, a contention for which convincing evidence would not be easy to adduce.

The conclusion was reached by the Tweed Salmon Commission in 1896 that the supply of salmon can be kept up, if a sufficient proportion of each run of fish is enabled to reach the rivers and ascend to the spawning grounds.

This is the great argument in favour of a weekly close season on salmon rivers; but there is no doubt on some of the great rivers of Canada, as on the Fraser River or Skeena River, that the fish which have passed the lower fishing grounds during Sunday are overtaken on Monday morning by fishermen who hurry to the highest limit up the river allowed by law, and capture the fish after the first few miles of their ascent. This may be so on the Restigouche and other eastern rivers where the nets, some miles up the river, take the fish on Monday which have passed the lower nets in the estuary during the Sunday close time. An annual close time is necessary not only to supplement the partially ineffective weekly close time; but to render illegal the capture and handling of spawning fish by poachers.

In all civilized countries, possessing salmon rivers, a rigidly defined close time covering as far as possible the spawning season, has been enforced and with good

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effect. Fish taken illegally during the 30, 40 or 60 hours weekly close time may be legally possessed and sold, on Monday or Tuesday, if the illegal capture be not detected. But it is difficult to keep illegal salmon during a long annual close time, without risk of detection, and if discovered, their condition proves them to be unseasonable and illegal fish. Moreover an annual close season may be enacted (like the ten days close time in September in British Columbia) for several subsidiary reasons as for instance to prevent the capture of very late incoming salmon, like the last stragglers (discoloured, soft and disgusting in appearance) of the Blue-back or, Sockeye run, and to cover simultaneously one of the earliest runs of Cohoe Salmon both of them very desirable objects, the one on economic and health considerations, the other on protective grounds, thus the canning of salmon in bad condition, and the perpetuation of an early run of a valuable species are accomplished by this ten days interregnum. Fishery regulations *per se* have no direct connection with health or sanitary regulations, yet the purposes of the latter regulations are often indirectly aided and accomplished by the former. Fish in an unseasonable, emaciated and degenerate condition cannot be good food. The Pacific Salmon which have mounted many hundreds of miles, are ill-conditioned, semi-putrid and wholly unfit to be eaten, yet they would be largely consumed, and many factories would not hesitate to can them, did not the law (by close time regulations) prevent it. In remote districts, Indians and white men too, are said to use them for food and outbreaks of disease may be often traced to this cause.

Oyster regulations have had a similar object largely in view, and have prohibited the taking and sale of 'sick' or spatting oysters as much on grounds of health, rightly or wrongly, as for protection purposes.

Close seasons as a rule cover periods when fish may not only be taken more numerously (as they are then schooling) but more easily (as the females are more heavy with spawn;) but they are also intended to protect the weakly emaciated spent fish after spawning, as well as the vigorous 'full' fish before spawning. It is well known that shad on descending from their breeding grounds up river, are little more than skin and bone, yet worthless and emaciated though they are, the fishermen strain every nerve to capture them. A Shad close time should cover the descending fish as well as protect the ascending schools. The same reason may be urged for a long close season for salmon. It prevents the capture of black slink salmon and unsightly kelts. It no doubt enables the young fish, the smolts, to descend to the sea undisturbed. There is every reason to prevent a river or lake from being disturbed all through the year by fishing operations, and the fish harassed and driven about by long lines of nets.

The Canadian regulations for salmon, etc., have worked untold benefit in preventing the continuous disturbance of the fishing grounds from January to December. Had it been permitted, the fish would no doubt forsake such waters, never to return. Special close times, covering several years in some cases, have been devised to restore depleted fisheries. Thus in 1892 a close time for three years for striped sea bass was enforced in New Brunswick. The beneficial result was most marked, and the fish which had been almost exterminated increased—more rapidly than either the authorities or the fishermen could have reasonably anticipated. All fisheries are not so readily restored, and a long period of prohibition in the St. John River, in New Brunswick, appears to have been ineffectual to restore the depleted and destroyed sturgeon fishery there. The same difficulty in restoration, by a lengthy close time, has been observed in lobster fisheries, when these have been once depleted.

It has been possible, in the case of some fisheries, to so arrange the annual close time, that the fish about to spawn are protected from capture before the actual spawning period. The smelt, for instance, do not spawn as a rule for some weeks after the present close time begins, but as the netting season draws to its end a vast number of smelts are found to be swollen with eggs that are rapidly approaching the ripe stage. It is no doubt due to this antedated close time that the smelt still abound in vast schools at the mouth of the Miramichi, the Richibucto, the Restigouche and other rivers, although as many as 4,000 or 5,000 tons have been captured during the short netting season of a few weeks. A close season to achieve fully its object should, if possible, protect the first as well as the last spawners. It

should do this in order to keep up the early runs, which in most marketable fish are by far the most valuable. It should also prevent the last spawners from being captured, as the late fish are always in a poor, flabby and unseasonable condition for food. The capture of early runs has in the case of salmon rivers had the effect of wholly destroying them and of rendering such rivers late. Late rivers imply a large proportion of degenerate, unsightly and undesirable fish. Prohibitions again have been enacted to prevent the disturbance of one kind of fish by fishing operations carried on for other kinds of fish. Thus nets for whitefish, pickerel or dore, and for coarse fish such as catfish, pike and suckers were prohibited in the Bay of Quinte for many years, not to protect the fish just mentioned, but on other accounts. Thus in summer such nets would take spawning bass, or, at any rate, would disturb them while spawning, and later would interfere with the bass anglers who desired these fine black bass grounds to be free from nets at the time. The fishermen themselves were not strongly averse to this summer net prohibition for three reasons—(a) they were employed by the anglers as boatmen and in other ways; (b) their nets readily rotted and became useless if used in hot weather; (c) catfish and other coarse kinds are soft and in poor condition in summer and fall, whereas in the cold winter months they are most valuable and in prime condition for market.

Very various, indeed, are the grounds for enacting close seasons and the reasons for enforcing them, but the ultimate object is the promotion and improvement of the fish supply, and conferring thereby substantial benefit on the fishermen and the public.

It is from the fishermen and from the public, therefore, that the authorities ought to look for every aid in the laudable task of fish protection. That such aid is not always to be relied upon is a matter of common knowledge. Indeed, it is too often the case that the parties likely to derive most benefit permanently from a brief protective prohibition do not realise that such benefit must inevitably accrue to them.

The published views of a well known Ohio fisherman may be given as an example. He said:—'Regarding this matter of a close season I have certainly some convictions. The difficulty along our part of the line of Lake Erie, which we have to encounter, is that the time that you can take these fishes best for the market is in the month of November, and in no other month to speak of can you take any whitefish in the head of Lake Erie. It is true that the head of Lake Erie is the natural spawning ground probably for the whitefish, but if you do not take them in the fall with pound-nets and other appliances in the head of Lake Erie, they must then take them with gill-nets. Now there is no use of making a close season to shut out this fishing article of food. You take the fishing of Ohio, and you take the month of November out of the fishing month, and you might just as well hang up your nets entirely on the American side, that is, on the headwaters. The month of November is the only time that it is possible to catch the fish, that is fish for commerce.'

A prominent member of a fishing firm in Michigan said: 'I think a close season to commence the first of September and end the first of January, would be what we ought to have. I think the State ought to take the money that is expended in hatching fish, and pay the fishermen to stop fishing during the close season; that is, pay the fishermen for their time while they are lying still in the fall, during the fall fishing season.'

Such an expression of opinion is proof of the unwillingness of the fishing community to realise the purpose and meaning of close seasons for fish. Public opinion does not appear to have reached the necessary state of enlightenment. The California Fishery Commissioners when they reported regarding salmon protection on the depleted Sacramento River in 1882, said:—

'The Commission has much satisfaction in being able to report that there now appears to exist a more harmonious feeling upon the necessity of preserving the fish in our rivers. During the year last past, from all the information we have, there has been exhibited, on the part of the conductors of the canning business, a fair and earnest desire to enforce the close season, and a commendable realization of the importance of preserving the fish from wasteful destruction, and allowing

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them to reach their breeding-grounds in sufficient numbers. But still there has been a great deal of surreptitious violation of the laws by itinerant fishermen, whose depredations can only be prevented by the people in the immediate neighborhood by assisting in enforcing the law; for it may here, we think, be pertinently remarked, that the 'American citizen,' whilst exhibiting the highest order of natural ability for the making of laws, seems to almost entirely overlook the fact that it is also his privilege and duty, individually, to aid in the enforcement of them.'

This lack of support on the part of the public in the enforcement of just and necessary fishery laws is not confined to the United States; but the view, at one time prevalent, that the product of the waters is common property which any one may secure how, when, and where he likes, is slowly giving way to one more enlightened and having more regard to the public interest.

APPENDIX No. I.

EXPENDITURE AND REVENUE.

The total expenditure for all Fisheries services, except Civil Government, for the fiscal year ending June 30, 1899, including Fishing Bounty, amounted to \$417,601.16, being within the appropriation by \$1,099,27.

The total fisheries revenue, during the same period, from rents, license fees, fines and sales, including the *modus vivendi* licenses to United States vessels, amounted to \$85,502.85.

Service.	Expenditure		Vote.	
	\$	cts.	\$	cts.
Fisheries.....	95,278	59	95,000	00
Fish-breeding.....	34,522	57	34,500	00
Fisheries protection service.....	105,133	27	104,890	00
Fishing bounty.....	159,459	00	160,000	00
Miscellaneous expenditure.....	23,207	73	24,310	43
Total.....	\$417,601	16	\$418,700	43

The details of the above will be found in the Auditor General's report under the proper headings.

In addition to the above, the following summary shows the salaries and disbursements of fishery officers in the several provinces, together with the expenses for maintenance of the different fish-breeding establishments throughout the Dominion:—

Service.	Expenditure		Vote.	
	\$	cts.	\$	cts.
Fisheries, Ontario.....	11,784	22		
“ Quebec.....	11,350	27		
“ New Brunswick.....	22,922	50		
“ Nova Scotia.....	25,348	11		
“ Prince Edward Island.....	5,832	35		
“ Manitoba.....	1,883	37		
“ North-west Territories.....	4,065	68		
“ British Columbia.....	8,459	47		
General account.....	2,632	12		
Total.....	\$ 95,278	59	95,000	00

SALARIES and Disbursements of Fishery Officers.

Service.	Expenditure	Vote.
	\$ cts.	\$ cts.
Fish-breeding, Ottawa hatchery.....	1,278 40	
“ Newcastle “.....	3,762 01	
“ Sandwich “.....	4,941 89	
“ Tadoussac “.....	2,190 86	
“ Gaspé “.....	366 63	
“ Magog “.....	340 45	
“ Restigouche “.....	2,802 64	
“ Bedford “.....	1,401 25	
“ Bay View “.....	950 47	
“ Sydney “.....	73 94	
“ Miramichi “.....	2,186 58	
“ St John Riv. “.....	5,328 28	
“ Fraser Riv. “.....	3,736 14	
“ Selkirk “.....	3,967 36	
General account.....	1,155 67	
Total	34,522 57	34,500 00

This expenditure by provinces is subdivided as follows :—

EXPENDITURE.

	\$ cts.	\$ cts.
<i>Ontario.</i>		
Salaries of officers.....	7,252 42	
Disbursements of officers.....	4,525 80	
Miscellaneous.....	6 00	
Total		11,784 22
<i>Quebec.</i>		
Salaries of officers.....	6,779 79	
Disbursements of officers.....	4,536 95	
Miscellaneous.....	33 53	
Total		11,350 27
<i>New Brunswick.</i>		
Salaries of officers.....	14,674 63	
Disbursements of officers.....	7,443 19	
Miscellaneous.....	804 69	
Total		22,922 50
<i>Nova Scotia.</i>		
Salaries of officers.....	14,299 79	
Disbursements of officers.....	11,010 66	
Miscellaneous.....	37 66	
Total		25,348 11
<i>Prince Edward Island.</i>		
Salaries of officers.....	4,219 84	
Disbursements of officers.....	2,476 29	
Miscellaneous.....	136 72	
Total		6,832 85

EXPENDITURE AND REVENUE.

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EXPENDITURE—Continued.

	\$ cts.	\$ cts.
<i>Manitoba.</i>		
Salaries of officers.....	1,205 00	
Disbursements of officers.....	678 37	
Total.....		1,883 37
<i>North-west Territories.</i>		
Salaries of officers.....	1,984 56	
Disbursements of officers.....	1,957 69	
Miscellaneous.....	123 43	
Total.....		4,065 68
<i>British Columbia.</i>		
Salaries of officers.....	5,589 07	
Disbursements of officers.....	1,048 40	
Miscellaneous.....	1,822 00	
Total.....		8,459 47
General account.....		2,632 12
Grand total.....		95,278 59

FISH-BREEDING.

	\$ cts.	\$ cts.
<i>Newcastle Hatchery.</i>		
Salaries.....	594 00	
Miscellaneous expenditure.....	3,168 01	
Total.....		3,762 01
<i>Sandwich Hatchery.</i>		
Salaries.....	900 00	
Miscellaneous expenditure.....	4,041 89	
Total.....		4,941 89
<i>Ottawa Hatchery.</i>		
Salaries.....	700 00	
Miscellaneous expenditure.....	578 40	
Total.....		1,278 40
<i>Tadoussac Hatchery.</i>		
Salaries.....	650 00	
Miscellaneous expenditure.....	1,540 86	
Total.....		2,190 86
<i>Gaspé Hatchery.</i>		
Salaries.....	366 63	
Miscellaneous expenditure.....		
Total.....		366 63

FISH-BREEDING—Continued.

	\$ cts.	\$ cts.
<i>Magog Hatchery.</i>		
Salaries	180 00	
Miscellaneous expenditure.....	160 45	
Total		340 45
<i>Restigouche Hatchery.</i>		
Salaries.....	700 00	
Miscellaneous expenditure.....	2,102 64	
Total		2,802 64
<i>Bedford Hatchery.</i>		
Salaries	450 00	
Miscellaneous expenditure.....	991 25	
Total		1,441 25
<i>Bay View Hatchery.</i>		
Salaries.....	450 00	
Miscellaneous expenditure	500 00	
Total		950 00
<i>Sydney Hatchery.</i>		
Miscellaneous expenditure.....	73 94	
Total		73 94
<i>Miramichi Hatchery.</i>		
Salaries.....	1,000 00	
Miscellaneous expenditure.....	1,186 58	
Total		2,186 58
<i>St. John River Hatchery.</i>		
Salaries.....	600 00	
Miscellaneous expenditure	4,728 28	
Total		5,328 28
<i>Selkirk Hatchery.</i>		
Salaries	525 00	
Miscellaneous expenditure.....	1,442 36	
Total		3,967 36
<i>Fraser River Hatchery.</i>		
Salaries	500 00	
Miscellaneous expenditure.....	3,236 14	
Total		3,736 14
<i>General Account.</i>		
Miscellaneous expenditure.....	1,155 67	
Total, Fish-breeding.....		34,522 57
Total salaries and disbursements of fishery officers.....		95,278 59

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MISCELLANEOUS.

MISCELLANEOUS		\$	cts.
Building fishways.....		876	28
Legal and incidental expenses.....		861	05
Canadian fisheries exhibit.....		904	81
Expenditure in connection with the distribution of fishing bounties		5,034	73
Surveys of oyster beds.....		4,261	33
Issuing licenses to United States fishing vessels.....		398	71
Fisheries Revenue.....		509	10
Behring Sea Arbitration.....		4,552	62
Biological Station.....		4,709	10
J. S. Hall, Q.C.—re Richelieu Eel Weirs.....		1,100	00
Total.....		23,207	73

FISHERIES PROTECTION SERVICE—1898-9.

<i>Steamer 'Acadia.'</i>		\$	cts.	\$	cts.
Wages of officers and men.....		9,673	39		
Provisions.....		3,243	73		
Fuel.....		2,156	69		
Repairs.....		3,582	35		
Miscellaneous.....		4,412	22		
Total.....				23,068	38
<i>Steamer 'La Canadienne.'</i>					
Wages of officers and men.....		7,883	02		
Provisions.....		3,303	52		
Fuel.....		1,888	25		
Repairs.....		316	28		
Miscellaneous expenditure.....		7,289	48		
Total.....				21,680	55
<i>Steamer 'Stanley.'</i>					
Wages of officers and men.....		3,584	06		
Provisions.....		1,811	65		
Fuel.....		1,816	55		
Miscellaneous expenditure.....		723	76		
Total.....				7,836	02
<i>Steamer 'Curlew.'</i>					
Wages of officers and men.....		6,150	80		
Provisions.....		2,102	66		
Fuel.....		1,811	93		
Repairs.....		469	98		
Miscellaneous expenditure.....		2,807	25		
Total.....				13,342	62
<i>Steamer 'Petre'</i>					
Wages of officers and men.....		6,400	15		
Provisions.....		2,173	13		
Fuel.....		1,477	71		
Miscellaneous expenditure.....		2,089	20		
Repairs.....		95	39		
Total.....				12,155	58

FISHERIES PROTECTION SERVICE, &c.—*Concluded.*

	\$ cts.	\$ cts.
<i>Steamer 'Constance.'</i>		
Wages of officers and men.....	6,768 13	
Provisions	1,942 46	
Fuel	5,748 04	
Repairs.....	2,753 90	
Miscellaneous expenditure.....	3,816 31	
Total.....		21,028 84
<i>Schooner 'Osprey.'</i>		
Wages of officers and men.....	4,339 95	
Provisions.....	1,446 95	
Fuel.....	38 15	
Repairs.....	488 94	
Miscellaneous expenditure.....	1,625 76	
Total.....		7,939 75
<i>Schooner 'Kingfisher.'</i>		
Wages of officers and men.....	4,655 00	
Provisions.....	2,442 47	
Fuel.....	59 63	
Repairs.....	530 83	
Miscellaneous expenditure.....	1,513 47	
Total.....		9,201 40
<i>Steamer 'Dolphin.'</i>		
Wages of officers and men.....	1,478 63	
Provisions.....	782 84	
Fuel.....	500 84	
Repairs.....	32 16	
Miscellaneous.....	172 40	
Total.....		2,966 87
Fisheries Intelligence Bureau.....		2,936 20
General account.....		11,841 92
Total.....		133,998 13
Less—Amount paid by Customs Dept. for Str. 'Constance'.....	21,028 84	
do do do 'Stanley'.....	7,836 02	
		28,864 86
Net total.....		105,133 27

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STATEMENT of Fisheries Revenue paid to the credit of the Receiver General of Canada,
for the Fiscal Year ended June 30, 1899.

	\$	cts.
Ontario, rents, license fees, fines, &c.....	5,830	85
Quebec do	6,287	71
Nova Scotia do	4,668	22
New Brunswick do	10,430	08
P. E. Island do	2,242	24
Manitoba do	1,537	85
N. W. Territories do	150	50
British Columbia do	45,801	75
	76,949	20
Less—Refunds	509	10
	76,440	10
Licenses to U. S. fishing vessels	9,062	75
Total	85,502	85

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COMPARATIVE STATEMENT of Expenditure and Revenue of the

	1885-86.		1886-87.		1887-88.	
	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ sts.	\$ cts.
Ontario.....	17,900 74	15,917 62	19,534 01	15,063 57	19,860 52	18,251 25
Quebec.....	13,938 21	2,963 75	14,966 55	3,804 66	13,463 37	5,394 99
New Brunswick.....	15,719 36	4,078 10	16,944 87	4,417 52	20,533 20	7,625 64
Nova Scotia.....	17,852 33	2,166 53	18,092 21	1,585 28	18,308 02	3,905 44
Prince Edward Island.	3,187 73	40 00	4,044 49	128 00	3,402 51	.....
Manitoba and North- west Territories.....	1,920 73	.....	2,468 25	5 00	2,816 64	819 25
British Columbia.....	1,878 53	922 50	5,860 72	943 50	3,661 83	6,934 55
Fish-breeding and fish- ways.....	44,038 80	.....	37,864 22	.....	41,082 04	.....
Fisheries Protection Service.....	37,613 30	.....	134,340 12	.....	77,102 98	.....
Miscellaneous.....	10,350 43	.....	11,327 77	.....	13,498 56	.....
Totals.....	164,400 16	26,088 50	265,443 21	25,947 53	213,729 67	42,931 12
Fishing bounties...	161,597 39	.....	160,903 59	.....	163,757 92	.....
	1892-93.		1893-94.		1894-95.	
General Account Fish- eries.....	.....	.....	.....	.....	.....	.....
Ontario.....	20,116 91	30,623 09	22,634 37	28,632 82	21,938 56	33,211 60
Quebec.....	11,761 34	7,471 70	11,692 82	7,211 82	12,459 34	8,836 18
New Brunswick.....	15,721 05	7,831 53	18,522 94	8,333 24	21,370 94	11,170 36
Nova Scotia.....	19,444 22	6,782 02	20,420 81	5,296 27	23,555 38	7,075 07
Prince Edward Island..	2,847 60	304 10	3,078 55	980 15	3,796 58	3,312 30
Manitoba.....	3,932 96	1,661 68	5,331 29	926 99	6,178 71	2,458 80
North-west Territories.						
British Columbia.....	5,490 60	40,264 00	5,283 21	25,337 90	6,218 74	23,517 25
Fish-breeding.....	47,322 49	.....	45,024 67	.....	39,730 93	.....
Fisheries Protection Service.....	106,805 39	.....	115,147 59	.....	100,207 29	.....
Miscellaneous.....	100,602 14	.....	34,892 19	.....	24,619 86	.....
Totals.....	334,044 70	94,938 12	282,028 44	76,719 19	260,076 33	89,581 56
Fishing bounties...	159,752 15	158,794 54	160,089 42

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Fisheries Department, from July 1, 1885, to June 30, 1899.

1888-89.		1889-90.		1890-91.		1891-92.	
Expenditure.	Revenue.	Expenditure.	Revenue.	Expenditure.	Revenue.	Expenditure.	Revenue.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	-\$ cts.	\$ cts.	\$ cts.
19,264 98	24,266 06	14,539 87	23,666 96	15,540 30	26,517 70	15,155 83	25,368 90
12,991 63	3,380 79	9,670 94	5,409 81	10,666 98	3,642 14	10,917 36	4,742 76
20,298 00	8,282 88	14,914 95	8,834 35	16,082 77	7,193 69	15,707 98	6,334 83
20,201 09	2,744 23	17,395 24	5,424 95	17,844 19	5,582 65	18,755 86	3,357 42
3,748 69	140 00	3,113 21	302 88	3,242 25	667 00	1,835 65	166 00
2,848 16	848 00	3,604 70	794 00	3,609 03	1,234 00	3,593 43	1,079 00
4,333 63	6,416 00	3,634 41	11,367 50	4,320 53	12,859 02	6,158 17	8,192 48
41,315 12	352 50	39,126 91	.....	39,496 45	1,286 50	43,957 74	178 00
69,693 82	.....	64,434 66	1,176 38	83,050 16	1,934 49	93,397 40	.....
10,912 18	.....	9,313 92	.....	13,382 28	.....	17,449 06	.....
205,605 30	46,440 46	178,748 81	56,976 83	207,234 94	60,917 19	226,928 48	49,719 39
149,990 63	.....	149,999 85	.....	165,967 22	.....	156,892 25	.....
1895-96.		1896-97.		1897-98.		1898-99.	
.....	.....	2,198 47	.....	2,389 66	.....	2,632 12	.....
24,917 48	35,681 68	21,592 40	32,814 66	19,239 34	30,574 57	11,784 22	5,830 85
11,870 43	8,160 98	12,910 80	7,876 12	11,140 16	7,571 15	11,350 27	6,287 71
20,526 56	10,696 88	21,671 92	10,110 77	17,063 58	5,317 08	22,922 50	10,430 08
23,049 41	6,180 93	23,682 33	5,239 55	21,683 91	11,511 85	25,348 11	6,668 22
3,555 87	2,161 85	3,744 36	2,032 25	6,775 78	2,707 57	6,832 85	2,242 24
6,915 20	2,256 69	1,908 14	1,719 00	1,206 26	1,515 00	1,883 37	1,537 85
6,226 77	26,410 75	2,181 58	344 13	2,324 66	393 87	4,065 68	150 50
38,050 41	.....	8,841 64	39,888 82	8,508 79	47,864 75	8,459 47	45,801 75
102,021 72	.....	27,330 73	.....	28,002 32	.....	34,522 57	.....
20,203 25	.....	99,357 41	.....	101,807 96	.....	105,133 27	.....
257,237 10	91,549 76	62,777 30	100,025 30	59,919 56	.....	23,207 73	.....
163,567 99	.....	289,197 01	.....	280,061 98	107,455 84	427,599 16	76,949 20
.....	.....	154,389 77	.....	157 504 00	.....	159,459 00	.....

APPENDIX No. 2.

FISHING BOUNTIES.

The payments made for this service are under the authority of Act 54-55 Vic., cap. 42, intituled: 'An Act to encourage the development of the sea fisheries and the building of fishing vessels,' which provides for the payment of the sum of \$160,000 annually, under regulations to be made from time to time by the Governor General in Council.

REGULATIONS.

The regulations governing the payment of fishing bounties are as established by the following Order in Council dated the 10th December, 1897.

Order in Council.

AT THE GOVERNMENT HOUSE AT OTTAWA,

FRIDAY, the 10th day of December, 1897.

Present;

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

His Excellency, in virtue of the provisions of 'The Bounty Act, 1891,' 54-55 Victoria, chapter 42, and by and with the advice of the Queen's Privy Council for Canada is pleased to order that the regulations governing the payment of fishing bounties established by Order of the Governor in Council dated the 24th August, 1894, shall be and the same are hereby rescinded, and the following regulations substituted therefor:—

1. Resident Canadian fishermen who have been engaged in deep-sea fishing for fish other than shell-fish, salmon and shad, or fish taken in rivers, or mouths of rivers, for at least three months, and have caught not less than 2,500 pounds of sea-fish, shall be entitled to a bounty; provided always, that no bounty shall be paid to men fishing in boats measuring less than 13 feet keel, and not more than 3 men (the owner included) will be allowed as claimants in boats under 20 feet.

2. No bounty shall be paid upon fish caught in trap-nets, pound-nets and weirs, nor upon the fish caught in gill-nets fished by persons who are pursuing other occupations than fishing, and who devote merely an hour or two daily to fishing these nets but are not, as fishermen, steadily engaged in fishing.

3. Only one claim will be allowed in each season, even though the claimant may have fished in two vessels, or in a vessel and a boat or in two boats.

4. The owners of boats measuring not less than 13 feet keel which have been engaged during a period of not less than three months in deep-sea fishing for fish other than shell-fish, salmon or shad, or fish taken in rivers, or mouths of river, shall be entitled to a bounty on each such boat.

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5. Canadian registered vessels, owned and fitted out in Canada, of 10 tons and upwards (up to 80 tons) which have been exclusively engaged during a period of not less than three months in the catch of sea-fish other than shell-fish, salmon or shad, or fish taken in rivers, or mouths of rivers, shall be entitled to a bounty to be calculated on the registered tonnage which shall be paid to the owner or owners.

6. The three months during which a vessel must have been engaged in fishing, to be entitled to bounty, shall commence on the day the vessel sails from port on her fishing voyage and end the day she returns to port from said voyage.

7. Owners or masters of vessels intending to fish and claim bounty on their vessels must, before proceeding on a fishing voyage, procure a license from the nearest Collector of Customs or Fishery Overseer, said license to be attached to the claim when sent in for payment.

8. Dates and localities of fishing must be stated in the claim, as well as the quantity and kinds of sea-fish caught.

9. Ages of men must be given. Boys under 14 years of age are not eligible as claimants.

10. Claims must be sworn to as true and correct in all their particulars.

11. Claims must be filed on or before the 30th November in each year.

12. Officers authorized to receive claims will supply the requisite blanks free of charge, and after certifying the same will transmit them to the Department of Marine and Fisheries.

13. No claim in which an error has been made by the claimant or claimants shall be amended after it has been signed and sworn to as correct.

14. Any person or persons detected making returns that are false or fraudulent in any particular will be debarred from any further participation in the bounty, and be prosecuted according to the utmost rigour of the law.

15. The amount of the bounty to be paid to fishermen and owners of boats and vessels will be fixed from time to time by the Governor in Council.

16. All vessels fishing under bounty license are required to carry a distinguishing flag, which must be shown at all times during the fishing voyage at the main topmast head. The flag must be four feet square in equal parts of red and white, joined diagonally from corner to corner. Any case of neglect to carry out this regulation reported to the Department of Marine and Fisheries will entail the loss of the bounty, unless satisfactory reasons are given for its non-compliance.

JOHN J. MCGEE,
Clerk of the Privy Council.

There were received for the year 1898, 14,679 claims, a decrease of 168 compared with the year 1897.

The number of claims paid during the year was 14,531, being a decrease of 189 as compared with the previous year.

There was \$63,461 in bounties paid to vessels and their crews, and \$95,998.50 to boats and boat fishermen, making the total bounty paid during the year 1898-9, \$159,459.

The number of vessels which received bounty during the year was 784, the total tonnage being 25,108 tons, showing a decrease of 6 vessels and 617 tons, as compared with the previous year.

Bounty was paid on 13,747 boats, and to 23,501 boat fishermen during the year, being a decrease of 192 boats and 111 fishermen, as compared with 1897-8.

GENERAL STATEMENT of Fishing Bounty Claims received and paid for the Year 1898.

Province.	County.	Number of Claims received.	Number of Claims rejected.	Number of Claims paid.
Nova Scotia.....	Annapolis.....	181	1	180
	Antigonish.....	157		157
	Cape Breton.....	537		537
	Colchester.....			
	Cumberland.....	10	2	8
	Digby.....	499	2	497
	Guysborough.....	1,348	16	1,332
	Halifax.....	1,359	6	1,353
	Hants.....	1		1
	Inverness.....	625		625
	King's.....	66		66
	Lunenburg.....	937	2	935
	Pictou.....	36	3	33
	Queen's.....	192	1	191
	Richmond.....	1,089	12	*1,079
	Shelburne.....	651	2	649
Victoria.....	500	24	476	
Yarmouth.....	258		258	
	Totals.....	8,446	71	8,347
New Brunswick.....	Charlotte.....	466	1	465
	Gloucester.....	346	15	331
	Kent.....	62		62
	Northumberland.....	8		8
	Restigouche.....	1		1
	St. John.....	51	1	50
	Westmoreland.....			
	Totals.....	934	17	917
Prince Edward Island.....	King's.....	598	6	592
	Prince.....	439		*446
	Queen's.....	106	1	*107
	Totals.....	1,143	7	1,145
Quebec ..	Bonaventure.....	776	11	765
	Gaspé.....	2,507	22	*2,486
	Rimouski.....	76	16	60
	Saguenay.....	797	13	781
	Totals.....	4,171	65	4,092
	Grand totals.....	14,679	160	14,531

* NOTE.—The number of claims paid includes several applications for previous years, which explains the difference between claims paid and claims received, after deducting those rejected.

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DETAILED STATEMENT of Fishing Bounties paid to Vessels in each County for the Year 1898.

Province.	County.	Number of Vessels.	Tonnage.	Average Tonnage.	Number of Men.	Amount paid.
						\$ cts.
Nova Scotia.....	Annapolis.....	11	260	23·7	62	663 00
	Antigonish.....	1	10	10	3	29 50
	Cape Breton.....	11	178	16·2	57	548 50
	Cumberland.....	4	87	21·3	16	191 00
	Digby.....	50	1,493	29·43	429	4,223 00
	Guysborough.....	20	506	25·6	103	1,175 50
	Halifax.....	53	1,308	24·36	305	3,290 50
	Hants.....	1	17	17	3	36 50
	Inverness.....	24	407	16·23	122	1,200 00
	King's.....	4	69	17·1	16	173 00
	Lunenburg.....	157	11,171	71·24	2386	26,680 00
	Pictou.....	1	23	23	.....	23 00
	Queen's.....	9	244	27·1	63	653 50
	Richmond.....	46	1,358	29·24	297	3,288 50
	Shelburne.....	60	1,774	29·34	495	4,991 50
	Victoria.....	5	114	22·4	22	257 00
Yarmouth.....	48	1,849	38·25	470	4,904 00	
	Totals.....	505	20,868	41·163	4840	52,328 00
New Brunswick.....	Charlotte.....	49	874	17·41	193	2,128 50
	Gloucester.....	178	2,100	11·142	627	6,175 50
	Kent.....	.....	.....	.....	.....	.....
	Northumberland.....	3	39	13	11	110 50
	Restigouche.....	1	26	26	4	52 00
	St. John.....	8	116	14·4	24	272 00
	Totals.....	239	3,155	13·48	859	8,738 50
Prince Edward Island..	King's.....	13	330	25·5	71	791 50
	Prince.....	6	143	23·5	32	351 00
	Queen's.....	5	88	17·3	22	228 00
		Totals.....	24	561	23·9	125	1,370 50
Quebec.....	Bonaventure.....	.....	.....	.....	.....	.....
	Gaspé.....	1	15	15	4	41 00
	Rimouski.....	.....	.....	.....	.....	.....
	Saguenay.....	15	509	33·14	73	983 50
		Totals.....	16	524	32·12	77	1,024 50
	Grand totals.....	784	25,108	32·20	5901	63,461 50

DETAILED STATEMENT of Fishing Bounties paid to **Boats** in each County for
the Year 1898.

Province.	County.	Number of Boats.	Number of Men.	Amount paid.	Total Bounty paid to Vessels and Boats in 1898.
				\$ cts.	\$ cts.
Nova Scotia	Annapolis	169	265	1,096 50	1,759 50
	Antigonish	156	232	968 00	997 50
	Cape Breton	526	996	4,012 00	4,560 50
	Cumberland	4	9	35 50	226 50
	Digby	447	827	3,341 50	7,564 50
	Guysborough	1,312	2,053	8,497 50	9,673 00
	Halifax	1,300	1,836	7,723 00	11,013 50
	Hants				36 50
	Inverness	601	1,321	5,224 50	6,424 50
	King's	62	89	373 50	546 50
	Lunenburg	778	876	3,844 00	30,524 00
	Pictou	32	47	196 50	219 50
	Queen's	182	289	1,193 50	1,847 00
	Richmond	1,033	1,608	6,662 00	9,949 50
	Shelburne	589	941	3,882 50	8,874 00
	Victoria	471	746	3,082 00	3,339 00
	Yarmouth	210	303	1,270 50	6,174 50
	Totals	7,872	12,438	51,403 00	103,730 00
New Brunswick	Charlotte	416	681	2,799 50	4,928 00
	Gloucester	153	381	1,486 50	7,662 00
	Kent	62	98	405 00	405 00
	Northumberland	5	18	68 00	178 50
	Restigouche				52 00
	St. John	42	59	248 50	520 50
	Westmoreland				
	Totals	678	1,237	5,007 50	13,746 00
Prince Edward Island	King's	579	974	3,988 00	4,779 50
	Prince	440	970	3,835 00	4,186 00
	Queen's	102	255	994 50	1,222 50
	Totals	1,121	2,199	8,817 50	10,188 00
Quebec	Bonaventure	765	1,291	5,283 50	5,283 50
	Gaspé	2,485	4,927	19,729 50	19,770 50
	Rimouski	60	92	382 00	382 00
	Saguenay	766	1,317	5,375 50	6,359 00
	Totals	4,076	7,627	30,770 50	31,795 00
	Grand totals	13,747	23,501	95,998 50	159,459 00

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GENERAL STATISTICS.

The fishing bounty was first paid in 1882.

The payments were made each year on the following basis:—

1882, vessels \$2 per ton, one half to the owner and the other half to the crew.

Boats at the rate of \$5 per man, one-fifth to the owner and four-fifths to the men.

1883, vessels \$2 per ton, and boats \$2.50 per man, distributed as in 1882.

1884, vessels \$2 per ton, as in 1882 and 1883.

Boats from 14 to 18 feet keel.....	\$1 00
do 18 to 25 do	1 50
do 25 feet keel upwards.....	2 00

And boat fishermen \$3 each.

1885, 1886 and 1887, vessels \$2 per ton as in previous years. Boats measuring 13 feet keel having been admitted in 1885, the rates were:—Boats from 13 to 18 feet keel, \$1; from 18 to 25 feet keel, \$1.50; from 25 feet keel upwards, \$2, and fishermen \$3 each.

1888, vessels \$1.50 per ton, one-half each to owner and crew. Boats, the same as in 1885, 1886 and 1887.

1889, 1890 and 1891, vessels \$1.50 per ton as in 1888. Boats \$1 each. Boat fishermen \$3.

1892, vessels \$3 per ton, one half each to owner and crew. Boats \$1 each. Boat fishermen \$3.

1893, vessels \$2.90 per ton, paid as formerly. Boats \$1 each. Boat fishermen \$3.

1894, vessels \$2.70 per ton, distributed as in previous years. Boats \$1 each. Boat fishermen \$3.

1895, vessels \$2.60 per ton, half each to owner and crew. Boats \$1 each. Boat fishermen \$3.

1896, vessels \$1 per ton, which was paid to the owners, and vessel fishermen \$5 each, clause 5 of the regulations having been amended accordingly. Boats \$1 each, and boat fishermen \$3.50 per man.

1897, vessels \$1 per ton, and vessel fishermen \$6 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1898, vessels \$1 per ton, and vessel fishermen \$6.50 each. Boats \$1 each, and boat fishermen \$3.50 per man.

Since 1882, 13,854 vessels, totalling a tonnage of 502,849 tons, have received the bounty. The total number of vessel fishermen which received bounty is 105,503, being an average of 8 men per vessel.

The total number of boats to which bounty was paid since 1882 is 238,546, and the number of fishermen 447,215. Average number of men per boat, 2.

The highest bounty paid per head to vessel fishermen was \$21.75 in 1893; the lowest 83 cents, while the highest to boat fishermen was \$4, the lowest \$2.

The general average paid per head is \$4.85.

COMPARATIVE STATEMENT by Provinces for the Years 1882 to 1898, inclusive, showing :—
 (1) Total number of Fishing Bounty Claims received and paid by the Department of Marine and Fisheries.

YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		PRINCE EDWARD ISLAND.		QUEBEC.		TOTAL.	
	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.
1882.....	6,730	6,613	1,257	1,142	1,169	1,100	3,162	3,117	12,318	11,972
1883.....	7,171	7,076	1,693	1,579	1,138	1,106	3,602	3,325	13,604	13,086
1884.....	7,007	6,930	1,252	1,224	923	885	3,470	3,429	12,652	12,468
1885.....	7,646	7,599	1,609	1,588	1,117	1,025	3,943	3,912	14,315	14,124
1886.....	7,639	7,702	1,767	1,763	1,131	1,080	4,275	4,355	14,812	14,900
1887.....	8,262	8,227	1,975	1,958	1,201	1,126	4,138	4,105	15,576	15,416
1888.....	8,481	8,429	2,065	2,026	1,153	834	4,328	4,310	16,027	15,599
1889.....	8,816	8,523	2,428	2,392	1,211	1,511	4,664	4,652	17,119	17,078
1890.....	9,337	9,429	2,522	2,469	1,352	1,257	4,860	4,804	18,071	17,959
1891.....	10,242	10,063	2,831	2,084	1,482	1,446	5,108	4,913	19,663	18,506
1892.....	8,272	8,186	1,067	1,001	1,065	1,051	4,425	4,204	14,829	14,442
1893.....	7,926	7,844	967	881	1,027	1,012	4,059	3,898	13,979	13,636
1894.....	8,640	8,600	925	911	983	963	3,948	3,876	14,496	14,350
1895.....	8,835	8,825	979	975	1,009	1,025	3,904	3,955	14,727	14,780
1896.....	8,597	8,562	1,137	1,064	1,111	1,120	4,368	4,229	15,211	14,975
1897.....	8,450	8,418	1,042	991	1,175	1,171	4,180	4,149	14,847	14,729
1898.....	8,446	8,347	934	917	1,143	1,145	4,171	4,092	14,679	14,531
Totals.....	140,497	139,373	26,450	24,965	19,390	18,857	70,588	69,325	256,925	252,550

(2) Number of vessels, tonnage and number of men which received Bounty in each year.

YEAR.	NOVA SCOTIA.			NEW BRUNSWICK.			PRINCE EDWARD ISLAND.			QUEBEC.			TOTAL.		
	No. of Vessels.	Ton- nage.	No. of Men.	No. of Vessels.	Ton- nage.	No. of Men.	No. of Vessels.	Ton- nage.	No. of Men.	No. of Vessels.	Ton- nage.	No. of Men.	No. of Vessels.	Ton- nage.	No. of Men.
1882.....	588	22,841	5,343	120	2,171	531	15	389	74	63	2,210	538	788	27,611	6,486
1883.....	700	29,788	6,238	126	2,102	496	16	450	66	62	2,236	443	904	34,576	7,243
1884.....	700	29,828	6,327	139	2,289	560	16	582	92	56	1,965	382	911	34,664	7,361
1885.....	629	27,709	5,897	128	2,120	496	19	597	113	55	1,791	317	831	32,217	6,823
1886.....	562	25,375	5,022	145	2,628	520	32	1,071	215	52	1,730	320	791	30,804	6,077
1887.....	566	24,520	4,900	154	2,889	563	38	1,677	338	54	1,883	334	812	30,969	6,135
1888.....	589	26,008	5,450	150	2,545	544	37	1,245	246	51	1,842	388	827	31,640	6,631
1889.....	597	27,123	5,684	153	2,590	565	35	1,274	239	48	1,729	330	833	32,716	6,818
1890.....	540	23,955	4,935	133	2,129	447	32	1,002	203	34	1,182	220	739	28,268	5,805
1891.....	527	22,780	4,618	124	2,051	411	27	778	155	27	924	168	705	26,533	5,352
1892.....	507	22,279	4,611	108	1,683	343	30	983	139	23	803	159	668	25,748	5,252
1893.....	536	23,195	4,780	210	2,922	634	27	910	151	32	952	179	805	27,979	5,744
1894.....	602	24,735	5,077	238	3,189	721	21	594	114	38	1,066	178	899	29,584	6,090
1895.....	603	25,018	5,184	238	3,107	764	27	769	129	39	1,362	173	907	30,156	6,250
1896.....	583	23,415	4,607	250	3,337	800	23	656	114	36	1,143	144	862	28,551	5,665
1897.....	507	21,323	4,829	239	3,079	816	20	490	109	24	833	116	790	25,725	5,870
1898.....	508	20,868	4,840	239	3,155	859	24	561	125	16	524	77	784	25,108	5,901
Totals.....	9,814	420,760	88,342	2,894	43,986	10,070	439	14,028	2,625	710	24,075	4,466	13,854	502,849	105,503

(3) NUMBER of Boats and boat fishermen which received Bounty in each year.

YEAR.	NOVA SCOTIA		NEW BRUNSWICK.		P. E. ISLAND.		QUEBEC.		TOTAL.	
	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.
1882.....	6,043	12,130	1,024	2,530	1,087	3,070	3,071	5,716	11,225	23,446
1883.....	6,458	13,553	1,453	3,309	1,098	3,106	3,266	6,188	12,275	26,156
1884.....	6,257	12,669	1,086	2,505	869	2,346	3,344	6,416	11,556	23,936
1885.....	6,970	13,396	1,460	3,254	1,006	2,606	3,857	7,485	13,293	26,741
1886.....	7,140	13,351	1,618	3,567	1,048	2,547	4,303	7,981	14,109	27,446
1887.....	7,662	13,997	1,804	3,994	1,083	2,711	4,051	7,550	14,605	28,252
1888.....	7,840	14,115	1,876	4,148	797	2,141	4,259	7,852	14,772	28,256
1889.....	7,926	14,118	2,237	5,032	1,475	3,568	4,602	8,807	16,240	31,525
1890.....	8,886	15,738	2,324	5,242	1,192	3,024	4,766	9,241	17,168	33,245
1891.....	9,525	16,552	1,928	4,126	1,383	3,427	4,865	9,402	17,701	33,507
1892.....	7,679	12,307	893	1,765	1,021	2,047	4,181	7,693	13,774	23,812
1893.....	7,308	11,748	671	1,314	985	1,962	3,866	7,245	12,830	22,269
1894.....	7,956	12,899	661	1,281	913	1,813	3,821	7,139	13,351	23,132
1895.....	8,222	13,106	737	1,434	998	2,141	3,916	7,877	13,873	24,558
1896.....	8,008	12,454	814	1,553	1,095	2,126	4,189	7,688	14,106	23,821
1897.....	7,911	12,542	752	1,351	1,151	2,147	4,125	7,572	13,939	23,612
1898.....	7,872	12,438	678	1,237	1,121	2,199	4,076	7,627	13,747	23,501
Totals...	129,663	227,113	22,016	47,642	18,327	42,981	68,558	129,479	238,564	447,215

(4) TOTAL Number of men receiving Bounty in each year.

YEAR.	NOVA SCOTIA.	NEW BRUNSWICK.	P. E. ISLAND.	QUEBEC.	TOTAL.
	No. of Men.	No. of Men.	No. of Men.	No. of Men.	
1882.....	17,473	3,061	3,144	6,254	29,932
1883.....	19,791	3,805	3,172	6,631	33,399
1884.....	18,996	3,065	2,438	6,798	31,297
1885.....	19,293	3,750	2,719	7,802	33,564
1886.....	18,373	4,087	2,762	8,301	33,523
1887.....	18,897	4,557	3,049	7,884	34,387
1888.....	19,565	4,692	2,390	8,240	34,887
1889.....	19,802	5,597	3,807	9,137	38,343
1890.....	20,673	5,689	3,227	9,461	39,050
1891.....	21,170	4,537	3,522	9,570	38,859
1892.....	16,918	2,108	2,186	7,852	29,064
1893.....	16,528	1,948	2,113	7,424	28,013
1894.....	17,976	2,002	1,927	7,317	29,222
1895.....	18,290	2,198	2,270	8,050	30,808
1896.....	17,061	2,353	2,240	7,832	29,486
1897.....	17,371	2,167	2,256	7,688	29,482
1898.....	17,278	2,026	2,324	7,704	29,402
Totals.....	315,455	57,712	45,606	133,945	552,718

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(5) TOTAL annual payments of Fishing Bounty.

Year.	Nova Scotia.	New Brunswick	P. E. Island.	Quebec.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1882.....	106,098 72	16,997 00	16,137 00	33,052 75	172,285 47
1883.....	89,432 50	12,395 20	8,577 14	19,940 01	130,344 85
1884.....	104,934 09	13,576 00	9,203 96	28,004 93	155,718 98
1885.....	103,999 73	15,908 25	10,166 65	31,464 76	161,539 39
1886.....	98,789 54	17,894 57	10,935 87	33,283 61	160,903 59
1887.....	99,622 03	19,699 65	12,528 51	31,907 73	163,757 92
1888.....	89,778 90	18,454 92	9,092 96	32,858 75	150,185 53
1889.....	90,142 51	21,026 79	13,994 53	33,362 71	158,526 54
1890.....	91,235 64	21,108 33	11,666 32	34,210 72	158,241 01
1891.....	92,377 42	17,235 96	12,771 30	34,507 17	156,891 85
1892.....	109,410 39	10,864 61	9,782 79	29,694 35	159,752 14
1893.....	108,060 67	12,524 09	9,328 62	28,320 72	158,234 10
1894.....	111,460 03	12,690 80	7,875 79	28,040 18	160,066 80
1895.....	110,765 27	12,919 32	9,285 13	30,598 27	163,567 99
1896.....	98,048 95	13,602 88	9,745 50	32,992 44	154,389 77
1897.....	102,083 50	13,454 50	9,809 00	32,157 00	157,504 00
1898.....	103,730 00	13,746 00	10,188 00	31,795 00	159,459 00
Totals.....	1,709,969 89	264,098 87	181,109 07	526,191 10	2,681,368 93

LIST of Vessels which received Fishing Bounty for the Year 1898.

PROVINCE OF NOVA SCOTIA.

ANNAPOLIS COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.	
							\$	cts.
80093	Anna K	St. John	14	George Gibson	Margaretville.....	1	20	50
72978	Annie Coggins.....	Digby	21	David Hayden.....	Thorne's Cove....	7	66	50
88270	Alice May	St. John	10	Ambrose Sabean, sr.	Port Lorne.....	5	42	50
94700	Franklin S. Schenck	Digby	44	John L. Apt.....	Thorne's Cove....	13	128	50
94706	George J. Tarr.....	do	61	John S. Hayden	Victoria Beach....	13	145	50
85503	G. P. Taylor.....	Annapolis.....	13	Stephen Haynes.....	do	4	39	00
42089	Lily	St. Andrews... 10	10	James Aldred.....	Margaretville.....	3	29	50
100020	May Flower.....	Annapolis	12	John Burrell.....	Clementsport....	2	25	00
94732	Only Son.....	Windsor	13	John Gordon.....	Margaretville.....	3	32	50
83253	Rescue	Annapolis.....	17	Josiah Burrell.....	Clementsport....	5	49	50
37172	Richard Simonds	St. John	45	Norman Ray	Margaretville.....	6	84	00

ANTIGONISH COUNTY.

90642	Komaroff.....	Yarmouth	10	J. Brown & P. Decoste	Harb' rauBouche	3	29	50
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CUMBERLAND COUNTY.

88396	Brant.....	Windsor	12	Abner Neves	Apple River.....	2	25	00
83261	Economist.....	Digby	14	James E. Ogilvie.....	Parfsboro'	2	27	00
103023	Minnie H	Parrsboro'	12	Wm. E. Hayes.....	do	3	31	50
100515	Packet.....	do	49	Burpee Tupper.....	Spencer's Island.	9	107	50

CAPE BRETON COUNTY.

100389	Annie F.....	Sydney	13	John Farrell.....	Main-à-Dieu.....	4	39	00
100372	Betsy Jane.....	do	11	Samuel Moore	Little Bras d'Or..	4	37	00
92566	Cassie M	Halifax.....	12	John Pope.....	Main-à-Dieu.....	5	44	50
85381	Champion	Sydney.....	19	John Williams.....	Louisburg	4	45	00
75571	Fanny	Liverpool.....	16	Aaron Anesty.....	North Sydney ..	5	48	50
88513	Ida	Sydney	11	Elias Leblanc.....	Little Bras d'Or..	3	30	50
10 381	Katie B	do	24	John H. Burke.....	Little Lorraine..	7	69	50
80974	Mary Ann	do	19	Thomas Hart, sr ..	Main-à-Dieu.....	6	58	00
88431	Mayflower.....	Halifax.....	21	John P. Bates.....	Batston	6	60	00
92600	Merit.....	Sydney	13	Alexander Leblanc.	Little Bras d'Or..	6	52	00
100566	Rob. S.....	Halifax.....	19	Ambrose Forward...	Lingan.....	7	64	50

DIGBY COUNTY.

83431	Acadian.....	Weymouth... 32	32	George H. Stevens..	Freeport.....	11	103	50
83258	Alfred	Digby	29	Edwin Hains.....	do	9	87	50
90660	Alice May	do	18	Edgar McDormand ..	Westport.....	8	70	00
88598	Alph. B. Parker	St. John	39	Holland Outhouse...	Tiverton.....	12	117	0
94696	Annie M. Sproul.....	Digby.....	70	John W. Sproul.....	Digby	16	174	00
10 547	B & C.....	do	14	Loren Perry.....	Westport.....	2	27	00
94698	Carrie H.....	do	20	Augustus Haycock..	do	7	65	50
94704	Charles Haskell.....	do	67	Howard Anderson...	Digby	16	171	00
74331	Condor	Yarmouth	11	Howard Titus.....	Westport.....	5	43	50

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LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

DIGBY COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
103181	Curlew	Shelburne	63	John Sims	Digby	16	167 00
90662	Edward A. Horton	Digby	67	Joseph E. Snow	do	14	158 00
77740	Elmer	do	15	James Gower	Westport	7	60 50
94707	Ernest F. Norwood	do	79	Joseph E. Snow	Digby	5	111 50
75757	Etta	do	17	Clarence Webber	Westport	5	49 50
85558	Fair Play	Yarmouth	11	John A. Powell	do	2	24 00
74329	Fairy Queen	do	13	Wallace Coggins	do	5	45 50
100891	Fleur de Lis	Weymouth	17	Geo. A. Mallett	Plympton	5	49 50
77963	Freeman Colgate	Digby	26	Chas. Hicks & Sons	Westport	10	91 00
80798	Freddie G	do	18	George Gower	do	7	63 50
83250	Gazelle	do	20	D. & O. Sproul	Digby	7	65 50
90436	Genesta	Barrington	32	George Denton	Westport	12	110 00
94835	Georgie Linwood	Digby	25	Herbert Johnston	Digby	5	57 50
100544	Helen Maud	do	26	Chas. McDormand	Westport	8	78 00
77786	Hesperus	Halifax	17	George Buckman	do	3	36 50
61789	I. H. Goudey	Shelburne	27	Casimir R. Comeau	Meteghan River	5	59 50
100064	Isma	St. John	31	Chas. Hicks & Sons	Westport	19	96 00
94693	John H. Kennedy	Digby	54	John W. Snow	Digby	6	93 00
83461	Josie L. Day	do	16	Edward Keans	do	9	74 50
59388	Letitia	St. Andrews	10	Peter H. Belliveau	Belliveau's Cove	3	29 50
85690	Lora T	Digby	15	Joseph Thurber	Freeport	7	60 50
85534	Lloyd	Yarmouth	24	W. H. Anderson	Digby	9	82 50
85687	Mabel	Digby	38	William M. Denton	Westport	14	129 00
100487	Mabel B.	do	57	M. G. Crocker	Freeport	12	135 00
85539	Maggie Jane	Yarmouth	12	Thomas Sa. Inier	Meteghan	4	38 00
85682	Maiafert	Digby	23	Edward C. Bowers	Westport	10	88 00
92640	Minerva	Lunenburg	80	Edward C. Bowers	do	18	197 00
85533	Minnie C.	Yarmouth	12	Chipman Thurber	Freeport	5	44 50
89794	Minnie C.	Digby	18	Chas. H. Bailey	Westport	8	70 00
100895	New Home	Weymouth	31	Moise Thibodeau	Church Point	10	96 00
94825	On Time	Digby	19	Charles Glavin	Westport	9	77 50
100539	Rowena	do	19	Warren Snow	Smith's Cove	2	23 00
85558	S. A. Crowell	Yarmouth	23	Wallace Gower	Westport	8	75 00
100609	Swan	Shelburne	56	Milton Hains	Freeport	14	147 00
75726	Thrush	Yarmouth	13	Frank Lent	do	5	45 50
94694	Utah and Eunice	Digby	33	Milton Hains	do	9	91 50
103711	Venette	Yarmouth	16	Stephen Doucette	Cape Cove	8	68 00
100548	Violetta	Digby	11	Arthur W. Longmire	Digby	5	43 50
88264	Walter J. Clarke	do	20	Wilbur P. Hamilton	do	6	59 00
64049	Weenona	do	19	Thomas Brooks	Freeport	7	64 50
100543	W. Parnell O' Hara	do	79	Edgar Post	Digby	20	209 00

GUYSBORO COUNTY.

103453	Anna Maud	Arichat	10	Thurlow Munroe	White Head	3	29 50
103322	Bonnie Briar Bush	Pt Hawkesb'ry	38	Henry O' Neill	Auld's Cove	8	90 00
100445	Carrie O	Canso	12	Samuel Grant	White Head	3	31 50
103321	Christie Campbell	Pt Hawkesb'ry	55	Thomas H. Peoples	Pirate Harbour	10	120 00
38418	Dolphin	Arichat	36	William S. Peart	Guysboro	3	55 50
83180	Friend	Halifax	17	Luke Mannette, sr.	Larry's River	4	43 00
61622	Gentile	Guysboro	34	Edward Gilley	New Harbour	6	73 00
94963	Golden Seal	Halifax	32	Edward B. Pelrine	Larry's River	7	77 50
100161	Hilda Maud	Pt Hawkesb'ry	46	John G. Murray	Port Richmond	11	117 50
57715	John Lawrence	Halifax	23	Henry A. Richard	Charlo's Cove	5	55 50
69964	Lizzie A.	Pt Hawkesb'ry	20	Edward Purcell	Mnlgrave	3	39 50
75577	Mary Ann Bell	Lunenburg	33	Joseph O' Neill	Auld's Cove	5	65 50
103859	Mary May	Halifax	23	Benjamin David	Port Félix	9	81 50
100446	Minnie May	Canso	12	William L. Dort	Sandy Cove	3	31 50

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—Con.

GUYSBORO COUNTY—Concluded.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
80970	Orion	Halifax.....	24	Hubert Richard.....	Charlo's Cove....	6	63 00
100231	Pearl	do	16	Martin Magher.....	Canso.....	3	35 50
75892	Peter Mitchell.....	Pt Hawkesb'ry	26	Michael Power.....	Mulgrave.....	4	52 00
92575	Robinetta	Halifax.....	14	Reuben Mu roe.....	White Head	3	33 50
100444	Stella May	Canso	12	James Meagher.....	Canso	5	44 50
59495	Three Brothers.....	Halifax.....	23	Leander Tanner.....	Cole Harbour.....	2	36 00

HALIFAX COUNTY

90495	Annie L.....	Halifax.....	34	Joseph Scott.....	East Dover.....	6	73 00
100221	Baleka	do	31	Gray Bros.....	Sambro	7	76 50
94662	Bessie Florence.....	do	12	Chas. W. Twohig....	Pennant.....	4	38 00
103858	B & B. Holland.....	do	26	Richard Holland.....	Portuguese Cove	7	71 50
90496	Black Prince.....	do	18	J. W. Slaunwhite....	Terence Bay.....	5	50 50
103537	Bonacord	do	12	James W. Smith.....	Sambro	2	25 00
90721	Brilliant Star.....	do	56	Peter Hartlin.....	East Jeddore....	10	121 00
96799	Catherine A. C.....	do	17	Hezekiah Cleveland..	West Dover.....	5	49 50
103852	Dawn	do	13	James & Thos. Parker	Owl's Head.....	2	26 00
59484	Day Spring.....	Halifax.....	36	George L. Baker.....	West Jeddore....	8	88 00
90481	Ella D.....	do	32	Archibald Darrach...	Herring Cove....	10	97 00
90726	Ellen Maud.....	do	16	Samuel Wilson.....	Holifax.....	6	55 00
103749	Emerald.....	Lunenburg.....	29	Fader & Co.....	do	7	74 50
85738	Emma F.....	Halifax.....	13	Amos Graves.....	East Dover.....	3	32 50
96785	Eva M. B.....	do	45	Daniel Bonang.....	W. Chezzetcook.	6	84 00
100247	Fairy Queen.....	do	11	Geo. H. Nickerson....	Pennant.....	2	24 00
85444	Flora.....	do	42	Patrick Scallion.....	Herring Cove....	10	107 00
100259	Florence G.....	do	15	Caleb Gray.....	Sambro.....	3	34 50
100228	Golden Dawn.....	do	46	George Conrod.....	E. Chezzetcook..	13	130 50
103544	Grace D.....	do	10	James Marrayatt....	Pennant.....	3	29 50
882 0	Grande.....	do	14	John P. Slaunwhite...	Terence Bay.....	3	33 50
90489	Green Leaf.....	do	44	Martin Julien.....	W. Chezzetcook.	8	96 00
83306	I. O. N. A.....	do	26	Andrew Sullivan....	Herring Cove....	8	78 00
100216	Katie M.....	do	11	Charles Nelson.....	Halifax.....	*	11 00
69105	Lady of the Lake...	do	20	Richard Christian...	Prospect	6	59 00
94665	Louis Luby.....	do	41	William Lapiere....	W. Chezzetcook.	11	112 50
100580	Maggie E. C.....	do	20	David Covey.....	Haggets Cove....	7	65 50
96805	Maggie May.....	do	62	Jeremiah Fillis....	W. Chezzetcook.	18	179 00
85664	Mary E.....	do	14	Andrew Twohig.....	Pennant.....	3	33 50
100327	May	do	10	Thos. E. Little.....	Terence Bay.....	3	29 50
103182	Meta.....	Shelburne.....	18	James Reno.....	Herring Cove....	5	50 50
100254	Myrtle M. Gray.....	Halifax.....	19	James Gray.....	Pennant.....	6	58 00
85665	Nellie D.....	do	12	Daniel Smith.....	Sambro	4	38 00
94667	Nettie M. G.....	do	32	Mathew Lynch.....	Ferguson's Cove	7	77 50
103539	Neva.....	do	11	Ephraim Marrayatt..	Pennant.....	2	24 00
100245	Oracle.....	do	18	W. McC. Boak.....	Halifax.....	4	44 00
85562	Oresa.....	do	14	Lawson B. Corkum...	East Jeddore....	5	46 50
100241	Pansy.....	do	32	George Schnair.....	Pennant.....	7	77 50
92371	Primrose.....	do	14	Angus Gray.....	Sambro	4	40 00
100474	K. Beatrice.....	do	19	James Morash.....	West Dover.....	5	51 50
75575	Rising Dawn.....	do	18	Frederick Boutillier..	Indian Harbour..	5	50 50
96806	Rising Sun.....	do	28	George Julien.....	W. Chezzetcook.	4	54 00
69082	Saint Agnes.....	do	30	Ebenezer Homans....	Clam Harbour....	4	56 00
64869	Sarah L. Oxner.....	do	34	Edward Hayes.....	Herring Cove....	10	99 00
100255	Sea Flea.....	do	12	James Stevens.....	Owl's Head.....	3	31 50
103538	Staletta	do	25	W. Charles Henley...	Spry Bay.....	4	51 00
103193	Startle.....	Liverpool.....	11	Charles F. Martin....	Halifax.....	5	43 50
77836	T. W. Smith.....	Halifax.....	35	Charles Beaver.....	Spry Bay.....	5	67 50

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LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*HALIFAX COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
96781	Venture.....	Halifax.....	43	Edward Dempsey.....	Herring Cove.....	12	121 00
61904	Water Lily.....	do.....	14	Isaac Morash.....	West Dover.....	3	33 50
92578	Willeta.....	do.....	12	Joseph Gray.....	Sambro.....	3	31 50
100226	Willie H. Crosby.....	do.....	65	James Julien.....	W. Chezzetcook..	7	110 50
85378	Zephyr.....	do.....	16	Robert Slaunwhite, (pro. P.).....	Terence Bay.....	5	48 50

HANTS COUNTY.

75614	Fawn.....	Digby.....	17	Henry E. Ogilvie.....	Summerville.....	3	36 50
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INVERNESS COUNTY.

71302	Alice.....	Charlottetown	10	Pepin P. Chiasson...	Belle Côte.....	6	49 00
103320	Ben Hur.....	P. Hawkesbury	61	W. H. Paint.....	Pt. Hawkesbury..	11	132 50
103452	Charlotte.....	Arichat.....	73	David Walker.....	do.....	12	151 00
103313	Catherine.....	P. Hawkesbury	10	Severin Chiasson....	Eastern Harbour	4	36 00
96778	Campania.....	do.....	11	Charles Robin, Collas & Co. (Ltd.).....	do.....	4	37 00
83244	Claribel.....	Charlottetown	19	Charles Doucet.....	do.....	6	58 00
96768	Elizabeth Ann.....	P. Hawkesbury	11	Magloire Poirier.....	Cheticamp Point	4	37 00
96774	Florence.....	do.....	11	Simeon Belfountain..	Eastern Harbour	4	37 00
103317	Flying Star.....	do.....	11	Paul Desveaux.....	do.....	4	37 00
103312	Laura.....	do.....	13	Mederick Aucoin.....	Margaree Harbor	6	52 00
103316	Laura.....	do.....	10	Ubald Bourgeois.....	Eastern Harbour	4	36 00
103315	Lillie.....	do.....	12	Fidèle Chiasson.....	do.....	5	44 50
103318	Little Heir.....	do.....	19	Eusébe Chiasson....	Eastern Harbour	5	51 50
96775	Louise.....	do.....	11	Simeon Belfountain..	do.....	5	43 50
96779	Majestic.....	do.....	12	Chas. Robin, Collas & Co. (Ltd.).....	do.....	4	38 00
96771	Marie.....	do.....	10	John Roach.....	do.....	4	36 00
96777	Marie Joseph.....	do.....	11	Victor Roach.....	do.....	4	37 00
103314	Mary.....	do.....	10	Paul Aucoin.....	do.....	4	36 00
96769	Mary Lambert.....	do.....	11	Chas. Chiasson.....	Little River.....	5	43 50
69125	May Flower.....	Halifax.....	20	Hyacinthe Chiasson..	Eastern Harbour	6	59 00
96770	O. L. B.....	P. Hawkesb'ry	12	Didace Boudrot.....	do.....	5	44 50
96962	Sunrise.....	Yarmouth.....	18	John J. McDonald....	Seaside.....	2	31 00
96773	Virgin.....	P. Hawkesb'ry	10	Michael Ramard.....	Eastern Harbour	4	36 00
96776	Willie B.....	do.....	11	Emilien Roach.....	do.....	4	37 00

KING'S COUNTY.

74326	Dreadnaught.....	St. John.....	19	Joseph N. Chute.....	Harbourville.....	6	58 00
77732	Heather Bell.....	Digby.....	13	Joseph Parker.....	Hall's Harbour...	3	32 50
94756	Sarah E. Ells.....	St. John.....	19	Leonard Houghton...	do.....	3	38 50
100744	Sea Queen.....	Windsor.....	18	L. D. Curry.....	Harbourville.....	4	44 00

*Crew not entitled to bounty.

List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

LUNENBURG COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid	
							£	cts.
94790	Abana	Lunenburg.....	80	James Romkey.....	Lower La Have..	14	171	00
100839	Acalia	do	34	Nathan Silver.....	Lunenburg.....	5	66	50
94783	Alaska	do	80	Hilbert Smith.....	Lower La Have..	17	190	50
100489	Algoma	do	56	Jeffrey Publicover...	Getson Cove.....	15	153	50
100846	Albatross.....	do	26	Abraham Ernst.....	Mahone Bay.....	5	58	50
103507	Annie	do	16	C. U. Mader.....	do	3	35	50
100472	Arcana	do	80	Alex. Knickle.....	Lunenburg.....	17	190	50
94778	Argosy	do	80	Charles Smith.....	do	15	177	50
103495	Athlon	do	80	Freeman Conrad.....	Upper La Have..	17	190	50
100170	Atlanta	do	80	Freeman Anderson.....	Lunenburg.....	17	190	50
103745	Aris	do	80	Albert V. Conrad.....	Parks Creek.....	17	190	50
103501	Barcelona	do	80	William Smith.....	a Have.....	17	190	50
103755	Basil M. Gilbert.....	do	80	John B. Young.....	Lunenburg.....	19	203	50
94651	Bessie A.....	do	80	W. N. Reinhardt.....	La Have.....	17	190	50
103430	Beluga	do	80	Albert V. Conrad.....	do	15	177	50
103503	B. G. Anderson.....	do	80	Thomas Hamm.....	Lunenburg.....	17	190	50
100838	Blanche A. Colp.....	do	80	C. U. Mader.....	Mahone Bay.....	17	190	50
103421	Blenheim.....	do	80	Charles Smith.....	Lunenburg.....	17	190	50
94782	Bona Fides.....	do	80	J. Joseph Rudolf.....	do	17	190	50
96828	Bonanza	do	80	Charles Silver.....	do	17	190	50
100571	Britannia	do	80	Charles Smith.....	do	17	190	50
100848	Britannia.....	do	59	Daniel Lohnes.....	Middle La Have..	14	150	00
94645	C. A. Chisholm.....	do	80	Abraham Ernst.....	Mahone Bay.....	*	80	00
94658	C. A. Ernst.....	do	57	do	do	13	141	50
97084	Calla Lily.....	do	62	Edmund Hirtle.....	Middle La Have..	13	146	50
103427	Cambrian.....	do	60	Dean Fralick.....	Pleasantville.....	16	164	00
103502	Carlraine.....	do	80	Alvin Himmelman.....	Ritcey's Cove.....	17	190	50
100823	Carrie	do	60	Adnah Burns.....	Dayspring.....	14	151	00
97081	Ca rie.....	do	80	Elisha Wentzel.....	Ritcey's Cove.....	18	197	00
107115	Cayuga	do	80	Edmund Hirtle.....	Middle La Have..	18	197	00
100579	Citizen.....	do	80	M. MacGregor.....	Ritcey's Cove.....	17	190	50
90869	Clara E. Mason.....	do	80	David Smith.....	Lunenburg.....	15	177	50
103415	Clarence Smith.....	do	80	G. A. Smith.....	do	17	190	50
103759	Columbia	do	80	J. Alex. Silver.....	do	18	197	00
100834	Comrade.....	do	80	W. N. Reinhardt.....	La Have.....	17	190	50
103419	Cordova	do	80	Charles Smith.....	Lunenburg.....	15	177	50
103756	Crescent.....	do	80	Joseph Rudolf.....	do	17	190	50
100159	C. U. Mader.....	do	80	C. U. Mader.....	Mahone Bay.....	17	190	50
100483	Curfew	do	49	J. D. Sperry.....	Petite Riviere...	10	114	00
107112	Daisy Linden.....	do	80	Abraham Ernst.....	Mahone Bay.....	17	190	50
88355	D. A. Mader.....	do	80	C. U. Mader.....	do	16	184	00
90834	Diego	Port Medway..	27	Harris Conrad.....	Vogler's Cove... 10	92	00	
97089	Dictator.....	Lunenburg.....	80	S. Watson Oxner.....	Lunenburg.....	17	190	50
100841	Dora	do	80	William Acker.....	do	17	190	50
103506	Ebro.....	do	75	J. William Young.....	do	15	172	50
103424	Elva M.....	do	80	C. U. Mader.....	Mahone Bay.....	17	190	50
100827	Elnora.....	do	52	Henry Gerhardt.....	Kingsburg.....	10	117	00
103492	Emily L.....	do	10	Wesley H. Stevens...	Tancook Island.. 2	23	00	
83308	Ella.....	Liverpool.....	10	Jennis C. Hanson.....	Oakland.....	1	16	50
88356	Energy.....	Lunenburg.....	80	C. U. Mader.....	Mahone Bay.....	17	190	50
94659	Enterprise.....	do	80	William Cleversy.....	Pleasantville.....	17	190	50
100151	Erminie.....	do	80	Thomas Hamm.....	Lunenburg.....	17	190	50
94960	Eureka	do	80	John S. Smith.....	Lower La Have.. 17	190	50	
103198	F. B. Wade.....	do	80	L. B. Currie.....	West Dublin..... 17	190	50	
103429	Fern.....	do	70	Edmen Walters.....	Middle La Have.. 17	180	50	
103743	Flo. F. Mader.....	do	80	C. U. Mader.....	Mahone Bay..... 18	197	00	
100480	Gallant.....	do	57	Elias Richard, sr.....	Getson Cove..... 14	148	00	
94773	Galatea	do	80	John B. Young.....	Lunenburg..... 17	190	50	

* Crew not entitled to bounty.

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LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*LUNENBURG COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	Number of Crew paid.	Amount of Bounty paid.	
							\$	cts.
97083	Garland.....	do	51	J. D. Sperry.....	Petite Rivière.....	*	51	00
90582	G. A. Smith.....	do	80	John M. Ritcey.....	Ritcey's Cove.....	16	184	00
100411	Genevieve.....	do	80	Abraham Ernst.....	Mahone Bay.....	17	190	50
100825	Georgina.....	do	34	James Bell.....	Bell's Cove.....	10	99	00
100576	Glad Tidings.....	do	80	W. C. Smith.....	Lunenburg.....	20	210	00
103753	Gladys B. Smith.....	do	80	Benjamin Smith.....	do	19	203	50
103505	Gladys May.....	do	80	Adam Selig.....	Vogler's Cove.....	20	210	00
97088	Glendale.....	do	38	Charles Bell.....	Dublin Shore.....	*	38	00
96836	Gleaner.....	do	80	W. C. Acker.....	Lunenburg.....	17	190	50
103752	Glyndon.....	do	80	Artemus Zink.....	Ritcey's Cove.....	19	203	50
190850	Grace.....	do	80	Daniel Getson.....	Getson's Cove.....	17	190	50
90862	Grenada.....	do	80	S. Watson Oxner.....	Lunenburg.....	18	197	00
100488	Gurnet.....	do	56	Alvin Creaser.....	Ritcey's Cove.....	12	134	00
103744	Harry Smith.....	do	80	J. Henry Wilson.....	Lunenburg.....	17	190	50
100569	Howard Young.....	do	80	James Young.....	do	18	197	00
100490	Irene M. B.....	do	66	Eli Ernst.....	Mahone Bay.....	16	170	00
107116	Ivy.....	do	12	Joshua Ernst.....	Pleasantville.....	4	38	00
96830	J. A. Silver.....	do	80	Charles Silver.....	Lunenburg.....	17	190	50
94785	J. C. Schwartz.....	do	80	Charles Hewett.....	do	17	190	50
103414	Jeanie Myrtle.....	do	80	John M. Ritcey.....	Ritcey's Cove.....	17	190	50
103491	Jennie May.....	do	80	Martin Westhaver.....	Lunenburg.....	16	184	00
100164	J. H. Ernot.....	do	80	S. Watson Oxner.....	do	17	190	50
100837	J. M. Young.....	do	80	William Young.....	do	17	190	50
94789	Joseph McGill.....	do	80	Henry Ritcey.....	Ritcey's Cove.....	18	197	00
107114	Klondyke.....	do	80	Thos. A. Wilson.....	Bridgewater.....	18	197	00
94788	Laura C. Zwicker.....	do	80	Abraham Ernst.....	Mahone Bay.....	15	177	50
96838	La France.....	do	80	S. Watson Oxner.....	Lunenburg.....	17	190	50
96832	Laura M. Knock.....	do	80	Allan R. Morash.....	do	17	190	50
94780	Lawrence.....	do	80	Abraham Ernst.....	Mahone Bay.....	17	190	50
103202	L. B. Currie.....	do	80	L. B. Currie.....	West Dublin.....	17	190	50
103418	Leader.....	do	80	Alex. Knickle.....	Lunenburg.....	17	190	50
96833	L. E. Young.....	do	80	Benjamin Anderson.....	do	17	190	50
96827	Leopold.....	do	80	Ammon Ritcey.....	Ritcey's Cove.....	17	190	50
103760	Lillian.....	do	80	Elias Richard, sr.....	Getson's Cove.....	18	197	00
107113	L. Morton.....	do	60	Adam Selig.....	Vogler's Cove.....	13	144	50
103496	Lorena Maud.....	do	80	Isaac Zinck.....	Ritcey's Cove.....	17	190	50
100830	Lorraine C.....	do	64	Leander Corkum.....	Middle La Have.....	16	168	00
83316	Lottie.....	Port Medway.....	80	Samuel E. Teel.....	Vogler's Cove.....	15	177	50
103420	Luetta.....	Lunenburg.....	80	David Smith.....	Lunenburg.....	18	197	00
103509	Maggie E. Z.....	do	70	Henry D. Moser.....	do	17	180	50
97100	Maggie M. W.....	do	80	J. Henry Wilson.....	do	17	190	50
100162	Magic.....	do	45	J. D. Sperry.....	Petite Rivière.....	10	110	00
103425	Majestic.....	do	80	Reuben Ritcey.....	Ritcey's Cove.....	17	190	50
94775	Malabar.....	do	80	R. H. Griffith's.....	Lunenburg.....	17	190	50
103413	Martello.....	do	65	Abraham Ernst.....	Mahone Bay.....	13	149	50
96840	May Flower.....	do	60	Albert V. Conrad.....	La Have.....	11	131	50
100849	Merl M. Parks.....	do	80	James Wamback.....	Parks Creek.....	18	197	00
193423	Melbourne.....	do	61	Eber Gerhardt.....	Middle La Have.....	15	158	50
100574	Melrose.....	do	71	Allan R. Morash.....	Lunenburg.....	15	168	50
74319	Merino.....	do	46	David Shupe.....	Martin's Point.....	7	91	50
103510	M. J. Crosby.....	do	76	Charles Rafuse.....	La Have.....	15	173	50
87728	Micmac.....	do	34	Allan Westhaver.....	Lunenburg.....	5	66	50
90823	Miletus.....	do	80	John Shankle.....	East La Have.....	15	177	50
100153	Mila.....	do	80	J. William Young.....	Lunenburg.....	17	190	50
107111	Millie Mace.....	do	80	M. MacGregor.....	Ritcey's Cove.....	19	203	50
103757	Minnie J. Heckman.....	do	80	Anthony Heckman.....	do	22	223	00
103416	Minnie J. Smith.....	do	80	William Smith.....	Lunenburg.....	17	190	50
97052	Minnie Maud.....	Liverpool.....	80	Theophilus Creaser.....	Ritcey's Cove.....	17	190	50

*Crew not entitled to bounty.

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*
LUNENBURG COUNTY—*Conclud.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
103422	Mischief.....	Lunenburg....	80	Thos. A. Wilson.....	Bridgewater....	16	184 00
94772	Molega.....	do.....	80	Benj. Anderson.....	Lunenburg.....	18	197 00
92632	Monarch.....	do.....	80	Allan R. Morash.....	do.....	16	184 00
103758	Muriel.....	do.....	80	E. Fenwick Zwicker.....	do.....	19	203 00
94966	Nicanor.....	do.....	79	Davis Westhaver.....	do.....	16	183 00
100485	Nightingale.....	do.....	52	William Bailey.....	West Dublin.....	10	117 00
92636	Nonpareil.....	do.....	80	John Zink.....	Lunenburg.....	17	190 50
88442	Nova Zembla.....	do.....	79	C. U. Mader.....	Mahone Bay.....	17	189 50
94786	Ontario.....	do.....	90	W. C. Smith.....	Lunenburg.....	17	190 50
94779	O. P. Silver.....	do.....	80	Charles Silver.....	do.....	17	190 50
94641	Ovando.....	do.....	80	Jeffrey Publicover.....	Getson's Cove...	16	184 00
100836	Panama.....	do.....	80	Henry Adams.....	Lunenburg.....	17	190 50
100486	Pandora.....	do.....	53	Abram Cook.....	do.....	15	150 50
100483	Puma.....	do.....	58	Simon Pentz.....	Pentz Settlement	16	162 00
94774	Puritan.....	do.....	80	Theophilus Creaser.....	Ritcey's Cove...	17	190 50
100473	Rapture.....	do.....	57	Alfred Corkum.....	Middle South....	15	154 50
96834	Robert F. Mason.....	do.....	80	Martin Mas-n.....	Lunenburg.....	17	190 50
100572	Rowena.....	do.....	51	William Schmeisser.....	La Have.....	15	148 50
90868	Sadie.....	do.....	79	G. N. C. Hawkins.....	Lunenburg.....	16	183 00
94787	Samoa.....	do.....	80	James W. Gerhardt.....	do.....	17	190 50
100218	Sarah M. W.....	Halifax.....	14	Hezekiah Wambolt.....	St. Marg'et's Bay	4	40 00
88349	Senovar.....	Lunenburg.....	80	Nathan Hiltz.....	Martin's River...	16	184 00
100471	Secret.....	do.....	80	John B. Young.....	Lunenburg.....	17	190 50
100165	Snow Queen.....	do.....	67	Leander Meisner.....	Martin's Point...	15	164 50
107117	St. Clair.....	do.....	80	Charles Smith.....	Lunenburg.....	18	197 00
103500	St. Helena.....	do.....	80	Howard Wynacht.....	do.....	17	190 50
100829	Stranger.....	do.....	11	Garret Richard.....	Pleasantville...	3	30 50
103754	Talmouth.....	do.....	80	Freeman Messenger.....	Petite Rivière...	20	210 00
92623	Torridon.....	do.....	80	Isaac Heckman.....	Ritcey's Cove...	18	197 00
94657	T. W. Langille.....	do.....	71	Francis Conrad.....	Middle South....	16	175 00
100575	Tyler.....	do.....	54	W. A. Zwicker.....	Lunenburg.....	16	158 00
103742	Unique.....	do.....	80	Abram Ernst.....	Mahone Bay.....	17	190 50
97098	Urania.....	do.....	80	David Heiser.....	Lunenburg.....	17	190 50
103417	Uruguay.....	do.....	80	David Lohnes.....	Ritcey's Cove...	17	190 50
100821	Venus.....	do.....	76	Jacob Hiltz.....	Indian Point....	15	173 50
103504	Viking.....	do.....	80	Amiel Corkum.....	Middle La Have..	17	190 50
94776	Volunteer.....	do.....	80	M. MacGregor.....	Ritcey's Cove...	17	190 50
61921	W. E. Weir.....	Halifax.....	41	Freeman Young.....	Tancook Island..	8	93 00
100152	Werra.....	Lunenburg.....	80	David Smith.....	Lunenburg.....	17	190 50
96-29	Westeria.....	do.....	80	Freeman Anderson.....	do.....	17	190 50
100833	Yucatan.....	do.....	80	J. Joseph Rudolf.....	do.....	17	190 50

PICTOU COUNTY.

38510	Lily.....	Pictou.....	23	George Rivers.....	Pictou.....	•	23 00
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QUEEN'S COUNTY.

103205	Aroostook.....	Liverpool.....	67	Andrew McNutt.....	Liverpool.....	14	158 00
103174	Bona.....	Shelburne.....	15	Eldred, Leslie.....	Port Mouton.....	5	47 50
83134	Infant.....	Lunenburg.....	15	Johnson Rhynard.....	Brooklyn.....	5	47 50
103191	Jennie B.....	Liverpool.....	13	William H. Vogler.....	Port Jolley.....	4	39 00
94833	Newsboy.....	do.....	16	Alexander, Thankle.....	Port Mouton.....	4	42 00
61916	Only Son.....	do.....	16	William A. Conrad.....	Liverpool.....	4	42 00
103194	Oressa.....	do.....	10	Joseph Hogan.....	Hunt's Point.....	4	36 00
103199	Trilby.....	do.....	12	Wm Wigglesworth.....	Liverpool.....	3	31 50
83495	Utopia.....	do.....	80	James C. Inness.....	do.....	20	210 00

* Crew not entitled to bounty.

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LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—Con.

RICHMOND COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner. or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid. \$ cts.
36474	Alexander Fraser.....	Lunenburg	32	Anselm Thompson....	River Bourgeois..	9	90 50
88456	Alice May	Arichat.	39	Wm I. Levesconte....	do	10	104 00
69143	Arequippa.....	do	36	Philip, Gruchy.....	D'Escousse.....	7	81 50
41771	Atalia	Guysborough..	34	Jesse M. Huntson....	St. Peters	4	60 00
94680	Bonnie Glen.....	Halifax.....	17	Xavier Marchand....	Petit de Grat.....	6	56 00
75561	Boreas	Lunenburg	41	John Colford	Port Richmond....	8	93 00
54156	British Lady.....	Halifax.....	19	Albert Joyce	RiverInhabitants	4	45 00
38501	B. Weir & Co.....	Arichat.....	25	John Shannon	East Basin	2	38 00
74100	Candid	do	23	Désiré Burke	River Bourgeois..	7	68 50
88459	Caroline.....	do	12	John B. Girroir.....	W. Arichat	2	25 00
72061	C. P. M.	do	22	Alexander Burke.....	River Bourgeois..	6	61 00
72058	Daisy	do	34	P. Richard.....	Arichat	4	60 00
83395	Elerie	Halifax.....	29	Lewis Murray	Port Richmond..	5	61 50
83083	Emma Proctor.....	P't Hawksb'ry	41	Edward Proctor	RiverInhabitants	9	99 50
80944	Espérance	Guysboro.....	10	Joseph Petitpas....	Arichat	3	29 50
103454	Ethel B.	Arichat	10	Rémi Boudrot	Petit de Grat	3	29 50
88462	Fannie S.	do	8	Docithé Fougère....	Rv Bourgeois	9	86 50
88599	Guide	Halifax.....	38	Edward Poirier.....	LowerD'Escouss	12	116 00
38468	Hector	Arichat.	35	George Walker.....	Basin	4	61 00
96764	Ida C. Spoffard.....	P't Hawksb'ry	54	Robert Murray	Port Richmond..	6	93 00
85560	Jacques.....	Yarmouth	58	Frederic Poirier....	D'Escousse.....	13	142 50
83135	J. M. B.	Halifax.....	20	Sam. P. Burke	St. Peters	7	65 50
80972	John Vincin.....	Sydney	17	Simon Delorey	Janovin Island..	5	49 50
88467	Katie	Arichat.....	11	Frank Sampson.....	Poulamond.....	3	30 50
103458	R. McKenzie	do	17	James Barron.....	Lardoise.....	6	56 00
38516	Lady of the Lake	do	26	Peter Landry	St. Peters	8	78 00
96763	Lilia Linwood	do	67	Wm I. Levisconte....	River Bourgeois..	15	164 50
88455	Laura Victoria.....	do	39	Henry McDonald.....	D'Escousse.....	11	110 50
72071	Lumen Diei.....	do	20	Urbain Sampson.....	River Bourgeois..	6	59 00
88463	Maria	do	14	Andrew Boudrot.....	Petit de Grat.....	4	40 00
85388	Mary Alice	Halifax.....	21	Edward Malcom.....	Port Malcom.....	5	53 50
38522	Mary	Arichat.....	23	Isaïe Boudreau.....	River Bourgeois..	7	68 50
100380	Mary D.	Sydney	27	Leon Sampson.....	St. Peters	8	79 00
72048	Neptune	Arichat.....	26	Henry Sampson.....	River Bourgeois..	7	71 50
74365	Nova Stella.....	do	53	Léon Poirier.....	D'Escousse.....	15	150 50
54139	Ocean Belle	Halifax.....	20	Isidore Fougère....	Poulamond.....	9	78 50
61630	Olive J.	do	57	John Malcom.....	Port Malcom.....	10	122 00
38462	Partners	Arichat.....	25	Thomas Sampson.....	River Bourgeois..	2	38 00
72067	Philomène D.....	do	22	John Pelham.....	Janovin Island..	4	48 00
46485	Quicksteps.....	P't Hawksb'ry	52	John Murray, jr.....	Port Richmond..	4	78 00
88439	Ripple.....	Halifax.....	20	Isidore Boudrot.....	Petit de Grat.....	2	33 00
64033	Ripple.....	P't Hawksb'ry	34	Geo. Cruickshank....	Port Richmond..	4	60 00
92599	Thistle	Sydney	11	Robt. Monbourquette	L'Ardoise West..	4	37 00
71034	Vanguard	Arichat.....	51	Dominique Boudrot..	Petit de Grat.....	5	83 50
57662	Village Bride.....	Halifax.....	24	Peter Malcolm.....	Port Malcolm.....	6	63 00
38523	Victoria	Arichat.....	24	Henry Burke	St. Peter's.....	7	69 50

SHELBURNE COUNTY.

94632	A. C. Greenwood.....	Shelburne	15	Hugh M. Perry.....	Black Point	5	47 50
97034	A. D'E.....	Yarmouth	15	David H. Blades.....	Upper Wood's Harbour.....	3	34 50
80655	Annina	do	12	George Pike.....	Coffin's Croft.....	5	44 50
100620	Alina	Shelburne	80	Churchill Locke	Lockeport.....	21	216 50
100617	Altona	do	28	Austin Swansburg....	Little Harbour... Sandy Point.....	7	73 50
100612	Ardella	do	10	Eleazer Crowe.....	do	2	23 00

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*SHELburnE COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
100813	Blanche	Barrington	24	Jethro C. Swim	Clark's Harbour	9	82 50
88551	B. M. Thorbourne	Shelburne	80	John M. Thorbourn	Jordan Bay	20	210 00
103186	Brittania	do	11	Ross Enslow	West Green Har- bour	5	43 50
96970	Charlie Richardson	do	26	John B. Harding	Rockland	8	78 00
100605	Dawn	Barrington	49	A. N. Smith	Barrington	13	133 50
83492	Dessie	Liverpool	11	E. A. Capstick	Lockeport	4	37 00
96976	Edith	Shelburne	40	Enos Churchill	do	10	105 00
77603	Eldon C.	Barrington	27	Josiah S. Thomas	Cape Negro	8	79 00
103789	ffie B. Nickerson	Shelburne	22	Amasa Nickerson	Central Wood's Harbour	7	67 50
85731	Eva L. H.	do	62	Bradfd P. Thorburn	Sandy Point	15	159 50
83255	Floyd	Annapolis	20	Eldridge Nickerson	Shag Harbour	6	59 00
90645	Fly	Yarmouth	16	Charles M. Wickens	Lower Shag Har. Baccaro	6	66 00
103065	Garnet	do	27	Thomas W. Crowell	do	6	66 00
100815	Happy Home	Barrington	10	Wm. E. Smith	Up. Port La Tour	4	36 00
80799	Hattie E.	Digby	16	Isaac A. Nickerson	Shag Harbour	5	48 50
90647	Hattie Emeline	Yarmouth	11	Charles A. Reynolds	Up. Port La Tour	4	37 00
100607	Icelda	Shelburne	19	Arthur Hardy	Rockland	6	58 00
88554	Jersey Lily	do	80	Enos Churchill	Lockeport	20	210 00
107052	J. J. Clark	Barrington	67	Prince W. Stoddard	Lower Wood's Harbour	15	164 50
85566	J. Lyons	do	17	David Slate	Cape Negro	7	62 50
54132	John Franklin	Halifax	18	Leander McKenzie	East Jordan	3	37 50
61572	John Halifax	Shelburne	63	John M. Harding	Osborne	8	115 00
94941	John Purney	do	80	George H. King	Sandy Point	22	223 00
73967	Katie	Liverpool	14	Churchill Locke	Lockeport	5	46 50
90438	Lark	Barrington	13	John C. Ross	Up. Port La Tour	5	45 50
80624	Lima	Yarmouth	12	William Halliday	Bear Point	6	51 00
94661	L. C. Tough	Halifax	12	Thomas Swain	Black Point	4	38 00
103173	Mabel	Shelburne	21	John Matthews	Rocklaud	7	66 50
103712	Marguerite	Yarmouth	10	Jared Brannen	Lower Wood's Harbour	5	42 50
83493	Mary C.	Liverpool	80	Wm. McMillan	Lockeport	20	210 00
103057	May Flower	Yarmouth	12	Harry Greenwood	Shag Harbour	4	38 00
103184	May Flower	Shelburne	26	Mark A. Vernon	Sandy Point	7	71 50
103177	May Flower	do	12	Adam B. Hamilton	Carleton Village	2	25 00
100614	May Flower	do	11	Benjamin Hardy	Allendale	3	30 50
83434	Mary May	do	20	Adam J. Firth	Shelburne	7	65 50
92568	Mary Kate	do	13	Charles G. Acker	Church Over	5	45 50
90439	Oscar F.	do	18	William D. Penney	South Side	9	76 50
103782	Oasis	do	80	John A. McGowan	Shelburne	24	236 00
1037-8	Plover	do	80	George A. Cox	do	24	236 00
75595	Ripple	Yarmouth	19	Vincent Brannen	Wood's Harbour	4	45 00
100319	Rob Roy	do	12	James E. Nickerson	do	3	31 50
53551	Roving Bird	Halifax	24	King Perry	North East Har. West Green Har.	7	69 50
100616	Sea Slipper	Shelburne	11	James Enslow, jr	do	4	37 00
77956	Speed	Yarmouth	13	Robert Nickerson	Up. Wood's Har. Lockeport	3	32 50
103783	Springwood	Shelburne	80	William McMillan	do	22	223 00
90433	St. Ann	Barrington	11	Chas. H. Dickson	Wood's Harbour	4	37 00
90648	Stranger	do	15	Ira P. Brown	Stoney Island	4	41 00
96961	Tivoli	Shelburne	24	Wm. J. Doane	Red Head	6	63 00
103179	Trilby	do	31	Wm. McMillan	Lockeport	8	83 00
100608	Vesper	do	14	Churchill Locke	do	5	46 50
77744	Whip-poor-will	do	17	J. P. Littlewood	Ingomar	5	49 50
90430	Will Carleton	Barrington	80	Joseph A. Smith	Port La Tour	17	190 50
103183	Wren	Shelburne	18	William McCarthery	Shelburne	6	57 00
75722	Yuba	Yarmouth	15	Charles E. Crowell	Port La Tour	6	54 00

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LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—Continued.
VICTORIA COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
106383	Florence L.....	Sydney.....	10	William Young	Sugar Soaf	2	23 00
74039	James Henry	do	18	John Dunphy	South Ingonish..	5	50 50
100840	Maritime.....	Lunenburg	59	R. E. Burke	Ingonish.....	9	117 50
97042	Sea Bird.....	Halifax	17	Peter McDonald	M c K i n n o n ' s Harbour.....	3	36 50
107351	Wilfrid Laurier.....	Sydney.....	10	Daniel McLeod	South Ingonish..	3	29 50

YARMOUTH COUNTY.

80647	Annie M. Bell	Yarmouth.....	64	Leander Amiro	L. E. Pubnico ...	16	168 00
94980	Aurore.....	do	80	Leon D'Eon.....	West Pubnico. :	18	197 00
88267	Bessie May.....	St. John..	23	Nathaniel Pierce	Charlesville	9	81 50
103051	Carrie May	Yarmouth	25	James Gardner	Argyle Sound....	8	77 00
85536	Circassian.....	do	80	A. F. Stoneman & Co	Yarmouth	18	197 00
94977	Civilian	do	80	Charles D'Entremont	West Pubnico ...	20	210 00
100819	David James	Barrington.....	27	James Lennox	Pubnico Head ...	10	92 00
88403	David Sprague.....	Yarmouth	31	W. A. Killam	Yarmouth	*	31 00
103053	Edlie C.....	do	10	James F. Harding.....	L. E. Pubnico ...	3	29 50
103066	Eddie J	do	23	Anthony M. D'Entremont.	West Pubnico ...	8	75 00
85683	Edith L	Digby.....	16	W. A. Killam	Yarmouth	*	16 00
85 51	Ethel.....	Yarmouth.....	80	J. H. Porter & Co.....	Tusket Wedge....	16	184 00
97036	Eva.....	do	10	Ad-tison Morton	Lower Argyle... :	2	23 00
100535	Fairplay	do	11	Josiah B. Lewis.....	Yarmouth	2	24 00
90654	Flora.....	do	64	David D Entremont..	West Pubnico ...	20	194 00
94972	Florence.....	do	11	J. suc Boudreau.....	Tusket Wedge... :	5	43 50
90885	Georgiana.....	do	80	Henry Lewis.....	Yarmouth	22	223 00
80643	Hazel Dell.....	do	80	James Amiro	West Pubnico....	15	177 50
100327	Hattie	do	10	Robert Ellenwood	Yarmouth	3	29 50
100326	Helena	do	14	William McNair	Argyle Sound....	2	27 00
103717	Henry L.....	do	10	Archangel D'Entremont	West Pubnico ...	2	23 00
88587	Jessie May.....	do	14	Alexander Hemlow	Yarmouth	4	40 00
103059	Lou-y Bourque	do	11	Ans lme Bourque	Bourque's Cove..	2	24 00
88261	Little Joe.....	do	18	Thomas A. Crosby	Yarmouth	3	37 50
103709	Lizzie E.....	do	14	E. Juston Ellis.....	Port Maitland ...	5	46 50
80614	Louise.....	do	80	J. H. Po ter & Co....	Tusket Wedge....	18	197 00
103718	Lucy.....	do	10	Amb. D'Entremont..	West Pubnico....	4	36 00
80632	Lumen.....	do	30	J. H. Po ter & Co	Tusket Wedge... :	9	88 50
88596	M. A. Louis.....	do	64	A. F. Stoneman & Co	Yarmouth	19	187 50
88583	Mary O'Dell.....	do	14	Levi Robicheau.....	do	2	27 00
90659	N. A. Laura.....	do	59	Remi D'Entremont	West Pubnico....	16	165 00
103705	Nebula.....	do	24	Ferdinand Amiro	do	10	89 00
90892	Nellie	do	59	J. H. Porter & Co	Tusket Wedge....	16	163 00
90873	Primrose.....	do	34	Henry T. D'Entremont.....	L. E. Pubnico ...	9	92 50
103706	Regine.....	do	10	Wm. D'Entremont	West Pubnico ...	3	29 50
88589	Sanford.....	do	20	W. A. Killam	Yarmouth	*	20 00
83254	Sea Foam.....	Annapolis	28	Joseph L'Amiro.....	L. E. Pubnico ...	6	67 00
75724	Sea Foam.....	Yarmouth	75	J. H Porter & Co	Tusket Wedge....	18	192 00
100323	Senora.....	do	80	Marc A Surette.....	West Pubnico....	21	216 50
100313	Souvenir.....	do	71	Sylvain D'Entremont	do	20	201 00
103716	Valkyrie.....	do	11	Peter Amiro.....	do	5	43 50
100*11	Vesta Pearl.....	do	40	W. A. Killam.....	Yarmouth.....	6	79 00
90896	Wapiti.....	do	80	A. F. Stoneman & Co	do	18	197 00
103704	Whisper.....	do	31	Peter Amiro	West Pubnico....	8	83 00
85541	Willie M.....	do	24	Sylvain Amiro	L. E. Pubnico....	6	63 00
85559	Willie F.....	do	12	Riley W. Haskell.....	Port Maitland ...	5	44 50
90882	Will O' the Wisp.....	do	51	A. F. Stoneman & Co	Yarmouth	19	174 50
90897	Wrasse.....	do	56	do	do	19	179 50

* Crew not entitled to bounty.

LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—Con.

PROVINCE OF NEW BRUNSWICK.

CHARLOTTE COUNTY

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
103124	Addie B.....	St. Andrews...	12	Arthur Ramsdell.....	Whitehead.....	4	38 00
103995	Annie.....	do ..	16	Joseph Hatt.....	Woodward's Cove.....	3	35 50
94727	Aurelia.....	St. John.....	22	James Scoville.....	North Head.....	5	44 50
103996	Au revoir.....	St. Andrews...	15	Frederick Russell.....	Seal Cove.....	3	34 50
103127	Avis C. Tobey.....	do ..	13	Hamilton Bancroft.....	Woodward's Cove.....	5	45 50
64011	Bee.....	do ..	18	Sherman Lawson.....	Flagg's Cove.....	5	50 50
100111	Bess.....	Parrsboro.....	24	Francis Cassidy, sen.....	Lepreaux.....	3	43 50
103128	Britannia.....	St. Andrews...	22	Charles Sinclair.....	Castalia.....	4	48 00
88409	Carrie.....	Digby.....	12	Thomas A. Cook.....	Le Tête.....	3	31 50
103118	Della F. Tarr.....	St. Andrews...	34	Chas H. Greenwood.....	Wilson's Beach.....	3	53 50
92505	Edith B.....	do ..	47	Winslaw Richardson.....	Leonardville.....	5	79 50
103114	Edward Morse.....	do ..	32	Alexander Calder, jr.....	Welchpool.....	5	64 50
80803	Exenia.....	Windsor, N.S.....	18	Wm. F. Parker.....	Beaver Harbour.....	5	50 50
80882	Ella Mabel.....	St. Andrews...	14	Walter Calder, jr.....	Welchpool.....	4	40 00
83202	Enchantress.....	do ..	10	Peter Dixon.....	Flagg's Cove.....	1	16 50
88276	Falcon.....	do ..	12	John F. Cronk.....	do ..	5	44 50
75501	Flash.....	Digby.....	10	Albert E. Coggins.....	Westport N. S.....	3	29 50
92511	Fleetwing.....	St. Andrews...	11	Aldin McFarland.....	Flagg's Cove.....	3	30 50
97146	Free Trade.....	do ..	10	Lorenzo C. Watt.....	do ..	3	29 50
94834	Flora Woster.....	do ..	22	Andrew McGee.....	Back Bay.....	4	48 00
97150	Gleaner.....	do ..	13	Frank Newman.....	Wilson's Beach.....	3	32 50
9250	Grey Eagle.....	do ..	13	Bismark Dick.....	Back Bay.....	5	45 50
83463	Havelock.....	do ..	33	William James.....	Wilson's Beach.....	4	59 00
94839	Harrie.....	do ..	14	Wm. J. Tucker.....	Le Tête.....	3	33 50
103119	Hortense.....	do ..	15	W. J. Morse.....	White Head.....	5	47 50
103121	Island Girl.....	do ..	17	Frank Ingersoll & Son.....	Flagg's Cove.....	4	43 00
80604	Jennie C.....	Yarmouth.....	16	Daniel Thompson.....	Black's Harbour.....	3	35 50
103997	Jessie James.....	St. Andrews...	11	Lewis Frankland.....	Whitehead.....	3	30 50
51965	John E. Dennis.....	do ..	18	Alfred Stanley.....	North Head.....	3	37 50
77736	Laonic.....	Shelburne.....	15	John Dixon, sr.....	Flagg's Cove.....	3	34 50
88273	Lillian E.....	St. Andrews...	13	Andrew McGee.....	Back Bay.....	3	32 50
88407	Linnet.....	do ..	15	James Scoville.....	Flagg's Cove.....	4	41 00
59342	Lizzie S. McGee.....	do ..	14	Andrew McGee.....	Back Bay.....	5	46 50
83426	Louisa.....	St. John.....	16	Bristol Hargrove.....	Beaver Harbour.....	5	48 50
92514	Maggie Jane.....	St. Andrews...	10	John Thomas.....	Flagg's Cove.....	3	29 50
103117	Margaret.....	do ..	49	Bernard Eldridge.....	Beaver Harbour.....	9	107 50
85442	Mystery.....	do ..	14	Charles Dixon.....	North Head.....	4	40 00
94837	Olga.....	do ..	11	Thomas Richardson.....	Lords Cove.....	3	30 50
95518	Peril.....	do ..	18	George Dixon.....	Beaver Harbour.....	5	50 50
75591	Rise and Go.....	do ..	16	Wm. Sirls.....	Wilson's Beach.....	6	55 00
75864	Roving Lizzie.....	Weymouth.....	11	Benjamin Carter.....	Seeley's Cove.....	2	24 00
88272	Simeon H. Bell.....	St. Andrews...	14	Charles Dixon.....	North Head.....	3	33 50
59387	Telephone.....	do ..	19	James Brown, jr.....	Wilson's Beach.....	5	51 50
88414	Trumpet.....	St. John.....	20	George U. Wright.....	Beaver Harbour.....	4	46 00
103998	Try Again.....	St. Andrews...	15	A. W. Ingersoll.....	Woodward's Cove.....	3	34 50
103129	Uncle Sam.....	do ..	11	John G. Fraser.....	do ..	4	37 00
94832	Venus.....	do ..	42	Simon Brown.....	Wilson's Beach.....	6	81 00
103125	Virgin Queen.....	do ..	16	Nelson Morse.....	Whitehead Isl'd.....	4	42 00
77969	Wave Queen.....	do ..	11	Hiram Foster.....	Flagg's Cove.....	3	30 50

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List of Vessels which received Fishing Bounty, &c.—New Brunswick—Continued.

GLOUCESTER COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
							\$ cts.
72099	Adelina	Chatham	12	Clement Lanteigne	Lameque	4	38 00
100984	Alice	do	11	Chas. Robin, Collas & Co.	Caraquet	4	37 00
103279	Alice Maud	do	10	do	do	4	36 00
92419	Anna	do	12	Dosithé Chiasson	Lameque	4	38 00
96739	Angeline	do	14	Joseph C. Doiron	Caraquet	6	53 00
103071	Anglesea	do	12	Hya H. LeBouthillier	do	4	38 00
100987	Arabi	do	12	Philip Rive	do	3	31 50
103085	Argentina	do	12	Chas. Robin, Collas & Co.	do	3	31 50
103009	Adeline Gladys	do	12	Richard Young	Shippegan	4	38 00
97194	Alika	do	12	Lange Paulin, jr.	Lameque	3	31 50
103081	Albatross	do	13	Thomas Ahier	Shippegan	3	32 50
100960	Annie M.	do	11	W. S. Loggie & Co.	Chatham	3	30 50
103763	Alouette	do	10	Thomas Ahier	Shippegan	3	29 50
103780	Britannia	do	13	Wm. Fruing & Co.	Caraquet	3	32 50
100780	Britannia	do	12	C. Hubbard	do	4	38 00
100983	Bee	do	11	Chas. Robin, Collas & Co.	do	4	37 00
100975	Big Bear	do	10	Robert Young	do	3	29 50
100299	Blanchard	do	11	Chas. Robin, Collas & Co.	do	3	31 50
100909	Blue Nose	do	11	Joseph Sewell	do	3	30 50
103589	Blenheim	do	13	Chas. Robin, Collas & Co.	do	4	39 00
72079	Betsy	do	13	Sebastien Noel	Lameque	3	32 50
103072	Ben Hur	do	11	Richard Young	Shippegan	3	30 50
61431	Bee	do	11	Paul Noel	Lameque	4	37 00
100988	Caesar	do	10	Philip Rive	Caraquet	5	42 50
100774	Calliope	do	12	do	do	3	31 50
103585	Cedric	do	14	do	do	4	40 00
103271	Celia	do	11	Dominique Gallien	do	3	30 50
100784	Charlotte	do	13	R. Young	do	3	32 50
100789	Chazalic	do	11	do	do	3	30 50
96730	Christina	do	11	Chas. Robin, Collas & Co.	do	4	37 00
100916	Cygnat	do	12	do	do	4	38 00
100971	Cyprian	do	10	Elie Sivret	do	3	29 50
101000	Condor	do	10	Thomas Ahier	Shippegan	5	42 50
103083	Corsair	do	10	do	do	4	36 00
100915	Dawn	do	12	Chas. Robin, Collas & Co.	Caraquet	5	44 50
100917	Dora	do	11	do	do	3	30 50
100913	Daffodil	do	10	Thomas Ahier	Shippegan	4	36 00
92412	Dollie Dutton	do	13	Richard Young	do	4	39 00
103076	Dipper	do	12	W. S. Loggie & Co.	Chatham	3	31 50
100999	Dove	do	11	Thomas Ahier	Shippegan	4	37 00
103590	Eliza	do	13	Chas. Robin, Collas & Co.	Caraquet	4	39 00
100293	Eliza	do	15	Robert Young	do	4	41 00
96737	Elmina	do	11	Jacques Noel	Lameque	4	37 00
100986	Empress	do	12	Robert Young	Caraquet	3	31 50
103776	Esk	do	14	do	do	3	33 50
100772	Estelle	do	13	Philip Rive	do	3	32 50
100787	Ethel	do	11	R. Young	do	3	30 50
100905	Evangeline	do	10	Philip Rive	do	4	36 00
100988	Eagle	do	10	Thomas Ahier	Shippegan	4	36 00
100911	Emperor	do	10	do	do	4	36 00
100298	Fisher	do	12	Joseph H. Chiasson	Little Lemeque	4	38 00
103077	Fame	do	10	W. S. Loggie & Co.	Chatham	4	36 00

LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*GLOUCESTER COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No of Crew paid.	Amount of Bounty paid.
							¢ cts.
61445	Flavie.....	Chatham.....	13	Théophile Duguay....	Lameque.....	4	39 00
96736	Fly.....	do.....	14	Richard Young.....	Shippegan.....	3	33 50
100977	Fly.....	do.....	12	Chas. Robin, Collas & Co.....	Caraquet.....	3	31 50
61405	Fly.....	do.....	11	Alexander McLaughlin.....	Tracadie.....	4	37 00
83399	Fannie R. C.....	Halifax.....	21	Benj. Windsor.....	Miscou Harbour.....	4	47 00
100782	Flying Foam.....	Chatham.....	12	Robert Young.....	Caraquet.....	3	31 50
100912	Foam.....	do.....	10	Thomas Ahier.....	Shippegan.....	4	36 00
103001	Falcon.....	do.....	10	do.....	do.....	4	36 00
100778	Gambetta.....	do.....	13	C. Hubbard.....	Caraquet.....	3	32 50
100993	Garfield.....	do.....	10	Philip Rive.....	do.....	3	29 50
103954	Gazelle.....	do.....	10	C. Hubbard.....	do.....	3	29 50
100919	Gazelle.....	do.....	12	Chas. Robin, Collas & Co.....	do.....	3	31 50
100968	Gem.....	do.....	11	Chas. Robin, Collas & Co.....	do.....	4	37 00
103282	Gilknockie.....	do.....	11	Robert Young.....	do.....	3	30 50
1009 4	Gladstone.....	do.....	10	Philip Rive.....	do.....	3	29 50
100910	Gleaner.....	do.....	13	Luc Lanteigne.....	do.....	3	32 50
100992	Great Mogul.....	do.....	11	Philip Rive.....	do.....	2	24 00
92418	Grip.....	do.....	12	James Davidson.....	Tracadie.....	4	38 00
100790	Guiding Star.....	do.....	11	R. Young.....	Caraquet.....	3	30 50
96733	Gem.....	do.....	12	Richard Young.....	Shippegan.....	4	38 00
103086	Gipsy.....	do.....	20	W. S. Loggie & Co.....	Chatham.....	5	52 50
103766	Genesta.....	do.....	12	Thomas Ahier.....	Shippegan.....	3	31 50
100989	Gladiator.....	do.....	11	Philip Luce.....	Little Shippegan.....	3	30 50
100994	Hercules.....	do.....	10	Philip Rive.....	Caraquet.....	4	36 00
61425	Hope.....	New Carlisle.....	13	Chas. Robin, Collas & Co.....	do.....	3	32 50
100903	Hope.....	Chatham.....	12	R. Young.....	do.....	3	31 50
103939	Hope.....	do.....	11	Michael Bisho.....	Inkerman.....	2	24 00
100906	Hotspur.....	do.....	10	Philip Rive.....	Caraquet.....	3	29 50
100956	Harold N.....	do.....	12	W. S. Loggie & Co.....	Chatham.....	3	31 50
103765	Hirondelle.....	do.....	11	Thomas Ahier.....	Shippegan.....	4	37 00
103931	Irene.....	do.....	12	Wm. Fruing & Co.....	Caraquet.....	3	31 50
100997	Ivanhoe.....	do.....	10	Thomas Ahier.....	Shippegan.....	3	29 50
103779	Ibis.....	do.....	11	Wm. Fruing & Co.....	do.....	4	37 00
96724	Isabel.....	do.....	11	do.....	do.....	5	43 50
103281	Japan.....	do.....	11	R. Young.....	Caraquet.....	3	30 50
100965	Josephine.....	do.....	11	Philip Rive.....	do.....	3	30 50
100958	John B.....	do.....	11	W. S. Loggie & Co.....	Chatham.....	5	43 50
103289	Jersey Lily.....	do.....	12	Thomas Ahier.....	Shippegan.....	3	31 50
100981	Kite.....	do.....	11	Chas. Robin, Collas & Co.....	Caraquet.....	3	30 50
103283	Koh-i noor.....	do.....	13	Philip Rive.....	do.....	5	45 50
103288	Kite.....	do.....	10	Thomas Ahier.....	Shippegan.....	3	29 50
103089	Lady Maud.....	do.....	11	Philip Rive.....	Caraquet.....	4	37 00
100951	Leo.....	do.....	13	Hyacinthe Lanteigne.....	do.....	4	39 00
103280	Lily.....	do.....	11	Chas. Robin, Collas & Co.....	do.....	4	37 00
100972	Lizzie D.....	do.....	11	Robert Young.....	do.....	3	30 50
103003	Lark.....	do.....	10	Thomas Ahier.....	Shippegan.....	3	29 50
92403	Marie.....	do.....	26	Ubalde Landry.....	Grand Anse.....	3	45 50
72100	Marie.....	do.....	11	Onésime Chiasson.....	Lameque.....	4	37 00
103278	Marie Celia.....	do.....	13	Wm. Fruing & Co.....	Caraquet.....	4	39 00
100292	Marie Joseph.....	do.....	12	Lazare Gauvin.....	Lameque.....	4	38 00
100781	Mary Louise.....	do.....	11	C. Hubbard.....	Caraquet.....	3	30 50
100295	Marie Louise.....	do.....	18	Joseph A Poulin.....	do.....	4	44 00
61447	Merida.....	do.....	13	Andrew D. Aché.....	Lameque.....	4	39 00

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List of Vessels which received Fishing Bounty, &c.—New Brunswick—Continued.

GLOUCESTER COUNTY—Continued.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
100779	Mermaid	Chatham	11	C. Hubbard	Caraquet	3	30 50
103088	Max	do	10	Maxime Cormier	do	5	42 50
100955	Majestic	do	10	C. Hubbard	do	3	29 50
103084	Mary Emma	do	11	Onésime Paulin	do	3	30 50
103768	May Flower	do	13	Chas. Robin, Collas & Co.	do	3	32 50
100785	Midnight	do	12	R. Young	do	3	31 50
100300	Mikado	do	13	Chas. Robin, Collas & Co.	do	4	39 00
88669	Morning Star	do	12	Gustave Gionet	Pokemouche	2	25 00
100957	Mary R.	do	12	W. S. Loggie & Co.	Chatham	3	31 50
100970	Nellie	do	11	Dominique Gallien	Caraquet	3	30 50
103284	Normandy	do	11	Philip Rive	Caraquet	3	30 50
103004	Oriole	do	11	Thomas Ahier	Shippegan	3	30 50
103005	Osprey	do	10	do	do	4	36 00
100297	Palma	do	14	Olivier Duguay	Lamèque	4	40 00
100776	Patrick	do	11	Philip Rive	Caraquet	5	43 50
96740	Providence	do	13	Prosper Albert	do	4	39 00
100904	P. T. S.	do	11	Thomas Sivret	do	4	37 00
96732	Providence	do	11	Joseph L. Robichaud	Shippegan Island	4	37 00
72076	Providence	do	12	Thomas Ahier	Shippegan	4	38 00
103080	Ptarmigan	do	11	do	do	3	30 50
103764	Petrel	do	12	do	do	4	38 00
103777	Penguin	do	13	Wm. Fruing & Co.	do	2	26 00
103778	Pelican	do	13	do	do	4	39 00
100979	Ranger	do	10	Chas. Robin, Collas & Co.	Caraquet	4	36 00
100775	Red Gauntlet	do	11	Philip Rive	do	3	30 50
100952	Replevin	do	10	Chas. Robin, Collas & Co.	do	4	36 00
97191	Rita	do	12	Chas. Robin, Collas & Co.	do	3	31 50
100908	Rosalie	do	10	Edward O. LeBouthillier	do	3	29 50
100773	Rupert	do	12	Philip Rive	do	3	31 50
96727	Ryse	do	11	Sinaie Aché	Lamèque	3	30 50
103072	Reward	do	13	James DeGrace	Shippegan	4	39 00
103272	Red Weasel	do	11	Richard Young	do	4	37 00
103273	Russel	do	10	John M. Ward	Miscou	4	36 00
103587	Romulus	do	19	W. S. Loggie, Co.	Chatham	4	45 00
103287	Raven	do	11	Thomas Ahier	Shippegan	4	37 00
100907	Sarah	do	10	Robert Young	Caraquet	4	36 00
74401	Sarah	do	11	Nazaire Noel	Lamèque	3	30 50
103010	Sarah B.	do	10	Joseph Lanteigne (E)	Caraquet	3	29 50
92408	Sarah A. W.	do	15	Robert J. Wilson	Wilson's Point	3	34 50
103584	Saxon	do	13	Philip Rive	Caraquet	3	32 50
100914	Sea Flower	do	11	Chas. Robin, Collas & Co.	do	3	30 50
100901	Sea Flower	do	12	Robert Young	do	4	38 00
100961	Silver Moon	do	14	Onésime Gallien	do	3	33 50
100788	Sir Charles	do	11	R. Young	do	3	30 50
100974	Sivret	do	10	do	do	4	36 00
103087	Stanley	do	10	Marcel Caron	do	4	36 00
100963	Stanley	do	10	Philip Rive	do	3	29 50
103767	Stella Marie	do	19	Luc Friolet	do	4	45 00
103008	St. Joseph	do	12	Adolphe Aché	Lamèque	4	38 00
103772	Surprise	do	10	Thomas Blanchard	Caraquet	3	29 50
100986	Swift	do	11	Augustin Lanteigne	Little Shippegan	3	30 50
96731	Sea Star	do	13	Joseph Savoy	Shippegan Island	4	39 00
100959	Sea Bird	do	10	W. S. Loggie & Co.	Chatham	4	36 00

List of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*GLOUCESTER COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid
							\$ cts.
103006	Swallow.....	Chatham.....	11	Thomas Ahier.....	Shippegan.....	4	37 00
103762	Swan.....	do.....	14	do.....	do.....	3	33 50
103761	Swing.....	do.....	11	Agapit A. Albert....	Caraquet.....	3	30 50
100779	Teutonic.....	do.....	11	C. Hubbard.....	do.....	4	37 00
100918	Tickler.....	do.....	12	Chas. Robin, Collas & Co.....	do.....	3	31 50
103583	Two Brothers.....	do.....	11	Mathew Wilson.....	Little Shippegan	2	24 00
96738	Three Brothers.....	do.....	12	Richard Young.....	Shippegan.....	4	38 00
103082	Thrush.....	do.....	10	Thomas Ahier.....	do.....	4	36 00
103255	Valkyrie.....	do.....	12	Philip Rive.....	Caraquet.....	3	31 50
100995	Voltaire.....	do.....	10	do.....	do.....	3	29 50
100966	Von Moltke.....	do.....	11	do.....	do.....	3	30 50
103274	Vesuvius.....	do.....	10	George D. Maillet....	Shippegan.....	4	36 00
103775	Victoria.....	do.....	16	W. S. Loggie & Co..	Chatham.....	4	42 00
103588	Vulture.....	do.....	13	do.....	do.....	4	39 00
100985	Wasp.....	do.....	12	Chas. Robin, Collas & Co.....	Caraquet.....	4	38 00
100953	White Wings.....	do.....	10	R. Young.....	do.....	3	29 50
100973	World's Fair.....	do.....	11	do.....	do.....	3	30 50
96735	White Fish.....	do.....	12	Joseph L. Savoy.....	Lamèque.....	4	38 00
103079	Wren.....	do.....	11	Thomas Ahier.....	Shippegan.....	4	37 00
100920	Zephyr.....	do.....	12	C. Robin, Collas & Co	Caraquet.....	3	31 50

NORTHUMBERLAND COUNTY

100969	John Bull.....	Chatham.....	10	James Anderson.....	Church Point....	4	36 00
92420	Mary Louise.....	do.....	13	Donald Loggie.....	do.....	3	32 50
83096	St. Patrick.....	do.....	16	John White.....	Upper Neguac...	4	42 00

RESTIGOUCHE COUNTY.

94959	Winnie G. S.....	Lunenburg.....	26	Donald McGregor...	Dalhousie.....	4	52 00
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ST. JOHN COUNTY.

88253	E. B. Colwell.....	St. John.....	19	Addison Thompson..	Dipper Harbour.	5	51 50
59373	E. M. Oliver.....	St. Andrews....	14	Charles Harkins.....	do.....	3	33 50
104000	Little Gracie.....	do.....	11	Francis Campbell....	do.....	2	24 00
77783	Lost Heir.....	St. John.....	15	Henry Alston.....	Pisarinco.....	3	34 50
52159	Mary E.....	do.....	21	Frederick Buchanan.	St. John.....	3	40 50
92509	Mary Jane.....	St. Andrews....	13	Mark Shannon.....	do.....	3	32 50
80630	Vanity.....	Yarmouth.....	11	Patrick Murray.....	Dipper Harbour..	3	30 50
97149	Winnie.....	St. Andrews....	12	Robert McLellan....	do.....	2	25 00

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LIST of Vessels which received Fishing Bounty, &c.—Con.

PROVINCE OF PRINCE EDWARD ISLAND.

KING'S COUNTY.

Official Number.	Name of Vessel.	Report of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
69132	Belle of the Bay	Gusborough ...	20	John Gosbee.....	Murray River. ...	4	46 00
92675	Can't Help It.....	Pictou	40	John Herring.....	Murray Har. S...	9	98 50
38335	Elizabeth.....	Arichat.....	17	William Hemphill...	Georgetown.....	3	36 50
38477	Elizabeth.....	do	18	Amos Landry.....	Montague Bridge	6	57 00
83196	Ethel Blanche.....	Pictou.....	17	William Reynolds...	Murray Har. S...	7	62 50
100691	Francis E. Willard...	do	23	Benjamin H. Herring	do	6	62 00
75552	Hannah Elridge	Charlottetown	57	Henry Dicks.....	Georgetown	7	102 50
75566	Julia A.....	do	15	Reuben Penny.....	Murray Harb. S...	4	41 00
69109	Marcella Butler.....	Halifax	38	John Hemphill.....	Georgetown	4	64 00
90639	Morell.....	Georgetown...	16	Edward Delorey.....	do	3	35 50
100696	Marion Emerson.....	Pictou.....	30	Reuben Cahoon.....	Murray Harb. S...	8	82 00
74160	Sea Bird.....	Charlottetown	20	Joseph White.....	do	6	59 00
90488	Wave.....	do	19	James Delorey.....	Brudenell	4	45 00

PRINCE COUNTY.

71310	Black Watch.....	Charlottetown	23	Benjamin Perry.....	Alberton.....	5	55 50
103771	J. Anny.....	Chatham.....	12	John Poirier.....	Tignish.....	5	44 50
92473	Lucy Louise.....	Charlottetown	19	James Roach.....	Malpeque.....	5	51 50
94992	Sarah P. Ayer.....	do	64	John Champion.....	Alberton.....	9	122 50
96926	Sea Foam.....	do	15	Donald McIntyre...	Lot 14.....	4	41 00
88518	W. F. Elizabeth.....	Sydney.....	10	Roderick McDougall	Port Hill.....	4	36 00

QUEEN'S COUNTY.

92466	G. H. Gardner.....	Charlottetown	17	E. Marshall.....	North Rustico...	7	62 50
96936	Katie and Ella.....	do	20	Lauchlin H. McLaine	Charlottetown...	3	39 50
90206	Minnie Mac *.....	do	15	John W. Clow.....	Trac. road lot 34	5	45 00
92663	Prince Edward *..	do	18	Lauchlin H. McLaine	Charlottetown..	1	24 00
103592	Rosamond.....	do	18	Thomas Doyle.....	North Rustico...	6	57 00

* For 1897.

List of Vessels which received Fishing Bounty, &c.—*Con*

PROVINCE OF QUEBEC.

GASPÉ COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty paid.
							¢ cts.
94675	Success.....	Halifax.....	15	R. J. Leslie.....	Amherst, M. I....	4	41 00

SAGUENAY COUNTY.

74270	Amarilda.....	Quebec.....	24	Cléophas Vézina.....	St. Michael.....	3	43 50
85756	Aristile.....	do	19	Phléas Vézina.....	do	2	32 00
61966	D. Cronan.....	Halifax.....	40	Pierre Le Marquand.	Esquimaux Point	7	85 50
103533	Dolphin.....	do	21	James Fequet.....	Old Fort Island.	3	40 50
88469	George Clarke, jr....	Arichat.....	64	Luke Cormier.....	Esquimaux Point	8	116 00
69382	Marie du Sacré Cœur	Gaspé.....	46	Paul Landry.....	do	10	111 00
100365	Marie Louise.....	Quebec.....	13	François Germain....	Ottawa.....	2	26 00
103358	Romeo.....	do	22	Louis Pineau.....	Bic.....	2	35 00
107231	Ste. Anne.....	do	13	Magloire Chouinard.	Manicouagan....	4	39 00
92334	Ste. Marie.....	do	53	Pierre Ouellette.....	Quebec	6	92 00
80753	Stella Maris.....	do	51	Louis Cummings.....	Esquimaux Point	8	103 00
75680	Sea Star.....	do	52	William Leblanc.....	do	6	91 00
69591	Ste. Marie.....	do	37	Alex Scherrer.....	do	6	76 00
64873	Willie.....	do	36	Louis Gagnon.....	Pentecost.....	3	55 50
66727	Willow.....	do	18	August Boulet.....	St. Thomas Mgny	3	37 50

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APPENDIX No 3.

NOVA SCOTIA.

District No. 1.—Comprising the four counties of the Island of Cape Breton.

Inspector A. C. Bertram, North Sydney, C. B.

District No. 2.—Comprising the counties of Cumberland, Colchester, Pictou, Antigonish, Guysborough, Halifax and Hants.

Inspector Robert Hockin, Pictou.

District No. 3.—Comprising the counties of King's, Annapolis, Digby, Yarmouth, Shelburne, Queen's and Lunenburg.

Inspector L. S. Ford, Milton.

DISTRICT No. 1.

ANNUAL REPORT ON THE FISHERIES OF CAPE BRETON ISLAND, 1898.

NORTH SYDNEY, C. B., January 2, 1899.

Hon. Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report on the fisheries for 1898 of District No. 1, Nova Scotia, comprising the counties of Cape Breton, Inverness, Richmond and Victoria, together with tabulated statements giving the products of the fishery for the year in kinds, quantities and values.

The total product for 1898 amounts in value to \$1,061,235.39 compared with \$1,056,115.83 for the previous year, showing an increase for the present year of \$5,119.56 over that of 1897. This increase is confined to the counties of Cape Breton and Inverness. The former gives a value increase of \$27,706.47, while the increase in the latter county is \$77,315.50. It will be observed therefore that Richmond and Victoria counties show a considerable decrease: the former \$37,838.30 and the latter \$62,064.11.

The classes of fish which make up the increase in Cape Breton county are salmon, herring, cod and haddock, and in Inverness county, salmon, pickled herring, mackerel, cod and halibut; while a short catch in salmon, mackerel, lobsters, cod, hake and halibut make up the decrease in Victoria county, and lobsters, cod, haddock, pollock and squid account for the decrease in Richmond county.

The following statement will show in what classes of fish have the increase and decrease occurred in the whole Island fishery :—

Kind of fish.		Increase.	Decrease.
Salmon, fresh.....	lbs.	51,116	
" canned.....	lbs.	7,620	
" pickled.....	brls.	46	
Herring, pickled.....	brls.	1,882	
" fresh.....	lbs.		266,690
" smoked.....	lbs.		11,000
Mackerel, fresh.....	lbs.	23,173	
" pickled.....	brls.	3,580	
Lobsters, canned.....	cans.		198,626
" fresh in shell.....	lbs.	442,100	
Cod dried.....	cwt.		13,670
Haddock, fresh.....	lbs.	15,865	
" dried.....	cwt.		995
Hake dried.....	cwt.		953
Pollock.....	cwt.		1,521
Halibut.....	lbs.		55,952
Trout.....	lbs.	6,165	
Shad.....	brls.		11
Smelts.....	lbs.		27,662
Alewives.....	brls.		132
Eels.....	brls.		467
Oysters.....	brls.		798
Squid.....	brls.		42

LOBSTERS.

The greatest falling off in any branch of the fishing industry has occurred in canned lobsters amounting to 198,626 pounds. This decrease is not confined to one county but is distributed among the four counties. Yet there were three more canneries in operation in 1898 than in the previous year. The cause of this marked falling off in the lobster fishery is owing to scarcity of lobsters and not to any other cause, as the industry was as vigorously prosecuted during the present season as in any previous year. Of course there were 442,100 pounds of live lobsters exported this summer against 13,100 pounds the previous year. I fear that some form of restriction is necessary to preserve the lobster industry. The high price realized by both packers and fishermen for these crustaceans now causes vigorous prosecution of the industry, and while some packers and fishermen desire the preservation of this important fishery, there are others whose sole object is to get the fish. The danger to this important branch is not in taking undersized fish as much as in destroying the mother before spawning. Packers know that the fishermen when out at their traps remove the 'berries' from female lobsters, yet they will tell the officers they are powerless to prevent this practice. In some districts the spawn fish are taken from the traps outside and carried to the inside waters near a factory and liberated, but this is only done in rare cases. In Richmond county a Mr. Levisconte has given instructions to his fishermen to take the female lobsters to a pond near his factory where they are liberated. A gate made of wire prevents the fish from getting out and at the same time allows the sea water to get in. Mr. Levisconte as well as other well-informed packers are of the opinion that only once in two years does a female lobster deposit eggs. It is only in rare instances that packers take the trouble of preserving even the female lobster found with spawn on the outside. The packers can preserve this industry if they so desire. They have the remedy in their own hands. When they know that the female lobster is taken and the spawn rubbed off, it is their duty to give the officers such information as will lead to the punishment

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of the guilty fishermen. Then again, why should not the packers form themselves into an association for mutual protection from dishonest fishermen who destroy in the above mentioned manner the egg bearing mother? If some such system of protecting the spawning grounds had been formulated there would not be such a great falling off in the lobster fishery as is noticeable in this report. Where so much indifference in the preservation of the grounds is exhibited by both packers and fishermen, the Government should hesitate before acquiescing in their appeals for extension of the fishing season. The industry is too valuable to the country to be thus jeopardized.

It would not surprise me if Cape Breton in the near future was a strong competitor with western Nova Scotia in the supply of live lobsters for the American market. With two Boston boats calling weekly at Port Hawkesbury there is no reason why thousands of cases of lobsters could not be shipped in these steamers from Cape Breton. The live lobster industry from this Island is bound to develop, and possibly next season it will assume large proportions, particularly from the 'Bras d'Or Lakes' and the southern coast of Cape Breton and Richmond counties.

COD.

I find by the returns that the codfish catch did not come within 13,670 cwt. of the quantity taken the previous year. Yet there were over six hundred more men employed in the prosecution of the fishing industry this year than in the past season. The cod fishery being one of the leading branches, there must be some noticeable reason for such a falling off in the catch compared with the previous year, particularly as there was such a marked increase in the number of fishermen. There is no doubt that these fish are migratory. Invariably when fish are reported plentiful, say for instance in Newfoundland waters they are scarce in our waters. That they move about from bank to bank is now fairly well understood by fishermen. Next season our shore waters may be teeming with cod, while on the Newfoundland coast they may be reported scarce. The statements frequently made that the waters are yearly becoming depleted of the cod family are not borne out by facts. The cod, the most ravenous of fish, move about over a large sea area and wherever food is plentiful cod are found in abundance. As the cod family spawn in deep water and as the ova floats and develops in the waters of the Atlantic, the female cod is not so much exposed to the destructive agencies adopted by man as in the case of fish which seek the inland waters to spawn. Scarcity of these fish in the inshore waters in the early part of the season and scarcity of bait are the causes of the falling off in this season's catch. The bait question is the chief cause. In our coastal waters cod are plentiful in autumn. These fish appear to move inshore and feed on the numerous banks which surround this island. I do not mean to say they are not found plentiful on some inshore banks in the early part of the season, but in the autumn cod can be found on all the inshore banks. The want of codfish bait is a yearly recurring circumstance in most fishing districts and causes annual loss to this valuable industry. It is to be regretted that our fishermen, as a rule, do not avail themselves of that invaluable adjunct to their business—an ice house—which, in this country, can be inexpensively constructed and easily filled at a season when they are otherwise idle. With a small, but well filled ice house, every fisherman could lay up bait which almost invariably appears during some point of the season, and always in advance of the larger fish. Every fisherman could thus provide against frequent losses resulting from want of bait. Some means that would be instrumental in directing their efforts to this end, would prove of incalculable value.

MACKEREL.

There is an increase of 23,173 pounds of fresh and 3,580 barrels of pickled mackerel over the catch of 1897, which was a poor one. For the past two years the fall catches were failures; the early summer fishery in each year largely making up the catch given in the statistics. Unless mackerel are allowed to reach the spawning grounds

unmolested by the destructive purse-seines, I fear that this important fishery will become a thing of the past. The natural spawning grounds for these fish are in the North Bay and the waters of the Magdalen Islands. Sometimes the ova in the female is so matured when they make their appearance in Cape Breton waters that they spawn in our bays. Aspy Bay and Bay St. Lawrence are their spawning grounds in our waters. While on their way to the spawning grounds during the last of May and first of June they are pursued by purse-seining vessels, and tens of thousands of barrels of the mother fish are taken. How can the supply be kept up under these circumstances? Year after year mackerel appear to be becoming scarcer and unless purse-seining is prohibited until after spawning season is over, failure will be the word used when writing reports of this fishery.

HERRING.

The pickled herring statistics show an increase of 1,882 barrels over last year, but there is a decrease of 266,690 pounds of fresh and 11,000 pounds of smoked herring. This decrease has again occurred in the upper waters of the Bras d'Or Lakes, spring herring being taken there for bait purposes. The demand for this bait fish has fallen off during the past two years owing to the fact that considerable quantities of bait or frozen herring have been imported from Newfoundland, purchased by lobster fishermen and used by them to bait their traps. While the spring run of herring keeps up, the mid-summer fat herring, the best herring taken in Canadian waters, do not strike into our bays and harbours as formerly. Some fishermen attribute the absence of these excellent commercial fish to the increase of lobster traps in our inshore waters, others to July gales, which force the fish back into deep water. It is not likely that either the presence of traps or July gales is the cause of the absence of the mid-summer herring, as they have been known to strike in large schools when traps on the Eastern coast were as numerous as they are now. The gale theory does not hold good either for the reason that in seasons when gales did not occur these fish did not appear in as large number as formerly. They must seek some other haunts, possibly in some of the bays of Newfoundland, where herring have appeared in immense shoals during recent years.

SALMON.

The salmon fishery has been good. In fresh salmon, largely for export, there is an increase of 51,116 pounds, in canned 7,620 pounds and in pickled 46 barrels. The increase has largely been made up in Inverness county, particularly in that stretch of coast from Broad Cove, north to Pleasant Bay. Salmon are purchased from the fishermen by a Mr. Abbot, an American gentleman, who has a freezer at Margaree Harbour, and also by the Messrs. Loggie, who employ a small steamer to carry the fish from the net fishermen to their freezers at Mulgrave. Besides the large quantities which are taken into the freezers referred to, a considerable amount of fresh salmon is shipped in ice to the cities of Canada during the fishing season. Margaree and Little River, Cheticamp are the best spawning rivers in Inverness county. The former has been stocked with salmon fry from the hatchery in this county, but no fry has ever been placed in the Cheticamp River, owing to the difficulty of reaching it. In August last, accompanied by a guide, I proceeded to the upper waters of Little River. After a walk of about three and a half miles we reached the first pool, a very large deep pool between high mountains. I observed no fish in this pool. We proceeded until two more miles were covered. At this point we came to another large pool. I noticed a school of salmon in the river below. They soon made for the pool, which I discovered to my amazement was literally alive with salmon. This pool is about 200 feet in length, sixty in width and very deep. I remained for some twenty minutes watching the fish schooling about. The head of the pool was cut off by a large rock, but I knew from the roaring noise that there was a high fall at the upper end. I heard the guide from the cliff above call me to come up, which I did and witnessed for the first time salmon attempting to reach the upper waters by leaping the falls. The fall from the top to the

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pool below was about fourteen feet and a heavy volume of water leaped over it, causing a great white foam and shower of spray. While I remained there I counted 123 salmon which tried to jump the falls and not one succeeded. They would leap out of the white foam below and sometimes strike the rock on the side of the fall and drop back into the pool below. Others would be thrown back by the force of the water, there being no 'rest' above after gaining the top. It was a grand sight. I do not believe salmon ever reached beyond this fall, although I was informed that two salmon were seen in pools above by prospectors. The upper are much better for spawning than the lower waters and in order to enable these fish to reach the spawning grounds above I have reported the matter to the department and asked for an expenditure to have a portion of the fall removed. With access to the spawning grounds above, I believe the supply of salmon in a few years would be greatly increased.

HALIBUT.

There is a decrease of 55,952 pounds in halibut. The only county in my district showing an increase catch of halibut is Inverness. There is no market near at hand for fresh halibut, which accounts for the decrease. American vessels report abundance of these fish on the outside banks.

OTHER BRANCHES.

The other classes of fish are much about the same as in previous years, excepting smelts which show a decreased catch of 27,662 pounds. An open season in December and first part of January is the main cause of the decrease in smelts. Frost is required for the export of these fish. The supply is well kept up.

The various rivers and streams were well protected this year from poachers. The angling for salmon and trout was good in the month of July and each year the number of anglers are on the increase. Since communication has been directly opened up by steamer with Newfoundland, many anglers first whip the Cape Breton streams and afterwards proceed to Newfoundland where the angling season opens later. The money spent by the Government in the protection of our rivers and streams is money well spent, not only from a commercial standpoint, but in protecting valuable rivers for anglers who come from abroad and spend money in our country.

I have the honour to be, sir,
Your obedient servant,

A. C. BERTRAM,
Inspector of Fisheries.

SYNOPSIS OF FISHERY OVERSEERS' REPORTS FOR THE ISLAND
OF CAPE BRETON, 1898.

CAPE BRETON COUNTY.

Overseer Joseph McPherson, of North Sydney, reports a decrease in the catch of herring and lobsters in his district over the previous year. The decrease in the herring fishery he attributes to the large number of steamers which frequent North Sydney Harbour during the herring season and frighten this fish away. The late date for the commencement of the season's operations and stormy weather he gives as the cause of the scarcity of lobsters. The other branches of the fishery in his district were pretty much the same as last season. The close seasons were well observed.

Overseer Michael R. McInnes, of Amaquades Pond, reports a more vigorous prosecution of the cod fishing industry in his district during this season than in previous

years, owing to the fishermen procuring better prices for this fish in the local markets. On account of scarcity of bait, however, the catch was not as large as might be. The lobster fishery was carried on by only a few fishermen, but the result proved so satisfactory that he is of the opinion that this industry will be prosecuted on a much larger scale next season. About per cent of the 50 total catch of all branches of the fishery in his district was sold in Canada, the balance being used for home consumption. No illegal fishing came to his notice during the season.

Overseer Timothy Sullivan, of Little Bras d'Or, reports a decrease in the catch of cod this season. He attributes this to a less vigorous prosecution of this industry than in former years. A larger number of fishermen were engaged in the lobster fishery in his district this season than previously. He reports the July or mid-summer run of herring scarce. The close seasons were well observed.

Overseer John McLean, of Gabarous Lake, reports an increase in cod and a decrease in mackerel, herring and salmon. He also reports a great scarcity of bait. No abuses existed in his district and the several close seasons were well observed.

Overseer Henry Le Vatte, of Louisburg, reports an increase in cod and haddock in his district this season. The fishermen made large catches of these fish, and were it not for scarcity of bait during the spring and the presence of dog-fish on the coast during the summer a much larger catch would have been taken. He remarks that many of the fishermen in his district engage in the lobster fishery so much so that this industry is being overdone. He attributes the cause of this too vigorous prosecution of the lobster fishery to the fact that fishermen are unable to prosecute the other branches of the industry owing to want of bait. He hopes that some remedy to assist the fishermen by cold storage facilities or otherwise will be undertaken by the Government.

Overseer Joseph McDonald, of Little Lorraine, reports an increase in all branches of the industry this season excepting mackerel. The prices for fish ruled higher than in previous years and this caused a more vigorous prosecution of the industry. About 95 per cent of the total catch was sold in Canadian markets, the balance being used for home consumption. No abuses existed in his district.

Overseer John McCuish, of Scattarie Island, reports an increase in cod and herring. The mackerel fishery was almost a total failure. The lobster fishery was fairly good, but the season was short owing to the presence of ice on the coast during the spring months. The close seasons were well observed. About 90 per cent of the fish taken in his district was sold in Canadian markets, the balance being used for home consumption.

Overseer C. E. Rees, of Port Morien, reports a fair increase in the herring and a slight increase in cod over last year. The increase in cod he attributes to the favourable weather enjoyed for fall fishing. There was a decrease in mackerel and halibut, owing doubtless to scarcity of these fish. The close seasons were well observed. Almost the total catch of fish was sold in Canada, only a very small portion (about 3 per cent) being used for home consumption.

INVERNESS COUNTY.

Overseer D. F. McLean, of Port Hood, reports an increase in salmon and mackerel and a decrease in all other branches. The increase in mackerel he attributes to a more vigorous prosecution of the industry by vessel fishermen than formerly. Many causes are attributed for the decreases in the other branches of the industry, such as frequent storms, scarcity of bait, presence of dog-fish on the coast, etc. He is of the opinion, however, that if those interested in the prosecution of the fishing industry had contented themselves during the past thirty years with the use of hand lines for fishing mackerel and cod-fish instead of the scientific use of seines and trawls, such a great scarcity of fish would not now be so noticeable in the officers' reports each year.

About 20 per cent of the fish taken in his district was used for home consumption, and the remainder in about equal proportions is sold in Canada and exported to foreign countries. The close seasons were strictly observed, special guardians rendering efficient service. The Sawdust Act was complied with by the millowners. No fishways exist in his district. One trap-net under license from the Department of Fisheries was operated; the total value of fish caught therein being \$242.50.

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Overseer Lewis McKeen, of Mabou, reports a fairly good catch of cod during the latter part of July and through the month of August, but during the early part of September dog-fish made their appearance and proved very destructive to this fishery, not only by frightening the fish away but also by destroying trawls and nets. Mackerel were scarce, the few that were taken being used for bait. He is unable to attribute a cause for the scarcity of these fish. The catch of spring herring was good, but the mid-summer run was a failure. It is believed that large schools of fall herring came around the coast but were frightened away by dog-fish. The salmon catch was below that of last year. Lobster fishing was fairly good during the first part of the season but did not continue so, and the return shows considerable decrease as compared with the catch of 1897. Close seasons were fairly well observed, as was also the Sawdust Act. There are no fishways in his district.

Overseer Archibald A. Chisholm, of Margaree Forks, reports a slight increase in the total catch of the fisheries in his district this season over the past year. Dog-fish interfered somewhat with the fall fishing by destroying fishing gear. A larger number of men were engaged in the industry this season than previously, which doubtless accounts for the increase referred to.

Overseer Albert Ingraham, of North-east Margaree, reports a large falling off in cod and lobsters in his district and a slight increase in salmon and mackerel. The close seasons were well observed. About 80 per cent of the fish taken in his district is sold in Canada and the balance used for home consumption.

Overseer William Lucoin, of Eastern Harbour, Cheticamp, reports the herring fishery is fairly good. Cod were plentiful in the early part of the season but gradually diminished towards the close, and the returns show a decrease in this branch of the industry. Haddock, hake and halibut were scarce. Owing to the scarcity of bait mackerel were not as plentiful as was expected. Lobsters were about the same as last year. About 60 per cent of the fish caught was exported to foreign countries, 30 per cent was sold in Canada and the remainder used for home consumption. Close seasons were strictly observed.

Overseer Angus McIntosh, of Pleasant Bay, reports an increase in the catch of lobsters, mackerel and salmon owing to a more vigorous prosecution of these branches than in previous years. The codfish catch was about the same as last year. No abuses exist in his district, and the close seasons were observed.

RICHMOND COUNTY.

Overseer D. R. Boyle, of West Arichat, reports a large decrease in the catch of cod, haddock, hake, halibut and squid, and a slight increase in herring, mackerel and salmon. The large falling off in the cod fishery is severely felt by the fishermen, it being the most important branch of the industry in his district. This decrease is principally owing to boisterous weather which prevailed during the fall months, also to the fact that fewer vessels were engaged in prosecuting the industry than formerly. The lobster catch is about the same as last year, the decrease in canned lobsters being more than counterbalanced by the increased quantity exported in shell this season. Fairly good prices for this season's yield of the different branches were realized by the fishermen, and were it not for this fact their loss owing to the large falling off in several branches of the industry, would be most severely felt. The close seasons were strictly observed and no serious infraction of the regulations came under his notice. About 90 per cent of the total catch of fish in his district was shipped to Halifax and P. E. Island markets, the balance being used for home consumption.

Overseer Archibald Morrison, of Cannes, reports a decrease in the catch of cod, herring, mackerel and lobsters. The codfish catch although small proved remunerative as the fishermen secured very fair prices for their catch. The lobster fishery is gradually diminishing owing to the grounds being overfished. He is of the opinion that the only means of preserving this important industry from extinction is by prohibiting lobster fishing altogether for a period of several years. About 95 per cent of the fish taken was sold in Canada, and the balance used for home consumption.

Overseer *Arthur Brymer, of Lower L'Ardoise*, reports an increase in mackerel, hake and pollock, and an average catch of cod and haddock. The cause of the increase in the above branches he attributes to a more vigorous prosecution of the industry than formerly. The close seasons were well observed.

VICTORIA COUNTY.

Overseer *W. R. Moffatt, of Cape North*, reports a decrease in all branches of the fisheries in his district over the year 1897, owing to stormy weather and scarcity of fish. The total catch of mackerel was shipped to the United States. Of the other branches 75 per cent was sold in Canada and the balance used for home consumption. The close seasons were well observed.

Overseer *John D. Morrison, of Wreck Cove*, also reports a great scarcity of all kinds of fish in his district, consequently the returns show a considerable falling off compared with last year. No illegal fishing was carried on and no abuses exist in his district. About 70 per cent of the total catch was sold in Canada, the balance being used for home consumption.

Overseer *Charles McRae, of Middle River*, reports a slight increase in salmon and cod over last year's catch. The different branches of the fisheries in his district appear to have been more vigorously prosecuted this year than previously. About 70 per cent of the catch of fish taken in his district was sold in Canada and the balance used for home consumption. There are no fishways in his district. The regulations were well observed.

Overseer *Duncan Gillis, of Baddeck*, reports an average catch in the various branches of the fisheries in his district this season. No abuses existed and the several close seasons were well observed. About 70 per cent of the total catch of fish was sold in the Canadian markets, the balance being used for home consumption.

I have the honour to be, sir,
Your obedient servant,

A. C. BERTRAM,
Inspector of Fisheries

N.B.—The overseers in Victoria county being all new officers and appointed within the present year they are not in a position to make accurate report on the fisheries of their respective districts as the overseers in the other counties who have had longer experience.

A. C. B.

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DISTRICT No. 2.

ANNUAL REPORT OF THE FISHERIES OF DISTRICT No. 2, NOVA SCOTIA,
 COMPRISING THE COUNTIES OF ANTIGONISH, COLCHESTER, CUM-
 BERLAND, GUYSBOROUGH, HALIFAX, HANTS AND PICTOU.

PICTOU, January 2, 1899.

Hon. Sir LOUIS H. DAVIES, K.C.M.G.,
 Minister of Marine and Fisheries.

SIR,—I have the honour to submit my tenth annual report of the fisheries in District No 2, Province of Nova Scotia, together with tabulated returns, showing the quantities of each kind of fish caught as well as comparative tables showing the increase or decrease of the catch of each kind of fish.

The estimated value of the total catch for the past season is \$1,456,271, as compared with the estimated value of the catch for the year 1897, \$1,464,974, showing a decrease in value of \$8,703 or less than one per cent.

Since the year 1890 the value of the several years catch has been as follows :—

1890	\$1,453,015
1891	1,640,912
1892	1,357,208
1893	1,427,605
1894	1,510,900
1895	1,429,782
1896	1,245,463
1897	1,461,327
1898	1,456,271

These figures speak for themselves showing that the results of the year's operations are about an average of that of the past nine years.

Of the anadromous fishes last year, the reported catch of—

Salmon shows a decrease of	3 per cent.
Shad shows an increase of	100 "
Smelts show an increase of	10 "
Alewives show an increase of	12 "

Of the deep-sea fish the catch of

Halibut shows an increase of over	100 "
Cod shows an increase of about	10 "
Haddock shows a decrease of about	7 "
Hake shows an increase of about	30 "
Pollock shows an increase of about	20 "

Comparing the aggregate catch of the whole cod family with that of last season there is an increase of about 6 per cent.

SALMON.

There was a decrease in the quantity caught on the Atlantic shores of the district of 12 per cent, viz., in Guysboro county, a decrease of 15 per cent, and in Halifax county a

decrease of 7 per cent. In the Bay of Fundy portion of the district there was a decrease of 20 per cent, while on the Straits of Northumberland there was an increase of 23 per cent.

SHAD.

The product of the shad fishery is remarkable, showing an increase of about 100 per cent over last season.

This fishery is of little or no importance upon any other part of the district excepting the counties bordering on the Bay of Fundy.

Since the year 1889 the yield has been as follows :—

	Barrels.
1889.....	535
1890.....	750
1891.....	1,178
1892.....	1,811
1893.....	746
1894.....	981
1895.....	1,185
1896.....	1,079
1897.....	1,382
1898.....	2,777

Just what has been the cause of this increase is difficult to determine. The only known factor which appears likely to change the results being the better system of river protection adopted five or six years ago, whereby the close season from Friday evening until Monday morning is better enforced during the spawning season while the fish are in the rivers.

ALEWIVES.

Last season I had to report a decrease in the catch of alewives of about 42 per cent from the catch of the previous year. This season the returns show an increase of 12 per cent over the catch of last year.

It is remarkable, however, that on the Atlantic coast not only there was no increase but a very considerable decrease of about 40 per cent from last year's catch, while from the Bay of Fundy counties the reports show an increase of 175 per cent over the catch of last season.

Assuming that these fish ascend the coast as the temperature of the water rises it may be that prevailing easterly winds may turn their course up the Bay of Fundy, and that this accounts for the larger catch in that portion of the district. At any rate, it appears to be evidence that gaspereaux are not so likely to return to their native waters as fish of the salmon family.

The faculty of discerning whether the waters of a river are from streams with lakes and still waters on them or from those of a more rapid character seems to be quite keen, for with two branches on a river, one with lakes, the other without, these fish seem to have the instinct to discern the lake waters: they will ascend that branch and are not found in the other, nor will they ascend rivers that have no lakes or still waters on them. They spawn in the still waters.

SMELTS.

The product of the year's operations shows an increase of about 9 per cent over the yield of last season.

Upon the Straits of Northumberland these fish spawn in the month of May, and the close season under the regulations is from April 1 to July 1. I was surprised to find evidence of recent spawning in rivers flowing into the Atlantic in the county of Guys-

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boro as late as July 10, in a brook at Port Hilford. The bottom of the brook was covered with spawn and there was quite a number of smelts in the brook at the time.

From inquiry it appeared to be quite unusual for these fish to be seen in that brook so late in the season and it may have been owing to some abnormal cause; however, it will be the subject of investigation during the ensuing season, so that there may be reliable data regarding the spawning time of these fish on the Atlantic coast.

It may be that because of a lower degree of temperature that they do not spawn so early as in the Straits of Northumberland.

HERRING.

The catch this year is only two-thirds of that of last: and the smallest reported catch since the district was set off. The following list shows the quantity in barrels caught each season since 1889. I have assumed that 200 lbs. of fresh fish are equal to a barrel.

1889.....	38,019
1890.....	40,424
1891.....	30 952
1892.....	43,435
1893.....	30,981
1894.....	41,607
1895.....	70,370
1896.....	28,018
1897.....	38,671
1898.....	25,570

MACKEREL.

The reports are not satisfactory inasmuch as they show a catch 40 percent less than that of last season and the smallest but one since 1889, as the following figures will show.

	Brls. salted.	Lbs. fresh or preserved.
1889.....	19,751	38,538
1890.....	23,139	32,928
1891.....	27,124	6,000
1892.....	14,322	2,000
1893.....	10,851	751,850
1894.....	10,175	669,300
1895.....	5,907	575,350
1896.....	8,594	1,318,917
1897.....	3,558	1,606,091
1898.....	2,092	1,547,178

As there has been a great change in the mode of marketing these fish, the refrigerators lately built having led to a large trade in fresh fish, it is somewhat difficult to arrive at a satisfactory conclusion from the foregoing figures as to the increase or decrease of the fishery, but assuming that 200 lbs. of fresh fish are equal to one barrel of salted, thus the figures in barrels would be as follows:

1889.....	19,964
1890.....	23,304
1891.....	27,514
1892.....	14,332
1893.....	14,610
1894.....	13,522
1895.....	8,344
1896.....	15,189
1897.....	11,591
1898.....	9,828

LOBSTERS.

On the Atlantic coast of this district the catch was slightly better than that of last year; owing to the fact that during the fishing season the weather was more favourable than it was during the fishing season of last year.

In the waters of the Straits of Northumberland the fishing was not so good as last year, in the counties of Antigonish and Pictou, but in Cumberland county the catch was better.

Over the whole district the catch was about equal to that of last season, in the Straits of Northumberland, and I have noticed that when herring are abandoned there is a good catch of lobsters, and *vice versa*, and this season's results gives evidence in the same direction, for in Cumberland county herring were plentiful, and lobsters also, while in Pictou and Antigonish there was a shortage in both.

I have supposed that the herring being in abundance spawn in the spring months and as their spawn sinks to the bottom and attaches to rocks, weeds, &c., it is fed upon by the lobsters attracted by this bait and thus it leads to a larger catch.

The close season regulations were rigidly enforced during the season, a patrol steamer being employed and traps confiscated wherever found, and in this district there were about 940 found set in violation of law. Convictions were obtained where possible.

It was quite noticeable that whereas formerly the fishery officers found all of the fishermen in favour of fall fishing and against the enforcement of the season regulations that during the past season the disposition to violate the law was confined to a very small percentage and many of the fishermen were willing to assist the officers with information as to the location of illegal apparatus.

The future of this fishery will largely depend upon a strict observance of the season regulations, for the enforcement of any other restrictions is likely to involve too great an expenditure to be practicable. If, however the eggs of the female can be hatched in incubators at a reasonable outlay, I am of opinion that it should be done under the supervision of the department but the cost made a charge upon the industry.

Of course if the female can be kept in the water until the berries are hatched, such an expedient would be unnecessary, but when it is remembered that the eggs can be removed from a female, that this can be done in the boat where no one can inspect it, that the ten cents of to-day will in ninety-five cases out of a hundred be grasped by the fisherman rather than the chance that he or his neighbour may make a dollar in a year or two, then it would appear to be a wise course to purchase the eggs at a price that would ensure their coming into the control of the department, hatch them in incubators at or near the factories and restore them to the sea to take their chance of life. The cost of this incubator could be met by an increase in the license fee.

It seems to me that undue importance seems to be attached to the preservation of the fish to which the eggs are attached; as a matter of fact this female is not so important as an unberried female, because as the spawning process has recently occurred, it will be a longer time before she would arrive at that stage again than is likely to be the case with the unberried female.

During the past season nineteen summons have issued, and conviction obtained in twelve cases for violation of the Fisheries Act. Twelve nets were confiscated, being set in violation of law.

SYNOPSIS OF OVERSEERS' REPORTS.

Overseer A. R. McAdam, Antigonish County, says that in the early part of the season the catch of lobsters was large and promising but as the season advanced it dropped.

There was a good catch of hake especially in the western part of his division. Six nets which were set for trout were confiscated being in violation of law. The salmon fishery was better than it had been the previous year by about 10 per cent. A number of fishways are required in his division. The guardians are for the most part faithful to their trust and many of them take much interest in the work.

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Overseer Davison, Colchester County.—There was an increase in the catch of shad over any of the previous years for some time past. He thinks this increase partly due to the fine weather during the fishing season, which caused the fish to come to the surface and to the flats where they were taken in weirs. The fishermen who fished on the deeper waters did not do so well as they had done the previous season.

Although the catch was larger than for some years it is only about one quarter as much as those of fifteen or twenty years ago, and this is because there is no protection to the mother shad when in the rivers for the purpose of spawning. If they were protected there the fishery would be restored. He recommends a close season for shad from March 20 to June 20 in each year.

Overseer G. O. Smith, Cumberland County, says a number of nets were confiscated in his division, being set in violation of law, the names of the owners or persons who set them could not be discovered. Fish were more plentiful than last year, 90 per cent of the gaspereaux caught in the River Philip is by residents of Halifax County who came there in schooners. There are three fishways in his division which are considered in good order.

Overseer Angevine, Cumberland County, says the close season for salmon has been strictly observed, no cases of violation of law came to his knowledge.

Overseer Davis, Guysboro County, says that the results of the salmon fishery in his division shows an increase of about 10 per cent. The catch of codfish was 20 per cent larger than last year. There was an increase of about 65 per cent in the quantity of hake taken, while the haddock fishery returns show a decrease of about 35 per cent. There was a decrease in the herring fishery of about 50 per cent, and in that of mackerel of about 60 per cent. The yield of the lobster fishery was better than that of the previous year, about 7 per cent, attributable to finer weather during the fishing months. Owing to scarcity of bait in the fall months the cod and haddock fishing off Canso and in the Chedabucto Bay were not prosecuted as vigorously as would have been done had the bait been plentiful. Owing to the low prices which prevailed in the early part of the season the year has not been a prosperous one with the fishermen.

Overseer Alex. W. Reid, of Guysboro County, says that salmon were more plentiful in the St. Mary's River than last year, but in other waters of his division the catch was about the same. Summer herring did not appear west of Isaacs Harbour, but there were good catches of fall herring in some localities, these brought fair prices; about 25 per cent of this catch was salted for lobster bait. Cod were about as plentiful as last year, but owing to rough weather late in the fall the catch did not come up to that of last season. Lobster were more plentiful in some localities, from April 20 to May 31 the catch exceeded that of last year, but in the month of June very few were taken owing to their scarcity. The close season has been very well observed, only a very few cases of illegal fishing came to his notice but sufficient evidence to convict the parties could not be procured.

Good service was rendered by the patrol boat *Active*. Two salmon nets were seized by Guardian John A. Kirk, being set in violation of law, also a gaspereaux net at Stillwater, St. Marys. Several fishways are badly needed in his division.

Overseer Robert Gaston, of Halifax County, says there was a slight increase in the salmon fishery, also in lobsters, codfish, halibut and mackerel. A decrease in all other kinds. Sixteen cases of violation of the Fisheries Act were brought to his notice and summons issued against the parties. Eleven convictions were obtained. Three fishways in his division are in need of repair—the names of the owners of the dams being the subject of a special report.

Overseer Rowlings, of Musquodoboit, Halifax, reports that every vessel owned in his division which went to the North Bay returned with a full load of cod and haddock; and this accounts for the larger catch of these fish reported by him. The shore fishery was worse than last year. At West Chezzetcook, the largest fishing village in his division, nearly one-half of the boat fishermen were short of the quantity required to entitle them to a bounty although they fished for three or four months. Not nearly half the quantity of herring were caught as there was the previous year. Most of those reported in his statistical return were caught by vessels off Prince Edward Island. Mackerel were very

scarce. Lobsters more plentiful than last year, the shipments of live lobsters to Boston being nearly double that of any previous year. The law regarding the season for catching lobsters has been better observed than in any previous year; only in two places in his division did they try to pack; one of these, he thinks has been broken up entirely. The alewife fishery was a total failure; none were taken, neither at Chezzetcook nor at Lake Porter, where there are no sawdust and no dams, nor on rivers where there are such.

Overseer Pritchard, of Pictou, says that the run of salmon during the spawning season was about an average. The freshets were late, so that the fish did not enter the rivers as early as usual and poachers had limited time for operations. In accordance with instructions he had visited saw-mills in his division and warned the owners against allowing sawdust to drift into the streams. For a while they obeyed his instructions but later he found they were violating the law. He finds great difficulty in enforcing the size and sex limit in the lobsters regulations. With regard to Pictou Island, nothing but a resident fishery officer can prevent small lobsters being packed. He instituted proceedings against a packer for packing without a license, but he has left the country.

Overseer A. J. McDonald, of Pictou, says there was an increase in the catch of salmon. About three-fourths of the salmon taken in his division are exported to the United States. The mill-owners did not observe the law as regards dumping sawdust and mill refuse in the streams. Owing to heavy rains the rivers were kept full during the spawning season. Some persons were noticed fishing for salmon in October, but they escaped arrest and identification. One salmon net was seized for violence of the Fisheries Act.

Overseer Nathaniel Forbes, Pictou County, says neither the herring, mackerel or salmon fishery yielded an average catch. The cod fishery was better than former years, while the product of the lobster fishery was about the same as last year. Hearing that torches were seen in Sutherlands River he drove down frequently to see that the law was observed. One case of illegal fishing came to his knowledge, and upon the party confessing, he convicted him and fined him ten dollars, which was paid. No fishing apparatus was confiscated. He visited all the mill-owners in his division, and found the law with respect to mill refuse duly observed. There is only one fishway in his division, which he found to be in good repair and kept clear of rubbish.

I have the honour to be, sir,
Your obedient servant,

ROBERT HOCKIN,
Inspector of Fisheries.

SESSIONAL PAPER No. 11a

DISTRICT No. 3.

ANNUAL REPORT ON THE FISHERIES OF DISTRICT No. 3,
BY INSPECTOR L. S. FORD.

MILTON, QUEEN'S CO., N.S., January 2, 1899

Hon. Sir L. H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit my annual report for 1898, of the fisheries of *District No. 3, Nova Scotia, comprising the counties of Lunenburg, Queen's, Shelburne, Yarmouth, Digby, Annapolis and King's.* Tabulated returns showing kinds, quantities and values of fish caught, estimated values of material employed in the fisheries during the year are also inclosed.

The value of the catch shows a decrease as compared with the year 1897 of \$749,508.30.

Total for 1897	\$5,453,957.85
“ 1898	4,704,449.55

This decrease is more apparent than real. The excessive reports from Digby, last year, were almost equal to the deficit of this season. More care has been taken with the present returns, and I have no doubt that they show a fair yield of the fishing industry for this year. Despite the fact that the figures show a decreased catch, I am of opinion that it has been, both as regards prices and catch, an average yield for the fishermen.

The several close seasons have been fairly observed, owing to the special care of the officers and special guardians.

COD.

The cod family is to the front as usual, haddock are being prepared into finnan haddies in large quantities, and shipped to the upper provinces as far as British Columbia. The county of Digby takes the lead in this business; but other counties are falling into line, and the prospects for a constantly increasing demand for finnan haddies is extremely good. One of the firms in Digby engaged in this business informed me they were obliged to import haddock from Gloucester, U.S., to fill all their orders.

MACKEREL.

There was a fair catch of this valuable fish this year in some counties, notably Yarmouth, but many of our harbours seem to be entirely deserted by them. Different reasons for this disappearance are extant, but I have no doubt that the wholesale destruction of the mackerel with large traps in the spring, while the fish are full of spawn and seeking their spawning grounds, is about the best theory. I think in the near future the growing scarcity of this valuable fish will force the attention of your department to devise some means of protection.

LOBSTERS.

This business proved quite as profitable as usual this season. It must be noted that the average catch is kept up by the increased number of traps, and the larger number of fishermen engaged in this industry.

63 VICTORIA, A. 1900

It is both troublesome and expensive to protect these fish. There seems to be a determination on the part of many of the fishermen to violate the law as regards size limit and berried lobsters, and it requires the constant attention of our officers to prevent the wholesale destruction of this most valuable fishery.

As the commission appointed by the Government has gone so largely into this matter there seems no need for us to offer any suggestions in this report. We may hope for better regulations next season.

SALMON.

The catch of salmon depends so largely on atmospheric influences that it is difficult to tell from year to year the cause of its fluctuation. Even heavy rains in the spring will influence the extent of the catch, both of the salmon and the alewives or gaspereaux.

If the department is to retain control of the streams in this district, it will need to make an entire change in the regulations to suit many of them. They—the regulations—are obsolete and unworkable. I would be pleased to note the changes needed on each river and submit them to the department for their opinion or approval if I am required to do so.

We have fair fish-passes in most of the dams on the rivers and the fish ascend, when allowed to do so to their spawning grounds, but the mill-owners claim the water the most of the time, and there is considerable friction in consequence, but there is really no need of dispute, a judicious arrangement for a pass cared for as it may be, will reconcile both interests. I have had but little trouble in this direction the past year, and anticipate less for the future if the regulations can be arranged to meet the requirements of each case.

TROUT.

It is doubtful if the overseers ever get a fair estimate of the trout caught. Sportsmen at all times and seasons frequent the lakes and rivers, and it is impossible to arrive at their catch. As they are almost entirely used for home consumption, any accurate statement does not appear possible. There seems to be plenty of these fish in most of the rivers they frequent, and any regulations affecting salmon and alewives will protect this valuable fish as well.

HERRING.

This fish, like the mackerel, seems to have deserted some of the harbours where they were once plentiful. They are a valuable fish, both for home consumption and export, and enter largely into the revenues of most every fisherman. The cause of this falling off is difficult to determine. Storms are apt to keep them off shore, but there were storms at sea when herring were plentiful in those harbours. Scarcity of herring also means scarcity of bait for cod, and consequently the shore fishery fails to some extent.

Cold storage for bait, will meet a want long felt by fishermen. The scarcity of fresh bait is a factor that more affects the catch of fish, particularly the shore fishery, than any other. To be able to secure within a reasonable distance at all times fresh bait, will, without doubt, be of great assistance. It only remains to devise some means to make the immense schools of dog-fish that infest our coast, of some commercial value, to greatly improve the fisherman's condition.

The overseers generally report a good year's fishing in all its branches, and that in most all localities the law has been well observed.

I am, sir, your obedient servant,

L. S. FORD,
Inspector of Fisheries, District No. 3.

STATISTICS OF FISHERIES FOR NOVA SCOTIA

1898

NOVA SCOTIA—District No. 1.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, and the Quantity and Value of all Fishing Materials, Number of Men and the Kinds and Quantities of Fish and Fish Products in the Island and District of Cape Breton, Province of Nova Scotia, for the Year 1898.

Number.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.									
	Vessels.		Boats.		Gill Nets.		Trawls.		Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, lbs.	Number.
	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.										
<i>Cape Breton County.</i>																		
1	18	500	7	67	1020	95	185	3700	1850	65	385	5000	5000			35712		1
2			23	430		45	101	20200	10000	20	130	200	5000					2
3			22	385		40	75	1500	750	20	125	550	5000					3
4			30	275		50	70	2000	475	2	10	350			10			4
5			24	225		40	20	530	150	4	40	59						5
6			37	400		70	37	620	230	20	100	175						6
7			35	466		54	43	603	294	25	83	145						7
8	45	850	22	398		43	110	2650	800	48	390	110	4000	1000		70416		8
9			14	172		16	35	849	145	1	9	75	1300					9
10	19	200	4	1725		240	243	5775	2430			400						10
11			35	900		44	350	3750	1050			100						11
12			35	925		136	300	7350	3350			150						12
13	1	24	7	17	450	43	115	3945	2870			7	305			65	38060	13
14	21	225	6	28	400	62	205	4625	3500			11	204			24	18576	14
15			4	45		8	95	1885	685			2	55			29	18576	15
16	1	250	6	45	1400	120	300	6900	2500	10	100	580	2000			32	12240	16
17			39	1100		85	85	1780	595	45	225	270				57	45	17
18			45	992		74	152	3040	1270	87	435	734				45	73632	18
19			12	197	3525	67	612	12208	1305	347	1962	25872	200	1865255		557	26528	19
								62172	26594	347	1962	40390	1000	202		557	413308	4000

* Note.—In N. 10 include 1 seine (330 fathoms) valued at \$750.

SESSIONAL PAPER No. 11a

RETURN showing the Kinds and Quantities of Fish and Fish Products in the Province of Nova Scotia, &c.—Continued.

Number.	DISTRICTS.	KINDS OF FISH.													FISH PRODUCTS.			TOTAL VALUE OF ALL FISH.	Number.			
		Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Habit, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or gages, lbs.	Bass, lbs.	Bels, brls.	Oysters, brls.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.			Fish as manure, brls.		
<i>Inverness County.</i>																						
1	Port Hood	1000	500	2200	400	200	300	300	20	2						600	150	30	25,600	20	1	
2	Little Mabou	300	40	100	40		80	200	5							20	20	10	2,130	00	2	
3	Seaside	500	500	300	12		100	300	10	5						40	60	20	6,032	60	3	
4	Little Judique	500	20	80			100	500	8	5						20	30	20	2,577	00	4	
5	Judique	200	25	25			1000	400	4	10						40	60	25	6,428	15	5	
6	Long Point	300	20	10			1500	600	10							48	75	15	7,367	10	7	
7	Creignish	250	13				1000	140	20							30	60	10	3,102	10	7	
8	Low Point	200	25				200	200	30	30						40	50	10	2,475	00	8	
9	Port Hastings	150	20				250	4000	25	30						40	40	15	3,257	60	9	
10	Port Hawkesbury	200	10				1200	160	30	5						1000	30	10	80,700	00	10	
11	West Bay and Malagawatch									18						65	32		8,027	50	11	
12	North and South Basin River Dennis						400	3500	5	23						20	11		3,300	50	12	
13	Mabou Harbour, Coal Mines and Beauin Vinnach.						25	5000		10						180	100		6,333	20	13	
14	Broad Cove							2000								35	30		1,107	50	14	
15	Whycocomagh							10000	25	30						50	15		925	50	15	
16	Scottsville and East Lake, Anslie						500	750	300	27						500	120	20	2,000	00	16	
17	Margaree Harbour and River						48	438	5							80	84	19	5,398	50	18	
18	Whale Cove and Chimney Corner						48	28	93	10						120	80		5,757	10	19	
19	Margaree Island						73	34	110	18						195	151	48	8,621	80	20	
20	Broad Cove, Marsh, and Port Ban.						19	41	59	300						75	80	10	2,527	75	21	
21	Mabou Harbour, North Side						150	50		10						1500	600		15,893	70	22	
22	Grand Etang						90	40								1000	400		7,105	00	23	
23	Friar's Head						60	50								1300	450		8,507	50	24	
24	Doncett's Cove															37	700		6,560	95	25	
25	Meat Bay and Fishing Cove															3000	4000		13,705	80	26	
26	Pleasant Bay and Pollett's Cove						500	2000	500	30						3500	1200		60,953	60	27	
27	Eastern Harbour						150	75	800	80						300	400		23,884	15	28	
28	Cheticamp Point and Lake						25	12	1000	5						300	530		10,266	20	29	
29	Cape Rouge																					
	Totals	3600	2416	3451	844	6973	20275	28798	479	150	294	187	400	3291	1488	11550	9758	262	357,743	00		

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RETURN showing the Quantity and Value of Fish, &c.—Nova Scotia—Con.

Number.	DISTRICTS.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number				
		God tongues and sounds, lbs.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked, lbs.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gas-petreaux, lbs.	Eels, lbs.	Flounders, lbs.			Tom cod or frost fish, lbs.	Squid, lbs.	Coarse and mixed fish, lbs.	Fish oil, galls.	Fish as bait, lbs.	Seal skins, No.
<i>Richmond County.</i>																				
1	Arichat and Petit de Grat.....	5	2073	9311	202	50	326	670	15	72	3100	75	242	2000	180	2	42,650	06	1	
2	Cape Auguet, West Arichat, Fort Royal and Jeanvin's Island.....	6	1980	39	75	145	1060	133	15	7500	10	275	2893	232	6	38,422	25	2		
3	Rocky Bay and Cape Le Rond.....	3	263	4	5	102	24	24	10	17100	3	154	420	175	3	11,097	40	3		
4	Descousse, Foulamond and Martinique.....	2	46	46	112	41	26300	187	75	73100	25	200	3600	200	8	32,663	50	4		
5	St. Peter's.....	100	100	100	100	100	100	100	15	100	2700	100	100	100	100	4,980	00	5		
6	River Bourgeoise.....	200	200	200	200	200	200	4200	120	80	100	100	100	100	20	25,744	40	6		
7	Grandique Ferry and Port St. Louis.....	200	200	200	200	200	200	3500	534	24	200	200	200	20	20	4,678	00	7		
8	River Inhabitants and Basin.....	200	200	200	200	200	200	3500	534	24	200	200	200	20	20	17,801	00	8		
9	Port Malcolm and Gut of Canso.....	100	100	100	100	100	100	863	15	100	100	100	100	100	20	3,720	00	9		
10	West Bay.....	17	3400	155	120	290	115	6750	800	60	23	18000	7000	313	100	1320	142	10		
11	Fourchu, Framboise and St. Esprit.....	17	1900	98	20	30	35	2450	400	32	15	8000	2150	34	45	310	67	11		
12	L'Archevêque, Grand River and Point Michelaud.....	15	4100	1350	55	35	900	8000	850	700	14	5800	3580	230	170	3000	260	12		
13	Lower L'Ardoise, L'Ardoise and Rockdale.....	1500	565	38	22	90	5000	2100	1200	43	28	3100	3300	31	99	875	120	13		
14	Grand Greve, Indian Reserve and St. Peter's East.....	65	10900	7530	4311	524	619	1754	50230	4150	8900	2718	336	135700	16030	723	1285	17893	1306	16
Totals.....																				
																	368,012	36		

RETURN showing the Number, Tonnage and Value of Vessels and Boats and the Quantity of Fish, &c.—Nova Scotia—Con.

Number.	FISHING VESSELS AND BOATS.					FISHING GEAR OR MATERIALS.						KINDS OF FISH.											
	Vessels.			Boats.		Gill Nets.			Trap Nets.			Trawls.			Salmon, preserved in cans, lbs.	Salmon, salted, brls.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, salted, brls.	Number.			
	No.	Tonnage.	Value.	Men.	No.	Value.	No.	Fathoms.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.				
<i>Victoria County.</i>																							
1	12	200	3	56	1495	157	5920	1850						3650	19	114			285	1			
2				33	314	83	1360	204						1273					245	2			
3				42	676	96	2320	940						2600	9	62			130	3			
4				90	3600	107	3780	1440			6	72		144		600			35	4			
5				9	180	17	204	112							3	27			8	5			
6	59	2000	12	52	2080	104	2508	912			62	1012			19	65			37	6			
7				39	1735	78	1716	624			39	624			36	44			22	7			
8				18	123	25	208	161			24	120			14	394			10	8			
9				33	304	47	3243	744			7	35				182			3	9			
10				19	200	40	1078	490								41			8	10			
11				14	160	38	50	1120	430							65			9	11			
12				23	220	60	86	2030	730					500	9	85			20	12			
13				63	631	87	106	2120	850		49	197	1450		187	31900			13				
14	18	100	3	15	165	15	33	650	300		4	16	3800		9	10350			14				
15				24	288	27	47	950	450		8	37			31	2500			15				
16				15	124	15	30	550	250		7	30	1050		22				16				
				3	89	2500	18	545	12305	998	1189	29817	10527	2	400	206	2143	6300	8187	109	1933	44750	812
Totals.																							

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RETURN showing the Quantity and Value of Fish, &c.—Nova Scotia—Con.

Number.	DISTRICTS.	KINDS OF FISH.												TOTAL VALUE OF ALL FISH.	Number.							
		Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Hallibut, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or gasperaux, bbls.	Oysters, bbls.	Flounders, lbs.	Tom cod or frost fish, lbs.			Squid, bbls.	Coarse and mixed fish, bbls.	Fish oil, galls.	Fish as bait, bbls.	Seal skins, No.		
<i>Victoria County.</i>																						
1	Dingwall, White Point and Sugar Loaf	7104	708	55	40	20	4500									250	300		11,086	30	1	
2	Money Point and Sparling's Brook	17184	62													15	200		7,878	25	2	
3	Bay St. Lawrence and Wreck Cove	7292	224													125	300		5,703	40	3	
4	New Haven and Neil's Harbour	22704	2225	175		21	14	22								2050	245	225	18,536	15	4	
5	South Point and Neil's Harbour	3792	175	15												240	150		2,105	40	5	
6	South Point and Green Cove	10800	1882	508												1432	450		13,416	60	6	
7	North Ingomish	19680	1080	300												800	425		11,079	50	7	
8	South Bay		400	10		10										40	50		4,313	00	8	
9	Englishtown	9744	106													25	75		3,265	80	9	
10	Big Bras d'Or		135	55												10	23	10	1,030	90	10	
11	Peel Cove and Barachois	22944	160	43												11	13		5,817	40	11	
12	Indian Brook, Little River and Breton Cove	13272	325	140												24	125	21	3,357	40	12	
13	French River, Wreck Cove and Path End		863													38	280	53	5,681	50	13	
14	South Side Little Narrows to Iona		29													9	6	4	1,205	30	14	
15	Baddeck and Baddeck Bay		27													15	5	5	884	50	15	
16	Big Harbour, Bouladerie and Red Head		60														7		1,152	50	16	
	North Side Little Narrows																					
	Totals	134516	8452	1322	54	52	4500	600	1900	48	57	125	200	2000	262	107	5488	2308	225	98,013	90	

RECAPITULATION

Of the Yield and Value of the Fisheries for the Island of Cape Breton, for the Year 1898.

Kinds of Fish.	Quantity.	Rate.		Value.	
		\$	cts.	\$	cts.
Salmon, fresh.....	Lbs. 116,272	0	20	23,254	40
do preserved.....	Cans. 11,048	0	15	1,637	20
do pickled.....	Brls. 330	15	00	4,950	00
Herring, pickled.....	do 30,599	4	00	122,396	00
do fresh or frozen.....	Lbs. 1,025,950	0	01	10,259	50
do smoked.....	do 1,000	0	02	20	00
Mackerel, fresh.....	do 31,202	0	12	3,744	24
do pickled.....	Brls. 13,229	15	00	198,435	00
Lobsters, preserved.....	Lbs. 1,175,610	0	20	235,122	00
do fresh in shell.....	Cwt. 4,552	5	00	22,760	00
Cod, dried.....	do 62,616	4	00	250,464	00
do tongues and sounds.....	Brls. 122	10	00	1,220	00
Haddock, fresh.....	Lbs. 25,180	0	03	755	40
do dried.....	Cwt. 13,055	3	00	39,165	00
do smoked finnan haddies.....	Lbs. 9,311	0	06	558	66
Hake, dried.....	Cwt. 4,070	2	25	9,157	50
do sounds.....	Lbs. 1,463	0	50	731	50
Pollock.....	Cwt. 1,887	2	00	3,774	00
Halibut.....	Lbs. 111,778	0	10	11,177	80
Trout.....	do 25,725	0	10	2,572	50
Shad.....	Brls. 3	10	00	30	00
Snelts.....	Lbs. 52,598	0	05	2,629	90
Alewives.....	Brls. 3,341	4	00	13,364	00
Bass.....	Lbs. 150	0	10	15	00
Eels.....	Brls. 876	10	00	8,760	00
Oysters.....	do 312	4	00	1,248	00
Flounders.....	Lbs. 138,400	0	05	6,920	00
Tom cods or frost fish.....	do 18,830	0	05	941	50
Squid.....	Brls. 4,400	4	00	17,600	00
Coarse and mixed fish.....	do 15,498	2	00	30,996	00
Fish oil.....	Galls. 43,137	0	30	12,941	10
Fish as bait.....	Brls. 15,407	1	50	23,110	50
Fish as manure.....	do 307	0	50	153	50
Seal skins.....	No. 281	1	25	351	25
Total for 1898.....				1,061,235	45
do 1897.....				1,056,115	83
Increase.....				5,119	62

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RECAPITULATION

SHOWING the Number and Value of Fishing Vessels, Boats, Nets, &c., in the District
No. 1 of Nova Scotia, for the Year 1898.

	Value.	Total.
	§ cts.	§ cts.
90 vessels, 2,213 tons.....	33,210 00	
3,444 boats.....	67,064 00	
18,354 gill-nets, 423,307 fathoms.....	136,992 00	
4 seines, 830 fathoms.....	1,350 00	
3 trap-nets.....	1,000 00	
1,931 trawls.....	11,058 00	
43 smelt-nets.....	395 00	
15,510 hand lines.....	7,749 00	
		258,818 00
71 Lobster cannerise.....	53,975 00	
156,545 lobster traps.....	83,882 00	
		137,857 00
33 freezers and ice houses.....	2,912 00	
818 smoke and fish houses.....	24,207 00	
281 piers and wharfs.....	49,902 00	
47 tugs, steamers and smacks.....	4,300 00	
		81,321 00
Total value.....		477,996 00

RETURN showing the Quantity and Value of Fish, &c.—Nova Scotia—Con.

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Number.	DISTRICTS.	KINDS OF FISH.																TOTAL VALUE OF ALL FISH.	Number.				
		Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brs.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brs.	Smelts, lbs.	Alewives and gaspereau, brs.	Bass, lbs.	Eels, brs.	Clams, brs.			Oysters, brs.	Fish as bait, brs.	Fish as manure, brs.	
<i>Cumberland County.</i>																							
1	Pugwash, Port Philip and Gulf Shore	14										59400	458	160	24	50	646	3485	2500		112,737 00	1	
2	Wallace							600				20500	200	250	25		721	658			7,307 00	2	
3	River Philip							1000				6000	100								1,465 00	3	
4	La Planche, Nappan and Maccan				20	20	50	500		30	500		15		10	30			20		1,040 00	4	
5	Minudie to Apple River	10			30	30	100	750											15		6,700 00	5	
6	Advocate				200	200	50	90	1600										20		1,324 00	6	
7	Spencer's Island and Port Greville				400	135	40	200	900													2,873 00	7
8	Parrsboro'				320	320																3,907 00	8
	Totals	24	950	51100	505	70	40	440	3750	1600	533	85900	773	410	69	80	1367	4208	2500				
	Value	120	3800	50	33	1515	20	880	375	160	6330	4295	3692	41	690	100	5468	6312	1250			137,413 00	

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Quantity and Value of all Kinds of Fish, &c.—Nova Scotia—Continued.

KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.
Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Trout, lbs.	Shad, brls.	Alewives or Gaspereau, brls.	Bas, lbs.	Clams, brls.		
4000								500	10	400	5000		\$ 3,050 00	1
1000								900	2	15	100		380 00	2
5000								500	170	20	4000		3,230 00	3
1115	66	27800	4000	118	9	15	80	5000	405	66	1900	200	6,942 00	4
11115	66	27800	4000	118	9	15	80	6900	587	501	11000	200		
2223	264	278	80	472	27	34	160	690	5870	2004	1100	400	13,602 00	

KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.						
Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Bas, lbs.			Eels, brls.	Clams, brls.	Oysters, brls.	Fish oil, galls.	Fish as bait, brls.	Fish, as manure, brls.
		21800	500	224304	18				200	5000				7	20	10	350	1100	46,706 00	1
		1500		132740			600										250	670	28,623 00	2
		91400	4900		299	30	190		6000	10000	200		125	100					6,766 00	3
9000	7	36200	1400	17664	82				300	3000	5		26				170	90	6,979 00	4
4100		3000	300	14592													50	75	3,917 00	5
6800		5400					25		400	10600		150	30						2,355 00	6
17100	12	14200	1100	27936	5		103	100	400	400						60	40	140	9,830 00	7
3500		1000					10		100										743 00	8
40500	19	174500	8200	417236	404	30	933	100	7400	28600	205	150	188	20	110	60	860	2075		
8100	76	1745	984	83447	1616	90	2100	50	740	1430	820	15	1880	40	440	18	1290	1038	105,919 00	

RETURN showing the Number and Value of Vessels and Boats, Nets, &c.—Nova Scotia.—Con.

Number.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						KINDS OF FISH.										
	Vessels.			Boats.			Gill Nets.			Seines.			Trap Nets.			Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Number.
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Fathoms.	Number.	Value.	Fathoms.	Number.	Value.								
<i>Halifax County.</i>																							
1				124	1040	365	600	12000	2200	62	6200	12000	2000	150	100	480000	80	1					
2				130	1250	210	550	11000	2150	23	2300	14100	2500	300	250	300000	30	2					
3				20	490	4500	4000	8000	830	22	2200	1900	16	600	900	200000	40	3					
4	70	1200	20	80	750	90	325	6500	1900	8	800	1200	2300	150	9000	1500	30	4					
5	85	1500	30	230	2500	150	700	68520	700	38	3800	9300	4000	300	9000	10000	275	5					
6	20	400	5	153	2500	200	450	15000	2500	40	4000	8000	12000	300	500	1150000	150	6					
7	57	900	16	161	2000	275	275	8000	1900	25	2800	4800	75	500	500	16520	7	7					
8	108	2500	30	12	200	25	100	3000	650	10	800	2300	225	125	10	64456	8	8					
9	110	2500	33	44	800	90	280	7000	2100	9	7500	1400	350	25	25	8	10	9					
10				56	700	120	300	7500	2000	16	1600	3200	800	300	75	200	3	10					
11	26	800	5	40	800	75	350	10000	2500	18	1800	3500	300	25	300	500	15	11					
12	195	2500	35	52	700	60	75	2400	600	25	2500	3000	275	10	600	15500	8	12					
13	31	400	10	30	600	50	60	1700	500	40	3200	3200	200	100	2000	1000	15	13					
14	166	10000	50	25	500	37	10	250	75	10	1000	2500	400	12	1000			14					
15	55	1300	11	76	1230	54	240	14400	900				330	35	6300	900	2	15					
16				17	162	12	100	5600	375				287	10	300	50		16					
17							140	7500	520				260	11			1	17					
18	306	6350	80	128	1200	70	400	24000	1600				560	660			4	18					
19	47	1500	13	47	520	30	97	5820	340				58	5			1	19					
20				50	865	44	94	5600	330					5			3	20					
21				60	1169	51	125	7500	600				1050	30			3	21					
22	86	1900	23	95	1600	73	211	12650	800				160	130			14	22					

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23 Clam Harbour and Owl's Head	4	75	1500	19	70	1150	54	209	12540	800	2	265	425	1	135	120	301	56	20496	23		
24 West Ship Harbour					11	220	14	47	2820	188							45	12	13728	24		
25 East Ship Harbour					21	345	21	77	1520	235							121	8	23376	25		
26 Pleasant Harbour					5	130	7	10	200	36							8	1	23376	26		
27 Tangier					11	267	10	42	860	130				1	150	250	32	1		27		
28 Pope's Harbour and Gerrard's Island					24	640	26	82	1640	267				1	400		100	26	35280	28		
29 Spry Bay, Taylor's Head and Mushaboon	2	58	1000	9	61	1121	66	335	6700	1005							576	147	91776	29		
30 Sheet Harbour and Sober Island					47	834	47	145	2900	435						400	600	3	42144	30		
31 Beaver Harbour and Salmon River					9	110	8	9	180	34							60		54288	31		
32 Quoddy and Harrigan Cove					4	90	5	8	160	36							2		88656	32		
33 Moser River and Smith's Cove					8	106	5	1	20	3										33		
34 Mitchell's Bay and Ecum Secum					18	283	35	26	520	109	4	318	390				23		74448	34		
Totals		60	1516	400	2408	31082	2896	10273	346010	35548	353	34508	60265	29	3285	33782	1700	6047	31000	1118150	1017	590352
Values																6756	340	24188	310	134178	15255	118070

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23 Clam Harbour and Owl's Head	634	40	5	10	5	1620	600	1000	2	2	40	400	78	104	9,518					
24 West Ship Harbour	45	14				290	150	400	18	3		30	12		3,529					
25 East Ship Harbour	145	11				775					10	134	10	120	1,438					
26 Pleasant Harbour	75	3				170				1	10	45		120	5,141					
27 Tangier	156	5				340	600	850	4	1		80	4		1,037					
28 Pope's Harbour and Gerard's Island	250	10				1006						191		180	9,213					
29 Spry Bay, Taylor Head and Mushaboon	620	28	216	110	25	1080	200					490	10	400	23,709					
30 Sheet Harbour and Sober Island	380	24			29	3887	400			10		241	12	220	15,449					
31 Beaver Harbour and Salmon River	80	2			1	480	200					70		270	15,997					
32 Quoddy and Harrigan Cove	60	2			5	200				4		60		450	22,528					
33 Moser River and Smith's Cove	57	1				40	150			10		35			360					
34 Mitchell's Bay and Ecum Secum	215	23			8	708			4			139	10	370	17,406					
Totals	18786	13	79300	1728	5000	2465	2903	1526	27900	256	108	1051	31000	92	315	12347	1802	2374	21	504,895
Values	75144	130	2379	5184	300	5546	1452	3052	1305	1024	1080	2102	1550	368	472	3704	2703	1487	21	504,895

RECAPITULATION.

Of the Yield and Value of the Fisheries in District No. 2, Nova Scotia, with Comparative Statement of the Increase or Decrease for the Years 1897 and 1898.

Kinds.	Quantity in 1898.	Rate.	Totals.	QUANTITIES.	
				Increase.	Decrease.
		\$ cts.	\$		
Salmon, fresh.....	Lbs. 201,059	0 20	40,212		9,122
" preserved in cans.....	" 2,620	0 15	393	1,465	
" smoked.....	" 4,125	0 20	825	633	
Herring, salted.....	Brls. 20,702	4 00	82,808		14,218
" fresh.....	Lbs. 973,703	0 01	9,737	223,481	
" smoked.....	" 8,300	0 02	166		23,600
Mackerel, fresh.....	" 1,547,178	0 12	185,661		59,513
" salted.....	Brls. 2,092	15 00	31,380		1,466
Lobsters, preserved in cans.....	Lbs. 2,602,724	0 20	520,544		83,722
" fresh in shell.....	Cwt. 18,898	5 00	94,490	5,396	
Cod dried.....	" 42,576	4 00	170,304	3,335	
Cod tongues and sounds.....	Brls. 30	10 00	300	11	
Haddock, fresh.....	Lbs. 1,839,832	0 03	55,194		75,318
" dried.....	Cwt. 8,804	3 00	26,412		3,614
" smoked finnan haddies.....	Lbs. 160,280	0 06	9,616	160,280	
Hake, dried.....	Cwt. 7,933	2 25	17,848	1,944	
" sounds.....	Lbs. 9,234	0 50	4,617	1,530	
Pollock.....	Cwt. 5,537	2 00	11,074	1,018	
Halibut.....	Lbs. 411,029	0 10	41,102	277,793	
Trout.....	" 39,485	0 10	3,948	6,255	
Shad.....	Brls. 2,777	10 00	27,770	1,395	
Smelts.....	Lbs. 183,360	0 05	9,168	14,700	
Alewives or gaspereaux.....	Brls. 3,215	4 00	12,860	332	
Bass.....	Lbs. 14,760	0 10	1,476	2,520	
Eels.....	Brls. 839	10 00	8,390		400
Clams in shell.....	Brls. 1,641	2 00	3,282		
Oysters.....	Brls. 1,785	4 00	7,140		523
Tom cod or frost fish.....	Lbs. 58,740	0 05	2,937	17,610	
Squid.....	Brls. 3,313	4 00	13,252	85	
Coarse and mixed fish.....	" 937	1 50	1,405	534	
Fish oil.....	Galls. 45,856	0 30	13,756	8,299	
Fish as bait.....	Brls. 27,531	1 50	41,299		1,483
Fish as manure.....	" 13,773	0 50	6,887	8,256	
Seal skins.....	No. 21	1 00	21		29
Total for 1898.....			1,456,274		
Total for 1897.....			1,464,976		8,702

SESSIONAL PAPER No. 11a

RECAPITULATION

Showing the Number and Value of Fishing Vessels, Boats, &c., in the District No. 2, Province of Nova Scotia, for the Year 1898.

Material.	Value.	Total.
	\$	\$
88 vessels (2,144 tons).....	48,395	
5,668 boats.....	103,852	
28,606 gill-nets (779,379 fathoms).....	131,974	
382 seines (37,933 fathoms).....	63,625	
82 trap-nets.....	17,160	
2,041 trawls.....	10,159	
30 weirs.....	7,370	
118 smelt nets.....	2,003	
8,251 hand-lines.....	11,705	
		396,243
116 lobster canneries (1,931 hands).....	117,885	
291 lobster, 525 traps.....	152,324	
		270,169
45 freezers and ice-houses.....	13,532	
1,544 smoke and fish-houses.....	80,334	
892 piers and wharves.....	40,154	
54 tugs steamers and smacks.....	39,580	
		173,600
Total value.....		840,012

COMPARATIVE STATEMENT of the Value of the Fisheries in each County of District No. 2, Nova Scotia, for the Years 1897 and 1898.

County.	Value in 1897.	Value in 1898.	Increase.	Decrease.
	\$	\$		
Antigonish.....	74,060	66,412		7,648
Colchester.....	27,203	33,145	5,942	
Cumberland.....	120,820	137,413	16,593	
Guysborough.....	713,527	594,887		118,640
Halifax.....	403,037	504,893	101,856	
Hants.....	9,148	13,602	4,454	
Pictou.....	117,179	105,919		11,260
	1,464,974	1,456,271	128,845	137,548
	1,456,271			128,845
	8,703			8,703

NOVA S OTIA—

RETURN showing the Number, Tonnage and Value of Vessels and Province of Nova Scotia,

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						Salmon, fresh, lbs.	Herring, salted, bris.		
		Vessels.			Boats.			Gill Nets.			Trawls.		WEIRS				
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Fathoms.	Number.	Value.			Number.	Value.
	<i>Annapolis County.</i>		\$		\$		\$										
1	Margaretville.....	4	80	1000	18	10	200	20	20	1000	500	12	100	2	400	1000	400
2	Port George.....					12	300	20	20	1000	500	12	100	2	400	2000	300
3	Port Lorne.....	1	10	100	5	20	400	35	30	2500	1000						500
4	Hampton.....					20	400	40	28	1500	600	16	150				600
5	Phinny and Young's Cove.....					23	450	35	50	2000	800	20	200				500
6	Parker's Cove.....					25	500	40	50	2000	800	20	200				350
7	Hilsburn and Lichfield.....	1	40	600	8	20	400	30	50	2100	1000	30	300				400
8	Victoria Beach.....	3	150	2000	40	30	600	50	55	3000	1500	100	600				78
9	Thorn's Cove.....	3	150	1500	30	10	200	16	20	1000	500	50	300	2	400		
10	Clementsport.....	2	26	700	8	13	300	26	12	500	225	50	300	4	800		30
11	Annapolis.....								50	500	300			3	200	300	
12	Lequille River.....													1	50	200	
13	Round Hill.....															100	
14	Inland Lakes.....																
	Totals.....	14	456	5900	109	183	3750	312	385	17100	7725	310	2250	14	2250	3600	3158
	Values.....	\$														720	12632

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District No. 3.

Boats, Nets, &c., and Quantities of Fish caught in District No. 3.
for the Year, 1898.

KINDS OF FISH.														TOTAL VALUE OF ALL FISH.		Number.					
Herring, smoked, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues & sides, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Follock, cwt.	Trout, lbs.	Smelts, lbs.	Bass, lbs.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Coarse and mixed fish, brls.		Fish, oil, galls.	Fish as bait, brls.	Fish as manure, brls.	\$	cts.
.....	.....	600	2	2000	110	125	100	100	.....	.....	.....	.....	.....	.....	.....	200	30	100	5,296	25	1
.....	125	300	1	2000	150	200	300	50	.....	.....	.....	.....	.....	.....	.....	200	35	100	4,807	50	2
.....	250	600	4	3000	225	275	350	80	.....	.....	.....	.....	.....	.....	.....	300	45	75	7,603	75	3
.....	225	550	3	1500	600	600	300	150	.....	.....	.....	.....	.....	.....	.....	200	50	30	9,550	00	4
.....	240	500	3	1000	900	1000	500	200	.....	.....	.....	.....	.....	.....	.....	300	60	30	11,055	00	5
.....	300	375	2	1200	1000	1200	550	275	.....	.....	.....	.....	.....	.....	.....	350	30	35	11,148	50	6
.....	225	475	4	900	1200	1600	700	400	.....	.....	.....	.....	.....	.....	.....	450	50	.....	13,252	00	7
.....	150	2500	8	3000	3000	5000	10000	2500	.....	.....	.....	.....	.....	.....	.....	1200	1500	20	44,102	00	8
.....	20	.....	.....	100	.....	500	100	100	.....	.....	.....	.....	.....	.....	.....	.....	25	25	1,528	00	9
2000	.....	300	1	800	300	400	100	100	.....	.....	.....	.....	.....	.....	.....	200	150	75	3,766	50	10
.....	.....	.....	.....	.....	.....	.....	.....	.....	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	90	00	11
.....	.....	.....	.....	.....	.....	.....	.....	.....	400	1000	500	.....	.....	.....	.....	.....	.....	.....	4,260	00	12
.....	.....	.....	.....	.....	.....	.....	.....	.....	300	100	100	.....	.....	.....	.....	.....	.....	.....	85	00	13
.....	.....	.....	.....	.....	.....	.....	.....	.....	800	.....	.....	.....	.....	.....	.....	.....	.....	.....	80	00	14
2000	1535	6200	28	15500	7485	10900	13000	3955	1700	1100	600	3	600	1000	2000	3400	1975	490	.....	.....	.....
40	7675	24800	280	465	22455	24525	6500	7910	170	55	60	30	30	50	4000	1020	2962	245	116,624	50	50

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Nets, &c., and Quantity and Value of Fish, &c.—Nova Scotia—Con.

KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.				
Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Haitbut, lbs.	Trout, lbs.	Shad, brls.			Alewives or gaspereaux, brls.	Fish as bait, brls.	Fish as manure, brls.	\$	cts.
										450		135			30	1,365	00	1
												75				795	00	2
												35				350	00	3
200	50	1000	4000							250					60	385	00	4
2000	600					140	120	60	150	900					100	4,670	00	5
8000	500					200	900	100	75	500					90	7,870	00	6
1200	150					125	75	40	25						20	1,735	00	7
1500	90					100	60	30	20	600					50	1,505	00	8
3200	300		50000			150	20	10	150	100				100	50	4,007	50	9
4000	150		60000			140	75	15	100					75	40	3,751	25	11
5000	60					90	40		25					50	25	1,857	50	10
500	543		250000	2000	187	175	60	40	50	750		543		150	200	15,347	00	12
80													500			2,016	00	13
800											1000		200			1,060	00	14
						10										1,440	00	15
						4										316	00	16
100						7										378	00	17
											700					70	00	18
26580	2443	1000	364000	2000	187	1141	1350	295	595	3550	1700	993	700	895	640	.....	.....	.....
5316	9772	10	7280	240	935	4564	4050	663	1190	355	170	9930	2800	1342	320	48,938	25	.....

7,500 lobsters sent alive to Boston.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.—Nova Scotia.—*Con*

Number.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.											
	Vessels.			Boats.			Gill Nets.			Seines.			Trap Nets.					
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.
<i>Queen's County.</i>																		
1	4	141	5100	31	65	1150	75	300	5403	2100	3	320	650	.....	.....	.....	.....	1
2	1	10	500	4	50	850	58	296	5330	2972	2	250	560	.....	.....	.....	.....	2
3	1	13	500	4	47	757	50	176	3178	1252	.....	.....	.....	.....	.....	.....	.....	3
4	1	17	600	5	45	950	42	75	1342	690	.....	.....	.....	.....	.....	.....	.....	4
5	1	1	17	600	5	165	1850	92	265	4770	1835	.....	.....	.....	.....	.....	.....	5
6	1	1	17	600	5	30	626	34	73	1317	511	.....	.....	.....	.....	.....	.....	6
7	1	93	2500	17	38	615	38	125	2254	875	.....	.....	.....	.....	.....	.....	.....	7
8	1	1	17	600	5	50	980	46	150	2700	1050	.....	.....	.....	.....	.....	.....	8
9	1	1	17	600	5	10	140	12	8	96	48	.....	.....	.....	.....	.....	.....	9
10	1	1	17	600	5	20	240	20	38	426	230	.....	.....	.....	.....	.....	.....	10
11	1	1	17	600	5	6	90	20	6	90	20	11
Totals.....																		
	8	274	9200	61	465	8248	487	1506	26816	10573	5	570	1210	1	400

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RETURN showing the Kinds, Quantities and Value of Fish, &c.—Nova Scotia.—*Con.*

Number.	DISTRICTS.	KINDS OF FISH.											FISH PRODUCTS.		TOTAL VALUE OF ALL FISH	Number.	
		Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Alwives or gasperaux, brls.	Fish oil, galls.			Fish as bait, brls.
<i>Queen's County.</i>																	
1	Liverpool, Brooklyn and Gulls Island	2800		200			2800	90	30	20	3000	2000	10	800	50	13,792 50	1
2	Western Head, Moose Harbour and Black Pt.			200		440	50	50		20	800			250	10	2,920 00	2
3	White Point, Hunt's Point and Summerville			300	25920		520	80		15	1000			150	10	9,694 00	3
4	Port Joli and Port Hébert			150	4752		260	10						80	10	2,659 40	4
5	Port Mouton			1250	59280	2046	850	60			1500			240	20	35,418 00	5
6	Eagle Head and Beach Meadows			35	51312	670	120									14,232 40	6
7	West and East Berlin			15	10200	50	50									4,100 00	7
8	Port Medway	3500	100	20		500	500								10	3,315 00	8
9	Milton	5000										1000				1,200 00	9
10	Mill Village	3000	100													1,200 00	10
11	Greenfield	1350	150									1000				1,000 00	11
	Totals	16250	350	2370	160464	3616	5540	290	30	55	6300	4000	425	1720	110	89,591 30	
	Values	3250	70	9480	32003	18080	22160	870	67	110	630	400	1700	516	165		

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.—Nova Scotia—Continued.

Number.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						KINDS OF FISH.								
	Vessels.			Boats.			Gill Nets.		Seines.		Trap Nets.		Salmon, fresh, lbs.	Herring, salted, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, lbs.	Lobsters, preserved in cans, lbs.				
	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Number.						Value.			
	Number.	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%				
<i>Shelburne County.</i>																					
1	85	4000	25	60	1700	66	14000	1300	1850	1	2000	300	100	15000		7176	1				
2	135	4300	50	150	4000	130	19000	1850	500	1	2000	700	500	15000			2				
3	52	1350	26	85	2000	36	17000	1400				500	1000				3				
4	20	500	6	25	700	30	1000	950				100				300	4				
5	500	27000	256	500	12000	700	70000	8000		6	11000	2000	50000			225784	5				
6	100	3000	20	290	5000	150	53000	7000				100	1000				6				
7	30	1200	18	45	500	40	13500	600				100	500			33000	8				
8	40	1000	15	85	1100	80	13000	1000				75	500				9				
9				65	1400	62	16000	1150		1	1500	3000				29064	10				
10	24	375	7	20	1200	35	6000	1000				600	71				11				
11	80	2400	22	55	3175	125	20000	3200				130	25				12				
12	12	175	4	35	3500	120	16000	2600				90	10				13				
13	13	300	6	50	1800	120	8300	1385				200	100				14				
14	474	19000	102	55	1450	110	19500	3300				500	50			1689	15				
15	95	300	20	48	1480	70	1200	2100				1000	20	300			16				
16	738	30000	185	170	2550	340	24000	4920	2	1000	250	200	335	400	10	64080	17				
Totals.																					
	79	2418	94900	762	1759	43615	323900	41185	3	2609	750	8	14500	3800	5471	67700	54	43996			
Value																					
																	1160	21884	8124	810	87993

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RETURN showing the Kinds, Quantities and Value of Fish, &c.—Nova Scotia—Continued.

Number.	DISTRICTS.	KINDS OF FISH.												TOTAL VALUE OF ALL FISH.	Number.							
		Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Haddock, smoked, lbs.	Hake, dried, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or raspe-reaux, brls.	Fels, brls.	Tom cod or frost fish, lbs.			Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.				
	<i>Shelburne County.</i>																	% cts.				
1	Barrington	1750	3000		1200			125	400	600					600	25	300		400	3000	30,945 00	1
2	Wood's Harbour	12000	700		200			75	600										200	6000	91,622 00	2
3	Shag Harbour	1700	900		450			200	1000	350					30				300	600	17,215 00	3
4	Bear Point	750	200		100			60	600										50	500	8,115 00	4
5	Cape Island	16000	8000		3000			300	100000						150	40			3000	8500	205,166 80	5
6	Port La Tour and Baccaro	4000	1500		900			2000	10000										2000	1200	40,200 00	6
7	Upper La Tour	1250	400		200			300	800										200	400	10,190 00	7
8	Cape Negro and Blanche	6000	200		550			150	700										150	400	40,645 00	8
9	Cape Negro Island	4400	300		300			200	20000	750					200				900	800	26,530 00	9
10	Fort Clyde		10																	500	8,197 80	10
11	North-east Harbour	1200	600		125			35							15	3	200		150	30	9,469 00	11
12	Black Point, Red Head and Round Bay	800	1500		250			30	1000	300					75	5	400		600	100	12,560 00	12
13	Rosaway and McNutt's Island	600	700		500			400	300	100					30	10	600		300	100	9,153 50	13
14	Gunning Cove, Churehoyer and Birchton	600	600		375			20							100	25	500		250	60	7,400 00	14
15	Shelburne and Sand Point	300	1575		510			300	300	6000					800	100	8	6000	4000	435	70,171 50	15
16	Jordan	300	4300		60			5							1500	4000	15	600	1300	110	30,318 00	16
17	Lockeport	3500	32000		1475			620	5000	1200					5	8	500	4	12300	1353	*175,352 00	17
	Totals	55150	70585	21	10195	900	36	4820	113700	11000	5400	1245	111	3700	4	26150	23088					
	Value	\$275750	282340	210	30385	54	81	9640	11370	1100	270	4980	1110	185	8	7839	34632					783,245 60

* 26,000 cans of cod valued at \$3,120.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.—Nova Scotia—Continued.

Number.	FISHING VESSELS AND BOATS.										FISHING GEAR OR MATERIALS.						KINDS OF FISH.						
	Vessels.			Boats.			Gill Nets.				Trap Nets.		Weirs.		Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Number.
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Patterns.	Value.	Number.	Value.	Number.	Value.									
<i>Yarmouth County.</i>																							
1	Yarmouth	21	928	23,600	240	90	1,800	180	400	10,000	2,500	2	4,000	850	250	300,000	64,000	71,000	11,000	1,100	17,378	1	
2	Port Maitland	2	26	550	10	40	2,100	80	40	1,000	800	2	4,500	712	150	300,000	153,000	1,000	500	1,000	2		
3	Sandford					20	400	40	200	5,000	2,000	3	8,000	3,300	200		32,300		600	200	3		
4	Arcadia					30	150	60	38	350	278	1	500	1,000	1,000		1,300		700	800	4		
5	West Pubnico	14	634	16,000	160	40	300	95	140	3,500	700	1	2,500	2,400	24,000	47,000	172,368	18,000	12,000	5			
6	East Pubnico	3	36	1,200	10	15	150	30	64	1,000	300	30	600	800	800		187,200	3,900	600	6			
7	Tusket Wedge	7	364	9,500	85	45	500	90	180	3,600	900	1	1,500	1,000	1,550		6,000	223,408	9,500	7,000	7		
8	Tusket					500	2,000	500	1,800	7,000	10,000										8		
9	Eel Brook					50	350	100	150	375.0	500			300							9		
10	Salmon River					20	120	20	100	2,500	400			3	240	1,000					10		
	Totals	47	1,988	51,050	505	850	7,880	1,195	3,112	107,900	18,328	9	20,500	740	6,462	8150	344,000	17,000	65,876	18,100	3,8978		
	Values														1,292	32,900	8,440	34	78,756	1,307,915	90,500	1,559,12	

SESSIONAL PAPER No. 11a

RETURN showing the Kinds, Quantities and Value of Fish, &c.—Nova Scotia—Continued.

Number.	DISTRICTS.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.		
		Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked fisherman haddies, lbs.	Hake, dried, cwt.	Pollock, cwt.	Hallbut, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or gaspereaux, brls.	Eels, brls.	Tom cod or frost fish, lbs.	Squid, brls.			Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.
<i>Yarmouth County.</i>																		
1	Yarmouth	50000	1400	20000	640	1600	45000	18000	18000	18000	2	30	1200	3650	1125	250	121,029 50	1
2	Port Maitland	1300000	2150	10000	50	1800	10000	160	10000	14	2	14	1500	100	500	500	41,314 90	2
3	Sandford	2150	200	2000	6	6	3000	2000	60	140	150	150	1800	550	275	52,192 00	3	
4	Arcadia	2000	2000	1200	4000	4000	4000	800	140	140	1800	550	200	20	20	12,393 00	4	
5	West Pubnico	1	40	40	103	400	800	400	400	70	100	70	8000	1000	300	119,898 60	5	
6	East Pubnico	5	6000	470	470	5000	5000	5000	400	20	20	60000	1000	300	500	63,640 00	6	
7	Tusket Wedge	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	170,462 85	7
8	Tusket	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9,620 00	8
9	Salmon River	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	2,050 00	9
10	Fel Brook	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	2,300 00	10
	Totals	13 182150	9940	30000	795	5636	62800	5000	20000	1800	269	60100	254	9200	8250	2745	594,900 85	
	Values	5464	28920	1800	1789	11272	6280	500	1000	7200	2690	3005	1016	18400	2475	4117	512	

RECAPITULATION

Of the Yield and Value of the Fisheries in District N^o 3, Province of Nova Scotia, for the Year 1898.

Kinds of Fish.	Quantities.	Rate.		Value.		Total.
		§	cts.	§	cts.	
Salmon, fresh	Lbs. 73,406	0	20	14,681	20	14,885 20
" smoked	" 1,020	0	20	204	00	
Herring, salted	Brls. 25,527	4	00	102,108	00	136,412 00
" fresh	Lbs. 2,592,800	0	01	25,928	00	
" smoked	" 418,800	0	02	8,376	00	
Mackerel, fresh	" 792,662	0	12	95,119	50	104,374 50
" salted	Brls. 617	15	00	9,255	00	
Lobsters, canned	Lbs. 1,431,960	0	20	286,392	00	1,800,707 00
" fresh	Cwt. 302,863	5	00	1,514,315	00	
Cod, dried	" 366,974	4	00	1,467,896	00	1,474,326 00
" preserved	Cans. 26,000	0	12	3,120	00	
" tongues and sounds	Brls. 331	10	00	3,310	00	
Haddock, fresh	Lbs. 2,534,620	0	03	76,038	60	400,947 60
" dried	Cwt. 84,489	3	00	253,467	00	
" finnan haddies	Lbs. 1,190,700	0	06	71,442	00	
Hake, dried	Cwt. 96,525	2	25	217,181	25	248,561 25
" sounds	Lbs. 62,760	0	50	31,380	00	
Pollock	Cwt. 47,128	2	00	94,256	00	111,251 80
Halibut	Lbs. 1,112,518	0	10	2,612	00	
Trout	" 26,120	0	10	13,450	00	3,380 00
Shad	Brls. 1,345	10	00	17,560	00	
Smelts	Lbs. 67,600	0	05	74	00	6,180 00
Alewives	Brls. 4,390	4	00	14,030	00	
Bass	Lbs. 740	0	10	3,427	50	3,016 00
Eels	Brls. 618	10	00	95,848	00	
Flounders	Lbs. 280,600	0	05	69,985	20	74,920 50
Tom cod	" 68,550	0	05	18,320	00	
Squid	Brls. 754	4	00			95,848 00
Coarse or mixed fish	" 47,924	2	00			
Fish oil	Galls. 233,284	0	30			74,920 50
Fish as bait	Brls. 49,947	1	50			
Fish as manure	" 36,640	0	50			18,320 00
Total						4,708,524 55

SESSIONAL PAPER No. 11a

RECAPITULATION

OF the Value of Fishing Vessels, Boats, Nets, &c., used in District N^o 3, Nova Scotia, for the Year 1898:

Material.	Value.	Total.
	\$	\$
3 59 vessels (19,361 tons).....	755,985	
6,246 fishing boats.....	153,073	
12,044 gill-nets (815,751 fathoms).....	181,054	
261 seines (30,240 fathoms).....	48,060	
142 trap-nets.....	55,193	
188 weirs.....	11,495	
4,578 trawls.....	69,738	
10,117 hand lines.....	14,668	
46 bag nets.....	1,093	
		1,290,359
44 lobster canneries.....	34,190	
197,097 lobster traps.....	125,204	
		159,394
115 freezers and ice-houses.....	11,857	
1,327 smoke or fish houses.....	75,799	
462 piers or fishing wharfs.....	96,658	
42 fishing tugs or smacks.....	20,525	
		204,839
Total.....		1,654,592

Number of Fishermen employed in the same District.

Men in fishing vessels.....	4,378
" boats.....	6,698
Persons in lobster canneries.....	1,767
Total.....	12,843

RECAPITULATION

Showing the Number, Tonnage and Value of Vessels and Boats, and the quantity and value of all Fishing Materials in the whole Province of Nova Scotia, for the year 1898.

Number.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.											
	Vessels.		Boats.		Gill Nets.		Seines.		Trap Nets.		Trawls.		Weirs.			
	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
1	197	3,525	67	612	12,208	1,305	2,671	62,172	26,594	1	330	750	347	1,962	1	
2	571	9,935	152	865	20,394	2,113	2,261	65,830	30,419	3	500	600	586	4,473	2	
3	1,356	17,450	296	1,422	23,157	2,473	12,230	265,488	69,452	1	1	1	792	2,480	3	
4	89	2,300	18	545	12,305	958	1,189	29,817	10,527	2	400	400	206	2,143	4	
5	11	200	3	221	2,737	318	678	19,892	7,432	1	1	1	133	544	5	
6	33	395	8	176	2,938	322	279	25,375	5,820	6	6	6	2	135	6	
7	523	10,050	104	2,193	51,037	8,208	357	10,263	3,813	29	3,425	3,460	1,225	6,744	7	
8	1,516	36,850	400	2,408	31,082	2,806	10,273	346,010	35,548	353	31,508	60,295	654	2,617	8	
9	31	500	5	66	1,248	73	48	7,067	1,420	1	1	1	2	120	9	
10	30	400	3	297	6,602	406	299	10,372	5,639	1	1	1	27	119	10	
11	456	5,900	109	183	3,750	312	385	17,100	7,725	1	1	1	310	2,250	11	
12	1,531	43,485	519	510	22,440	877	655	14,230	3,838	35	2,990	7,350	717	14,265	12	
13	51	1,700	12	85	1,895	151	61	3,615	1,655	6	3,100	1,900	58	200	13	
14	51	1,700	12	85	1,895	151	61	3,615	1,655	6	3,100	1,900	58	200	14	
15	12,643	549,750	2,410	2,393	65,245	1,436	5,425	320,000	97,750	212	20,980	30,850	1,365	40,350	15	
16	274	9,200	61	466	8,244	487	1,506	26,816	10,373	5	570	1,210	55	292	16	
17	2,418	94,900	762	1,759	43,615	2,240	900	326,000	41,185	3	2,600	750	1,827	10,546	17	
18	1,988	51,050	505	850	7,880	1,195	3,112	197,990	18,328	1	1	1	246	1,150	18	
Totals	23,718	837,590	5,434	15,358	323,989	20,801	59,004	2,018,437	450,020	647	69,003	113,035	8,550	90,955	218	18,865

SESSIONAL PAPER No. 11a

RECAPITULATION—Continued.

Showing the Number, Tonnage and Value of Vessels and Boats and the quantity and value of all Fishing Materials, &c.—Continued.

Number.	FISHING MATERIALS.			LOBSTER PLANT.					OTHER FIXTURES USED IN FISHERIES.									
	Smelt Nets.		Hand Lines.	Canneries.		Traps.		No. of hands employed.			Freezers and Ice Houses.		Smoke and Fish Houses.		Piers and Wharfs.	Steamers and Smacks.	Number.	Value.
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	No. of hands employed.	Number.	Value.	Number.	Value.	Number.	Value.	Number.			Value.
1	Cape Breton	2,380	1,040	14	19,100	43,700	23,590	507	80	280	3,402	172	3,752	1	50	1	50	1
2	Inverness	105	3,099	24	16,754	54,000	28,635	415	17	2,355	10,300	75	36,240	15	985	2	985	2
3	Richmond	19	2,016	15	9,300	40,670	21,310	369	2	350	7,415	21	3,475	30	3,195	3	3,195	3
4	Victoria	1	2,270	1,585	18	8,82	18,175	10,367	196	12	127	40	3,090	13	70	4	70	4
5	Antigonish	214	84	6	6,890	22,150	11,300	168	1	10	821	13	6,475	1	70	4	70	4
6	Colchester	12	250	1	700	1,200	1,000	9		47	1,830							
7	Cumberland	70	1,233	42	22,105	39,450	19,693	323		3	30							
8	Guysborough	19	210	4,437	9,975	118,100	64,825	642	19	12,860	37,127	274	25,675	36	31,325	8	31,325	8
9	Halifax	2	40	3,500	1,579	64,210	28,116	346	11	400	40,301	618	14,479	18	8,255	9	8,255	9
10	Hants																	
11	Pictou	15	270	58	29,300	46,415	27,190	493	14	262	1	25						
12	Annapolis			490	490	6,500	4,900		11	800	143	4,550						
13	Digby			1,037	3,063	31,110	22,138	1,018	55	3,772	120	3,700	55	33,950	11	6,350	13	6,350
14	King's			150	86				24	1,135	66	3,225						
15	Lunenburg			850	5,100	14,850	10,700	375	2	600	346	29,780	195	21,010	11	900	15	900
16	Queen's			580	492	12,767	5,102	72		190	3,804	27	516	4	750	16	750	16
17	Shelburne	4	300	5,680	4,472	101,620	59,602	182	17	3,000	382	21,770	165	22,932	4	5,575	17	5,575
18	Yarmouth	1	100	1,350	965	30,250	22,762	120	6	2,550	80	13,910	20	18,250	12	6,950	18	6,950
	Totals	166	2,798	33,878	34,122	645,167	361,410	5,185	193	28,301	3,689	180,340	1,635	180,714	143	64,405		

RECAPITULATION--Continued.
 RETURN showing the Kinds and Quantities of Fish and Fish Products in the whole Province of Nova Scotia, &c.—*Con.*

COUNTIES.	KINDS OF FISH																	
	Salmon.		Herring.		Mackerel.		Lobsters.		Cod.		Haddock.		Hake.					
	Fresh.	Preserved in cans.	Salted.	Salted.	Fresh.	Smoked.	Fresh.	Salted.	Preserved in cans.	Preserved in shell.	Dried.	Tongues and sounds.	Fresh.	Dried.	Smoked.	Dried.	Sounds.	Number.
1 Cape Breton.....	Lbs. 22,852	Lbs. 200	Brls. *186	Brls. 5,255	Lbs. 40,300	Lbs. 1,000	Lbs. 202	Brls. 557	Lbs. 413,308	Cwt. 4,000	Cwt. 13,104	Brls. 18	Lbs. 10,680	Cwt. 1,787	Lbs. 30	Cwt. 41	Lbs. 41	1
2 Inverness.....	Lbs. 83,280	Lbs. 2,661	Brls. *25	Brls. 7,299	Lbs. 915,800	Lbs. 1,000	Lbs. 5,110	Brls. 7,595	Lbs. 239,256	Cwt. 1,535	Cwt. 18,885	Brls. 39	Lbs. 3,600	Cwt. 2,416	Lbs. 30	Cwt. 3,451	Lbs. 844	2
3 Richmond.....	Lbs. 3,840	Lbs. 8,187	Brls. *10	Brls. 16,132	Lbs. 25,100	Lbs. 800	Lbs. 25,890	Brls. 4,265	Lbs. 368,530	Cwt. 552	Cwt. 22,175	Brls. 65	Lbs. 10,900	Cwt. 7,530	Lbs. 1,159,800	Cwt. 7,524	Lbs. 619	3
4 Victoria.....	Lbs. 6,300	Lbs. 8,187	Brls. *109	Brls. 1,833	Lbs. 44,700	Lbs. 800	Lbs. 10,501	Brls. 812	Lbs. 134,516	Cwt. 187	Cwt. 8,452	Brls. 4	Lbs. 1,322	Cwt. 30	Lbs. 2,290	Cwt. 54	Lbs. 5,794	4
5 Antigonish.....	Lbs. 30,406	Lbs. 39,100	Brls. 1,833	Brls. 6,800	Lbs. 4,000	Lbs. 8,500	Lbs. 14,400	Brls. 197	Lbs. 164,256	Cwt. 24	Cwt. 135	Brls. 5	Lbs. 2,000	Cwt. 25	Lbs. 10	Cwt. 19	Lbs. 70	6
6 Colchester.....	Lbs. 8,516	Lbs. 320	Brls. 400	Brls. 50	Lbs. 26,400	Lbs. 800	Lbs. 1,800	Brls. 878	Lbs. 500,524	Cwt. 811	Cwt. 950	Brls. 5	Lbs. 1,100	Cwt. 505	Lbs. 70	Cwt. 40	Lbs. 40	7
7 Cumberland.....	Lbs. 37,645	Lbs. 2,620	Brls. +2,025	Brls. 12,351	Lbs. 703,200	Lbs. 800	Lbs. 408,527	Brls. 878	Lbs. 915,956	Cwt. 18,063	Cwt. 21,699	Brls. 12	Lbs. 1,757,432	Cwt. 6,417	Lbs. 155,280	Cwt. 2,150	Lbs. 397	8
8 Guysborough.....	Lbs. 33,782	Lbs. 1,700	Brls. +1,700	Brls. 6,047	Lbs. 31,000	Lbs. 4,000	Lbs. 1,118,150	Brls. 1,017	Lbs. 590,332	Cwt. 18,063	Cwt. 18,786	Brls. 13	Lbs. 73,300	Cwt. 1,728	Lbs. 5,000	Cwt. 2,465	Lbs. 2,963	9
9 Halifax.....	Lbs. 11,115	Lbs. 40,500	Brls. 66	Brls. 27,800	Lbs. 174,500	Lbs. 4,000	Lbs. 8,200	Brls. 404	Lbs. 417,286	Cwt. 118	Cwt. 118	Brls. 9	Lbs. 9	Cwt. 9	Lbs. 15	Cwt. 15	Lbs. 10	10
10 Hants.....	Lbs. 4,500	Lbs. 11,115	Brls. 19	Brls. 174,500	Lbs. 174,500	Lbs. 2,000	Lbs. 2,000	Brls. 3,158	Lbs. 417,286	Cwt. 1,535	Cwt. 6,200	Brls. 28	Lbs. 15,500	Cwt. 7,485	Lbs. 30	Cwt. 933	Lbs. 100	11
11 Pictou.....	Lbs. 3,600	Lbs. 40,500	Brls. 3	Brls. 960	Lbs. 1,614,600	Lbs. 51,100	Lbs. 5,362	Brls. 2,000	Lbs. 29,424	Cwt. 223,292	Cwt. 29,227	Brls. 93	Lbs. 2,253,970	Cwt. 47,995	Lbs. 1,159,800	Cwt. 82,945	Lbs. 49,350	12
12 Annapolis.....	Lbs. 1,150	Lbs. 1,150	Brls. 960	Brls. 2,443	Lbs. 1,000	Lbs. 364,000	Lbs. 61,300	Brls. 563	Lbs. 148,128	Cwt. 187	Cwt. 1,141	Brls. 176	Lbs. 83,000	Cwt. 1,359	Lbs. 295	Cwt. 295	Lbs. 410	13
13 Digby.....	Lbs. 26,580	Lbs. 13,564	Brls. 4670	Brls. 2,975	Lbs. 133,200	Lbs. 1,000	Lbs. 61,300	Brls. 563	Lbs. 148,128	Cwt. 1,053	Cwt. 215,303	Brls. 176	Lbs. 83,000	Cwt. 7,534	Lbs. 900	Cwt. 1,324	Lbs. 410	14
14 King's.....	Lbs. 13,564	Lbs. 16,250	Brls. +350	Brls. 2,370	Lbs. 133,200	Lbs. 1,000	Lbs. 67,700	Brls. 54	Lbs. 439,968	Cwt. 55,150	Cwt. 70,585	Brls. 21	Lbs. 10,195	Cwt. 290	Lbs. 30	Cwt. 36	Lbs. 30	15
15 Lunenburg.....	Lbs. 16,250	Lbs. 5,800	Brls. 5,471	Brls. 8,150	Lbs. 844,000	Lbs. 1,700	Lbs. 656,300	Brls. 54	Lbs. 653,976	Cwt. 18,100	Cwt. 388,978	Brls. 13	Lbs. 182,150	Cwt. 9,640	Lbs. 30,000	Cwt. 795	Lbs. 795	16
16 Queen's.....	Lbs. 5,800	Lbs. 6,462	Brls. 8,150	Brls. 4,592,453	Lbs. 428,100	Lbs. 2,371,042	Lbs. 15,938	Brls. 5,210,294	Lbs. 653,976	Cwt. 326,313	Cwt. 442,166	Brls. 483	Lbs. 4,399,632	Cwt. 106,348	Lbs. 1,360,291	Cwt. 108,528	Lbs. 73,457	17
17 Shelburne.....	Lbs. 6,462	Lbs. 13,668	Brls. †	Brls. 76,828	Lbs. 4,592,453	Lbs. 428,100	Lbs. 2,371,042	Brls. 15,938	Lbs. 5,210,294	Cwt. 326,313	Cwt. 442,166	Brls. 483	Lbs. 4,399,632	Cwt. 106,348	Lbs. 1,360,291	Cwt. 108,528	Lbs. 73,457	18
18 Yarmouth.....	Lbs. 390,742	Lbs. 13,668	Brls. †	Brls. 76,828	Lbs. 4,592,453	Lbs. 428,100	Lbs. 2,371,042	Brls. 15,938	Lbs. 5,210,294	Cwt. 326,313	Cwt. 442,166	Brls. 483	Lbs. 4,399,632	Cwt. 106,348	Lbs. 1,360,291	Cwt. 108,528	Lbs. 73,457	18

* Salted. † Smoked. ‡ Totals, salted, 330 brls.; smoked, 5,145 lbs.

SESSIONAL PAPER No. 11a

RECAPITULATION—Concluded.
 RETURN showing the Kinds and Quantities of Fish and Fish Products in the whole Province of Nova Scotia, &c.—Concluded.

COUNTIES.	KINDS OF FISH—Con.														TOTAL VALUE OF ALL FISH.	Number.						
	Pollock.	Hallibut.	Trout.	Shad.	Smelts.	Alewives or raspereau.	Basas.	Bels.	Clams in shell.	Oysters.	Flounders.	Tom cod or frost fish.	Squid.	Coarse and mixed fish.			Fish oil.	Fish as bait.	Fish as manure.	Seal skins.		
	Cwt.	Lbs.	Lbs.	Brls.	Lbs.	Brls.	Lbs.	Brls.	Brls.	Brls.	Lbs.	Lbs.	Brls.	Brls.	(Galls.)	Brls.	Brls.	Brls.	No.	\$	cts.	Number.
1 Cape Breton.....	81	50,075	700	3	13,000	96	2,500	189			400	124	12,618	8,206	1,745	45	40	237,486	19	1		
2 Inverness.....		6,973	20,275		28,798	479		294	187		400	3,281	1,488	11,530	9,758	262		357,743	00	2		
3 Richmond.....	1,754	50,230	4,150		8,900	2,718	135,700	336			16,030	723	1,285	17,833	1,596		16	368,012	36	3		
4 Victoria.....	52	4,500	600		1,900	48	200	57	125		2,000	262	107	5,488	2,308		225	98,013	90	4		
5 Antigonish.....			1,800		3,400	73	1,800	100	28			23	20	941	1,484			66,412	00	5		
6 Colchester.....	5	1,000	7,400	1,657	13,000	480	1,400	5	280					100	25	1,40		33,145	00	6		
7 Cumberland.....	440	3,750	1,600	533	85,900	773	410	69	1,367		27,740	3,198	692	32,408	18,965	4,600		137,413	00	7		
8 Guysborough.....	3,486	348,335	8,430	24,560	927	369	290	369	290		31,000	92	315	12,347	1,802	2,974	21	594,889	00	8		
9 Halifax.....	1,526	57,944	5,955	27,900	256	108	1,051	108	1,051									504,895	00	9		
10 Hants.....	80		6,900	587	28,600	501	11,000	188	200									13,602	00	10		
11 Pictou.....			7,400		28,600	205	150	188	20						60	860	2,075	105,919	00	11		
12 Annapolis.....	3,955		1,700		1,100	80	600	3			1,000		2,000	3,400	1,975	490		116,624	50	12		
13 Digby.....	31,197	743,868	1,320	202	25,500	80	140	75					32,400	59,490	18,130	83,975		2,023,083	45	13		
14 King's.....	595	3,550	1,700	993	700	140									895	640		48,638	25	14		
15 Lunenburg.....	870	182,300	1,400	150	15,600	140		160			3,750	500	4,320	134,324	3,004	510		1,052,140	60	15		
16 Queen's.....	56	6,300	4,000		425								4	26,130	28,088			89,591	30	16		
17 Shelburne.....	4,820	113,700	11,000		5,400	1,245		111			3,700							783,245	60	17		
18 Yarmouth.....	5,636	62,800	5,000		20,000	1,800		269			60,100	254	9,200	8,250	2,745	1,025		594,900	85	18		
Totals.....	54,652	1,635,325	91,330	4,125	303,558	10,946	15,650	2,333	1,641	2,097	419,000	146,120	8,467	64,359	322,277	92,885	50,720	7,226,035	00	302		

SESSIONAL PAPER No. 11a

RECAPITULATION

OF the Values and Kinds of Fishing Materials in the whole Province of Nova Scotia, for the Year 1898.

Articles.	Value.	Total.
	\$	\$
537 fishing vessels (23,718 tons)	837,590	
15,358 " boats	323,989	
59,004 gill-nets (2,018,437 fathoms)	450,020	
647 seines (69,003 fathoms)	113,035	
227 trap-nets	73,353	
218 weirs	18,865	
8,550 trawls	90,955	
33,878 hand lines	34,122	
166 smelt nets	2,798	
41 bag-nets	693	
231 lobster canneries	206,010	1,945,420
645,167 " traps	361,410	
193 freezers and ice houses	28,301	
3,689 smoke and fish houses	180,340	567,420
1,635 piers and wharfs, (fishing)	186,714	
143 tugs and smacks	64,405	
		459,760
Total value of fishing capital		2,972,600

Number of men employed in the Fisheries of Nova Scotia, 1898.

Men on fishing vessels	5,434
" " boats	20,801
Persons employed in canneries	5,185
Total	31,420

APPENDIX No. 4.

NEW BRUNSWICK.

District No. 1, comprising the county of Charlotte.—*Inspector J. H. Pratt, St. Andrews.*

District No. 2, comprising the counties of Restigouche, Gloucester, Northumberland, Kent, Westmorland and Albert.—*Inspector R. A. Chapman, Moncton.*

District No. 3, comprising the counties of St. John, King's, Queen's, Sunbury, York, Carleton and Victoria.—*Inspector H. S. Miles, Oromocto.*

DISTRICT No. 1.

REPORT ON THE FISHERIES OF DISTRICT No. 1, NEW BRUNSWICK,
COMPRISING THE COUNTY OF CHARLOTTE FOR THE YEAR 1898
BY INSPECTOR JOHN H. PRATT.

ST. ANDREWS, N.B., December 31, 1898.

The Hon. Sir L. H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith my tenth annual report on the fisheries of *District No. 1. N.B., comprising the County of Charlotte*, which I may state includes the islands at the mouth of the Bay of Fundy on the New Brunswick shore, and also the fisheries of the Chiputneticook Lakes. A synopsis of the reports of the several fishery officers is also appended, with the requisite statements showing the product and values by sub-districts. I also include a statement showing the amount of capital invested in the numerous fisheries of the district. I am pleased to report an increase for the past year in the fishery products and values over that of 1897 by \$275,074. This is mainly due to the large increase in the catch of herring and also to a slight surplus in several kinds of line fish. The prices throughout the season were of a satisfactory nature.

It might be of interest to give here the gross annual values of the products of this district's fisheries for the past ten years, during which they have been under my control as inspector.

For 1889.....	\$1,373,589.26
1890.....	1,062,756.10
1891.....	1,279,977.19
1892.....	863,465.90
1893.....	771,182.35
1894.....	1,118,477.29
1895.....	968,203.50
1896.....	1,108,701.76
1897.....	870,287.30
1898.....	1,145,361.77

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The slight fluctuations noticed in the statistics for the years given are not sufficient to cause any serious alarm as to the early extinction of the various fisheries of the Bay of Fundy. During my numerous cruises in the *Curlew* towards Cape Breton and Prince Edward Island, I have been enabled to observe nearly all the fishing grounds possessed by the other maritime provinces, and it is quite plain to the most casual observer that the Bay of Fundy fishermen possess advantages for gaining a livelihood far superior to any other fishermen by the sea. On my annual eastern cruises I meet numerous fishermen who are unable, from various causes principally by the failure of cod and herring to strike inshore, to make an income sufficient to support their families during the coming year, and are really in straightened circumstances. One would have to search very narrowly indeed to discover among the hardy fishermen of the Bay of Fundy any one in very poor circumstances. There are some exceptions of course, but only among those who have neglected the numerous opportunities that a kind Providence has provided for them to draw their harvest from the sea almost at their very doors. For a considerable portion of the past season I was employed in cruising on the coasts of Nova Scotia and Cape Breton, with a run to Prince Edward Island. In consequence I did not have the opportunity of visiting the various fishing grounds in the remote parts of this district that is deemed essential for their efficient protection. However, by considerable correspondence, I was enabled to look after those fisheries in a manner that I trust was satisfactory to your department.

The number of registered vessels owned in the district and employed in the several branches of the fishing industry is forty-eight, aggregating 875 tons, besides 1,059 fishing boats, which include a great number of large sloops, used for carrying sardine herring, and for other trading purposes, but which are under ten tons register.

When you take into consideration the fact of such a large number of herring weirs being licensed in my district, and the innumerable disputes necessarily arising therefrom, together with the fact of my services being required so much in Nova Scotia and Cape Breton, it will explain the large amount of correspondence necessary to maintain the proper control of the district during my absence.

HERRING.

This fishery is the most important of any in the Bay of Fundy. About two-thirds of the population direct their energies towards its prosecution, and derive their living therefrom. Like the lobster, it is each year assuming a more prominent position in the eyes of the more intelligent fishermen. There is more rivalry in the search for better weir locations, the outlay is heavier, better facilities are being afforded for the transport of the catch to the several markets, and now the numerous sardine canneries are awakening from their lethargy, and several syndicates are competing in their offers to our fishermen for their catch of herring during the coming season of 1899. We are much pleased to see this rivalry existing among the buyers of our sardine-herring, as it will surely have a tendency to increase the prices of the future catch in our waters. There is no doubt that before many months have passed there will be formed in the state of Maine a substantial syndicate owning all or nearly all of the sardine canneries in that state. I may add that at this present time, there are in operation sixty-two sardine factories in Maine and during the past season those factories canned 1,178,694 cases of sardines, valued at \$2,727,781 which is an increase of nearly half a million cases over the pack of the previous year. Fully sixty per cent of the fish used in these canneries came from Canadian waters.

However, it is a pleasure to report that the schools of herring are as plentiful as ever, and the catches of the several sizes are quite satisfactory. The net herring were very plentiful at Grand Harbour, Grand Manan, during the fall months, and a great number of schooners loaded cargoes there. Large schools of herring suitable for sardine purposes played inshore at L'Etang Harbour during the latter part of the season, the weirs there reaping a rich harvest, selling their catch to the numerous trading boats from Eastport. Owing to this unusual catch at L'Etang and vicinity the catch of sardine herring shows the satisfactory increase over that of 1897 by 16,502 barrels.

Sutton Clark, Esq., of St. George, during this year has erected a large factory at L'Etang Harbcur, where he has begun the canning of sardine herring, putting up an article that cannot be excelled by his competitors in the adjoining state of Maine. With the two sardine factories at Beaver Harbour and two others at St. Andrews and Deer Island, all increasing their annual output, it will give you a good idea of the importance this canning industry is assuming in this district. With reference to the all-important question as to whether herring are increasing or decreasing in the Bay of Fundy, I can assure your department that this question was the subject of many heated discussions this year as in past years, and as usual, it still remains unsolved. With reference to this question I might be pardoned for quoting from a recent report of Mr. H. F. Moore, Ph.D., a member of the United States Fish Commission, who spent considerable time in these waters during the years 1893-4 and 5. After dealing very intelligently with the strife always existing between weir fishermen and net fishermen, Mr. Moore says: 'On the other hand, it is claimed that the continued catching of immense numbers of young fish for the sardine industry must produce a decrease in the herring, and that it is only a question of time when this decrease will make itself manifest, if it has not already done so. At first sight it would seem that this might be reasonable and the only reason that such a decrease has not taken place is no doubt because the number of herring killed by man is insignificant when compared with the total number of this species in the seas, and the number which yearly fall victims to the various natural dangers which beset them.

'When all the factors in the case are reviewed, I think it has been shown that not only has there been no decrease in the sardine herring in the region under discussion, but that there are at present no practices connected with the fishery, which are liable to seriously affect their future abundance.'

From the foregoing you will be able to observe that the herring question is one that will stand unlimited discussion, there being such a surprising number of theories advanced by those interested.

SALMON.

There being but one river in this district frequented by this fish, the catch is, therefore, small, but still greatly in excess of the previous season. Overseer Todd in his annual report shows that the salmon are visibly increasing, which is no doubt to be attributed to the vigilant oversight of himself and the three guardians under his control. Numerous attempts were made by poachers to take salmon on the St. Croix River, but I am pleased to say their attempts were frustrated. Numerous sportsmen met with good success, fly-fishing in the pool above St. Stephen, and many fine salmon were successfully landed.

Several salmon were seen above the fishways on the Magaguadavic River, and it is to be hoped that they will be able in the near future to ascend this beautiful river, a river that cannot be excelled anywhere in Canada as a salmon river. Guardian Hall is exerting every effort to keep the fishways in efficient condition, and believes that a number of salmon have ascended the river during the past season.

HALIBUT.

A considerable decrease is noticed in the catch of halibut which is due to a less vigorous prosecution of this fishery, and not to any scarcity of this large fish. A number of vessels that were engaged formerly in this fishery fitted out this season for hake, or went weir fishing. Prices remained good during the season.

COD.

There is a slight decrease in the returns for the cod-fish catch, due to many of the fishermen formerly engaged in hand lining directing their attention to the weir fisheries. The good prices prevailing for sardine herring warranted them in this venture

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although many of them were sadly disappointed at the end of the season, there being many weirs that hardly paid the cost of construction.

HAKE.

Quite a number of schooners fit out expressly for this fishery and the rebeing several good grounds for hake in the Bay of Fundy, satisfactory returns are generally the result. An increase of 1,000 quintals over the previous season is noticed in the several officers' returns which brought the fishermen very satisfactory prices during the entire season.

HADDOCK.

Quite a large increase will be noticed in this catch up to date. Good prices were realized by the fishermen in selling them fresh from the water to the numerous buyers, and even at the present time two cents per pound is being received by the fishermen. More energy was displayed in this fishery than heretofore on account of the good prices prevailing, and it is to be hoped that the financial results will be equally as good in the future. An increased quantity of haddock, smoked as finnan haddies, commanded a ready market. The demand for haddies is increasing and I hope to be able to report in the future that our fishermen are conducting this fishery with a view of placing more smoked haddock on the market. At Beaver Harbour and St. Andrews finnan haddies are cured by two energetic dealers and they find a ready market for their output. A new departure is being tried at Beaver Harbour in the canning of haddies and a good demand is being created.

MACKEREL.

Excepting for the few very small ones found mixed with the sardine herring in the weirs, no mackerel were caught during the past season. However, mackerel were not by any means abundant at any of their usual haunts. Our fishermen speak in glowing terms of periods in the years gone by, when big hauls were made by them in this district, and good prices realized. They look forward hopefully to making equally good catches and it is to be hoped they will not be disappointed in the near future.

FISHWAYS.

I have given an unusual amount of time to the keeping in efficient condition of the numerous fishways in this district and they have served well their intended purpose during the year. Overseer Todd on the St. Croix, and Guardian Hall at St. George, have taken special pains with the fishways each have under their control. Fish of various kinds have passed through them, and with some little repairs in the spring they will be in good order for the coming season.

CAMPOBELLO FISH FAIR.

I was unable this year to attend the meeting of this fishery association which was held during October at Welshpool, as I was attending to the United States fleet at Cape Breton. However, a very large number of persons attended including the Premier of New Brunswick and several members of both Provincial and Dominion parliaments. The exhibits of fish surpassed that of previous years, exciting much admiration among the numerous visitors. The committee have expressed a strong desire for your department to be represented at their next annual fair by one of your fishery experts; in order that greater good may be derived by a lecture on our fisheries, the best method of preserving them, and other matters of interest to fishermen. Much good would no doubt result from this visit of one of your departmental experts to Campobello, one of the most important fishing islands in Canada.

SYNOPSIS OF FISHERY OFFICERS' REPORTS.

Overseer Fraser of Grand Manan reports: Having only been appointed a few months ago, he does not profess to be thoroughly posted in regard to the fisheries of his district. His figures for the different kinds of fish are very much at variance with those of last year, and his total results are very much less, thus showing a decrease in the present year. This he cannot account for. The various fisheries were prosecuted this year as vigorously as those of 1897, 90 per cent of the catch of the island of Grand Manan is exported to foreign countries, that to a large extent via the United States in bond. Part is exported to the United States fresh, and there manufactured in different ways for that market. Ten per cent only would be used for home consumption. A few cases of violations of the Fisheries Act were reported to him, but he was unable to secure sufficient evidence to convict, however, he had very little trouble in making the fishermen comply with orders. On several occasions he managed to get among suspected parties and they regretted his presence. To properly enforce the regulations in the waters of this island a patrol boat should be allowed to the overseer, and power given him to hire two men. This boat wants to be kept going through four months of the year, from August 1 to November 30, this being the period when the *Curlew* is generally absent, leaving the grounds practically in the hands of the fishermen to do as they wish for the time being. I would also suggest that net fishing be put under license like weir fishermen, for the season that the netters in the habit of throwing overboard on the netting grounds all small fish taken in their nets, which, being considerable, poisons the ground by rotting. This simply transfers the fishing ground into a gurry ground driving the fish off shore, and damaging both weir and net fishing. He would also suggest that net fishermen be compelled to have their nets out of the water from sunrise to sunset, so that the fish can get inshore. At present nets are set deep and under run each day, and left so set for months. The fish coming shore meet the nets and sheer off, and thus the fishermen are destroying their own business. If they were under license like weirs the overseer could regulate them according to the fishery laws, but now, practicably, nothing can be done. Another matter that requires action by the authorities, is the exporting to Eastport and other United States ports of such large quantities of herring from the weirs of this island, the American trading vessels buying the fish here at a very small price, and taking them into their own markets free of duty. A Grand Manan boat taking them in would be subject to duty, the United States people and their vessels receive all the labour, freight, etc., on the fish while our boats and fish are practically shut out from their market by a prohibition duty. If possible something should be done to help our fishermen in this matter, and also prevent the destruction of such immense quantities of small herring which accounts for the small catches of large herring on our coasts. Many old fishermen believe that eventually the herring fisheries will be destroyed by this slaughter of the small ones.

Overseer Todd of St. Stephen in his annual report states, that salmon were very abundant this season in the Ste. Croix River, thus emphasizing the fact that the employment of a number of guardians on the river during the season is the most effective and economical method in the end. The catch of other fish was about the same as past years. black bass are increasing in the river. The fish-ways have been kept in good condition and kept open during the entire season.

Overseer Brown of Campobello reports a decrease in the amount of herring smoked. Owing to the high prices received for sardines here the fishermen sold them for that purpose. Most of the smoked herring put up on this island were brought from Grand Manan in the fall, when the fish were cheap, and the weirs in this district did not fish. An increased number of salt herring were put up by the fishermen of this district, although they did not catch them here, but in Grand Manan waters. The catch of herring for sardine purposes was about one-third less than that of last year, but the prices received were unusually large. The catch of hake did not equal that of the previous year, and he has the same to say with regard to pollock, which did not seem inclined to take the hook. They schooled however very freely, evidently playing after shrimps. He only reports one half the catch of cod as most of the vessels fitted out for the haddock and hake fisheries which paid them better. Haddock sold for a good price

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during the year in a fresh state, very few have been salted. Lobsters show a small increase in the catch. This, we cannot account for as lobsters seem to be getting scarce but the high price paid for ten and a half inch lobster induced the fishermen to make an effort. There was a decrease in the catch of most all kinds of fish, but on account of the good prices realized, the fishermen fared better than other years. The close seasons have been very well observed except in a few instances.

Overseer Campbell of St. Andrews reports that the season has not been a very profitable one, as the price of sardine herring part of the season was very low. There were more weirs fished than in 1897, but the catch was very little larger than that year, not from a scarcity of herring however, but from a want of buyers. There were so many sardine herring in other places nearer Eastport, that at times for days or weeks there would be no sardine buyers in the inner bay. The Digdeguash weirs, with one or two exceptions, did very little, and the main catch in this district was in Chamcook and St. Andrews. The quantity of herring in the bay through most of the season was very large, but much mixed with britt and a few large herring. There were quite a number of small mackerel at one time during the season, but they were so mixed with the sardine herring that they could not be separated, and went in with the sardine catch. The catch of lobsters was small and not so many traps were fished as in 1897, but the prices were good. Line fishing in the bay was not quite so good as the previous year. The usual number of Nova Scotia vessels dug the flats, for clams this season, and our fishermen complain of them being allowed to do so. The beds are becoming depleted of the large clams. These beds would soon fill up again were the digging stopped for a few years. About twenty years ago when Hartt and Balkam were canning clams they had the beaches ploughed up and for a few years the clams were quite small but renewed themselves. There has been but little trouble with fishery violations this year, except for some torching for herring during three or four nights, mainly carried on by the weir owners themselves. Messrs Robertson & Co. have done a large business, manufacturing 5,000 cases smoked haddies and 600 cases of bloaters, which are entered as smoked herring. He makes no special recommendations as the season on the whole has been a quiet but profitable one.

Guardian Dick, the officer in charge of the fisheries from L'Etang and St. George, in his report says: There has been a decrease in the catch of hake, haddock and lobsters, but on the other hand there has been a considerable increase in the catch of cod, pollock and sardine herring. The fishermen of this district gave more attention to weir fishing this season than any of the other fisheries, which is attributable to the large schools which struck inshore in my district, and the good prices received for the herring. Some idea may be gathered of this increased catch of herring when I state that it amounted to 29,985 barrels more than last season.

Guardian Cross of Beaver Harbour who controls the fisheries from L'Etang River to Point Lepreaux states in his annual report that: taking the whole fishing industry altogether there has been a gain in the catch and value over that of last year. There were very few large herring taken and for several years past this fishery has been declining for which he cannot give any reason. There has not been as many sardine herring shipped from this district as last year, but there has been more canned in the two factories here. The catch was about the same as previous year. Lobsters show about the same catch as last year but more of them were canned in the factories here and in Blacks Harbour. They brought good prices all the season, especially those that were shipped to the United States. Line fish of all kinds show an increase in the prices received and also the catch, although not so many men were engaged in the line fisheries. About fifty per cent of the district's catch was sold in the Dominion, while the remainder went to the United States market. This fishing season was more prosperous than the previous one.

Guardian Hall, in charge at St. George, reports: The fishways here are in first-class condition and many salmon have passed through them during the past season. Quite a number have been seen about here in the rivers, as well as in the mill-pond and in the basin. There has been no fly fishing for them and consequently none have yet been captured. The trout fishing in the several lakes has been up to the average, and numerous fishing parties during the season have had good sport, and fine catches.

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Guardian Lord, in charge at West Isles, reports a decrease in the herring catch this past season. Early in the summer the catch was fair and prices moderately high, but later on the catch was small. Our annual fall catch, which we always count as the best of the season, was a total failure, but whether the schools are less, or that they have forsaken their usual haunts, is a question on which opinions differ very much. Some think they are scarcer, others that they are more plentiful all round the coast than ever before, but he is of opinion that they are getting scarcer. Our smoking herring business was a failure, none at all being taken, the silver hake of which there were a few, may have driven these herrings from this island. We cannot say it was the squid for these fish were very scarce. For about a week a number of the weirs took a few tinker mackerel which were sold with the herring to the packers. The line fish seem to be as plentiful as usual, but a large number of fishermen who formerly engaged in this industry procured employment in the sardine factories at Eastport and Lubeck, where they believed they were better off from a financial standpoint. The pollock were plentiful for a time, a larger number being caught in weirs, and perhaps they account in a measure for the scarcity of herring. Haddock remain the same, although a less number of vessels were employed this year trawling. Cod were as plentiful as ever, and he noticed some of them had a small under fin cut off, which is said to be the Gloucester hatchery work. Lobsters are becoming scarcer every year. He finds it very hard to prevent illegal lobster fishing during the close season, as the fishermen risk the penalties for the few dollars made. They set their traps without buoys and during the night haul their traps by dragging for the lines, therefore it is almost impossible to catch them.

Guardian Conrad at Ste. Croix who has charge of the fisheries on the border lakes, from Vanceboro northward, reports that he has by constant vigilance been able to prevent any poaching in the waters of his district. Several reports of persons having violated the law were brought to him, but on investigation they were without foundation. The fishing of various kinds was very good, and the waters were visited by numerous parties of sportsmen who were well pleased with their success.

I have the honour to be, sir,
Your obedient servant,

JOHN H. PRATT,
Inspector of Fisheries.

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DISTRICT No. 2.

REPORT ON THE FISHERIES OF DISTRICT No. 2, COMPRISING THE COUNTIES OF RESTIGOUCHE, GLOUCESTER, NORTHUMBERLAND, KENT, WESTMORLAND AND ALBERT, FOR THE YEAR 1898, BY INSPECTOR R. A. CHAPMAN.

MONCTON, January 2, 1899.

Hon. Sir L. H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit my report on the fisheries of District No. 2 New Brunswick, for 1898, with tabulated statements giving the product and value by districts and counties, together with a return of the capital employed in the prosecution of these fisheries.

The returns show a considerable falling off from the previous year's aggregate, which is almost entirely confined to one county (Gloucester) and which is largely caused by the very low prices prevailing for codfish, and during two or three years ending with 1897, where fishing did not pay causing many of the dealers to lose heavily, and consequently in some of the smaller districts where agricultural pursuits have paid better fishing has been almost abandoned, but the high prices realized in 1898 for fish will have an inspiring effect, and no doubt stimulate the business so as to restore it to the old figures or probably increase them, especially as there appears to be no scarcity of cod, smelts, herring etc., though lobsters are being overfished as more fully explained hereafter, the reduction of the number of districts in this (Gloucester) county from two to four making it more difficult in such largely increased areas for the officers to get correct figures may also have something to do with smaller returns, though I have assisted them with aid of bounty claims, statistics, &c., to make them up. I will now report in detail upon the principal kinds of fish caught with remarks thereupon, &c.

SALMON.

The catch of this fish was not up to the average past year, except on the Restigouche and coasts leading to this river, though fly fishing on the principal streams was good especially on the Miramichi when the guardians were in good time and the first run of fish got up safely, into the pools and on the head waters of the different tributaries of this river. There is not a doubt that the supply of salmon depends not only upon the fish getting up and being protected, but also upon favourable conditions for depositing their eggs, hatching, &c., as on the natural hatcheries or spawning beds of the rivers frequented by these fish. If everything is favourable fall and spring large results will follow and then in four or five years there will be plenty of mature fish, but if on the contrary with unfavourable conditions in the fall, heavy runs of ice in the spring tears up and destroys the beds containing the eggs thereon, then as a natural result in due course of time fish must be scarce. Another matter upon which there is much difference of opinion, is, whether the summer run of salmon are produced from the same fish as those that come in during the fall; many maintain they are not and therefore that the Miramichi Hatchery, being supplied with eggs taken from the fall fish, is of less beneficial effect than if this hatchery were supplied with eggs of fish pooled from the summer catch. In the latter case it would cause those now taken in the fall to deposit more spawn in the natural hatcheries, and would ensure better results, though undoubtedly great advantage accrues if there are more eggs brought to maturity in this hatchery than in the natural beds of the rivers.

HERRING.

These fish are very abundant in the spring, but are of poor quality ; large numbers are taken not only for food but bait, &c., and if the weather is rough usually large quantity of spawn is driven ashore and carted on the land for manure. The banks between Miscou and Caraquet are frequented by a much better quality of fish latter part of August and during September when many are taken by boats and schooners from all parts of the coast.

MACKEREL

Were scarce past season where they did strike in they only remained a short time consequently less were taken than usual, though great preparations were made on some parts of the coast for their catch ; their movements appear to be very erratic.

LOBSTERS.

Though in Westmorland County more lobsters were taken last year without an extension than during 1897 with ten days more time, yet the whole catch in this district in 1898 to July 15 was slightly under that of the previous year with said ten days included, but a much larger number of traps was used, and with the prevailing high prices giving such inducements to continue increasing factories and gear, it does appear that something must be done to prevent the extermination of this valuable fishery. If fall fishing was adopted in place of spring, as nearly all the spawn is dropped before the 15th July, I believe the supply would not be exhausted, while now the berries are washed off the fish in an immature state by the fishermen or when officers are not on guard female fish are boiled berries and all ; fall fishing would also do away with illegal fishing and thus save quite a large sum, but the large packers everywhere appear to be opposed to this as it would be doubtless difficult to get hands to run their factories after those that they engage in the spring got away or had procured other employment ; but such a change would certainly be better that all the hatcheries and preventive laws that can be provided. I do hope that the commission now making inquiries may be able in their report to recommend something that will hereafter prevent this important fishery from being destroyed, which would certainly be in the interest of every canner and fisherman on the coasts.

COD.

The catch of this staple fish has not been up to the average of the past two years, not on account of any scarcity, but the low prices prevailing caused the work especially in small boats to be almost abandoned, in places where other employment could be had ; but the advance in values during 1898 will certainly again give an impetus to this fishery which will doubtless within the next year or two put it up to or ahead of what it ever has been heretofore, there being room for almost unlimited expansion.

SMELTS

Show again a large catch notwithstanding that during the past two seasons heavy rains causing freshets have carried these fish out of the smaller streams just about the time this fishing commenced, and when this is the case they never appear to return the same season in large numbers, but they are certainly not becoming any scarcer but appear to be increasing from year to year, and as they are food for so many other kinds of fish the quantities taken for sale are a very small percentage of what are thus consumed. The benefits of this fishery cannot be overestimated, hundreds of thousands of dollars yearly being distributed thereby amongst the working people in the winter season when other employment is so hard to procure, thus enabling the traders to largely increase their business besides giving traffic to the different lines of local railways as well as the Intercolonial.

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BASS.

There is a small increase in the quantity of bass taken over the previous year, as we have not yet lost the benefit of the prohibition of some years ago, which enabled them to breed undisturbed in large numbers, and since that time the run of these fish as a whole has been longer from year to year, they appear to be a slow growing fish, and to take a good many years to attain a large size; whether with present rate of fishing the supply will be kept up or not is yet difficult to foretell, though it appears now as if it would with proper care that the small fish are not caught and destroyed by the smelt nets on the Miramichi, &c.

SHAD.

These fish come into St. John harbour on their way up St. John River to spawn in the latter part of May and first two weeks in June, and what are not taken by nets in the said harbour and river after they have deposited their eggs, return to salt water and come up to their feeding grounds at the head of the Bay of Fundy where by the 1st of September they become very fat. Fifty years ago some 200 boats were profitably employed in this fishery, which large fleet is now reduced to some twenty or thirty boats, there is not a doubt if a close time was made up to the 20th of June in each year, to enable these fish to spawn that in a few years the waters would be teeming with them again, to realize their present destruction any person has only to visit the markets of this province early in June and see these fish opened to be satisfied of the dreadful destruction that is taking place every year; surely this matter is worth some attention.

ALEWIVES

Are usually plentiful in a number of rivers and streams in the spring, and might be caught in much larger quantities, but not much attention appears to be given to this fishery except in one or two places.

OYSTERS.

While there is a slight falling off in the catch of these fish from the valuable beds in Buctouche and Cocagne, and a very considerable one from the Caraquet beds, there is a large increase in the take of an inferior fish in Northumberland County, as while some years ago very few were had outside of limited areas in Bay du Vin, now they are plentiful for miles up the Miramichi River, and men in boats and small vessels from the adjacent counties in the fall flock to these beds and load up their craft. The Caraquet beds, land-locked at the mouth of the Caraquet River, where there is very little current or sea, are becoming swamped out and covered by sediment and mud; it is proposed that this could be remedied by a small dredge scraping out the mud from amongst these beds and making the bottom suitable for receiving the spat, which is now very largely lost. This place would certainly be worth our examination as these oysters, though of small size are nicely flavoured, and in former years produced largely.

Referring to officers' reports very few of the overseers sent in any report with their returns at all, and the few received contain no notes or recommendations of importance.

I have the honour to be, sir,
Your obedient servant,

R. A. CHAPMAN,
Inspector of Fisheries.

DISTRICT No. 3.

REPORT OF THE FISHERIES OF DISTRICT No. 3 OF NEW BRUNSWICK,
 COMPRISING THE COUNTIES OF VICTORIA, CARLETON, YORK,
 SUNBURY, QUEEN'S, KING'S AND ST. JOHN, FOR THE YEAR 1898,
 BY INSPECTOR H. S. MILES.

OROMOCTO, N.B., January 2, 1899.

The Honourable Sir L. H. DAVIES, K.C.M.G.,
 Minister of Marine and Fisheries.

SIR,—I have the honour to submit my annual report of the fisheries of this district, also statistical returns showing the value and quantities of fish taken, which, when compared with that of last year, shows a decrease of \$35,614.45.

SYNOPSIS OF FISHERY OFFICERS' REPORTS.

Overseer O'Brien, of St. John County, reports a falling off in the catch of salmon this year, resulting partly from the easterly winds which prevailed in the months of June and July and also to the extreme foggy weather rendering fishing in the harbour dangerous during the greater parts of salmon, shad and alewife fishing season. Lobsters show a decided increase in catch, because nearly all the fishermen devote their time and attention to this business in winter when all other fish go off shore.

Overseer Isaac I. Hetherington, of Jenkins, Queen's County, reports an abundance of alewives, while shad were less than an average run; other kinds of fish about as usual. He captured two nets for illegal fishing.

Overseer Cecil F. McLean, of Burton, Sunbury County, reports that the run of alewives was a little better than last year but the catch was not so heavy as there were not so many engaged in fishing as in former years. The catch of shad was greater than last year, salmon not so good owing to a raise of water that came about the middle of the fishing season. Pickerel are on the increase and are fast becoming an important part of the fisheries and should be protected by a regulation size of mesh and a close season, the mesh to be 2 $\frac{1}{2}$ or 3" mesh extension measure, and the close season to extend from October 1 to March 1. The alewives went up the Oromocto River in large quantities but at the Smith dam they are headed, a Hockin fishway is in that dam but no fish have ever been known to enter it.

Overseer Robert Orr, of Fredericton, York County, says that 'during the fishing season I devoted all my time on the St. John and S. W. Miramichi rivers. Drifting on the St. John River above tidal waters was carried on quite extensively and without more assistance it will be impossible to prevent it in the future. As regards the S. W. Miramichi River I have to say that a great deal of spearing was done before the guardians were placed on the river. A special guardian should be on the river by June 1. The Government through the representation of Mr. Edgar Hanson who takes great interest in the preservation of the fisheries, also Inspector Miles, put four men on the river between Boiestown and the forks, a distance of fifty miles. This stretch of river cannot be properly protected by four men, not less than seven are required to prevent spearing and netting. During the month of September quite a large number of salmon reached their spawning grounds and owing to the high water escaped the ravages of spearers. All fish taken in this district was used for home consumption. The abuses by netting on the St. John River still exist to a very great extent and can only be prevented by more

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guardians. Close season on the St. John River fairly observed. I am of the opinion that the sawdust in my district is not injurious. No fishways in this district.' In conclusion he suggests that the head of tidal waters on the St. John River be established at the iron railway bridge at Fredericton.

Guardian Charles McEwen, of Beaufort, Carleton County, particularly reports a fine run of large salmon and trout in the north branch of the Miramichi River from July 18 until autumn, during which time the river was visited by many sportsmen. No illegal fishing.

Guardian D. E. Brooks, of Bristol, Carleton County, reports a large run of salmon of which few were taken in the early season owing to the water having been so high but later on a fair number were caught, speared, &c. All were used for home consumption.

Overseer Leonard Wilson, Victoria County, says that illegal fishing is seldom indulged in. Owing to the artificial culture of salmon, they are becoming numerous. No fishways in his district. More guardians are required, and their services should extend over a greater period of time than last year.

I have the honour to be, sir,
Your obedient servant,

H. S. MILES,
Inspector.

NEW BRUNSWICK—District No. 1.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, and the Quantity and Value of all Fishing Materials, with the Kinds and Quantities of Fish caught, in District No. 1, Province of **New Brunswick**, for the Year 1898.

Number.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.											
	Vessels.			Boats.			Gill Nets.		Seines.		Trawls.		Weirs.					
	Number.	Tonnage.	Value. \$	Men.	Number.	Value. \$	Men.	Number.	Fathoms.	Value. \$	Number.	Fathoms.	Value. \$	Number.	Value. \$			
<i>Charlotte County.</i>																		
1	12	277	6300	68	119	3776	148	50	3238	900	37	1110	1850	114	1150	37	11480	1
2	18	270	5300	77	288	65680	518	410	10480	3800	35	3280	6800	111	2225	42	41100	2
3	2	59	800	8	180	9500	220	50	1500	450	75	2250	4500	75	750	86	34400	3
4	7	158	2700	38	126	2560	163	130	4160	1870	37	1110	2220	330	1900	35	8300	4
5	7	92	1700	29	258	8737	203	21	641	222	64	1806	2000	80	794	67	17250	5
6	2	19	450	4	88	1780	95	.....	.....	.....	41	1230	1230	62	372	48	14400	6
	48	875	17250	224	1059	92033	1347	670	19989	7242	283	10786	18400	772	7191	315	126930	
	Totals																	

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RETURN showing the Kinds and Quantities of Fish, &c.—New Brunswick—Continued.

DISTRICTS.	KINDS OF FISH.													Number.						
	Salmon, fresh, lbs.	Scallops, preserved in cans.	Scallops, fresh, lbs.	Herring, salted, bris.	Kippered herring in cans, lbs.	Kippered herring, lbs.	Herring, fresh or frozen, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, preserved, cans.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.		Clams, preserved, cans.	Clams, shelled, bris.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked, fman haddes, lbs.	Haddock, canned, lbs.
<i>Charlotte County.</i>																				
1	3600	16000	4300	200	240000					3400	40992	6525	245	48000	450	4000	925		4000	1
2			19400	482								897	1324		101		1209			2
3												174	500		1755	2060000	900	1500000	9600	3
4			2000			8750		24000	900			20			10	400000				4
5	750																			5
6						500000	20318000	8705000			40680	4470	2866							6
7								74255			26400	340	500			600000	850	15000		7
8												340	100			400000		500		8
	4350	16000	25700	6234	240000	500000	20326750	8503255	900	3100	108072	12766	5535	43000	2261	1250000	4465	165500	13600	

RETURN showing the Kinds and Quantities of Fish, &c.—New Brunswick—Concluded.

Number.	DISTRICTS.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.				
		Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or Raspeaux, brls.	Pickrel, lbs.	Sardines, preserved	Sardines, brls.	Founders, lbs.	Tom cod or frost fish, lbs.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.	Fish as manure, brl.	
<i>Charlotte County.</i>																				
1	Lepreaux to L'Etang	4250		380	10000												2450	*188,613 90	1	
2	L'Etang to St. George	1899	1400	3079	5000												1700	+222,757 25	2	
3	St. George to St. Stephen	1200		450	1000	2500											1275	99,157 50	3	
4	St. George and vicinity				6000	6000		10									125	2,428 00	4	
5	St. Stephen and vicinity				5500	8000	250	3000											2,330 00	5
6	Grand Manan	5740	4000	9983	40000													850	486,723 00	6
7	Campobello	3708	4530	3060	10000													480	89,961 10	7
8	West Isles	200	250	450	1000													600	53,385 00	8
	Totals	16997	14430	17402	57000	14000	11000	260	3000	1250000	169900	48700	1100	77	39300	4300	12855	1,145,361 75		

* In No. 1 add 5 barrels of shad and 9 seals, \$86. † In No. 2 add 19 barrels of squid, \$76.

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RECAPITULATION

Of the Yield and Value of the Fisheries of District No. 1, New Brunswick, for the Year 1898.

Kinds of Fish.	Quantity.	Price.		Value.	
		\$	cts.	\$	cts.
Salmon, fresh.....	Lbs. 4,350	0	20	870	00
Scallops, canned.....	Cans. 16,000	0	15	2,400	00
" fresh.....	Lbs. 25,700	0	05	1,285	00
Herring, pickled.....	Brls. 6,234	4	00	24,936	00
" kippered.....	Cans. 240,000	0	10	24,000	00
" ".....	Lbs. 50,000	0	05	2,500	00
" fresh or frozen.....	" 20,326,750	0	01	203,267	50
" smoked.....	" 8,803,256	0	02	176,065	12
Mackerel, fresh.....	" 900	0	12	108	00
" canned.....	Cans. 3,400	0	12	408	00
Lobsters, canned.....	" 108,072	0	20	21,614	40
" fresh.....	Cwt. 12,766	5	00	63,830	00
Cod, dried.....	" 5,535	4	00	22,140	00
Clams, canned.....	Cans. 43,000	0	10	4,300	00
" shelled.....	Brls. 2,261	7	00	15,827	00
Haddock, fresh.....	Lbs. 1,250,000	0	03	37,500	00
" dried.....	Cwt. 4,465	3	00	13,395	00
Finnan haddies, smoked.....	Lbs. 165,500	0	06	9,930	00
" ".....	Cans. 13,600	0	10	1,360	00
Hake, dried.....	Cwt. 16,997	2	25	38,243	25
" sounds.....	Lbs. 14,430	0	50	7,215	00
Pollock, dried.....	Cwt. 17,482	2	00	34,804	00
Halibut, fresh.....	Lbs. 67,000	0	10	6,700	00
Trout, fresh.....	" 14,000	0	10	1,400	00
Shad, pickled.....	Brls. 5	10	00	50	00
Smelts, fresh.....	Lbs. 11,000	0	05	550	00
Alewives, pickled.....	Brls. 260	4	00	1,040	00
Pickarel, fresh.....	Lbs. 3,000	0	05	150	00
Sardines, canned.....	Cans. 1,250,000	0	05	62,500	00
" fresh.....	Brls. 169,900	2	00	339,800	00
Flounders, fresh.....	Lbs. 43,700	0	05	2,435	00
Tom cod or frost fish.....	" 1,100	0	05	55	00
Squid.....	Brls. 19	4	00	76	00
Coarse and mixed fish.....	" 77	2	00	154	00
Fish oil.....	Galls. 39,300	0	30	11,790	00
" used as bait.....	Brls. 4,300	1	50	6,450	00
" " manure.....	" 12,355	0	50	6,177	50
Seal skins.....	No. 9	4	00	36	00
Total value of catch for 1898.....				1,145,361	77
" " 1897.....				870,287	30
Increase during 1898.....				275,074	47

NUMBER and Value of Vessels, Boats, Nets, Weirs, &c., engaged in the Fisheries of District No. 1, New Brunswick, for the Year 1898.

Material.	Value.
	\$ cts.
48 vessels (tonnage 875).....	17,250 00
1,059 boats.....	92,033 00
670 gill-nets (19,989 fathoms).....	7,242 00
289 weir seines (10,796).....	18,400 00
772 trawls.....	7,191 00
315 weirs.....	126,930 00
7 smelt nets.....	70 00
1,406 hand lines.....	777 00
8 lobster canneries.....	18,200 00
23,059 lobster traps.....	19,015 00
8 freezers and ice-houses.....	19,000 00
797 smoke and fish houses.....	136,565 00
278 piers and wharfs.....	46,125 00
11 tugs, steamers and smacks.....	4,875 00
2 sardine factories.....	3,000 00
1 fish-curing factory.....	3,500 00
1 guano factory.....	5,000 00
80 weir scows.....	4,000 00
50 pile-drivers.....	500 00
30 fish-presses.....	3,000 00
Total value of material.....	532,673 00

NEW BRUNSWICK—District No. 2.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., in the District No. 2, Province of New Brunswick, for the Year 1898.

Districts.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						
	Vessels.			Boats.			Gill Nets.			Snellet Nets.			
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.
<i>Restigouche County.</i>													
1 Above Dalhousie	1	28	500	5	36	600	65	50	8000	6000	200	10000	1
2 Below Dalhousie					190	4000	350	85	18000	20000	25	13000	2
Totals	1	28	500	5	226	4600	415	135	26000	26000	225	11300	
<i>Gloucester County.</i>													
1 Beresford, &c.	117	1234	42000	370	410	8500	820	460	40000	23500	44	20000	1
2 Bathurst, Caraquet, &c.	21	246	8000	65	520	15600	720	690	40000	17500	157	57000	2
3 Tracadie, Inkerman, &c.	70	810	35000	232	300	10000	650	500	128000	35000	197	37000	3
4 Miscou and Shippegan Island.	208	2290	85000	667	1580	48600	2990	2200	270000	96000	296	9400	4
Totals													
<i>Northumberland County.</i>													
1 Neguac, &c.	3	39	1650	11	190	3800	270	1250	26000	20000	196	10000	1
2 Bay du Vin, &c.	2	30	800	7	200	10000	550	800	80000	65000	180	8000	2
3 Chatham, &c.	4	94	2800	18	150	4000	150	800	20000	20000	354	21000	3
4 South-west and North-west Miramichi Rivers.					130	2600	130	120	9400	7000			4
Totals	9	163	5250	36	670	20100	1100	2970	140400	112000	730	39000	

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	2	36	950	6	306	11000	560	2580	51600	12900	465	18500	1
<i>Kent County.</i>													
1 Carleton, Richibucto, &c.....	2	36	950	6	306	11000	560	2580	51600	12900	465	18500	1
2 Buctouche, &c.....					400	12000	1000	600	15000	5000	265	12000	2
3 Cocagne, &c.....					200	6000	400	400	10000	3000	65	3000	3
Totals.....	2	36	950	6	906	29000	1960	3580	76600	20900	795	33500	
<i>Westmorland County.</i>													
1 Shediac, &c.....					300	9000	600	600	26000	11000	250	10400	1
2 Botsford, Sackville, &c.....					380	5000	700	500	16000	3000	100	3000	2
3 Dorchester.....					32	1600	64	35	8600	3500	.....	.....	3
Totals.....					712	19600	1364	1135	50600	17500	350	13000	
<i>Albert County.</i>													
1 Albert County.....					4	200	8	10	800	600	.....	.....	1
Grand totals.....	220	2517	91710	714	4068	122400	7837	10120	564400	273000	2396	106200	

RETURN showing the Quantity and Value of Fish, &c.—New Brunswick—Continued.

Number.	DISTRICTS.	KINDS OF FISH.														Number.				
		Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.		Hake, sounds, lbs.	Habibut, lbs.	Trout, lbs.	Shad, brls.
<i>Restigouche County.</i>																				
1	Above Dalhousie.....	75000			100	2000												12000		1
2	Below Dalhousie.....	150000			2000	26000												2500		2
	Totals.....	225000			2100	28000												14500		
<i>Gloucester County.</i>																				
1	Beresford, &c.....	130000	2000		14550	50000	2000	50	42000	40	2500			200			500	5000		1
2	Bathurst, Carquet, &c.....	220000			32000	20000		10	195000	200	38000	50	500	600	1000		20000	10000		2
3	Tracadie, Inkerman, &c.....	69500			16100	60000		50	184000	200	7000	30	100	200	7000		7000	6500		3
4	Miscou and Shippegan Island.....		9000		10500			40	481000	60	18500	50	200	400	10000		10000	1000		4
	Totals.....	419500	11000		73100	130000	20000	150	902000	500	66000	130	600	1100	1600	37500		22500		
<i>Northumberland County.</i>																				
1	Negusc, &c.....	65000	500		4000	30000	20000		48000	50	1800			100	150	1000	1000	2500	50	1
2	Bay du Vin, &c.....	92650			2000	10000	25000	20	70000	80	200			200	300	1000	1000	1000	100	2
3	Chatham, &c.....	80000			100	10000	1500		1500		150							3000	500	3
4	South-west and North-west Miramichi Rivers.....	35000																16000	950	4
	Totals.....	272650	500	10000	6100	40000	30000	20	118000	130	2150			300	450	2000		22500	1600	

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	1	2	3	1	2	3	1	2	3	1	2	3	1		
<i>Kent County.</i>															
1 Carleton, Richibucto, &c.	28000	100	15200	28000	17000	50	250000	150	2800	30	1300	2000	4000	11980	65
2 Buctouche, &c.			10000	9000	1000	20	140600	50	180	30	200	800	500	2300	.....
3 Cocagne, &c.			4000	10000	500	10	72000	50	100	.....	100	.....	.....	1200	.....
Totals	28000	100	29200	47000	177500	80	462600	250	2880	30	1600	2800	4500	15480	65
<i>Westmorland County.</i>															
1 Shediac, &c.	4000		35000	40000	35000	1500	250000	250	50	.....	50	.....	.....	5000	10
2 Botsford, Sackville, &c.			10000	40000	15000	2000	250000	1000	50	.....	.....	.....	.....	4500	400
3 Dorchester	2500		50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3000	1600
Totals	6500		45050	440000	50000	3500	500000	1250	100	.....	50	.....	.....	12500	2610
<i>Albert County</i>															
	3000		250	2000	.....	.....	.....	.....	60	.....	40	.....	.....	7000	200
Grand totals	954650	11600	100000	1558000	687000	100000	272800	250	2008150	2620	650	3040	4850	94480	3875

RETURN showing the Quantity and Value of Fish, &c.—New Brunswick—Continued.

DISTRICTS.	KINDS OF FISH.											Seal skins, No.	Fish as manure, brls.	Fish as bait, brls.	Fish oil, galls.	TOTAL VALUE OF ALL OF ALL FISH.	Number.	
	Smelts, lbs.	Alewites or Gasperan, brls.	Bass, lbs.	Clams, brls.	Beis, brls.	Sardines.	Oysters, brls.	Flounders, lbs.	Tot cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.							
<i>Restigouche County.</i>																		
1 Above Dalhousie	485000				40				20000	100							42870	1
2 Below Dalhousie	350000				100			4000	3000						800		50188	2
Totals	520000				140			4000	23000	100					800		93058	3
<i>Gloucester County.</i>																		
1 Beresford, &c.	6000		2000		50			800	2000						1700		112530	1
2 Bathurst, Caraquet, &c.	460000		20000	1000	300			1200	100000						8000		440640	2
3 Tracadie, Inkerman, &c.	350000	1500	5000	200	450			100	6000	200					5500		190755	3
4 Miscou and Shippegan Island.	250000		5000	100	100				5000	500					4500		243700	4
Totals	1072000	1500	32000	1300	900			1300	113000	700					19700		983625	
<i>Northumberland County.</i>																		
1 Neguac, &c.	680000	100	50000	100	20			3000	10000	800					2000		108634	1
2 Bay du Vin, &c.	610000	170	25000	50	20			6000	50000	200					4000		116600	2
3 Chatham, &c.	1400000	1500	35000	50	30	361000		7000	30000						50		211355	3
4 South-west and North-west Miramichi Rivers.		1250	175000		200												44600	4
Totals	2690000	3020	285000	900	270	366000		16000	45000	1000					6050		481249	

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	1	2	3	8	1	2	3	1	2	3				
<i>Kent County.</i>														
1 Carleton, Richibucto, &c	960000	2800	22500	100	650	500	28000	148000	20	360	1400	3500	2600	242616
2 Buctouche, &c.	580000	1000	1000	1500	200	3500	100000	100000	700	700	60	30.00	2500	185299
3 Cocagne, &c.	145000	500	500	500	100	1000	20000	20000	1000	1000	1000	2000	1500	51735
Totals.	1685000	4300	24000	2100	950	5000	28000	268000	20	1060	1460	8500	6600	428170
<i>Westmorland County.</i>														
1 Shediac, &c.	800000	1200	1500	300	125	150	8000	8000	500	500	100	15000	10000	274210
2 Fotsford, Sackville, &c.	240000	500	4000	150	100	225	10000	10000	10000	10000	20	12000	1000	136196
3 Dorchester					20						60			17718
Totals.	1040000	1700	5500	450	245	375	28000	28000	500	500	180	27000	11000	428124
<i>Albert County.</i>														
1	3000		400		24			30000		50	30			6689
Grand totals	7010000	10520	346900	4050	2529	360000	22675	113000	1732000	20	3410	62050	62000	2427415

RECAPITULATION

Of the Yield and Value of the Fisheries in District No. 2, New Brunswick, for the Year 1898.

Kinds of Fish.	Quantity.	Price.		Value.	
		\$	cts.	\$	cts.
Salmon, fresh.....	Lbs.	954,650	0 20	190,930	00
" in cans.....	"	11,600	0 15	1,740	00
" smoked.....	"	10,000	0 20	2,000	00
Herring.....	Brls.	155,800	4 00	623,200	00
" fresh.....	Lbs.	687,000	0 01	6,870	00
" smoked.....	"	100,000	0 02	2,000	00
Mackerel.....	Brls.	250	15 00	3,750	00
" fresh.....	Lbs.	272,600	0 12	32,712	00
Lobsters.....	Cans.	2,005,150	0 20	401,030	00
".....	Cwt.	2,620	5 00	13,100	00
Cod.....	"	71,290	4 00	285,160	00
" tongues and sounds.....	Brls.	160	10 00	1,600	00
Hake.....	Cwt.	3,040	2 25	6,840	00
" sounds.....	Lbs.	4,850	0 50	2,425	00
Haddock.....	Cwt.	650	3 00	1,950	00
Trout.....	Lbs.	94,480	0 10	9,448	00
Halibut.....	"	44,000	0 10	4,400	00
Smelts.....	"	7,010,000	0 05	350,500	00
Bass.....	"	346,900	0 10	34,690	00
Alewives.....	Brls.	10,520	4 00	42,080	00
Oysters.....	"	22,675	4 00	90,700	00
Clams.....	"	4,050	2 00	8,100	00
Eels.....	"	2,529	10 00	25,290	00
Shad.....	"	3,875	10 00	38,750	00
Squid.....	"	20	4 00	80	00
Sardines.....	Cans.	366,000	0 05	18,300	00
Flounders.....	Lbs.	113,000	0 05	5,650	00
Frost fish.....	"	1,732,000	0 05	86,600	00
Coarse fish.....	Brls.	3,410	2 00	6,820	00
Fish oil.....	Galls.	20,540	0 30	6,162	00
Fish as bait.....	Brls.	62,050	1 50	93,075	00
" manure.....	"	62,900	0 50	31,450	00
Seal skins.....	No.	13	1 00	13	00
Total.....				2,427,415	00

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NUMBER and Value of Vessels, Boats, Nets, Traps, &c., engaged in the Fisheries in District No. 2, **New Brunswick**, in the Year 1898.

Material.	Value.	Total.
	\$ cts.	\$ cts.
220 vessels (aggregate tonnage, 2,517).....	91,710 00	
4,098 boats.....	122,400 00	
564,400 fathoms of nets.....	273,000 00	
2,396 smelt nets.....	106,200 00	
400 bass scoop-nets.....	2,000 00	
3 mackerel trap-nets.....	3,000 00	
67 trawls.....	1,370 00	
2,650 hand lines.....	1,825 00	601,505 00
201 lobster factories.....	125,900 00	
209,960 " traps.....	184,560 00	310,460 00
156 freezers and ice-houses.....	61,300 00	
407 fish and smoke-houses.....	27,180 00	
49 piers and wharfs.....	9,520 00	
172 steamers and smacks.....	20,700 00	
800 smelt shanties.....	12,400 00	131,100 00
Total.....		1,043,065 00

NEW BRUNSWICK—District No. 3.

RETURN showing the Number of Vessels and Boats, Nets, &c., and the Quantity and Value of Fish caught in District No. 3, Province of New Brunswick, for the Year of 1898.

Number.	DISTRICTS.					FISHING VESSELS AND BOATS.					FISHING GEAR OR MATERIALS.					KINDS OF FISH.					
	Vessels.		Boats.			Gill Nets.		Seinees.			Weirs.		Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, smoked, lbs.	White perch, fresh, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Number.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.									Number.	Value.	Number.	Value.
<i>St. John County.</i>																					
1	52	1040	15	210	8400	420	60000	8	400	600	28	11200	45867	450	25000	540	100	1			
2	140	2800	28	60	3600	120	24000	5	375	400	2000	15600	200	200	2500	160	2				
3	80	600	10	60	6000	120	60000	12	480	960	5	2000	76000	250	9000	1600	3				
4	Musquash	.....	.....	38	3040	76	38000	.....	.....	.....	.....	.....	5000	.....	.....	600	4			
5	St. Martin's	.....	.....	35	1750	70	14600	.....	.....	.....	.....	.....	1200	.....	.....	1150	5			
	12	222	4440	53	403	22790	806	202600	25	1255	1960	33	13200	1220	25000	6390	599				
<i>Totals</i>																					
<i>Other Counties.</i>																					
6	King's	.....	.....	150	6000	300	20000	.....	.....	.....	.....	.....	30000	600	.....	.....	6			
7	Queen's	.....	.....	200	2400	400	25000	.....	.....	.....	.....	.....	4500	.....	.....	.....	7			
8	Sunbury	.....	.....	58	1160	116	10000	.....	.....	.....	.....	.....	3000	.....	9000	.....	8			
9	York	.....	.....	110	2200	220	6000	.....	.....	.....	.....	.....	25000	.....	.....	30000	9			
10	Carleton	.....	.....	35	350	70	500	.....	.....	.....	.....	.....	6000	.....	.....	.....	10			
11	Victoria	.....	.....	90	500	180	750	.....	.....	.....	.....	.....	4000	.....	.....	.....	11			
	2	60	1100	6	643	12610	1286	63000	.....	.....	.....	.....	72500	600	9000	30000	.....	.....	.....	.....
	14	282	5540	59	1046	35400	2092	205600	240225	25	1255	1960	33	13200	1820	34000	6390	599			
	<i>Grand totals</i>																				

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RETURN showing the Kinds, Quantity and Value of Fish, &c.—New Brunswick—Concluded.

DISTRICTS.	KINDS OF FISH.														TOTAL VALUE OF ALL FISH.	Number.	
	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Haddock, (smoked fan nan haddes), lbs.	Hake, dried, cwt.	Pollock, cwt.	Trout, lbs.	Shad, brls.	Fresh shad, lbs.	Alewates or gaspereau, brls.	Bas, lbs.	Pickarel, lbs.	Fels, brls.	Sardines, brls.	Smoked alewives, lbs.			Coarse and mixed fish, brls.
<i>St. John County.</i>																	
1 St. John Harbour.....	575	750000	450	700	8000	12000	100	95	300000	2500	132,753 40	1					
2 Dipper Harbour.....	3 2525	3000	175	3	3	375	2000	2000	2500	31,765 00	2						
3 Pisarico.....	370	415	25	250	25	2000	2000	2000	2000	28,563 75	3						
4 Musquash.....	290	250	200	800	200	500	500	500	500	8,988 50	4						
5 St. Martin's.....	350	800	200	11,590 00	500	11,590 00	500	11,590 00	500	11,590 00	5						
Totals.....	3 4110	750000	4915	400	730	8000	12375	100	2095	300000	3000	213,670 65					
<i>Other Counties.</i>																	
6 King's.....	16000	500	16000	30000	400	3000	50	4000	4000	230	250	*17,065 00	6				
7 Queen's.....	7000	7000	7000	1400	40	45	16,690 00	7									
8 Sunbury.....	1000	60	30000	18	35	7,230 00	8										
9 York.....	18000	300	1000	1000	1000	110	14,140 00	9									
10 Carleton.....	15000	25	15000	20	30	3,960 00	10										
11 Victoria.....	20000	30	4000	150	150	3,825 00	11										
Totals.....	77000	1115	500	3200	3000	128	62,910 00	1000	600	250	276,580 65						
Grand totals.....	3 4110	750000	5415	400	77000	1845	8000	139000	228	2045	301000	600	250	3000	600	250	3000

* Note.—In No. 6, add 15,000 lbs. sturgeon and 13 kegs of caviare.

RECAPITULATION

Of the catch of Fish in District No 3, New Brunswick, for the Year 1898.

Kinds of Fish.	Quantity.	Price.		Value.	
		\$	cts.	\$	cts.
Salmon, salted	Brls.	15	15 00		225 00
" fresh	Lbs.	216,167	0 20	43,233	40
Herring, salted	Brls.	1,820	4 00	7,280	00
" smoked	Lbs.	34,000	0 02	680	00
White perch	"	30,000	0 05	1,500	00
Lobster fresh	Cwt.	6,390	5 00	31,950	00
Cod	"	599	4 00	2,396	00
" tongues and sounds	Brls.	3	10 00		30 00
Haddock	Cwt.	4,110	3 00	12,330	00
" finnan haddies	Lbs.	750,000	0 06	45,000	00
Hake	Cwt.	5,415	2 25	12,183	75
Pollock	"	400	2 00		800 00
Trout	Lbs.	77,000	0 10	7,700	00
Shad	Brls.	1,845	10 00	18,450	00
" fresh	Each.	8,000	0 10		800 00
Alewives	Brls.	15,575	4 00	62,300	00
" smoked	Lbs.	301,000	0 02	6,020	00
Bass	"	3,000	0 10		300 00
Pickarel	"	139,000	0 05	6,950	00
Ee s	Brls.	228	10 00	2,280	00
Sardines	"	2,095	1 50	3,142	50
Sturgeon	Lbs.	15,000	0 07	1,050	00
Caviare	Kegs.	13	35 00		455 00
Fish for bait	Brls.	2,500	3 00	7,500	00
Coarse and mixed fish	"	600	2 00	1,200	00
Fish oil	Galls.	250	0 30		75 00
Fish for bait	Brls.	500	1 50		750 00
Total				276,580	65

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RECAPITULATION

OF the Fishing Material in District No. 3, New Brunswick, for the Year 1898

Material.	Total value.	
	\$	cts.
14 vessels (282 tons)	5,540	00
1,046 boats	35,400	00
265,600 fathoms nets	240,225	00
25 seines (1,255 fathoms)	1,960	00
260 trawls	13,000	00
33 weirs	13,200	00
190 hand lines	190	00
85 canoes	850	00
10,700 traps	10,700	00
59 ice-houses	8,700	00
109 smoke and fish-houses	42,800	00
70 wharfs and piers	38,200	00
6 steamers and smacks	3,000	00
Total	413,765	00

RECAPITULATION showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of all Fishing Materials, & used in the Fishing Industry in the whole Province of New Brunswick, for the Year 1898.

Number.	FISHING VESSELS AND BOATS.										FISHING GEAR OR MATERIALS.										
	Vessels.					Boats.					Gill Nets.		Seines.		Trawls.		Weirs.		Smelt Nets.		
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
1	28	500	4600	415	135	2 000	26000														
2	208	2200	85000	667	1580	48600	2980	2290	270000	96000								225	11300	1	
3	163	5260	20400	36	670	20400	1100	2370	140400	112000				45	500			206	9400	2	
4	36	950	29000	6	900	29000	1960	3580	76600	20 000				10	150			730	38000	3	
5	6		19600	712	19600	1364	1135	50600	17500					12	750			795	33600	4	
6			200	4	200		8	10	800	600								350	13000	5	
7	12	222	4440	53	403	22700	806	4050	202600	202600	25	1255	1960	260	13000	33	13200			6	
8			6000	150	6000	300	400	20000	15000												7
9	1	20	300	2	200	2400	400	500	25000	12500											8
10	1	40	800	4	58	1160	116	200	10000	5000											9
11				110	2200	220	120	6000	4000												10
12				35	350	70	10	500	375												11
13				90	500	500	30	1500	750												12
14	48	875	17250	224	1059	92033	1347	670	19989	7242	289	10786	18400	773	7191	315	126930	7	70	14	
Totals	282	3674	114500	987	6203	249833	11276	16100	849089	520467	314	12041	203660	1100	21561	348	140130	2403	106270		

* NOTE.—In No. 2, add 2 trap-nets, \$2,000. In No. 4, add 1 trap-net, \$1,000. † In No. 3, add 400 scoop bass-nets, \$2,000.

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RECAPITULATION showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of Fish, &c.—
New Brunswick—Continued.

COUNTIES.	LOBSTER PLANT.			OTHER FIXTURES USED IN FISHERIES.						KINDS OF FISH.				Number.	
	Number.	Value.	Number of hands employed.	Freezers and Ice Houses.	Smoke and Fish Houses.	Piers and Wharfs.	Tugs, Steamers and Smacks.	Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.				
1 Restigouche	2	1300	3260	15	12100	2	300	1	200	4	1700	225000	11000	2100	1
2 Gloucester	60	43700	80700	54	14200	130	11700	23	7700	154	6000	419500	5600	73100	2
3 Northumberland	12	16400	13000	71	27500	130	11800	11	5000	11	5000	272650	10000	6100	3
4 Kent	56	21500	55000	11	5500	24	1650	21	820	3	8000	28000	100	29200	4
5 Westmoreland	61	43000	58000	5	2000	120	1700	4	800	3	8000	6500	100	45050	5
6 Albert						1	30					3000		250	6
7 St. John			10700	30	6000	63	40000	70	38200	6	3000	143667		1220	7
8 King's				9	1200	15	750					30000		600	8
9 Queen's				10	5000	20	1000					4500			9
10 Sunbury				5	250	6	300					3000			10
11 York				5	750	5	750					25000			11
12 Carleton												6000			12
13 Victoria												4000			13
14 Charlotte	8	18200	23059	8	19000	737	136565	278	46125	11	4875	4850	10000	6284	14
Totals	199	144100	243719	223	89000	1313	206545	397	93845	189	28375	1175167	11600	163854	

* NOTE—Salted barrels.

RECAPITULATION showing the Quantity and Value of Fish, &c.—New Brunswick—Continued.

Number.	COUNTIES.	KINDS OF FISH.																	
		Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Smoked mman had-dies, lbs.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Hallbut, lbs.	Trout, lbs.	Shad, brls.	Number.
1	Restigouche	28000		100		22550	490	100									14500		1
2	Gloucester	130000	20000	45000	150	902000	300	66000	130		600		1100	1600		37500	22500		2
3	Northumberland	40000	30000	46500	20	118000	130	2150					300	430		2000	22500	1600	3
4	Kent	47000		177500	80	462000	250	2880	30				1600	2800		4500	15480	65	4
5	Westmoreland	440000	50000	3500		500000	1250	100		50							12500	2010	5
6	Albert	2000					60						40				7000	200	6
7	St. John		25000				6390	539	3		4110	750000	4915		400			810	7
8	King's												500				16000		8
9	Queen's																7000	700	9
10	Sinbury		9000														1000	6010	10
11	York																18000	30011	11
12	Carleton																15000		12
13	Victoria		8803255	4300		108072	12766	5535			1250000	4465	16997	14430			20000	5013	13
14	Charlotte	20326750															14000		14
	Totals	21013750	8987255	276900	250	2113222	21776	77424	163	1250000	9225	915500	25452	19280	17802	111000	185480	5805	

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RECAPITULATION showing the Quantity and Value of Fish, &c.—New Brunswick—Concluded.

Number.	COUNTIES.	KINDS OF FISH.												TOTAL VALUE OF ALL FISH.	Number.			
		Smelts, lbs.	Alwives or gaspereau, brls.	Bas, lbs.	Pickereil, lbs.	Bels, brls.	Sardines, cans.	Oysters, brls.	Clams, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Coarse and mixed fish, brls.	Fish oil, galls.			Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.
1	Restigouche	520000				140								800			98,058 00	1
2	Gloucester	1072000	1500	32000		900								37000			988,625 00	2
3	Northumberland	2690000	3029	285000		270	365000							6050		4	481,249 00	3
4	Kent	1685000	4300	24000		950								8500		9	429,670 00	4
5	Westmoreland	1040000	1700	5500		245								27000			428,124 00	5
6	Albert	3000		400		24											6,689 00	6
7	St. John		112375			100	2095 brls.							43000			213,670 65	7
8	King's		400	3000		50											17,065 00	8
9	Queen's		1400	40000		40											16,690 00	9
10	Sunbury		1000	30000		18											7,230 00	10
11	York		400	20000		20											14,140 00	11
12	Carleton			15000		20											3,960 00	12
13	Victoria			4000													3,825 00	13
14	Charlotte		11000			3000											* 1,145,361 75	14
	Totals	7021000	26355	349400	142000	2757	{ 1616000 { 171965 brls. }	22675	6311	161700	1733100	4087	60090	68950	75245	22	3,849,357 40	

† NOTE.—In No. 7, some of this bait is rated at \$3 per barrel. Add also 300,000 lbs. smoked alewives.
 ‡ In No. 8, add 15,000 lbs. sturgeon and 13 kegs of caviare.
 § In No. 10, add 30,000 perch. No. 11, add 1,000 lbs. smoked alewives.
 * In No. 14, several items are included not in the columns, see p.

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RECAPITULATION

Of the Vessels, Boats, Nets, and all Fishing Material used in the Fisheries of the whole Province of **New Brunswick**, in the Year 1898.

Articles.	Value.	Total.
	\$ cts.	\$ cts.
282 fishing vessels (3,674 tons)	114,500 00	
6,203 " boats	249,833 00	
16,100 gill-nets (849,989 fathoms)	520,467 00	
314 seines (12,041 fathoms)	20,360 00	
3 trap-nets	3,000 00	
348 weirs	140,130 00	
2,403 smelt nets (bag-nets)	106,270 00	
400 bass nets	2,000 00	
1,099 trawls	21,561 00	
4,246 hand-lines	2,792 00	
199 lobster canneries	144,100 00	1,180,913 00
243,719 " traps	214,275 00	
223 freezers and ice-houses	89,000 00	358,375 00
1,313 smoke-houses, &c.	206,545 00	
800 smelt shanties	12,400 00	
2 sardine canneries	3,000 00	
1 fish curing factory	3,500 00	
1 guano factory	5,000 00	
30 fish presses	3,000 00	
189 tugs or smacks	28,575 00	
80 weir scows and 50 pile-drivers (\$500)	4,500 00	
85 canoes (for fishing purposes)	850 00	
397 piers or fishing wharfs	93,845 00	
		450,215 00
Total		1,989,503 00

Number of Men employed in the Fisheries of **New Brunswick**, 1898.

Men in fishing vessels	997
" boats	11,276
Persons in lobster canneries	5,474
Total	17,747

APPENDIX No. 5.

PRINCE EDWARD ISLAND.

REPORT ON THE FISHERIES OF PRINCE EDWARD ISLAND FOR 1898,
BY INSPECTOR OF FISHERIES J. A. MATHESON.

CHARLOTTETOWN, P.E.I., January 2, 1899.

The Hon. Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries,

SIR,—I have the honour to submit my report of the fisheries of the province of Prince Edward Island for the season 1898, together with a tabulated statement of the yield and value in the different counties. The value of the catch for the island was as follows:—Yield in 1897, \$954,949 45. Yield in 1898, \$1,070,206 70. An increase of \$115,257 25.

MACKEREL.

This branch of the fisheries shows about the same quantity and value as last season, although far short of an average catch, net fishing this season being even worse than last. Our fishermen almost despair of the mackerel again returning to our waters. Were it not for the high price obtained, this fishing would be almost abandoned, thus occasioning a great loss to the province.

OYSTERS.

Notwithstanding the great number of men and boats employed in previous years in this fishery, I find the output for the year 1898 has increased 5,969 barrels, principally due to the large Queen's county catch. The law in reference to small oysters was fairly well observed, but in order to have this regulation work with more beneficial results it will be necessary to place a good man at each of the principal landings to examine the oysters before being barrelled and see that all undersized fish are returned to the beds. This is all the more necessary as the present limit of two inches in diameter is almost too small for the protection of this fishery, and if the size limit cannot be enforced no doubt the results will be disastrous. In Richmond Bay during the summer and fall months, drags have been used by the large boats and although a good many convictions have been obtained against offenders, it is almost impossible to entirely prohibit this means of fishing, the bay being so large that the officers cannot recognize the offenders to secure convictions. It will be hard to compel the discontinuance of the use of drags unless we can have a small tug or boat continuously on the bay. Some new oyster beds have been discovered this season, two small beds at Tracadie, one at Savage Harbour and one at Rustico; these I expect to have examined during the coming summer by Mr. Kemp, the oyster expert.

SMELTS.

This fishery has slightly increased, entirely owing to the extra number of men and boats engaged in this branch of the industry. An extension of ten days was granted, but on account of the irregular crossing of the steamer *Stanley*, by which the fish were transported, the fishermen received no benefit from this privilege.

TROUT.

Tourists as well as our local sportmen have enjoyed good trout fishing this season. The regulations in regard to the dumping of sawdust in our streams and the use of netting, have been well observed and will no doubt improve this branch.

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HERRING.

Large quantities of herring appeared on our coast as soon as the ice left our shores and enough were taken for home consumption and for lobster and mackerel bait, these being their principal use.

Fall herring although of excellent quality, were not as plentiful as usual and were not sought after with the usual vigour.

LOBSTERS.

This fishery did not commence as early as usual owing to the ice remaining on the coast until about the tenth of May, and I regret to say that, although over 30 per cent more traps were used in this industry, the value of the catch has decreased \$14,702.25. This was caused partly by the lateness of the season which prevented the fishermen from getting out their traps as early as usual and principally by the scarcity and small size of the fish. A very small proportion of spawn or berried fish appeared this season owing, no doubt, to the lobsters not being old enough to carry the spawn. Only a few of the larger fish which keep in deep water supply spawn; and I look forward to seeing this industry become, in a very short time, so unprofitable that many will have to abandon it entirely. A large number of the canneries on the west and north sides of the island were closed about the first week in June owing to the scarcity of fish. It takes more traps each succeeding year to catch the average quantity of fish, and I believe that more strenuous efforts must be adopted to retain the present commercial value of this product.

COD.

I am pleased to report an increase of over twenty thousand dollars in this branch of the fisheries. Codfish struck in about the first week in June and continued plentiful throughout the season. The demand being good, prices were well sustained and the fishermen well remunerated for their season's work. Owing to the scarcity of mackerel on this coast, cod fishing will be prosecuted with greater vigour than in the past.

HAKE.

Fishing was much better than for the past two seasons and our fishermen are looking forward with brighter hopes for the future.

Overseer Nolan, of King's County, reports:—The herring fishing showed an increase of two thousand barrels over last year. He believes that the fish were as plentiful last year but were not as much sought after. Mackerel fishing was about the same as last year but far below an average catch. He noticed at East Point and at East and North Lakes, where the American fishing fleet generally fish and where most mackerel are taken by boat fishermen, that there was nearly twice the quantity caught this season as has been for the last three seasons. In his opinion, this fact is due chiefly to the prohibiting of seining. Should the practice of baiting fish around schooners and then catching them with seines be stopped, in the course of a short time, the fishing would again improve. Lobsters are not decreasing much in numbers but greatly in size. If every packer would object to taking lobsters carrying spawn they would eventually reap a decided benefit for themselves and fishermen. Codfish were both larger and more plentiful. All other kinds of fish appeared about as usual.

Overseer Davison, of Prince County, reports:—There was a slight increase in the quantity of oysters but he found great difficulty in preventing the use of drags and the landing of small oysters. The catch of lobsters in Egmont Bay has increased this season owing to the extension of time and to the greater number of men and traps. A large number of traps was destroyed and a number of convictions obtained for violation of the Fisheries Act. Other kinds of fish were about an average catch. A new industry has been started in the shipping of quahaugs to the United States, which has been quite satisfactory to shippers. Through time the export of quahaugs will likely be largely carried on.

Respectfully submitted,

J. A. MATHESON,
Inspector of Fisheries.

PRINCE EDWARD ISLAND.

RETURN showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of all Fishing Materials, and the Kinds and Quantities of Fish caught in the Province of Prince Edward Island, for the Year 1898.

Number.	DISTRICTS.				FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						KINDS OF FISH.					
					Vessels.		Boats.		Gill Nets.		Trap Nets for Perch.		Trawls.		Salmon, smoked, lbs.		Herring, salted, brls.		Herring, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Number.
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.
<i>King's County.</i>																						
1		35	500	8	100	2000	140	300	6000	1800	110	250	200	3000			2900	40000	45	50400	1	
2		60	1250	80	180	3600	80	180	3600	1200	30	60	30	300			1800	30000	20	28656	2	
3		140	3250	360	400	8000	360	400	8000	2700	50	100	50	500			4000		20	120548	3	
4		1	650	4	35	1000	70	100	2000	700							4500	15000	25	44048	4	
5		4	180	16	75	3500	160	225	4500	1200							1500	20000	30	112138	5	
6		12	200	40	125	1800	190	290	6000	1600							2300		25	63168	6	
7		1	30	5	110	3500	300	700	14000	4800							4800	8000	150	91776	7	
8					65	650	130	200	4000	1500							1200		290	63436	8	
9					70	1000	165	240	4800	1600							1300		450	28656	9	
10					30	430	35	150	3000	850							1000		125	34128	10	
Totals		20	475	11800	73	810	1650	2785	55900	17950	190	410	590	6980	8000	23600	105000		1180	642944		
Value															1000	94400	1050		17700	126588		

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RETURN showing the Kinds and Quantities of Fish and Fish Products, &c.—Prince Edward Island—Continued.

Number.	DISTRICTS.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.					
		Cod, dried, cwt	Cod tongues and sounds, brs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or Gaspe-reau, brs.	Bels, brs.	Clams, brs.	Oysters, brs.	Tom cod or frost fish, lbs.			Squid, brs.	Coarse and mixed fish, brs.	Fish oil, galls.	Fish as bait, brs.	Fish as manure, brs.
<i>King's County.</i>																					
1	Souris and Red Point	3500	25	150	2500	5000	2200	2000	500	10	50	3	4000	80	70	3000	1500	100	46,535 00	1	
2	Bay Fortune	1000	10	50	1000	2000	500	4000	6000	5	10	3	2000	50	15	1000	550	30	23,308 20	2	
3	Annandale	750	10	25	550	1100	5000	5000	5000	5			3000	120	35	600	2000	225	51,513 10	3	
4	Georgetown	500	6	400	800	1000	1000	1000	5000				5000	25		500	750	60	32,879 60	4	
5	Murray Harbour, North	600	10	600	1200	1200	1200	1000	15000	8			6000	30		700	1600	100	36,555 60	5	
6	do South	1700	10	300	4550	9100	1000	10000	15000	80	10	2	5000	15		3000	2000	100	48,146 10	6	
7	Morrell and St. Peter's	1400	20	250	700	300	6000	6000	15000	80	10	2	4000	15		1200	2000	100	51,995 70	7	
8	Naufrage	2000	250	150	300	300	6000	5000	1500	18			3000	20	10	700	500	40	25,323 70	8	
9	North Lake	1000	100	150	300	2500	5000	5000	1000	20	20		1000	10	10	400	600	50	17,485 60	9	
10	East Lake	550	100	100	100	100	100	100	1000	25	20		1000	10	10	400	600	50	17,485 60	10	
	Totals	13000	81	975	10250	50500	5200	39200	29000	170	157	90	5	37000	340	140	12100	125000	875	
	Value	52000	810	2925	23062	10250	520	3920	1450	680	1570	180	20	18500	1360	280	3630	18750	875	367,471 30	

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RETURN showing the Kinds and Quantities of Fish and Fish Products, &c.—Prince Edward Island—Continued.

Number.	Districts.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.			
		Cod, dried, cwt.	Haddock, fresh, lbs.	Haddock, dried, lbs.	Hake, dried, cwt.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, lbs.	Clams, brls.	Bels, brls.	Oysters, brls.	Tomcod or frosh, lbs.	Squid, brls.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.
<i>Queen's County.</i>																			
1	Tracadie	1800	12000	5000		500	20000	500	40	325	1500					60		57,967 60	1
2	New London	1500		200	100	500	5000	100	15	10	100					100		35,230 00	2
3	Crapaud						6000									50		10,266 60	3
4	Point Prim	500	1000	10	300	2000	20000	10	10	15	2100	500	20	1000	150	100	20	35,129 60	4
5	Rustico	2000				1000	12000	40	100	40			50	800	700	130		51,336 20	5
6	Charlottetown					1500	10000											650 00	6
7	Wholesale River	1000				100	5000		50	30	3000			80				4,884 00	7
8	Lot 65									5						120		33,725 80	8
9	Pownal															30		6,968 40	9
10	Bays and Rivers					4000	30000	200	200		5000		100					41,000 00	10
	Totals	6800	13000	5210	400	9600	378000	850	415	415	11700	500	170	20	2880	1520	580		
	Value	27200	390	15630	900	960	189000	3400	930	4150	40800	25	680	40	864	2280	580	275,359 20	

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RETURN showing the Kinds and Quantities of Fish and Fish Products, &c.—Prince Edward Island—Continued.

Number	DISTRICTS.	KINDS OF FISH.														TOTAL VALUE OF ALL FISH.	Number.			
		Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Tongues & sounds, brls.	Hardock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Hallbut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alwives or gaspereau, brls.	Beils, brls.	Quahangs, bushels.			Oysters, brls.	Fish oil, galls.	Fish as bait, brls.
<i>Prince County.</i>																				
1	Tignish.....	14,896	1800	50	500	4500	5000	3								2500			60,004	1
2	Nail Point.....	80496	1200		580	500										400			29,789	2
3	Frog Pond.....	75128	844		840	41										100	1254		22,226	3
4	Mrimingash.....	35712	400		500	1529	500				12000					847	1609		13,569	4
5	Alberton.....	110448	100	100							86000						2500		31,739	5
6	Narrows and Lot 11.....	60276	120		45						8100						950		19,900	6
7	Ellerslie Lot 12.....	16272	148								18000						200		27,706	7
8	Grand River.....	25920	600		90						4000						38	640	19,680	8
9	Malpeque.....	960	200	2			100				200						1800	200	17,601	9
10	Richmond Bay.....		100								20689						500	60	26,172	10
11	Boxbury Lot 6.....																50		4,441	11
12	Fifteen Point.....	31496	20								10000							3000	69,399	12
13	Brae.....	23320																600	12,339	13
14	West Point.....	28368	40								10000							250	11,943	14
15	Travellers' Rest.....		10								20000								15,930	15
16	Summerside.....	54472	20								20000								1,740	16
17	Carleton.....	125336									8000								14,051	17
18	Tryon.....																		27,142	18
Totals.....		1150300	35	150	2555	6570	5100	500	3	241489	30	72	3175	14779	4445	17710	200		427,376	20
Value.....		230060	175	450	5748	3285	510	50	30	12074	120	720	952	59116	1334	26565	200			

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RECAPITULATION by Counties showing the Kinds and Quantities of Fish and Fish Products, in the Province of Prince Edward Island, for the Year 1898.

Districts.	KINDS OF FISH.													FISH PRODUCTS.							TOTAL VALUE OF ALL FISH.	Number.
	Salmon, smoked, lbs.	Herring, salted, lbs.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, lbs.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Halibut, lbs.	Trout, lbs.	Shad, lbs.	Number.					
1 King's County	8000	28600	105000	15000	1180	642944	35	13000	81	975	10250	20500	5200	39200	..	1						
2 Queen's County	900	7474	70000	15000	650	546776	39	6800	..	5210	400	..	..	9000	..	1				
3 Prince County	900	13854	76800	11200	398	1150390	35	5572	2	150	2555	6570	5100	500	3							
Totals	8000	44924	251800	26200	2228	2340020	74	25372	83	6385	13200	27070	10300	43300	3							

Districts.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.
	Smelts, lbs.	Alewites or gaspereau, lbs.	Clams, lbs.	Quahangs, bush.	Bels, lbs.	Oysters, lbs.	Tom cod or frost fish, lbs.	Squid, lbs.	Coarse and mixed fish, lbs.	Fish oil, galls.	Fish as bait, lbs.	Fish as manure, lbs.	Seal skins, %.		
1 King's County	29000	170	90	..	137	5	37000	340	140	12100	875	..	..	367,471	30
2 Queen's County	378000	850	415	..	415	11700	500	170	29	2880	1520	..	20	275,389	20
3 Prince County	241489	30	..	3175	72	14779	..	..	..	4445	17710	200	..	427,376	20
Totals	648489	1050	505	3175	644	26484	37500	510	160	19425	31730	1665	20	1,070,206	70

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RECAPITULATION

SHOWING Yield and Value of the different Fisheries in the Province of Prince Edward Island during the Year 1898.

Kinds of Fish.	Quantity.	Price.	Value.
		\$ cts.	\$ cts.
Salmon, smoked	Lbs. 8,900	0 20	1,780 00
Herring, salted	Brls. 44,924	4 00	179,696 00
" fresh	Lbs. 251,800	0 01	2,518 00
Mackerel, salted	Brls. 2,228	15 00	33,420 00
" fresh	Lbs. 26,200	0 12	3,144 00
Lobsters, preserved in cans	" 2,342,020	0 20	468,004 00
" fresh	Cwt. 74	5 00	370 00
Cod dried	" 25,372	4 00	101,488 00
Tongues and sounds	Brls. 83	10 00	830 00
Haddock, fresh	Lbs. 13,000	0 03	390 00
" dried	Cwt. 6,335	3 00	19,005 00
Hake, dried	" 13,205	2 25	29,711 25
" sounds	Lbs. 27,070	0 50	13,535 00
Halibut	" 10,300	0 10	1,030 00
Trout	" 49,300	0 10	4,930 00
Shad	Brls. 3	10 00	30 00
Smelts	Lbs. 648,489	0 05	32,424 45
Alewives	Brls. 1,050	4 00	4,200 00
Clans	" 505	2 00	1,010 00
Eels	" 644	10 00	6,440 00
Quahaugs	Bush. 3,175	0 30	952 50
Oysters	Brls. 26,484	4 00	105,936 00
Tom cod or frost fish	Lbs. 37,500	0 05	1,875 00
Squid	Brls. 510	4 00	2,040 00
Coarse and mixed fish	" 160	2 00	320 00
Fish oil	Gals. 19,425	0 30	5,827 50
Fish as bait	Brls. 31,730	1 50	47,595 00
" guano	Tons. 1,665	1 00	1,665 00
Seal skins	No. 20	2 00	40 00
Total for 1898			1,070,206 70
Total for 1897			954,949 45
Increase			115,257 25

RECAPITULATION

SHOWING the Number and Value of Vessels, Boats, Nets, Lobster Canneries, Traps, &c., used in the Fisheries of the Province of Prince Edward Island, Season of 1898.

Number.	Articles.	Value.	Total Value.
		\$ cts.	\$ cts.
29	Vessels, 658 tons	15,900 00	
3,147	Boats	62,346 00	
4,806	Gill nets, 92,949 fathoms	29,673 00	
1	Trap-net	1,000 00	
205	" for perch	860 00	
10	Seines, 54,440 fathoms	3,350 00	
669	Trawls	7,938 00	
150	Dip nets	260 00	
184	Smelt nets	4,553 00	
2,781	Hand lines	2,174 50	
230	Lobster canneries	126,829 00	128,054 50
284,235	" traps	140,883 00	267,712 00
3	Freezers and ice-houses	200 00	
36	Smoke and fish-houses	5,560 00	
18	Piers and wharfs	16,880 00	22,640 00
2	Steamers and smacks	1,500 00	1,500 00
	Total value		419,966 50

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APPENDIX No. 6.

QUEBEC.

REPORT ON THE GULF OF ST. LAWRENCE FISHERIES FOR THE SEASON OF 1898, BY FISHERY OFFICER WM. WAKEHAM, M.D., WITH SYNOPSIS OF OVERSEERS' REPORTS.

The Hon. Sir L. H. DAVIES, K.C.M.G.
Minister of Marine and Fisheries.

SIR,—I have the honour to present herewith the annual report and statistics of the fisheries of the Gulf division for the season of 1898. In preparing an advance statement to accompany the report for 1897, I had estimated that there would be found a very considerable falling off in the total yield of the season of 1898 as compared with 1897. The result of the tabulated statements, however, shows that the difference was slight, the total value in 1897 being \$1,393,126.40, and in 1898, \$1,381,226.10, or a decrease for the last season of only \$11,900.30. The fishing season opened early, and at first it was thought that we were going to have an abundant return from all the leading branches of the fishery, but as the season advanced complaints were heard in almost all directions that the returns were falling a long way behind an average.

COD.

Cod struck in early in May and though the returns show a slight increase in quantity over the catch of 1897 yet the season was not up to the average. On the north coast the capelin or summer school failed completely. This fishery, which is made along the coast from Natashquan to Blancs Sablons during the months of June and July, is dependent altogether on the movements of the capelin. When the capelin trims along shore and lingers for a few weeks among the bays and islands we are safe to have an abundant codfishing, made altogether inshore and in shoal water, the cod being taken mostly with cod traps or seines. When from whatever cause, the capelin keep off shore, and passes from west to east, and through the straits of Belle Isle, then the summer codfishery, on what is known as the Canadian Labrador, fails. This failure to strike inshore on the part of the capelin occurs every now and then, and generally for two or three years in succession. We have had on the Labrador, for the five or six seasons preceding 1898, fairly good codfishing. It has failed in 1898, and the previous history of this fishery would lead us to expect two or three bad years in succession. Over the rest of the coast the fishery was about as usual, good when winds were favourable, and bait abundant. On the Labrador during the capelin school the cod are taken at the surface, where they school just like mackerel, elsewhere they are taken at the bottom, and this bottom fishery is almost more constant than the surface one.

SALMON.

The salmon net fishery was a fairly good one along the shores of Gaspé and Bonaventure, and on the upper part of the county of Saguenay; below Natashquan, like the cod fishery, it was a failure, due no doubt largely to the same cause, the keeping off shore of the capelin. Whenever the capelin are abundant inshore in the bays and estuaries and among the islands where the salmon nets are fished fishermen are assured of a good salmon net fishing. The salmon do not take to the rivers, but remain playing

about, and feeding on the capelin, which seem to hang by preference about the nets, swimming all through them; as a natural result of this large catches of salmon are made. Instinctively I suppose the salmon feeling that he has a long fast ahead of him, in fresh water, seeks to be well filled before entering his river; thus he follows the capelin off shore, and there remains, until late in the season when he proceeds directly up the river, escaping the coast nets, in fact frequently the main salmon run under such conditions as we had on the Labrador in 1898 only takes place late in July or in August when the nets are up. The salmon catch, in any one, or even a couple of seasons, whether with net or rod, is not a certain evidence of the extent of the salmon run.

HERRING.

Spring herring were everywhere abundant. These fish are mostly taken for bait, especially for the lobster fishery, though at the Magdalen Islands a considerable quantity is frequently carried in vessels to Lubec and other ports on the coast of Maine slightly salted in bulk and afterwards smoked. At one time during the existence of the Reciprocity Treaty with the United States many thousands of barrels of this lean herring were exported from the county of Bonaventure to Boston. This trade was effectually killed by the duty on pickled fish. Summer herring were not as plenty as usual, and the fall fishing for fat herring was a failure over most of the coast. On that part of the coast of Gaspé bordering on the southern shore of the Gulf west of Fame Point fat herring were very abundant for several weeks, and many fishermen devoted all their time to the capture and curing of herring, giving up the cod fishery; unfortunately much of this herring was carelessly cured, and put up in inferior barrels, so that the benefits which should have resulted to the coast were lost. The Labrador herring fishery was a failure.

MACKEREL.

The mackerel fishery, which is now confined entirely to the Magdalen Islands, there being no mackerel seen of recent years anywhere else in the Gulf division, was a fairly good one, the take being almost double that of the previous season. The spring mackerel fishery at the Magdalen Islands is greatly hampered by the practice of setting immense fleets of nets right across the mouth of Pleasant Bay: these nets are set by vessels from Nova Scotia and the United States. The local officer, Mr. Chevrier thinks (*vide* his report) that in the interest of the local fishermen this practice should be stopped, and that a cutter should be stationed at the islands to prevent it. We could of course control it within the three-mile limit, but outside of this, without some international arrangement, I do not see that we could stop it. This being the case, and as much of the fishing is now really done fully three miles off shore, from the Headlands, I do not see that we would gain very much by stopping gill-net fishing in the waters under our control. Our fishermen are on the spot. They should be first on the grounds, and do as others from a distance are doing. The injury to our mackerel fishery in the gulf is not done by any gill net fishing, but by the immense destruction of the large ripe mackerel made by the purse-seine fleet from Gloucester off the Nova Scotia coast in May and the early days of June. Prohibit the use of the purse-seine north off Cape Sable until after June 15, and the mackerel fishery in the gulf will soon improve. The large mackerel which constitute the first run of these fish into the gulf never touch the United States shores, either coming or going, and they first make the land along the coast of Nova Scotia, passing into the gulf round Cape North, in a ripe condition, about the end of May. The Gulf of St. Lawrence mackerel fishery has steadily failed since the introduction of this spring purse seine fishery off the Nova Scotia coast. Previous to this we had of course bad seasons, but never such a decided and continuous failure as we are now suffering from. The Southern spring mackerel fishery, made in March and April, is one the evil of which does not so seriously affect us, though it does to some extent as the second and third runs of mackerel along our coast are fish which come up along the United States shores, and are the remnant that have escaped. These are also spawning

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fish. But the first run of extra large fish, those that are taken in the purse-seine in May, along the coast of Nova Scotia, are distinctly our own—they can be traced from the northern edge of the Gulf Stream over and outside of the Georges, and they first make the land between Cape Sable and the Gut of Canso, thence following closely along shore round Cape North into the gulf. These mackerel are the first to enter the gulf in the spring and the last to leave in the fall, leaving the shores of Nova Scotia, between Halifax and Cape Sable, during November or the early days of December, and passing south by way of the Georges to their supposed wintering grounds along the northern edge of the Gulf Stream. I think we have as much right to insist that these fish be not wastefully destroyed on the way to their spawning grounds in our waters, as our neighbours have to complain about the injury done to their interests by the practice of pelagic seal hunting. In the case of the mackerel they are equally interested with ourselves in the matter, the bulk of the mackerel fishing in the gulf will be done by their own fishermen, and on some of our best grounds, as at the Magdalen Islands, they enjoy the same inshore fishing rights that we do ourselves. I believe that a majority of the United States mackerel fishermen are quite in sympathy with our own men in this matter.

LOBSTERS.

The lobster pack shows a slight increase, 30,856 pounds. This is not due to any improvement whatever in the fishery, but to the fact that 85,775 more traps were fished in the Gulf division. In 1894, 1,168,998 pounds of lobsters were packed in ninety-six canneries fishing with 76,775 lobster traps, employing altogether 1,360 hands. In 1898 the pack amounted to 1,067,058 pounds; to put this up it required 154 canneries, 162,470 traps, and 2,769 hands. Many of these new canneries are small affairs. They are run by men who having learned the art of soldering, at once begin to pack on their own account. As a rule the meat put up in such canneries is not up to the standard. The lobster close season is everywhere absolutely observed in the Gulf division, save at the Grand Entry Lagoon, where considerable illegal packing has been done in the past; this season, thanks to the employment of an active local guardian, but very little illegal packing was done.

In connection with the decrease in the total earnings of the fisheries in the gulf it is well to note that the returns from the Island of Anticosti have greatly fallen off since the purchase of the island by Mr. Menier. Previous to this the island was really looked upon as common property, and hosts of fishermen from all parts of the gulf, used to land on the island, especially along the north side, and prosecute the cod and herring fishery during the summer and fall. These men lived on shore in rough buildings. They cut all the firewood they required on the spot, and did considerable fur hunting, which was mostly done out of season. None of these resided permanently on the island. Now, however, all this has changed. M. Menier will, very naturally, not permit non-residents to carry on fishing from the island; any one complying with M. Menier's regulations may obtain a location, if he becomes a permanent resident, and can then fish if he so pleases. At English Bay and Strawberry Cove where the fishermen have always been residents, and where no changes have taken place under the new ownership, very little fishing is now done, as all hands have found more profitable employment on shore. At English Bay, now rechristened Baie Ste. Claire, where a few years ago only a few rough and straggling cottages were found along the beach, we now find quite a town, built around a large public square, roads have been made, land drained, large farms established with modern equipment and outbuildings, a system of waterworks, hotel, church, shops of all descriptions, a school-house which would serve as a model to many of our towns, and an hospital with a resident surgeon who is also a naturalist. This hospital is fitted with all the modern appliances for antiseptic surgical work, hot and cold baths, and is divided and subdivided so as to furnish wards for all classes and conditions of patients. There is also constantly at work an extensive steam saw-mill fitted with planing, grooving and tonguing machines, and a turning-lathe, from which all the lumber required in the many extensive works now going on is supplied. The logs are cut within sight of the mill. Elaborate

private residences finished in the natural woods, have been built for the governor, surgeon, clergymen and other chief officers. An extensive forge, to which is adjoined machine, paint, plumbing and tinsmith shops, was in course of construction at the time of my visit. All these buildings and many more, such as shops and storehouses, have been built to correspond, and are finished and painted in harmony with the general plan. A good carriage road has been constructed to Ellis Bay, some ten miles away on the southern shore of the island, where is the grave of the reputed pirate of the gulf—Gamache—who was buried on his feet so as to get the start of some of us at the last call. Here at Ellis Bay M. Menier intends to erect a chateau for himself; the stone is now being quarried at various parts of the island. He has also under construction here an immense breakwater, inside of which shelter can be had for a large number of deep draught vessels. Ellis Bay already affords good shelter from any weather, but with a southerly sea outside a heavy swell rolls in, vessels ride safely and without any strain, but with the discomfort of a heavy roll. This will be done away with when the breakwater, several hundred feet of which has already been built, is completely finished. It is M. Menier's intention to begin work at several other points on the island, notably at Fox Bay, where there is already a fair harbour for small vessels, as soon as the present dispute about the rights of squatters is settled definitely. All these extensive building operations, making of roads, lumbering, &c., have been carried out and performed by local labour, either directly from the island or by men imported from Quebec and the neighbouring parishes, and all the material and supplies required for these many extensive works, and for the maintenance of the residents and men employed have been either furnished directly from the island or imported from Quebec and brought to the island in M. Menier's steamer the *Savoy* a vessel of British register, which has been running steadily for several years between the island and Quebec. This steamer being much of the time at the island, and thus being on the spot, has already been of material assistance in several cases of wreck. All the labour employed, whether skilled or ordinary, is Canadian, only four or five of the heads, men in the confidence of M. Menier, being Frenchmen from old France and several of these are in a fair way of becoming naturalized as they are taking to themselves Canadian wives. Thus we see that though the fishing returns of the island have fallen off, the amount of capital and labour employed in developing its other resources have been greatly increased.

I beg to append synopses of the reports of most of the local overseers showing in detail the condition of the fisheries in each of their subdivisions.

SYNOPSIS OF THE REPORTS OF THE LOCAL FISHERY OFFICERS.

Restigouche Subdivision extending from Tide Head to the Point of Maguasha. Mr Charles Brown reports an average salmon catch. The total yield was not up to that of last season, but this is more than accounted for by the fact that three of the upper stations having been leased to the Restigouche Salmon Club were not fished. Salmon ran in early in May, before many of the nets were set. The main river and its tributaries are all well stocked with breeding fish.

The smelt fishery was a good one, the yield amounting to 266,642 pounds, being a considerable increase over catch of the last season. This fishery is being prosecuted with increased vigour each year. So far there are no signs of any diminution in the runs of the fish. There are no fishways in the subdivision, and none are needed.

Carleton Subdivision, extending from Maguasha to the Grand Cascapedia River. Mr. James Green reports that the salmon fishing was below the average. He attributes this to the stormy weather in June by which many of the nets were washed ashore during the best of the run. Spring herring were abundant, and the catch of fat fall herring was considerably above an average. Cod were plenty, and all those who engaged in this fishery did well. There is at present only one small lobster cannery in operation in this subdivision, engaging a couple of hands. These made fair fishing at the start, but the lobsters gave out early.

Bonaventure Subdivision extending from the Grand Cascapedia River to Paspebiac. Overseer George Forest reports a considerable increase in the general yield of

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the fishing in his district. The number of salmon net stations was increased by the licensing of two new berths. Spring herring were very abundant, but fall herring were scarce. Cod were very plenty, and owing to the fine weather in the fall fishermen were able to continue fishing late into November. The returns show a slight increase in the lobster pack, but this was due to the establishment of an extra cannery and not to any increase or improvement in the lobster fishery, which continues steadily to fail.

Port Daniel Subdivision extending from Paspébiac to Point Macquereau. Overseer F. X. Chapados reports a slight falling off in the catch of salmon, but an increase in the lobster pack. This latter was entirely due to the use of a larger number of traps. Summer codfishing was poor, but in October and November the fish struck in abundantly, and the fishermen did well. Herring were not as abundant as usual.

Grand River Subdivision, extending from Point Macquereau to the Barachois of Mal Bay. Overseer John Keays reports an increase in the salmon catch of about one-fourth more than last season. The codfishery was not quite up to that of 1897. This was due to a scarcity of bait, herring and squid not being at all constant. The smelt fishery opened well in October, but fell off greatly in November so that the catch is not up to the average. The returns show a slight increase in the lobster pack.

Gaspé Subdivision, extending from the Barachois of Mal Bay to Cape Rosier. Overseer Walter Langlois reports an increase of 46,810 pounds in the yield of the salmon net fishery as compared with 1897. Herring were abundant. Cod fishing began on the 22nd May, and continued fair up to the 15th August, between this date and the early part of September the fishing was slack, towards the middle of September the fishery improved and continued good until the 16th October, when a heavy north-east gale struck the coast, after this very few fish were taken. During this gale twenty fishing boats and ten flats were totally lost at Point St. Peters. Mr. Langlois was requested by the fishermen of Point St. Peters to call attention to the necessity for a breakwater at this place for the protection of fishing boats. This is a large fishing station, and it is not the first time that serious loss has occurred here by the destruction of boats on the moorings. The lobster catch shows an increase of 13,470 pounds; this is altogether due to the opening of four new canneries, otherwise the pack would be below the average. The smelt fishery shows a slight falling off; this was due to the prevalence of strong northerly winds during the open season. These winds kept the smelt off the usual seining grounds.

Fox River Subdivision, Cape Rosier to Fame Point. Overseer Moise Aspireau reports that the cod fishery was fairly good through what is known on the coast as the summer fishing, that is from the opening of the season up to the 15th August; during the fall, however, the fishery failed. Herring were abundant in summer and spring, but scarce in the fall. The lobster pack shows a falling off of nearly two-thirds though the number of traps fished was in excess of last season. Capelin were scarce, these fish have now almost disappeared from this part of the coast.

Mont Louis Subdivision, Fame Point to Marsouis. Overseer Louis Letourneau reports that the return from the lobster fishery was small, one of the two canneries operating in the subdivision had to close down early in June owing to scarcity of fish. The salmon fishing was a good one and the prices obtained by the fishermen were higher than usual. Herring were abundant in the western part of the district, but scarce in the eastern end. Cod struck in May, and the fishery began well, but it slacked off as the season advanced, and on the whole was below the average. Salmon fly fishing was good in the Magdalen, and now that the Mont Louis River is being protected, salmon are rapidly increasing in it.

St. Anne's Subdivision, Marsouis to Cape Chatte. Overseer Didace Bouchard reports the salmon net fishery as having been good. Salmon were abundant in the St. Anne's River, over four hundred having been taken with the fly. The cod fishery was also a success, it lasted late into the fall, fish having been taken up to November 25. Herring were abundant, but as usual these last years they were frequently driven off by the white whales. Mackerel and capelin seem to have completely disappeared from this part of the coast.

Godbout Subdivision, Manicouagan to Jambons. Overseer N. A. Comeau reports an increase in the catch of salmon of over ten thousand pounds; the fly fishing was also

good. The return from the cod fishery was considerably below the average. The herring fishery gives a return of over 900 barrels, which for this subdivision is considerably above an average. The winter and spring seal hunt was not quite as profitable as that of 1897. One small lobster cannery was operated at Cawees; here the pack was slightly better than for either of the two preceding years.

Moisie Subdivision, Jambons to Pigou. Overseer Théotime Migneault reports that the first salmon was taken in the Moisie nets on May 17, the fishing continued good up to the end of June, the nets were taken up on the 8th July. One hundred and ninety-nine salmon, weighing 3,980 pounds, were taken by five rods during a short season on the river. The return from the codfishery is considerably below the usual yield, fewer boats and vessels were engaged in the fishery and stormy weather in August kept the boats in harbour during fully half the time. Mackerel missed entirely. The spring herring fishery was good, but in the fall this fishing failed.

Mingan Subdivision, Pigou to Watsheeshoo. Overseer George DuBerger reports an increase of 2,460 cwt. in the returns from the codfishing, the increase was entirely at the western end of the district, at Esquimaux Point in the eastern end the catch was poor. The salmon net fishing was good, upwards of 40,000 pounds having been taken in the estuary of the St. John's River; this was considerably more than an average catch. The spring seal hunt on the ice in April was better than in 1897, but this fishery is being gradually abandoned as the vessels which formerly engaged in it are lost, or become no longer seaworthy, they are not replaced. Bait was not so abundant as usual, and a great deal of time was lost during the season owing to the difficulty of procuring the bait which is absolutely necessary to the cod fisherman.

Natashquan Subdivision, Watsheeshoo to English Point. Overseer John W. Scott reports the seal fishery as showing a small increase over that of 1897. The salmon net fishing was not as good as usual. The codfishing shows a falling off of 65 per cent, due entirely to the fact that the capelin did not strike inshore in June and July as usual. The herring missed entirely, not one barrel being taken, whereas in 1897, the catch amounted to 700 barrels. The lobster pack shows a small increase owing to the fact that several new canneries were in operation.

MAGDALEN ISLANDS.

Southern subdivision—Entry, Amherst and Grindstone Islands.

Overseer J. A. Chevrier reports: That the spring seal fishery was a complete failure; owing to the low price of oil this industry is being gradually abandoned. Spring herring struck in Pleasant Bay in great abundance, and as the weather was fine, and a large fleet of vessels from the Maritime Provinces and the United States visited the islands in search of bait the local fishermen did well. Spring mackerel were abundant and the catch was better than in 1897, but there is no doubt that the local fishermen would have done much better had it not been for the immense number of gills set from foreign and other fishing schooners off the mouth of the bay. These nets completely block the entrance of the bay. The practice of dressing the fish, taken in these nets, on the fishing ground must also be detrimental. Mr. Chevrier advises that a cutter be stationed at the Magdalen Islands from the beginning of the herring fishery until the close of the spring mackerel fishing to prevent all this. Cod fishing was good, but it is not now very generally engaged in at the islands. The fat or fall mackerel fishery was good. This was due largely to the fact that during the season of this fishery the weather was fine.

The lobster fishery, which is one of the principal industries of the islands shows a decrease, and this in spite of the fact that many new canneries are being established. No illegal lobster fishing took place in the southern division of the islands.

Northern subdivision—Allright Half, Bryon and Grosse Islands.

Overseer Procul Chevrier reports: The spring seal hunt a failure at all the islands, except Bryon, where the ice having been jammed on shore, a fairly good hunt was made

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by fishermen from the shore. Spring herring were abundant at all the islands and during the spawning season which lasts for a couple of weeks in May, there was no end to the quantity that could have been taken. Spring mackerel were plentiful but not many were taken in this subdivision. Cod were also abundant, but very few men engaged in this fishery. The fall mackerel catch was good, fish were plentiful and the weather was fine. The lobster pack continues to show a falling off in spite of the fact that more traps are being fished each season.

The whole humbly submitted.

W. WAKEHAM,
Officer in charge of the Gulf Division Fisheries.

SYNOPSIS OF FISHERY OFFICERS REPORTS IN THE INLAND DISTRICTS
OF QUEBEC—(EXCLUSIVE OF GULF DIVISION.)

SOUTH SHORE, RIVER ST. LAWRENCE, FROM CAPE CHAT TO POINT LÉVIS.

Overseer F. Marin, of Ste. Félicité, reports a considerable increase in the general value of the fisheries of his district, chiefly noticed at Capucins, Ste. Félicité and Sandy Bay. Of recent years, cod has been quite plentiful off the coast of Rimouski county as far up as Rivière Blanche. This season's catch was even better than the previous one, but towards the end of the summer the belugas (white whales) seemed to scare them away. Herring was very plentiful and good catches were reported along the coast, especially at Sandy Bay, where the want of curing implements alone prevented a larger supply being secured. Although salmon seemed as plentiful as ever in Matane River, they did not take the fly and the anglers captured but few. The other fisheries produced an average result. He has no direct violations of the fishery regulations to report. The fish at this district is mostly used in the county, but some shipments were made to the Saguenay districts and elsewhere. The value of the total yield is given at over \$34,000, an increase of 50 per cent over the previous one.

Overseer Zéphirin Lavoie, who has charge of the upper end of Rimouski county, states that the yield of the fisheries in general is constantly declining and that shad and mackerel are a thing of the past. The regulations were fairly observed. The staple fish of this district is evidently herring, of which nearly over 800 barrels are reported salted, besides four million pounds fresh, not including the 800 barrels of sardine herring. The total value of catch is estimated at \$46,000.

Overseer Alphonse Côté, who had charge of the county of Temiscouata, after having visited his whole division, reports that fish are generally becoming scarcer and scarcer. In the spring a large quantity of herring is caught as well as some coarse and mixed fish which is hardly used for anything but for fertilizing purposes. Salt herring and most all other fish caught here are used in Canada, excepting sardines, which are exported to United States. Quite an industry is carried on by fishing for smelts through the ice with hooks, especially on Isle Verte River. This is about the only kind of fish which does not show signs of depletion. At Cacouna a fisherman caught \$30 worth of seals in his fishery. He observed how voracious these animals were, attacking and destroying other fishes—even salmon were killed by them. He could only secure the small ones as the large ones would break through his fishery and escape. Next season he has a scheme by which he hopes to capture all that will enter his fishery. He also visited Lake Temiscouata which is within his district. Where formerly 400 barrels of whitefish were caught, only fourteen are reported this year. This falling off is ascribed to the high dam built about ten years ago on the Madawaska River, the outlet of Lake Temiscouata, at Edmundston, N.B. Since the construction of the said dam, old fishermen have noticed a steady decline of the fish supply as it is still unprovided with a fish-pass. He also noticed considerable sawdust in that stream, sufficiently to injure fish life. He was

informed of illegal netting in these inland lakes, but was neither able to catch any in the act of fishing nor secure evidence leading to a conviction. Reliable local guardians should be located at or in the vicinity of Temiscouata Lake to check this alleged poaching.

The whole value of the fisheries is made up at \$28,000, a decrease of over 25 per cent as compared with last year's product.

Overseer George Sirois, who had charge of Kamouraska county, also reports a general diminution in the fisheries of his locality, which he attributes to the scarcity of fish. This was particularly noticeable and regrettable in the case of the sardine cannery at St. André, which was compelled to cease operations, owing to the want of the fish supply. The different fishery regulations are reported well observed.

Overseer Ephrem Gagnon, whose division extends to Point Lévis, states that he visited all his fishermen and endeavoured to secure a correct statement of the true yield of the 155 fisheries under his charge. Of these, 40 were *pêche anglaise* or wire netting pound, under license, but the remainder were eel weirs, and paid no fees. Eels, which are the staple fish of this division, (over 375,000 pounds being caught) were as plentiful as last year, but the yield might have been larger had the weirs not been destroyed and brought ashore by a terrific gale in the fall. Fishermen then thought it was too late to reset them again. Very few salmon are now seen in this district, hardly 500 pounds being returned as the whole season's catch. Smelts were also very scarce. The whole yield, valued at about \$27,000, is used for local consumption and for the Quebec market. The fishery regulations were well observed. A single infraction of illegal netting without license came to his notice, the net was confiscated and sold. There were a few complaints respecting the throwing of sawdust in the streams of his district.

NORTH SHORE, RIVER ST. LAWRENCE FROM QUEBEC TO BERSIMIS.

Overseer Joseph Pouliot, who has charge of the county of Montmorency including the Island of Orleans, states that the fisheries in that locality are gradually declining. The salmon and shad fisheries were complete failures, only 300 pounds of each being reported, while a few years ago it was no rare occurrence to see a single fishery capture five and six hundred shad in one tide. Pickerel, whitefish and barfish are also disappearing, and their catch is annually lessened. Eels are about the only kind still yielding an average catch. Mr. Pouliot visited all the fisheries of his district (over 100). Some of them are built with brushes, laths or wire netting, while others are partly brush and partly wire. Some were paying licenses and others were not. As salmon are no more taken in paying quantities, these *pêches* are set later in the season, mostly for eels during the fall. The total yield of this division is valued at \$10,500, a falling off of one-third from last year's catch.

Overseer U. Bhercur, of Charlevoix county, also reports a falling off in the yield of their fisheries. A considerable quantity of speckled trout is caught in the lakes of that county. Six belugas or white whales were captured yielding over 300 gallons of oil.

Overseer L. N. Catellier, of Tadoussac, reports the catch of salmon in his district to exceed 100,000 pounds, mostly caught by the net fishermen, as anglers fared badly this season. The salmon arrived nearly three weeks earlier than usual, the water being high, the fish had reached the upper waters before the arrival of the sportsmen. The net fisherman holding license for his station considers it as a part of his estate and is a careful observer of the regulations. All the salmon caught by the netters in this division is shipped to Montreal and Quebec, while the produce of the brush weirs is more used for domestic or local consumption. There was not so much illegal fishing in the Saguenay River as during the previous year, but there was some still. Mr. Catellier reports the capture of nearly 200 belugas (white whales); the total value of which catch is given at \$31,000, an increase of 80 per cent over that of 1897.

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INLAND DISTRICTS.

Megantic and Sherbrooke divisions.

Overseer Allan McLeod, who had charge of Lake Megantic district, reports a very prosperous fishing season. Fish are still as plentiful there as ten years ago. These waters, being admirably situated and of easy access, draw a large number of tourists and sportsmen from the vicinity as well as from the neighbouring Republic. These strangers are of considerable benefit to the settlers, whom they employ as guides and helps in their fishing and hunting trips, besides supplying the former with food. Mr. McLeod is of opinion that the close time for lunge, the principal fish of Lake Megantic, should commence earlier, as by September 20th they are congregating on their spawning beds and it is too bad to disturb them after that date. Lake Megantic shores are now mostly inhabited, thus rendering poaching an easy matter but difficult of detection, as settlers will not inform on one another. He visited the dams on the different streams in the vicinity of this large lake. Several new mills were erected during the season. He seized thirteen gill-nets and destroyed them, but was unable to prosecute the owners for want of direct evidence.

Overseer John McCaw, who had charge of the Sherbrooke district, reports less poaching and illegal fishing than during the previous years. He complains that inadequate protection is given to the beautiful waters of the Eastern Townships now so attractive to sportsmen.

Magog and Brome.

Overseer Hugill Ball, who has charge of the western side of Lake Memphremagog, states that more lunge were caught than during the previous season, although the yield was not up to that of former years. Fish were abundant on the spawning beds, appearing there as early as October 10. With the assistance of a reliable guardian, the close seasons were strictly maintained. One boat was confiscated and two offenders fined.

Overseer C. G. Boyenton, who has charge of the other side of Lake Memphremagog, reports considerable illegal fishing with nets during the open season, but he did his best to check it with the little assistance he had at his disposal. He is of opinion that net or seine fishing might be allowed for whitefish in some parts of the lake and at certain times of the year. As these whitefish do not take the hook, it might prove beneficial to grant such permission to the settlers who otherwise might become poachers, and the fishery laws might therefore be better respected. Such privileges are granted to United States citizens at the southern end of this lake, which is Vermont State, where whitefish seem more plentiful than lunge.

Missisquoi Bay.

Overseer P. E. Luke, who has charge of Missisquoi Bay, states that the large catch of pickerel would have been even larger had not the ice moved so early in the spring. For some unknown reason whitefish did not put in an appearance as usual, thus rendering fall fishing very unprofitable. The whole catch is shipped to New York and Boston. The close seasons are reported well observed. This officer seized a schooner for illegal fishing in June, and in the fall he confiscated a gill-net on the east side of the bay.

Richelieu River.

Pierre Levesque, who has charge of the upper part of Richelieu River, states that the general yields of fish has considerably fallen off owing to the restrictive measures recently adopted limiting and curtailing the fishing implements. For instance, only forty-six hoop-nets were used against 130 during the previous season. Eels are the staple fish of this district and large quantities were taken. Mr. Huot, owner of the two large eel fisheries in this stream, captured 65,000 pounds alone. Should these restrictions be continued in force angling would soon improve, and the majority of the people would welcome any such beneficial changes. The fact that he seized thirty-one hoops-nets and four seines is adequate proof that considerable illegal fishing was attempted, but these seizures

with the five fines imposed had a salutary effect. Fortunately the waters of the Richelieu remained high in the spring, thus allowing the fish facility to ascend the small tributaries for the purpose of spawning. Nearly five-sixths of the catch is exported to the United States.

Overseer J. O. Dion, of Chambly, reports an increased yield of the fisheries below the Chambly dam on the Richelieu River. This result he ascribes to the very dam itself, as the fish cannot now ascend above it. The big eel fishery in the vicinity of Chambly canton was a complete failure and the licensee did not realize sufficiently to pay the fee; however, the small eel fisheries captured as many as usual.

Coarse fish, especially carp, comprises the largest part of the catch; however, he reports 7,000 lbs. of bass and pickerel. Some of the licensed fishermen of the Sorel district came down the river as far as St. Ours; infringing on his limits. He hopes it will not be repeated another season. Having heard that spearing was practised in some parts of his district, Mr. Dion went and had this illegal practice stopped. He notified all interested parties that no seining would be allowed next spring. The total value of the fisheries of both the above divisions only amounts to \$7,300.

Beauharnois and Chateauguy Divisions.

Overseer W. H. Dewitt reports an increased catch of bass, pickerel, perch and eels but a falling off in that of sturgeon. About 85 per cent of the yield is shipped to Montreal markets and the remainder used in the locality. He would approve of restricting the use of seines in that part of Lake St. Louis. The close seasons were well observed. Millowners also complied with the regulations. Carp are getting so plentiful that it is recommended seining should be allowed in the small streams, where they no doubt ascend to spawn.

Overseer J. D. McMillan, who has charge of the south side of Lake St. Francis, also reports an improvement in pickerel, maskinongé and perch and a shortage in sturgeon. The former is ascribed to the prohibition of seines and hoop-nets in those waters, and the latter to the high winds in the autumn when sturgeon lines were set. The existing fishways are in good order but where most needed there are none, especially at Dewittville. Millowners do not now allow their sawdust to drift in the streams. The proximity of these waters to the United States make them quite a summer resort and a great many tourists visit them every season.

Montreal Division.

Overseer John Morris states that the catch of fish was fair in the early part of the season but that it did not last long. The quality of the soft fish was not up to the average. The different regulations were fairly well observed; very few infringements came to his notice. The total value of the yield does not reach \$4,000.

Verchères Division.

Overseer Chas. Robitaille reports a surplus over the preceding catch. There was considerable poaching in the vicinity of Contrecoeur Islands and at Bout-de-l'Île; at each visit there, he always seized and destroyed several hoop-nets and gill-nets, but he does not seem to have detected their owners. He did his best to prevent the capture of small or young fish. Seining should not be permitted between June 15 to September 1, according to this officer, as it is difficult during the hot weather to preserve fish, especially soft fish, in good condition. This step would prove beneficial to every one concerned, the fishermen as well as the consumer.

Nicolet Division.

Overseer Geo. Boisvert states that most of the fishermen seek to underestimate their catch, thinking thereby to secure the abolition of the license system, but by taking notes at different times, it enables him to obtain a fair estimate of the yield. He noticed that not only were fish actively sought after, but that they seemed of a larger size, especially sturgeon and shad. Most of the catch is shipped to Montreal, Sherbrooke and Three Rivers. He watched closely during the prohibited times but detected no poaching. There is a saw-mill at Becancour which should be provided with a fish-ladder, as it completely bars this stream. In fact, there are no fishways at all in his division. He

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recommends the special marking of all licensed implements, to facilitate the detection of illegal ones by the officers. The principal abuse complained of is the use of small mesh seines in isolated spots destroying immatured fish. The total catch is valued at over \$6,000.

Maskinongé and Berthier Divisions.

Overseer Gabriel Caron reports a larger catch than the preceding one, but the fish were of a smaller size. This increase is openly ascribed to excessive and illegal fishing. The fact that this overseer destroyed 162 unlicensed hoop-nets is evident proof of the amount of poaching carried on in this part of Lake St. Pierre. Some fishermen take license for one or two *verveux* and use from six to ten.

He also urges that all licensed implements be distinctly so marked. The undersized fish is not shipped to Montreal, where the markets are closely supervised by Officer Riendeau, but they are sent to neighbouring markets towards Quebec. He ends his report by saying that he considers seining the most destructive of all modes of fishing, as the seines when drawn in small bays, where fish have deposited their eggs, must disturb and destroy them.

Ottawa River Division.

Overseer Doisithé Chenier, of Hull, states that although the number of licensed fishermen was less than in 1897, still the season's yield surpasses the previous one. This is particularly noticed in Lake Deschenes where large quantities of pickerel, sturgeon and catfish were captured. The fish of that lake are of a larger size and their abundance is ascribed to the protection it has received and to the absence of sawdust and rubbish from its clear waters, contrasting with the nuisance experienced in the lower Ottawa where fishermen spend half their time in cleaning their nets by removing the accumulated rubbish. The Buckingham Mills also throw every débris in the water, and every time he passed the Lièvre River he noticed it full of mill refuse as well as the neighbouring bay where it is allowed to accumulate to the detriment and against the protestations of the regular fishermen who are loudly complaining. Considerable illegal fishing was done in the spring by unlicensed fishermen when the water was high. These poachers sell their catch in small villages, fearing detection if they come to town.

St. Lawrence River.

Overseer Joseph Riendeau, of Montreal, supervises that part of the St. Lawrence River extending from Lake St. François to Lake St. Pierre. He says it is almost impossible to even make an approximate of the quantity of fish caught as so much of the yield is disposed of in the interior of the province and not accounted for by the overseer. In his frequent visits to the different fishing districts he seeks not only the protection of the fisheries, but also that of the fishermen themselves. In many instances, well-to-do farmers and even merchants succeed in obtaining licenses, to compete with the poor fisherman whose only means of a livelihood is fishing. Sometimes these rich applicants do not even pay fees. The overseer of a district should be able to discriminate who are the deserving and real fishermen to whom this calling is of material benefit, and to those alone should licenses be granted. He finds that the respective districts under the charge of one overseer are generally too large for one person to protect alone unless his whole time was devoted to it, otherwise there is always more or less poaching carried on. On one of his visits to Isle Perrot he caught and arrested four individuals seining without licenses. Thinking a sufficient lesson had been given, they were subsequently released as they were too poor to pay fines. The most illegalities are perpetrated in Lake St. Peter and within a few weeks he seized and destroyed no less than 300 hoop-nets with small meshes or long wings, and then he believes there were over one thousand hoop-nets then fishing in the lake. These wings are very injurious for small fish and should be prohibited, or at least limited. Mr. Riendeau is of opinion that the tar applied to these *verveux* is very harmful, as he claims that fish caught in such nets are partly poisoned and soon become unfit for food although placed on our best markets.

Mr. Riendeau remarks that game fish are openly sold on the Quebec City markets during their close season without apparent hindrance. Some one should be deputed to supervise the markets of such a city under the very shade of the Provincial buildings.

PROVINCE OF QUEBEC—Gulf of St. Lawrence District.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, and the Quantity and Value of all Fishing Materials and other Fixtures used in the Fishing Industry in the County of Bonaventure, Province of Quebec, for the Year 1898.

RESTIGOUCHE SUBDIVISION (Tide Head on the Restigouche to Maguasha).

DISTRICTS.	FISHING BOATS.			FISHING GEAR OR MATERIALS.								KINDS OF FISH.					
	Number.	Value.	Men.	Gill Nets.		Seines.		Trawls.		Hand Lines.		Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Number.
				Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.							Number.	Value.
<i>Bonaventure County.</i>																	
1 Restigouche	53	\$ 795	100	30	6000	4000						41900	50	8000			
	72	1020	144	100	2400	1700	3	120				8500	220	1000		1	1
2 Carleton	125	1660	210	250	5000	2500	20	600				26	400	6000		12	2
3 Maria	155	2060	360	350	6000	2700	15	450				75	340	3000		13	3
Totals	352	4740	714	700	13400	6900	38	1170				150	960	10000		2	2
CARLETON SUBDIVISION (Maguasha to Maria).																	
1 New Richmond	16	160	24	50	800	300								110	1500		1
2 Capelin and Black Capes.	164	1760	194	365	7800	4150	10	300				40	30	7000		3000	1
3 Bonaventure.	250	3460	375	500	10000	5000	54	1400				35	5	14539		6000	2
4 New Carlisle	40	450	60	90	1650	900	20	600				75	100	15000		2000	3
5 Paspebiac.	170	2750	300	340	6120	3400	30	900				27	150	5000		2000	4
Totals	640	8580	953	1345	26370	13750	114	3200				150	500	6000		6000	5
												372	2750	34500		37000	
BONAVENTURE SUBDIVISION (New Richmond to Paspebiac Point).																	

RETURN showing the Number and Value of Vessels, Boats and Fishing Materials, &c.—County of Bonaventure—Continued.
 PORT DANIEL SUBDIVISION (Papebiac Point to Point Maquereau).

DISTRICTS.	FISHING BOATS.			FISHING GEAR OR MATERIALS.								KINDS OF FISH.					
	Number.	Value.	Men.	Gill Nets.		Seines.		Trawls.		Hand Lines.		Salmon, fresh, lbs.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Number.	
				Number.	Value.	Number.	Fathoms.	Number.	Fathoms.	Number.	Value.						Number.	Value.
<i>Bonaventure County—Concluded.</i>																	
1 Papebiac	38	1500	63	40	780	776	7	165	35	400	130	80	3000	190	.....	1
2 Nouvelle	40	1250	119	65	1150	1105	9	240	192	20	200	70	2200	250	.....	2
3 Shegawake	53	1280	80	80	1450	1380	6	180	144	.....	160	90	300	300	.....	3
4 Port Daniel	166	4980	240	180	3400	3950	18	460	368	60	450	480	23594	500	1000	4
5 Anse & Gascon	145	4500	216	200	3900	3870	20	480	384	100	950	220	6518	550	.....	5
Totals	442	13510	718	565	10680	11081	60	1525	215	2000	1322	700	35312	1790	.....	.....
Grand total	1487	27625	2485	2640	56450	35731	212	5895	341	2630	2712	1183	152686	5550	52500	54000	2

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RETURN showing the Number and Value of Vessels, Boats and Fishing Materials, &c.—County of Bonaventure—Continued.

PORT DANIEL SUBDIVISION (Paspébiac Point to Point Maquereau).

DISTRICTS.	KINDS OF FISH.														TOTAL VALUE OF ALL FISH.	Number.									
	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Trout, lbs.	Smelts, lbs.	Eels, brls.	Flounders, lbs.	Tom cod or froet fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.					
<i>Bonaventure County.</i>																									
1 Paspébiac.....	24864		600	5		50	12						12		450	200	300							9,592 80	1
2 Nouvelle.....			480	4		15	10						15		350	150	280							3,997 50	2
3 Shegawake.....	9408		670			8							8		525	200	300							6,425 10	3
4 Port Daniel.....	30888		2400	8		150	40		14000				120		1670	750	450							26,167 40	4
5 Anse à Gascon.....	4176		3400	83		160	60						200		2800	850	500							22,548 80	5
Totals.....	69336		7550	100		383	122		14000				355		5795	2150	1830							68,731 60	
Grand total.....	89520	116	16125	125	12000	468	122	10900	296342	86	30570	51800	855	800	8009	4178	38830							192,636 50	4

RETURN showing the Number and Value of Vessels, Boats and

County

GRAND RIVER SUBDIVISION

Number.	DISTRICTS.	FISHING BOATS.			FISHING GEAR OR MATERIALS.								
		Boats.			Gill Nets.			Seines.		Trawls.		Hand Lines.	
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.
	<i>Gaspé County.</i>		%			\$			\$		\$		%
1	Newport	130	3800	290	245	4 50	1950	7 220	200	83	950	820	535
2	Pabos	52	910	112	91	1390	758	4 110	90	16	180	261	211
3	Grand River	154	6500	390	390	8945	3600	4 150	60	130	1450	700	370
4	Cape Cove	179	5000	426	366	7490	2610	8 230	135	131	1440	1364	2840
5	Percé	98	4500	196	210	4560	1840	3 120	75	.....	.....	1400	1050
6	Bonaventure Island	33	1000	60	70	2560	650	.....	.....	.....	.....	200	120
7	Corner of Beach	28	1100	5	80	2890	1160	9 225	180	.....	.....	125	88
	Totals	664	22810	1524	1452	32485	12568	35 1055	740	360	4020	4870	5214

GASPÉ SUBDIVISION

1	Malbaie	213	8650	243	86	2900	2200	14 484	480	.....	.....	500	250
2	Point St. Peter and Chien Blanc	138	3460	176	112	3600	2560	7 187	225	.....	.....	352	176
3	Seal Cove and Douglastown	168	4900	204	83	2750	1770	8 240	128	.....	.....	408	204
4	Sandy Beach	28	675	35	70	2000	2000	.....	.....	.....	.....	70	35
5	Gaspé North and South	43	475	48	100	3500	2650	24 960	960	.....	.....	50	25
6	Peninsula	18	350	29	65	1960	1650	.....	.....	.....	.....	60	30
7	Cape Ozo and Little Gaspé	57	700	6	70	2094	1720	2 40	15	.....	.....	130	65
8	Grand Grève and Ship Head and Cape Rosiers	140	3000	160	81	2920	1600	10 240	245	.....	.....	332	166
	Totals	805	22210	966	667	21724	16150	65 2151	2053	.....	.....	1902	951

FOX RIVER SUBDIVISION

1	Anse à Louise and Jersey Cove	117	936	234	954	4680	1170	.....	.....	.....	.....	200	400
2	Anse à Grisfonds	50	400	100	100	2000	500	.....	.....	.....	.....	260	320
3	Fox River	125	1000	250	250	5000	1250	.....	.....	.....	.....	500	1000
4	Little Cape	25	200	50	50	1000	250	.....	.....	.....	.....	100	200
5	Echourie and Big Cove	24	98	30	30	600	150	.....	.....	.....	.....	60	120
6	Point Jaune and Anse à Valeau	69	535	134	134	2140	670	.....	.....	.....	.....	268	528
	Totals	410	3169	798	1518	15420	3990	.....	.....	.....	.....	1388	2568

SESSIONAL PAPER No. 11a

Fishing Materials, &c.—Province of Quebec—Continued.

of Gaspé.

(Point Maquereau to Corner of Beach).

KINDS OF FISH.														TOTAL VALUE OF ALL FISH.	Number.		
Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.	Halibut, lbs.	Smelts, lbs.	Squid, brls.	Fish oil, galls.	Fish as bait, brls.			Fish as manure, brls.	\$	cts.
7400	195	.....	23104	.....	7190	.....	25	20	.....	3000	220	5500	350	600	39,265	80	1
25600	40	.....	16704	.....	2500	.....	5	5	.....	1000	86	980	260	.....	19,725	05	2
5000	160	.....	22560	.....	8900	.....	40	40	.....	2000	180	5700	1200	.....	46,292	00	3
.....	420	.....	28800	.....	15800	.....	19	13	.....	.....	323	7100	1100	.....	75,798	25	4
1500	70	.....	9100	.....	8500	.....	17	12	.....	.....	400	7050	700	.....	41,243	00	5
.....	25	.....	.....	.....	4500	.....	2	2	.....	.....	30	2500	150	.....	19,205	50	6
16000	25	.....	11328	.....	1250	.....	.....	.....	.....	.....	25	1000	125	.....	11,153	10	7
55500	935	.....	111596	.....	48640	.....	108	92	.....	6000	1264	29830	3885	600	252,682	70	

(Malbaie to Cape Gaspé).

6000	325	.....	17270	.....	10200	.....	.....	.....	.....	3000	250	5500	1400	.....	51,654	00	1
660	350	.....	5664	.....	5200	.....	.....	.....	.....	.....	100	1700	2600	.....	28,272	80	2
6500	250	.....	9264	.....	2400	.....	.....	.....	.....	.....	50	1275	800	.....	15,535	30	3
22000	20	.....	.....	.....	40	.....	.....	.....	.....	.....	.....	35	10	.....	4,665	50	4
42000	8	.....	.....	.....	.....	.....	.....	.....	.....	42950	.....	.....	.....	.....	10,579	50	5
21640	30	.....	.....	.....	30	.....	.....	.....	.....	.....	.....	24	10	.....	4,590	20	6
10420	90	.....	3936	.....	640	.....	.....	.....	.....	.....	75	220	170	.....	6,412	20	7
7320	600	.....	29200	.....	3000	.....	.....	.....	.....	.....	100	1400	800	.....	23,724	00	8
116530	1673	.....	65334	.....	21510	.....	.....	.....	.....	45950	575	10154	5790	.....	145,433	50	

(Cape Rosier to Fame Point).

.....	450	14000	1720	20	4100	9	50	.....	11000	.....	100	2050	400	.....	21,739	00	1
.....	200	15000	4800	40	1800	4	20	.....	6000	.....	50	900	200	.....	10,780	00	2
.....	475	20000	1920	10	6950	10	30	.....	16000	.....	130	3470	750	.....	34,810	00	3
.....	75	5500	.....	.....	250	2	10	.....	6000	.....	30	125	100	.....	2,312	50	4
.....	60	1000	.....	.....	260	2	4	.....	5000	.....	30	130	100	.....	2,131	00	5
.....	200	8000	3840	15	500	4	8	.....	9000	.....	60	250	300	.....	5,452	00	6
.....	1460	63500	12280	85	13860	31	122	.....	53000	.....	400	6925	1850	.....	77,224	50	

RETURN showing the Number, Tonnage and Value of Vessels, Boats

County of

MAGDALEN RIVER SUBDIVISION

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.									
		Vessels.				Boats.		Gill Nets.		Seines.		Trap Nets.		Hand Lines.			
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.
	<i>Gaspé County—Con.</i>			¢		¢				¢			¢		¢		¢
1	Grande Etang and Point Sèche.....																
2	Big and Little Chlory-dorme.....				108	2160	180	200	5000	2000	2	80	50			360	720
3	Petite and Frigate Point.....																
4	Grand and Little Vallée.....																
5	Magdalen River.....																
6	Manche d'Épée and Gros Mâle.....				84	1640	125	130	3250	1300	1	30	40			250	400
7	Anse Pleureuse and Mont Louis.....																
8	Rivière à Pierre.....				83	1340	124	130	3250	1300	2	60	40			248	280
	Totals.....				275	5140	429	460	11500	4600	5	170	130			858	1400

STE. ANNE DES MONTS SUBDIVISION

1	Claude River to Martin River.....				30	450	54	30	750	360							108	108
2	Ste. Anne.....				114	1710	168	100	2500	1200							228	228
3	Cape Chatte.....				37	555	55	38	950	300							110	110
	Totals.....				181	2715	277	168	4200	1860							446	446

MAGDALEN ISLANDS

1	Entry Island.....				20	800	45	75	1875	450							30	9
2	Amherst Island.....	1	15	300	4	150	6000	340	1629	40625	9774	7	980	2000			680	175
3	Grindstone Island.....				211	10550	592	175	4375	1050	5	575	1800	2	750	1100	275	
4	Allright Island.....	6	240	5000	30	109	2725	289	352	10560	2112				1	200	400	100
5	Grand Entry.....				47	1600	68	20	500	120					3	475	130	31
6	Grosse Isle.....				45	1550	42	4	32	30							84	11
7	Bryon Island.....				50	1750	59	10	250	60							20	10
	Totals.....	7	255	5300	34	632	24975	1435	2265	58217	13596	12	1555	3800	6	1425	2444	611

SESSIONAL PAPER No. 11a

and Fishing Materials, &c.—Province of Quebec—Continued.

Gaspé—Continued.

(Fame Point to Claude River).

KINDS OF FISH.														TOTAL VALUE OF ALL FISH.		Number.	
Salmon, fresh, lbs.	Salmon, salted, brls.	Herring, salted, brls.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Halibut, lbs.	Trout, lbs.	Eels, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.	\$		cts.
1950		850		9120	4980			15800	1200		4000	1000			29,934	00	1
4800	5	250		1872	1940			300	1000		1500	800			11,949	40	2
9450		1250			1325			3500			1000	450	100		13,565	00	3
16200	5	2350		10992	8245			19600	2200		6500	2250	100		55,448	40	

(Claude River to Cape Chatte).

800	202			396				1900			250	150	300		3,192	00	1
3000	1933			1094				4400			700	350	700		14,233	00	2
1700	416			300				4500			200	120	400		4,103	00	3
5500	2551			1790				10890			1150	620	1400		21,528	00	

SUBDIVISION.

	75	110	14256	25						10	50				4,979	20	1
	3000	1825	90147	3500	10	250				100	1200	725	300	250	75,164	40	2
	2500	2090	139712	2532	15	175				25	800	1850	500	1200	85,110	40	3
	1804	2043	79536	480		30				6	125	1160	150	250	58,003	20	4
	437	203	175152	246							80	500		170	41,793	90	5
	150	134	35295	30							10	200		300	10,467	00	6
		40	78192									75		1045	17,657	15	7
	7966	6445	612290	6813	25	455				131	2225	4560	950	3215	293,175	25	

63 VICTORIA, A. 1900

RETURN showing the Number, Tonnage and Value of Vessels, Boats

County of

GODBOUT SUBDIVISION

Number.	DISTRICTS.	VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.									
		Vessels.			Boats.			Gill Nets.		Seines.		Trap Nets.	Hand Lines.				
		Number.	Tonnage.	Value.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.
				\$		\$				\$			\$		\$		\$
1	Manicouagan to Jambons..	3	47	650	8	210	4200	176	310	7500	3750	5	250	250	.....	352	141

MOISIE SUBDIVISION

1	Jambons & Ste. Marguerite	.....	.....	.....	.....	4	250	8	5	1300	1200	1	40	50	.....	.....	.....
2	Seven Islands	2	63	1400	10	20	2200	40	17	2730	2525	3	155	233	.....	.....	.....
3	Moisie and Pigou	1	13	400	4	24	2050	47	35	5850	5540	3	110	150	.....	.....	.....
	Totals	3	76	1800	14	48	4500	95	57	9880	9265	7	305	433	.....	.....	.....

MINGAN SUBDIVISION

1	River aux Graines and Chaloupe	.....	.....	.....	.....	20	1000	50	5	500	250	4	126	220	.....	104	52
2	Sheldrake	24	1200	60	4	400	300	2	70	300	2	1000	120	60
3	Thunder River	42	1500	99	8	750	500	2	190	100	2	700	200	100
4	Dock, Ridge Point and Jupitagan	.....	.....	.....	.....	12	690	28	3	300	300	5	170	245	.....	56	33
5	Magpie	.....	.....	.....	.....	55	1000	95	10	900	400	7	250	180	.....	190	100
6	St. Johns River	.....	.....	.....	.....	59	2950	130	20	2000	1500	3	200	300	.....	280	140
7	Long Point, Mingan and Romaine	.....	.....	.....	.....	25	1000	65	10	750	500	2	125	200	.....	120	60
8	Esquimaux Point	6	285	3600	45	90	8000	170	5	450	100	15	525	1200	3	600	530	265
9	La Corneille	.....	.....	.....	.....	5	200	4	3	200	100	.....	.....	.....	.....	8	4
	Totals	6	285	3600	45	332	17540	701	68	6250	3950	40	1656	2745	7	2300	1608	814

NATASHQUAN SUBDIVISION

1	Piashter Bay	.....	.....	.....	.....	5	270	12	12	240	120	1	50	50	.....	50	12
2	Pashasheeboo to Agwanus	.....	.....	.....	.....	13	900	35	26	260	260	3	110	150	.....	210	63
3	Natashquan	4	106	2000	35	26	1400	75	70	1400	700	7	380	350	.....	468	140
	Totals	4	106	2000	35	44	2570	122	108	1900	1080	11	540	550	.....	728	215

WASHEECOTAI SUBDIVISION

1	Kegashka	.....	.....	.....	.....	5	500	10	5	500	100	2	80	50	.....	20	20	
2	Washeecotai and Romaine	1	20	400	3	27	1550	46	15	1500	700	2	80	50	3	600	106	75
3	Coacoachoo and Meagher's Creek	.....	.....	.....	.....	15	300	40	5	500	250	3	120	100	1	400	20	10
	Totals	1	20	400	3	47	2350	96	25	2500	1050	7	280	200	4	1000	146	105

SESSIONAL PAPER No. 11a

and Fishing Materials, &c.—Province of Quebec—Continued.

Saguenay.

(Manicouagan to Mai Islands).

KINDS OF FISH.														TOTAL VALUE OF ALL FISH.	Number.					
Salmon, fresh, lbs.	Salmon, salted, brls.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddeek, dried, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Squid, brls.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.	
82000	..	7	183000	50	2976	310	11	...	7500	2700	3000	20	...	3768	170	53	547	\$ cts.	24,298 85	1

(Jambons to Pigou).

2800	..	4	...	...	...	180	2	...	800	500	...	...	...	120	10	...	4	1,502	00	1
22500	..	65	...	...	...	633	11	...	12800	...	...	...	...	521	100	...	57	9,050	55	2
128000	..	...	...	...	...	474	6	...	5200	1300	...	...	...	541	75	...	70	28,568	30	3
153300	..	69	...	...	...	1287	19	...	18800	1800	...	...	...	1182	185	...	131	39,129	85	

(Pigou to Watsheeshoo).

...	...	...	...	...	...	840	...	...	3000	...	...	14	...	650	250	...	...	4,286	00	1
2800	..	...	...	...	...	5000	10	...	5000	...	...	50	...	4000	1250	...	8	24,445	00	2
1200	..	...	...	...	...	860	4	...	2000	...	...	15	...	650	300	...	10	4,637	50	3
9200	..	130	...	...	...	4500	15	400	4000	...	...	12	...	3100	1500	...	15	25,356	75	5
42000	..	...	...	...	...	5500	20	600	5000	2000	...	...	...	3800	1600	...	20	36,665	00	6
7255	..	...	...	...	...	1800	8	10	4000	500	...	10	...	1800	300	...	330	10,653	50	7
1200	..	164	...	...	...	270	...	400	2000	...	...	50	...	6000	1000	...	1100	17,431	00	8
63655	..	294	...	...	...	21200	57	1410	25000	3250	...	151	...	19250	6200	...	1558	483	75	9
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	123,958	50	

(Watsheeshoo to Natashquan Point).

...	...	...	...	...	...	10080	75	...	150	...	...	15	...	75	50	...	...	2,458	50	1
28	..	...	...	...	...	11328	400	...	200	...	...	15	...	400	200	...	...	4,755	60	2
18000	24	...	...	...	...	2400	1100	...	400	...	...	30	...	5000	600	...	1393	13,082	25	3
18000	52	...	...	...	...	23808	1575	...	750	...	...	60	...	5475	850	...	1393	20,295	35	

(Mont Joli to Wolf Bay).

...	...	...	...	...	...	212	...	...	1000	700	...	...	...	200	100	...	17	1,437	25	1
...	...	...	...	...	...	183	...	...	900	1400	...	...	...	200	75	...	30	2,247	00	2
...	...	...	...	...	...	350	...	...	1000	...	...	...	...	410	50	...	38	8,159	50	3
...	...	...	...	...	...	745	...	...	1900	3100	...	...	...	810	225	...	85	11,843	75	

63 VICTORIA, A. 1900

RETURN showing the Number, Tonnage and Value of Vessels, Boats

County of

ST. AUGUSTIN SUBDIVISION

Number.	FISHING VESSELS AND BOATS.									FISHING MATERIALS.			
	Vessels.				Boats.			Gill Nets.		Seines.			
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.
<i>Saguenay County.—Con.</i>													
1	Wolf Bay and Netagomin.....				8	250	9	10	750	400	1	50	30
2	St. Mary's Island and Harrington.....				61	1220	97	20	1400	650	8	160	100
3	Little Meccatina and Whale Head.....				50	1000	35	14	700	500	5	250	125
4	Mutton Bay.....				50	1000	60	20	1400	650	8	400	250
5	La Tabatière and neighbourhood.....				40	800	30	15	750	500	5	250	125
6	St. Augustin.....				15	300	12	15	750	500	3	150	75
7	Sandy Island to Chicatica.....				13	260	10	10	500	250	2	100	50
	Totals.....				237	4830	253	104	6250	3450	32	1460	755

BONNE ESPÉRANCE SUBDIVISION

1	Nabitippi to Old Fort.....	1	30	500	4	46	1840	92	25	1800	1800	12	600	750
2	Bonne Espérance.....	2	250	6000	14	40	2750	80	10	800	650	8	700	1600
3	Pigeon Island, Stick Point, Salmon Bay.....	1	50	1000	6	60	3000	130	16	1600	1500	8	600	1200
4	Little Fishery to Belles Amours.....				20	600	38	10	800	600	6	500	500	
5	Bras d'Or to Blancs Sablons.....				75	1500	150	6	600	600	6	500	1000	
	Totals.....	4	330	7500	24	241	9690	490	67	5600	5150	40	2900	5050

ANTICOSTI

1	Fox Bay.....				12	1000	12	24	1200	400	2	90	100
2	Salmon River.....				2	50	2	3	250	150	1	30	30
3	English Bay.....				10	500	20	20	600	300	2	100	100
4	Strawberry Cove.....				20	800	40	30	1200	400	4	200	200
5	Chaloupe Creek.....				2	50	2	2	300	200			
	Totals.....				46	4200	76	80	3550	1450	9	420	430

SESSIONAL PAPER No. 11a

and Fishing Materials, &c.—Province of Quebec—Continued.

Saguenay—Continued.

(Wolf Bay to Chicatica).

				KINDS OF FISH.										TOTAL VALUE OF ALL FISH.		Number.	
Trap Nets.		Hand Lines.		Salmon, salted, brls.	Herring, salted, brls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Halibut, lbs.	Trout, lbs.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.	\$		cts.
Number.	Value.	Number.	Value.														
	\$		\$														
7	2000	20	5	10	25	32800	200	.....	.....	1000	400	100	.....	100	8,105	00	1
10	3000	384	96	3	250	.....	650	.....	.....	.....	861	210	.....	187	4,452	05	2
10	3000	140	35	5	27	950	1000	.....	.....	.....	2180	250	.....	460	5,977	00	3
10	3000	240	60	8	130	.....	1440	.....	.....	.....	1500	300	.....	180	7,525	00	4
7	2100	120	30	10	150	34432	820	.....	.....	.....	4340	150	.....	1280	14,043	40	5
2	600	25	7	6	25	.....	100	.....	.....	2000	390	400	.....	110	1,644	50	6
2	600	40	10	8	10	.....	100	.....	.....	.....	200	500	.....	50	1,432	50	7
38	11300	969	243	50	617	68182	4310	.....	.....	3000	9871	1910	.....	2367	43,179	45	

(Chicatica to Blancs Sablons).

12	3600	109	30	21	.....	2400	1200	.....	.....	1000	750	100	.....	50	6,132	50	1
8	3200	150	80	30	100	.....	4000	.....	.....	800	2000	200	.....	30	17,867	50	2
12	3600	250	100	10	20	.....	3000	.....	.....	1200	1800	150	.....	48	13,175	00	3
7	1750	90	25	10	500	.....	1200	.....	.....	750	750	60	.....	30	7,377	50	4
18	5400	300	100	3	30	.....	4000	.....	.....	.....	3000	200	.....	360	17,815	00	5
57	17550	890	335	74	650	2400	13400	.....	.....	3750	8300	710	.....	518	62,367	50	

ISLAND.

.....	.....	20	20	.....	500	33600	200	.....	1000	.....	400	150	.....	50	10,027	50	1
.....	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
.....	.....	20	20	.....	200	.....	150	.....	500	.....	250	60	100	30	1,702	50	3
.....	.....	50	45	.....	200	.....	1000	10	4000	.....	1000	200	150	30	6,012	50	4
.....	.....	.....	.....	12	.....	.....	.....	.....	.....	.....	130	.....	.....	50	281	50	5
.....	.....	94	89	12	900	33600	1350	10	5500	.....	1780	410	250	160	18,024	00	

RECAPITULATION
Showing the Number of Vessels and Boats, Nets and all Fishing Materials, &c., in the Gulf District, Province of Quebec,
for the year of 1898.
COUNTY OF BONAVENTURE.

Number.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.												
	Vessels.			Boats.			Gill Nets.			Seines.			Trap Nets.			Trawls.			
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	
1			\$ 795	100	30	6000			4000									1	
2			\$ 4740	714	700	13400			6900			1170	410					2	
3			\$ 8580	933	1345	28370			13750	114	3200	2380	1174	3200	126	630		3	
4			\$ 13510	718	565	10680			11081	60	1525	1220			215	2000		4	
Total			\$ 27625	2485	2640	56450			35731	212	5895	4210			341	2630			

COUNTY OF GASPE.

1	Grand River	Subdivision	664	22810	1524	1452	32445	35	1055	740								360	9020
2	Gaspe	"	805	22210	966	657	21724	65	2151	2053									
3	Fox River	"	410	3163	718	1518	15420		3990										
4	Mont Louis	"	275	5140	423	480	11500	5	170	130									
5	Ste. Anne	"	181	2715	277	168	4200		1860										
6	Magdalen Islands	"	7	5300	34	24975	13596	12	1535	3800	6	1435							
Total			7	5300	34	24975	143546	117	4931	6723	6	1435						360	9020

COUNTY OF SAGUENAY (North Shore).

1	Godbout	Subdivision	3	650	8	210	4200	176	310	7500	5	250	250					4	100
2	Moisie	"	3	1800	14	48	4500	95	57	9880	7	305	433						
3	Mingan	"	6	3600	45	332	17540	701	68	6250	40	1656	2745	7	2300				
4	Nashquan	"	4	2000	35	44	2570	122	108	1900	11	540	550						
5	Washbecoqui	"	1	400	3	47	2350	96	25	2500	4	280	200	4	1000				
6	St. Augustin	"						253	104	3450	32	1460	715	38	11300				
7	Bonne Esperance	"	4	7500	24	211	9390	490	67	5600	40	2900	5650	57	17550				
8	Anticosti	"				46	2400	76	80	3550	9	420	430					4	50
Total			21	15950	123	1205	48080	2009	819	43430	151	7811	10413	96	32150	8	150		
Grand total for the Gulf District.			28	21250	163	5059	156724	9923	9989	243426	480	18637	21346	102	33585	709	11800		

SESSIONAL PAPER No. 11a

RECAPITULATION
 SHOWING the Number of Vessels and Boats, Nets and all Fishing Materials, &c.—Gulf District, Province of Quebec—Continued.
 COUNTY OF BONAVENTURE—Continued.

DIVISIONS.	FISHING GEAR OR MATERIALS.						LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.								
	Weirs.		Smelt Nets		Hand Lines.		Canneries.		Traps.		No. of hands employed.		Freezers and Smoke & Fish Ice Houses.		Houses.		Piers and Tugs, Strs. Wharfs, & Smacks.		
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
1 Restigouche	13	110	65	3000	150	111	1	500	45	45	3	4	200	40	1000	40	1000	1	1000
2 Carleton			24	480	150	111	1	500	650	380	11	11	380	12	120	12	380	2	2
3 Bonaventure					1240	372	3	850	3250	1800	66	13	280	68	40485	2	3000	3	3
4 Port Daniel					1322	700	5	2050	10450	5730	254	7	400	9	250			4	4
Total	13	110	89	3480	2712	1183	9	3400	14395	7925	384	35	1280	129	41855	2	3000		

COUNTY OF GASPE—Continued.

1 Grand River Subdivision					4870	5214	12	3550	15880	7875	286	12	740	130	39750	7	1800	1	1
2 Gaspé					1902	951	10	4160	10550	6710	174			70	26000	14	3800	2	2
3 Fox River					1868	2568	5	500	6800	2650	44	1	500	30	21734	5	200	3	3
4 Mont Louis					838	1400	2	1000	2000	1050	15			18	5000	2	1000	4	4
5 Ste. Anne					416	446												5	5
6 Magdalen Islands					2444	611	88	37784	99385	52494	1690			124	12100	29	5075	6	6
Total					11908	11190	117	46994	134615	70779	2209	13	1240	372	95584	57	11875	5	800

COUNTY OF SAGUENAY (North Shore)—Continued.

1 Godbout Subdivision					55	352	1	400	150	75	5	17	170	2	30	1	200	1	1
2 Moisie																		2	2
3 Mingan						1608	814	1	1660	1660	35	1	800	4	1500	2	100	3	3
4 Natashquan						215	215	5	480	1750	875		600	84	24100	11	2400	4	4
5 Washetocotai					50	146	3	850	1750	875	44			20	3000	2	400	5	5
6 St. Augustin						969	243	8	1420	4250	2125	92						6	6
7 Bonne Esperance						890	335	7	330	1650	1100	30	90	90	9750	44	2250	7	7
8 Anticosti						94	89	4	205	4000	2000	20	19	400	1	500		8	8
Total					2	105	4787	28	3680	13440	7835	19	1570	219	38780	61	5850		
Grd. total for the Gulf District.	13	110	91	3585	19407	14315	154	54074	162470	86539	2769	67	4090	720	176219	120	20725	5	800

RECAPITULATION

Showing the Kinds, Quantities and Value of Fish caught in the County of Bonaventure, for the Year 1898—Continued.

Number.	DIVISIONS.	KINDS OF FISH.												Number.			
		Salmon, fresh, lbs.	Salmon, salted brls.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounders brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.		Hake, dried, cwt.		
1	Restigouche	1900		50	8000												1
1	Carleton	53200		960	10000	10000		2	7800						2000		2
3	Bonaventure	22274		2750	34500	37000			12384						10000		3
4	Port Daniel	35312		1790		1000			69336						100		4
	Total	152686		5550	52500	54000		2	89320						125	12000	122
COUNTY OF GASPE—Continued.																	
1	Grand River	55500		985					111596								1
2	Gaspé	116530		1673					65334								2
8	Fox River			1400	63500				12280						31		3
4	Mont Louis	16200		2350					10992								4
5	Ste. Anne	5500															5
6	Magdalen Islands			7965					612290								6
	Total	19730	5	16975	63700			6445	812492						56		92
COUNTY OF SAGUENAY (North Shore)—Continued.																	
1	Godbout	82000		7	183000												1
2	Moisie	153300		69					2975								2
3	Mingan	63655		294													3
4	Natasquan	18000		52					23808								4
5	Wahscrotoi			23	129				34080								5
6	St. Augustin			50	617				68182								6
7	Bonne Espérance			74	650				2400								7
8	Anticosti			12	900				33600								8
	Total	316955	211	2666	183000			50	165046						97		
	Grand total for the Gulf District	663371	216	25151	299000	54000	6497	1067058	201	161160	278	12000	2563	214			

SESSIONAL PAPER No. 11a

RECAPITULATION
Showing the Kinds, Quantities and Values of Fish caught in the County of Bonaventure, for the Year 1898—Continued.

DIVISIONS.	KINDS OF FISH.										TOTAL VALUE OF ALL FISH.	Number.		
	Haddock, lbs.	Trout, lbs.	Smelts, lbs.	Eels, brls.	Pfounders, lbs.	Tongod or Frost sh, lbs.	Squid, brls.	Carpe and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.			Fish as manure, brls.	Sealskins, No.
1 Resigonche.....		6000	266642	50	30500	50000		200			500	4	\$ cts.	
2 Carleton.....		900	15700	26	30500	1800		600			10500			1
3 Bonaventure.....		4000		10			355		1984	1778	24000			2
4 Port Daniel.....			14000						5795	2150	1830			3
Total.....		10900	296342	86	30500	51800	355	800	8009	4178	38830	4		4
														192,636 50

COUNTY OF GASPE—Continued.

1 Grand River Subdivision.....			6900				1204		29830	3885	600			252,682 70
2 Gaspe.....			45950				575		10194	5730				145,433 50 2
3 Fox River.....	53000					400			6925	1850				77,224 50 3
4 Mont Louis.....	19600	2200							6500	2250	100			55,448 40 4
5 Ste. Anne.....	10890								1150	620	1400			21,528 00 5
6 Magdalen Islands.....				131					2225	4560	950	3215		298,175 25 6
Total.....	83490	2260	51950	131			2239		56764	18955	3090	3215		845,492 35

COUNTY OF SAGUENAY (North Shore).—Continued.

1 Godbout Subdivision.....	7500	2700	3000				20		3768	170	53	547		54,298 85 1
2 Moisi.....	18800	1800							1182	185		131		39,129 85 2
3 Mingan.....	25000	3250					151		19250	6200		1538		123,958 50 3
4 Natashquan.....	750							60	5475	850		1303		20,205 35 4
5 Washicootal.....	1900	3100							810	225		85		11,843 75 5
6 St. Augustin.....		3000							9871	1910		2367		43,179 45 6
7 Bonne Esperance.....	5500	3730							8300	710		518		62,367 50 7
8 Anticosti.....									1780	410	250	160		18,024 00 8
Total.....	59450	17690	3000				171	60	50436	10660	303	6759		343,097 25
Grand total for the Gulf District.....	142940	30700	351292	217	30500	51800	2765	860	115229	33733	41183	9978		1,381,226 10

RECAPITULATION.

STATEMENT showing Yield and Value of the Fisheries of the Gulf Division, P. Q.,
for the Season of 1898.

Description.	Quantity.	Price.		Value.	
		\$	cts.	\$	cts.
Salmon, fresh in ice	Lbs. 663,371	0	20	132,674	20
" salted	Brls. 216	15	00	3,240	00
Herring "	" 25,151	4	00	100,604	00
" fresh	Lbs. 299,000	0	01	2,990	00
" smoked	" 54,000	0	02	1,080	00
Mackerel, salted	Brls. 6,497	15	00	97,455	00
Lobsters, canned	Lbs. 1,067,058	0	20	213,411	60
" fresh, whole	Cwt. 201	5	00	1,005	00
Cod, salted	" 161,160	4	00	644,640	00
" tongues and sounds, salted	Brls. 278	10	00	2,780	00
Haddock, fresh	Lbs. 12,000	0	03	360	00
" salted	Cwt. 2,563	3	00	7,689	00
Hake, salted	" 214	2	25	481	50
Halibut, fresh	Lbs. 142,940	0	10	14,294	00
Trout "	" 30,700	0	10	3,070	00
Smelt "	" 351,292	0	05	17,564	60
Eels, salted	Brls. 217	10	00	2,170	00
Flounders	Lbs. 30,500	0	05	1,525	00
Tommy cod, fresh	" 51,800	0	05	2,590	00
Squid, fresh	Brls. 2,765	4	00	11,060	00
Coarse and mixed fish	" 860	2	00	1,720	00
Fish oil	Galls. 115,229	0	30	34,568	70
Fish as bait	Brls. 33,793	1	50	50,689	50
Fish as manure	" 41,183	0	50	21,091	50
Seal skins	Pieces. 9,978	1	25	12,472	50
Total value for 1898				1,381,226	10
" 1897				1,393,126	40
Decrease for 1898				11,900	30

SESSIONAL PAPER No. 11a

RECAPITULATION.

RETURN showing Number of Men, Vessels and Boats, &c., and Value of Material employed in **Gulf Division Fisheries**, Season of 1898.

Description.	Value.	
	\$	cts.
28 vessels of 1,119 tons manned by 163 men.....	21,250	00
5,659 boats fished by 9,923 men	156,724	00
243,426 fathoms of gill-net.....	117,640	00
480 seines of 18,637 fathoms.....	21,346	00
120 trap-nets.....	33,585	00
709 trawls.....	11,800	00
13 weirs.....	110	00
91 smelt nets.....	3,585	00
19,407 hand fishing lines.....	14,315	00
154 lobster canneries employing 2,769 hands.....	54,074	00
162,470 lobster traps, with lines, &c.....	86,539	00
67 freezers and ice-houses.....	4,090	00
720 smoke and fish-houses.....	176,219	00
120 piers and wharfs (private).....	20,725	00
5 smacks and steamers.....	800	00
Total value.....	722,802	00

RETURN of the Number of Fishermen, the Number of Boats, Nets, &c., the Quantity
Cape Chat to Point Lévis,

Number.	DISTRICTS.	FISHING MATERIALS.						Salmou, lbs.	Shad, lbs.	Herring, salted, brls.
		Boats.		Gill Nets.		Brush or Eel Weirs				
		Number.	Value.	Men.	Number.	Fathoms.	Value.			
			%			%	%			
1	Capucins	16	128	19	18	450	216			252
2	Mechins	47	376	60	60	1500	288		1320	578
3	Ruisseau à Sem.	10	80	13	12	300	144			155
4	Grosses Roches	18	328	27	17	425	204			175
5	Ste. Félicité	54	432	59	67	1675	804	5	100	1104
6	Matane	30	260	35	28	700	336	11	220	205
7	Rivière Blanche.....	24	376	26	36	900	432			486
8	Sandy Bay	60	500	67	93	2325	1100			1120
9	Métis			5	5	300	300		15000	
10	Ste. Flavie	12	600	12	12	600	600		18000	
11	Ste. Luce	9	280	9	2	120	120	9	450	300
12	Rimouski	7	150	7				17	850	5000
13	Isle à Canuel	4	125	8				4	200	300
14	Notre Dame du Sacré Cœur.....	8	160	16				8	250	150
15	Rivière Hatée	2	40	4				2	50	100
16	Cap à L'Original and Bic	2	40	4				4	100	125
17	St. Fabien	2	40	4				3	75	100
18	St. Simon	1	20	2	1	50	40	101	7040	100
19	Temiscouata Co., including Ile Verte	1	75	95					2950	35930
20	St. André			27				27	1240	50
21	Kamouraska			17				13	620	1300
22	St. Denis			14				14	1065	500
23	Rivière Ouelle			55				45	2130	32
24	Ste. Anne de la Pocatière			23				31	1025	
25	St. Roch			12				12	1500	
26	St. Jean Port Joli			23	1	50	100	22	2950	
27	L'Islet	7	90	21	1	75	450	12	1500	
28	Cap St. Ignace			10				10	2400	
29	St. Thomas	4	32	14	5	370	1800	6	700	1600
30	Berthier	8	96	38	11	585	3500	28	2500	970
31	St. Valier	6	154	11	4	650	4160	3	400	4850
32	St. Michel	8	123	8	5	370	5150	1	100	4125
33	Beaumont	12	125	13	5	650	3400	1	100	6800
34	Lévis	9	70	12	5	300	2800			80
35	St. David and St. Nicholas.....	3	35	5	2	210	2000			300
36	Ile aux Grues, aux Oies & other Isl'ds	4	70	5	1	50	200	20	3950	
	Totals	368	4805	780	391	12655	28144	409	31515	62730
	Values								12546	4849
										45716

* In No. 19, include 12 beluga or white whale skins, \$48, and 30 seals \$37.

† In No. 23, include 239 beluga skins, \$956, (white whale).

SESSIONAL PAPER No. 11a

INLAND DISTRICTS.

and Value of all Fish caught on the South Shore of St. Lawrence River from Province of Quebec, for the Year 1898.

KINDS OF FISH.										TOTAL VALUE.		
Herring, fresh, lbs.	Whitefish, lbs.	Bass, lbs.	Pickered, lbs.	Sturgeon, lbs.	Eels, lbs.	Sardines, brls.	Mixed and coarse fish, lbs.	Cod, fresh, lbs.	Halibut, lbs.	Fish oil, galls.	\$	cts.
7000								35300	1100	130	2,992	00 1
8000								99350	4500	335	8,174	00 2
7000								27700	1500	75	2,247	50 3
11000								48500	5000	90	3,762	00 4
15500							15000	38650	4900	380	7,257	50 5
7500							44000	1100	4500	85	2,159	50 6
7000								3300	700	180	2,303	00 7
18000								1700	6000	400	5,465	00 8
40000											3,400	00 9
				3000							3,780	00 10
40000				14000		200					7,040	00 11
100000					6500	100	1200				23,112	00 12
2400000						500	25300				26,993	00 13
1500000						100	20000				16,130	00 14
10000						75	5000				790	00 15
12000						100	8000				1,035	00 16
11000						50	10000				786	00 17
1000											640	00 18
296100				2800	4900	490	1586200			690	*28,333	30 19
800				1685	2140	15	25700				592	50 20
600				2000	930	30	81400				1,171	80 21
3800				1070	6000	25	12200				765	00 22
30000				1440	41800	5	6200			12000	17,655	40 23
					34000		4000				2,080	00 24
					7800						468	00 25
				600	17750						1,065	00 26
					8060		1500				534	60 27
					26080						1,564	80 28
	3220	1740	2350	11300	10800		7100				2,022	30 29
	2950	375	325	1600	31100		1585				2,326	30 30
	4115	1335	825	7640	43080		9350				3,944	95 31
	1230	1280	710	1625	71000		1000				4,860	30 32
	1360	750	1390	3100	46400		2550				3,653	80 33
	1135	260	770	850	79200		1725				5,274	35 34
	625	40	250	150	11200		2500				791	70 35
	175	25	25	50	25000		150				1,521	75 36
4526300	14810	5805	6645	52910	473740	1690	1871660	255600	28200	14365		
45263	1184	464	332	3175	28424	5070	18717	12780	2820	4309	186,692	55

RETURN of the Number of Fishermen, Value of Boats, Nets, &c., and the Quantity
to Bersimis, Province of

Number.	DISTRICTS.	FISHING MATERIALS.							
		Boats.			Gill Nets.			Brush or Eel Weirs.	
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.
			¢			\$		\$	
1	Island of Orleans.....			80	13	4500	2700	90	16400
2	County of Montmorency.....			35				18	3400
3	County of Charlevoix.....			25	23	2900	280	140	1600
	<i>Saguenay Division.</i>								
4	St. Firmin.....	6	260	7				5	100
5	Tadoussac.....	6	220	8	4	500	300	1	25
6	Bergeronnes.....	4	80	4	4	400	250		
7	Bon Désir.....	1	20	1	1	75	50		
8	Escoumains.....	7	120	7	5	400	350	2	50
9	Sault au Mouton.....	2	20	2				2	50
10	Mille Vaches.....	6	90	6	1	100	75	5	125
11	Portneuf.....	6	100	6	4	350	300	2	50
12	Sault au Cochon.....	2	20	2	1	100	60	1	20
13	Islets Jérémie.....	6	90	6	6	400	350		
14	Bersimis.....	2	20	2	1	80	50	1	20
15	Inland Waters.....								
16	*Lake St. John District.....			100					
	Totals.....	48	1040	291	63	9805	4765	267	21840
	Values.....		\$						

* No. 16, estimated, include also 95,000 lbs. ouananiche and 8,000 lbs. pike.

SESSIONAL PAPER No. 11a

—Continued.

and Kinds of Fish on the North Shore of the St. Lawrence, from Quebec City Quebec, for the Year 1898.

KINDS OF FISH.											Beluga (white whales) No.	Beluga oil, galls.	TOTAL VALUE.		Number.
Salmon, lbs.	Shad, lbs.	Herring, salted, brls.	Whitefish, lbs.	Trout, lbs.	Sea bass, lbs.	Pickeral, lbs.	Sturgeon, lbs.	Eels, lbs.	Sardines, brls.	Mixed and coarse fish, lbs.			\$	cts.	
300	300		4500		4350	2800	10160	116500		1000		8,535	60	1	
1600		25	2500	50000	2300	1100	1840	23500		4200		2,001	40	2	
								7000	25	15300	6	6,182	00	3	
1500		20		2000					5	60000	100	3,095	00	4	
23000				3000						20000	75	6,525	00	5	
19000				1000								3,900	00	6	
2000												400	00	7	
12500		20		1000					10	40000	20	3,490	00	8	
		25		500					8	10000		274	00	9	
4000		50		2000					15	50000		1,745	00	10	
13000		20		2000					5	20000		3,095	00	11	
3000		5		200								640	00	12	
18000				300								3,630	00	13	
2400		10		1000					2	6000		686	00	14	
10000				20000								4,000	00	15	
			14500	15000		40000				50000		11,180	00	16	
110300	300	175	21500	98000	6650	43900	12000	147000	70	276500	201				
22060	18	700	1720	9800	532	2195	720	8820	210	2765	804	3015		59,379 00	

63 VICTORIA, A. 1900

**RETURN of the Number of Fishermen, Value of Boats, Nets, &c., the Quantity and
Ottawa, in the Province of**

DISTRICTS.		FISHING MATERIALS.										
		Boats.			Gill Nets.			Seines.			Hoop Nets.	
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.
Number.	%				%			%		%		
		(Angling, trolling and night lines.)										
1	Megantic to Sherbrooke and vicinity											
2	Magog and Brome			do		do						
3	Missisquoi Bay	12	147	45				15	1230	700		
4	† Richelieu River	72	1083	84				23	460	450	48 400	
5	Huntingdon, Beauharnois and Chateauguy	88	1350	156	6	120	20	12	400	300		
6	Laprairie and Montreal	54	540	92	1	20	5	23	690	460	10 50	
7	Chambly and Verchères	90	900	96				20	520	520	6 50	
8	County Richelieu and St. Francis River	90	560	138	40	480	120	38	400	540	125 520	
9	County Yamaska and River	60	640	135	1	20	10	40	360	180	200 1120	
10	County Nicolet	50	525	50	8	140	22	20	770	400	5 100	
11	* Portneuf, Champlain and St. Maurice	20	400	40				7	70	50		
12	Maskinonge and Berthier	60	500	62	3	70	10	16	320	130	29 75	
13	Montcalm and Terrebonne and Laval	23	125	52	9	165	25	7	140	28	8 40	
14	County Soulanges and Isle Perrot	6	60	18	22	220	60					
15	Lake Two Mountains and Vaudreuil	45	490	52	28	485	75					
16	County Argenteuil	15	200	25	45	400	300					
17	Ottawa River, Carillon to Pontiac	130	1950	130	320	9500	950					
18	Gatineau Lakes											
		(Angling and trolling.)										
Totals		815	9470	1175	483	11620	1597	221	5360	3758	431 2355	
Value \$												

* Estimated. This also includes 100,000 pounds tom-cods, valued at \$5,000, caught in vicinity of Three Rivers.

† In No. 4 include 8 eel weirs valued at \$49,600.

SESSIONAL PAPER No. 11a

Value of Fish, &c., within the District extending from Quebec City to Upper Quebec, for the Year 1898.

KINDS OF FISH.											TOTAL VALUE.		Number.	
Shad, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickarel, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	\$		cts.
2000	17700	100300	4800	29800	30300	1450	500	2000	5900		42900	15,495	00	1
	500	9300	7700	19700				1000	6000	2000	5000	2,901	00	2
	660			48720			500				54000	3,058	80	3
			4900	5650	19270		3600	74370	14320	250	74700	7,305	10	4
			9000	13400	17600	4800	209100	32500	50800	24900	196000	20,860	00	5
5000			6000	8000	12000	5000	12000	15000	4000		23000	3,930	00	6
1950			2500	9600	9300	1250	2350	13500	11350	500	63500	3,180	50	7
7150	500		4200	32300	37350	1650	15000	15500	35750	10 0	158750	8,523	00	8
	800		8500	27200	42000	16000	7000	20500	400	85000	160000	9,706	00	9
27400	1105		6900	2900	3000	1630	6910	23330	7540	10250	120500	6,097	80	10
15000	3400	12000	1100	6200	2000	500	8000	6200	2000		20000	*7,992	00	11
				5000	9000	1400	18000	8000	20000	8500	130000	4,324	00	12
4500		50000	450	2950	3100	600	500	1000	4500	1400	23100	6,097	50	13
			1400	3200	1600	3100	3000	2000	3000		8500	997	00	14
200			2000	1850	6150	5600	2550	3200		24000	26600	1,937	50	15
400	2500	800	1000	2000	3000	1300	4000	1000	4000			1,102	00	16
		650	46250	54750	58250	26650	63450	18000	42000	55850	82850	18,524	00	17
	9200	95300	14100	12750							8000	12,111	50	18
63600	36365	268350	120800	285970	253920	70930	356460	237100	211560	213650	1197400			
3816	2909	26835	9664	14298	10156	4255	21387	14226	6346	4273	11974	134,142	70	

* In No. 11 add 80,000 pounds of tom-cods valued at \$4,000.

RECAPITULATION

Of the Yield and Value of the Inland Fisheries of the Province of Quebec,
(exclusive of Gulf Division) for 1898.

Kinds of Fish.	Price.	Quantity.	Value.	
			\$	cts.
Salmon..... Lbs.	0 20	173,030	34,606	00
Shad.....	0 06	144,725	8,683	50
Herring, salted..... Brls.	4 00	11,604	46,416	00
" fresh..... Lbs.	0 01	4,526,300	45,263	00
Whitefish.....	0 08	72,675	5,814	00
Trout.....	0 10	366,350	36,635	00
Bass.....	0 08	133,255	10,660	40
Pickerel.....	0 05	336,515	16,825	75
Pike.....	0 04	261,920	10,476	80
Maskinonge.....	0 06	70,930	4,255	80
Sturgeon.....	0 06	421,370	25,282	20
Eels.....	0 06	857,840	51,470	40
Perch.....	0 03	211,560	6,346	80
Sardines..... Brls.	3 00	1,760	5,280	00
Catfish..... Lbs.	0 02	213,650	4,273	00
Mixed and coarse fish.....	0 01	3,345,560	33,455	60
Cod.....	0 05	255,600	12,780	00
Tom cods.....	0 05	80,000	4,000	00
Halibut.....	0 10	28,200	2,820	00
Beluga skins..... No.	4 00	452	1,808	00
Seal skins.....	1 25	30	37	50
Ouananiche..... Lbs.	0 06	95,000	5,700	00
Fish oils..... Galls.	0 30	24,415	7,324	50
Total for 1898.....			380,214	25
" 1897.....			343,884	85
Increase.....			36,329	40

STATEMENT

Of Fishing Materials in the Province of Quebec during the Year 1898,
(Gulf Division excluded).

Articles.	Value.		Total Value.
	\$	cts.	
1,231 fishing boats (2,246 men).....	15,315	00	53,769 00
942 gill-nets (34,080 fathoms).....	34,506	00	
259 seines (6,120 fathoms).....	3,948	00	
431 hoop-nets.....	2,355	00	106,368 00
64,900 hooks on night lines.....	1,058	00	
684 brush or eel weirs.....	102,955	00	
59 freezers and ice-houses.....			3,550 00
Total value.....			163,687 00

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RECAPITULATION

Of the Yield and Value of the Fisheries in the whole Province of Quebec, for the Year 1898.

Kinds of Fish.	Quantity.	Price.		Value.		Total Value.
		¢	cts.	¢	cts.	
Salmon, fresh in ice..... Lbs.	836,401	0	20	167,280	20	170,520 20
" salted..... Brls.	216	15	00	3,240	00	
Herring, salted..... "	36,755	4	00	147,020	00	196,353 00
" fresh..... Lbs.	4,825,3 0	0	01	48,253	00	
" smoked..... "	54,000	0	02	1,080	00	
Mackerel, salted..... Brls.	6,497	15	00			97,455 00
Lobsters, canned..... Lbs.	1,067,058	0	20	213,411	60	214,416 60
" fresh..... Cwt.	201	5	00	1,005	00	
Cod, dried..... "	161,160	4	00	644,640	00	660,200 00
" green..... Lbs.	255,600	0	05	12,780	00	
" tongues and sounds..... Brls.	278	10	00	2,780	00	
Haddock, fresh..... Lbs.	12,700	0	03	360	00	8,049 00
" dried..... Cwt.	2,563	3	00	7,689	00	
Hake..... "	214	2	25			481 50
Halibut..... Lbs.	171,140	0	10			17,114 00
Trout..... "	397,050	0	10			39,705 00
Smelts..... "	351,292	0	05			17,564 60
Whitefish..... "	72,675	0	08			5,814 00
Ouanimiche..... "	95,000	0	06			5,700 00
Pickarel..... "	336,515	0	05			16,825 75
Bass, (Achigan)..... "	133,255	0	08			10,660 40
Shad..... "	144,725	0	06			8,683 50
Eels, fresh..... "	857,840	0	06	51,470	40	53,640 40
" salted..... Brls.	217	10	00	2,170	00	
Sturgeon..... Lbs.	421,370	0	06			25,282 20
Maskinonge..... "	70,930	0	06			4,255 80
Pike..... "	261,920	0	04			10,476 80
Flounders..... "	30,500	0	05			1,525 00
Tom cod..... "	131,800	0	05			6,590 00
Perch..... "	211,560	0	03			6,346 80
Catfish..... "	213,650	0	02			4,273 00
Sardines..... Brls.	1,760	3	00			5,280 00
Squid..... "	2,765	4	00			11,060 00
Fish, coarse and mixed..... "	860	2	00	1,720	00	35,175 60
" " "..... Lbs.	3,345,560	0	01	33,455	60	
Seal skins..... No.	10,008	1	25			12,510 00
Beluga skins, (white whales)..... No.	452	4	00			1,808 00
Fish oil..... Gall.	139,644	0	30			41,893 20
" as bait..... Brls.	33,793	1	50			50,689 50
" as manure..... "	41,183	0	50			21,091 50
Total for 1898.....						1,761,440 35
" 1897.....						1,737,011 25
Increase.....						24,429 10

RECAPITULATION

OF all Fishing Vessels, Boats, Nets, &c., employed in the whole Province of
Quebec, 1898.

Articles.	Value.		Total.
	§	cts.	§ cts.
28 fishing vessels (1,119 tons; 163 men)	21,250	00	
6,890 fishing boats (12,169 men)	172,039	00	
10,931 gill-nets (277,506 fathoms)	152,146	00	
739 seines (24,757 fathoms)	25,294	00	
120 trap-nets	33,585	00	
697 weirs (brush or eels)	103,065	00	
431 hoop-nets	2,355	00	
91 smelt nets	3,585	00	
hand lines and night lines	15,373	00	
709 trawls	11,800	00	
154 lobster canneries (2,769 hands)	54,074	00	540,492 00
162,470 lobster traps, lines, &c.	86,539	00	
126 freezers and ice-houses	7,640	00	140,613 00
720 smoke and fish-houses	176,219	00	
120 piers and wharfs (fishing)	20,725	00	
5 smacks and steamers	800	00	
			205,384 00
Total value			886,489 00

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APPENDIX No. 7.

MANITOBA.

REPORT ON THE FISHERIES OF MANITOBA FOR THE YEAR 1898,
BY INSPECTOR F. W. COLCLEUGH.

SELKIRK, January 15, 1899.

Hon. Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit herewith returns showing the number of fishermen, tugs, tonnage, &c., in my district in 1898, also the yield of the fisheries for the same period. These are not complete, inasmuch as they do not include the catch of some important firms, nor particulars of their plant, although I sent them blanks last December requesting the same. The overseer at Berens River also failed to give me any particulars.

You will observe a very decided increase in the catch of all kinds of fish excepting whitefish and pickerel.

I would suggest, that in future all returns made by Fish Companies should be sworn to, as I find most of them attach very little importance to such matters and are not at all times accurate in their figures.

I know that the United States Government requires all such returns attested to before a magistrate.

I would also suggest that no fishing of any kind be allowed during the close season for whitefish, as any one holding license for catching other kinds always claim to have caught the whitefish whilst they were fishing for pickerel or other sorts, and as the whitefish come to shallow water to spawn, many of them are caught in this way, and if a whitefish has remained in the meshes of a gill-net overnight it is much better taken out than returned to the waters.

I have the honour to be, sir,
Your obedient servant,

F. W. COLCLEUGH,
Inspector of Fisheries.

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TOBA.

and Value of all Fish caught in the Province of Manitoba, for the Year 1898.

FIXTURES FISHING.		KINDS OF FISH.											TOTAL VALUE.	Number.	
Number.	Value.	Whitefish, lbs.	Trout, lbs.	Pickarel, lbs.	Pike, lbs.	Sturgeon, lbs.	Perch, lbs.	Tullibee, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	Home consumption, lbs.	Caviare, lbs.			
	%												\$	cts.	
2	200	565000	10000	270000	100000		10000	1000		1450000	250000		53,200	00	1
2	1300	259100		142000	142300			81200		102200	147000		28,169	00	2
		90020		465700	223050	135900	50150	219600	101000	412200	555100	1230	38,087	00	3
2	100	72299		349704	122878	214079	15640	1820	26411	730		5430	37,424	52	4
1	350	461952		7418									23,320	14	5
2	550	628443		7840	2275	35040			18476			930	33,349	01	6
4	1900	628443		7840	2275	35040			18476			930	33,349	01	7
4	460	587682		7989	500	8800							30,912	10	8
		68202		98931		18651							7,616	22	9
23	4900	3361141	10000	1357422	593278	447510	75790	303620	164363	1965130	952100	8520			
		168057	500	40723	11866	22375	758	6072	1644	19651	9521	4260	285,427	00	

APPENDIX No. 8.

NORTH-WEST TERRITORIES

REPORT ON THE FISHERIES OF THE NORTH-WEST TERRITORIES FOR
THE YEAR 1898, BY INSPECTOR E. W. MILLER.

QU'APPELLE, N.W.T., January 2, 1899.

The Hon. Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit the following report on the fisheries of the North-west Territories for the year 1898.

In the waters more immediately under the supervision of officers of your department, the supply of fish shows in most instances no signs of shrinkage. From some of the lakes in the more settled districts a smaller catch is reported, but this would appear to be due more to a less amount of fishing having been done than to a scarcity of fish.

At Lac la Biche and Lac Ste. Anne, where, a few years ago, the exhaustion of the lakes threatened starvation almost to the resident half-breeds, the recovery noted last year has been well maintained, and the fishermen are now convinced of the good results following the observance of a close season. Only a few of the smaller lakes in the Territories are so situated as to permit of fish being marketed in the summer season; those that are offered meet with a ready sale at good prices. A number of fishermen worked at the lakes north of Prince Albert in the early part of this year, their fish being bought and exported to the United States. From various causes the undertaking did not prove remunerative to the buyer, and there is no probability of a similar industry being carried on this winter. Under more favourable circumstances and with better and cheaper modes of transport there appears no good reason why a successful attempt should not be made to supply the towns in Assiniboia with fish from these lakes.

In the main, however, the lakes north of the Saskatchewan River must be regarded more as sources of food to the resident half-breeds and Indians than fitting objects for mercantile exploitation, and it would be inadvisable to imperil the permanence of the fishery by permitting too great a strain to be placed on it, even if it were of temporary advantage to the native residents. The opening up of an export business in sturgeon and its products, which has been attempted on a small scale on the Lower Saskatchewan River and Cedar Lake this year, must be looked at from this view, particularly in face of the rapid disappearance of the sturgeon in other places where it was formerly plentiful. Until such times that the dependence of the native population in this district on fish for their main supply of food becomes very much less than it is at present, it would be inexpedient to encourage fishing for export.

The rapid multiplication of irrigation ditches in Southern Alberta has called renewed attention to the danger of the extinction of the trout in the mountain streams from which their waters are principally drawn. A more rigid enforcement of the clause of the Fishery Act in regard to the screening of ditches has been recommended, as in spite of the objections raised by some irrigators to the use of screens, I consider they can be used in most instances without serious detriment to the ditch and must certainly prevent a great destruction of fish.

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Objections have been raised in some districts to the length of the close season for whitefish, but while the spawning time of this fish unquestionably varies considerably in different lakes, the season as now fixed is not longer than is needed for the effectual maintenance of a full supply of this valuable fish. The ease with which they may be netted on their shallow spawning grounds is the real ground on which the request for an earlier opening of the fishery is based.

In some of the smaller fish lakes, the enforcement of a close season for pike and mullet would seem to have led to an undue multiplication of the coarser fish at the expense of the more valuable species. It may therefore become advisable in the near future to suspend the close season for pike, &c., in certain waters, more especially those which are favourably situated for being restocked with whitefish fry. The encroachment of the pike has also been much marked in the trout streams of the western part of the Territories. The coarser fish here are but little fished for, and I am of opinion that no restriction should be placed on their capture in any of the Albertan tributaries of the South Saskatchewan River.

A change in the close season established for the protection of speckled trout has recently been recommended. At present the most esteemed variety found in the Territories, the Rainbow Trout (*Salmo mykiss*) is sacrificed to some extent in favour of the Bull Trout (*Salvelinus malma*). The proposed alteration, while giving an equal period of protection, favours the more valued fish and prolongs the open season at a time when the streams are in the best shape for fishing.

It was not found possible to place fry in any North-west lakes during the past year, there being no available source of supply. Much disappointment has subsequently been felt in some districts, the condition of the water, &c., having been very favourable. In Assiniboia in particular many lakes which had become so lowered by the series of dry seasons as to almost lose their power to sustain fish life, promise to soon recover their former levels, and it is very desirable that they should be stocked with fry so as to accelerate the coming of the time when they will again produce a fair supply of fish for the benefit of the surrounding settlers. The establishment of a fish hatchery in the Territories, if only on a small scale, is therefore a matter calling for early consideration.

During the past year the regulations are reported to have been well observed in all districts over which overseers and guardians have been appointed. No complaints have been received against any licensed fishermen though a number of nets have been seized, the property of undiscoverable owners, being either of illegal mesh or set in close season.

From the commissioner, officers and men of the North-west Mounted Police much valuable assistance has been received, both in bringing to my notice infractions of the regulations and the extension of travelling facilities where possible.

SYNOPSIS OF THE REPORTS OF THE OVERSEERS AND GUARDIANS IN THE DISTRICTS SPECIFIED.

PRINCE ALBERT.

The fisheries in this district are reported by *Overseer Robertson* as being in good condition in general. The fishing for export carried on at Candle Lake last winter proved unsuccessful from a variety of causes. The catch was not very good and the difficulties of transport were greater than usual owing to the heavy snowfall. In consequence of this failure there will probably be no buyers for export on Prince Albert market this winter and the fishery will be confined to purely local requirements. The overseer states that much more fishing for sale would be carried on if the close season terminated early enough to permit fishing to begin before the ice gets thick. At Beaver River and Green Lake where guardian Anderson is stationed during the whitefish close season, the catch was rather smaller than usual. This was due to some of the Indians having placed nets right across the former stream early in the fall, thus preventing the fish reaching their usual spawning ground. Steps will be taken to prevent this hurtful practice being repeated next year. Forty-eight

ordinary licenses were issued and fifty-five free permits to treaty Indians. One net of illegal mesh was seized at Crooked Lake but in general the regulations were well carried out.

CALGARY AND MCLEOD DISTRICT.

The building of the Crow's Nest Railway caused an increased amount of fishing to be done in the Waterton and Crow's Nest lakes, eight licensed fishermen being at work with nets, who were able to dispose of their catch of whitefish and lake trout at good prices. About 2000 lbs., of lake trout were taken from Lake Minniwankan, or Devil's Lake, near Banff. These fish were caught by hook and line in deep water. One fish weighed 29 lbs., but the average is about 6 lbs. Mountain whitefish locally called grayling, are also taken, but in limited numbers as no netting is done. The Spray Lakes are situated about eighteen miles from Canmore on the C.P.R. main line and a pack trail has been made to them by the enterprise of the miners of that town, many of whom are enthusiastic fishermen. These lakes are also much resorted to by the Stony Indians. Lake and bull trout form the main catch. The other fishing in this district is confined almost entirely to the angling for speckled trout in the many beautiful streams descending from the Rockies. The protection of this fishery from the devastating effects of the irrigation ditches, of which so many are now being constructed, is earnestly desired by the fishermen of the district, and a detailed report on this important question, in which the strictest enforcement of the fishery regulation requiring screens to be placed at the head gates of all ditches, is strongly recommended.

Guardian Millar of Sheep Creek reports that there was more water in the rivers than for some years past and that the catches with rod and line were good. He states that a great destruction of fish is caused by the unscreened ditches, the law in this respect being but meagerly observed. The alteration of the close season fixed for speckled trout would be welcomed by nearly all those interested in this fishing, the Cutthroat or Rainbow trout which is the most numerous and most esteemed variety both for sport and food, being in prime condition in September and October while the close season at present begins on September 15.

EDMONTON DISTRICT.

In this district *Overseer Young* states that the efforts of the department to maintain a good supply of fish are becoming better appreciated both by the general public and the fishermen more directly affected. This year it was found possible to materially reduce the catch of fish allowed to be taken under special permit during the close season, it being confined to the pressing daily needs of the actually resident half breeds and Indians. The results of the enforcement of a close season at Lac Ste. Anne and Lac la Biche for the last three or four years was shown very satisfactorily by the great improvement in the fisheries at those points. At the latter lake 2,000 fish were taken in three nights with 150 fathoms of net. The summer fishing was also very good. White Whale Lake which was formerly neglected by the fishermen on account of the poor quality of the whitefish there, has done well this year, there being a marked improvement in the fish.

Fifty-eight licensed fishermen were at work on Pigeon Lake where fishing is carried on both summer and winter, the towns on the Calgary and Edmonton Railway being mostly supplied from this source. A resident guardian is employed here who reports that the regulations are very willingly obeyed and that there is no falling off in either the quality or quantity of the fish taken in the open season.

From Saddle Lake, Floating Stone and Good Fish lakes, reports are not so favourable. These lakes are near Indian reserves, the close seasons are not properly observed and fish are consequently becoming scarce. It will be necessary to put these lakes under more direct supervision than hitherto.

The water level in the lakes of this district is stated to be lower than at any time since 1870, and this has had disastrous effect on some of the shallower lakes. In

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Beaver Lake, for example where pike and pickerel were formerly extremely abundant the fish have almost disappeared. There is but little river fishing done in this district.

BATTLEFORD DISTRICT.

The population around the fishing lakes of this district appear to be even more nomadic than the bulk of their kinsmen and there have been but a comparatively small number of resident families living near them this year. Jackfish Lake, about thirty miles from Battleford, swarms with the fish of that name which are of great size and of superior quality. The whitefish found here are held in poor estimation and the catch is small. At Turtle Lake, thirty miles further north, the whitefish are extremely good and it is here that the bulk of the fish supply of the district is taken. Guardian Gagné reports, however, that the catch this year for some unknown reason was very disappointing.

The Battle River formerly yielded a good supply of sturgeon and goldeyes; this fishery has, however, very much fallen off, partly owing to successive seasons of low water, but also to the blocking of the river by basket traps. It is hoped that the recent appointment of a guardian here will prevent this in future.

LONG LAKE DISTRICT.

Overseer Foster, of Silton, reports that in consequence of the good crops in this district, the fishery was not so largely resorted to as in the previous year. The regular fishermen had a good catch of exceptionally fine whitefish in the winter season. Little fishing is done in the hot weather, though it would seem that with a proper supply of ice, a profitable trade could be carried on. This fall the whitefish were observed in great numbers on their old spawning grounds at the south end of the lake, which had been deserted for some time. Owing to the heavy rainfall the lake which has long been steadily shrinking, regained the level marked five years since, and there was a great abundance of fish food. One net was seized here for infringement of the regulations.

QU'APPELLE LAKES.

Guardian Leader reports a large falling off in the catch of true whitefish in these lakes, attributable in his opinion to the change of ground by the fish and the failure of the fishermen to locate them. Continuous rough weather much impeded the summer fishery in the deeper water.

The supply of tullibee, a fish which here is considered but little inferior to the whitefish, is well maintained while pike, pickerel and suckers seem to be becoming superabundant. The upper lakes are a great resort of wild duck in the fall and they undoubtedly destroy a great quantity of whitefish spawn. Bluebills have been killed so gorged that the spawn would run from their mouth when help up.

Great numbers of coarse fish run up the small creeks entering the lakes as soon as they begin to run in the spring. It is considered advisable to permit these fish to be taken directly the streams begin to fall, as they are otherwise left stranded to rot.

A very severe storm in June caused the flank of the Katepwe dam to be again turned and the level of the lakes was considerably lowered. The ample rainfall has however maintained the lake water in first-class condition, and very few dead fish were noted this year. This dam has now been rebuilt by the North-west Government on such a scale that it might be expected to withstand all reasonable pressure, while its height renders the further maintenance of a second dam at Fort Qu'Appelle unnecessary.

CROOKED AND ROUND LAKES.

These lakes though in first-class shape as regards water, remain in a very unsatisfactory state in regard to supply of fish. Whitefish are practically extinct though once very plentiful here. The lakes require restocking with fry in the worst way, and I believe the Indians on the adjoining reserves are now sufficiently convinced of the evils of their former overfishing to willingly keep a proper close season in future.

Guardian Fitzgerald removed a great number of fish traps from the Qu'Appelle River during the summer, but it is comparatively an easy matter for the constructors to escape detection. It is probable that a large quantity of fish is taken from the stream by this means.

EAGLE QUILL LAKE.

Guardian Goodwin reports that there has been a good average catch of whitefish at this lake, which shows no sign of exhaustion. New dams have been built on the Swift Current Creek at Swift Current and Waldeck which are provided with good fishways. Considerable angling is done along the South Saskatchewan River in this district, the Buffalo fish, weighing from three to six pounds, being very plentiful and much esteemed for eating. The regulations are reported as well observed.

MOOSE MOUNTAIN LAKES.

These lakes are situated in the south-east of Assiniboia and are well stocked with pike, pickerel, &c., but contain no whitefish. Three licenses for nets were issued but the greater part of the fishing is done by hook and line. A great number of people resort to these lakes in the summer, and as several complaints have been made in regard to illegal netting, &c., it will probably be necessary to appoint a guardian next summer.

CUMBERLAND DISTRICT.

No resident overseer or guardian has as yet been appointed in this district but it is becoming apparent that such an officer will soon be urgently required. Fishing in the past has been confined to the food requirements of the resident population, and it is doubtful whether any catch in excess of this amount could long be sustained by the fisheries without threatening an early depletion. This year a large quantity of sturgeon has been exported via Grand Rapids, and there has also been a small manufacture of caviare. In both cases without a proper supply of ice considerable waste of fish is likely. The progress of this business will require to be closely watched so that the best interests of the whole body of residents in the district may be conserved.

The usual statements giving statistics of yield and value of the fisheries in the North-west Territories are hereto appended.

I have the honour to be, sir,
Your obedient servant,

E. W. MILLER,
Inspector of Fisheries, N.W.T.

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NORTH-WEST TERRITORIES.

RETURN of the Number and Value of Boats, the Quantity and Value of Fishing Materials, &c., in the District of Qu'Appelle, North-west Territories, for the Year 1898.

Number.	DISTRICTS.								FISHING MATERIALS.								
	Boats.		Gill Nets.			Seines.											
	Number.	Value.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.									
		%			%			%									
1	Long Lake	6	60	60	1500	360											
2	Qu'Appelle Lakes	11	315	36	900	225	1	50	50								
3	Crooked and Round Lakes	4	40	20	500	120											
4	Moose Mountain Lakes	4	60	10	300	72											
5	Eagle Quill Lakes	3	30	12	250	75											
		28	505	138	3450	852	1	50	50								

RETURN of the Kinds and Quantity of Fish in the District of Qu'Appelle, North-west Territories, for the Year 1898.

Number.	DISTRICTS.					KINDS OF FISH.					TOTAL VALUE.	
	Whitefish, lbs.	Pickereel, lbs.	Pike, lbs.	Tullibee, lbs.	Mixed and coarse fish, lbs.							
1	Long Lake	22000	6000	10000	8000	15600	00					
2	Qu'Appelle Lakes	3000	12000	20000	15000	15000	1360	00				
3	Crooked and Round Lakes	300	7000	10000	3000	12000	605	00				
4	Moose Mountain Lakes	6000	6000	10000	6000	6000	440	00				
5	Eagle Quill Lakes	6500	1000	3000	5000	5000	465	00				
6	Fishing Lakes (N.)	8000	8000	12000	20000	20000	680	00				
7	Qu'Appelle River		16000	20000	40000	40000	1280	00				
	Totals	31800	56000	85000	18000	106000						
	Values	1590	1680	1700	360	1060	6,390	00				

63 VICTORIA, A. 1900

RETURN of the Number and Value of Boats, the Quantity and Value of Fishing Materials, &c., in the District of Edmonton, North-west Territories, for the Year 1898.

Number.	DISTRICTS	FISHING MATERIALS.				
		Boats.		Gill Nets.		
		Number.	Value.	Number.	Fathoms.	Value.
			\$			\$
1	Lac la Biche	45	675	190	5700	760
2	Baptiste Lake			40	1200	160
3	Lac la Nonne			30	900	120
4	Heart Lake			40	1200	160
5	Beaver Lake			40	1200	160
6	Lac Ste. Anne	30	450	150	4500	600
7	Pigeon Lake	20	300	180	5400	720
	Total	95	1425	670	20100	2680

RETURN showing the Kinds and Quantity of Fish in the District of Edmonton, North-west Territories, for the Year 1898.

Number.	DISTRICTS.	KINDS OF FISH.					TOTAL VALUE.	
		Whitefish, lbs.	Pickarel, lbs.	Pike, lbs.	Perch, lbs.	Tullibee, lbs.		Mixed and coarse fish, lbs.
							\$ cts.	
1	Lac la Biche	10000	30000	40000		5000	10000	6,900 00
2	Beaver Lake	21000					5000	1,100 00
3	Island Lake	3000						150 00
4	Stony Lake	5000						250 00
5	Whitefish Lake	30000					5000	1,550 00
6	Long Lake				1000	5000		110 00
7	Pigeon Lake	50000					1000	2,510 00
8	White Whale Lake	50000						2,500 00
9	Lac Ste. Anne	35000	2000	5000			2000	1,930 00
10	Baptiste Lake					8000		160 00
11	Lac la Nonne	2000					2000	120 00
12	Little Whitefish Lake	1000						50 00
	Totals	297000	32000	45000	1000	18000	25000	
	Values	\$ 14850	960	900	10	360	250	17,330 00

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RETURN of the Number and Value of Boats, the Quantity and Value of Fishing Materials, &c., in the District of Prince Albert, North-west Territories, for the Year 1898.

Number.	DISTRICTS.	FISHING MATERIALS.				
		Boats.		Gill Nets.		
		Number.	Value.	Number.	Fathoms.	Value.
			§			§
1	Green Lake.....	20	300	100	2500	500
2	Assiniboine Lake.....	15	250	200	5000	800
3	Deer, Trout, Montreal and Candle Lakes.....	30	400	350	8750	1400
4	Saskatchewan River.....	40	400	100	1500	350
	Totals.....	105	1350	750	17750	3050

RETURN showing the Kinds and Quantity of Fish in the District of Prince Albert, North-west Territories, for the Year 1898.

Number.	DISTRICTS.	KINDS OF FISH.							TOTAL VALUE.	
		Whitefish, lbs.	Trout, lbs.	Pickeral, lbs.	Pike, lbs.	Sturgeon, lbs.	Perch, lbs.	Tullibee, lbs.		
								Mixed and coarse fish, lbs.		
1	Beaver River.....	120000							6,000 00	
2	Green Lake.....	100000		25000	120000			10000	8,600 00	
3	Assiniboine Lake.....	25000		35000				5000	2,350 00	
4	Devil's Lake.....	10000			4000			4000	620 00	
5	Pelican Lake.....	8000			12000			5000	690 00	
6	Doré and Dog Lakes.....	40000			60000			25000	3,450 00	
7	Montreal and Bittern Lakes.....	25000			40000			10000	2,150 00	
8	Sturgeon Lake.....	3000			6000			4000	310 00	
9	Candle, Deer and Trout Lakes.....	20000	10000	5000					1,650 00	
10	" ".....*	80000	40000	5000	15000				6,450 00	
11	Lakes south of Saskatchewan River.....			4000	3000		800	5000	238 00	
12	Saskatchewan River.....	3000		4000	4000	40000		15000	2,500 00	
	Totals.....	434000	50000	78000	264000	40000	800	10000	98000	
	Values.....	\$ 21700	2500	2340	5280	2000	8	200	980	35,008 00

* Exported (dressed).

RECAPITULATION.

RETURN of the Number of Boats, Nets, &, and the Quantity and Value of all Fish caught in the North-west Territories, for the Year 1898.

		FISHING MATERIALS.					
		Boats.			Gill Nets.		
DISTRICTS.		Number.	Value.	Men.	Number.	Fathoms.	Value.
Number.							
			%				%
1	Qu'Appelle	28	505		138	3450	852
2	Macleod	10	200		18	540	180
3	Edmonton	95	1425		750	20100	2680
4	Battleford						
5	Prince Albert	195	1350		670	17750	3050
6	Cumberland and other districts						
	Totals	238	3480	630	1576	41840	6682

		KINDS OF FISH.							TOTAL VALUE.	
DISTRICTS.		Whitefish, lbs.	Trout, lbs.	Pickarel, lbs.	Pike, lbs.	Sturgeon, lbs.	Perch, lbs.	Tullibee, lbs.	Mixed and coarse fish, lbs.	
Number.										\$
1	Qu'Appelle	31800		56000	85000			18000	106000	6,390 00
2	Macleod	8000	40000		15000				10000	2,800 00
3	Edmonton	297000		32000	45000		1000	18900	25000	17,330 00
4	Battleford	40000	4000	20000	30000	1000		10000	75000	4,400 00
5	Prince Albert	434000	50000	78000	264000	40000	800	10000	98000	35,008 00
6	Cumberland & other districts	3500000	20000	1000000	1500000	200000		50000	1500000	262,000 00
	Totals	4310800	114000	1186000	1939000	241000	1800	106000	1814000	
	Value	215540	5700	35580	38780	12050	18	2120	18140	327,928 00

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RECAPITULATION

OF the Yield and Value of the Fisheries of **Manitoba** and the **North-west Territories**, for the Year 1898.

Kinds of Fish.	Quantity.	Value.
	Lbs.	\$
Whitefish.....	7,671,941	383,597
Pickereel.....	2,543,422	76,303
Pike.....	2,532,278	50,646
Perch.....	77,591	776
Sturgeon.....	688,510	34,425
" caviare.....	8,520	4,260
Trout.....	124,000	6,200
Tullibee.....	409,620	8,192
Cattish.....	164,363	1,644
Coarse fish.....	3,779,130	37,791
Home consumption.....	952,100	9,521
Total for 1898.....		613,355
do 1897.....		638,415
Decrease.....		25,060

RECAPITULATION

OF the Number of Tugs, Boats, Nets, &c., used in **Manitoba** and **North-west Territories**.

Articles.	Value.
	\$
17 fishing tugs (1,885 tons; 97 men).....	115,600
633 fishing boats (1,232 men).....	17,808
212,910 fathoms gill-nets.....	28,548
165 fathoms seines.....	425
65 freezers.....	89,300
23 fishing piers.....	4,900
Total.....	256,581

APPENDIX No. 9.
BRITISH COLUMBIA.

REPORT ON THE FISHERIES OF BRITISH COLUMBIA FOR THE YEAR
1898, BY INSPECTOR JOHN McNAB.

NEW WESTMINSTER, B.C., January 14, 1899.

Hon. Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of the fisheries of British Columbia, for the year 1898, with statistical statement of yield and value of products, and of capital invested in the several branches of the fishing industry, appended.

A comparison with the returns of the last three years shows a large falling off in value of products, which is altogether owing to the small pack of salmon put up on the Fraser River, amounting to but 264,25 cases, as compared with 432,920 cases in 1895, 375,344 cases in 1896, and 879,116 cases in 1897.

The total value of products for 1898 amounts to \$3,713,101.16; in 1897 the amount was \$6,138,864.96.

Large fluctuations from year to year, in the catch of all varieties of fish, have always been common, and are not to be considered ominous of permanent failure, or depletion of the varieties affected; except the conditions affecting the life and propagation of the species have been changed, or subject to unfavourable conditions. Unfortunately, such has become the case with regard to the salmon of the Fraser River. It is the opinion of every one who, from observation and study of the subject is in a position to form an opinion thereon, that the Fraser River is the breeding place and nursery of practically all the sockeye salmon that enter the Gulf of Georgia by way of the Straits of Juan de Fuca. Mr. A. C. Little, Fish Commissioner for the State of Washington, a gentleman who is well qualified to form an opinion, has stated that 'his investigation has led him to feel certain that from 75 to 90 per cent of all sockeye salmon caught in the Sound, are Fraser River salmon.' Mr. Little's estimate is none too large. In my opinion practically all the sockeyes, which frequent the waters mentioned, are Fraser River fish. Now, when it is considered that the Juan de Fuca Straits and all the waters between its entrance and the mouth of the Fraser River, are practically an estuary of the Fraser, the obstructing of every available place and channel, with gear, and appliances, so devised as to kill, or lead to the destruction of salmon of all sizes, which, of necessity, must come into contact therewith, when, in accordance with the law of their nature, they are seeking to enter their native rivers, in order to propagate their species,—it is apparent that, unless some protective measures are enforced to restrain the cupidity of the fishermen, the future of the salmon fishing industry of the Fraser River and State of Washington as well, is menaced.

Another source of danger to the salmon of the Fraser River consists in the overflow of sand and clay, from the large hydraulic mining enterprises, on the upper waters of the Fraser, and its affluents, which affect some very important spawning grounds, by the debris, or tailings, overflowing or covering the gravel beds, and also by dams built across rivers, notably a dam across the south fork of the Quesnelle

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River, formerly an important spawning place for salmon, but from which they are now excluded.

The catch of sturgeon in the Fraser River and lakes has also fallen off; in order to prevent their depletion an annual close time of four months, from the 15th of May to the 15th of September, is recommended.

All the halibut caught for exportation, are handled and shipped to eastern market by the New England Fish Company, operating from Vancouver. Their exports for 1898 amounted to 1,200,000 pounds. Halibut of fine quality are found in immense quantities in the vicinity of the northern coast and islands. The fish are brought to Vancouver from the fishing grounds in steamers owned by the company, and averaged from 80,000 to 100,000 pounds each trip, which are caught in a few days when the weather is favourable. Large quantities of halibut are also caught in the northern waters of British Columbia by United States fishermen.

A new feature in the fishing industry this season was the salting for shipment to Japan of 4,000,000 pounds of dog salmon (*O. Keta*) by Japanese fishermen. The fish were mostly caught by fishermen when fishing for cohoes for the canners, and bought by the Japs. Formerly this class of fish when caught were allowed to go to waste.

All other varieties of salt water fish, varied and abundant as they are, are caught in sufficient quantities only to supply the local demand, with the exception of herring, which are being smoked or kippered in considerable quantities and find a ready market in all sections of the interior as well as in the cities; this is a growing industry.

The large increase of population in the interior of the province, consequent upon the development of the mining industry, has created a demand for a large quantity of fish, which is supplied partly from the state of Washington via Spokane, and partly from the lakes in the interior, from which considerable quantities of trout, char, lake herring, &c., are taken, but it is impossible to obtain anything like correct returns of quantities.

The larger lakes in the northern parts of the province are known to abound with trout and whitefish of fine quality, and several commercial fisheries are likely to be established there during 1899.

A company having good prospects of permanent success entered upon the manufacture of oil and fish guano from offal supplied by the canners on the Fraser River. Their output of oil was 12,000 gallons and about 200 tons of guano.

Of the lobsters planted in British Columbia waters, nothing is known, but it does not follow that they may not be doing well.

The oysters planted in one locality, in Oyster Harbour, where there was an opportunity to protect them from their natural enemies—starfish—are apparently doing well, but it is not yet apparent that they are propagating.

Whitfish have been reported by several reliable men as having been seen by them in Coquitlam and Harrison Lakes. In October next I will endeavour to secure some by netting, for the purpose of ascertaining their size and quality.

My guardians, from the districts of Rivers Inlet, Skeena and Naas, report a prosperous season's fishing, which the returns verify, and that the regulations were well observed, and enforced without friction. In the Fraser River district the want of a suitable steamer to patrol the waters outside the Fraser River, in Howe Sound, and the Gulf of Georgia, was seriously felt; without a suitable boat, unlicensed fishermen, with illegal gear, can follow their calling with impunity, they being beyond my reach and that of my officers.

All of which is respectfully submitted.

I have the honour to be, sir,
Your obedient servant,

JOHN McNAB,
Inspector of Fisheries for British Columbia.

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Sealing Report, 1898.

PARTICULARS OF CATCH.						Totals.	Number of Skins Branded.	Remarks.
Japan Coast.		Vicinity Copper Islands.		Behring Sea.				
Males.	Females.	Males.	Females.	Males.	Females.			
				59	319	378		
						185		
				274	420	1,117		
						706		
				203	211	643		
				126	125	581		
				302	167	657		
						242		
				186	438	961	1	Boarded Sept. 8 by Lt. H. G. Smith, H.M.S. "Pheasant."
				126	201	327		Boarded Aug. 12 by officers from H.M.S. "Pheasant."
201	159	20	30			440		
				444	361	1,114		Boarded Sept. 26 by Lt. R. D. Scott, H.M.S. "Pheasant."
						341		
				275	317	901		Boarded Aug. 12 by E. K. A., H.M.S. "Pheasant."
				250	188	760		Boarded Aug. 13 by R. D. Scott, H.M.S. "Pheasant."
						892		
				338	422	1,024	2	
				236	198	641		Boarded Aug. 13 by E. K. A., H.M.S. "Pheasant."
				116	114	491		
						276		
				251	468	1,257		
				396	860	1,473		
				233	160	664		
				304	271	702		
				193	144	485	1	
				376	414	1,249	1	Boarded Aug. 26 by R. D. Scott, H.M.S. "Pheasant."
				210	295	1,037		Boarded Aug. 13 by R. D. Scott, H.M.S. "Pheasant."
						453		These skins were reported on board at Alaska, vessel missing.
				109	145	416		
				155	173	626		Boarded Sept. 13 by Lt. E. K. A., H.M.S. "Pheasant."
				654	1,028	1,968		Boarded Aug. 17 by officers from H.M.S. "Icarus"; Aug. 24 by officers from H.M.S. "Pheasant."
				1,004	764	2,105	1	
				191	459	650		
				143	263	636		
				441	423	1,045		
						1,100		
						28,552		

B. RETURN showing Vessels and Materials used, and Kinds, Quantities and Values of Fish, and Fish Products in British Columbia, 1898.

Number.	VESSELS AND BOATS.				FISHING MATERIALS.				KINDS OF FISH.									
	Vessels.		Boats.		Gill Nets.	Seines.	Value.	Lines.	Salmon, in brls.	Salmon, fresh, lbs.	Salmon, smoked, lbs.	Salmon, in cans, lbs.	Salmon, dry salted, lbs.	Sturgeon, lbs.				
	Number.	Value.	Men.	Number.											Value.	Men.	Value.	Value.
1	Fraser River	51	196965	158	3725	149000	14900	396450	301025	1200	1800	3000	250	501000	75000	12682780	4000000	750000
2	Rivers Inlet	12	44480	36	600	25500	2500	105000	78750	200	300	100	250	20000	2000	4340424		
3	Skeneva River	10	31100	30	450	22500	2250	120000	90000	1000	1500	150	400	71350	10000	5057376		
4	Naas River	1	2500	3	100	4000	415	19500	14625			50	200	10000	10000	960000		
5	East Coast, Queen Charlotte Island				25	3500	175	2500	2500	250	375	750	150	2500	5000			
6	West Coast, Queen Charlotte Island				25	3750	110	2950	1950	300	450	250						
7	Cape Scott to Comox				30	3000	80	2875	1875	500	750	250	100	30000	6000	398072		
8	Comox to Victoria				60	12000	180	4800	3900	4000	6000	2000	250	200000	75000			
9	Victoria to Cape Beale				6	1800	20	1250	3250	1000	1500	2000	250	25000	8000			
10	Cape Beale to Cape Scott				3	750	12	20	1000	80	600	200	750	5000	10000	208800		
	Totals	149	289595	439	5080	218800	20695	660775	498825	8850	13275	8750	2690	914650	201000	23642452	4000000	750000

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B.—RETURN showing Vessels and Materials used, and Fish and Fish Products in British Columbia—Concluded.

Number.	Districts.	KINDS OF FISH.											TOTAL VALUE.	Number.														
		Halibut, lbs.	Herring, lbs.	Herring, smoked, lbs.	Olachans, salted, lbs.	Olachans, fresh, lbs.	Olachans, smoked, lbs.	Trout, lbs.	Assorted and mixed fish, lbs.	Smelts, lbs.	Codfish, fresh, lbs.	Skill, brls.			Hair-seal, skins.	Fish oil, galls.	Fish, guano, tons.	Caviare, lbs.										
1	Fraser River	1500000	200000	90000	250	250000	2500	1500000	150000	375000	1500000	500	19500	200	24778	1,682,661.40	1											
2	Rivers Inlet	25000	20000	.....	275	10000	300	1500	1500	.....	800	9200	.....	.....	447,307.40	2								
3	Skema River	5000	.....	.....	500	50000	2500	1500	.....	.....	5750	5750	.....	.....	527,880.10	3						
4	Naas River	10000	5000	.....	750	50000	1000	.....	.....	.....	750	3200	.....	.....	116,072.50	4						
5	East Coast, Queen Charlotte Island	25000	20000	2500	.....	.....	.....	12000	.....	.....	2500	35,200	28750	.....	15,550.00	5						
6	West Coast, Queen Charlotte Island	25000	25000	2500	.....	.....	.....	25000	.....	.....	10000	60,2000	11500	.....	9,550.00	6						
7	Cape Scott to Comox	10000	15000	1000	350	.....	.....	10000	10000	6000	2000	15	500	6125	52,719.70	7										
8	Comox to Victoria	350000	250000	25000	50	100000	2000	150000	250000	350000	350000	8000	17,250	.....	120,350.00	8											
9	Victoria to Cape Beale	5000	10000	2000	.....	.....	.....	5000	8000	.....	250	3750	.....	.....	9,762.50	9						
10	Cape Beale to Cape Scott	15000	20000	4000	.....	.....	.....	10000	8000	.....	250	11500	.....	.....	36,667.50	10						
Totals		1970000	565000	127000	2175	460000	24500	328800	466000	785000	522500	110	7600	124325	200	24778	3,018,501.10											
		Oysters..... Isinglass..... Clams and mussels..... Crabs and abelomies..... Shrimps and prawns..... Fur-seals..... Sea otter, 50 @ \$200..... Estimate of fish not included in above.....											12,000.00	500.00	9,080.00	22,500.00	5,000.00	285,520.00	10,000.00	350,030.00
		Grand total.											3,713,101.10	.....													

C—SCHEDULE of Salmon Canneries operated in British Columbia, Season of 1898.

Owners or Agents.	Name of Cannery.	No. of licenses.	Packed in 1-lb Cans.	District.	Locality.
Cleeve Canning Co.	Cleeve	20	393,600	Fraser River	New Westminster.
Brennan Bros.	Ontario	20	73,920	"	"
F. Boutilier & Co.	Boutilier	20	129,920	"	"
Sinclair Canning Co.	Sinclair	20	184,800	"	"
Western Fisheries Co.	Western	20	216,000	"	"
Westminster Packing Co.	Westminster	20	182,832	"	"
A. B. C. Packing Co.	Phenix	20	609,120	"	Lulu Island.
"	Brittania	20			
"	British American	20	571,536	"	Canoe Pass.
"	Canoe Pass.	20			
"	British Columbia.	20	282,096	"	New Westminster.
"	Wadhams	20	215,808	"	Ladner's.
Victoria Canning Co.	Delta	20	1,349,224	"	" Port Guichon. Canoe Pass.
"	Harlock	20			
"	Wellington	20			
Ewen & Co.	Lion Island	20	480,000	"	Lion Island.
Fraser River Industrial Society	Industrial	20	168,000	"	New West
B. C. Canning Co.	Dea's Island	20	216,624	"	Dea's Island.
Turner, Beeton & Co.	Fisherman's	20	216,000	"	Port Guichon.
"	London	20	230,400	"	Steveston.
"	Terra Nova	20	266,640	"	North Arm.
J. H. Todd & Sons	Beaver	20	351,696	"	Lulu Island.
"	Richmond	20	205,872	"	North Arm.
Brunswick Canning Co.	Brunswick	20	386,400	"	Steveston.
"	" No. 2	20	249,600	"	Canoe Pass.
Currie & McWilliams	Currie's	20	224,640	"	Westham Island.
Canadian Pacific Canning Co.	Canadian Pacific	20	361,488	"	Lulu Island.
Pacific Coast Packing Co.	Pacific Coast	20	268,800	"	"
J. H. Hume & Co.	Hume's	20	325,584	"	Steveston.
R. Ward & Co. (agents)	Imperial	20	442,080	"	"
W. Morris & Co.	Lighthouse	20	192,000	"	"
M. Costello & Co. (agents)	Star	20	211,200	"	"
"	Colonial	20	134,400	"	"
"	Atlas	20	148,800	"	"
Malcolm & Windsor	Gulf of Georgia	20	727,184	"	"
McDonald Bros.	Westham Island	20	108,100	"	Canoe Pass.
Crowder & Penzar	Anglo-American	20	138,056	"	"
Welch Bros.	Keltic	20	145,440	"	North Arm.
Provincial Canning Co.	Provincial	20	134,400	"	"
Dinsmore Island Canning Co.	Dinsmore Island	20	194,400	"	"
D. Mum & Co.	Sea Island	20	556,944	"	"
W. Hickey & Co.	Vancouver	20	537,600	"	"
Fraser River Canning Co.	Fraser River	20	263,540	"	"
Alliance Canning Co.	Alliance	20	196,800	"	"
M. Robinson	Labrador	5	16,800	"	"
English Bay Canning Co.	English Bay	20	379,536	"	English Bay.
R. Cunningham & Co.	Skeena	20	581,664	Skeena River	"
Carlyle Packing Co.	Carlyle	20	480,000	"	"
B. C. Canning Co.	Windsor	20	484,680	"	"
Victoria Canning Co.	Standard	20	690,576	"	"
"	Claxton	20			
Turner, Beeton & Co.	Inverness	20	696,000	"	"
"	Balmoral	20			
A. B. C. Packing Co.	North Pacific	20	912,000	"	"
"	British American	20			
Victoria Canning Co.	Wannuck	20	648,000	Rivers Inlet	"
B. C. Canning Co.	Victoria	20	590,832	"	"
"	Rivers Inlet	20	744,000	"	"
Wadhams & Co.	Wadhams	20	840,000	"	"
A. B. C. Packing Co.	Good Hope	20	966,544	"	"
Brunswick Canning Co.	Brunswick	20	840,000	"	"
Vancouver Canning Co.	Vancouver's	20	408,000	"	"
Lowe Inlet	Cunningham & Rhude	20	495,504	Skeena River	"
Alert Bay Canning Co.	Alert Bay	20	393,072	"	"
Clayoquot Fish Co.	Clayoquot	20	208,800	"	"
W. Morris & Co.	Mill Bay	20	480,000	Naas River	"
"	Naas Harbour	20	480,000	"	"

23,642,452

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D.—RECAPITULATION

Of the Yield and Value of the Fisheries of British Columbia, for the Year 1898.

Kinds of Fish.	Quantity.	Price.		Value.	
		\$	cts.	\$	cts.
Salmon, in one pound cans	Lbs.	23,642,452	0 10	2,364,245	20
“ fresh	“	914,850	0 10	91,485	00
“ salted, in barrels	Brls.	2,600	10 00	26,000	00
“ smoked	Lbs.	201,000	0 10	20,100	00
“ dry salted	“	4,000,000	0 04	160,000	00
Sturgeon, fresh, dressed	“	750,000	0 05	37,500	00
Halibut, fresh	“	1,970,000	0 05	98,500	00
Herring	“	565,000	0 03	16,950	00
“ smoked	“	127,000	0 10	12,700	00
Oolachans, salted	Brls.	2,175	10 00	21,750	00
“ fresh	Lbs.	460,000	0 05	23,000	00
“ smoked	“	24,500	0 10	2,450	00
Trout	“	328,800	0 10	32,880	00
Assorted and mixed fish	“	466,000	0 05	23,300	00
Smelt	“	78,500	0 05	3,925	00
Codfish, fresh	“	522,500	0 05	26,125	00
Skill	Brls.	110	10 00	1,100	00
Hair-seals	Skins	7,600	0 75	5,700	00
Fish oil	Galls.	124,525	0 30	37,357	50
Fish guano	Tons.	200	0 30	6,000	00
Caviare	Lbs.	24,778	0 30	7,433	40
Oysters, \$12,000; clams, mussels, \$9,080; crabs, abelonies, \$22,500;)					
Shrimps and prawns, \$5,000; and isinglass, \$500.					49,080 00
Estimate of fish not included in above.	Lbs.				350,000 00
Fur-seals	Skins.	28,552	10 00	285,520	00
Sea otter	“				10,000 00
Grand total					3,713,101 10

E.—CAPITAL invested in the Fisheries of British Columbia, including Fur Sealing industry, 1898.

Plant and Material.	Number.	Value.		Total Values.
		\$	\$ cts.	
Salmon canneries	67	20,000		1,340,000 00
Oil factories	12			48,000 00
Freezers and cold storage	4			30,000 00
Vessels	143			289,595 00
Boats	5,080			218,300 00
Gill-nets, fathoms	660,775			498,825 00
Seines				13,275 00
Lines				8,750 00
Scows and flat boats				33,500 00
Vessels employed in fur sealing	35	207,645		2,480,245 00
Boats “ “	102	10,200		
Canoes “ “	326	8,150		
				225,995 00
Grand total				2,706,240 00
Hands employed in fishing, curing and canning salmon		20,695		
“ vessels		439		
Sailors and hunters in sealing fleet (white)		324		
“ “ (Indians)		656		
Total			22,114	

APPENDIX No. 10.

ONTARIO.

SYNOPSIS OF FISHERY OVERSEERS' REPORTS IN ONTARIO FOR THE YEAR 1898.

LAKE OF THE WOODS DIVISION.

Overseer M. Kyle states that while only about one-half the pound-nets of 1897 were actually in use, the financial result proves nearly 50 per cent better. Good prices prevailed during the whole season, even in winter fish were greatly in demand. Pickerel, mackinonge, sturgeon and bullheads show large increases while trout and whitefish have fallen off. Of course hardly half the number of whitefish nets were used this summer. The excessive capture of sturgeon under similar circumstances is ascribed to the low water which prevailed during the last season while the water had kept very high during the two previous years. The close seasons were well observed and no serious violations of the regulations came to his notice, excepting some parties found fishing in Lake Manitou without licenses. The only fishway in his district on the Winnipeg River is now in good working order, the water having been raised to the requisite level. The value of the Lake of the Woods fisheries is reckoned at \$69,000 for the season 1898.

LAKE SUPERIOR.

Overseer W. J. Cross, who has charge of the upper part of Lake Superior, returns an average catch of fish, consisting chiefly of trout and whitefish. While the returns of Nipigon and Rossport districts show a surplus value of over \$12,000, those of Port Caldwell have fallen off by nearly \$9,000. He makes no remarks about his division.

Overseer T. H. Elliott, who has charge of the lower portion of this lake from Otter Head, reports a shortage in the catch of whitefish of nearly forty tons as compared with the previous one, and an improvement of about the same amount in the yield of salmon-trout. There is no doubt that whitefish is steadily declining in these waters. Both divisions of Lake Superior seem well divided as to the respective value of their fisheries, each yielding about \$100,000.

LAKE HURON.

North Channel, including Manitoulin Island.

Overseer Elliott, who has also charge of this district, reports a serious shortage in the three staple fish of the Manitoulin district, whitefish, trout and pickerel aggregating 173 tons, but it is more than made up in other parts of the division. This falling off is ascribed to overfishing in the past. About twenty small trap-nets for pickerel were seized and destroyed during the summer. If these traps could be properly controlled, Mr. Elliott believes they should be licensed to catch coarse fish. Nearly the entire catch is shipped to Buffalo, Detroit and Chicago. One of the principal abuses is the capturing of immature fish in pound-nets, especially young sturgeon. If the mesh of the pound-net pots were at least four inches, most of these small

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fish would escape. The protection of the *Dolphin* greatly contributed to check illegal seining in this district. A heavy gale at the end of October destroyed many nets in the vicinity of the Duck Islands. Fish being very scarce in their own waters, the fishermen from across the border made frequent visits to our waters and needed close watching, in some cases setting their nets at night and lifting them in the morning. A powerful syndicate has been formed amongst the fish firms of the Great Lakes, the two-thirds of which is controlled by the A. Booth Packing Company. While the dealers claim that the markets will not now be glutted and that more uniform prices will be obtained, the fishermen already complain of the prices being lowered below living rates, claiming that the object of this combine is to drive them out of the business and substitute their own gear, boats and tugs, &c. This officer adds that he always contended that *bona fide* fishermen alone should be licensed, but under present circumstances, it cannot be denied that the fisheries of this division are controlled by foreign capital. The total value of the fisheries of this part of Lake Huron is reckoned at \$249,000, being a considerable surplus over that of the previous year.

Georgian Bay.

Overseer F. J. Smith states that trout fishing was good during October, but the gales of November somewhat curtailed the herring fishing. The close seasons were fairly observed but illegal fishing was carried on without licenses. Fourteen trap-nets, five seines, and seven hoop-nets were confiscated for illegal use. The result of the fishing season's operations for this part of Georgian Bay is valued at nearly \$80,000.

Overseer R. Edmonstone also reports salmon trout as plentiful during the month of October and large captures were made, but December was so stormy that very little fishing was done in any part of his division. Six tugs and forty-four fishing boats were licensed to fish in this part of Georgian Bay. The cruising of the *Dolphin* was of material help to the protection of the fisheries there. During the season, he had eight convictions for illegal fishing some of which were tried before the captain of the above mentioned cruiser.

Overseer Isaac Lennox reports an increased catch of salmon trout and a falling off in whitefish. The latter he ascribes to the scarcity of fish, while the former is due to a better observance of the close seasons of recent years. He has no infractions of the fishery regulations to report. Most of catch of the whole Georgian Bay, valued at \$180,000, is shipped to foreign parts.

Cape Hurd to Point Edward.

Overseer Chas. Briggs reports a better catch of salmon trout and whitefish than last year's. Owing to the heavy gales experienced during November, the herring fishery suffered much loss and the catch is therefore short. About seventy per cent of the yield is exported. No violation of the fishery regulations came to his notice. A new fishway has been placed in the Dennis Mill dam on the Saugeen River, which, it is hoped, will prove efficient. This officer believes in licensing the small trap-nets for the purpose of catching coarse fish which are now increasing rapidly to the detriment of the higher grades of fish. He does not consider them as destructive an engine as pound-nets. The whole catch of this division consisting chiefly of trout (nearly 700,000 lbs.) and whitefish (200,000 lbs.) is valued at \$90,000, being an increase of twenty per cent over the preceding year.

Overseer H. W. Ball states that owing to the early migration of the fish southward, and to the fact that the Goderich fishermen are only licensed to fish north of that part, they could not follow them, consequently boats and tugs were laid up in August making the shortest fishing season on record. Under such circumstances a falling off in the catch must be expected. About sixty per cent of the yield, valued at \$35,000, is exported to Buffalo. Mill-owners now comply faithfully to the requirements of the law.

Overseer H. B. Quarry says that less pound-nets were used than in 1897, and that owing to the heavy gales of October the catch of trout and whitefish is considerably decreased. This shortage is not ascribed to any marked scarcity of fish. The fact that no fishing was carried on through the ice last winter also tends to diminish the yield. Nearly the whole catch was sold to a Canadian dealer of Sarnia. This home market proved very beneficial to our fishermen. Only one complaint of illegal fishing was dealt with by him.

Overseer J. C. Pollock reports a larger catch of all kinds of fish excepting trout and whitefish. The decline of these two species is attributed to excessive gill netting in the above district. Fishermen are alleged to continue using their large meshed gill-nets during November under the pretence of fishing for herring. Mr. Pollock is of opinion that no gill-nets of any size should be permitted during the months of close season. One of these fishermen off Kittle Point is reported to have lifted 320 trout at one haul.

LAKE AND RIVER ST. CLAIR.

Overseer Jos. Boismier reports whitefish as plentiful as formerly. Fishermen are commencing to believe that they owe this improvement to the fry from the hatcheries. The capture of sturgeon was as large as the previous one but the fish are of a smaller size. Some of them when dressed only weighed four or five pounds. Something should be done to protect this valuable branch of the fisheries. Bass are getting scarce and should never be netted.

Overseer C. W. Raymond, who has charge of Mitchell's Bay, states that no seines should be allowed in that locality as it is a natural spawning ground for bass. Angling was fairly good in the channels. He issued fifty-five anglers permits to foreigners for bass. Besides these, over two hundred others fished under the section which allows those domiciled in Canada employing Canadian boatmen, &c. He attributes the scarcity of bass to the rapid increase of carp which destroy the spawn of the finer grades of fish. Unless this carp problem is solved in the near future, there will soon be no bass to protect.

Thames River.

Overseer T. McQueen says there are twenty-two fishery stations from the mouth of the river to Louisville, representing employment for ninety men. The principal kinds of fish here are pickerel, catfish, perch and pike. Compared with last year the catch would show a deficit owing to the blocking of the river by drifting ice which delayed the fishing operations for nearly six weeks. Nearly the whole catch is shipped to the United States. He has also charge of that part of Lake St. Clair off Dover West, where there are seven fishing station employing twenty-four hands, and a fair catch of fish is also reported from that locality.

There is no friction now between the fishermen of his district, who seem to understand that the protective regulations are for their immediate benefit. The mill rubbish is now burnt.

Overseer Peter McCann, of the upper waters of the Thames also reports that people now understand that strictly enforced regulations will contribute to the preservation of the fisheries. Rod and line fishing was more extensively followed than in previous years. He visited the dams often, especially in the spring when many seek the capture of fish. During the summer and fall a large quantity of bass and pickerel were caught by anglers. Carp are increasing fast and are found everywhere, unfortunately for the better class of fish. All fishways in this division were in excellent order, and the directions given by him to mill-owners were faithfully obeyed.

LAKE ERIE.

Overseer Peter Lamarche reports that the spring catch was the best for years, particularly that of whitefish. Fishermen were elated over the prospects, but unfortunately the fall fishing destroyed their chances of a good season.

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With the exception of pickerel, which shows a slight increase, all other kinds have greatly diminished. As compared with the previous yield, the shortage would nearly reach a half million pounds of fish. The warm weather of September and October prevented the usual run of herring and whitefish from striking inshore, then the autumn gales practically suspended operations. At the end of November the weather somewhat moderated, when some of the fishermen tried to make up their loss but winter set in on December 4 so severely that some pound-nets were frozen in and lost. Three parties were fined for fishing gill-nets without licenses.

Overseer J. K. Laird also reports a good run of fish in the spring of the year, but fall fishing was almost nil, owing to the violent gales experienced there in October which rendered many nets entirely useless. Judging from the occasional good lifts in a few sheltered places the fish still remained plentiful inshore. The fishery regulations are now willingly complied with by the genuine fishermen, who are contented to notice the protection exercised in their interests.

Overseer Wm. Freeland reports a decrease of about 33 per cent from the previous catch. This is ascribed to the fact that there were eight nets less than last year. Here also the shortage is accounted for by storms partly destroying the pound-nets. While some of the fishermen cease operations on November 1, others keep it up to the end of the year. He reports no illegalities whatever.

Overseer W. P. Croome, of Grand River, reports that the catch of fish is fully up to the average. All the fish of this district are consumed by the anglers and their friends. The Rod and Gun Club have been a great preventive of illegal fishing here. The mill-owners have not allowed the refuse of their mills to escape in the streams of this district. The ten fishways of his division have all been repaired and are now in good condition. No illegal fishing came to his notice.

The total yield of Lake Erie is reckoned at \$212,000; a deficit of about \$30,000 from that of last year.

LAKE ONTARIO.

Overseer F. Kerr, whose division comprises parts of Lakes Erie and Ontario as well as the Niagara River, states that there was no scarcity of fish and the season's operations were generally satisfactory. The run of whitefish was steady throughout the season, especially from Burlington Beach to Niagara. Whitefish being in demand at good prices, many fishermen devoted their whole summer to it, making little or no attempts at herring. These fish seemed to come quite close to the shore on the old grounds of Burlington Beach where formerly seine hauling was carried on from May to August, taking fish of all sizes, but at present fishermen are getting quite reconciled to the gill-net system. They would not now return to the old destructive means of capture after witnessing the recent steady increase of this delicious fish. It is quite satisfactory for a person to be able to set a gill net in the evening within a few hundred yards of the shore and lift it the next morning with from 50 to 100 medium sized whitefish averaging four pounds and retailed at 10 cents per pound. At Winona there was not less than ten boats constantly pursuing this fishery until the end of the season, without apparent signs of diminution. Salmon-trout appears to have declined since a couple of years. He does not blame the scarcity of fish for it, but ascribes it to the fact that fishermen were more intent in the pursuit of whitefish using the $4\frac{1}{2}$ -inch mesh instead of the larger which should be used for trout.

Herring came a little later than last year, and so soon as the weather became favourable they were found so plentiful that fishermen were unable to handle them advantageously. They consequently restricted their nets, using a larger mesh and catching a larger sized fish commanding better prices. However at one time the market became entirely glutted, so large were the hauls made, as much as ten and twelve thousand being taken at one lift. Altogether this fishery was a success, and it seems to be steadily improving. Should a proper sized mesh be now adopted and kept, the supply would never fail. Apparently ciscoes have disappeared, and a once great winter industry has ceased to be. Occasionally an odd one is still found among the other herring, but it is a rarity. Many theories have been advanced for the cause

of their extinction, but in the opinion of Mr. Kerr they have simply deteriorated as a species and become crossed and absorbed by other predominating species. At the time of cisco fishing their grounds did not seem frequented by herring while now they have become the best herring grounds.

Sturgeon are getting scarce on the old Niagara grounds, the only apparent reason alleged being overfishing. Most of the sturgeon are caught on the United States side at the mouth of the river. Those caught on the Canadian side are bought by American dealers who run boats for that purpose, thus evading the duties. Unless special protection is enacted to preserve this valuable species it cannot withstand very much longer the present drain of constant fishing, regardless of size limit or close seasons, from early spring to the late autumn. Pickerel seemed quite plentiful in the usual localities, especially at old Niagara; an average catch was secured and shipped to Buffalo. Perch are becoming a regular table fish and much sought after as such. Although tons and tons are annually caught with nets and hooks still the supply never seem to grow less. Since 'shad,' a diminutive inferior fish, has become abundant in Lake Ontario it seems to replace perch as food for the larger species, hence the abundance of the perch. Of recent years, carp has been introduced in our waters and it is now swarming in all our bays, inlets and rivers. It seems difficult of capture with the ordinary implements. The spear seems to be the best adapted engine for its destruction. It is a very objectionable coarse fish that should never have been introduced in our waters. Generally speaking, this was an exceptionally good season, fish were plentiful, prices fair, and the fishermen experienced no losses of implements by storms as is too often the case. Angling has improved in Niagara River since the abolition of the machine traps formerly fished at Queens-ton. Forty-five permits were issued to American anglers in that stream.

The fishery regulations were fairly well obeyed, hardly any illegal fishing coming to his notice. A few gill-nets were confiscated in the spring and the culprits prosecuted for fishing without a license.

Overseer R. J. Walker, of Halton and Peel counties, reports about an average catch. The herring only became really abundant in the fall. The whole catch is disposed of in Canada. Mill-owners complied with the sawdust regulation. Some fishermen attempted to lift their nets on Sundays, but desisted upon warning being given.

Overseer S. Freeman says that owing to the prohibition of the seine in his division an increase of fish is already noticeable. Only two cases of illegal fishing came to his notice. He confiscated the nets and imposed a fine. There are ten fishways in this district and he visited them all and cautioned the owners respecting the observance of the requirements of the law.

Overseer Jos. Redmond reports the catch to be about equal to the previous one. In fact he is inclined to believe that the fisheries are improving around Prince Edward county. This amelioration he unhesitatingly ascribes to the help received from the Government hatcheries, and fishermen of experience now speak highly of artificial culture. Several seizures and convictions were effected by him during the season for illegalities against the Fisheries Act.

Overseer W. P. Clarke reports an average catch of fish in Bay of Quinte but prices rules higher than last year. Seven-eighths of the catch is exported to the United States. The close seasons were observed and little or no illegal fishing came under his notice. He recommends that every licensed implement should bear some distinct mark of recognition to enable the officer to detect unlicensed gear.

Overseer Chas. Gilchrist reports that trolling for maskinonge in Rice Lake was excellent. Angling for bass was also satisfactory. Both white men and Indians admitted that fish were more abundant than during the past three seasons, as the poachers have recently been looked after rather closely. With proper protection this beautiful lake would never show signs of depletion.

Overseer E. H. Sills says the catch was an average one in the Napanee district. While some kinds of fish seemed more abundant others, notably whitefish, yielded less. No complaints were heard by him against the fishing laws and sawdust regulations. There are no fishways in this division.

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ST. LAWRENCE RIVER.

Kingston to Lancaster.

Overseer John Purdy reports an increased catch of fish in his division over that of last year. Licensed fishermen have prosecuted their calling with vigour and were not troubled with illegal fishing. The use of hoop nets should be encouraged as it catches mostly coarse fish which are so detrimental to the young of the better grades. Nearly the whole catch of fish is shipped across the border via Cape Vincent.

Overseer S. Y. Bullis, of Charleton Lake, says that all the fish caught there by tourists and residents in angling and trolling is for home consumption. Salmon-trout, bass and pike are the principal kinds of fish in this lake.

Overseer H. R. Purcell reports that the tourists and sportsmen, camping in his division, have found pickerel and bass more plentiful than during the past seasons. He believes in the artificial breeding of fish. The salmon-trout fry planted in some of those lakes are doing well.

Overseer Ephraim Deacon, who protect the waters of Lanark, reports an increase in the different kinds of fish which he attributes to a more vigorous prosecution of the fishery. All fish caught are used for local consumption excepting catfish, which are sold to the Lake Ontario Fish Co. He has no prosecutions to report, as no violations of importance came to his notice, and he knows of no existing abuses.

SIMCOE DIVISION.

Overseer Wm. McDermott is of opinion that nearly all kinds of fish were more plentiful than for years past. The most noticeable improvement was in pike, bass and catfish; the former in Bailey and Nottawasaga Rivers, and the latter in Holland River. It is the opinion of several sportsmen that pike, being so similar in characteristics to maskinonge, should also have the same close season, and he recommends it. With the exception of a few convictions for fishing during the close seasons, the fishery laws were fairly well observed. The mill-owners are now complying with the requirements of the Act both respecting sawdust and maintenance of fishways in proper condition.

PARRY SOUND AND MUSKOKA.

Overseer G. R. Steele states that he visited the numerous lakes and streams in his division. He found two cases of sawdust violations and fined the offenders. Of the several cases of violations of the close seasons that came to his notice eight persons were fined, the others were dismissed for want of evidence. There was no complaint of the scarcity of fish excepting of Lakes Salmon and Otter, where, it is alleged, numerous tourists are depleting them by over fishing. From information received, and by observation, he is of opinion that the present close time for salmon-trout is unsuitable for the waters of this district, and he recommends that it should begin fifteen days earlier.

SCUGOG DIVISION.

Overseer A. Bradshaw says that while maskinongé seemed more plentiful than last year, the other species have diminished. Although his catch is only approximated, he believes it to be as nearly correct as possible. The fishery laws were well observed, only one prosecution taking place at Lindsay. The fish-way in the Lindsay dam has been of great benefit, as large numbers of fish have ascended it. He is of opinion that the spring close season should be a fortnight sooner to suit the waters of the locality.

WELLINGTON COUNTY AND VICINITY.

Overseer A. Hughson reports that speckled trout are increasing in those inland lakes. He finds it difficult to give even an estimate of the quantity caught by the anglers. Fishways would be required in several mill dams of that district. The catch is used for local consumption. The different regulations are well observed.

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A R I O.

all Fishing Materials, also the Kinds and Quantities of Fish in the Province of the Year 1898.

Pound Nets.		KINDS OF FISH.											TOTAL VALUE.		
Number.	Value.	Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Trout, salted, brls.	Pickeral, lbs.	Pike, lbs.	Maskinonge, lbs.	Mixed and coarse fish, lbs.	Sturgeon, lbs.	Caviare, lbs.	Bladders, lbs.		Number.	
	\$												\$	cts.	
28	3300		274540	15000		210000	30500	10500	89000	295000	26720	400	69,053	20	1
28	4200	66150	240660	240100	15	64970	7460			11530			48,974	50	1
1	250	25000	140170	260000		6000	1000			500			38,083	60	2
			15000	30000	75								4,950	00	3
3	750		*20000	15000	700	2000							10,600	00	4
				152020									15,202	00	5
			49000	250000									28,920	00	6
			28000	168000									19,040	00	7
4	1600		22020	91000									10,861	60	8
			9000	50100									5,730	00	9
4	2000		81000	58200		6200	2100			31000			14,554	00	10
2	1000		46380	17920		4000	1500			2100			5,888	40	11
42	9800	91150	651230	1332340	790	83170	12060			45130					
		1823	53698	113234	7900	4159	482			2708			202,804	10	

* In No. 4 include 40 barrels of salted whitefish, \$400.

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and Value of Fish, &c., in the Province of Ontario—Continued.

KINDS OF FISH.												TOTAL VALUE.	Number.		
Herring, salted, bbls.	Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickereel, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Caviare, lbs.	Perch, lbs.	Catfish, lbs.			Mixed and coarse fish, lbs.	\$	cts.
20	2000	7000	4000		150	3200		100					1,221	50	1
100	20000	28000	34000		2500	500							6,585	00	2
		7075	800	100	2330			4085					1,015	60	3
		2440	6715		21740	800		5830				500	2,345	50	4
100		14000	35000		120000	7000	2000	15000	800		3000		12,780	00	5
		14000	3000		65700	8500	700	30000	400		6000		7,207	00	6
		11825	10000		3000			3000					2,276	00	7
		11000	25000		2000	2500		2000					3,700	00	8
		28000	120000		42000			5000					16,640	00	9
	600	54000	48000		55000	4000	140	110		400	1500		12,099	00	10
		120000	130000		20000	5000	350	200		1000	1000		23,991	00	11
100		32000	16000		6000	6000		3000			2000		5,320	00	12
	500	11000	10000	750	20000	30000		3000		1500	5000	2000	4,515	00	13
		161000	247000										37,580	00	14
		6000	60000		5000								6,730	00	15
		15000	65000		12000								8,300	00	16
		31000	108000										13,280	00	17
		35000	220000										24,800	00	18
		40000	268000										30,000	00	19
		17500	276000										29,000	00	20
320	23100	645840	1686515	850	377420	67500	3190	73125	1200	2900	18500	2500			
1280	462	51667	168651	68	18871	2700	191	4388	600	87	370	50	249,385	60	

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and Value of Fish, &c., in the Province of Ontario—Continued.

KINDS OF FISH.											TOTAL VALUE.		Number.
Herring, fresh, lbs.	Herring, salted, brls.	Whitefish, brls.	Whitefish, lbs.	Trout, lbs.	Trout, brls.	Pickarel, lbs.	Pike, lbs.	Sturgeon, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	%	cts.	
			66000	128000		7000	10000	1000				18,890 00	1
			60000	80000		20000	10000					14,200 00	2
	50	45	35000	30000	200	10000				10000		8,950 00	3
	75	60	70000	60000	100	60000	30000	3000		10000		18,080 00	4
10000	40	25	12000	50000	50	125000	27000	6000	5000	20000		15,060 00	5
	96	10	12500	15000	35	140500	25900	400	15000			12,095 00	6
24100			1050	1650	12	2200		19630				2,138 80	7
2000			700	40200	8			3000				4,376 00	8
				4250	5							475 00	9
				202800								20,280 00	10
			1000	71600	15							7,390 00	11
4400				43250	40							4,813 00	12
31200	70	40	28500	500000	60							54,184 00	13
71700	325	180	286750	1226750	525	364700	102960	33030	20000	40000			
1434	1300	1800	22940	122675	5250	18235	4116	1982	400	800		180,931 80	

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RETURN of the Number and Value of Vessels and Boats, and the Quantity and Value of Fish, &c., in the Province of Ontario—Continued.

Number.	KINDS OF FISH.										TOTAL VALUE.	Number.		
	Trout, lbs.	Trout, lbs.	Bass, lbs.	Pickarel, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Carps, lbs.			Mixed and other fish, lbs.	Caviare, lbs.
<i>Lake Huron (Proper)—Continued.</i>														
1	682500	150											89,950 00	1
2	38000		1500	1500					8000				5,435 00	2
3	270000		9500	6000	800		3000		22000	1400			30,292 00	3
4	102720	12		47750			27570						17,664 90	4
5	3430		26080	341970	1500		25470	250	6420	1260			40,523 10	5
Totals.....	1096650	162	37080	397220	2300		285040	250	36420	2260			183,805 00	
" for Georgian Bay.....	1226750	525		361700	102900		33030						180,931 80	
" North Channel.....	1686515		850	377420	67500	3190	73125		29000	18500			249,385 60	
Grand totals for Lake Huron.....	4009915	687	37930	1139340	172700	3190	391195	250	39820	40760				
Values.....	\$ 400992	6870	3634	56907	6908	191	23472	15	1180	815				614,182 40
<i>Lake St. Clair Division.</i>														
1			26000	16000	5913	1000	41880		20000	12000			8,214 52	1
2			300	800	20650		3100		6030	7520			2,302 90	2
3			35800	80400	31030	2680	4970		22120	24230			13,471 00	3
4			2000	7500	2500	700	5000		3960				6,613 00	4
Totals.....			40700	104700	60093	4380	54050		51150	43810				
Values.....			\$ 3256	5235	2404	263	3243		1535	876				30,601 42

* Add here 180 barrels whitefish, salted, \$1,800, for Georgian Bay.

RETURN of the Number of Value of Tugs and Boats, and the Quantity

DISTRICT.		FISHING MATERIALS.													
		Tugs or Vessels.				Boats.			Gill Nets.			Pound Nets.		Herring, salted, brls.	Herring, fresh, lbs.
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.		
<i>Lake Erie.</i>															
1	Pelee Island	1	8	10000	7	9	1110	22	30	3000	300	8	2975	197860	
2	Essex County	2	205	14500	14	31	3120	43				35	10300	723270	
3	Kent County	5	62	12700	10	29	2850	54	5	500	150	47	16200	823360	
4	Elgin County	6	134	11200	31	46	3000	110	300	16320	1700	27	7700	400120	
5	Norfolk County †	2	50	4000	5	10	200	20	30	9000	2500			112100	
6	Haldimand County					39	2390	56	400	36000	5800	2	600	32000	
7	Welland County														
Totals		16	459	52400	67	215	18500	372	765	65420	10450	179	63775	4-39850	
Total values... \$														420	96787

* One of these a sailing vessel, 198 tons. † In No. 5 add 15 seines 2,500 fathoms, valued at \$1,365.

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and Value of Fish, &c., in the Province of Ontario—Continued.

KINDS OF FISH.												
Whitefish, lbs.	Bass, lbs.	Pickereel, lbs.	Pike, lbs.	Maskinongé, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish lbs.	Caviare, lbs.	TOTAL VALUE.	Number.
											* cts.	
10910	1730	2530	22800	.....	26330	.....	1330	870	.....	.....	7,644 90	1
47480	5540	40840	.....	.....	24790	.....	37460	5590	302260	.....	29,517 20	2
48175	515	93250	.....	.....	12030	.....	51085	1375	126350	.....	64,799 35	3
58150	2860	359690	.....	.....	28105	.....	31300	1610	42645	.....	42,902 90	4
75000	2500	160500	110000	.....	30400	.....	220415	8440	175100	8200	* 42,834 65	5
5000	11500	63600	9500	5000	5300	2000	15800	6700	20000	.....	8,868 00	6
650	5600	82000	3000	.....	158000	.....	22000	.....	26000	.....	16,020 00	7
245365	30245	802410	145300	5000	284955	2000	379390	27585	692355	8200		
19629	2420	40120	5812	300	17097	120	7588	552	13847	4100	212,586 10	

* Partly estimated.

RETURN of the Number and Value of Tugs and Boats, and the Quantity

Number.	FISHING MATERIALS.											Herring, salted, brls.	Herring, smoked, lbs.	
	Tugs or Vessels.				Boats.			Gill Nets.			Hoop Nets.			
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.			Value.
	DISTRICTS.													
	Lake Ontario.													
		%		%					%		%			
1	Niagara and Queenstown..			11	1000	22	200	20000	6000					
2	Port Dalhousie.....	1	8 1800	3	7	600	14	250	25000	7000				
3	Beamsville.....			14	1000	28	300	30000	8000					
4	Burlington Beach.....			16	1100	32	320	32000	9500					
5	Angling and trolling in above districts.....													
6	Halton and Peel Counties.....			17	2900	40	755	37550	3335				596000	
7	York County.....			10	1030	17	102	15 00	1640				72000	
8	Ontario County.....			5	90	10	9	1235	250					
9	Northumberland and Dur- ham Counties.....			22	1000	30	23	24000	1200	17	250			
10	Rice Lake and Trent River.....			10	280	30				46	920			
11	Prince Edward County.....	2	100 5000	10	100	500	150	63	17900	*2000	36	720		
12	Bay of Quinte.....			53	1575	72	682	15850	1420	92	2000		175	
13	Lennox County and Nap- anee River.....			28	610	39	30	6000	690	50	920			
14	Amherst Island & vicinity.....			16	240	32	20	4125	225					
15	Wolfe Island and vicinity.....			22	540	37	35	5150	600	24	560			
	Totals.....	3	108 6800	13	331	12465	553	2789	233810	41360	265	5370	175	668000
	Values.....												700	13360

* 2 seines, 300 fathoms, valued at \$200.

SESSIONAL PAPER No. 11a

and value of Fish, &c., in the Province of Ontario—Continued.

KINDS OF FISH.												TOTAL VALUE.	Number.
Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickereel, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.		
10000	70000	1000	5000	25000			30000		22000		10000	10,210 00	1
180000	18000	1000	1000	4000			500	1000	12000		10000	6,070 00	2
280000	50000	6000		10000			4000		10000		2000	11,280 00	3
195000	41000	3000	4000	2000	4000		1500	2000	12000		2000	8,670 00	4
			14000	45000	4000				60000			5,330 00	5
	200	14000	1000		100			150	500		300	13,450 00	6
70800	94200	9150									2700	11,361 00	7
4900	2950	100			250				100			357 00	8
25000	12500	5400			32000			1200		35000	20000	4,492 00	9
			50000		11130	100000		5850		50800	21450	12,212 40	10
50000	60000	60000	19000	10000	40000	20000	2000	10000	5000	20000	40000	17,970 00	11
104800	14770		6800	22000	109600	3150		5850	48870	128800	58800	15,763 70	12
42000	21400		600	31000	27000		1000	13000	39000		104000	9,320 00	13
	13400	2000									6200	1,396 00	14
1500	12000			6900	19300		7000	8300	9800	23460	17900	4,182 20	1
964000	410420	101650	92400	155900	247380	123150	46600	46850	219270	258120	295350		
19280	32834	10165	7392	7795	9895	7389	2796	2811	6578	5162	5907	132,064 30	

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RETURN of the Number and Value of Tugs and Boats, and the Quantity

Number.	DISTRICTS.	FISHING MATERIALS.							
		Boats.			Gill Nets.			Hoop Nets.	
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.
	<i>St. Lawrence River, Kingston to Lancaster.</i>		\$				\$	\$	
1	Frontenac County.....	46	580	56	60	2000	265	36	650
2	Fronting on County Leeds.....	70	3200	80				3	50
3	Lakes in Leeds and Lanark.....	23	250	40	4	50	20	53	1170
4	*Grenville County to Lancaster.....								
	Totals.....	139	4030	176	64	2050	285	92	1870
	Value.....	\$							
	<i>Inland Divisions.</i>								
1	*Prescott and Carleton Counties.....								
2	*Renfrew County.....								
3	*Lake Nipissing.....								
4	*Parry Sound and Muskoka.....								
5	*Peterborough and vicinity and Otonabee River.....							8	175
6	*Lake Scugog and Victoria County.....								
7	*Lake Simcoe, Couchiching and Severn and Holland Rivers.....								
8	*Wellington County and vicinity.....								
	Totals.....							8	175
	Value.....	\$							

* Angling, trolling and night lines.

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and Value of Fish, &c., in the Province of Ontario—Continued.

KINDS OF FISH.											TOTAL VALUE.		Number.	
Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickereel, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Eels, lbs.	Pereh, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	%		cts.
4800		6500	4600	1800	46000			38400	600	102500	25820	7,932	40	1
800	1000	20600	7800	4500	7650	4700	34000	17000	24000	22500	42500	10,882	00	2
			1500	550	6000	200	10500	800	600	1000	5000	4,985	80	2
												1,215	50	4
5600	1000	27100	34900	6850	155650	4900	44500	59325	27650	167900	102110			
112	80	2710	2792	543	6226	294	2670	3559	830	3358	2042	25,015	70	
*	600		9950	7270	9500	11100	1250	8800	9000	41100	57900	5,106	50	1
	650	2000	4750	5100	10800	1800	3800	2100	600	1500	12500	2,079	00	2
				5000			3000				23000	840	00	3
	3750	43000	280500	184200	6000	4100			7000	3000	153000	40,066	00	4
	3200	58300	160000	1000	1030	268200		5400	2000	10450	76700	37,195	00	5
			233000			311000		2600			254000	42,536	00	6
*	30000	72300	43000	15400	3800	27000	2100		16500	5000	55000	17,433	00	7
		15000	3000						1500	2200	12000	2,069	00	8
	38200	190600	734200	212970	36100	623200	10150	18900	36600	63250	644100			
	3056	19060	58736	10648	1444	37392	609	1134	1098	1265	12882	147,324	50	

* Partly estimated.

RECAPITULATION of the Number of Fishermen, Tonnage and Value of Tugs, Boats, Nets, &c., and the Quantity and Value of all Fish caught in the Province of Ontario, for the Year 1898.

Number.	FISHING MATERIALS.										OTHER FIXTURES USED IN FISHING.															
	Tugs or Vessels.			Boats.			Gill Nets.				Snares.		Round Nets.		Hoop Nets or Verroux.		Freezers and Ice Houses.		Piers and Wharfs.							
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Pathony.	Value.	Number.	Pathony.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.					
1	4	54	5800	14	24	2450	48	35	7000	1250				28	3800	14	600	8	8500							
2	14	519	27900	82	53	8200	124	459	20500	27309			42	9800			9	5400	21	17350	2					
3	45	1107	111700	252	428	34723	908	11060	1320640	133375			15	950	1135	6	180	45	28400	38	16475	3				
4	1	16	500	2	72	2060	236						54	4365	3790	7	1700	21	1110	4	225	4				
5	16	659	12400	67	215	18500	372	765	65120	10450			15	2500	1365	179	63775	63	21960	7	2200	5				
6	3	108	6800	13	331	12465	553	2789	233810	41360			2	300	200		265	5370	64	1360			6			
7					139	4630	176	64	2050	285								92	1870					7		
8									(Angling, trolling and with night lines.)									8	175					8		
	83	2257	105100	430	1262	82428	2417	15172	1838120	214020			86	8115	6490	372	106365	406	9305	193	66445	66	36025			
Totals.																										

PROVINCE OF ONTARIO.

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RECAPITULATION of the Number of Fishermen, Tonnage and Value of Tugs, Boats, Nets, &c., and the Quantity and Value of all Fish caught in the Province of Ontario, for the Year 1898—Concluded.

Number.	PROVINCE OF ONTARIO.	KINDS OF FISH.													TOTAL VALUE.								
		Salmon-trout, brls.	Herring, salted, brls.	Herring, fresh, lbs.	Whitefish, brls.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickarel, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Hels, lbs.	Perch, lbs.		Catfish, lbs.	Mixed and coarse fish, lbs.	Caviare, lbs.					
1	Lake of the Woods.					15000		210000	30500	10500	295000					89000	26720					169,053	20
2	Lake Superior.	790		91150	40	651230		83170	12060		45130											202,804	10
3	Lake Huron, including Georgian Bay.	687	1495	407500	180	1181930	37930	1130340	172700	3190	391195	250	39320	40760	133010	1200						614,182	42
4	Lake St. Clair.			1700		79350	40700	104700	60093	4380	54050		51150	43810	370410							30,601	42
5	Lake Erie.		105	4899350		36245		802410	145390	5000	284955	2000	379390	27585	692355		8200					212,386	10
6	Lake Ontario.		175	† 964000		410420	92400	155300	247380	123150	46600	46850	219270	258120	295350							132,064	30
7	St. Lawrence River, Kingston to Lancaster.			5000		1000	27100	6850	155350	4900	44500	59325	27650	167900	102110							25,015	70
8	Inland Districts.					38200	190600	212970	36100	628200	10150	18900	36600	63250	644100							147,324	50
	Totals.	1477	1775	6309000	220	2882035	5670605	2715340	859783	774320	1171580	127325	753380	601425	2326335		36120					1,433,631	72

† In No. 1, add 400 lbs. sturgeon bladders, \$400. ‡ In No. 6, add also 668,000 lbs. smoked herring, \$13,360.

RECAPITULATION

OF the Yield of the Fisheries in the Province of Ontario for the Year 1898.

Kinds of Fish.	Quantity.	Price.		Value.	
		§	cts.	§	cts.
Whitefish, salted.....	Brls. 220	10	00	2,200	00
" fresh.....	Lbs. 2,882,035	0	08	230,562	0
Trout, ".....	" 5,676,605	0	10	567,660	50
" salted.....	Brls. 1,477	10	00	14,770	00
Herring, ".....	" 1,775	4	00	7,100	00
" fresh.....	Lbs. 6,309,000	0	02	126,180	00
" smoked.....	" 668,000	0	02	13,360	00
Bass.....	" 970,375	0	08	77,630	00
Pickarel.....	" 2,715,340	0	05	135,767	00
Pike.....	" 859,783	0	04	34,391	32
Maskinonge.....	" 774,320	0	06	46,459	20
Sturgeon.....	" 1,171,580	0	06	70,294	80
" caviare.....	" 36,120	0	50	18,060	00
" bladders.....	" 400	1	00	400	00
Eels.....	" 127,325	0	06	7,639	50
Perch.....	" 753,380	0	03	22,601	40
Catfish.....	" 601,425	0	02	12,028	50
Coarse fish.....	" 2,326,335	0	02	46,526	70
Total 1898.....				1,433,631	72
" 1897.....				1,289,822	57
Increase.....				143,809	15

RECAPITULATION

OF all Fishing Tugs, Boats and Nets, &c., employed in Ontario for the Year 1898.

Articles.	Value.		Total Value.
	§	§	
83 vessels, (2,257 tonnage; 430 men).....	105,100		
1,262 boats, (2,417 men).....	82,428		
15,172 gill-nets, (1,838,420 fathoms).....	214,020		187,528
86 seines, (8,115 fathoms).....	6,490		
372 pound-nets.....	106,965		
406 hoop-nets.....	9,305		
Night lines, hooks, &c.....	2,000		336,780
193 freezers and ice-houses.....	66,445		
66 piers and fishing wharfs.....	36,025		
Total value.....			104,470
			628,778

APPENDIX No. II.

REPORT
ON
FISH CULTURE OPERATIONS
IN THE
DOMINION OF CANADA
1899.

REPORT BY PROFESSOR EDWARD E. PRINCE, COMMISSIONER AND
GENERAL INSPECTOR OF FISHERIES FOR THE DOMINION
OF CANADA, FOR THE YEAR 1899.

OTTAWA, December 31, 1899.

To the Honourable Sir LOUIS H. DAVIES, K.C.M.G., &c., &c.
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to present my annual report upon the work of fish culture carried on in the department's hatcheries during the year 1899. The numerical results, as shown by the subjoined statistical tables, are of the most satisfactory character as the total quantity of fry, whitefish, Atlantic salmon, Pacific salmon, Great Lake trout or salmon trout, and lobsters, planted in the various waters detailed in the several reports, considerably exceeds the annual average output for the last twenty years. What are the exact results of this annual effort to replenish the waters of the Dominion with the best and most valuable kinds of marketable fish admits of little question. Experts are agreed that fish-culture, if properly conducted, must of necessity show beneficial effects, and practical men interested in the fishing industry have expressed the opinion, almost universally, that the fisheries have benefited by the fish-breeding operation carried on under the department for over thirty years.

No one of course can deny that fish-breeding has limits, and very definite ones, and it must be admitted that much has been claimed for artificial propagation which a close and critical examination cannot fully justify. In my special report, included as Supplement No. 1 of the 29th Annual Report of the Department 1896, I pointed out (on p. 18, 'A concise Account of Fishes' Eggs') that the very nature of the eggs of certain species of fish prevented successful treatment by fish-culture methods. I said: 'It is, moreover, no uncommon thing for intelligent persons to apply to the Department of Marine and Fisheries for spawn, or for the young fry of fishes, the

eggs and young of which have never yet been seen by any one, and it is still more common for similar applications to be made for fry which on account of peculiar features in the nature of the spawn, it is impossible, or unprofitable, to deal with in fish-culture establishments,' and further on, upon the same page, I added that 'adhesive eggs, such as those of the black bass, maskinonge, sturgeon, &c., are most unsatisfactory for treatment by methods of artificial culture. With extra precautions and care a small percentage of their eggs can be hatched; but to obtain the best results the separate, non-adhesive kind of eggs only, should be hatched artificially.'

Hardly less hazardous is the attempt, which has been made upon an extensive scale in many countries, to artificially incubate the eggs of the sea-fishes notably cod, haddock, mackerel, sole and certain flat-fishes, whose ova are very minute and float in the open sea. In a prior report I referred to a system of saving from total destruction the eggs of marine fishes, at the time of their capture and I made reference to the practice followed by some United States fishermen in Lake Michigan, of taking the eggs from the fish captured at the spawning time, fertilizing them and then returning them to the water. Mr. Charles E. Fryer, one of Her Majesty's Inspectors of Fisheries for England and Wales, in his report for 1897 upon the Sea Fisheries of Britain (excluding Scotland) makes reference to this and goes on to remark:

'I very heartily concur in, and desire to strongly endorse, the doubt expressed by Professor Prince as to the advisability of relying solely on artificial breeding in any form as a means of keeping up the stock of any kind of fish; but there does not seem to be any reason why the principle thus described as being put in practice in Wisconsin with respect to trout should not be extended to other fish. In saying this I do not of course forget the essential differences between sea fish and freshwater fish; but what I wish to point out is the advantage which this suggestion has over the usual methods of the artificial hatching of sea-fish, viz., that at trifling expense, and without interfering with the ordinary fishing operations, it would result in the saving of millions of ova which would otherwise be destroyed.'

It is of course necessary to observe that while this rough and ready treatment at any rate saves from immediate and sure destruction the eggs thus scattered in the water, it is not always the case, probably very rarely so, that the eggs are returned to the water in localities favourable to their safety and successful development. Amongst freshwater fishes it is problematical whether the eggs cast overboard by the fishermen, will ever find a secure and appropriate resting place. With the sea fishes, above referred to, there is a greater possibility that the eggs will find themselves in favourable surroundings near the surface of the water but questions of salinity temperature, tides and currents are bound up with the matter, and under normal conditions, sea fishes no doubt spawn, when and where the most favourable conditions obtain. During the sittings of the recent Canadian Lobster Commission, 1898, of which I was appointed chairman, some evidence was given, which brought out forcibly the point upon which I have just insisted. A very intelligent and well-informed lobster packer in Cape Breton made the following recommendation to the commissioners: 'The best thing to preserve the lobster supply would be to preserve the ripe berried lobsters in a floating car at each cannery, and let an officer of the Dominion Government come round and remove the spawn. He should then scatter the spawn on a flat sandy bottom, cover it over, and let it hatch out naturally. Young lobsters are always found in the sand as I once got one alive about 100 yards out from the shore in three feet of water. It was white, but perfectly formed and not quite an inch long. We get millions of small lobsters on the sand after a soft ripple and a S.W. wind. . . If the lobster packers assisted they would give all the aid necessary as they would get the market value for the lobsters after the removal of the spawn.' The department three or four years ago tried an analogous scheme and induced many lobster packers to remove the 'berries' from ripe lobsters, place the eggs in a floating wooden cage specially devised, and allow them to hatch near the cannery wharves. Reports came to hand that millions of small lobsters were seen swimming about in proximity to the hatching crates; but there is grave reason to doubt that they were lobster fry at all. At the Lobster Commission's sitting at Canso one of the most prominent fish merchants and lobster canners on the Nova Scotia coast proved this when he said: 'Many fishermen see small creatures in vast num-

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bers in the inshore waters and they call them lobster fry. I sent some of these supposed lobster fry to Prof. Herrick, who has specially studied the lobster, and he kindly and promptly sent me a reply stating that the supposed fry of the lobster were simply sand-fleas.' In other words the system of returning ova to the water in unsuitable places and under unfavourable conditions results in attracting the enemies of the eggs and fry, and thus provides food for voracious scavengers ever on the look out for this dainty provender. If the eggs of fishes are removed from the parents and placed in safety in the hatching jars and trays while undergoing incubation, one great danger, perhaps the greatest danger of all, is avoided viz., the destruction of the helpless eggs by active and voracious enemies. The agile fry whether of salmon, whitefish, trout or lobster, has powers of rapid movement at an early stage of its life, subsequent to hatching—it is on the alert and can elude enemies, but the ova are helpless and exposed to innumerable perils.

During the past year twelve hatcheries have been in active operation and have turned out a total quantity of fry amounting to 222,350,000, of which nearly half were the fry of the lobster. As stated in my previous report, three of the establishments have not been in operation, and I regret to have to report that after the conclusion of the work at the Decade Hatchery, on the Restigouche River, the building was destroyed by fire. An event so serious, is on every ground to be deplored, but there is special reason to regard with regret the destruction of an institution so famous and so successful as that which for fifteen years has held a most prominent place in the world of pisciculture. The officer-in-charge, in his subjoined report, makes reference to the opinion prevalent in the district that the burning of the building and all that it contained, was an act of incendiarism. It is difficult to conceive how an institution, which has been universally admitted to have benefited the salmon fisheries of the Bay of Chaleurs and the noted Restigouche and Metapedia rivers to an incalculable extent, should have aroused the malice of any responsible or intelligent residents in the district. The only fortunate circumstance is, that the fry had all been distributed, except a few thousands retained in a small pond close by, and the fishermen and anglers will not therefore have any grounds for the fear that they will be deprived during the coming year of the benefit of artificial fish propagation, on account of the destruction of this fine hatchery. A new building, upon a suitable and more accessible site, will be ready in time for the season's work 1899-1900, and there will be no interruption in salmon-breeding operations by reason of the unforeseen calamity alluded to. The necessary steps have also been authorized, preliminary to the erection of new hatcheries on the Pacific coast as well as on the Atlantic coast, and the buildings which it is proposed to erect will not only be of increased capacity, but will embrace many improvements which I have suggested, and certain new arrangements in accordance with recent advances in the science of fish-culture.

Following the same course at the Miramichi Hatchery, South Esk, N.B., which has been adopted since 1897, a quantity of the ova of the brook trout was placed in that building by Mr. D. G. Smith, the Provincial Fisheries Commissioner, and successfully incubated. Nearly 28,000 of these brook trout fry thus hatched were planted by Mr. Smith in tributaries of the Rivers St. John and Miramichi. This conjoint work on the part of the Dominion and Provincial Governments in recuperating the waters of the province with these game fish, has given the liveliest satisfaction to anglers and others.

The Government of New Zealand towards the close of the year 1898 expressed a desire to have sent out a supply of the eggs of certain Canadian fishes, especially the whitefish and the Pacific salmon, and arrangements were at once made for sending a shipment in the care of Mr. F. L. Ayson. Mr. Ayson was the commissioner appointed by the government of the colony to make a complete examination and survey of the systems of artificial fish-culture adopted in Canada, United States, in the British Isles and various European countries, and he spent some months in 1898 and 1899 on this continent. Mr. Ayson was most zealous in the prosecution of his mission, and every facility was given to him by the Department of Marine and Fisheries to enable him to investigate the methods so successfully adopted in the hatcheries of the Dominion. The officers at Sandwich and at New

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Westminster were instructed to specially prepare supplies of ova of whitefish and British Columbia salmon for shipment across the Pacific Ocean. The whitefish eggs were carefully packed for their lengthy voyage by Mr. William Parker and they arrived in perfect condition at Vancouver, B.C., on Feb. 10. Mr. Ayson, who was waiting to receive them, immediately reported to me that 'they are splendid eggs and well-packed for the long journey they have to travel.' Unfortunately the salmon eggs in the Fraser River Hatchery were in a state of development too advanced to allow of shipping a suitable quota with any chance of success. The whitefish eggs, packed in thick 'canton flannel' in the perforated trays used for incubation, and well damped, were taken on board the SS. *Aorangi* by Mr. Ayson upon the 12th of February, and kept in a cool part of the ship. In a letter to me dated April 1, 1899, Mr. Commissioner Ayson wrote as follows:—'I took them on by the *Aorangi* sailing from there on the 12th February, arriving at Wellington, N.Z., on the 6th March. On the voyage down I kept them in the cool chamber at a temperature of from 35° to 40°. From Wellington I transhipped to one of the West Coast boats that run down to Greymouth on the west coast of the South Island. Arrived at Kaneiri Lake on the 9th March, arranged my hatchery jars in the trout hatchery there and got the eggs all unpacked on the evening of the 10th. The top trays of each case were in good condition, but in the bottom ones there was quite 30 per cent of loss, caused, I think by the 'canton flannel' covering the bottom of the trays being too thick in texture to allow the free passage of water as it came from the melting ice from the hopper above. The flannel held the water and the eggs were in a sodden state. The flannel in some of the trays had rotted and broke when the trays were being lifted out of the case. Any decaying fabric must be injurious to eggs coming in contact with it as these were. The lot from the American Fish Commission were also packed on trays covered with canton flannel, and there was about the same proportion of loss. We get the best results when perforated zinc is used for covering the bottom of the trays and the eggs packed between layers of green moss.

'The good eggs hatched out well, and I have liberated the young fish in the cool clear water of Kaneiri Lake. Our Government are very pleased with the results obtained from this lot.'

This letter of the special commissioner was followed later by a communication couched in the most courteous terms, addressed to me by the Premier of New Zealand, the Hon. Robert J. Seddon, acknowledging the help which it had been found possible to render. The letter is as follows:

PREMIER'S OFFICE,

WELLINGTON, N.Z., 17th August, 1899.

PROFESSOR PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to express the thanks of my Government for the courtesy which has been shown by your Government, and your department in particular, in facilitating the inquiries made by our commissioner, Mr. Ayson, into the working of your fisheries.

I have also to thank you for the consignment of whitefish ova which has been sent to this colony through him.

It is the desire of this Government to obtain a further consignment of whitefish ova, and also of the sockeye salmon (*Oncorhynchus nerka*), and shall be glad if you will kindly supply us with the same.

Particulars as to the quantity of each kind required will be duly forwarded by the New Zealand Inspector of Fisheries.

I have the honour to be, sir,
Your obedient servant,

R. J. SEDDON.

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Accordingly arrangements were made for sending about half a million British Columbia salmon eggs to New Zealand, via Sydney, N.S.W., and it is expected that these eggs will reach their destination early in 1900, and the fry will be planted in various New Zealand rivers. Atlantic salmon do not appear to have succeeded at the Antipodes, possibly on account of the high temperature of the water; but there is much reason to believe that British Columbia fish will show better results.

In former reports I have alluded to the various conditions necessary for the successful incubation of fishes' eggs. The vulgar notion must be dispelled for ever that artificial fish-propagation merely consists in squeezing the eggs from parent fishes, then applying the milt, laying them upon trays, and letting them hatch out in due course without any experienced care or attention, and finally dumping the newly-hatched fry into any waters in which interested parties may wish the fish to be placed. Fish hatching to be a success demands the utmost care and all the resources of trained experience. The eggs must be taken in a proper and careful manner, or they will suffer harm and if they survive, will yield weak and malformed fry. During the many weeks or months of incubation constant attention is requisite, the supply of water being judiciously controlled, the sickly and dying eggs removed and all accidental impurities got rid of otherwise a large percentage of the eggs will die, and the deadly fungus will work havoc on the trays of ova. Nor is the need of an expert's attention and knowledge less urgent when the fry hatch out and the work of planting them out begins. All the season's operations will be wasted and of no effect, if the fry are not distributed with care and with due regard to the temperature, purity, depth, and character of the waters to be stocked. The nature of the bottom, the lack or abundance of microscopic food, and many other details call for attention, and rough handling or carelessness during transit by rail or wagon are to be avoided for failing a proper regard to such matters, the results of fish hatching will be disappointing. Indeed fish-culture must be a failure if conducted by careless and inexperienced officers. The operations carried on in the Dominion hatcheries since fish-culture commenced in Canada, have had the inestimable advantage of experienced guidance. The officers on the whole have shown zeal and careful attention in their work and most of these officers, after a period of preliminary training, have had an experience of many years of practical work. It is impossible to overestimate the advantage of possessing a staff of officers of experience and really interested in their work, whose services indeed have been regarded as of such value that in more than one instance the United States authorities have given lucrative positions to Canadian officers in charge of hatcheries.

That fish-culture should escape all criticism was not to be expected. Criticism as a matter of fact has been lavishly bestowed on fish-breeding work—in some cases it has been well merited, owing to the ignorance, indolence, or lack of experience of parties entrusted with fish-culture work. Some criticism, however, has been directed against the adopted methods, as methods, and changes or improvements have been repeatedly suggested. One of the most frequent criticisms is that directed against the planting of very young fry which it is alleged are unable to care for themselves, and cannot endure the changed temperature of their surroundings when removed from the transportation cans or vessels. The fry, it is urged, should be kept until they are some months old when they would be able to feed themselves, and have sufficient vigour and intelligence to avoid enemies and to withstand unfavourable conditions of temperature and the like. When over thirty years ago Mr. Livingstone Stone, the veteran fish-culturist of the United States, asked the late Seth Green, a pioneer in the same science, 'How many of those engaged in trout-breeding would succeed?' he answered with characteristic brevity, 'One in a million!' Six years later (in 1873) Mr. Green found himself able to regard more hopefully the work of pisciculture generally, for as a result of practice and observation the science has been reduced to rules, and the conditions of success had been so fully ascertained that, at any rate, with familiar species of the Salmonidae there was little risk of serious failure if ordinary intelligence were exercised. Indeed so exact and precise have these rules become that the late Sir J. Gibson Maitland of Howietown, Scotland, did not hesitate to affirm that 'there is no

longer any question as to how the fish are to be hatched, and under what conditions they can be grown. The questions in trout-culture are now precisely the same as those which demand solution in breeding cattle, namely, how to breed so as to produce the most desirable and suitable characteristics for the district where they are to be reared.' With respect to other fishes than Salmonoids it must be admitted that pisciculture is even yet in a large degree experimental. To use Professor Huxley's phrase 'well considered and scientific methods' have yet to be worked out and the cultivation of our prolific waters is as important as the cultivation and development of our land resources. I propose in a future report to deal exhaustively with the ceaselessly-debated question of 'Newly-hatched fry *v.* fingerlings'; but I cannot resist referring to the very able and apposite observations of Mr. Herschell Whitaker, one of the most zealous and thoroughly informed fish-culture authorities on this continent. In a report of the Fish Commissioners of the State of Michigan eight years ago, Mr. Whitaker expressed himself as follows:—

'All fishculturists who attempt to keep up their stock of parent fish by raising a certain quantity of fry each year are familiar with the great mortality occurring at the period when the young fish has finally absorbed his food sac, and is ready to take the natural food provided by nature. At this time when he "rises" in search of this natural food if he does not find it he is compelled to take the artificial food prepared for him, and the difficulty of adapting his stomach to this food results in a loss which varies somewhat from fifty to seventy-five per cent. If the young trout at this period of his existence were allowed to forage for his natural food this mortality would be greatly reduced. There are streams that are well known in Michigan which have had plants of fry not to exceed five hundred in number which within three years from the time of stocking have shown up well, and to-day without further stocking afford good sport to the angler.

'Within the current month there appeared in the Detroit daily paper an interview with a prominent fishculturist who took occasion to say: "I believe, and against great opposition have always maintained, that 100,000 yearlings planted were more likely to live and thrive than 5,000,000 fry." Making due allowance for the enthusiasm of the interviewed party and for the natural predisposition of man to defend his pet theories, let us see where these figures would leave us.

'We will start with 5,000,000 fry planted, and we will say that twenty-five per cent perished the first year, ten per cent the second year, and five per cent the third year. At the end of the second year after deducting the twenty-five per cent for loss, and estimating the number thus left to be composed of one-third females, which would cast on an average 250 eggs apiece, there would be added to the stock 281,250,000. Estimating that there will be a loss of seventy-five per cent of this number we have left 70,312,500. At the end of the third year we would have 1,068,750 spawning females casting on an average 450 eggs each, amounting to 480,937,500. Deducting from this amount seventy-five per cent for loss, and we have left 120,234,375. These added to the original plant, after having deducted therefrom for loss on the original plant twenty-five, ten and five per cent for the three years, and we have left as the result of a 5,000,000 plant 193,753,125.

'Now let us take 100,000 yearling trout: At the end of the first year after planting we deduct ten per cent for the mortality in the adult fish which leaves us 90,000. Of this number one-third being females, we would have 30,000 spawning fish which would cast on an average of 250 eggs apiece. This would give us 7,500,000 and deducting 75 per cent for mortality we have left 1,875,000. At the end of the second year after planting after having deducted five per cent loss for adult fish, 85,500. One-third of these being spawners, will cast 450 eggs each, amounting to 12,825,000. Deduct from this amount seventy-five per cent for mortality and we have left 3,206,250. At the end of the third year after having deducted five per cent for loss we have left 81,225 fish. One-third of this number being females will cast on an average 900 eggs to each fish amounting to 24,367,500. From this amount deduct seventy-five per cent for loss, leaving 6,091,875.

'At the end of the third year we must also take into consideration the fry hatched from the fish hatched at the end of the first year which will have arrived at their first spawning age. This number will amount to 1,875,000. From this amount

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deduct twenty-five per cent for mortality and we have 1,406,250. One-third of these being females leaves 468,750 spawners, which will cast 250 eggs apiece amounting to 117,187,500. Deducting from this quantity a loss of seventy-five per cent, and we have left 29,296,875. The above amounts added together make the total result of the planting of 100,000 yearling trout at the end of a three-year period amount to 40,551,225 as against 193,753,125 as the result of the fry planting of 5,000,000.

‘Considering the results, therefore, of fry planting, from which practically all the results we have are due, we must assume that it has been eminently successful, and when we consider the cheapness with which this work is done it would seem that the ample success of fry planting is simply incontestable.’

A thorough study of the whole question as an expert has convinced me that the planting of young fry as carried out in connection with Dominion hatcheries has not only had substantial results, but results which could not be equalled by any other method. The limits of this report preclude a statement of the grounds upon which this opinion is based; but recognized authorities can be quoted extensively, all supporting the claim that the planting of young fry is an undoubted benefit. The following passage from a letter recently received from a widely known angler of long experience in Eastern Ontario may be quoted in proof:—

‘The good angling here this past season has firmly convinced us, that the gradual increase of trout in our lake, for last 10 years, has been caused by the fry sent us from the Ottawa Hatchery. We hope next spring to receive a larger quantity.

‘We would be pleased to have the close season for salmon-trout changed—say, to commence October 15, instead of November 1. This year the fish were through spawning before October 28.’

In other countries the Canadian system, where adopted, has been regarded as eminently successful. Thus I noticed in the Irish Fisheries Report five or six years ago that Mr. R. McLure wrote of salmon hatching operations on the River Blackwater that the planting of fry, say six, seven or eight weeks after hatching, had had undoubted beneficial results. He wrote (Feb. 16, 1895):

‘On the Kerry Blackwater we have this year laid down over 100,000 ova and expect to succeed in getting from this quantity 90,000 to turn out in the streams and tributaries in the main river. We have for many years successfully hatched out about the same quantity with very good results. We have always removed the fish at about two months old to the minor streams.

‘It would entail expensive arrangements to keep them in ponds, and I am not sure that very much better results would be obtained by doing so.

‘The river is teeming with salmon this year; the owner spends about five pounds a week employing bailiffs during the spawning season when salmon are so easily destroyed by poachers.

‘Artificial propagation on an inexpensive scale is in my humble opinion one of the best ways of developing the Irish salmon fisheries.

‘I believe the Inspectors of Irish Fisheries, who are able men, would be in a position to do good service to our salmon fisheries if they had some fund placed at their disposal to initiate and encourage artificial propagation extensively in this country.’

If the fry are kept more than six or seven weeks systematic feeding must be resorted to. At the Restigouche Hatchery Mr. Alex. Mowat was granted permission to retain and rear 10,000 sea salmon fry until they were six months old and many of them fully three inches in length. This very successful attempt is referred to in the subjoined report by the officer named; but as already stated I propose to reserve my remarks for a future season upon the vexed question, ‘Is the raising of fingerlings an established advantage?’

During the season 1898:99 a total quantity of fry was raised in all the hatcheries operated amounting to 222,350,000, a considerable advance over the preceding year.

It is possible to demonstrate beyond reasonable doubt that the stocking of waters with artificially hatched fry has been completely successful in restricted waters where the results could be tested and observed. The department has on record many instances of confined waters where the benefit could be shown by con-

vincing proof. In our great salmon rivers these benefits white less convincingly demonstrated are almost universally admitted by sportsmen and not fishermen. The residents upon such rivers would view with alarm the entire stoppage of fish-hatching operations. It must be admitted, however, that it is far less difficult to test the results of whitefish planting in the great lakes. Countless millions have been placed in all the more important inland waters of the Dominion, but opinions of the most opposite character prevail as to the results. In such a vast inland sea as Lake Erie the benefits have been repeatedly questioned. These once prolific waters appear to have been largely denuded of whitefish, and both Canadian and U. S. fishermen have come to regard Lake Erie as now mainly inhabited by the so-called lake herring or lesser whitefish. To the surprise of the most experienced men the last two years have witnessed a sudden and astonishing return of former plenty, and in the fall of 1899 the Canadian hatchery could have been filled with ease ten times over, so numerous were the schools of whitefish coming up out of the lake. On the U. S. side of these waters it has been the same. The *New York Forest and Stream* (December 16, 1899), referred to this amazing abundance of adult fish returning, as in former years of plenty, to the great spawning grounds of the Detroit River, and expressed itself in these terms:— In the Detroit River and the western end of Lake Erie there have been phenomenal runs of whitefish. The fishermen have made enormous catches, and the U. S. Commissioner will probably take 400,000,000 eggs of this important fish.'

The prevalent opinion, and it is a reasonable one, is that the whitefish fish-hatcheries are responsible for this improvement in the supply. Certainly the fisheries on the lake and in the river have been pursued with undiminished vigour during recent years, and no special effort has been made to curtail the catch and to encourage the natural multiplication of the species, beyond the protection afforded by existing fishery regulations. These regulations in the Canadian portion of the waters of the great lakes have, it is true, been to some extent abortive on account of the total absence of restrictions upon the American side, or at any rate the very lax and ineffective enforcement of existing regulations in the several adjoining States. The International Commissioners in 1896 pointed out that the United States nets at the western end of Lake Erie had been multiplied beyond reason and should be reduced by at least one-half, and they recommended extended fish-hatching operations as a mean of improving the whitefish supply. They said 'While no positive evidence of the success of fish-culture on Lake Erie has been adduced, owing to the fact that the whitefish fry there planted represent the same variety which naturally inhabits the lake, we are confident that the supply of that species has been materially benefited thereby. As the advantages to be gained by this means must be measured by the quantity of young fish returned to the water, and as the stock of whitefish has been so greatly depleted, we strongly urge that the scope of the operations in this direction be increased to the fullest extent possible. We do not recognize the present need of propagating other species than the whitefish, unless it be the wall-eyed pike, which has already received some attention in that respect.'

The following table shows the respective quantities of each species successfully hatched and planted in the various waters.

QUANTITIES OF FRY DISTRIBUTED.

The following table shows the numbers planted of various species propagated:—

Salmon (<i>Salmo salar</i>).....	7,710,000
Sockeye (Pacific) salmon (<i>Oncorhynchus nerka</i>).....	4,742,000
Great Lake trout (<i>Salvelinus namaycush</i>).....	2,778,000
Lake whitefish (<i>Coregonus clupeiformis</i>).....	118,000,000
Lobsters (<i>Homarus americanus</i>).....	100,000,000
	222,330,000

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For facility of reference, the further table below specifies the name and location of each hatchery, also the quantities of young fish and of eggs in an advanced condition supplied by each establishment, respectively, and the species of fry or the kind of eggs so distributed during the season.

No.	Name of Hatchery.	Number of Fry distributed.	Number of Eggs sent to other Hatcheries.	Number of Eggs received from other Hatcheries.	Species.
1	Bedford, N.S.	1,025,000		1,200,000	Atlantic salmon.
	"	3,000,000		3,000,000	Lake whitefish.
2	Bay View, N.S.	100,000,000			Lobsters.
3	Sydney, N.S.	Not in operation.			
4	Dunk River, P.E.I.	" "			
5	St. John River, N.B.	950,000		1,200,000	Atlantic salmon.
	"	230,000		250,000	Great Lake trout.
	"	2,800,000		3,000,000	Lake whitefish.
6	Miramichi, N.B.	1,605,000	300,000	250,000	Atlantic salmon.
7	Restigouche, P.Q.	2,025,000	250,000		"
8	Gaspé, P.Q.	Not in operation.			
9	Tadoussac, P.Q.	2,125,000			Atlantic salmon.
10	Magog, P.Q.	2,950,000		3,000,000	Lake whitefish.
	"	148,000		150,000	Great Lake trout.
11	Newcastle, Ont.	1,100,000	1,900,000		"
	"	2,950,000		3,000,000	Lake whitefish.
12	Sandwich, Ont.	73,000,000	15,000,000		"
13	Ottawa, Ont.	2,400,000		3,000,000	"
	"	1,300,000		1,500,000	Great Lake trout.
14	Fraser River, B.C.	4,742,000			Sockeye salmon.
15	Selkirk, Man.	20,000,000			Lake whitefish.
	Total	222,350,000	17,450,000	19,550,000	

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STATEMENT showing the Places where, and the Years in which, the several Fish Establishment, annually, since they

Year.	ONTARIO.			QUEBEC.			
	Newcastle.	Sandwich.	Ottawa.	Magog.	Tadoussac.	Gaspé.	Ristigouche.
	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.
1 1868-73.	1,070,000						
2 1874	350,000						100,000
3 1875	650,000						600,000
4 1876	700,000	8,000,000				60,000	300,000
5 1877	1,300,000	8,000,000			150,000	50,000	600,000
6 1878	2,605,000	20,000,000			1,180,000	1,051,000	1,015,000
7 1879	2,602,700	12,000,000			707,000	650,000	1,470,000
8 1880	1,923,000	13,500,000			1,250,000	1,597,000	1,500,000
9 1881	3,300,000	16,000,000			1,155,000	730,000	1,500,000
10 1882	4,841,000	44,000,000		200,000	334,000	500,000	740,000
11 1883	6,053,000	72,000,000		975,000	660,000	530,000	1,400,000
12 1884	8,800,000	37,000,000		250,000	995,000	520,000	300,000
13 1885	5,700,000	68,000,000		100,000	985,000	859,000	940,000
14 1886	6,451,000	57,000,000		300,000	720,000	290,000	660,000
15 1887	5,130,000	56,500,000		1,400,000	1,627,000	576,000	1,380,000
16 1888	8,076,000	56,000,000		675,000	900,000	630,000	1,500,000
17 1889	5,846,500	21,000,000		3,475,000	850,000	800,000	1,720,000
18 1890	7,736,000	52,000,000	5,732,000	2,800,000	1,600,000	450,000	1,280,000
19 1891	7,807,500	75,000,000	7,043,000	2,875,000	1,700,000	806,000	2,306,000
20 1892	4,823,500	44,500,000	4,903,000	3,050,000	1,300,000	1,000,000	1,750,000
21 1893	9,835,000	68,000,000	6,208,000	2,400,000	624,000	965,000	1,240,000
22 1894	6,000,000	47,000,000	4,480,000	3,600,000	2,060,000	910,000	883,000
23 1895	6,000,000	73,000,000	3,210,000	2,035,000	1,975,000	850,000	1,080,000
24 1896	5,200,000	61,000,000	3,950,000	3,210,000	2,060,000	675,000	2,885,000
25 1897	4,200,000	72,000,000	4,100,000	3,350,000	2,500,000	300,000	1,250,000
26 1898	4,325,000	71,000,000	3,020,000	4,200,000	3,272,000	1,100,000	2,100,000
27 1899	4,050,000	73,000,000	3,700,000	4,500,000	2,200,000		1,135,000
Totals...	125,375,200	1,125,500,000	46,353,000	41,943,000	32,989,000	15,949,000	32,249,000

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Hatcheries have been erected; also the number of Fry distributed from each were built, including the Year 1899.

NEW BRUNSWICK.		NOVA SCOTIA.			P. E. ISLAND.	BRITISH COLUMBIA	MANITOBA	Totals.
Miramichi	St. John River.	Bedford.	Sydney.	Lobster Hatchery, Bay View.	Dunk River.	Fraser River.	Selkirk.	
Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.
60,000								1,070,000 1
150,000								510,000 2
60,000		395,000						1,570,000 3
320,000		1,000,000						9,655,000 4
665,000		1,400,000						13,451,000 5
1,025,000		1,740,000						27,042,000 6
805,000	170,600	730,000			500,000			21,684,700 7
770,000	50,000	680,000			375,000			21,013,000 8
640,000	588,000	850,000	315,000		1,060,000			22,949,000 9
925,000	72,600	800,000	659,060		1,210,000			55,859,000 10
795,000	811,000	1,000,000	853,000		1,000,000			83,784,600 11
900,000	155,000	670,000	772,000		1,100,000	1,800,000		53,143,000 12
945,000	2,181,000	960,000	1,179,000		400,000	2,625,000		81,067,000 13
900,000	2,479,000	4,230,000	1,415,000		500,000	4,414,000		76,724,000 14
1,290,000	4,142,000	4,390,000	1,559,000			5,807,000		79,273,000 15
850,000	3,570,000	3,850,000	2,034,000			4,419,000		88,109,000 16
1,022,000	3,492,000	3,860,000	1,953,000			6,640,000		47,700,000 17
1,503,000	3,165,000	2,550,000	1,000,000	7,000,000		3,603,800		90,213,000 18
1,310,000	2,378,000	2,620,000	690,000	63,500,000		6,000,000		115,772,300 19
975,000	3,299,000	3,180,000		153,600,000		5,764,000		135,959,500 20
1,010,000	4,096,000	3,805,000	288,000	160,000,000		7,800,000	14,500,000	258,314,000 21
1,200,000	4,060,000	3,815,000	195,000	168,200,000		6,390,000	19,000,000	254,919,000 22
1,430,000	4,068,000	4,225,000	243,500	100,000,000		10,393,000	4,500,000	294,040,000 23
1,558,000	4,155,000	5,450,000	496,000	90,000,000		5,928,000		202,450,500 24
1,557,000	3,290,000	3,000,000		85,000,000		5,850,000	9,000,000	198,859,000 25
1,605,000	3,980,000	4,025,000		100,000,000		4,742,000	20,000,000	192,477,000 26
								222,350,000 27
24,270,000	50,202,200	59,225,000	13,652,500	927,300,000	6,145,000	82,175,800	67,000,000	2,650,468,200

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It should be added that a further new step was taken during last season, viz: the hatching of the famous game-fish the Rainbow trout. This was done at the Bedford Salmon Hatchery, N.S., and is referred to in the report on the operations at that establishment on a subsequent page. The work was undertaken at the suggestion, and with the co-operation, of the Nova Scotia Game and Fishing Society. This society purchased in Caledonia, State of New York, 25,000 eggs of the Californian trout. The department also secured a similar quantity and the entire shipment was transported to Bedford in charge of the department's officer at the hatchery there. They did well and the loss during incubation was extremely small. The fry were distributed in certain waters in the counties of Halifax and King's, N.S., and the result of the introduction of this western fish into eastern Canadian lakes and streams will be watched with interest. Opinions are divided as to the game qualities of this species after transplantation; but it is universally admitted to be, in many respects, one of the finest of our species of mountain trout. These fry, 46,100 in number, together with the brook trout fry hatched at the South Esk establishment N.B., viz: 28,000 incubated by arrangement with the New Brunswick Provincial authorities, if added to the total quantity of the fry of commercial fish hatched and planted, brings the grand total up to 222,424,100, a most creditable result in view of the strict economy exercised in regard to expenditure and the reduced appropriation available for fish-culture during the past season.

I have the honour to be, sir,

Your obedient servant,

EDWARD E. PRINCE,
Dominion Commissioner of Fisheries.

APPENDICES TO FISH-CULTURE REPORT.

1. BEDFORD HATCHERY, NOVA SCOTIA.

BEDFORD, December 9, 1899.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my annual report of work done at the Bedford hatchery for the year 1899.

In November, 1898, I received from the retaining pond at Carleton, N.B., 900,000 salmon eggs, and on April 12 last, 300,000 semi hatched salmon eggs from the Miramichi hatchery, also in March last, 3,000,000 whitefish eggs from the hatchery at Sandwich, Ontario.

On April 4 last, under instructions from the department, I proceeded to Caledonia, New York State, and purchased 25,000 eggs of the Rainbow or California trout. I also took charge of 25,000 eggs for the Halifax Game and Fish Club, all of which were laid down in the troughs here and with but a very small loss were hatched and distributed in lakes and rivers named below.

Whitefish fry.

McPherson's Lake, Pictou County, N.S.	50,000
Goshen Lake, Antigonish County, N.S.	200,000
Brazil Lake, Yarmouth County, N.S. ...	800,000
Paradise Lake, Annapolis County, N.S.	700,000
Lake Au Law, Inverness County, N.S.	800,000
Total	<u>3,000,000</u>

Salmon fry.

Nine Mile River, Halifax County, N.S.	50,000
Rodden River, Halifax County, N.S.	50,000
Pennant River, Halifax County, N.S.	75,000
Herbert River, Hants County, N.S.	50,000
Avon River, Hants County, N.S.	100,000
Meander River, Hants County, N.S.	100,000
Cornwallis River, King's County, N.S.	50,000
Gaspereaux River, King's County, N.S.	150,000
Annapolis River, Annapolis County, N.S.	150,000
East River, Pictou County, N.S.	50,000
Cariboo River, Pictou County, N.S.	50,000
Lochabar Lake, Antigonish County, N.S.	25,000
Vernon River, P.E.I.	75,000
Murray River, P.E.I.	25,000
Fox River, P.E.I.	25,000
Total	<u>1,025,000</u>

Rainbow Trout fry.

Chocolate Lake, Halifax County.....	4,000
Spruce Hill Lake, Halifax County.....	4,000
Anderson's Lake, Halifax County.....	3,000
Bennett Lake, Halifax County.....	6,000
Cranberry and Flat Lake, Halifax County.....	6,000
Coldbrook Stream, King's County.....	100
	<hr/>
	23,100
Halifax Fish and Game Club.	23,000
	<hr/>
Total	46,100

This season I kept in the breeding troughs about 100 each of salmon and Rainbow trout fry and fed them upon beef liver. The Rainbows did well and grew rapidly; some of them were $3\frac{1}{2}$ inches long in September, when I planted them in Coldbrook Stream. As the troughs had to be renewed I could not retain the fry longer in the hatchery.

The salmon fry could not stand the warm water in July, all died, the temperature of the water at that time was 74° .

I am of the opinion that any effort to raise salmon, brook or sea trout to the fingerling or yearling stage would not be successful here as the water gets too warm for them in the summer, but Rainbows would do fairly well. Although the Rainbow trout is a good game fish, an active biter and makes a strong fight, giving great sport to the angler, I think that it would be a great mistake to introduce them into waters where our native trout abounds. Where food is plentiful, and waters moderately cool, the Rainbows will grow fast and attain a weight of from 5 lbs. to 10 lbs. and will no doubt soon destroy the native trout of smaller size. The Rainbow trout are not as fine a fish for food as our native species and the flesh will not keep firm long after being taken out of the water.

Under instructions from the department a new set of breeding troughs were constructed to replace the old ones which had become so bad that they would not hold water.

Next season it will be necessary to shingle the entire roof and paint the walls of the hatchery which look very dingy and bare.

Last month I obtained at the retaining Pond Carleton, N.B., 1,000,000 salmon eggs which are laid down in the new breeding troughs.

I am, sir,

Your obedient servant,

ALFRED OGDEN.

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2. BAYVIEW LOBSTER HATCHERY, NOVA SCOTIA.

BEDFORD, N.S., December 9, 1899.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my annual report of the work done at the Bay View lobster hatchery for the season of 1899.

I am pleased to be able to state that the season's output of fry exceeds that of last year by twenty millions, not that there has been any increase in the supply of ova upon the old fishing grounds, but on account of extra exertions having been made in collecting ova on new grounds, a greater distance from the hatchery than could be covered previously. It has been the practice heretofore to collect ova from the lobster factories, and convey it to the hatchery, in large buckets, kept cool by changing the water frequently while in transit. This season I adopted a new plan, by constructing boxes filled with trays, the frames of which are made of wood and covered with fleecy cotton. Each box will contain about 3,000,000 eggs, and in cool weather can be carried a long distance and kept in perfect order. This method enables the steamer when collecting ova to cover more ground without loss of eggs, or delay in stormy weather. It also saves coal, water and labour, as the eggs can be kept in these boxes for several days in the hatchery before being placed into the jars. This season I had 15,000,000 eggs kept in boxes, ready to place in jars before starting the steam pump. Under the old system it would be necessary to get up steam for the first million eggs brought to the hatchery. I arrived at Bay View on May 16, and after getting the hatchery in good running order, commenced to run the steam pump on the 27th of that month. The steamer *May Queen* commenced work on May 25, and was employed thirty days in collecting ova and distributing fry. Ova were collected from fifteen factories between Caribou and Saddle Islands, around Pictou Island, and the north shore to Cape John. One trip was made to Canso and 12,000,000 eggs received there. The first fry seen in the jars was on June 14, distribution commenced ten days later, and on July 8, there had been planted in the waters between Caribou and Pictou Island 100,000,000 young lobsters.

Each year adds more factories on our coast and more traps on the fishing grounds, and it is a surprise to all that the fishery is holding out so long.

About all the fry that have been planted from the Bay View hatchery have been placed in Pictou Bay, and around Pictou Island, and I agree with the packers and fishermen who believe that the good fishing around this locality is largely due to the hatchery.

As previously reported the wharf requires repairing, and a new fresh water reservoir will be needed next spring, as wood will rot and decay when brought into contact with water.

In all other respects the hatchery is in fair order and the cost of necessary repairs will be light for next season.

I am, sir,

Your obedient servant,

ALFRED OGDEN.

3. ST. JOHN RIVER HATCHERY, NEW BRUNSWICK.

GRAND FALLS, N. B., December 30, 1899.

Prof. EDWARD E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—In compliance with the rules of the department, and in accordance with your instructions contained in your circular of the 4th instant, I have the honour to submit the following statement of the work done at the hatchery in my charge.

In presenting my annual report, for the transactions and the work done and performed at the Rapide des Femmes fish hatchery on the St. John River, for the year 1899, under my supervision, I beg to say that in the fall of 1898, as has already been reported, about 1,200,000 of sea salmon eggs were laid down in this hatchery; and in the month of March of this year an additional supply of fish eggs from Ontario consisting of 3,000,000 whitefish and 250,000 salmon trout eggs arrived at McAdam Junction in care of Mr. William Parker. I met him at McAdam and brought the eggs to this hatchery, they were in fair condition when they arrived and they did tolerably well all through the remainder of the hatching period. There was considerable loss in the salmon-trout eggs, which occurred about the time they were hatching out, but with this exception the results were fairly good.

DISTRIBUTION OF THE FRY.

Whitefish fry.

Harvey Lake, York County.	320,000
Oromocto Lake, York County.....	240,000
Lake George, York County.	240,000
Lake Yohoe, York County.....	320,000
Baldhead Lake, York County.....	240,000
Foster Lake, Charlotte County.....	240,000
Washademoac Lake, Queen's County.....	320,000
Grand Lake, Queen's County.....	320,000
Bolieu's Pond, Victoria County.....	240,000
Pond at the hatchery, Victoria County.	320,000
	2,800,000

DISTRIBUTION OF SALMON-TROUT.

Tomiscouata Lake, Temiscouata County.....	30,000
Shogomoc Lake, York County.....	30,000
Dumphy Pond, York County.....	20,000
Magaguadavic Lake, York County.....	30,000
Petitcodiac River, Albert County.....	40,000
Long Lake, Victoria County.....	30,000
St. John River, at the hatchery.....	50,000
	230,000

Sea salmon fry.

St. Croix River, Charlotte County.....	200,000
Loch Alva, Queens County.	80,000
Skiff Lake, York County.....	160,000
Salmon River, Victoria County.	80,000
Tobique River, Victoria County.....	80,000
St. John River, Victoria County.	350,000
	950,000

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RECAPITULATION.

Whitefish fry.....	2,800,000
Salmon-trout fry	230,000
Sea salmon fry.....	950,000
Total number of fry distributed.....	3,980,000

I might here state that in two instances the salmon-trout fry were planted in localities where they were not intended when they left the hatchery. This was the case with the fry that was put into Lake Temiscouata and Petitecodiac River, the former was intended for Grand Forks Lake, P.Q., and the latter for Livingstone Lake, Albert County, N.B., but in order to preserve the fry from becoming a total loss, they were planted in the waters above referred to.

It is a very risky matter for the department to undertake to fill applications made for young fry when the distance they require to be carried exceeds one hundred and fifty miles: this will apply more especially to salmon-trout fry. Parties applying for young fry do not appear to have the most distant idea of the risk there is carrying fish fry by train when it is not possible to get a change of pure and cold water except at long intervals. A person would suppose that it was a quantity of pickled fish they were applying for. I am of the opinion that some discretionary power should be given to officers in charge of hatcheries, with regard to the distance proposed by some applicants to carry fry and also the class of water and the kind of pond or place where it is intended to plant them. Occasionally we find an artificial pond of very small dimensions with scarcely two or three feet depth of water, or even in some cases not enough to prevent the whole thing from freezing up solid in a cold winter; and others wanting to stock some neglected, stagnant pool not much better than an old frog-pond scarcely fit for German carp to live in.

Collecting the Ova.

On the night of October 24 last, I and my man arrived in St. John West, all of my appliances having got there some time previous. As usual when I went to the pond I found that Mr. O'Brien had everything in first-class order to begin work, with boat, pontoons, seine and men all on hand. Thursday the 26th, I got some salmon put into the fresh-water tanks and in the afternoon I commenced to strip the fish; after I had manipulated two or three salmon, I found that they were not quite ripe, so I concluded not to interfere with them until Monday. On the 30th, Mr. Sheasgreen having arrived, we commenced to strip the fish, and continued so to do until November 9 when I finished. As Mr. Sheasgreen had some business in Fredericton I was alone the last day. The total number of salmon handled, according to my reckoning, was 722, of which there were 429 female and 293 male fish, yielding about 2,545,000 eggs, about one-half of which was sent to Bedford hatchery, and about 1,345,000 for my own hatchery. These figures are laid down as approximate numbers.

Repairs to the underground pipe.

In the early spring of the present year a very heavy freshet arose in the Rapide des Femmes Brook and overflowed the banks of the aqueduct just above where the C.P.R. received water in their tank, and carried away the embankment which was there and was of very inferior construction, and ran down through a field above the hatchery; the soil of the said field being of a sandy and gravelly nature it very soon washed out a large channel, about thirty feet in width and six feet in depth down through the entire field. In its course it stripped fifty-two feet of the underground pipe that supplies the hatchery with water. Consequently it became absolutely necessary to have this part of the washout wharfed up with bush, with earth, and gravel sufficiently high and thick to prevent the pipe from freezing in the winter; it was quite a job and cost nearly eighty dollars, including the repairs to the aque-

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duct; but I am confident that it is all secure and safe from the winter frost for some time to come. At present we have an ample supply of water in the hatchery, and all the other arrangements are in good working order. The hatching troughs are all full of salmon eggs. I would therefore respectfully suggest that salmon trout eggs be not sent here this winter as there is no possible place to put them. Of course I can accommodate the usual quantity of whitefish eggs, as they do not hamper or in any way come in contact with the trays containing the salmon eggs.

There is another matter to which I beg to draw your attention. The main dam on the brook is now perfectly staunch and tight and about a foot higher than the old one, therefore in the time of low water it turns the principal part of all the water in the brook into the aqueduct. Consequently, in the time of a high freshet in the spring, such a heavy body is turned into the watercourse that it is liable at any moment to overflow its banks, which might be the cause of another washout; in order to prevent such another occurrence, I would suggest that a small flood gate should be put into the dam, so that the flow of water could be regulated according to circumstances. I think the whole thing would not cost more than ten dollars, and it would be the means of preventing some damage that would be much more expensive. Three new ladders are very much required for the hatchery, one from the ground to the eve of the building and two for the roof, one at each flue or chimney.

This establishment is now in good running order, with an abundant supply of good pure water and a large stock of ova; and it is beautifully and conveniently situated on the bank of the noble St. John River, and about thirty feet from the Canadian Pacific Railroad.

All of the foregoing is most respectfully submitted.

I am, sir,

Your obedient servant,

CHAS. McCLUSKEY,
Officer in charge.

4. MIRAMICHI HATCHERY, NEW BRUNSWICK.

SOUTH ESK, N.B., December 14, 1899.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my report on the operations in connection with salmon culture as carried on at this hatchery during the season of 1899.

As stated in my annual report for the year 1898, there were 1,730,000 salmon ova placed in this hatchery during the latter part of October of that year. According to instructions received from the department, I transferred 300,000 of these ova to the hatchery at Bedford, N.S., during the month of March, leaving a balance of 1,430,000. Later on there was 250,000 ova received from the Restigouche hatchery, and placed in the troughs here in good condition, making the total number of salmon ova then in the house 1,680,000. The 250,000 Restigouche ova were applied for by Mr. R. H. Armstrong, of Newcastle, N.B., who is manager for the Miramichi Fish and Game Club. This gentleman was anxious to have a much larger supply of salmon fry planted in the stream which his club controls than could be apportioned from this hatchery, therefore his application to the Restigouche house was necessary. The total loss of ova from, the time of collection until distribution was completed,

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amounted to 75,000, leaving a balance of 1,605,000, which were planted in the following streams, viz :—

Name of River.	Miramichi Fry.	Restigouche Fry.
North-west Miramichi River and tributaries	450,000	200,000
Main South-west Miramichi River and tributaries	250,000	
Little South-west Miramichi River and tributaries	400,000	50,000
Sevogle River	170,000	
Renous River	75,000	
Stewart's Brook	10,000	
Totals	1,355,000	250,000

These fry were all planted in a strong healthy condition, and as in former years on the best available grounds, and as far up the streams as possible. This part of the work was commenced on June 6, and completed on June 27. In the autumn of 1898 I obtained 28,000 trout ova, from parent fish that were taken from the Bartibogue River by the Provincial Commissioner of Fisheries. The ova hatched in good condition with very little loss, and the commissioner planted the fry in small lots on streams emptying into the St. John and Miramichi Rivers. He reports that the work was attended with complete success.

Repairs.

During the month of July an expenditure of \$140 was allowed for repairing the different appliances in connection with the hatchery. A new sluice and gateway were built in the dam of the retaining pond and several other improvements made about the structure. Two new pontoons for carrying parent fish were built and the old ones repaired. The floor of the hatchery was repaired where it had become decayed from the dampness, and new pipes for carrying the waste water from the different ranges of troughs, were put in. The front wall of the building was also stripped and relined. The retaining pond was dredged and the sediment that had settled there during the spring freshet was removed, in order to give a clean gravelly bottom. The hatching trays and troughs were also varnished and all appliances put in good condition. Considerable trouble was experienced in repairing the pipes leading from the supply dam to the hatchery, and owing to this difficulty the total cost of repairing was increased about \$25 over the amount asked for in the estimate, but this extra expenditure has been well repaid, by obtaining an excellent supply of water. Next year it will be necessary to replace several of the present hatching troughs with new ones, as they are becoming decayed and leaky in the bottom. The supply tank will also need some repairing, but this work will not incur any very large expenditure.

Capture of Parent Salmon.

On September 13 I received telegraphed instructions from the department to proceed with the work of procuring parent fish in the same way as in former years. This was about ten days later than the time this work is usually commenced. After repairing the seine and nets, the fishermen, who were under the direction of the assistant officer, immediately proceeded with the work of seining in the pools above the head of the tide on the North-west Miramichi. Large numbers of fish had passed up into those pools during the months of July and August, and all the fish required were obtained from these pools, except those taken by the set net on the Little South-west Miramichi. The first fish were obtained on September 20 and from that

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date until the work was completed on October 24, the total number of fish taken was 378. Of this number, 81 were taken in the set net on the Little South-west, and the remaining 297 were obtained by seining the pools on the North-west Miramichi. The total number consisted of 247 females and 141 males. The cost of procuring this number of fish was \$501.22, showing the average cost of each to be \$1.33. The assistant officer reports that the pools were literally alive with fish when the work of seining commenced; in some pools as many as 200 grilse being liberated from the seine. When it is remembered that only four miles of one branch of this river is operated on with the seine, for the purpose of obtaining parent salmon for this hatchery, and that nearly 300 salmon were obtained therefrom, it will give a slight idea of the immense number of fish that must be in the waters of the Miramichi. The late October run of salmon were also very plentiful, but our supply was obtained before they could reach the pools above tide head, as the water continued very low all through the season.

Collection of Ova.

On October 17 the work of separating the fish in the retaining pond was commenced, and they were found to be in excellent condition. Quite a number of the fish were fed for stripping at this date, which is about the earliest that the fish in this river have ever been found to be ripe. The collection of ova continued until October 28, when there was still a balance of 47 females in the pond that were not ripe. The assistant having then been instructed to proceed to St. John to assist in the spawning operations at Carleton Pond, these fish were allowed to remain until his return. They were then found to be in fit condition for manipulation and the work of collecting ova was completed on November 13. The total number of ova obtained was 1,715,000. If the department sees fit to make a transfer to any of the other hatcheries, not fully stocked, about 300,000 of this number could be removed, and still leave as many as can be safely carried without the erection of extra hatching space. The Provincial Commissioner did not collect any parent trout this season, and this is very disappointing to parties who have been applying for these fry in small lots from nearly every part of the province. In my opinion it would be advisable for the department to allow a certain number of these fish to be taken next year and the ova placed in this hatchery, as the expense that would be incurred would amount to very little over the present ordinary routine expenditure, and as the hatching of trout and salmon can be successfully carried on together. In concluding this report I may say that the salmon fishing on this river during the past season has been very satisfactory, the net fishermen having made better catches than for some years past. In some cases the anglers were not as fortunate as in former years, but this was accounted for by the water being very low during the early part of the season. The parties who were on the rivers later in the summer made excellent scores, and on the whole the total catch of salmon considerably exceeded that of the two former years. The reports received by me from the anglers, as well as the various fish dealers, in regard to the results of the operations at this hatchery, are very gratifying, and there is abundant evidence to prove that the large annual output of artificially hatched fry is the main factor in supplying the steadily increasing demand that is being made on the salmon fishery of our river from year to year. During the past season the grilse were very abundant, and I would urge the department to instruct the protective officers to give these young salmon the best protection possible, in our inland waters, as upon them depends the future supply of mature fish. The importance of the salmon fishery should not be overlooked in any way, and every effort will be made to increase the usefulness of this hatchery in assisting to keep up the supply by stocking the streams with strong healthy fry. This year's supply of ova is, at present, in excellent condition and another large output of fry next season is assured.

Submitting all for your consideration.

I am, sir, your obedient servant,

ISAAC SHEASGREEN.

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5. RESTIGOUCHE HATCHERY, QUEBEC.

RESTIGOUCHE HATCHERY, December 1, 1899.

Prof. E. E. PRINCE,
 Dominion Commissioner of Fisheries,
 Ottawa.

SIR,—I have the honour to submit the following report *re* the Restigouche hatchery during the past year.

As shown in a previous report 2,500,000 fertilized eggs were deposited in the hatching trays at Dee Side in the autumn of 1898, from which crop of eggs were hatched 2,275,000 fry. These were planted in the following localities and streams :—

June 15-20, Kedgwick River, 55 miles from hatchery	400,000
“ 21-27, Main Restigouche between hatchery and Cross Pt.	810,000
“ 27-30, Upsalquitch River above Falls, 20 miles from hatchery	400,000
July 1-7, Metapedia River.....	400,000
“ 7, Parker Lake, south of Campbellton.....	5,000
May 3, eyed eggs shipped to Miramichi hatchery.....	250,000
July 7, retained in tanks at hatchery.....	10,000
Total.....	<u>2,275,000</u>

The fry were conveyed to their destination in the floating crates and were distributed in a fine, healthy condition in fairly deep water, covering a large area of the natural spawning grounds of the rivers. This mode of distribution is most perfect: the crates containing from 300,000 to 400,000 fry are towed from fifteen to twenty miles per day, and are so arranged as to permit of the escape and liberation of the fry to be constantly going on while passing up and down the river. Only the select places high up the rivers are chosen for the planting.

Of the 5,000 fry planted in Parker Lake, Mr. Prichard, the proprietor of the property, says he saw numbers of these little fish in the lake a week after they were planted, active and healthy as could be. We have already succeeded in growing them in this lake to 2½ pounds weight.

As regards the 10,000 fry retained at the hatchery in open air tanks until six months old, the experiment was most successful. Many of these little fish were fully 3 inches in length when liberated in the autumn. The food for the fry consists of pulverized liver and raw fish, the fish only being used as a fluid food, and the liver grated into powder. A great amount of attention and care must attend the work of feeding the fry and keeping all dead and decayed matter removed from the tanks. I am confident that from the trial made during the past summer at the Dee Side hatchery, that large numbers of the fry can be fed and reared in the tanks for at least six months before being liberated.

The Departmental Nets at Tide Head.

The retaining pond was made ready as quickly as possible in the spring, and the two nets got in operation, one on the 1st June, the other on the 10th. The following is a detailed record of the catch as kept in the two daily diaries for 1898 and 1899:—

Date.	Murray Island Station, 1899.	Pitts Creek Station, 1899.	Murray Island Station, 1898.	Pitts Creek Station, 1898.
June 1...	7		10	
" 2...	Nil.		8	
" 3...	6		15	
" 4...	Nil.		16	
" 5...	Nil.		Nil.	
" 6...	3		Nil.	
" 7...	4		20	
" 8...	3		8	
" 9...	3		16	
" 10...	Nil.	1	7	7
" 11...	Nil.	Nil.	25	5
" 12...	Nil.	Nil.	Nil.	Nil.
" 13...	Nil.	2	Nil.	Nil.
" 14...	4	Nil.	Nil.	2
" 15...	8	4	Nil.	15
" 16...	19	Nil.	Nil.	3
" 17...	4	5	34	Nil.
" 18...	Nil.	Nil.	17	5
" 19...	Nil.	Nil.	Nil.	Nil.
" 20...	6	7	Nil.	Nil.
" 21...	11	2	15	3
" 22...	6	8	Nil.	Nil.
" 23...	7	Nil.	8	3
" 24...	10	5	4	Nil.
" 25...	Nil.	Nil.	2	1
" 26...	Nil.	Nil.	Nil.	Nil.
" 27...	6	5	Nil.	Nil.
" 28...	4	9	Nil.	4
" 29...	5	Nil.	6	6
" 30...	19	8	9	4
July 1...	Nil.	Nil.	4	3
" 2...	Nil.	Nil.	Nil.	5
" 3...	Nil.	Nil.	Nil.	4
" 4...	5	1	Nil.	Nil.
" 5...	Nil.	3	Nil.	Nil.
" 6...	4	Nil.	4	Nil.
" 7...	5	3	Nil.	Nil.
" 8...	5	3	5	1
" 9...	2	Nil.	6	Nil.
" 10...	Nil.	Nil.	Nil.	Nil.
" 11...	Nil.	2	Nil.	Nil.
" 12...	6	Nil.	2	3
" 13...	Nil.	Nil.	Nil.	Nil.
" 14...	Nil.	Nil.	Nil.	Nil.
" 15...	4	3	1	Nil.
" 16...	1	Nil.		3
" 17...	Nil.	Nil.		
" 18...	Nil.	Nil.		
" 19...	2	Nil.		
" 20...	2	2		
" 21...	3			
" 22...	1			
" 23...	3			
	178	73	242	77

By the above schedule it will be seen the number of spawning fish for 1899 is 251. The manipulation of the fish began on October 18, and continued until November 1, 137 female and 114 male fish were operated upon, yielding about

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1,500,000 eggs, these were carefully packed in the hatching trays and conveyed to Flatlands, where they will be deposited in the course of a few days in the new hatchery which is now being constructed. The eggs at the present time are looking sound and in a good condition, they were carefully packed in moss and linen cloth, and are constantly kept damp and at a temperature of 33 degrees Fah. The embryo is now quite visible and I anticipate a successful hatch.

The new Hatchery.

The burning of the Dee Side hatchery on the 6th of August last is greatly to be deplored, particularly as it is well known to be the work of incendiarism. Nearly all the plant of every description was stored in the building at the time and was also destroyed. Therefore the new hatchery which is now being built, including the equipment, will necessitate a large expenditure of money, which otherwise would not have been necessary but for the burning of the Dee Side house.

The present new hatchery is situated at Flat Lands, N.B., some twenty miles lower down the river from the site of the old one at Dee Side.

The selection of the present site was a very wise one, as it offers every facility for the transportation of eggs and fry, both by rail and water and is quite adjacent to the retaining pond at Tide Head, and will admit of public inspection at all times. A dam of 115 feet long, by 10 high, has already been constructed on the beautiful spring water brook, which will be used as a reservoir and water supply, the large gravelly pond in connection can be utilized for sea trout, and for retaining a number of young salmon until three years old, also smelt can be retained and utilized for food for the salmon fry. On the whole the new hatchery will be the most complete of any in the Dominion, and will offer every facility for the hatching and rearing of large numbers of salmon and trout fry, and if judiciously operated will certainly prove a great factor in regulating and keeping up supplies of fish in this locality. The building will not be entirely completed before next spring but all facilities for the reception and hatching of the eggs will be completed soon, and with your permission it is my intention to equip a portion of the hatching room with galvanized iron tanks so that a large number of the fry may be fed and retained for six months.

General Remarks.

You will notice by the schedule comparing the catches of fish for the pond in 1898 and 1899, the nets took 50 per cent more fish in 1898; this difference cannot be attributed so much to the scarcity of the fish as it is due to natural causes. The first run of salmon passed into the river early in May, and escaped both nets and anglers, and about the time the fish were expected to come, from June 1 to June 10, they were almost nil, consequently poor catches for both netters and anglers and when the best run of fish did enter the river the water had become so clear, the nets so foul, that fish could not be caught.

I will now give a few of the anglers scores made in July, which I believe to be authentic and furnish the best evidence that the rivers were well stocked with fish.

Three rods at Camp Harmony caught twenty-four salmon and twenty grilse in one week. The lessees of the Upsalquitch River killed some eighty fish in eight days fishing. Mr. Dawson's waters gave between forty and fifty fish, and H. B. Holland's waters eighty or ninety salmon. I heard of one man at Kedgwick taking nineteen grilse in one day. I myself at Kedgwick, about August 1, took twenty-four salmon and grilse in a few days. I heard of two gentlemen taking twenty-two salmon at Patapedia during last three days of the fishing season; this was remarkable fishing as it is often difficult to entice salmon to rise to the fly so late in the season, and is the strongest evidence that fish were very plentiful. I have talked with many of the guardians and scowmen, who were unanimous in stating that the salmon were never more plentiful on the spawning grounds of the rivers than this fall. In all my thirty years' experience in the fishery I never knew the grilse to enter the rivers so early

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and so plentiful as this season. This is one of the best indications for the healthy condition of the river, and naturally must cause an immense run of adult salmon in the rivers in 1900 or 1901. I heard of a great deal of illegal fishing being done on the heads of the rivers. The provincial guardian at Kedgwick gathered a number of dynamite sticks, which were intended for use by parties of poachers from Madawaska County. The Upsalquitch River is not sufficiently guarded by the lessees. I heard of large numbers of poached salmon being taken there in a few hours.

It would be a great advantage were a capable officer appointed by your department to work in conjunction with the provincial and club guardians, with power to patrol that section from Dalhousie to the heads of the various rivers and see that the law is strictly enforced. This would certainly be the most effective way of conserving one of the most valuable salmon fisheries in the world.

I am, sir,

Your obedient servant,

ALEXANDER MOWAT.

6. TADOUSSAC HATCHERY, QUEBEC.

TADOUSSAC, December 9, 1899.

To Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of operations in connection with the Tadoussac hatchery for the year 1899. During the month of June I turned out 2,125,000 salmon fry in the rivers tributaries to the Saguenay River and a part in the Mowat's Lakes which is kept as a nursery for the young salmon. The following schedule will show the places where the fry were distributed :

Roberval Hatchery, H. J. Beemer, Esq.....	100,000
Ste. Anne River, Cousul Van Bruyssel.....	30,000
Murray River, County Charlevoix.....	150,000
River à Mars, County Chicoutimi.....	200,000
Tableau River	100,000
St. John River,	100,000
Ste. Marguerite River, County Saguenay.....	500,000
Baude River,	300,000
Chisholm River	200,000
Mowat's Lakes	420,000
Hatchery Lake	25,000
	2,125,000

As usual the distribution in the rivers of the Upper Saguenay was made with the assistance of the steam yacht *Forrest*. One lot of 100,000 were delivered at the Roberval hatchery; all the expenses paid by H. J. Beemer, Esq., the proprietor of the Roberval hatchery. I have also delivered to the same hatchery about 30,000 salmon-ouananiche fry, being the product of salmon eggs impregnated with the milt of male ouananiche. That lot of eggs was cared for by myself during last winter at the Tadoussac hatchery and the fry delivered in June at the Roberval hatchery in the very best condition, and to prevent any delay, a special train was waiting for the transport of cars from Chicoutimi to Roberval. As the pulling down of the old hatchery had made a large opening in the salmon pond, I have arranged a temporary means of closing the salmon pond by a fence of boards for the bottom and a wire net for the upper part. We have collected from the 200 female salmon kept

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in the pond 2,000,000 of eggs now on the trays and looking well. The repairs made in October to the dams of the Hatchery Lake, had a good effect and the water has been rising since, and we have now a large supply for the hatchery. The damages to the building reported last season and detailed in official communications to the department, have also been repaired; nothing but heavy cedar has been used for the cross beams in the cellar, and a sill of cedar also has been placed under the walls all around the building, making of the whole a first-class work. We had to renew the greatest part of the floor as it was all rotten. I have also used cedar deals for the parts of the floor the most exposed to dampness, especially under the long eighty feet tank. A new porch has been made to replace the one carried away by a gale of north-west wind last winter. All the windows exposed to the north-west side are provided with wooden shutters for the night and for the stormy days. I consider the building is in good order for a good many years to come. The first thing wanted for another season, will be some more trays to replace the old wire ones still in use for a certain quantity of eggs. As mentioned in my report of last year, twenty-five large tin cans will be needed for the next distribution. Those cans could be made here during the winter. As we had had for a good many years past, no difficulty in preserving our supply of parent salmon for the Tadoussac hatchery, I would suggest, to meet the views of the Ste. Marguerite Salmon Club, and to allow the salmon to run up the Saguenay River more freely, to keep our Point Rouge fishery opened Sunday and Monday during the months of May and June, and Saturday, Sunday and Monday during the month of July. As it has been reported before at length, it would be advisable to plant a part of the salmon fry for the Ste. Marguerite River at the head waters; this could be done by landing our cans at Pelletier's Cove in the Upper Saguenay, and then, by overland, to Ste. Marguerite River, a distance of seven miles and a half, in making a rough road. During the summer I had the visit of Mr. Blackie, a gentleman from Toronto, with a letter of introduction from the Honourable the Minister of Marine and Fisheries. As I was anxious to show this gentleman some specimen of our young salmon, I invited him to drive down to the Mowat's Lakes for a day's fishing. Mr. Blackie took twenty-four fine young salmon, very gamy fish. He was delighted with his fishing. In my annual report of last year I spoke of the necessity of stocking those lakes with smelts to be used as a food for the young salmon. I recommend the same thing again this year. The cost of seizing the smelts at Duck River, of taking the lattice boats to Tadoussac, and then the carrying the smelts, in our large distribution cans, to the Mowat's Lakes, will not exceed an expense of fifty dollars. In taking the smelts in October there would be considerable advantage, and in due course they would, no doubt, spawn in the lakes. The dam of the salmon pond will need repairing early next spring in time to receive the new supply of parent salmon for the season 1900. The temporary closing of the pond by a fence of boards and wire nets is not quite safe.

I have the honour to be, sir,

Your obedient servant,

L. N. CATELLIER.

7. MAGOG HATCHERY, QUEBEC.

MAGOG, QUE., November 23, 1899.

To Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—The following report of the operations carried on at the Magog fish hatchery, during the current year, is respectfully submitted.

On February 28 I received at Magog railway station from Mr. Wm. Parker, 3,000,000 whitefish eggs from Sandwich, Ontario, and 150,000 salmon-trout eggs

from Newcastle, Ontario; they all arrived in very good condition, and continued to do well through the period of incubation. The hatchery was in first class condition last season, with a plentiful supply of excellent water.

The distribution of young fry from this hatchery commenced on May 4 and continued until June 8, in the lakes herein named.

Salmon-trout.

Nicolet Lake, County of Richmond.....	25,000
Lake Fortin, County of Beauce.....	23,000
Spider Lake, County of Beauce.....	20,000
Lake Memphremagog, County of Brome and Stanstead...	30,000
Lake Massawippi, County of Stanstead.....	10,000
Lake Nick, County of Brome.....	5,000
Trouser Lake, County of Brome.....	10,000
Orford Mountain Pond, County of Brome and Sherbrooke.	5,000
Brome Lake, County of Brome.....	10,000
Lake Lyster, County of Stanstead.....	10,000

Total..... 148,000

Whitefish.

Lake Memphremagog, County of Brome and Stanstead..	1,225,000
Lake Masawippi, County of Stanstead.....	400,000
Orford Lake, County of Brome and Sherbrooke.....	500,000
Lake Megantic, County of Megantic.....	200,000
Brome Lake, County of Brome.....	225,000
Key Pond, County of Sherbrooke.....	200,000
Nicolet Lake, County of Beauce.....	100,000
Lake Fortin, County of Beauce.....	100,000

Total..... 2,950,000

Total number of fry distributed..... 3,100,000

The fry were invariably planted in a sound healthy condition, and on the same waters as selected in former years, and in sections of the lakes where observation showed to be the best adapted for the purpose of planting young fry. I was unable to more than quarter fill applications for fry from the hatchery this season; and in my opinion there will be a still greater number of applications next year. It is hardly necessary to add that there could not be any better evidence of the good work done by the hatchery, than is shown by the increase in the number of applications from year to year.

Repairs.

After the distribution of fry was completed, the hatchery was cleaned and dried, all appliances put in good working order. The hatching troughs and trays were also thoroughly varnished. Later on the whole building was shingled as the old roof had completely rotted away. Within the last two weeks I notice that there is a serious leak at the bottom of the penstock. I will have to take up a part of the floor and see what is the matter. I am afraid it is rotted out as it is constructed of wood.

In all other particulars the outfit of the hatchery is in good working order.

I have the honour to remain, sir,

Your obedient servant,

ALEX. FINLAYSON,

Officer in charge.

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8. NEWCASTLE HATCHERY, ONTARIO.

NEWCASTLE, December 5, 1899.

Prof. E. E. PRINCE,
 Dominion Commissioner of Fisheries,
 Ottawa.

SIR,—I have the honour to submit a report of the fish cultural operations carried on at this hatchery during the past year.

The following schedule will show you the points of distribution, also the numbers and kinds of fry distributed and placed in each locality last spring.

Whitefish.

Lake Ontario, Hamilton.....	300,000
“ Toronto.....	300,000
“ Cobourg.....	300,000
Bay Quinte, Pictou.....	300,000
“ Belleville.....	300,000
Lake Ontario, Consecon.....	300,000
Lake Simcoe, Barrie.....	300,000
Lake Couchiching, Orillia.....	300,000
Georgian Bay, Meaford.....	300,000
Lake Ontario, Bowmanville.....	125,000
“ Newcastle.....	125,000
Total distribution whitefish.....	2,950,000

Salmon-trout.

Lake Ontario, Toronto.....	100,000
“ Belleville.....	100,000
“ Kingston.....	100,000
“ Cobourg.....	50,000
Georgian Bay, Collingwood.....	100,000
“ Meaford.....	100,000
“ Warton.....	150,000
Lake Ontario, Consecon.....	50,000
Lakes, Haliburton.....	50,000
“ North Hastings Co.....	200,000
“ Northumberland Co.....	100,000
Total distribution salmon-trout.....	1,100,000
“ whitefish.....	2,950,000
Eyed eggs shipped to Ottawa.....	1,500,000
“ “ Magog, P.Q.....	150,000
“ “ Grand Falls, N.B.....	250,000
Total distribution from Newcastle.....	5,950,000

I beg to inform you that the fry were all in first class condition and deposited in the different waters.

On January 4 last we had the misfortune of having our water supply cut off, through the dam giving away which necessitated the pumping of water from the stream night and day for ten days. Of this had not occurred we would have had a larger number of fry for distribution. Fortunately, through persistent effort, we came off with not more than a quarter loss.

According to your instructions on September 25, I proceeded to Warton with two assistants to procure the usual supply of salmon-trout ova for Newcastle, Ottawa

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and other hatcheries in the lower provinces. We succeeded in getting our nets set about October 20 and at our first raising we secured about 120 trays of eggs in first class condition. The weather through the whole season was all that could be desired and our troubles were few. We wound up our operations this season about ten days earlier than last on account of getting an earlier start, during which time we succeeded in collecting about 4,500,000, out of which quantity Mr. John Walker of the Ottawa hatchery received 1,500,000, which leaves a balance of 3,000,000 in this hatchery in good condition and apparently doing well.

According to reports of fishermen and what I have seen myself at Wiarton fish are more plentiful this year than they have been for many years.

Our plant in Wiarton is now in good condition all and except our pile driver which is about 20 years old. We spent some \$24 in repairing it this year but owing to the rottenness of the frame it is hardly possible to depend on its being serviceable for more than another season. The probable cost of a new one would be about \$100.

The hatchery now is in first class condition. During the past summer it has been thoroughly renovated and painted inside and will not require any more repairs for some time.

I have the honour to be, sir,

Your obedient servant.

WM. ARMSTRONG,
Officer in charge.

9. SANDWICH HATCHERY, ONTARIO.

SANDWICH, December 30, 1899.

To Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—It is with extreme pleasure that I submit my annual report for the past year.

According to last year's report this hatchery contained 100,000,000 whitefish eggs, from which were turned out 88,000,000 young fry and semi hatched eggs, which were disposed of as follows:—

Eyed eggs.

Newcastle, Ont	3,000,000
Ottawa, Ont.....	3,000,000
Magog, Que.....	3,000,000
Bedford, N.S.....	3,000,000
St. John, N.B.....	3,000,000
Total.....	15,000,000

Young fry.

Point Edward, Lake Huron.....	4,000,000
Mitchell's Bay, Lake St. Clair	3,000,000
Peach Island, Lake St. Clair.....	3,000,000
Belle Isle, Detroit River.....	3,000,000
Fighting Island, Detroit River.....	4,000,000
In Bay below Fighting Island.....	4,000,000

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Stony Island, Detroit Island.....	4,000,000
Bois Blanc Island, Detroit River.....	6,000,000
In Lake below Bois Blanc Island.....	4,000,000
Pigeon Bay, Lake Erie.....	4,000,000
Bar Point, Lake Erie.....	4,000,000
Colchester, Lake Erie.....	3,000,000
Kingsville, Lake Erie.....	1,000,000
Leamington Lake Erie.....	1,000,000
Rond Eau, Lake Erie.....	1,000,000
Port Stanley, Lake Erie.....	1,000,000
Hamilton, Lake Ontario.....	1,000,000
Niagara, Lake Ontario.....	1,000,000
Toronto, Lake Ontario.....	1,000,000
In river at hatchery.....	20,000,000
Grand total.....	88,000,000

All the above fry were placed in the water at the above named points in an excellent condition.

This fall we have in the hatching 100,000,000 whitefish eggs which are in a fine condition.

The total catch of fish this autumn was accounted for as follows:—

Liberated.....	14,500
Sold.....	2,500
Salted.....	160
Lost.....	100
Used.....	60
Hotel Dieu (hospital).....	30
Total.....	17,350

The following are copies of a couple of letters forwarded to me from two of the best known and oldest French pioneer settlers and fishermen of Essex County. These letters contain some very valuable information in regard to the practical results which are being accomplished by the hatchery here.

SANDWICH WEST, December 26, 1899.

WM. PARKER, Esq.,
Supt. Sandwich Hatchery.

DEAR SIR,—I had occasion during the fall to visit some of the fishing stations worked by your men for the purpose of gathering spawn for the hatchery, and I must say that I came away more convinced than ever of the great usefulness of that institution. There is no doubt about it, the supply of whitefish in the Detroit River is increasing steadily year by year, and it is equally certain that the increase is due to the hatchery. It may seem strange to assert that artificial means can improve upon nature, and that the spawn extracted from a female whitefish and hatched by artificial means ensures better success than the same spawn would if left to its natural destination; and yet, such is the case. It is not that nature is at fault, but the condition of things has so changed, that what nature could do in the past, is now almost impossible owing to the many obstacles it has to overcome now, which it did not have then. The spawn of whitefish is exposed to so many dangers, taking as it does over five months before it is hatched, and the young fry having to fight its way down to the lakes amidst so many enemies, that it would almost be a wonder if any ever escaped. Of course, years ago, there was so much fish that, notwithstanding the vast amount of spawn destroyed, the supply could always balance the loss. With the spawn hatched in the hatchery it is different. The eggs are

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brought there safely and manipulated so carefully, that a very small amount is lost, perhaps 12 per cent, and then, the young fry, when hatched, instead of being abandoned to shift for itself until it reaches the lake, is transported there and deposited in places where it is comparatively free from harm. There is another important advantage in artificial hatching, I have seen whitefish spawning; have observed them hundreds of times. The male and the female come up from the bottom to the surface side by side, and just as they turn to go down again the female emits her spawn in a spray perhaps three feet in diameter, which then sinks to the bottom. Now, sir, do you think that all those eggs are impregnated? My opinion is that a lot of them are not. With the hatchery, however, it is different. The spawn is gathered in vessels and put in contact with the milt for such a length of time as to insure impregnation of all the eggs, so that very few are lost.

The fish caught in the river this year was small, averaging about two pounds. No doubt this is hatchery fish, for the older fish is, by this time, pretty well destroyed. As I had occasion to remark to you before, no whitefish comes back to the river except when it is old enough to spawn. Prior to that, it remains in the lakes; and now, I suppose this fish is coming for the first time or so, and the quantity caught is increasing steadily. The hauls made this year, your men told me, were from 30 to 140, and I know that you could have caught far more fish than you needed for the hatchery. It is not very long ago that you had to fish the whole season and that you barely caught the number you needed.

Hoping that the one hundred million eggs now in process of hatching, will reach maturity, and that the hatchery under your management will keep on in its successful career, and soon be enlarged.

I remain,

Yours truly,

RICHARD GIGNAC.

PETITE COTE, ONT., December 27, 1899.

WM. PARKER, Esq.,
Supt. Sandwich Fish Hatchery.

DEAR SIR,—In regard to the good work being accomplished by the Sandwich fish hatchery in the rivers and lakes in this part of the Dominion I have no hesitation in giving it as my firm opinion that for the last past two years there has been a wonderful increase of whitefish in the Detroit River, and I believe that had fishermen fished this year after the manner in which they fished some thirty or forty years ago, there would have been almost as large a catch as there was then. Therefore, I believe that this hatchery, as well as others maintained in other parts of the Dominion by our Government, are doing a most excellent work.

I desire also to state that in my opinion the pound nets which are allowed to be used to a large extent in Lake Erie are a source of great injury to the whitefish in the Detroit River.

I hope and trust that the Government will see its way clear to very largely extend the usefulness of the hatchery here under your careful management.

I remain very respectfully,

LOUIS LAFFERTY.

There are some very necessary repairs required about the hatchery, to which I feel it my duty to draw the attention of the department, namely: the foundation under the boilers, pumps, racks and tanks requires to be renewed; a new waste water pipe leading from the hatchery to the river is also required.

I remain,

Your obedient servant,

WILLIAM PARKER,

Fishery Officer.

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10. OTTAWA HATCHERY, ONTARIO.

OTTAWA, November 1, 1899.

Prof. E. E. PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of the operations carried on in the Ottawa hatchery during the year 1899.

On November 20, 1898, were received from the Newcastle Ont., Hatchery, about 1,500,000 salmon-trout eggs which were deposited in the hatching troughs in good condition; also in March, 1899, I received about 3,000,000 whitefish eggs from the Sandwich hatchery. The eggs from both hatcheries were in excellent condition. The fry hatched out strong and healthy in the months of April and May, 1899.

The work of distributing the fry was entrusted as in the past three or four years to Mr. Andrew Halkett with the assistance of Mr. A. M. Ross, both officials in the Fisheries Department.

I am pleased to inform you that the work was done in a very satisfactory manner and even more successful than in the past years, Mr. Halkett having had several years' experience in the distribution of the fry. In order to secure a successful planting of the fry, as this is of principal importance in order to accomplish the best results after the work of incubation is over, I would strongly report in favour of Mr. Halkett and Mr. Ross being appointed again for the same work next spring.

The hatchery is in good order and repair for the coming season's work. I expect the usual supply of salmon-trout eggs during this month.

The Canadian Fisheries Exhibits and Hatchery have been visited by over 20,000 persons during the year.

The fry having been deposited in the following named waters :

Whitefish.

Bass Lake.....	300,000
Humphries Lake.....	150,000
Green Lake.....	150,000
Rock Lake.....	300,000
Rond Lake.....	300,000
Otter Lake.....	180,000
Sharbot Lake.....	300,000
Hurd Lake.....	180,000
Rideau Lake	300,000
Mississippi Lake.....	240,000
Total.....	<u>2,400,000</u>

Salmon-trout.

Rideau Lake	50,000
16 Island Lake	50,000
Joliette Lake, No. 7.....	50,000
Eagle Lake.....	20,000
Sharbot Lake.....	40,000
Long Lake.....	40,000
Rock Lake.....	100,000
Otter Lake.....	30,000
Bass Lake.....	30,000
Victoria Lake.....	100,000
Villa Mon Repos (Three Rivers).....	50,000
Rond Lake.....	50,000

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Clear Lake	80,000
Hurd Lake.	40,000
Humphries Lake.....	30,000
Green Lake.....	30,000
Gauthier Lake (St. Jovite).....	60,000
Domain Pond and Stream (Lotbinière).....	100,000
Charleston Lake.....	100,000
Whitefish Lake (Gatineau).....	60,000
Joliette.....	100,000
Des Sables Lake (Ste. Agathe)	30,000
Rivens Lake.	60,000
Total.....	<u>1,300,000</u>

I remain, sir,

Your humble servant,

JOHN WALKER,
In charge of Ottawa Hatchery.

11. FRASER RIVER HATCHERY, BRITISH COLUMBIA.

NEW WESTMINSTER, B.C., December 13, 1899.

E. E. PRINCE, Esq.,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—With regard to the Fraser River hatchery I beg to report that of the total number of eggs 5,502,000 placed in the hatchery in October and November of last year, 4,742,000 were hatched out, 4,262,000 fry being taken to Harrison River and the balance, 480,000, to Lake Pitt.

760,000, nearly 14 per cent of the eggs turned out bad. This high percentage seems to have been mainly occasioned by the muddy condition of the water during a great part of the season. Mr. McNab, at that time inspector and officer in charge, had the dam which had become completely silted up, partially cleaned out and so far, this season, we have not had any trouble with mud.

As I have already stated in the usual report on the work of obtaining parent fish, we secured this season between the 17th September and 21st October 7,496,000 eggs in good condition. Up to date 503,000 bad eggs have been picked out and I see no reason to anticipate that our percentage of bad eggs at the close of the season will exceed ten: indeed I trust that it will turn out less than this.

The season has been very mild, the average temperature of the water to date having been since the first lot of eggs were placed in the troughs, 43° 8 as contrasted with a temperature of 39° during the corresponding period last season. The eggs have in consequence progressed very rapidly, quite a number being already on the point of hatching or hatched.

Yesterday in accordance with your instructions, I had 500,000 of the ova, carefully packed shipped on the SS. *Warrimoo*, consigned to the care of the Colonial Secretary, Sydney, N.S.W., for the New Zealand Government. The eggs were taken from the last consignment to the hatchery and as the steamer's officers have engaged to keep them well iced during the voyage, will, I hope, arrive at their destination in good condition.

The flume for conveying the water from the dam to the hatchery is nearly rotted out, but as I understand the department contemplate making some changes

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I did not think it advisable to have it renewed, and succeeded in getting the present flume repaired and made water-tight at a small cost.

The wooden railway used for carrying the eggs to the hatchery from the river bank and taking back the fry is badly in need of renewal.

Our supply of shipping trays and baskets are also now pretty nearly worn out, and for the last two years we have had to hire or borrow boats for the work at the spawning grounds and conveying the ova to the steamer at Chilliwhack.

If the hatchery were removed to a site further up the river, say nearer to the present spawning grounds at Morris Creek (and I think more than one suitable site could be found there), it could be operated more effectively and conveniently and at a considerable reduction in the annual expense. I understand that when this hatchery was first started that it was the intention to hatch more than one kind of salmon, and in 1864 and for some seasons subsequently the spring salmon or Quinnet were hatched along with the valuable sockeye salmon. The hatching of spring salmon was discontinued, as the great commercial demand has been almost solely for sockeyes. Recently, however, the other kinds have come into demand both for canning and for curing in various ways. The coho, which is a most excellent fish, is now of much market value, while the steelhead and even the dog-salmon is being utilized, whereas both these kinds were formerly dumped back into the river, when taken in the fishermen's nets. This fall there was a desire on the part of certain firms for opportunity to take humpback salmon, and as there is evidently a growing desire to utilize every kind of Pacific salmon, even those which have hitherto been rejected as of little or no value, the question arises as to whether in future operations of the hatchery other species should not be procured and hatched in the Government establishment.

As supplementary to the work of the hatchery I would ask if the department would take into consideration the advisability of making some moderate provision for the protection of the natural spawning beds. Morris Creek, where we now get the spawn, and which may be taken as a type of the spawning creek preferred by the sockeye, is a rapid stream running through a wooded bottom with a gravelly subsoil. The banks being very friable and heavy rains common during the spawning season, the regular bed of the creek frequently gets blocked by accumulations of drift, the water cutting fresh channels in which many of the salmon spawn, the ova being left dry on the subsidence of the freshet and the return of the creek to its original bed.

I have the honour to be, sir,

Your obedient servant,

C. B. SWORD,
Officer in charge.

12. SELKIRK HATCHERY, MANITOBA.

SELKIRK, December 31, 1899.

To Prof. E. E. PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit herewith a report of the operations at the hatchery at this place during the year 1899.

At the date of my last report we had in stock about thirty millions of whitefish eggs in splendid condition and promising very good results; the season was also favorable, inasmuch as the weather was steady and seasonable, without any marked variations of temperature. But owing to imperfect hatching jars, and being com-

pelled on account of the muddy condition of the Red River water to complete the hatching with water from the artesian well we did not succeed in bringing out more than two-thirds or twenty millions of healthy fry.

The question of suitable jars has been under consideration for some time, and it would be a great advantage if the hatchery were supplied with the regulation white-fish jar. I am satisfied our output would have been about 90 per cent of the eggs taken in, and it is safe to say that the jars would have paid for themselves twice over in result during the past two seasons.

As to the disposition of fry. I had two requisitions sent from your office, one from Mr. Fitzgerald, of Grenfell, N.W.T., and another from Mr. Powers, of Elkhorn, Manitoba, both of which I had determined to fill. When the fry were ready for transport I sent a telegram to each of the gentlemen named, and waited a full week for reply, receiving no answer; and the river here being open for quite a distance out into the lake, I decided to plant the whole output as far out in Lake Winnipeg as the ice would permit. This was accordingly done by Mr. Charles E. Page assisted by Mr. J. W. Ward, who report a very successful planting several miles from the mouth of the river in the direction of Grand Marais.

My decision regarding the disposition of the fry was rendered necessary from the fact that the tank in which the fry was held is supplied with water from the artesian well, which is entirely void of fish food and heavily charged with mineral of some sort, and as the food sack was being rapidly absorbed I could not hold them any longer, and have them in vigorous condition for planting.

On receiving instructions late in September last to procure supply of ova, I at once proceeded to make arrangements similar to those of last season. I left here on Friday, 6th October, for Lake Winnipegosis, and by the 14th had boats, nets and everything else ready for a start up the lake. I decided to go to the north end of the lake, where I found a harbour known as Whiskey Jack Harbour, the most favourable place I have yet seen for our purpose. Fish were there in abundance but not quite ready, by the 18th they began to spawn freely, and by the 22nd we had all the eggs we could handle, in fact, we had more than our trays would accommodate, and I put about one million of well fertilized eggs back into the lake. I arrived at home with my stock of ova on the night of the 25th, and found the hatchery in readiness to start operations, and also found that I had more eggs than the jars would accommodate. After overloading every jar in the building, we were compelled to dump about half a case in the Red River. I estimate seventy-five millions in the jars at starting, and though we started out with bright prospects I regret to say we have not met with the same measure of success as we did last year, owing to the extraordinary season we are experiencing here this winter. The river remaining open for such a length of time, subject to the action of the high winds, the mud we had to contend with was indescribable. This with the higher temperature and overloaded condition of the jars caused considerable banking, consequently we have had double the eggs affected with fungus we had last season. I now see that it would have been wise to put on some extra help for a time, but, nevertheless, if no accident overtakes us between now and the close, our output will be the largest in the history of the institution.

The hatchery building is not in a satisfactory condition; the floor became unsafe a few days after the operations began this year, and is now blocked up with timbers and blocks to enable us to complete this season's work. The foundation is made of 6 x 8 spruce, which if now seven years old and so badly decayed that an entirely new foundation will be absolutely necessary before the building can be used another year. The paint on the building could not have been properly applied when put on in the first instance, as it has now nearly all peeled off, and does not look well. I would certainly suggest that the building receive a good coat of paint the coming season.

The boiler was retubed in October, and is now in first class condition, nearly as good as new, and effects quite a saving in fuel.

The pump, although in poor condition on account of gravel sucked up through the supply pipe, is still working, and we hope will continue to do so until the end of the season; but it is a great risk, as has been previously pointed out to depend on

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one boiler and pump to operate continuously, night and day for over 200 days without accident, and I would suggest that the institution be furnished with both an auxiliary pump and boiler before undertaking the work of another season.

The suction pipe was a source of annoyance again this year, and a steam tug had to be employed to find it, and dig the sand and gravel from off the mouth of it. I suggested last year that it should be extended several feet out into the river, the cost of doing so would be more than saved, in the repairs to, and tear and wear of the pump.

The tank which has caused so much trouble other seasons by leaking, and which is in a very unsafe condition, has been much tighter this year than last, but will not I fear, stand caulking again, and should be replaced the coming season with a circular iron bound one.

The premises on three sides are not properly fenced in as they should be, and the evergreen trees and hedges planted by my predecessor to beautify the grounds are daily being destroyed by cattle, horses, running at large which have access to the grounds. There is a dilapidated barbed wire fence on the west side along the street, but it is in such a condition that it has become a menace to all passers by and especially to children, and should be removed at once, and replaced by a less dangerous one.

In the matter of fuel for this season, when I found the price of wood advanced to \$3.50 per cord, I ventured to recommend slabs instead, and I think the ultimate results will justify me in so doing, and effect a saving of about \$200.

As to the benefits to accrue from the establishing of hatcheries for the restocking of depleted waters I had always been somewhat sceptical. During the past year I have made diligent inquiry from many of the settlers along the lake, particularly the southern part, and nearly all agree that hatcheries are beneficial, and that this one is serving the purpose for which it was intended I am now also convinced, from actual observation that a good percentage of the small fry escape the ravages of the voracious fish which infest these waters, and become in course of time parent fish. In my opinion this hatchery alone is inadequate to restore so large a body of water as Lake Winnipeg, and would recommend the construction of another, either at Pine Falls on Winnipeg River, or at Hole River where there is also a natural fall of water very superior in quality to that of Red River.

At either of these places a building could be erected and equipped with larger capacity than this one, for half the money that this cost; then the maintenance would be small indeed compared with this.

Having an unlimited supply of the best water no steam boiler or pump would be required, nor would so large an expenditure for fuel be necessary every year. You would not require an expensive engineer, a night fireman, or barrels of cylinder oil, coal oil, tools and sundry other things necessary where steam has to be employed, and again you would be right on the lake where the ova are obtainable, and the fry is to be planted and virtually take the one in at the front door and let the other go out the back.

I also consider it would be of great advantage, to both Lake Manitoba and Winnipegosis to have a small hatchery located near the mouth of some of the streams emptying there into; when one considers the immense value of our fisheries, and the importance of carefully guarding them, he cannot but be convinced that money spent in hatcheries is well spent, and bound to yield satisfactory returns.

The number of visitors is about the same as last year, the hatchery being now no 'New thing' for the people of the town and the immediate vicinity, hence our callers are limited to visitors from outside places during the winter season. If the hatchery operated during the picnic season we would have visitors in large numbers as I find almost every one takes a lively interest in fish culture, as soon as they know something of artificial propagation.

Respecting requests for fry,—I have had several, all from persons living in the vicinity of some small inland lake, and I have advised each one to make application direct to you, and their wants would receive consideration.

I have the honour to remain sir, your obedient servant,

F. W. COLCLEUGH, *Officer in charge.*

ANNEX A.

REPORT ON OYSTER CULTURE BY THE DEPARTMENT'S EXPERT
FOR THE SEASON OF 1899.

OTTAWA, December 30, 1899.

To the Honourable

Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit to you my annual report for the past season.

During a portion of last year my time was taken up in cleaning an area of ground situated on the northern side of Reynolds' West Island in Murray River, P.E.I.; as this area was not finished on the closing of navigation, my time has been engaged with the aid of a small steamboat and crew, to remove the weed and eelgrass that was growing there, by using toothed frames of an oyster dredge, and by continually towing them over the ground the weed was torn out by the roots, the bottom became perfectly clean and was visible at a depth of ten feet from the surface. After this piece of ground was cleaned to my satisfaction I placed over fifteen hundred bags of gravel or beach stones on the western side of the bottom so as to form a foundation and make it firmer, this gravel was obtained along the shores of the different rivers in the locality, laying between low and high water mark; afterwards I laid a large quantity of oyster shells over the whole area, which were obtained during the previous winter from Murray River above McLure's dam by means of a mud digger. These shells were taken from dead oyster beds lying in fresh water on account of the dam being built across the river below where the beds existed and the shells were in a splendid state of preservation. One thousand loads of shell mud were obtained and after spreading this out to dry the shells were raked over and picked out, afterwards the mud was riddled and the small shells were also saved, so that not a shell was wasted; the shells were found to be in a much larger proportion than the mud. When the area was cleaned the shells were removed by means of scows, and towed down and spread evenly on the bottom. After finishing the above I was ready to stock the bed with young oysters and laid 84 barrels of small growing oysters averaging over 2,300 to the barrel from Richmond Bay, taken in the vicinity of Curtain Island. I was in hopes of laying a larger quantity but owing to the demand for marketable oysters being so great, and during the latter part of the season many of the oyster boats were smashed up by the heavy gales of wind which prevailed through the fall I had great difficulty to secure the number I did, as several parties agreed to collect small oysters for planting purposes but failed to do so and regret that a larger number were not laid, but those that were received were in excellent condition. The above work occupied a considerable portion of my time, and the other places on the island visited and examined by me were as follows:—

TRACADIE HARBOUR.

This is an extensive bay, oyster shells and dead beds covered over with mud and eelgrass were reported, and found to exist, although now of no value.

Between Queen's Point and Big Channel on the northside of the bay a large bed of dead oyster and clam shells were found lying in about 2 feet water and deepening steeply to 10 feet, these shells are bleached and are too hard for mud diggers to work upon. No life in the way of shellfish was discovered here.

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On Big Bank, which is really a large flat of sand and eel grass extending from the shore to the south side of the northern channel, a few oysters are found scattered about but they are very scarce.

In McAulay's Cove, on the southern side of Queen's Point, three small patches were found lying in about 7 feet water and about 20 feet long, consisting of a shelly soil with a few growing oysters but not amounting to anything of importance.

Off McDonald's wharf at the head of the bay oysters were reported to have been caught last fall, but upon examination it was found to have been dug up during the winter by mud diggers, and nothing but a small patch was left. I only got one oyster there.

Off Kelly's Point at the entrance of Winter River an area of dead shells were found amongst soft soil which has been worked upon by mud diggers and is of no available use for any other purpose.

In Winter River above the bridge the ground has been cut up with mud diggers, the bottom consists of soft black mud with small mussels growing over the area. At the bridge I noticed several starfish clinging to the piles feeding on the mussels which were growing there. In McDougal's Cove there is a hard shelly bottom now covered with eelgrass, and has the appearance of an oyster bed which has grown to the level of the ice, as no live oysters are found and it is lying in about eighteen inches of water.

I also tried on various parts of the bay while sailing, and found some parts composed of hard sand covered with eelgrass while other parts consisted of soft mud. I do not see any ground here which I would recommend for preservation of the oyster industry or which could be utilized for the cultivation of the same.

SAVAGE HARBOUR.

Last season it was reported that an extensive oyster bed was found in this harbour, but from inquiries made it seems to have been exaggerated as far as the quantity caught was concerned. Oysters were found there and upon examination there is a firm area over which they fished, of roughly speaking, nine or ten acres, which consists of a firm sand and muddy bottom with some large and small stones, shells, and a number of mussels were found to be growing loosely upon the area, the depth of water varied from about ten feet and gradually shoaled until it reached the shore. This area is situated at the southern part of the bay on the northern side of Canavoy Island.

Another smaller area similar to the above lies a little to the westward of the larger patch. Last winter the farmers made an effort to dig mud where the oysters were found, but were prevented by the fishery warden until an examination could be made. Mud digging has been carried on in McIntyre's Creek and at the head of the bay, and I consider they should remain there. An imaginary line drawn from the western part of Canavoy Island to eastern line fence of Samuel Coffin, is a good mark, to keep the mud diggers on the western side of line and the fishing on eastern side. This is a sandy soil and practically useless as a fertilizer, and it might be spoilt by the farmers if they were allowed access to it. On the other hand, I believe the above area could be cultivated successfully if an attempt were made.

MORELL RIVER.

The edges of the channel of this river are steep and for ages oysters have clung and grown to the sides forming long narrow ridges and small beds in the bends of the river until the shells were found to exist to quite a depth. Of late years the farmers have dug most of these beds up, leaving small patches of shell not larger than the width of a row-boat, the bottom is now very uneven and in most places the holes caused by the diggers have become filled in with very soft mud. Very few oysters are found on these disjointed patches. The oysters have grown to a large size which shows there is but little fishing carried on, and that the area is very

limited. Below the railway bridge at the mouth of the river the water is very shallow and can be waded across at low water time. The bottom consists of an extensive bed of mussels partially covered with eelgrass where oysters of various sizes may be found, most of them being small; they are of a quick growth owing to the strong current and shallow water, but are not in any large quantities, and are of little commercial value.

MIDGELL RIVER.

This like Morell, has been destroyed by the diggers and there is not a bed in either river which has escaped their notice. There is no available area large enough or fit to cultivate or protect, and several of these so-called beds are covered over with mud, it being at times almost impossible to obtain any shells from them at all. Sometimes a person will be enabled to catch a few oysters for his own use but they do not amount to any quantity. Persons will talk of what they could catch fifteen or twenty years ago, and are under the impression the same can be done to-day. Mud digging is carried on in St. Peter's Bay but no oyster fishing or live beds seem to be reported there. I cannot see that any further action is necessary as far as protection is concerned in either of the above rivers, beyond the ordinary oyster regulations.

FORTUNE RIVER.

My attention was called to examine the condition of this river and to reserve a certain area for farmers to dig their mud. Also to inspect a piece of ground which has been applied for to lease, and to protect the area from being destroyed by mud digging. This area is located on a sandy and muddy soil, having been dug up years ago by mud diggers and is now covered nearly all over with mussels. The gentlemen who applied for this area have planted a small quantity of oysters at their own risk as an experiment, hoping to be able to lease the area. The bottom of this river, suitable for cultivation, is very limited, and I do not consider it should be destroyed, so I have arranged the following boundaries:—Mud digging should not be allowed on the river below the line road dividing Lot 56 and Lot 43 on the north side of Fortune River, nor above McKay's wharf, which is just below the bridge, as the most valuable part of the river bed lies between these two boundary lines, while good mud digging can be obtained above this area to satisfy the wants of the farmers.

The fishery officer would have liked me to have examined Souris River, as he stated oysters were found there, but, owing to the lateness of the season, time would not permit me doing so.

BEDEQUE BAY.

For years past, farmers have been destroying the oyster beds in Bedeque Bay and Wilmot Creek until the fishing area has become very limited, and to save the beds from utter extinction the boundaries have been laid out as follows:—Commencing with a straight line running in a southerly direction from the eastern range light (on George Stafford's farm) to McDonald's Point; this is the western boundary of the oyster area until it crosses the southern boundary line, which lays in a west-north-westerly direction from a marked tree (K) on Wilmot Point to the southern extremity of Government wharf, the north side of this line to the point where it crosses the western boundary line to be reserved for oyster fishing and the rest of the bay may be used by the farmers. The land on the north and south sides of Wilmot Creek to be the boundaries for oyster fishing until the eastern line is reached, which runs in a southerly direction from the line fence of George Price and Robert Stafford's farms on the north side of the creek to William Schurman's road open to the shore (on the south side of the creek) about 150 yards to the westward of Schurman's wharf. Mud digging may be carried on to the east of this line, reserving the side to the westward for oyster fishing.

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This area reserved for oyster fishing should be satisfactory to all parties, as the farmers will know exactly where they can dig mud without injury to the oyster beds, as the oysters taken from here are very valuable to the fishermen and are reported to be improving in quantity. Instructions have been given to the inspector of fisheries to have the above boundary lines marked by bushes when the ice has formed, and to see that no person encroaches on the area with their mud diggers.

PROTECTION OF OYSTERS.

The demand for oysters is becoming greater each year, and is now far greater than the supply. This will eventually lead to the depletion of our public beds unless stringent measures are adopted to preserve them. The fisherman knowing there is a ready sale for his catch is naturally careless as to the size limit, and while oysters are becoming each year of greater value, more men will engage themselves in the industry, consequently at the end of each season there are less parent oysters left on the ground for breeding purposes and a larger number of small ones taken and while the demand continues the size and quantity of oysters will be gradually lessened. To counteract this evil I would strongly advise the department to have the fishing areas divided into two sections so as to fish one section alternately each year; also to restrict the size limit, to 3 inches only whether the oysters are round or long, as many fishermen will argue the point and call a long oyster a round one, and to remedy this, would be to change clause 6 of the oyster regulations which reads as follows:—'No persons shall fish for, catch, kill, buy, sell or have in possession any round oysters of a less size than two inches diameter of shell, or any long oysters measuring less than three inches of outer shell'. It would be in the interests of the oyster industry for this clause to be changed so as to read as follows:—No person shall fish for, catch, kill, buy or sell any oysters measuring less than three inches of outer shell; when measured the above size is found to be quite small enough to be taken from the beds for marketable purposes.

LEASED AREAS.

Another method of establishing and maintaining the supply is for persons interested in the industry to have a certain area under their own control for cultivating and planting purposes, it would also be of great value to wholesale buyers and packers to hold a plot of ground where they would place their small culls, also when a glut is on the market (as often happens during a spell of mild and fine weather) they would be able to hold their stock and meet the demands of the market as they are required.

Again, when bad weather approaches and oysters are scarce, a person having a stock on his own reserve will often find means to take them up and secure a higher price. Persons having areas under cultivation would naturally wish to send the largest and best selected oysters to market thereby obtaining a higher price for them, and, especially if sold by measure, they would return the small ones to the beds where they would develop into full-grown ones if left until probably the following season.

Another point to be looked at in granting areas to persons cultivating oysters in different parts of the provinces, is the distribution of the oyster spat during the spatting season. This is where man has no control; he may by his own efforts secure a large quantity, but natural beds may receive a large share, or the spat may spread over a large area of ground forming new beds if it is suitably adapted to receive it.

Some persons well state that those holding private areas will obtain a monopoly over the trade, but when it is seen that large quantities of American oysters are sold in Canadian cities it shows there is still room for more oysters from our own beds if we could supply them. And if the supply was increased to any great extent our merchants might compete with foreign markets for which there is always an outlet. But while prices increase and oysters are becoming scarcer it is only right to protect

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them from extinction, and any person studying and cultivating oysters would also find it a very profitable industry.

FISHING SEASON.

The present fishing season commences on September 16 and remains open until closed by the ice forming over the beds, there being an Order in Council in force that:—'Fishing for oysters or any shell fish through the ice is prohibited.' On an average the ice forms the early part of December, which gives about 10 or 11 weeks fall fishing, and opens up again about the latter part of April when most of the men are engaged in lobster fishing consequently it is carried on in the spring in a much smaller way until the 31st day of May when the close season begins. These dates I am of opinion are well arranged and do not see any necessity for a change, as shortening the season will have no material effect on the oysters, the fishing would be prosecuted with the utmost vigour while it lasted, and it is clear to every one that a large number of fishermen working upon a bed for a short season, will do as much damage, or perhaps more, than a lesser number working for a longer time. It is also noticed that when the season first opens there are men fishing from all parts, but as the season advances, the weather becoming colder and more boisterous, and oysters more difficult to obtain, many of them leave the beds and only the regular oyster fishermen stick to their work until compelled to leave on account of frost setting in.

A very extensive report on oyster culture is found in the thirty-first annual report of the Department of Marine and Fisheries (Fisheries part) for 1898, page 259, in which every subject is fully dealt with, and it is not necessary for me to repeat any of the details there given, in this present report.

I have the honour to be, sir,
Your obedient servant,

ERNEST KEMP,
Oyster Expert.

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APPENDIX No. 12.

REPORT OF THE FISHERIES PROTECTION SERVICE OF CANADA, BY
COMMANDER O. G. V. SPAIN.

OTTAWA, December 30, 1899.

The Honourable

Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to report on the work performed by the Fisheries Protection Service of Canada, under my command, during the past season.

The vessels forming the fleet were:—

Acadia, Commander O. G. V. Spain.

Curllew, Captain J. H. Pratt.

Constance, Captain George May.

La Canadienne, Commander W. Wakeham.

Petrel, Captain E. Dunn.

Kinfisher, Captain W. H. Kent.

Osprey, Captain C. T. Knowlton.

Quadra, Captain J. Walbran; this vessel was employed on occasions, when necessary, on the Pacific coast.

Since commencement of the season several changes have been made in the Government ships; two new vessels have been built, one in Scotland, the *Minto*, and the other in Prince Edward Island, the *Brant*. The dimensions, &c., of these two vessels will be found in another portion of the Marine and Fisheries Report, and the tug *Dolphin*, which has been used for some years in Georgian Bay, looking after the interests of our own fishermen, (which business is now principally taken over by the Provincial Government), has been sold.

The patrols of the various above named vessels were generally as follows:—

The *Acadia*, patrolling the coasts from Cape Sable Island, in Nova Scotia, to Cape Gaspé, in Quebec, and as usual, generally supervising the fleet. This vessel was refitted last year at a cost of some \$10,000, and is now in good condition to do her work for some years to come. Her boilers and machinery are in very fair order considering their age. This satisfactory state of affairs is nearly entirely due to the careful and painstaking manner in which the chief engineer, Mr. D. M. A. Mooney, who has had charge of this department on board since she entered the Government service, has looked after her.

Curllew.—The patrol of this vessel has been the Bay of Fundy, south-east coast of Nova Scotia, and the Cape Breton coast, with one trip to the Miramichi in connection with the pilotage question. She is an effective and handy little ship, and has done excellent work in stopping illegal lobster fishing, protecting the three mile limit, collecting bounty claims, &c.

Constance.—This vessel has again been used entirely in the revenue service. She has been painted white this season, which is supposed to make her less visible when on the watch for smugglers, than before, when painted black.

La Canadienne.—This vessel with Commander Wakeham in charge, has been working independently of the rest of the fleet, and mainly employed on the Quebec and Labrador coasts. A report of this officer's work will be found among the inspector's reports.

Petrel.—Employed on the great lakes protecting the boundary line, and looking after our fishermen's interests generally. This vessel has also been employed at intervals in placing and raising buoys in the vicinity of her fisheries work.

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Kingfisher.—This schooner, as usual, was stationed at Souris, Prince Edward Island, for the first part of the season, but on the request of Captain Kent, I changed her headquarters to Georgetown later on. She has done good work in protecting the coast and stopping illegal lobster fishing. In the fall she was ordered to Sydney. Captain Kent was instructed to represent the Canadian service at Sydney Carnival, where a number of British and French men-of-war were assembled. Her crew won the "gig race," beating all comers, and I received a letter of thanks from the Mayor of Sydney for the great assistance the *Kingfisher* had been; she was provided later with a complete new outfit of sails. The captain was instructed that the build and material of these sails would be entirely left to him; up to the present time, I have had no opportunity of closely inspecting them myself.

Osprey.—The headquarters of this vessel were at Canso, and in the fall, at North Sydney. She has been principally engaged in stopping illegal lobster fishing.

General Lord William Seymour, commanding the forces in British North America, made a trip on board her in the spring, and was very much pleased with this smart schooner.

Captain Knowlton made a seizure at Canso in November, of United States fishing vessel *Flora L. Nickerson*. An account of this seizure will be reported later.

Quadra.—This vessel has done valuable work on occasions when called upon, in British Columbia waters. Captain Walbran has been most careful in keeping me particularly well posted in reference to all the actions of foreign fishermen on our Pacific coast.

A report on the particular work of each individual captain, on the movements of the ship under his command, will be found herewith.

Three small tugs were again employed this year, in the suppression of illegal lobster fishing, which they managed to carry out successfully.

Florence C..—A chartered vessel under the command of First Officer Burns, of the *Curlew*, and manned by a crew from the same vessel. This tug's patrol was on the south-east coast of Nova Scotia.

Davies.—Owned by the department, under the charge of First Officer Graham, of the *Kingfisher*, and manned by a crew from the *Acadia*, was stationed in the Northumberland Straits and on the Cape Breton coasts.

Brant.—This is a new vessel belonging to the department, and when carrying on this particular work, was under the charge of Overseer Hobkirk, of Charlottetown. I am pleased to report that there was far less illegal fishing this year than ever before; and it was most satisfactory to myself and my officers, not to have so much of the disheartening work of destroying fishermen's valuable property, in the way of lobster traps, back-lines, &c.

It may be of interest to publish instructions given to the officer commanding the Fisheries Protection Service in 1886, and also issued to the different captains. Sir Louis H. Davies, the present Minister of Marine and Fisheries, instructed me to still continue the same regulations; they are as follows:—

INSTRUCTIONS TO COMMANDERS OF GOVERNMENT VESSELS ENGAGED IN THE PROTECTION OF THE INSHORE FISHERIES OF CANADA.

DEPARTMENT OF FISHERIES,

OTTAWA, March 16, 1886.

SIR,—In the performance of the special and important services to which you have been appointed you will be guided by the following confidential instructions.

For convenience of reference, these have been divided under the different headings, of *Powers, Jurisdiction, Duties, and General Directions*.

POWERS.

The powers with which you are invested, are derived from, and to be exercised in accordance with the following statutes, among others:—'The Fisheries Act' (31

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Vic., cap. 60, of Canada); 'An Act respecting Fishing by Foreign Vessels' (31 Vic., cap. 61, of Canada), and the subsequent statute entitled: 'An Act to amend the Act respecting Fishing by Foreign Vessels,' made and passed the 12th May, 1870 (33 Vic., cap. 15, of Canada); also, 'An Act to further amend the said Act' (34 Vic., cap. 23, of Canada).

'Chapter 94 of the Revised Statutes (third series) of Nova Scotia' (of the 'Coast and Deep Sea Fisheries'), amended by the Act entitled: 'An Act to amend cap. 94 of the Revised Statutes of Nova Scotia' (29 Vic., cap. 35).

An Act passed by the Legislature of New Brunswick entitled: 'An Act relating to the Coast Fisheries, and for the prevention of Illicit Trade' (16 Vic., cap. 69).

Also an Act passed by the Legislature of Prince Edward Island (6 Vic., cap. 14) entitled: 'An Act relating to the Fisheries, and for the prevention of Illicit Trade in Prince Edward Island, and the coasts and harbours thereof.'

Also from such regulations as have been passed or may be passed by the Governor General in Council, or from instructions from the Department of Fisheries, under 'The Fisheries Act,' hereinbefore cited.

As fishery officer you have full authority to compel the observance of the requirements of the *Fisheries Acts* and regulations by foreign fishing vessels and fishermen in those parts of the coasts of Canada to which, by the Convention of 1818, they are admitted to privileges of taking or drying and curing fish concurrent with those enjoyed by British fishing vessels and fishermen.

You will receive instructions from the Customs Department authorizing you to act as an officer of the Customs, and in that capacity you are to see that the revenue laws and regulations are duly observed.

JURISDICTION.

Your jurisdiction with respect to any action you may take against foreign fishing vessels and citizens engaged in fishing is to be exercised only within the limits of 'three marine miles' of any of 'the coasts, bays, creeks or harbours,' of Canada.

With regard to the Magdalen Islands, although the liberty to land and to dry and cure fish there is not expressly given by the terms of the convention to United States fishermen, it is not at present intended to exclude them from these islands.

DUTIES.

It will be your duty to protect the inshore fisheries of Canada in accordance with the conditions laid down by the Convention of the 20th October, 1818, the first article of which provides:—

'Whereas, differences have arisen respecting the liberty claimed by the United States, for the inhabitants thereof to take, dry and cure fish, on certain coasts, bays, harbours and creeks, of His British Majesty's dominions in America, it is agreed between the high contracting parties, that the inhabitants of the said United States shall have, for ever, in common with the subjects of His Britannic Majesty, the liberty to take fish of every kind on that part of the southern coast of Newfoundland, which extends from Cape Ray to the Rameau Islands, on the western and northern coast of Newfoundland, from the said Cape Ray to the Quirpon Islands, on the shores of the Magdalen Islands, and also on the coasts, bays, harbours and creeks from Mount Joli, on the southern coast of Labrador, to and through the Straits of Belle Isle, and thence northwardly indefinitely along the coast, without prejudice, however, to any of the exclusive rights of the Hudson's Bay Company; and that the American fishermen shall also have liberty, for ever, to dry and cure fish in any of the unsettled bays, harbours and creeks, of the southern part of the coast of Newfoundland, hereabove described, and of the coast of Labrador; but so soon as the same, or any portion thereof, shall be settled, it shall not be lawful for the said fishermen to dry or cure fish at such portions so settled, without previous agreement for such purpose with the inhabitants, proprietors or possessors of the ground.'

'And the United States hereby renounce for ever any liberty heretofore enjoyed or claimed by the inhabitants thereof, to take, dry, or cure fish on or within three marine miles of any of the coasts, bays, creeks or harbours of His Britannic Majesty's dominions in America, not included within the above mentioned limits; provided, however, that the American fishermen shall be admitted to enter such bays or harbours, for the purpose of shelter and repairing of damages therein, of purchasing wood and of obtaining water, and for no other purpose whatever. But they shall be under such restrictions as may be necessary to prevent their taking, drying or curing fish therein, or in any other manner whatever abusing the privileges hereby reserved to them.'

By this you will observe, United States fishermen are secured the liberty of taking fish on the southern coasts of Labrador, and around the Magdalen Islands, and of drying and curing fish along certain of the southern shores of Labrador, where this coast is unsettled, or if settled, after previous agreement with the settlers or owners of the ground.

In all other parts the exclusion of foreign vessels and boats is absolute, so far as fishing is concerned, and is to be enforced within the limits laid down by the Convention of 1818, they being allowed to enter bays and harbours for four purposes only, viz.,—*for shelter, the repairing of damages, the purchasing of wood, and to obtain water.*

You are to compel, if necessary, the maintenance of peace and good order by foreign fishermen pursuing their calling and enjoying concurrent privileges of fishing or curing fish with British fishermen, in those parts to which they are admitted by the Treaty of 1818.

You are to see that they obey the laws of the country, that they do not molest British fishermen in the pursuit of their calling, and that they observe the regulations of the fishery laws in every respect.

You are to prevent foreign fishing vessels and boats which enter bays and harbours for the four legal purposes above mentioned, from taking advantage thereof, to take, dry or cure fish therein, to purchase bait, ice, or supplies, or to tranship cargoes, or from transacting any business in connection with their fishing operations.

It is not desired that you should put a narrow construction on the term 'unsettled.' Places containing a few isolated houses might not, in some instances, be susceptible of being considered as 'settled' within the meaning and purpose of the convention. Something would, however, depend upon the facts of the situation and circumstances of the settlement. Private and proprietary rights form an element in the consideration of this point. *The generally conciliatory spirit in which it is desirable that you should carry out these instructions, and the wish of Her Majesty's Government that the rights of exclusion should not be strained,* must influence you in making as fair and liberal an application of the terms as shall consist with the just claims of all parties.

Should interference with the pursuits of British fishermen or the property of Canadians appear to be inseparable from the exercise of such indulgence, you will withhold it and insist upon entire exclusion.

United States fishermen should be made aware that, in addition to being obliged, in common with those subjects of Her Majesty with whom they exercise concurrent privileges of fishing in colonial waters, to obey the laws of the country, and particularly such Acts and regulations as exist to ensure the peaceable and profitable enjoyment of the fisheries by all persons entitled thereto, they are peculiarly bound to preserve peace and order in the *quasi* settled places to which, by the liberal disposition of Canadian authorities, they may be admitted.

Wheresoever foreigners may fish in Canadian waters, you will compel them to observe the fishery laws. Particular attention should be directed to the injury which results from cleaning fish on board their vessels while afloat, and the throwing overboard of offals, thus fouling the fishing, feeding and breeding grounds. 'The Fisheries Act' (section 14) provides a heavy penalty for this offence.

Take occasion to inquire into and report upon any modes of fishing, or any practices adopted by foreign fishermen, which appear to be injurious to the fisheries.

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GENERAL DIRECTIONS.

You will accost every foreign fishing vessel within the limits described, and if that vessel should be either fishing, preparing to fish, or should obviously have been fishing within the prohibited limits, you will, by virtue of the authority conferred upon you by your Commission, and under the provisions of the Acts above recited, seize at once (resort to force in doing so being only justifiable after every other effort has failed) any vessel detected in violating the law and send her or take her into port for condemnation.

Copies of the Acts of Parliament subjecting to seizure and forfeiture any foreign ship, vessel or boat which should be either fishing, preparing to fish, or should obviously have been fishing within the prohibited limits, and providing for carrying out the seizure and forfeiture are furnished herewith for your information and distribution.

Should you have the occasion to compel any foreign fishing vessels or fishermen to conform to the requirements of the 'Fisheries Act and Regulations,' as regards the modes and incidents of fishing, at those places to which they are admitted under the Convention of 1818, particularly in relation to ballast, fish offals, setting of nets, hauling of seines, and use of 'trawls' or 'bultows,' more especially at and around the Magdalen Island, your power and authority under such cases will be similar to that of any other fishery officer appointed to enforce the fishery laws in Canadian waters (*Vide Fisheries Act*).

If a foreign ship, vessel or boat be found violating the convention or resisting consequent seizure, and momentarily effects her escape from the vicinity of her capture or elsewhere, she remains always liable to seizure and detention if met by yourself in Canadian waters, and British waters everywhere if brought to account by Her Majesty's cruisers. But great care must be taken to make certain of the identity of any offending vessel to be so dealt with.

All vessels seized must be placed, as soon as possible, in the custody of the nearest customs collector, and information, with a statement of the facts, and the deposition of your sailing master, clerk, lieutenant, or mate, and of two at least of the most reliable of your crew be despatched with all possible diligence to the Government. Be careful to describe the exact locality where the violation of the law took place, and the ship, vessel or boat was seized. Also corroborate the bearings taken, by sounding, and by buoying the place (if possible) with a view to actual measurement, and make such incidental reference to conspicuous points and landmarks as shall place beyond doubt the illegal position of the seized ship, vessel or boat.

Omit no precaution to establish on the spot that the trespass was or is being committed within three miles of land.

As it is possible that foreign fishing craft may be driven into Canadian waters by violent or contrary winds, by strong tides, through misadventure, or some other cause independent of the will of the master and crew, you will consider these circumstances, and satisfy yourself with regard thereto before taking the extreme step of seizing or detaining any vessel.

On capture, it will be desirable to take part of the foreign crew aboard the vessel under your command, and place some of your own crew, a measure of precaution, on board the seized vessel; first lowering the foreign flag borne at the time of capture. If your ordinary complement of men does not admit of this being done, or if because of several seizures the number of your hands might be too much reduced, you will, in such emergency, endeavour to engage a few trustworthy men. The portion of foreign crew taken on board the Government vessel you will land at the nearest place where a consul of the United States is situated, or where the readiest conveyance to any American consulate in Canada may be reached, and leave them there.

When any of Her Majesty's vessels about the fishing stations or in port are met with, you should, if circumstances permit, go on board and confer with the naval commander, and receive any suggestions he may feel disposed to give, which do not conflict with these instructions, and afford him any information you may possess

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about the movements of foreign craft; also inform him what vessels you have accosted and where.

Do not fail to make a full entry of all circumstances connected with foreign fishing vessels, noting their names, tonnage, ownership, crew, port, place of fishing, cargo, voyage, and destination, and (if ascertainable) their catch. Report your proceedings as often as possible, and keep the department fully advised on every opportunity, where instructions would most probably reach you at stated intervals.

Directions as to the stations and limits on which you are to cruise, and any further instructions that may be deemed necessary, will, from time to time, be conveyed to you.

Considerable inconvenience is caused by Canadian fishing vessels neglecting to show their colours. You will draw the attention of masters to this fact, and request them to hoist their colours without requiring to be hailed and boarded.

It cannot be too strongly urged upon you, nor can you too earnestly impress upon the officers and crew under your command, that the service in which you and they are engaged should be performed with forbearance and discrimination.

The Government relies on your prudence, discretion and firmness in the performance of the special duties entrusted to you.

I am, sir, your obedient servant,

(Sd.) GEORGE E. FOSTER,
Minister of Marine and Fisheries.

It is very gratifying to me to again report on the efficiency and general good conduct of the officers and men under my command during the past season. The work is trying and monotonous, and particularly arduous in the late fall.

The fleet patrolled over eighty-seven thousand miles of coast line, and foreign fishermen have little or no opportunity of poaching. The fishing fleet is persistently followed and boarded when in our waters and reports taken from them of all particulars with regard to their catch of fish, whereabouts caught, and the manner of catching them.

SEIZURES.

One seizure was made, by Captain Knowlton of the *Osprey*, at Canso, Nova Scotia, for an infraction of the fishery laws, in that the United States fishing vessel *Flora L. Nickerson* did purchase provisions and stores at Canso without first obtaining a Dominion license. This vessel was seized and a guard put on board, but I released her next day on orders from the department, after the master had consented to immediately secure a *modus vivendi* license.

Another seizure of the United States fishing vessel *Stranger* was made at Lockeport, Nova Scotia; but this was purely for a customs matter. She was released on payment of a fine of twenty-five dollars.

LICENSES TO UNITED STATES FISHING VESSELS.

The same Order in Council being passed as before, sanctioning the continuance of the issue of *modus vivendi* licenses to United States fishermen, similar permits were issued in 1899.

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SCHEDULE of United States Fishing Vessels to which Licenses were issued under the Act entitled 'An Act respecting Fishing Vessels of the United States of America' during the Year 1899.

Name of Vessel.	Port of Registry.	Tonnage.	Port of Issue.	Fee.
				\$ cts.
Levanter.....	Salem, Mass.....	28	Yarmouth, N.S.....	42 00
Esther Anitu.....	Boston ".....	72	Shelburne, N.S.....	108 00
Horace Albert.....	Gloucester ".....	65	Yarmouth, N.S.....	97 50
Annie E. Lane.....	Salem ".....	29	".....	43 50
Nannie C. Bohlin.....	Gloucester ".....	97	Halifax, N.S.....	145 50
Electer.....	" ".....	84	Pubnico, N.S.....	126 00
Anna L. Sanborn.....	Salem ".....	17	Yarmouth, N.S.....	25 50
Parthia.....	Gloucester ".....	77	".....	115 50
Fernwood.....	" ".....	96	".....	144 00
A. R. Lawson.....	" ".....	85	Pubnico, N.S.....	127 50
Florence.....	" ".....	63	Halifax, N.S.....	94 50
Mystery.....	" ".....	89	Pubnico, N.S.....	133 50
Senator Saulisbury.....	" ".....	77	".....	115 50
W. E. Morrissey.....	" ".....	93	Tusket, N.S.....	139 50
Emma E. Witherell.....	" ".....	81	".....	121 50
Margaret.....	" ".....	107	".....	160 50
Mabel D. Hines.....	Beverly ".....	92	".....	138 00
Virginia.....	Gloucester ".....	81	Yarmouth, N.S.....	121 50
Meteor.....	" ".....	96	Pubnico, N.S.....	144 00
Hazel Oneita.....	" ".....	73	Tusket, N.S.....	109 50
Lawrence A. Munroe.....	" ".....	84	Barrington, N.S.....	126 00
John L. Nicholson.....	" ".....	92	Yarmouth, N.S.....	138 00
Annie Wesley.....	" ".....	65	Pubnico, N.S.....	97 50
Essex.....	" ".....	84	".....	126 00
S. P. Willard.....	" ".....	88	Halifax, N.S.....	132 00
Stranger.....	" ".....	59	Lockeport, N.S.....	88 50
Thetis.....	" ".....	67	Yarmouth, N.S.....	100 50
Shenandoah.....	" ".....	77	Barrington, N.S.....	115 50
O. W. Holmes.....	" ".....	75	Lockeport, N.S.....	112 50
Marsala.....	" ".....	54	".....	81 00
Howard Holbrook.....	" ".....	69	".....	103 50
Robin Hood.....	" ".....	65	Barrington, N.S.....	97 50
Landseer.....	" ".....	71	Pubnico, N.S.....	106 50
Harvester.....	" ".....	76	Shelburne, N.S.....	114 00
Grayling.....	" ".....	88	Lockeport, N.S.....	132 00
Admiral Dewey.....	" ".....	78	Canso, N.S.....	117 00
E. C. Hussey.....	Beverly ".....	42	".....	63 00
Fannie S. Ome.....	Gloucester ".....	61	Lockeport, N.S.....	91 50
Edward A. Perkins.....	" ".....	58	Canso, N.S.....	87 00
Ellen F. Gleason.....	" ".....	42	".....	63 00
New England.....	" ".....	59	".....	88 50
Hattie L. Trask.....	" ".....	48	".....	72 00
Alice M. Parsons.....	" ".....	43	".....	64 50
Richard Lester.....	" ".....	47	".....	70 50
S. F. Maker.....	" ".....	78	Port Hawkesbury, N.S.....	117 00
J. W. Collins.....	" ".....	52	".....	78 00
A. R. Crittenden.....	" ".....	56	".....	84 00
D. A. Wilson.....	" ".....	61	Tusket, N.S.....	91 50
Elsie M. Smith.....	" ".....	83	Arichat, N.S.....	124 50
Eliza B. Campbell.....	" ".....	69	".....	103 50
Mabel Leighton.....	" ".....	48	".....	72 00
Lottie Gardner.....	" ".....	77	Barrington, N.S.....	115 50
Hattie E. Worcester.....	" ".....	89	Shelburne, N.S.....	133 50
Jennie B. Hodgin.....	" ".....	85	Arichat, N.S.....	127 50
Masconoma.....	" ".....	67	".....	100 50
Blue Jacket.....	" ".....	86	N. Sydney, N.S.....	129 00
Nellie Dixon.....	Boston ".....	68	Liverpool, N.S.....	102 00
Ralph F. Hodgson.....	Gloucester ".....	59	Amherst, M.I., Que.....	88 50
Bessie M. Devine.....	" ".....	91	".....	136 25
Quickstep.....	" ".....	75	Canso, N.S.....	112 50
Harry G. French.....	" ".....	67	Shelburne, N.S.....	100 50
Eliza H. Parkhurst.....	" ".....	85	Canso, N.S.....	127 50
Lizzie Griffin.....	" ".....	71	".....	106 50
Agnes E. Downes.....	" ".....	59	".....	88 50

SCHEDULE of United States Fishing Vessels to which Licenses were issued—*Concluded.*

Name of Vessel.	Port of Registry.	Tonnage.	Port of Issue.	Fee.
				\$ cts.
Lizzie B. Adams	Gloucester, Mass.	58	Port Hawkesbury, N.S. .	87 00
Electa A. Eaton	" "	73	Whitehaven, N.S.	109 50
Eleazar Boynton	" "	63	N. Sydney, N.S.	94 50
Annie Greenlaw	" "	69	Yarmouth, N.S.	103 50
Reporter	" "	60	Liverpool, N.S.	90 00
F. W. Homans	" "	44	Port Mulgrave, N.S.	66 00
Golden Hope	" "	75	Pubnico, N.S.	112 50
Helen F. Whittier	" "	92	Yarmouth, N.S.	138 00
Dawson City	Boston "	49	Canso, N.S.	73 50
Winona	Gloucester "	78	Pubnico, N.S.	117 00
Commonwealth	" "	60	Canso, N.S.	90 00
Grace Darling	Salem and Beverly "	47	"	70 50
Lucille	Gloucester "	72	"	108 00
Oliver F. Kilham	Salem and Beverly "	44	"	66 00
Flora L. Nickerson	North Bay, Me.	63	"	94 50
George Temple	New York, N.Y.	44	Yarmouth, N.S.	66 00
Total		5,511		\$8,266 25

Number of vessels	80
Amount of tonnage	5,511
Amount received for fees	\$8,266 25

The following is the statement of the number of licenses issued to United States fishing vessels in each season since 1888:—

1888.....	36
1889.	78
1890.....	119
1891.....	98
1892.....	108
1893.....	71
1894.....	53
1895.....	47
1896.....	77
1897.....	40
1898.....	79
1899.....	80

Attached is a list of United States fishing vessels which have entered Canadian ports from January 1 to November 1, 1899, showing the number of times each vessel entered. The large number of these total entries, twelve hundred and twenty-eight in all will illustrate to what a great extent United States fishermen make use of our ports.

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LIST of United States Fishing Vessels which have entered Canadian Ports from October 31, 1898, to October 31, 1899, showing the number of times each Vessel entered the several ports; most of these Vessels besides entering at the Custom Houses were boarded by Canadian cruisers within the limits.

Number.	Name of Vessel.	Arichat.	Barrington.	Canso.	Georgetown, P. E. I.	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisbourg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P. E. I.	Whitehead.	Yarmouth.	Total entries.	
1	Arthur D. Story	1								1										2	
2	Admiral Dewey	1		4	2								1								8
3	A. R. Crittenden				1	2			1			2	1								7
4	Alva			1																	1
5	Argo			1																	2
6	Arbutus			1												1					2
7	A. E. Whyland									3			1			2					6
8	Atlanta																			3	5
9	Annie Wesley			1					3	1										2	7
10	A. P. Gifford			1	1															2	2
11	Annie S. Sanbourne	2																		12	15
12	Arthur Binney															1				1	1
13	Agnes E. Downs			4								1				1					6
14	Annie Greenlaw				1					1						10					12
15	Alice R. Lawson			1						2		1				1				1	6
16	Alice M. Parsons			5																	5
17	Arbitrator			1												2					3
18	A. T. Coffin																			1	1
19	Annie E. Lane	2																		11	13
20	A. S. Clifford				1																1
21	Annie C. Hall	2				1															4
22	A. S. Cornell															1					1
23	Annie E. Waterman			3					2							5				2	13
24	Addie M. Story			1						1											2
25	Almeida															2					2
26	Blue Jacket			1						1										2	6
27	Bessie M. Devine			3								2									3
28	Belle Franklin			1																	2
29	Bertha May												1						1		1
30	Braganza				2				1				1		1						5
31	Cecil H. Lowe															1					1
32	Commonwealth			3		1			2							5				2	13
33	Carrie W. Babson			1						1											2
34	Canopus															1					1
35	Columbia	1		1	1															2	5
36	Carleton Belle			1																1	2
37	Conductor			2		1														1	5
38	Centennial			1	2					1								1			5
39	Carrie E. Phillips															1				1	2
40	Cosmopolitan																			1	1
41	Carrier Dove																			2	2
42	Clara Clarita									1											1
43	Clara P. Sewell	1																			1
44	Carrie C.															2					2
45	Dido			2																	2
46	David Sherman																			1	1
47	D. A. Wilson			1						1						2				2	6
48	Dawson City			2									1	1							5
49	Dora A. Lawson									1											1
50	Eliza B. Campbell	4		2	1											1					8
51	Elsie M. Smith	2						1											2		7
52	Elenora	1		1									1								3
53	Eldora																			1	1
54	E. C. Hussey			1									1			3				4	9
55	Ethel B. Jacobs					1						1								2	4
56	Edward Trevoy					1										1				2	6
57	Edward A. Rich	1			2	1										1				1	6
58	Ella G. King							1												2	4
59	Ester Anita			2	1				7							8			1		19
60	Elisa Boynton											1				1					2

LIST of United States Fishing Vessels which have entered at Canadian Ports from
October 31, 1898, to October 31, 1899, &c.—Continued.

Number.	Name of Vessel.	Arichat.	Barrington.	Canso.	Georgetown, P. E. I.	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisbourg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P. E. I.	White-head.	Yarmouth.	Total entries.
61	Emma W. Brown															1				1
62	Elsie F. Rowe							1	1											2
63	Ellen F. Gleason			5		3		4								5	1			19
64	Edward A. Perkins			3				1	1			1				1				8
65	Emma & Ellen							1								1			1	3
66	Edwin B. Holmes	1		1															1	3
67	Electa A. Eaton			3																8
68	Eliza H. Parkhurst			5	1	1									1					9
69	Essex			1	1							3								10
70	Electo			1	1															3
71	Emma E. Wetherall									1										7
72	E. A. Rice																			1
73	Everett Pearce	1				1														3
74	Edward Glover															1				2
75	Effie M. Morrisey											1								1
76	Edith S. Whalen			2						2										4
77	Edith N. McInnes			1												1				2
78	E. S. Eveleth															1				1
79	Edith M. Prior															4				4
80	Evelyn L. Smith															2				2
81	Epes Tarr															1				2
82	Florence	2				1										3			1	7
83	Fanny S. Orne			1				1	1	3		1								7
84	Flora L. Nickerson	1		3																4
85	Fernwood			3								1				1			4	9
86	F. W. Homans					1									1		3			8
87	Grace Darling			1				3	1							1			2	8
88	Golden Hope							1								4				7
89	Governor Butler							1												1
90	Gladstone			1			1													2
91	Grayling	2								2										10
92	Glorianna			1												3				1
93	George F. Edmunds			1						1										6
94	Georgie Campbell			1								1				2				4
95	Golden Rod			1																1
96	Gardener M. Tarr																		2	2
97	George F. Pyke																	1		1
98	Garland																	1		1
99	Glenora												1							1
100	Horace B. Parker	1														1				2
101	Harry G. French	3		1			2	2		2						2				12
102	Hattie A. Heckman			1		1		2	1		2									7
103	Hazen Abbott							1												1
104	Hattie & Lottie							3			1									4
105	Helen Story							2								1				4
106	Hattie M. Graham							1										1		2
107	Henri N. Woods							3								1				7
108	Henry W. Longfellow							2	1							2				5
109	Hattie L. Frask			4												1				5
110	Hattie E. Worcester			1					1							4				7
111	Howard Holbrook			2						3		1						1		7
112	Hazel Onita			1		1						1							3	6
113	Helen F. Whitten			3		1						2								8
114	Harvester			1												5				6
115	Horace Albert																		6	6
116	Harvard									1										1
117	Helen G. Wells					1				1										2
118	Henry M. Stanley					2	2	1				1				3				9
119	Hattie E. Herenan													1						1
120	Hiram Lowell															1				2
121	Helen May Butler										1									1
122	Hattie C. Clark							1												1
123	Herald of the Morning																	1		1

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List of United States Fishing Vessels which have entered at Canadian Ports from October 31, 1898, to October 31, 1899, &c.—Continued.

Number.	Name of Vessel.	Arichat.	Barrington.	Canso.	(Georgetown, P. E. I.)	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisburg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P. E. I.	Whitehead.	Yarmouth.	Total entries.
124	Irving Leslie							1												1
125	Indiana			1												2				3
126	Iolanthe															2				3
127	Jennie B. Hodgdon	2		3		1		1								2				10
128	J. W. Collins			4		1		1				1	1			1				9
129	Joseph Rowe					1		1				1						1		4
130	James R. Clarke							1	1							2				4
131	James A. Garfield		2					1	1							1				6
132	John L. Nicholson			3				1				4							2	10
133	John S. Presson							1		1										2
134	Judique			1		1													1	3
135	James Rowe																		2	2
136	James S. Steele					1										2			5	8
137	J. K. Manning									1										1
138	Joseph McGuire									1										1
139	James E. Stetson												1		1					2
140	Jubilee						2													3
141	Kearsage			1						2			2							5
142	Kate L. Palmer																		2	2
143	Loring B. Haskell	2				1		2								1				6
144	Laurence A. Munroe		4	3				2	2			1				4		1		13
145	Latona							1	1		1							2		9
146	Lizzie B. Adams			2		1		1	1				3			1				9
147	Lottie E. Hopkins							1	2							2				5
148	Lizzie M. Stanwood		1	1		1		1	1											4
149	Laurel					1		1	1									1		4
150	Lottie Burns			1																1
151	Landseer		1	1						1						3			3	9
152	Lottie Gardener		2			3	1			1										8
153	Lizzie Griffin			3		2							2							7
154	Lucille			1		3				1						1		1	3	10
155	Lavanter		3	1				1	2			3				1		1		18
156	Lewis H. Giles																	1		1
157	Lena & Maud					2				2			5							9
158	Lora Doon						1			1						1				3
159	Lizzie M. Centre												3					1		4
160	Laurence Murdoch															2				2
161	Mabel Leighton	1		1				2		1		1				3		1		11
162	Masconoma		4	2				1					1							8
163	Miranda		1					6		1						2				12
164	Monitor		1					1								1				3
165	Mabel M. Story							1											3	4
166	Minerva							3								2				5
167	Maggie & May							1		1										2
168	Margaretta							1											1	2
169	Margaret Mathers			1		1		1		1									1	4
170	Maud M. Story		1					1												2
171	Marsalla			1		1		2	5			1								10
172	Mattie Winship							1								3				6
173	Mystery									1										8
174	Meteor			3																6
175	Mondego					1						1				3				5
176	Margaret Haskins			1								4								6
177	Margaret			2		1				1						1			1	6
178	Madonna			2						1										7
179	Mabel D. Hines			2								1								4
180	Mathew Karney		3																	1
181	Mizpah		1																	1
182	Marshall L. Adams															3				4
183	Mary F. Chisholm									1										1
184	Marguerite		3													2				6
185	M. B. Stetson									1										1
186	M. H. Perkins						1									2				3

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LIST of United States Fishing Vessels which have entered at Canadian Ports from October 31, 1898, to October 31, 1899, &c.—Continued.

Number.	Name of Vessel.	Ports of Call.													Total entries.					
		Aricbat.	Barrington.	Canso.	Georgetown, P. E. I.	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisburg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.		Port Mulgrave.	Shelburne.	Souris, P. E. I.	Whitehead.	Yarmouth.
250	W. H. Moody.....						2								1			1	4	
251	William H. Cross.....						1				1				1		1		4	
252	W. E. Morrissey.....			1			1	1	2		1				1				9	
253	Winona.....			1							1							5	7	
254	W. M. Young.....													1					1	
255	William H. Rider.....														3				3	
	Total entries.....	27	44	183	4	68	27	128	65	69	8	87	26	1	5	213	12	44	217	1,228

In the Fisheries Intelligence Bureau Report annexed, will be found a list of LaHave bankers and trawlers, North Bay band-liners and Labrador men, and the Lunenburg banking fleet. This list will show to what a very large extent the fishing industry is carried on in Lunenburg County.

THE MACKEREL FISHERY.

In nearly every locality, this fishery has been a most distinct failure. In numbers of places, not a single school has been sighted the whole season. There are, of course, all sorts of conjectures to account for this. Lots of fishermen think it is on account of the pernicious purse-seine; others say on account of the enormous quantity of decayed lobster gear; and again others, that it will not be any better till entirely new schools come on our coast; United States fishing vessels hardly did anything whatever, and the *Ethel B. Jacobs* usually the high liner, gave it up as hopeless, and proceeded to the Irish coast, where she was subsequently lost.

A firm at Canso made an experiment this season of the use of the *otter trawl*, which, though some people may not know it, is the English 'drag-net', now so extensively used by the fishing steamers in England and Scotland. Owing principally to the lack of experience in the use of this appliance, and not being properly equipped, the experiment was not a thorough success, but it has demonstrated that the use of the trawl is not impracticable on this coast, and those engaged in trying to carry on the work reached the conclusion, that with proper equipment, and the necessary experience, the appliance could be successfully operated here, and would probably be an improvement on present methods of fresh fishing. I am told it will be heard from again.

OFFICERS REPORTS.

EXTRACTS from reports of captains commanding canadian cruisers, as follows:—Captain Knowlton, of the 'Osprey'; Pratt, 'Curlew'; Kent, 'Kingfisher'; Dunn, 'Petrel'; Walbran, 'Quadra' and May, 'Constance.'

D. G. S. 'QUADRA'.

VICTORIA, B.C., December 30, 1899.

Commander O. G. V. SPAIN,
Commanding Fisheries Protection Service,
Ottawa.

SIR,—I beg to forward you the following report of the Fisheries Service performed by the *Quadra* during 1899.

Owing to the large number of lighthouses and other aids to navigation lately established in the waters of British Columbia, we were unable to give that attention to our fisheries which their growing importance demands.

On July 28, I proceeded on fisheries service to the west coast of Vancouver Island with Mr. Stumbles from the Marine and Fisheries Department, Ottawa. We visited San Juan River, the Somas River, Aiberni, and Uebucklesit Inlet and river leading to Anderson Lake. The obstruction to the salmon ascending the Somas River to the large inland lakes of Kleecoot and Great Central, known as the Paper Mill dam, was thoroughly inspected, and the river examined from Kleecoot Lake to Aiberni. On the return cruise a stay was made at Otter Point where inquiries were made from residents as to the different points in this locality and the dates when the salmon are noticeable in large numbers on their way to the Fraser River.

On November 14, a fisheries court was held on the *Quadra* at Alert Bay, at which I presided, to investigate a charge made against the manager and head-fisherman of the Alert Bay Canning Company for illegally fishing in Campbell River, Vancouver Island. The defendants pleaded guilty to the charge and a fine was inflicted and paid.

I have the honour to remain, sir,

Your obedient servant,

JOHN T. WALBRAN,
Captain Fisheries Protection Service.

OWEN SOUND, Dec. 30, 1899.

Capt. O. G. V. SPAIN,
Commanding Fisheries Protection Service,
Ottawa.

SIR,—I have the honour to submit my annual report of the work performed during the past season by the *Petrel*.

On the receipt of your letter of the 11th of April, instructing me to proceed to Goderich and get the ship ready for commissioning, I did so, and departed for Owen Sound on the 28th to complete the fitting out, as also instructed, making a

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departure for Lake Erie on the 8th of May, arriving at Amherstburg on the 9th at 2.25 p.m., and after taking on 21 tons of coal proceeded same day to Pelee Island and at once established the patrol of the boundary line as formerly. On the 11th prepared gas buoys, took them in tow for Pelee Passage and put one in place that evening, the other at daylight on the 12th, removing winter buoys in each case. On same day I seized twenty-three American gill-nets set in our waters. On the 16th I seized fifty-one American gill-nets three knots to the north of boundary line containing good catch of fish and forty ducks; nets set in eleven fathoms of water. On the 20th placed spar buoys on Grecian Shoal and North Harbour Reef; on the 22nd pulled out spars and cleared away wreck schooner *Groton* leaving from twenty-five to thirty feet of water over wreck; on the 24th had dressed ship to celebrate Her Majesty's birthday but received a telegram from the Deputy Minister to proceed at once to the wreck of the *Ganges*, which was said to be a derelict, so departed at 8 a.m. On the 25th commenced work on wreck of schooner *Ganges*; 29th, engaged diver, procured dynamite, a scow and other appliances. 30th, 31st, 1st and 2nd June continued work on wreck, completing on the last date, leaving over twenty feet least water over it. On the 7th I removed the life-boat and appurtenances from Pelee Island to Pelee Point; 14th, delivered 89 nets to C. Ross who tendered \$1.35 per net. 30th, I seized twelve American gill-nets. July 1, Dominion Day at Port Dover dressed ship and fired a salute of fifteen guns. On August 7 placed spar buoy on end of shoal forming a harbour at Long Point. 26th, proceeded to Windsor to procure lumber for life-boat station to be built on Pelee Point. 28th, landed lumber, shingles, &c., on Pelee Point. 29th, procured stone for foundation; 30th, crew on shore at work building life-boat station; 31st, and 1st and 2nd September continued work, building nearly completed. On the 23rd I seized (at the request of Collector Gott of Amherstburg) the American tug *Leathem D. Smith*, for infraction of the Customs laws and delivered her to the collector. A fine of \$400 was inflicted. 25th, having received instructions to take Judge Horne and party to Pelee Island to hold Court of Revision, took party on board and proceeded to Pelee Island. Not being able to land at Island, came to anchor off Leamington; 26th, landed Judge and party in small boat, could not land at dock on account of storm; Judge held court and again came on board, when departed for and landed party at Windsor. On 4th of October I seized twenty-three American gill-nets in our waters containing a few herring and five trout, one trout weighing 22 lbs. 3 oz., the largest caught for years in Lake Erie as far as I could learn. 12th crew employed painting life station on Pelee Point. On 18th, having received instructions to proceed to the mouth of Detroit River to see what was best to do with the wreck of the American schooner *Mary Amelia*, (to remove which \$600 was asked by a wrecker,) I put my crew to work to clear away the booms and other spars, cut down the masts and towed the wreck out into the lake and took it as near the beach as possible and out of the way of navigation. On the 20th November, having heard that the American Lighthouse boat had started to take in the gas buoys, I took in the Pelee Passage ones, placing spar buoys for the winter in their place, towed buoys to Amherstburg and gave them in charge of Light-keeper Hackett of Bois Blanc Island. 28th took in spar buoys from Grecian Shoal, North Harbour Reef and one for Light-keeper Hackett off Detroit River Light. On December 4 I seized ten American gill-nets, which are stored in Amherstburg. On the evening of the 8th having received a telegram from you saying "if I thought there was any chance of being caught in the ice to proceed at once to Owen Sound" and as the ship was caught by one day's delay last season I deemed it wise to take as few chances as possible, so departed on the 9th, making Sarnia that night and proceeded up Lake Huron the next morning, lay in Sand Beach until 10.10 p.m. and made Cove Island soon after daylight and just in time to escape one of the heaviest gales of the season on Lake Huron. On account of trying to get the Surprise Shoal bell buoy at Jackson's Cove I did not reach Owen Sound until 12.25 p.m. on the 12th where ship was placed in winter quarters and put out of commission on the 14th.

REMARKS.

You will observe a very great falling off in the seizures of nets this year. The American fishermen are finding out that it does not pay to risk their nets in our waters. A very careful and watchful patrol of the boundary line was almost continually kept. I allow a margin in the open lake of a mile or so to be sure of my ground; over this they have sometimes passed. I find I must keep them to the line, if I leave one that is over the next fishermen who comes along will go a little further and so on. A great deal of grappling was done but no nets were got by that means. They lost too many that way last year and have given up setting without buoys.

You will also observe that much more work than formerly has been done for the Marine Department.

The fishing in Lake Erie, was, I think, fully up to that of former years for the whole lake. A very heavy run of fish took place early in the summer but the fall fishing was not so good. Mr. Edward Harris of the Long Point Company told me that it had been the best season for him in many years. Our own fishermen, as far I could learn and observe, kept within the laws and regulations very well. I counted all the pound-nets on our side and found that all were licensed. I inspected all the light-houses on our side Lake Erie with the exception of Mohawk; it was always blowing when I happened to be in that locality. I found them all fairly well kept. I have some fears for Pelee Spit and Colchester lights, as repairs to the cribwork in both cases are badly needed, and, should we have as much ice and bad weather as last winter, both lighthouses will be in great danger.

The *Petrel* logged during the season 15,324 miles.

I have the honour to be, sir,

Your obedient servant,

E. DUNN,

Commanding D. G. S. 'Petrel.'

To Commander O. G. V. SPAIN, R.N.,
Commanding Fisheries Protection Service of Canada,
Department of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to forward to you my annual report of work performed by the ship under my command during the season of 1899.

Receiving instructions from you late in March to place the *Osprey* in commission on April 20, I instructed Chief Officer Acker on April 15 to proceed at once with the work of getting ship ready to commission. I arrived at Shelburne on the 19. The work had progressed slowly, weather being unfavourable, however we went into commission on April 22. On the 24th, after having some difficulty in getting my crew gathered up, I sailed by your instructions eastward towards Magdalen Islands, calling at Halifax, Liscomb, Arichat, arriving at Port Hawkesbury on the 29th, found ice reported further north. May 1 ice cleared, proceeded calling at Pictou and Charlottetown, meeting with some stormy weather and drift ice. Arriving at Magdalen Islands on May 13, I found seven United States trawlers six held Canadian licenses the one who was unlicensed had nets to catch his own bait. There were several Canadian trawlers baiting, beside a number of small Canadian buyers. Herring having struck the islands very early. Now the last run was considered to be nearly over. I at once proceeded, being previously instructed by yourself to be at Halifax not later than May 21. 16th passed through Strait of Canso proceeding toward Halifax and arrived on the morning of 20th, where we had a few days of bad weather.

On the morning of 25th we proceeded toward Shelburne with our distinguished passenger General Lord William Seymour, yourself and Lieut. Bowker on board. After a few hours of very moderate weather we were favoured with a fine westerly breeze full sail, which his lordship enjoyed very much, Shelburne 26th and Halifax 29th by way of Lunenburg, all enjoying the round voyage.

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May 30, by your instructions we proceeded eastward calling at Jeddore, and while there had an unpleasant duty to inflict a fine on a factory for illegal lobsters. On June 4 we took up our station between Liscomb and Louisburg, Canso headquarters mails and telegrams. Same date in company with several United States seiners cruising westward with fleet which did poorly, some going home clean while others had very small catches.

We continued to cruise not his station taking runs north to Gaspé and Prince Edward Island and westward to Halifax. Proceeding eastward we took up our station at Canso again, our attention mostly taken patrolling the coast looking after illegal lobster fishing which is followed only by a very few of the mean class of fishermen, while the respectable class hardly dare inform on them as their property might be in danger. On October 20 under cover of a dark, misty night (after all other means had failed) I manned my boat (ship lying at Whitehaven) to proceed to Whale Island which I had long been watching, last as well as this year, I found a good case a man just putting the finishing touch on the tins. Same night at Big Dover Island I came on a proper den of poachers. I destroyed and burned camp with all it contained.

On October 31, 9 a.m., detained the U.S. fishing vessel *Flora L. Nickerson* of Booth Bay for buying supplies without a Canadian license. This vessel was released at 9.30 p.m. on payment of a license.

On November 3 with yourself on board we proceeded towards Sydney passed through St. Peter's Canal 3 p.m. and on the 4th ran down the lake arriving at North Sydney noon of 5th. Both cruisers *Curlew* and *Kingfisher* in port with a fleet of five seiners. 6th, seiners went out, *Kingfisher* in company; we cruised 7th and 8th only to find that all the fleet had gone west for home, only one vessel being in luck had 140 barrels, another had six, so mackerel fishing proved a failure this season on this coast. On the 9th we proceeded west and arrived at Whitehaven on the 11th calling at Louisburg. We had several days of very heavy wind while at Whitehaven. On the 18th proceeded and calling at Liscomb and Spry Bay; arrived at Halifax on the 23rd, sailing again on the 26th, worked our way westward, arrived at Shelburne on the 28th and find that the fishermen report a very successful season which is a very unusual report.

We cruised in the vicinity of Shelburne until December 13 when we went into winter quarters and paid off the crew.

The season has been quiet and uneventful, except the detention of the *Flora L. Nickerson* which was released on payment of a license. Our annual sports passed off finely, the cruiser *Kingfisher* almost sweeping the board.

I have the honour to be, sir,

Your obedient servant,

C. T. KNOWLTON,
Commanding Cruiser 'Osprey.

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CRUISER 'OUBLEW.'

St. JOHN, N.B., December 30, 1899.

Commander O. G. V. SPAIN, R. N.,
 Commanding Fisheries Protection Service,
 Department of Marine and Fisheries,
 Ottawa.

SIR,—I have the honour to submit to you herewith my annual report on the various duties performed by this ship during the past season of 1899.

According to the usual annual custom the ship was put into winter quarters in Magés dock during December, and while there during the winter a thorough overhauling was given the machinery. Other slight repairs were made throughout the ship, and she was put in thorough order for commissioning on April the 15th. On that date the ship was commissioned the crew signed, and during the afternoon we steamed for the mouth of the Bay of Fundy, I found the fishermen there preparing for the various fishing industries, while line fish and herring were beginning to put in an appearance along the coast. As the sardine factories were not yet in operation, the small herring that were being caught in the weirs, were finding a ready sale to Nova Scotia schooners buying lobster bait. The days were very busily occupied in distributing bounty cheques, issuing new licenses, and settling numerous fisheries disputes that were awaiting my arrival.

At the beginning of May I received your orders to report at Halifax to you on the 11th instant which orders I carried out. Making a run to Salmon River and return on the 16th and 17th instant, the condemned United States fishing schooner, *Frederic Gerring* was placed in our charge to be towed to Newcastle, N.B., for use as a lightship on the Miramichi River.

A heavy gale prevented us from leaving Halifax till the 22nd, but after an uneventful run of 48 hours Point Escuminac was rounded on the 24th at noon, arriving at Newcastle in the evening. Owing to the strike of pilots on the Miramichi River we were unable to procure one, and were compelled to take a fisherman instead.

On account of this strike the pilot commissioners of the river apprehended that trouble would result, and we were ordered to remain while the matters in dispute were being adjusted by Captain Douglass, who was sent there by the Department of Marine and Fisheries.

On May 31 orders were received to returned to the cruising grounds, and leaving there on June 1st we steamed to Pictou and bunkered. Arriving at Canso on June 3. The fleet of United States seiners were found to be cruising off White Head and catching very few mackerel. Dense fogs and stormy weather operated against the movements of the mackerel fleet, as well as the fish being unusually scarce.

As nearly all of the seamen that were shipped in St. John in the spring had by this time decided to return home, a run was made to Liscombe and Salmon River, and the vacancies were filled. From thence a cruise was made to Cape Breton anchoring at North Sydney, where we were joined by Inspector Bertram on June 12 and with him we left for a visit to all the lobster factories on the north and west coast of that island. Many of the factory owners were taken by surprise, and no doubt, much good was accomplished by our visit. Cheticamp was reached on the 14th, and we spent a day there while the Inspector visited the falls on Little River. Next day the cruise was resumed, inspecting factories in Gut of Canso and St. Peters Bay. Steaming through the canal and lakes to North Sydney where the Inspector left ship. On June 20 steamed to Mulgrave, via the lakes, where I received personal orders from you to steam to Poulamond and report as to the necessity of a lighthouse at the entrance of its harbour.

Your orders were then received to return to the Bay of Fundy, and calling at the numerous ports on the way to enforce lobster regulations. St. John was visited for bunkering purposes on July 4. Thence among the fishermen at the mouth of

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the Bay, I found that good fishing of all kinds was in progress. After spending two days in Charlotte County we were ordered to return to the Nova Scotia coast again enforcing lobster regulations.

We also had the pleasure of meeting you at Guysboro, on July 20th and then returning to the south coast suppressing attempt at lobster fishing.

After a run to Louisburg for bunkering on July 29, we received your orders to be at Shelburne for the annual regatta held there on August 7, 8 and 9. Numerous yachts were there from Halifax and Yarmouth and very successful and enjoyable races were held.

Cruising westward the Bay of Fundy was again visited, where five days were spent, and then a run was made to North Sydney, arriving there on the 25th. After bunkering and receiving other supplies, Inspector Bertram came on board for the purpose of a second visit to the factories around the island. This work was completed by the 31st where we arrived at Port Mulgrave and the inspector returned by train to Sydney.

From Mulgrave we proceeded to Georgetown, P.E.I., meeting there the other cruisers in the service for the annual sports which took place on September 4 and 5. They were a great source of pleasure to the companies of all the ships, and all the sports were entered into by officers and men with great enthusiasm. While this ship made a much better showing than last season and was successful in capturing several of the prizes, still we hope to show a greater improvement at our next annual sport.

From Georgetown, Isaac's Harbour was reached on September 7, where we took into the government service the tug-boat *Florence C.* for the prevention of illegal lobster fishing between Halifax and Canso. First officer Burns was placed in charge, with three seamen, and she was fitted from this vessel with every essential for the successful prosecution of her work.

Yarmouth was reached on the 14th inst., where you came on board the ship and we steamed to Tusket, where you held an investigation among Tusket people, returning next day to Yarmouth.

Lobster matters again requiring attention on the eastern coast, a run was made in that direction, anchoring at Canso on the 20th. Cruising westward from there calling into various ports where illegal fishing was suspected, we put into Yarmouth on the 25th to scale boiler. After completing this a cruise was made upon the spawning grounds at Grand Manan, warning numerous vessels there against violations of the spawning ground regulations. Numerous fisheries difficulties in different parts of Charlotte County were then adjusted, licenses issued, besides acting as one of the judges at the Campobello Fish Fair. This regatta was held on the 19th October at Welshpool, and a strong breeze assisted the committee in carrying out the best programme of races they have had for years. On the 30th your orders were received to report to you from North Sydney, but bad weather prevented our arrival there until November the 4th, and we found very few United States mackerel schooners in Cape Breton waters.

Capt. Douglas, R.N.R., with workmen and supplies, were conveyed to St. Paul's Island, and after four days work there I brought them back to Sydney, where orders were awaiting us to return to the Bay of Fundy.

On November 11, while lying at anchor at Louisburg Harbour, bunkering, the schooner *Sailor's Home* of Halifax, while under way fouled us, carrying away our fore-topmast, requiring us to put into Halifax and being provided with a new foremast.

Leaving the *Gatling* at Halifax, we sailed westward on the 23rd for Port Mouton, where illegal lobster fishing was reported in progress. This was found correct, and we proceeded to destroy large numbers of traps, and narrowly searched a number of houses for evidences of illegal fishing. Yarmouth was reached for coaling on the 27th, and on the day following Charlotte county was reached, and we began the collection of fishermen's bounty claims and the settlement of numerous fisheries complications.

This kept us busily employed till December the 17th, when we steamed from Beaver Harbour to St. John to put steamer into winter quarters. This was done

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on December 19, and the crew paid off same day, retaining the engineers and stokers to repair machinery.

My report showing cost of the several departments of the vessel for the year 1899 is almost ready, and will soon be forwarded to you, also the cost of patrol boat *Florence C.*

Special reports on various matters have been submitted to you at intervals during the year, which I trust you have found satisfactory.

I have the honour to be, sir,

Your obedient servant,

JOHN. H. PRATT,
Commanding 'Curlew.'

Commander O. G. V. SPAIN,
Commanding Fisheries Protection Service of Canada.

SIR,—I have the honour to report the work done by the *Kingfisher* for the season of 1899 as follows :

On May 1st I proceeded to Shelburne to superintend the fitting out of the *Kingfisher*—on May 10 the ship was placed in commission and sailed on 13th.

The first American seiner arrived on the 15th, by the 17th I proceeded east with a small fleet, calling at Liverpool, Cape La Have, and Lunenburg. No Mackerel being seen west of Sambro, the vessels moved east by the 24th. I followed on the 25th, running down in company with several seiners to Cape Canso, when we fell in with twenty-two sail, which as far as I could ascertain comprise the whole Cape shore fleet. We cruised about Cape Canso for a few days, fleet finding no fish.

On May 31 orders were received to proceed to Charlottetown. I proceeded to that port, arriving on June 2—while there the ship's company were measured for uniforms. On June 4 we took up our station off East Point with headquarters at Souris, where I continued cruising until October 18.

The mackerel fishery was again a failure in the Gulf of St. Lawrence, the greater part of my time was taken up looking after illegal lobster fishing. I employed a steam launch for twenty days which was most effective and enabled me to do good work, making it about impossible for them to get traps out. I destroyed quite a number of traps but nothing compared to previous years. The assistance of the steam launch was very important.

On June 26 orders were received to be in Sydney on July 12 with the *Kingfisher* to participate in sports at the Carnival. I arrived at Sydney on the 10th in Company with six men-of-war, four English and two French. Immediately on arrival I called on Mayor Crowe and offered any assistance I could give him in carrying out his programme. His Worship accepted our assistance, requesting that we should trim the court house with flags and other decorations for the grand ball in honour of the fleet, which we did to the satisfaction of all concerned. The gig race between three of H.M.S. ships and the cruiser *Kingfisher* was very interesting and was won by the *Kingfisher*, easily. The carnival was a grand success.

On July 21 I arrived back at my station off East Point. The vessels had found very few mackerel during my absence. A few small schools were seen off the 2nd Chapel first week in September, nothing later.

The mackerel fishery at the Magdalen Islands was also a failure in several localities; total catch for the Islands was 2,700 barrels. Fish being very large and eagerly sought after at \$24 per barrel.

On August 15, acting on instructions from yourself, I proceeded to Picton and put ship on marine slip. The next day we hauled over on the slip, had the decks caulked, bottom painted and other necessary repairs made. On the 19th we came off the slip and proceeded to Georgetown, my headquarters for mails and telegrams

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having been changed to that port. While there I had the mainsail repaired, same having burst on the trip to Pictou.

From that time until October 18, we were employed carrying out the law *re* the the Lobster close season. At the expiration of this time we sailed for Sydney, C.B., to meet the fleet of seiners which always assemble there for the fall catch. On arriving I found six seiners reporting no mackerel. On October 27, the schooner *Lena* and *Maud* made a haul of 135 barrels of very large fish, all extra 1. The other vessels of the fleet got nothing to speak of, only two or three barrels each.

On November 6, upon meeting you at Sydney I received instructions to proceed to Shelburne and lay the ship up for winter, on the 10th of that month. I sailed immediately arriving at Shelburne on the 9th, paying out of commission next day.

The Fisheries protection Annual Sports were held at Georgetown on September 4 and 5, five ships being present. My ship had the honour of retaining the Fisheries Protection Cup for rifle competition, also to capture the *Acadia-Kingfisher* Cup from the *Acadia*. Sir Louis Davies, Minister of Marine and Fisheries, was present on the first day of the sports. He takes a great interest in our ships and always on leaving the grounds has a word of praise for the officers and men.

I have the honour to be, Sir,

Your obedient servant,

W. H. KENT,
Commanding 'Kingfisher.'

QUEBEC, December 30, 1899.

To Captain O. G. V. SPAIN R.N.,
Commander of the Fisheries Protection Service,
Ottawa.

SIR,—In conformity with your instructions I have the honour to submit to you the following report which is a summary of the work performed by the revenue cruiser *Constance* during the past season of navigation, 1899:

On February 14 last my engineer and his crew began the work of fitting out, and during the first week of March work was commenced on the new deck for the bridge. On the 25th of March the crew arrived on board, and on the 5th of April all hands signed ship's articles.

On April 1 we began to cut the *Constance* out of the ice at her winter quarters in Indian Cove assisted by shoremen with their ice saws and crow-bars.

The afternoon of April 3 we cut the steamer clear and into open water, proceeding up to Quebec at once under steam and moored in the Louise Basin for safety from the drifting ice in the river.

After receiving on board a full supply of coal, provisions, &c., we left for the Gulf on April 7.

On April 27 seized the schooner *Providence* at St. Anne des Monts River for contravention of the Customs Act, towed her to Rimouski and handed her over to the collector of the port.

On May 15 received instructions from Mr. Fred L. Jones, inspector of customs, to proceed to Shippigan to watch for the schooner *Queen of the Fleet*, and to seize her on sight for smuggling on the Nova Scotia coast.

On May 19 we anchored in Shippigan harbour. Here we learned that the said schooner had been seized the previous day by the collector of the port.

We then proceeded up the Gulf, and from May 25 to June 6 we were at Quebec to take in a new tail shaft to replace the old one condemned by Inspector Samson, which was very much pitted by the action of the sea water. During the above time occupied by the engineer, the crew were employed giving the ship's bottom a thorough

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scrapping and painting; also had steering gear overhauled and put in good working order.

By instructions received we left Rimouski on June 20 for the Nova Scotia coast, and on Sunday, 25th, anchored at Port Hawkesbury, and at North Sydney the next afternoon.

The evening of June 29 we left North Sydney for St. Pierre Miquelon with Messrs. Jones and party on board and returned to Sydney on the July 3.

From July 4 to 18 our cruise was along the Cape Breton and Nova Scotia coasts to Halifax, but owing to the continued southerly winds and heavy fogs, little or nothing could be accomplished in the way of cruising, and on the latter date (July 18) we returned up the Gulf towards the St. Lawrence river.

On July 27 received instructions to proceed and cruise in the vicinity of Caraque, Miscou and Shippigan, and to keep a sharp lookout for the topsail schooner *Resolute* from Jersey via Cadiz reported to have a lot of liquor on board to be smuggled ashore at the latter named place.

On the night of August 21 we succeeded in intercepting the said vessel. Next day, August 22, we followed the *Resolute* into Shippigan harbour, gave her a thorough search, and also watched her closely until the 24th, when her cargo of salt was discharged, but nothing of a contraband nature was on board of her except some six cases of brandy and whiskey, a couple of gallons of wine, and some cigars and cigarettes, all of which were entered on the ship's list of provisions, and were duly reported to the collector of the port. On Monday, September 11, we hauled off the schooner *Sanguan* stranded on the sands at Douglastown and towed her into Gaspé Basin.

On September 12, hauled off the schooner *Marie Elmore* stranded on the beach at Fox River and towed her also to Gaspé Basin.

With the exception of the time we were at St. Pierre Miquelon, and on the Nova Scotia coast, our cruise was along the north and south shores of the gulf. Anticosti, and the Bay Chaleurs, covering altogether 16,000 miles, also boarded and searched 107 vessels.

On November 28, we arrived here (Quebec) from the gulf to go into winter quarters at Indian Cove, and on December 4, paid off the officers and crew from further duty, leaving the vessel in charge, for the winter, of my boatswain's mate, John Johnson, and Telesphore Broulotte who keep watch in turn—week about.

I may here mention in conclusion that during the months of October and November the weather, although very open, was very cold with strong gales accompanied with an unusual amount of fog, but less snow than we generally have at that season of the year.

Nothing unusual occurred during the season except the shipping of a heavy sea on October 1, off the south-west point of Anticosti, during a north-west gale, which carried away our after-companion into the lee scuppers and flooding the cabin and officers quarter with from two to three feet of water.

To prevent a recurrence of the same I would suggest a continuance of the present deck house (that is now over the engine-room) to take in the companion leading to the cabin, making the vessel much more seaworthy, besides giving an additional and comfortable extra room which is very much required.

I have the honour to be, sir,

Your obedient servant,

GEO. M. MAY.

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FISHERIES INTELLIGENCE BUREAU.

I have now fifty-three reporting and twenty-four bulletin stations; Mr. T. O'Brien, my new clerk in charge at Halifax, has carried out his work in an excellent manner, and to my entire satisfaction. Appended is a list of reporters, also the annual report of the Fisheries Intelligence Bureau.

LIST of Fisheries Bureau Reporters outside the Civil Service.

Residence.	Name.	Allowance.
Beaver Harbour, N.B.	E. W. Cross	\$ cts.
Bloomfield, P.E.I.	John Doyle	15 00
Caraquet, N.B.	Miss E. D. Chenard	15 00
D'Escousse, C.B.	R. F. Bourke	15 00
Escuminac, N.B.	J. J. Keary	15 00
Gaspé, P.Q.	J. J. Annett	15 00
Grand Manan, N.B.	E. A. Calder	15 00
Grand River, P.Q.	Mrs. John Carbery	15 00
Ingonish, C.B.	E. B. Burke	15 00
Isaac's Harbour, N.S.	S. R. Giffin	15 00
L'Ardoise, C.B.	John McIsaac	15 00
Long Point, P.Q.	John Vibert	15 00
Lunenburg, N.S.	W. A. Zwicker	15 00
Magdalen Islands	J. A. LeBourdais	15 00
Meat Cove, C.B.	Alex. B. McDonald	15 00
Newport Point, P.Q.	Mrs. Meunier	15 00
Paspébiac, P.Q.	Miss Ada Beck	15 00
Percé, P. Q.	Miss Kate Beck	15 00
Point St. Peter, P.Q.	Mrs. P. Bond	15 00
Salmon River, N.S.	J. H. Whitman	15 00
Seven Islands, P.Q.	P. R. Vignault	15 00
Shippegan, N.B.	Mrs. A. Hamon	15 00
S. W. Point Anticosti	Miss Grace Pope	15 00
Whitehead, N.S.	C. H. Felthmate	15 00
Yarmouth, N.S.	F. L. Hatfield	15 00

LIST of Fisheries Bureau Reporters who are Government Officials.

Residence.	Name.	Allowance.	
		\$	cts.
Alberton, P.E.I.	J. P. Brennan	15	00
Arichat, West, C.B.	C. P. LeLacheur	15	00
Bayfield, N.S.	E. G. Randall	15	00
Campobello, N.B.	A. J. Clarke	5	00
Canso, N.S.	Thos. C. Cook	15	00
Cheticamp, C.B.	S. Aucoin	5	00
	C. F. Aucoin	10	00
Digby, N.S.	J. M. Viets	15	00
Gabarus, C.B.	R. McLean	15	00
Georgetown, P.E.I.	Chas. Owen	15	00
Hawkesbury, C.B.	J. C. Bourinot	15	00
Liverpool, N.S.	J. H. Dunlop	15	00
Lockeport, N.S.	J. R. Ruggles	15	00
Louisburg, C.B.	P. O'Toole	15	00
Mabou, C. B.	Louis McKeen	15	00
Malpeque, P.E.I.	J. M. McNutt	15	00
Margaree, C.B.	M. A. Dunn	15	00
Musquodoboit Harbour, N.S.	George Rowlinson	15	00
North Sydney, C.B.	A. G. Hamilton	15	00
Petit de-Grat, C.B.	P. T. Fougere	15	00
Port Hood, C.B.	E. D. Tremaine	15	00
Port La Tour, N.S.	J. W. Taylor	15	00
Port Medway, N.S.	E. E. Letson	15	00
Port Mulgrave, N.S.	David Murray	15	00
Pubnico, N.S.	J. A. D'Entremont	15	00
Sand Point, N.S.	R. H. Bolman	15	00
Spry Bay, N.S.	W. C. Henley	15	00
St. Ann's, C.B.	D. McAulay	15	00
St. Peter's, C.B.	D. Urquhart	15	00

The whole most respectfully submitted.

O. G. V. SPAIN,
Commander of the Fisheries Protection Service of Canada.

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ANNEX A.

DETAILED REPORT OF THE FISHERIES INTELLIGENCE BUREAU.

HALIFAX, December 30, 1899.

Commander O. G. V. SPAIN, R.N.,
Commanding Fisheries Protection Service Canada.

SIR,—I have the honour to submit the annual report of the Fisheries Intelligence Bureau, for the season of 1899.

In connection with the Bureau during the past year, the stations comprised the following, viz.,—Fifty-three reporting and twenty-four bulletin. A new reporting station at Douglastown was established to take the place of Gaspé. The latter place is still retained as a bulletin station. New reporters were appointed to Salmon River, Isaac's Harbour, and Campobello.

The following is a summary received from the various stations showing the result of fishing operations for the season of 1899.

T. O'BRIEN,
Clerk in charge.

CANSO.

Report from *A. N. Whitman & Sons, Canso, N.S.*

Codfish.—The inshore catch of codfish for 1899 has been no improvement on previous years. As we have before remarked, the inshore fishery seems to be steadily, though slowly declining. This may be due to the increased traffic around our coast; to the disturbing of the water by the thousands of lobster traps and lobster boats in the early part of the season; or to other causes. The bank fishery has been somewhat of an improvement on last year, the most of the vessels having carried home good trips of fish, due perhaps to some extent to bait having been more plentiful on the fishing grounds. There seems to be no diminution of the number of codfish on the outside grounds, and the supply is no doubt practically inexhaustible. The early spring trip was made by a larger number of vessels, though with little profit, the main object in the early start apparently being to make sure of a crew. Canso continues to command a large share of the business of supplying the banking fleet. No place in North America combines so many advantages for the carrying on of the fishing business. The prices of codfish this autumn have shown a sharp decline and there seems no reasonable prospect of a rally, and as a large addition of first-class vessels will be made to the banking fleet in the coming spring, it looks as though low prices would probably rule next year, if the average catch should be maintained.

Haddock.—The haddock fishery of this port is of growing importance. Three firms here are now engaged in the production of finnan haddies, and it gives promise of becoming an important industry. The catch of the fall of 1898 and the winter of 1899, was a fair one and prices were fairly maintained. None were taken in the traps this year. The summer catch was about the average. One firm here ships a carload of fish, weekly, to Montreal and a large proportion of its contents are haddock. It is observed that an increasing number of people are learning the value of haddock as a food fish, as compared with other kind of fish, and this once rather despised fish is coming to the front.

Hake.—These fish are not abundant here at any time. The catch has been as usual and prices have been well sustained.

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Herring.—The catch has been of the smallest the season through, but there is nothing to indicate that these fish have left us for good. The catch on the coast of Scotland last year was exceptionally large, this year it has been exceptionally small. So far as Canada is concerned the demand for salt herring is decreasing yearly, other fish and other food taking its place. There has been no special advance in price because of the scarcity.

Lobsters.—The lobster catch in this vicinity showed no special falling off this year, and a sharp advance in the price to the fishermen made the lobster season a profitable one for them. The keen competition between packers has got the business to a point where it has ceased to be profitable, and nothing but the high prices paid for the canned goods has saved them from serious loss. Take the business as a whole it has been operated this year without profit, and it will soon be a case of the survival of the fittest.

Mackerel.—As with herring so with mackerel. The mackerel catch the whole season has been a failure. Fishermen are of the opinion that there will be no marked improvement in the mackerel fishery until an entirely new school comes on the coast. There are not wanting signs of the coming of such a school.

Squid.—The catch of these valuable bait fishes inshore this year has not been large, but on the banks they have been plentiful, especially during the latter part of the season. A marked feature of the business this year has been the small quantity taken by the traps. What have been taken have been secured by means of the jig. The importance of laying in a stock of bait by freezing is becoming more clearly understood every year. The discussion of the subject by Dr. Kendall, M.P.P., of Sydney, both in the Legislature and out of it, has given added emphasis to it, and his scheme of a system of Government aided cold storage houses has received a good deal of attention. Whether it can be worked or not remains to be seen, but there is no doubt that the discussion will have done good in stimulating private enterprise in this direction. We are pleased to be able to add, that the cold storage of bait has been in successful operation here for ten years or more, putting us well in the front of improvement in this particular. From a thousand to fifteen hundred barrels of squid are now in cold storage here and in this vicinity, and this will be ample for local requirements for the remainder of the season.

CLARK'S HARBOUR.

Reporter, Mr. J. Lewis Nickerson :

Codfish were first reported May 9, in fair quantities, and continued so during the balance of the season. Our reporter says, 'Cod is plentiful, but could not be caught for want of bait.' The number of quintals shipped during the season was 4,500.

Haddock first appeared May 11, and varied from fair to poor the whole season. 1,300 quintals were shipped during the season.

Herring appeared on the 5th of August, and disappeared about the 25th, with the result that the total catch for the whole season was estimated at 400 barrels.

Lobsters were first reported on the 1st of January. The catch was very good, and continued so during the remainder of the month. From the 1st of February until the close of the season, the catches gradually decreased. On the whole a fair quantity was realized. Appended is the statement of the number of cases canned :—

	Cases.
M. G. Nickerson.....	700
Cape Island Packing Co.....	800
Jas. McGrath	550
	<hr/>
	2,050

The number of crates of live lobsters shipped during the season was 4,256.

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Mackerel first appeared on the 18th of May. The catch was much below the average. The total number of barrels in traps as below:—

	Barrels.
Green Island trap	1,801
Seal Rock	160
Little Green Island.....	120
	2,081

The fishing throughout the whole season was greatly handicapped on account of scarcity of bait.

DIGBY.

Reporter, Mr. J. M. Veits:

Codfish was first reported May 2, and scarce. With the exception of a few days in June, when the catches were fair, the season's catch was light. Dog-fish were very troublesome during July and August. Numerous storms also contributed towards making the catch a light one. Total catch estimated at 359,000 lbs.

Haddock fishing commenced on May 2, and the catches were poor during the balance of the month. In June the catch varied from fair to poor and continued so to end of the season. The haddock fishing has been practically a failure, the total catch being 362,000 lbs., less than one-third of last year's catch. Enough are taken to supply the finnan-haddie business.

Hake this season was exceptionally good. Reported May 9 in small quantities to end of month. From June 13 to the end of the season hake was plentiful. Season's catch estimated at 2,270,000 lbs.

Halibut fishing, as far as this centre is concerned, is small. Digby vessels take their catches to Yarmouth, and sell there for American markets, therefore the total catch for this station, is for those vessels that come here at the end of the season. 7,150 lbs. being reported by these vessels.

Herring fishery has been much better this season than for many years past. First reported May 9 and varied from fair to good during the month. June catch was not as good as the preceding month. Fair catches were made in July, and varied from fair to good in August and September. The catch for the balance of the season was poor. Mr. Viets says, 'The Smith Cove and Little Joggins weirs, once noted for their "Digby Chickens" have taken a much larger quantity, and of better quality, than for many years past. This I cannot help feeling is owing to the scarcity of lobster pots in the vicinity of Digby Gut and in the harbour. Another reason for the failure of the herring fishing here, I cannot but record, in my observations is the awful and unnecessary destruction of the small fry of herring caught in the weirs, and unfit for market, but not allowed to escape. Consequently they are left to rot in weirs, or hauled therefrom and spread on land. Another reason is what is called "Drifting at night" with torches. Yet another reason, and perhaps as fatal, to the increase or even normal standard, is taking them for the sardine factories on the coast of Maine.' Season's catch 415 brls.

Lobsters were first reported May 2, when a fair catch was made, but the balance of the month was poor. During June the catch varied from fair to poor. The head of the Bay of Fundy is the chief ground for this industry, in this district. The lobster fishing is fast failing. In 1895 it took one pot to do certain work, in 1899 it takes ten pots and men in proportion to do the same work. The catch is kept at its normal status, but at the expense, or rather slaughter of that fishery, by extra force.

Mackerel was reported first on May 30 and was scarce the whole season. The weir at Joggins had 20 brls. on May 26 and 60 brls. on May 27.

Bait was obtainable at this station and St. Mary's Bay throughout the season. Digby fishermen find it hard to obtain bait along the North shore.

ISAAC'S HARBOUR.

Reporter, Mr. Simon M. Giffin :

Codfish.—The fishing at the early part of the season was only fair. Towards the end of August the fishing improved when boats averaged 2 quintals. The fishing for September opened well, cod averaged $\frac{3}{4}$ quintal per man, but a great many days were lost on account of storms. The October watch was fair, being interferred with by dog-fish. Total for Isaac's Harbour was 200 quintals. The total catch for the following places was 500 quintals, Drum Head Seal Harbour, Fisherman's Harbour.

Haddock.—100 quintals were taken during the season.

Halibut was reported only one day during the season, and very scarce.

Herring.—The total catch of spring and fall herring is estimated at 900 brls. Fair catches were made in the early part of the season up to the end of August. The September catch was poor, with the exception of two days, when herring was reported very plentiful. Herring struck in at Carter, 8 miles west of Isaac's Harbour, in large quantities, when ten to forty barrels were taken to fleet of nets, and continued good until September 22. Nothing was done in October.

Mackerel was very plentiful for the greater part of the season but as they were very small, the catches were light, on account of their not meshing well.

Pollock.—100 quintals were taken throughout the season.

LIVERPOOL.

Reporter, Mr. J. H. Dunlop :

Alewives first reported May 11, catches being light and irregular to the end of June. Nothing reported afterwards.

Cod first taken May 19; catches irregular, but fair to end of June. Scarcity of bait interfered greatly. Cod improved in July, being plentiful throughout the month. On the 2nd schooner *Priscilla* arrived with 700 quintals. Catch varied from good to fair for balance of season.

Haddock first reported May 27, catches being very irregular and light to the end of June. Fair and regular catches were made during July, after which haddock again fell off, light catches being made to end of season.

Herring was not reported until the 1st of July, catches varying from poor to good to 24th, when thirty barrels were taken in drag seine. Storms interfered with fishing during August. Catches were very light in September. Reported schooling off Port Mouton on 18th and 22nd. Nothing was done in October.

Lobsters were first reported May 4, good catches being made until the 22nd, when a storm arrived which destroyed the gear and put an end to the fishing for a few days. For the balance of the season the lobster fishing was very poor.

Mackerel.—Nothing was done in this branch until July 26 when they were reported fair. On 27 twenty-five barrels of very large mackerel were taken in trap. Twelve barrels were taken 12th of August and four barrels on 18th, which was about all taken during the month. In September mackerel was scarce, some boats getting about twenty large mackerel about every fourth day. On 12th twenty-five barrels were taken in drag net. Very little was done in October.

Squid when reported were fair.

LOCKEPORT.

Reporter, Mr. J. R. Ruggles :

Alewives first appeared May 5, but only in small quantities. Very little was done in this branch throughout the season.

Codfish.—Nothing was done in this branch until May 27, when good fishing was reported off shore, the small boats returning with very good catches. The June fishing opened fair, and steadily improved to 20th, when cod fishing was reported very good and all the boats doing well. On 15th of July the catch was

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already far in excess of last year. For the balance of the season the cod remained very plentiful. In addition to the total catch it is reported that 322 barrels, or 9,660 gallons of cod oil was extracted.

Haddock.—A few haddock were first taken on July 1, but the catch gradually increased to fair to the end of the season.

Hake.—Although hake was not reported, the total catch shows a slight increase over last year.

Halibut.—The first halibut reported were taken about the middle of July. The fish was very fine, but in small quantities. In August not enough was taken to supply the local demand. Total catch estimated at 5,000 pounds.

Herring struck in June 21, and craft were able to secure enough for bait, sometimes readily and at others with short delay. During July herring appeared only in small schools, fishermen getting from two to three brls. Herring was reported very plentiful on the 1st and 2nd of August, but were poor for the rest of the month, some getting from ten to fifty and others nothing. Very little was done in this branch in September and October. In November herring were reported more plentiful than earlier in the season. The total catch this season is estimated at 1,900 barrels or 380,000 lbs.

Lobsters were first reported on May 1, when 2,000 were taken in this harbour. They continued in fair quantities until the 18th when they fell off and were so scarce that about the 27th a great many of the fishermen were talking of taking up their traps. During May storms destroyed much of the gear, which greatly interfered with this fishery.

No. of live lobsters taken for export 112,500
 No. of lobsters canned.....(1,000 cases) or 48,000 lbs.

In comparison the number of live lobsters exported was far in excess of last year, but a smaller quantity was canned.

CATCH of Fish at Lockeport Station for 1899.

Name of Vessel.	Catch.	Oil.
		Brls.
Springwood.....	624,000	59
Three Bells.....	447,500	39
Alice M. Buden.....	608,000	57
Mary C.....	367,000	31
Alina.....	361,250	38
Helene.....	501,500	40
Laurence.....	310,000	3
Agattia.....	435,000	39
Satellite.....	100,000	.....
Iceida.....	20,000	1
Only Son.....	21,000	.....
Altara.....	45,900	3
Tribby.....	25,500	3
Idith.....	136,000	5
News Boy.....	86,500	.....
Charlie Richardson.....	95,000	4
Boats from Port Hébert to Blue Island.....	500,000	.....
	4,684,150	322

Proportion of Cod.....	4,554,616 lbs.
" Haddock.....	83,311 "
" Hake.....	41,155 "
" Pollock.....	5,068 "
Total.....	4,684,150 "

LUNENBURG.

Reporter, Mr. W. A. Zwicker:

Cod was first reported May 1, the catch being good, but owing to storms nothing was done from this to 13th. From 14th to 30th the fish was plentiful, boats getting full fares, and bankers reporting cod good. During June the catches varied from very plentiful to fair. In July the fishing fell off slightly, owing to quantities of dogfish. The August fishing was about the same as July, owing to bait being scarce for some little time. Storms and dog-fish interfered somewhat with cod-fishing during the months of September and October, but when fishing was carried on the catches were good to fair. The shore catch was considered the best for years. The Labrador catch was a poor one. Throughout the entire season the fishing was very good at North Bay, Sable Island, Western, Middle, Quero and Grand Banks.

Dogfish was not quite as troublesome as in 1898 on the shore fishing grounds, but bankers found them very troublesome on Middle Bank.

Haddock first reported June 2, when good catches were made up to the 7th. From June 8 until September 4, the catch was fair, but fell off considerably from that until the 15th of October. From that date, until November 15, the haddock fishing was good. On the whole this season's catch was the best for a number of years.

Herring.—The first bank herring was taken May 16 in good quantities, but continued so for three days only, poor catches being made from 20th to 31st. From June 1st to 5th, the catch of herring was fair, but nothing was done, owing to scarcity of bait, from that until 20th. From June 21 to July 19, herring was very plentiful in traps, the catch being sold to bankers for bait. From July 20 to the first weeks in November, the catch was fair. This season's catch was below the average.

Lobsters.—The fishermen at this station commenced fishing in this branch on the 2nd of January, and stopped June 30. The catch for January, February and March was poor, the catch being exported to the United States. The April catch was good, May fair, and June poor. About 25 per cent of the larger ones taken in April and May were exported to the United States, the remainder being sold to packers. The season's catch was about an average one.

LUNENBURG BANKERS.—(TRAWLERS), LA HAVE.

	Lbs.		Lbs.
Harold J. Parker.....	560,000	Citizen.....	460,000
Carlraine.....	560,000	Majestic.....	440,000
Puritan.....	300,000	L. B. Currie ..	360,000
Barcelona.....	380,000	Jennie Myrtle ..	445,000
Bessie A.....	365,000	Beluga.....	350,000
Loreana Maud.....	540,000	Emulator.....	353,000
Torraddon.....	320,000	Manal M. Parks ..	475,000
Grace.....	340,000	Carrie.....	470,000
Glyndon.....	500,000	Uruguay.....	530,000
Comrade.....	370,000	Collector.....	465,000
Alma Nelson.....	500,000	Leopold.....	460,000
Millie Mace.....	435,000	Madeira.....	525,000
Alberta.....	375,000	Volunteer.....	470,000
Joseph McGill.....	337,000	Alaska.....	400,000
Minnie J. Hackman.....	450,000	Talmouth.....	372,000
Avis.....	370,000	Carrie.....	475,000
Curfew.....	190,000	Roma.....	500,000
Perfect.....	160,000	Jessie L. Smith ..	300,000

NORTH BAY AND BANKS (HANDLINERS.)

Algoma.....	280,000	Gallant.....	300,000
Klondyke.....	440,000	St. Vincent.....	300,000
Lillian.....	550,000	Cayuga.....	360,000
Lorraine C.....	265,000	Rowena.....	250,000
Cambrian.....	286,000	Fern.....	300,000
Georgina.....	70,000	Mischief.....	120,000
Enterprise.....	240,000	Nightingale.....	190,000
Puma.....	250,000	D. M. Owen.....	240,000
Calla Lily.....	80,000	Yosemite.....	460,000
Brittania.....	260,000	Melbourne.....	160,000

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LABRADOR MEN.

Grenada	90,000	Abana	75,000
Valiant	50,000	Maggie	50,000
Ovando	120,000	Miletus	110,000
Mayflower	70,000	G. A. Smith	10,000
Garland	55,000	Garnet	120,000
Stella E	16,000		

Mackerel.—The first mackerel was reported May 18, one boat getting five. Nothing was reported in this branch until 26th, when boats averaged 100 mackerel. From 25th to 31st, some large mackerel being taken in nets. During June a few large and medium mackerel were taken every day. On July 3, six barrels of small mackerel were taken in traps. Nothing else was done until July 26, when 340 large mackerel were taken in trap. Two barrels were taken on August 5. Very little was done in this line for the balance of the season. This year's catch, on the whole, was not as good as former years.

Squid was plentiful from October 15 to November 10, but very scarce before and after these dates. Bankers report squid plentiful from July 15 to October 10 on all the banks.

LUNENBURG BANKING FLEET.

	Lbs.		Lbs.
O. P. Silver	340,000	Harry Smith	360,000
Dora	370,000	Malabar	430,000
Ermie	375,000	Minnie J. Smith	480,000
Blenheim	420,000	Milo	430,000
Tyler	330,000	St. Helena	420,000
J. C. Schwartz	380,000	Olive Louise	340,000
Lena J. Oxner	500,000	Robert F. Mason	300,000
Athelon	460,000	Panama	440,000
Basil M. Gilbert	450,000	Britannia	410,000
Wisteria	325,000	Gleaner	360,000
Elbro	290,000	Renown	320,000
Atlanta	490,000	Nonpareil	300,000
Lawrence	370,000	Luetta	410,000
Howard Young	505,000	Clara E. Mason	340,000
Bonanza	360,000	J. M. Young	300,000
Clarence Smith	460,000	Viking	390,000
Bona Fider	355,000	Huron	375,000
J. A. Silver	340,000	Werra	360,000
Yucaton	300,000	B. G. Anderson	420,000
Lilla B. Hirtle	528,000	Urania	450,000
Secret	450,000	Gladys B. Smith	520,000
Dictator	390,000	Torato	320,000
E. L. Mauner	440,000	Columbia	380,000
Ontario	370,000	Maggie M. W.	420,000
Argosy	365,000	St. Clair	430,000
J. H. Ernst	400,000	Muriel	540,000
L. E. Young	340,000	Minto	540,000
Arcana	400,000	Aroostook	290,000
B. L. Corkum	320,000	Laura Knock	370,000
Mascot	390,000	Alalia	140,000
Cordova	360,000	Gladys May	390,000

LUNENBURG LABRADOR FLEET.

Jennie May	100,000	Nicanor	110,000
Sadie	180,000	Monarch	90,000

LUNENBURG NORTH BAY FLEET.

Maggie E. Z.	200,000	Rapture ..	140,000
Minnie B. Smith ..	150,000		

MAHONE BAY FISHING SCHOONERS AND THEIR CATCH.

Laura C. Zwicker ..	360,000	Unique	400,000
Genevieve	440,000	Elva M.	250,000
Venus	380,000	C. U. Mader	385,000
Blanche A. Colp ..	410,000	Flo. M. Mader ..	420,000
Roe	300,000	Hattie L. M.	260,000
Daisy Linden	420,000	Energy	400,000
Lawrence	330,000	Mildred	400,000
Snow Queen	275,000		

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MAHONE BAY LABRADOR FLEET.

Nova Zembla	70,000	Irene M. B.	100,000
Senovar	65,000	D. A. Mader	120,000
C. A. Chisholm	45,000	Martello	120,000

MUSQUODOBOIT HARBOUR.

Reporter, Mr. George Rowlings :

Alewives were a total failure this year. No reason can be given for this, as there were many places clear of sawdust and other obstructions, which left a free passage to the lakes.

Cod were first reported May 29, catches being fair until the end of June. Nothing was done during the early part of July, but the catch improved towards the end of the month. Fish was scarce during the balance of the season, storms greatly interfering with the fishermen. Boat fishermen did more and vessels less than last year. On the whole the season's catch shows a slight improvement over last, but fishermen have to go out between one and two miles offshore, the fish keeping well off.

Haddock first reported June 6, fair catches being made to end of month. The last part of July and first half of August, haddock was plentiful, but catches gradually fell off towards the end of the season.

Herring reported June 13 in very small quantities during the month, but slightly improved in July. Very little was done in this branch for the balance of the season. On the whole the catch is much below that of last year.

Lobsters were not so plentiful as last year, there being not more than half the quantity shipped to Boston. A great many of the canners put up large quantities, which they intended to ship, but on account of the low prices in Boston, they did not ship, which makes the season's pack come nearly up to that of last year. About 23 tons were shipped in shell to the United States this season.

Mackerel has been a failure. The catches for the last four or five years has been small, but never so small as this year.

Salmon.—The catch this year was fair.

Trout were fairly plentiful.

Total catch of fish taken in the district, from Dartmouth to Ship Harbour:—

<i>Alewives</i>	66 barrels.
<i>Cod</i>	11,365 quintals.
<i>Haddock</i>	1,145 "
<i>Halibut</i>	26,000 pounds.
<i>Herring</i>	2,106 barrels.
<i>Lobsters</i>	68,866 pounds.
<i>Mackerel</i>	136 barrels.
<i>Pollock</i>	1,325 quintals.
<i>Salmon</i>	2,360 pounds.

PORT LA TOUR.

Reporter, Mr. J. W. Taylor :

The catch in general has been largely in advance of last year, although there has been no very large catches in any department, the work has been very regular.

Alewives.—The first good run was reported April 8 from Barrington. Very little was done at Port La Tour in this department.

Cod.—The season commenced rather dull in this line. The catch during May averaged one quintal per man, but improved towards the end of the month. The fishing was fairly regular in June, and when weather permitted fishermen averaged $1\frac{1}{2}$ quintals per day. The July catch varied from fair to poor. Scarcity of bait

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greatly interfered with the fishing in August. The early part of September was poor in this branch, but improved towards the end of the month. Schooner *Will Carleton* arrived from banks on September 9, with 1,300 quintals cod. Fair catches were made in October. The total catch at this station is estimated at 2,000 quintals, about 40 per cent better than last year.

Haddock were first reported July 1 in small quantities, and with the exception of some fair catches, were considered poor, although the total season's catch is double that of last year.

Herring were first reported June 5 off Cape Negro. The first report from this station was received June 23 when best netter had eighty herring. The July catch was poor. In August herring were very plentiful, but so small that they would not mesh well. On account of scarcity of bait the boats were unable to go out for the greater part of the month. Very little was done in September and a few fair catches were reported in October. The total catch is estimated at 300 barrels.

Lobsters.—The lobster fishery did not employ as many men this year on account of codfish striking in earlier than for several years. Lobsters were first reported May 8, the greater part of which were small. The catch was very poor for the balance of the season, but long before the close season a great many traps were taken up and their owners turned to codfishing. Before the close of the season prices went so high that the fishermen realized more than in former years.

Mackerel.—The mackerel fishing was a failure at this station. The largest catch reported being fifty to a net and that only three times during the entire season.

Squid were poor, and as at other places the fishermen were handicapped on account of scarcity of bait. Clams were, with one or two exceptions, used during the entire season.

PORT MEDWAY.

Reporter, Mr. E. E. Letson

Alewives.—First reported the 2nd of May, the catches being light, but regular during the month.

Cod.—Good appearance of cod was reported on May 8, but none were taken until 24th, when good catches were made. Storms interfered with the fishermen for the greater part of June. On 24th, the schooner *Gladys May* arrived with 600 quintals. From 25th to end of month cod was plentiful but would not take clam bait. The July catch was very regular, and the fishermen made good hauls throughout the month. During August the catch was not so regular, but were more plentiful. On 13th schooner *Myosotis* arrived from Grand Banks with 1,800 quintals. On account of the scarcity of bait, few boats went out in the early part of September. On the 9th fair catches were made and daily improved to the end of the season.

Haddock was not reported until the 20th of June, the catches being light, but regular to the end of July. From the first of August to the end of the season the catch was about the same as reported for cod.

Herring.—Small herring struck in July 11, in immense schools, but they would not mesh. Attempts were made to stop them with capelin seines, but few were taken. Dog-fish struck in on the 24th. A few large herring were taken on the 28th. The catches for the balance of the season were light, only enough being taken to supply bait for a few days.

Lobsters.—The catches throughout the month of May were very regular and fair. The storm of the 21st destroyed a great quantity of gear. United States schooner *Lotaria* dragged her anchor and stranded. Light catches were made during the rest of the season.

Mackerel were only reported three times during the season and then very scarce.

Salmon.—During May the catch varied from fair to poor, very little being done in this branch for the remainder of the season.

Squid was scarce all through the fishing season.

PORT MULGRAVE.

Reporter, Mr. David Murray :

The season of 1899 has been the poorest fishing since 1881. No spring mackerel. Not many summer herring, and fall herring has been a failure. Where we used to get 20 barrels to a boat, we have not got one herring. Some took as low as 100 herring all the season, and others got none. 500 barrels herring would cover the catch from Magdalen Islands to St. Peter's Island. On May 10 Captain Harding of the schooner *Annie D.* reported having sailed through large shoals of mackerel, but no boats in sight.

EAST PUBNICO.

Reporter, Mr. J. A. D'Entremont :

Codfish first reported May 16, fair and continued so up to 20th, when it began to slacken off. From June 5 to July 1, codfish was reported very plentiful. The fish was only fair to 10th of July, but gradually improved week of 18th, afterwards fell back to fair. All the boats were hauled up for the winter on September 12. On the whole the season's catch was a good one, being estimated at 3,045,000 lbs.

Halibut.—The catch was very poor during the season.

Herring.—There was a few herring caught inshore about the last of September, and fair catches were made at Flat and Mud Islands, but the season's catch has been almost a total failure.

Lobsters were reported for the first time May 6. The catch was poor and remained so during the whole season.

Mackerel.—The first report of mackerel was received May 18, when 100 were taken in nets. Nothing was done from that date until 25th when fair catches were made to 31st. Trap had 15 brls. May 26. From 1st to 23rd June the mackerel fishing was fair. Nothing was done in this branch after that date. The total catch is considered a poor one.

SALMON RIVER.

Reporter, Mr. Thomas O'Leary :

The lobster fishery is about the only one that is carried on to any extent at this station. After it is over the fishermen pursue the hook and line fishing on a small scale, using clams for bait. The lobster fishery has been very good this season at Port Dufferin. The quantity to each boat has not been as large as last year but prices were much better.

There is no net fishing carried on here, except by the light keeper at Beaver Island, who has taken about 3 barrels during the season.

SAND POINT.

Reporter, Mr. R. R. A. Bolman :

Alewives were taken in light quantities from May 12 to June 1, about one-half of which were used fresh for bait by the shallops. The balance were salted and smoked for home consumption.

Codfish was fair 10 to 15 miles off shore during May, and improved during the months of June, July, August and the middle of September, when the squid left the grounds. Codfishing was exceedingly poor, all the season, inside of 8 miles from the shore. Dog-fish being very plentiful drove the fish off shore. About three-quarters of the boat-fishermen at this port closed up their fish stages and went to the United States. One shallop only fished from this port, hence the total catch of shore cod will not exceed 500 quintals. Mr. Bolman says:—'The exodus of young and middle-aged fishermen from this harbour and headlands to the United States, is three-fold that

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known at any time for the past 30 years. Boats can be seen all along the shore hauled up and housed over, and their owners gone in American vessels.

The Bank Quero fleet have done well with handlines and clam bait. The five vessels composing said fleet returned on their second trips with decks to the water. Total catch 9,500 quintals, with 100 men.

Haddock were poor during the whole season. Total catch 30 quintals.

Herring.—A small school struck in May 29. The latter part of August another school struck in. Total catch, 375 barrels, 300 of which were salted and the balance used fresh for bait. The first school were very small and fat, the last one large and poor.

Lobsters.—Fishing commenced on February 1. The catch was light during the month owing to bad weather. During March the fishing improved both in quantity and quality. The April catch was fair up to the middle of May, when it slacked off rapidly. On May 13 an American lobster smack loaded 9,000 large live lobsters, it being one week's catch from this place. The season's catch was below that of 1898, but prices ranged higher and the net proceeds were better than last year. The catch this season was about one-half large.

Mackerel appeared at intervals during September. The total catch was 12 barrels, all of which were salted for market.

Salmon was first reported on May 19 in fair quantities, and continued so until July 10.

Squid was fair inshore and plentiful off-shore all the season up to September.

SPRY BAY.

Reporter, Mr. J. E. Conrad :

Cod.—The first cod were reported on May 12, boats taking from fifty to sixty each, but towards the end of the month the catch fell off, some boats only getting 10. The June and July catch varied from fair to poor, up to July 29 when dog-fish struck in. During the balance of the season the catch, with a few exceptions, was middling. As at other places storms and dog-fish greatly interfered with the fishing, the latter being particularly annoying.

Haddock.—Very little was done in this branch throughout the entire season, boats getting from five to twenty quintals each.

Herring first struck in about May 11, but very few were taken until June 4, when they became plentiful, and remained so for the better part of the month. The catch during the month of July and August was poor. The fishing slightly improved during September. Very little was done in October. The catch on the whole is better than for some years past.

Lobsters were first reported May 2, the catch being poor and continued so for the entire season.

Mackerel were first reported schooling at Pope's Head. First reported at this station being taken on May 4. Schools were also reported near this place on June 3, but very few were captured. The balance of the season was poor in this branch. Ten barrels represents the entire catch for this station for the season.

Pollock.—Total catch averages one to two quintals to a boat.

Salmon was poor throughout the season.

Squid when reported was poor, although they were very destructive to nets. Squid was used for bait when obtainable, but clams and herring was chiefly used.

WHITEHEAD.

Reporter, Mr. C. C. Feltmate :

Alewives were taken in light catches from May 31 and only lasted a few days. Total catch estimated at 75 barrels.

Codfish were first reported May 25 very plentiful. From June 1 to July 6 the catch was very poor, owing somewhat to bad weather and scarcity of bait. The

catch improved about the middle of July, but gradually decreased. The August catch was practically nothing; dogfish, bad weather and scarcity of bait, being the cause. During September the catch varied from fair to poor. 1,300 quintals is the estimated catch for this season.

Haddock was poor during the whole season. First reported May 24. Total catch 450 quintals, equal to about half of last year's catch.

Herring struck in May 24. The fishing was very poor during the months of May and June. From 1st to 15th July the catch was fair, poor remainder of month. No herring caught during the month of August, owing to bad weather, dog-fish and scarcity of bait. September and October catches were poor. On the whole the total catch shows a slight improvement over last year, 500 barrels being taken this season.

Lobsters were first reported May 2, catches varying from fair to light to the end of the season. Total season's pack estimated at 2,000 cases, about 400 cases less than last year.

Mackerel were reported schooling on May 25. On 29th of that month 3,000 were taken in trap. The month of June opened with 2,000 mackerel in trap, which were shipped fresh. From that to 19th very few were taken. On 19th, 40 barrels were in trap, which were also shipped fresh. No mackerel were taken during the balance of the season. Total catch 100 barrels.

Pollock were taken in fair quantities off and on during the season, a great many being taken in traps. Total catch estimated at 300 quintals.

Squid.—With one or two exceptions, bait was very scarce the whole season.

WOOD'S HARBOUR.

Reporter, Mr. W. L. Crowell :

Cod was first reported June 13 and fair catches were made from that date to July 8, after which none was reported. The season's catch was very light owing to the fishermen being unable to secure bait.

Herring were taken in light catches the last part of September, but after that never came inshore. There was not enough taken to supply the fishermen with bait. Large quantities were reported schooling outside of the harbour, but nothing was done. The total catch is below that of last year.

Lobsters were taken in fair quantities all through the month of January. Owing to bad weather very little was done in February, but in March some very good catches were made. The best fishing was done from 1st to 15th April after which light catches were made up to the end of the season. The catch is a little below last year's.

Mackerel were first taken about May 10 and fair catches were made to about the middle of June, after which none were captured. The catch was an average one.

Tusket River would be about as follows :—

Salmon, fresh, 11,000 lbs., mostly exported.

Trout	"	8,000	"	"
Smelts	"	15,000	"	"
Frost fish	"	10,000	"	local use and lobster bait.
Shad	"	60	brls.,	different ways.
Eels	"	40	"	mostly exported.
Alewives	"	2,800	"	about half salted, balance fresh bait.

Salmon River fisheries :—

Salmon, fresh,	1,000	lbs.,	mostly	exported.
Trout	"	1,000	"	different ways.
Smelts	"	1,500	"	about half exported.
Frost fish	"	1,200	"	local use.
Eels	"	20	brls.,	mostly exported.
Alewives,	"	400	"	mostly fresh bait.

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Eel Brook River fisheries :

Alewives, fresh,	250 brls.,	mostly fresh bait.
Eels	120 "	local use.
Trout	400 "	different ways.
Smelts	1,500 lbs.,	exported.
Silver hake	2,000 "	home use.

YARMOUTH.

Reporter, Mr. F. L. Hatfield :

Alewives were first reported May 1, catches being fair until 31st.

Cod were reported fair on May 12, catches remaining so until 17th when cod became very plentiful for one day only, after which it dropped back to fair. Very little was done in June until 22nd, after which date cod was very plentiful up to the end of the month. With the exception of one day, codfishing was very dull in July. Catches for the balance of the season were very irregular, owing to storms and scarcity of bait.

Haddock was about the same as cod throughout the season.

Halibut.—Fair but irregular catches were made during May and June.

Herring was poor all through the season.

Lobsters were reported May 1 when good catches were made, but decreased during the second week. Fair but irregular fishing was reported to end of month. Very little was for rest of season. During the past season the following quantities of live lobsters have been shipped to the United States from this port:—

1899.	Crates.	Value.
January	2,385	\$34,971
February	1,176	16,793
March.....	1,468	27,350
April.....	4,847	64,850
May	3,301	32,131
June	1,404	17,730
July.....	324	4,852
	<hr/>	<hr/>
	14,905	\$198,677

The following are the shipments of canned lobsters of 1899 pack:—

1899	Lbs.	Value.
January	10,956	\$ 1,893
February	24,198	4,454
March.....	9,900	1,640
April.....	53,300	9,435
May.....	348,115	50,216
June	156,650	23,229
July	68,750	13,364
August	3,100	620
September.....	1,200	300
	<hr/>	<hr/>
	676,169	\$105,151

Mackerel were first taken May 8, one trap having one dozen large fish. During the remainder of the month, the various traps in this district caught from one to one hundred and eighty barrels. The first fish taken by nets were reported on 18th, small catches being made, with exception of 29th to 31st, when mackerel was very plentiful in nets. During June traps varied from one to eighty

barrels. Net fishing was good early in the month. Traps were taken up on July 1. *Salmon* when reported were fair.

Shad first reported May 4 in fair quantities, but catches were poor and irregular during May and June.

Trout were reported during May, fair and good, but very irregular. Nothing afterwards.

WEST ARICHAT.

Reporter, C. P. LeLacheur :

Alewives were again a failure this year, not more than fifty barrels being taken.

Cod struck in about the last of May and light catches were made, up to the middle of June, when occasionally fair hauls were made up to the end of the month. During the first part of July the catch was variable, but improved towards end of that month, while the herring were on the coast. The fishing during August and September was poor. Windy weather and scarcity of bait in September and part of October greatly interfered with the work. The total catch this year is considerably below the average. This may be attributed to the unusual scarcity of bait this season. The prices, however, were better than last year, which to a certain extent will make up for shortage of catch.

Haddock were first reported May 30, and small catches were made pretty regularly up to June 25. Very few were taken during the remainder of the season. The catch varies but slightly from last year; this season's catch being smaller than usual.

Herring were first taken about June 15, when good catches of medium sized fish were made close inshore. Some good hauls of large fat fish were again made from 26th to 28th of that month, the catch ranging from three to five barrels per boat daily. The school then left, and did not appear again until July 18, when for a couple of nights, some of the fishermen did fairly well. From that until the close of the season the fishing was poor. The usual 'August run' did not put in an appearance this year, consequently the total catch is not nearly as large as last year.

Lobsters.—Fishing commenced April 25, and closed about the middle of June. The fishing was poor all through the season. The factory closed on June 24 on account of scarcity of lobsters. The catch is steadily diminishing each year and the indications are that this once valuable industry will soon have passed away. Were it not for the very high prices paid this season, some of the fishermen would have barely paid expenses. The greater portion of the lobsters caught here were canned.

Mackerel.—A few of these fish made their appearance here 1st of June, but only a small number were taken. The catch this year was a failure.

Bait.—The fishermen of this place have not got into the way of importing herring for bait, but depend entirely on sculpine and flatfish, caught along the water's edge with spears or fished with hook and line. Therefore, unless the weather is favourable for catching these fish—a calm, clear water being necessary—their traps are sometimes very poorly baited.

ARICHAT.]

Reporter, Mr. E. P. Flynn :

Alewives, which some years ago were fairly plentiful seem to have abandoned our shores. Our reporter says:—'This I attribute, in a great measure, to the want of proper protection of the brooks leading into our lakes, where these fish resorted for the purpose of spawning.'

Cod were first taken here May 15, in very light quantities, and of an inferior quality. During the balance of the season the catch varied from fair to poor. The season's catch has been a poor one compared with other years. The prices were

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very much higher than they have been for some years past. The short catch can be attributed to stormy weather and scarcity of bait.

Haddock.—The same may be said of haddock as of cod.

Herring first struck in about May 9, but nothing was done during that month. Another school struck these shores on June 20, and fair catches were made. The July catch was very good to the end of month, but gradually fell off. Nothing was done in August, and very little in September and October.

Lobsters.—The first lobsters taken April 14, and only in fair quantities. The factory here continued packing from the beginning of the season, until the last of June, when, owing to the scarcity of fish it closed. The quantity and quality were about the same as former years.

Mackerel struck in about May 25, but very few were caught. The mackerel fishery was practically a failure. Our reporter attributes the scarcity of this fish of late to the use of purse seines, which in following the mackerel drive them from the coast.

Bait was scarce during the better part of the season.

CHETICAMP.

Reporter, Mr. Chas. E. AuCoin :

The total number of boats registered this year is 21. Two new ones being registered this season.

The fisheries in general, as usual, have been greatly hindered by the inclemency of the weather, and a superabundance of that execrable dog-fish, although the progress is not by far to be complained at, save the mackerel fishery. The latter has entirely failed this year, but no cause whatsoever can be assigned to its failure. It is probable that large schools of whales and sea-hogs, so called, have been detrimental to the success of the fishermen. These have lashed the waters of the Gulf of St. Lawrence, the greater part of the month of June and, no doubt, have caused some havoc among other schools of fish.

Codfish was first reported May 8, and in small quantities, and continued so for the balance of the month. A slight improvement was noticeable during the month of June. The July catch varied from fair to good. During the balance of the season the catch varied from good to poor. A general deterioration is noticeable in the size of cod taken at present. Between 40 and 50 barrels of cod and dog-fish oil has been exported from this station.

Haddock were first reported May 15. The catches throughout the season were on the whole only fair.

Hake appeared May 19, but with the exception of a few fair catches in September, the season's work was poor. The total catch of cod, haddock and hake was 9,000 quintals. During the last few years hake has gone on a remarkable decline.

Halibut was first reported July 28. The whole season's catch was very small.

Herring was first reported May 2. Small thin herring have been captured in nets in the spring as usual; but in no large quantities. The herring, for some unaccountable reason, left these shores and were not reported the balance of the season. The most of the herring landed here comes from the shores of the Magdalen Islands, where a few of the largest boats go in the early spring. The total catch of herring, including what was brought from the Magdalen Islands, was 300 barrels.

Lobsters first report May 1 in fair quantities and varied from that to good during the balance of the season. The lobster catch was quite favourable to the fishermen at this station this year, but the quality of the fish seems to be deepening into inferiority every year.

Mackerel first appeared on the scene about the July 17, when a few were taken at Pleasant Bay. The quantity captured by each individual boat was small, although the aggregate from the whole fleet would still make up a good figure. Total catch 200 barrels.

Salmon reported first May 8. The capture of salmon has had a poor show this year. Owing to strict regulations by Government in connection with the setting

of nets, especially in Little River; and the vigilance tendered by the overseer and guardians, against the intrepid means of illegal fishing. Total catch for the season is estimated at 4,000 lbs.

Squid were fairly plentiful during the season.

D'ESCOUSSE.

Reporter, Mr. R. F. Burke :

Codfish.—Nothing was done in this branch on account of stormy weather, until May 24. The catch when reported was very poor and continued so to the end of June, with the exception of a few days at the end of month, when fair catches were made. Nothing was done during the balance of the season. The number of boats engaged in the fishing at this station is 25.

The total catch for the season is as follows :—

Schooner <i>Jaquis</i>	900 quintals.
“ <i>Ginde</i>	600 “
“ <i>Victoria</i>	400 “
“ <i>Jubilee</i>	600 “
“ <i>Nova Stella</i>	900 “
“ <i>Ariquiba</i>	500 “
	3,900 “

Hake was first reported May 15 very scarce, and continued so to the end of the season.

Herring struck in May 8, but the catches were very poor during the month, and the first half of June. From the 15th to 30th of that month the fishermen did fairly well. Reported fair for a few days only in July. After that nothing was done.

Lobsters were reported in fair quantities May 3 and continued so for the balance of the season. A great quantity of gear was destroyed by storms in the early part of the year.

Mackerel were not reported until May 24, when some fair catches were made. The early part of June a few good hauls were taken, but nothing was done after that, with the exception of one day in August. The spring catch was better than last year.

GABARUS.

Reporter, Mr. R. McLean :

Caplin was very plentiful throughout the month of June.

Codfish.—The early part of May was occupied by the fishermen in getting ready for fishing, and the first report for cod was received May 25, boats averaging one quintal, which were principally caught in deep water. The June and July catch was an improvement on the previous month. Catches varied from two to three and a-half quintals per boat. The fish was very large. The August codfishing was very good, and of fine quality. On 21st boats brought in from 1,600 to 2,100 lbs. each. Cod was reported very plentiful in September and October, boats getting from three to seven quintals of fine large fish. The cod taken were larger and better than any caught for the last 18 years, being all first quality. The total catch this year is estimated at 2 500 quintals.

Haddock.—Fair catches were reported from June 5, and continued so until the middle of August, after which date haddock fell off considerably. Total catch estimated at 200 quintals.

Hake were first reported August 11, in small quantities, and light catches were made off and on during the balance of the season.

Herring first struck in June 9, but only light catches were made for the balance of the month. The first herring were taken in deep water. During the

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first two weeks of July only enough herring was taken to supply the fishermen with bait. From the 15th, the catch greatly improved, varying from 600 to 3,000 large fish. Herring fell off considerably in August. Nothing was done in this branch during August and September. None of the fish taken were of second quality, being all merchantable. The catch is considered better than for the last 18 years. Total catch 539 barrels. Herring used for home consumption and bait not included.

Lobsters.—A great deal of injury was done, and a great many days were lost to the fishermen on account of storms, fog and heavy seas. The first lobsters were taken May 9, 500 being captured. Fair catches were made up to the end of the season.

Mackerel.—The first mackerel captured in this district were taken May 25, some boats getting from 50 to 100. On the 29th, the catch averaged two barrels. The catch for the early part of June was fair, but towards the end of the month it gradually dropped off, and nothing was done in this branch for the balance of the season. Large schools of very small mackerel appeared in August, but were only fit for bait. The season's catch is considered a light one, being but 80 barrels.

Squid appeared about June 23. With the exception of a few herring, mackerel and caplin, squid supplied all the bait used at this station. Clams were not used.

HAWKESBURY.

Reporter, Mr. J. C. Bourinot :

Alewives when reported in May were good at River Inhabitants and Port Malcolm. Very scarce in June.

Cod and *Haddock* fisheries are said to be a failure.

Herring.—Nothing was done in this branch at Hawkesbury, with the exception of one day in July, when herring was plentiful. Were also good at Basin River Inhabitants and Port Malcolm, between 22nd and 27th June.

Lobsters were reported May 8 in fair quantities, but were only taken once during the month at this station. Fair catches were made throughout May at Strait of Canso and Bear Island. Light catches were made at Hawkesbury during June.

Mackerel reported fair at Port Malcolm and Basin River Inhabitants May 30. Scarce for rest of season.

Pollock were very plentiful for the greater part of the season.

INGONISH.

Reporter, Mr. J. M. Burke :

Cod.—The fishing season opened up about a fortnight earlier than usual this year. Codfish were taken the first week of May, and continued fairly plentiful up to the middle of July. From that to the end of the month fishing was poor. Codfish was plentiful in August, boats getting from one to four quintals. August was the best month of the season in this branch. During the balance of the season, fishing was fair. On the whole, the catch is fully one-half better than for the past three years, prices being from \$1 to \$1.25 per quintal higher, hence the year has been an extraordinary one in this branch of the fisheries.

Haddock were first reported May 13, on trawls in shoal water, and the catch varied from good to poor, for about three weeks, when the school was over. The catch was about the same per boat, but as there were more boats engaged in this branch, this spring, the general catch was about one-third more.

Herring.—The spring run struck in the last week of April, in small quantities and were used entirely for bait for cod and lobster fishing. There was no July or summer herring at this station this season.

Lobsters were taken the last week in April, and a number of factories commenced packing about May 1, all being in operation from the second week in May. The catch was fair during the first five weeks, gradually decreasing towards the end of the season, in fact became so scarce that some packers closed their factories on or about July 15. The season's catch was an average one, good prices being obtained.

Mackerel appeared about May 20, but in such small quantities that there was not enough taken to supply bait for codfishing. A few were taken in shore-fast nets along in July and August. None were taken after September 1.

Salmon were first taken the last week of May. The season's catch was an average one, but some localities did not do so well owing to their position with the prevailing winds. Fair prices were obtained for the early catch, and what could be sold fresh brought fair value throughout the season.

Squid struck in between 1st and 10th July, and remained fairly plentiful, although irregular at times all the season up to about November 15.

The season has been a very remunerative one to the fishermen and dealers as well, at this station. The increased catch of cod and haddock with increased prices obtained puts the year's work in advance 50 per cent of any season for at least five years past.

L'ARDOISE.

Reporter, Mr. John McIsaac :

Codfish were first reported May 24, but in small quantities, until July 28, when a slight improvement was noticeable. The fishing days being very few, the catch on the whole was poor. The cod taken during the season was taken in deep water. Mr. McIsaac says:—'The cod and haddock fisheries are a thing of the past in this bay, only a few small boats attending to it.' The boats for Scattarie and Lingan have all done well, as also did four small boats at Eastern Bank.

Haddock.—The same could be said of haddock, as for cod. First reported May 24, scarce, and continued so until the close of the season. Haddock was formerly best for the poor classes as it used to be very plentiful and close inshore, but now very few are taken.

Herring.—The catch of fat herring was very good, both in quantity and quality. First reported May 24, very scarce and remained so until July 1, when it improved. Unfortunately a great many fishermen started for Scattarie too soon, expecting to meet the herring there. They struck in here better than any season for the past ten years. The fishermen who stayed here did exceptionally well.

Lobsters first made their appearance towards the end of April. Reported in fair catches during the season. On the whole the catch was not as good as last year, but owing to the high prices paid, the fishermen have done very well financially. The bulk of the catch was sold to factories.

Mackerel struck in as usual not in large quantities. First reported May 27. That and getting good prices brought the average higher than last year. The bulk of the catch prepared for the Halifax market, and the balance sold to bankers.

LOUISBURG.

Reporter, C. V. LaVatte :

Codfish first appeared the last of May, and were plentiful during the entire season. This branch of the fisheries was greatly handicapped by scarcity of bait and dog-fish. The total catch was about 50 per cent better than last year.

Haddock were first reported June 3 and plentiful and varied for that month from good to fair. With the exception of a few days in September nothing more was done in this line. The season's catch was about double that of last year.

Herring struck in May 1, and were scarce up to end of June. A slight improvement was noticeable in July, but after that the catch was very poor. The season's catch was about 30 per cent below that of other years.

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Lobsters were first taken May 19 and continued fair up to the time the season closed. A great number of traps were destroyed by storms, and much time was lost in repairing and replacing them. The season's catch was considered an average one.

Mackerel first struck in about the last of May. The June fishing was poor. During July Louisburg harbour was alive with small mackerel, smaller than tinkers, and they took hook freely. In August swarms of tinkers struck in and plenty were taken, but they were too small to salt and made fairly good bait. The mackerel voyages were not as good as last year, being only about one-half.

Squid were very scarce in June and July, but plentiful in August, and for the balance of the season was only obtainable on certain days.

'The dog-fish question,' our reporter says, 'is a very serious one to our fishermen, as they prevent them from catching squid for bait and also hinder the catching of codfish. If out fishermen had cold storage facilities, so that they could take care of bait, days when fish is abundant, the catch would be increased at least 25 per cent. On the whole our fishermen are in a better position this year than they have been for some years past.'

MABOU.

Reporter, *Mr. Lewis McKeen* :

This year's returns show a marked decrease, probably 50 per cent in the catch of line fish (cod, hake and haddock), compared with the season of 1898.

Alewives reported for a few days only at the latter part of May, but in very small quantities.

Codfish appeared about May 25. Throughout June and July fresh bait was scarce, and as most of the fishermen were prosecuting the lobster fishery, very little attention was paid to line fishing. During the early part of August catches varied from poor to fair, but improved after the 10th. About September 1 dog-fish struck in and were found very troublesome. A number of the fishermen became discouraged and gave up fishing to work on the railroad. Since November dog-fish have not been so troublesome, but codfish have been scattered over the fishing grounds, consequently the catch has been small.

Herring.—A fair catch of spring herring was made in May. These fish, however, are used chiefly for lobster and cod bait, and are not of much commercial value. The July catch of fat herring was a failure. The scarcity of this fish greatly affected the catch of line fish in this district. The September catch was also much below the average.

Lobsters appeared about April 29, or immediately after the opening of navigation. Good catches were made during the first week, but at the end of that time a heavy northerly gale drove the ice inshore, and destroyed a large number of traps and herring nets. Throughout May, however, good catches were made. During the remainder of the season the catch was fair. The total pack was estimated in excess of 1898.

Mackerel.—This industry has practically become a thing of the past in this district. The very small catch of this season were used for home consumption.

Salmon.—The catch of salmon has been decreasing in this district during the last eight or ten years, until this season it was a complete failure. The few that were taken were disposed of for home consumption.

MARGAREE.

Reporter, *Mr. M. A. Dunn* :

Alewives.—The catch of these fish this season is almost a total failure. First reported May 10, and few were taken up to June 5. After that date nothing was reported.

Codfish were first reported taken with trawls of May 15, and with hand lines May 20. With trawls fair fishing was reported up to the end of June, but the catches with hand lines during this time was light. The fishing was good during

the months of July and August, particularly the week of August 26 which was considered the best of the season. Cod was reported plentiful during the remainder of the season, but could not be caught, owing to stormy weather, dog-fish and scarcity of bait. The catch for the whole season is estimated to be a little above the average year's catch.

Haddock movements were similar to cod, but catch much less than last year.

Hoke were not reported until July 15 and in very small quantities, and remained scarce throughout the whole season with the exception of a few days towards the close, when fair catches were made.

Herring struck the coast April 28 and good catches were taken for a few days. On May 4 a storm destroyed a great many of the nets, after that the catch was only fair. On July 29 a large school of herring was reported off the coast, but very few were taken on account of the abundance of dog-fish, which prevented the nets from fishing. The first week in August, fishing was fair. During the balance of the season, very little was done. On the whole the season's catch was considered a failure.

Lobsters.—Fishing commenced May 8 and continued good until June 15, when it began to decrease gradually to the end of the season. The catch was considered an average one.

Salmon.—First taken in river June 1, and outside June 9. The catch continued light until June 15. From that until July 15 the catch was good. For the balance of the season fishing in this branch was light. Total catch was not up to last year.

Squid struck in about July 25, and were the chief source of bait during the season.

Dog-fish put in an appearance about July 20, and continued almost a constant source of annoyance during the whole of the season. This destructive fish has caused great loss to the fishing industry of this port, and especially in the lines of herring and codfish.

MEAT COVE.

Reporter, Alex. B. McDonald :

Codfish were very plentiful throughout the season, but there being no certain market for cod, not many were taken.

Lobsters.—Fishing was above the average although the season was a little late opening, on account of ice and heavy wind. As there was no gales to damage gear, lobsters were plentiful and of good size.

Mackerel fishing was a failure, only very few catches being made early in the season. Mature fish very scarce, only few being seen schooling. Tinker mackerel were plentiful, but would not take the hook.

The fishermen here are at a great disadvantage in not having a merchant buying fish, in the community, and having no regular steam communication with the outside world.

The only chance they have of selling their fish, after the middle of August, is the uncertain arrival of a trading schooner.

Net fishing is going out of practice altogether.

The dogfish are so plentiful, that they destroy any nets that are set, hence very few herring are caught.

Squid were plentiful at this station throughout the season.

PETIT-DE-GRAT.

Reporter, Mr. Peter T. Fougère :

Alewives.—None were taken here this season.

Codfish made their appearance about the 18th of May. They were not in large quantities as in former years, but still the catch was about the same as last year. The total catch is estimated at 1,200 cwt. The price has increased \$1 over last year, which is equal to 200 cwt. over last year. In addition to the tota

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catch it is reported that 1,700 gallons of oil was extracted from cod, 1,400 of which was shipped to Halifax and the balance kept by the fishermen for their nets and other purposes.

Dog-fish.—This fish made its appearance in July, and has been a source of worry to fishermen throughout the season. The estimated loss caused by them to nets, &c., is about \$1,000.

Haddock were first taken about May 10. The catch this year is about 1,800 cwt. smaller than last season's. The fishermen assign the cause of the smallness of the catch to easterly winds, and some kind of small bait which took the haddock away with them. The prices were very good here, being \$2.50 to \$3 per cwt.

Herring struck in the 30th of May. The catch was a light one throughout the whole season. The total catch this year only amounted to 440 barrels, being about 960 barrels less than last season. The fishermen lost much by giving their time to netting. The price paid was the same as usual, \$3.50.

Lobsters.—This was the very first fish taken in these parts, being captured about 12th of April, very good catches being made up to near the middle of May. From that on the lobsters were very scarce. Some of the fishermen hauled up their traps and got ready for haddock and codfishing, although they would have done much better had they kept at lobstering 1,200 cases were put up by the canneries here, and about 50,000 live lobsters were shipped to Upper Canada and the United States. Although the catch was smaller, better prices were paid, and on the whole the fishermen have done as well as heretofore.

Mackerel.—This fish is evidently a thing of the past in this locality. There were four vessels fitted out here to go mackerel fishing at the Magdalen Islands, two of these did fairly well, the largest sold its catch for \$1,400, and the other for \$800. The other two did nothing. 120 barrels of mackerel was all that was brought into Petit-de-Grat. No fall mackerel were caught here.

Pollock came in at the same time as the haddock. About 300 cwt. were taken. The price brought was the same as haddock.

Salmon.—This delicious fish came about the 20th of June, but not in such large quantities as last year. The amount taken was just about enough to supply the demand for fresh salmon. The value of the catch was about \$250 less than last season.

Squid.—The late arrival of squid put the fishermen in this locality back very much for want of bait. Squid has been very poor throughout the season. The first squid were captured about the last of July.

PORT HOOD.

Reporter, Mr. E. D. Tremaine :

Codfish were first caught this season May 16, the catch throughout being light. *Dog-fish* arrived on the grounds August 31 and interfered with all kinds of fishing during the season.

Haddock were first reported June 5 in fair quantities, and continued so until the arrival of the *dog-fish*, when the catches were very poor.

Hake fishing was also practically ruined by *dog-fish*. *Hake* was first taken June 19. Up to the arrival of *dog-fish* the catch was fair, afterwards this branch of the fishing industry was almost abandoned.

Herring were first reported May 2 in fair quantities, and continued so during the remainder of the month. During June, July and August the catch was poor. From 1st to 14th September the catch gradually improved. Reported very plentiful on 14th. Remainder of month and October few were taken. On account of *dog-fish* many fishermen did not set their nets, not caring to have them cut to pieces.

Lobsters were first taken last week in April, in large quantities until May 6 when much of the gear was destroyed by storms. Afterwards, however, the catch improved, and upon the whole a good season's work was done.

Mackerel fishing was poor the whole season. First reported July 13; 75 barrels of good quality mackerel represent the total catch.

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Squid was fairly plentiful during the season, with two or three very large runs.

ST. ANN'S.

Reporter, Mr. Thos. D. Morrison :

Cod first reported May 13 the catch varying from good to poor during the month. For the balance of the season, cod was regularly poor.

Herring reported May 9 in fair quantities. The fishing in this branch was very poor for the rest of season.

Mackerel.—Practically nothing done in this line.

Salmon first reported May 30. From that date until July 5 the catches were fair. Nothing was done afterwards.

Squid were reported very plentiful between 11th and 20th July, boats jigging from six to eight barrels per day. Several bankers baited here this season.

ST. PETER'S.

Reporter, H. D. Urquhart :

Alewives were very scarce. About the 1st of June a few were caught, the highest catch being not over a barrel.

Codfish and *haddock* were not caught in this bay this season, but the catches made by vessels from this vicinity on the eastern banks and North Bay were exceptionally good.

Herring.—The first run was about June 1. The catches were good, and the run lasted five days. July 20 saw the second run, and August 13, the third, the fish of the later run being exceptionally large. The highest catch was about 15 barrels.

Lobsters.—This branch of the fishing industry opened about the 20th of April. The May catch was fair, but fell off towards the end of the month. The fishing varied during June from fair to poor, very little was done for the balance of the season. The number of fishermen who follow this branch are increasing every year. That more were canned is no doubt due to this fact, and not to any increase in the fish.

Mackerel made their first appearance May 28, the fish being extremely large. The highest catch was 13 barrels. The second run came on the 10th of July, number three, the highest catch being three barrels. Towards the latter part of the month, the bay was alive with small mackerel known as tinkers, the largest being about 10 inches long.

Salmon fishing can hardly be said to be carried on in this bay, the catches made this season being very light.

PRINCE EDWARD ISLAND.

ALBERTON.

Reporter, Mr. J. P. Brennan :

Alewives were reported but twice during the season, and in very small quantities.

Cod.—The codfishing did not start until the 30th of May, owing to ice being still in the bay, and the prevalence of storms. Cod was fair during June at Alberton, and for a few days were reported plentiful at Waterford and Sea Cow Pond. The catch was good for the early part of July, but slackened considerably towards the end. During the balance of the season fish was very scarce at this station, but reported fair at times at Cape North and Black Marsh. During the storm of September 6, two *Caraquet* boats were lost at Alberton, seven men being drowned.

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Haddock were reported June 13 in fair quantities, but after that date fishing was poor in this branch.

Hake.—The first hake were taken June 21, fair but irregular catches being made during the season.

Herring struck in on 6th of May, and were reported very plentiful at Alberton and Tignish for two days only, when they fell off, nothing being done in this line from May 31 to August 15, when herring reappeared, but in small quantities. A large number of nets were destroyed by the storm of June 22.

Lobsters were first taken May 6, in large quantities. Plentiful at North Cape and Tignish. No fishing was done from 14th to 25th May. The catch for June opened with lobsters reported very plentiful, but the catch greatly fell off during the month. For the balance of the season the catch varied from fair to poor.

Mackerel not reported until June 19, poor catches being made throughout the entire season.

BLOOMFIELD OR MIMINEGASH.

Reporter Mr. John Doyle :

Codfish.—On account of the ice not leaving the coast, the first report was received May 26. Fair catches were made during May and June. The fishing gradually decreased in July. Nothing was done in this branch during the month of August and the first three weeks of September. The balance of the season's catch was fair. On account of the scarcity of bait, the catch was about the same as last year.

Hake struck in on July 8 and fair catches were made up to the last week in September, after which the fishing fell off. Nothing was done in October. The total catch for the season was equal to last year.

Herring struck in May 12, and were reported plentiful from Cape Wolfe to Cape Gage. They only remained for about seven days during the month. No other school was seen for the balance of the season. There was not enough herring taken for bait.

Lobsters were reported May 11 which was later than usual. The catch was from fair to poor until the 20th, after which they fell off and only a few fair catches were made during the balance of the season.

Mackerel was first reported May 20. Fishing with hook and line may be called a failure. A few mackerel were taken in nets throughout the season, but in very small quantities. There was not a school of mackerel seen on this part of the coast at any time during the season.

Fish of all kinds being in great demand, fishermen say they have done as well this season as they have done for the last few.

GEORGETOWN.

Reporter, Mr. Charles Owen :

Codfish first reported May 19 in small quantities, but gradually improved towards the end of the month. Fair catches were made during June. The July catch at this station was poor. Cod reported very plentiful on 3rd, S.E. of Boughtor Island, and on 22nd, off Murray Harbour. The catch for August and September was fair. October poor.

Hake has been plentiful throughout the season, and good catches have been made on the fishing banks extending from Pictou Island to East Point. First reported June 19.

Herring made their appearance April 12, when only a few were netted. On the 24th, one barrel per net was caught. From 1st to 30th May there was a large body in this vicinity, and during that month a number of bankers were supplied with bait, also a quantity secured by lobster fishermen for their traps. A large quantity was caught and loaded on small schooners in bulk, these cargoes being disposed of to the several lobster factories along the coast. On or about June 1, the school moved out of the bays and rivers, and small catches were made some distance off

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shore. During September herring was netted off Pictou Island, and also from Wood Island to Cape Bear. In October, fair catches were reported, having been taken off Souris and Grand River.

Lobster fishing commenced on or about April 20, and fair to good catches were made up to May 15; from that to June 15 this branch slackened off so much, that the fishermen moved their traps into shallow water, where an improvement in the catch was observed for some days. During the balance of the season the catch per boat was poor. Owing to the advance in value of lobsters, the amount realized is equal to that of former years.

Mackerel fishing in this vicinity has been a failure this year. Very few have been taken by hook, and the quantity collected from all sources would not exceed 100 barrels.

Squid with one or two exceptions was fair. Bait could be obtained at Cardigan Bay and Panmuir Island during the early part of the season.

MALPEQUE.

Reporter, Mr. Jas. McNutt :

Cod were first reported May 25 in fair quantities. During the remainder of the season the catch varied from fair to good. This branch was greatly interfered with by stormy weather.

Herring first struck in May 6, and fair catches were made to 20th, after which very little was reported in this branch. Enough was taken during the season to supply the fishermen with bait and for home consumption. One schooner load was sold for bait elsewhere.

Lobster fishing commenced about the 10th of May, and with a few exceptions was reported poor up to 20th when a very severe north-east storm destroyed a great deal of gear, principally those in shallow water. The catch in June varied from fair to poor, and, as in May much gear was destroyed by the storm of June 22. The catch was poor for the balance of the season. The total catch is rated considerably below that of last year, but the prices being higher compensated somewhat for the small quantity.

Mackerel fishing was an entire failure at this station, so far as hooking is concerned. First reported July 6 in poor quantities and continued so for the balance of the season. Some nets were set along the shore, but very few mackerel were taken. The fishermen at this station contend that netting is the great cause of the failure of the mackerel fishery in this district.

NEW BRUNSWICK.

CAMPOBELLO.

Reporter, Mr. Luke Byron :

The catch of all kinds of fish at this station during the season has been fair. At first the fish was very plentiful, and close inshore. The catch was good of almost all kinds of fish, such as cod, hake, haddock, halibut, pollock and herring. Towards the end of the season the fish moved out into deep water, and the catch gradually diminished. All the fish taken here was of a superior quality, especially the herring, which was too large for canning purposes, and as a consequence several factories had to close down. The general opinion is that the sardine business must necessarily reduce the quantity of herring in this locality, if the demand for sardines continues, as the herring are getting scarcer every year.

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ESCUMINAC.

Reporter, Mr. J. J. Keary:

Cod was first reported June 5 in fair quantities, and gradually improved towards the end of the month. For the balance of the season the catch was fair and regular.

Herring struck in May 8 in large schools, and remained very plentiful up to 13th when they left the shore. The season's catch is considered fair.

Lobsters were first taken on May 2 in fair quantities. The catches for the remainder of the season were very poor.

Mackerel.—The catch of mackerel this season was a very poor one. First reported June 24. Drift and set nets were used, nothing being done with hook. Our reporter says:—'That drift nets keep the mackerel out in deep water, thereby hurting hooking.'

Salmon were first reported May 19, from which date, with one or two exceptions, catches were very light.

Shad were first reported May 25 in fair quantities, and remained so to the middle of June, after which date nothing was done in this branch.

GRAND MANAN.

Reporter, Mr. Charles Dixon:

Codfish were not reported until May 17, and the catch to the end of the month was very good. Codfish gradually fell off during June, and with one or two exceptions little or nothing was done in this branch for the remainder of the season. The total catch will not exceed 500 quintals.

Haddock was reported May 17, but not in as large quantities as cod. Very plentiful for the greater part of June, boats getting from 5 to 10 quintals and vessels about 18 quintals daily. The catch varied from very good to poor from July 1 to August 8. Nothing much was done in this branch during the balance of the season. Total catch estimated at 500 quintals.

Hake was first reported on May 18, and the catches throughout the balance of the month were good. Hake was very plentiful at Long Island Bay, all the boats and vessels doing extra well during June. The catch of July was a good one, but fishing was not as steady. Dog-fish made their appearance about the 22nd and greatly bothered the fishermen. Fishing was good the first part of August, but nothing was done in this branch from the 8th to 25th of this month. Hake remained fair for the balance of the season. Hake was reported good during the fishing season from the various places in this district. 4,000 quintals is the total catch. 350 brls. fish oil have been put up at this station.

Halibut appeared May 23, and the catch was a poor one.

Herring were first reported on May 17, but very few were taken. Nothing was done in June. Some were taken in weirs and nets during July, but just about enough to supply bait. Reported fairly good the first and last part of August, boats getting from 2 to 8 brls. per day, and the weirs at Seal Cove and Long Island doing well. Herring were plentiful in all weirs in the island during September. Good netting was reported from Cheney's Island, South Head and Whale Cove, small schooners getting from 25 to 50 barrels per week. Nothing was done in October. About 6,000 half barrels of herring have been put by up the fishermen at this station, and 1,000,000 boxes smoked. The canning factory at North Head put up 1,700 cases of kippered herring, this year. 14,500 brls. small herring were sent to Portland and Lubec for the sardine factories.

Lobsters were reported May 17 owing to storms which destroyed a great quantity of gear. The fishing throughout the season was good. The factory at Grand Harbour canned 205,600 lbs. this season. About 3,000 cwt. fresh lobsters were exported to the United States.

Pollock.—4,500 quintals was the total catch for this station, the largest part of which were taken in the weirs.

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Bait.—The first bait used was gaspereaux, obtained at St. John, N.B., during May and June. Herring was used for the balance of the season.

SHIPPIGAN.

Reporter, Mrs. A. Hammon :

Cod.—Owing to moving ice, boats were unable to start fishing before the end of May. The fishing at first was good to fair, but on account of the blustery weather the boats could not stay out. Towards the fall schooners made immense catches. The total catch was the best for years. The prices being maintained made it a prosperous year for the fishermen in this district. The total catch is estimated at 20,000 quintals, which was dried and shipped in bulk to ports in the Mediterranean, casked for West Indies and Brazil, and a great quantity shipped to local markets.

Herring.—None reported.

Lobsters.—This season's catch was considered fair. First reported May 17. The average catch per boat was about 450. About 7,000 cases were packed on Miscou and these shores this season. Good prices were realized.

Mackerel this year is a failure.

Salmon were very scarce. June was the only month that salmon was reported, but only for a few days, and in fair quantities.

PROVINCE OF QUEBEC.

DOUGLASTOWN.

Reporter, Mr. Chas. Viet :

Cod.—The catch of cod varied throughout the season from fair to poor. Storms greatly interfered with the fishing in this district.

Herring when reported from this station was poor.

Mackerel was not reported.

Squid was obtainable throughout the greater part of the fishing season. On the whole the catch of nearly all kinds of fish was fair.

GRAND RIVER.

Reporter, Mrs. John Carbery :

Capelin was very plentiful, but for a few days only.

Codfish first reported May 24 in fair quantities, and varied from that to poor during the months of June and July. From August 1 to September 15 dog-fish became so numerous and destructive that little or nothing could be done. This was followed by bad weather which made the fall catch a failure. The bank fishermen did fairly well.

Herring first struck in May 1, in very large schools and continued so, with a few exceptions, during the remainder of the month. During June the catch was poor. July and August varied from good to fair. Little fishing was done during the month of September, on account of the abundance of dog-fish, which was very destructive to nets and trawls. From 1st to 10th of October, storms stopped fishing, which was fair from 11th to close of season.

Lobsters first reported May 1, of fair size and very plentiful. During June the catch varied from fair to poor. On the whole the season's catch was fair.

Mackerel was very scarce all through the season.

Salmon were first reported May 26. The whole season's catch was poor, and the size of the fish small.

Smelt.—The catch this season was very good.

Squid were fair from August 1st to the close of the season.

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LONG POINT.

Reporter, Mr. John Vibert :

Cod.—Owing to the number of storms on the coast, cod was not reported until the June 14, and then in very irregular catches. Good catches were made from July 5 to 15. With the exception of one day in August, when cod was reported very plentiful, nothing else was done in this line for the rest of the season.

Launce when reported were very plentiful.

Salmon was only reported three times during the season, when the catches were good.

Magpie.

Capelin appeared in large quantities on June 2, and remained so for the remainder of the month.

Cod first reported May 28, the catches varying from fair to good during the month, and reported very plentiful for the early part of July. Nothing was reported afterwards.

Launce when reported were very plentiful.

Salmon were reported plentiful the last part of June.

Moisie River.

Capelin was reported in fair quantities for only a few days.

Codfish was first reported May 30, but the catches, as far as were reported, were poor, until June 26, when fishing was good for a few days. During the balance of the season, the catches varied from fair to poor. Bad weather interfered greatly with the season's work.

NEWPORT POINT.

Reporter, Mrs. Meunier :

Capelin were first reported on May 31; small catches were made during June.

Cod appeared in very light quantities on May 2, but nothing was done for the remainder of the month owing to strong tides and storms. On 25th cod was reported very good on banks, boats getting from 10 to 25 drafts. The fishing during June was only fair owing to scarcity of bait, and storms. A slight improvement was noticeable in July. For the balance of the season the fishing continued fair. Fishing was reported fairly good on banks throughout the season. The total catch for this station is estimated at 11,000 quintals.

Herring struck in about May 1, and in large quantities, and excellent catches were made for the balance of the month. Throughout June and July the catch was fair but very irregular. This season's catch is 8,000 barrels.

Lobsters.—The season opened very favourably, and good catches were made up to May 5, after which date the catch kept gradually decreasing, little or nothing being done after June 9. The pack this year is slightly in advance of last, being 640 cases.

Salmon when reported was fair. The total catch is estimated at 3,000 lbs.

Squid was used throughout the season. It was scarce in the earlier part, but was more plentiful towards the end of the fishing season.

PASPEBIAC.

Reporter, Miss Ada Beck :

Capelin made their appearance about the June 1, and good catches were made up to the 17th, after which date nothing was reported.

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Cod first reported May 2, in fair quantities. Nothing was done during the balance of the month owing to heavy winds. For the balance of the season the catches varied from good to poor, but were very irregular owing to scarcity of bait and high winds.

Herring struck in May 5, and good catches were made for the greater part of the month. Nothing was done in June and July. Light but irregular catches were made during the balance of the season.

Squid and all other kinds of bait was scarce throughout the season.

PERCÉ.

Reporter, Mr. E. G. Touzeau :

Cod fishing started May 7, but poor catches being made to the end of the month. A slight improvement was noticeable in June and July. Fair catches were made during the balance of the season. On the whole the season's work was only fair, owing more to the unsettled weather than to the scarcity of fish.

Herring struck in about the 2nd of May, and were plentiful up to the end of the month. June, July and August catches varied from very good to poor, being greatly handicapped by scarcity of bait and storms. Nothing was done in September and October. On the whole the catch is considered fair.

Lobsters were good in the early spring, but very scarce towards the latter part of the season.

Squid were plentiful up to the end of May, and greatly varied during the balance of the season.

POINT ST. PETER.

Reporter, Mrs. P. Bond :

Codfish were first reported on on May 22, in light quantities until June 1. From that date until 23rd, they varied from fair to good. Throughout July and August catches were fair to poor, owing to the unfavorable weather and scarcity of bait. During October, up to the closing of the season the catches were very good.

Herring struck in on May 17, and continued plentiful until 22nd, when the catches began to decrease until the close of the season. The herring generally were large and fat.

Lobsters were first reported May 10, and the catches throughout the season were very light.

Mackerel.—There was no mackerel taken in this district this season.

Salmon.—A few light catches were made during June.

Smelt.—Only fair catches were made from 10th to 14th October.

Squid first appeared on July 19, and in small quantities. From August 26 to the end of the season, squid reported very plentiful.

SEVEN ISLANDS.

Reporter, Mr. P. E. Vignault :

Codfish appeared late in June, and in small quantities, but the fishing was fair, when weather permitted, for the balance of the month, but decreased during July and August. September and October fishing was for the most part stopped by stormy weather. On the whole the total catch was considered poor.

Herring were first reported May 16, in small quantities and practically nothing was done in this branch during the season.

Salmon were first reported May 22 plentiful, and continued so until June 20, after which date light catches were made. The total catch is considered better than last year.

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ST. JOHN'S RIVER.

Capelin first reported May 29. During June caplin was very plentiful.

Cod were first taken June 14, but in small quantities, plentiful towards the end of the month.

Launce were very plentiful the latter part of June. Nothing reported afterwards.

Salmon were reported plentiful for the greater part of June.

Trout when reported were plentiful.

SHELDRAKE.

Capelin reported very plentiful for the greater part of June.

Cod.—The catch during the season was very irregular, never being better than fair.

Launce when reported was fair.

Salmon catch was poor.

ANTICOSTI.

Reporter, Miss Grace Pope :

English Bay.

Capelin struck in very plentiful on June 6, and were reported abundant up to the middle of July.

Cod fishing began May 25, when light to fair catches were made up to the end of June. The July and August catch were generally poor. From the middle of September to the middle of October practically nothing was done in this branch. From October 15 to close of season the fishing was very good.

Herring struck in May 25 in fair quantities and continued so to June 10, when some very good catches were made. From 1st to 15th July herring was reported very plentiful. The balance of the season the fishing varied from fair to poor.

Squid made their appearance August 2 in small quantities, and remained so until middle of October. From that to the end of the season the fishing was very good.

Fox Bay.

Cod.—Very little fishing was done during the summer. Fair catches were made from October 10, but greatly handicapped on account of scarcity of bait. Salt squid being the only thing obtainable.

Herring.—First reported May 19. Very plentiful and continued good for balance of month and June. After that date catches were only fair.

South-west Point.

Capelin was remarkably good from June 5 up to the middle of July. Immense flocks of gannets reported constantly fishing. Some caplin found in fish, and reported in great abundance fifteen miles from South-west Point as late as August 15.

Cod.—There was no fishing done here in this branch during the season.

Strawberry Cove.

Fishing was practically the same as English Bay. The total catch at English Bay and Strawberry Cove for eleven boats was 105 barrels green fish and 170 quintals dry, to end of September.

MAGDALEN ISLANDS.

Reporter, Mr. J. A. LeBourdais :

Codfish struck inshore May 15 and remained until latter end of June, but only light catches were made on account of the small number of boats engaged in that branch, and bait being scarce. During July and September the catch was fair, but greatly hindered by bad weather. October, was in large quantities, but could not be caught on account of scarcity of bait and bad weather. The fishing boats engaged have done fairly well.

Herring struck in about April 26. First caught in nets and very plentiful. Also plentiful at the north part of the island, before the ice cleared, and continued so until the end of May, when it slackened. Herring seemed to be more abundant at Pleasant Bay than for several years past. Large quantities were taken for bait and local use. A large fleet of Nova Scotia and bank fishermen came to this place for their bait, some of them twice during the month. During the first part of September some few large herring were caught in nets, but none to mention, on account of bad weather.

Lobsters were first reported in the early part of May, prospects being very good and herring plentiful. During the month of June and early part of July the catch was fair, but gradually decreased. The lobsters are as plentiful this year as formerly, but on account of the number of boats engaged the catches were light. During the season the lagoons were literally covered with traps.

Mackerel struck in first week in June in fair quantities, but only light catches were made by netters. Reported taking hook freely July 17, and good catches were made in several of the bays daily until September 1. Very little fishing was done in that month owing to bad weather. Throughout the season mackerel seemed to be in fair quantities but would not take the hook, excepting during the time mentioned. The fishing at Byron was fairly good during August. All fishing, with the exception of herring, was not above the average.

The whole respectfully submitted.

T. O'BRIEN.

SUPPLEMENT

TO THE

THIRTY-SECOND ANNUAL REPORT OF THE DEPARTMENT OF MARINE AND
FISHERIES BEING PARTLY FOR THE FISCAL YEAR ENDED JUNE 30, 1899,
AND PARTLY FOR THE CALENDAR YEAR 1899

MARINE

REPORTS

OF THE

HARBOUR COMMISSIONERS

FOR

TORONTO, MONTREAL, QUEBEC, THREE RIVERS, BELLEVILLE, NORTH SYDNEY AND PICTOU

THE PILOTAGE AUTHORITIES

THE HARBOUR AND SHIPPING MASTERS, CERTAIN PORT WARDENS, TOGETHER
WITH STATEMENT OF WRECKS AND CASUALTIES

CHIEFLY UP TO THE

31st DAY OF DECEMBER, 1899

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

PRINTED BY S. E. DAWSON, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY

1900

OTTAWA, December, 1900.

Hon. Sir LOUIS HENRY DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit herewith the Supplement to the thirty-second Annual Report of the Marine Branch of the Department of Marine and Fisheries, being for the year 1899, containing a statement of merchant shipping, wrecks and casualties, list of certificates granted to masters and mates; the reports of the harbour commissioners of Toronto, Belleville, Montreal, Quebec, Three Rivers and North Sydney; list of harbour masters; reports of harbour masters generally; reports of pilotage commissioners; reports of port wardens, and list of shipping masters.

I have the honour to be, sir,

Your obedient servant,

F. GOURDEAU,
Deputy Minister Marine and Fisheries.

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APPENDIX No. I

MERCHANT SHIPPING.

The total number of vessels remaining on the register books of the Dominion on December 31, 1899, including old and new vessels, sailing vessels, steamers and barges, was 6,698, measuring 679,352 tons register tonnage, being an increase of 55 vessels and a decrease of 14,430 tons register, as compared with 1898. The number of steamers on the registry books on the same date was 1,974, with a gross tonnage of 277,676 tons. Assuming the average value to be \$30 per ton, the value of the registered tonnage of Canada, on December 31 last, would be \$20,290,560.

The number of new vessels built and registered in the Dominion of Canada during the last year was 277, measuring 21,098 tons register tonnage. Estimating the value of the new tonnage at \$45 per ton, it gives a total value of \$949,410 for new vessels.

A statement follows, showing the number of vessels and number of tons on the register books at the different ports of registry in the Dominion, on December 31 last, along with a comparative statement of the tonnage from 1874 to 1899. A statement is also published of the number of vessels built and registered in the Dominion during the last year, and a comparative statement of the number of new vessels built and registered from 1874 to 1899, both inclusive.

STATEMENT showing the number of Vessels and number of Tons on the Registry Books of the Dominion of Canada, on December 31, 1899.

PROVINCE OF NEW BRUNSWICK.

Name of Port.	Total Number of Sailing Ships and Steamers.	Number of Steamers.	Gross Tonnage of Steamers.	Total Net Tonnage of Sailing Ships and Steamers.
Chatham	329	42	1,955	7,808
Dorchester	4	Nil.	Nil.	1,513
Moncton	14	1	20	2,444
Richibucto	16	2	79	2,737
Sackville	14	3	65	1,130
St. Andrews	144	7	273	2,951
St. John	399	63	7,451	67,705
Total	920	118	9,843	86,288

STATEMENT showing the number of Vessels and number of Tons on the Registry Books, &c.—Continued.

PROVINCE OF NOVA SCOTIA.

Name of Port.	Total Number of Sailing Ships and Steamers.	Number of Steamers.	Gross Tonnage of Steamers.	Total Net Tonnage of Sailing Ships and Steamers.
Amherst	4			113
Annapolis	46	1	32	5,518
Arichat	128	1	66	5,110
Barrington	42	1	48	1,405
Canso	9	Nil.	Nil.	306
Digby	167	5	209	8,412
Guysboro'	21	Nil.	Nil.	859
Halifax	475	57	7,510	23,415
Liverpool	71	2	137	5,307
Lunenburg	290	6	423	24,450
Maitland	19	Nil.	Nil.	14,740
Parrsboro'	128	1	189	30,469
Pictou	55	19	1,110	8,186
Port Hawkesbury	83	2	43	2,871
Port Medway	18	1	138	1,541
Shelburne	101	3	68	5,491
Sydney	100	11	752	6,830
Truro	2	Nil.	Nil.	160
Weymouth	38	1	21	3,466
Windsor	121	16	2,738	65,024
Yarmouth	203	23	4,555	29,784
Total	2,121	150	18,039	243,457

PROVINCE OF QUEBEC.

Amherst (Magdalen Islands)	18	Nil.	Nil.	639
Gaspé	32	1	709	1,858
Montreal	543	186	58,601	89,338
New Carlisle	8	2	45	196
Quebec	774	135	19,180	52,555
Total	1,375	324	78,535	144,586

PROVINCE OF ONTARIO.

Amherstburg	5	2	28	148
Belleville	24	17	622	935
Bowmanville	3	Nil.	Nil.	609
Brockville	22	21	475	299
Chatham	29	18	883	1,518
Chippewa	3	2	263	153
Cobourg	3	1	23	311
Collingwood	71	69	7,891	5,787
Cornwall	3	3	198	128
Deseronto	18	13	1,383	1,276
Dunnville	1	1	87	57
Goderich	43	26	744	1,851
Hamilton	47	40	6,054	5,115
Kingston	170	77	13,061	24,713
Lindsay	Nil.	Nil.	Nil.	Nil.
Napanee	Nil.	Nil.	Nil.	Nil.
Oakville	2	Nil.	Nil.	126
Ottawa	351	189	15,134	26,544
Owen Sound	39	37	5,765	4,202
Peterboro'	Nil.	Nil.	Nil.	Nil.
Pictou	17	8	1,786	2,092

SESSIONAL PAPER No. 11b

STATEMENT showing the number of Vessels and number of Tons on the Registry Books, &c.—Continued.

PROVINCE OF ONTARIO—Concluded.

Name of Port.	Total Number of Sailing Ships and Steamers.	Number of Steamers.	Gross Tonnage of Steamers.	Total Net Tonnage of Sailing Ships and Steamers.
Port Arthur.....	18	18	3,159	2,053
Port Burwell.....	6	4	43	132
Port Colborne.....	3	2	92	321
Port Dover.....	13	6	170	692
Port Hope.....	56	32	2,706	5,500
Port Rowan.....	8	3	203	413
Port Stanley.....	7	7	1,164	739
Prescott.....	40	18	1,251	7,153
Sarnia.....	27	20	7,860	6,375
Saugeen.....	9	9	508	347
Sault Ste. Marie.....	26	24	1,079	1,017
St. Catharines.....	91	51	5,860	12,155
Toronto.....	245	188	15,512	14,678
Wallaceburg.....	30	17	1,094	1,245
Whitby.....	3	Nil.	Nil.	514
Windsor.....	55	29	7,516	6,036
Total.....	1,488	952	102,614	135,234

PROVINCE OF PRINCE EDWARD ISLAND.

Charlottetown.....	171	20	3,957	14,660
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PROVINCE OF BRITISH COLUMBIA.

New Westminster.....	128	87	10,801	8,098
Vancouver.....	112	91	15,654	11,766
Victoria.....	248	136	29,779	24,551
Total.....	488	314	56,234	44,415

PROVINCE OF MANITOBA.

Winnipeg.....	126	82	5,961	9,108
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YUKON TERRITORY.

Dawson.....	9	9	2,493	1,604
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SUMMARY.

New Brunswick.....	920	118	9,843	86,288
Nova Scotia.....	2,121	150	18,039	243,457
Quebec.....	1,375	324	78,535	144,586
Ontario.....	1,488	952	102,614	135,234
P. E. Island.....	171	20	3,957	14,660
British Columbia.....	488	314	56,234	44,415
Manitoba.....	126	82	5,961	9,108
Yukon District.....	9	9	2,493	1,604
Total.....	6,698	1,969	277,676	679,352

63 VICTORIA, A. 1900

COMPARATIVE STATEMENT showing the number of Vessels and number of Tons on
from 1874 to 1899,

Provinces.	1874.		1875.		1876.		1877.	
	Number of Vessels.	Registered or net Tonnage.	Number of Vessels.	Registered or net Tonnage.	Number of Vessels.	Registered or net Tonnage.	Number of Vessels.	Registered or net Tonnage.
New Brunswick.....	1,144	294,741	1,133	307,926	1,154	324,513	1,133	329,457
Nova Scotia.....	2,787	479,669	2,786	505,144	2,867	529,252	2,961	541,579
Quebec.....	1,837	218,946	1,831	222,965	1,902	228,502	1,951	248,399
Ontario.....	815	113,008	825	114,990	889	123,947	926	131,761
Prince Edward Island...	312	48,388	335	50,677	338	50,692	342	55,547
British Columbia.....	35	3,611	40	3,685	40	3,809	43	3,479
Manitoba.....	.....	.....	2	178	2	178	6	246
Total.....	6,930	1,158,363	6,952	1,205,565	7,192	1,260,893	7,362	1,310,468
	1883.		1884.		1885.		1886.	
New Brunswick.....	1,107	315,906	1,096	308,132	1,060	288,589	1,042	269,224
Nova Scotia.....	3,037	541,715	2,942	544,048	2,988	541,832	2,929	526,921
Quebec.....	1,739	216,577	1,628	202,842	1,631	203,635	1,650	232,556
Ontario.....	1,133	140,972	1,184	142,387	1,223	144,487	1,248	140,929
Prince Edward Island...	241	49,446	234	39,213	227	36,040	225	30,658
British Columbia.....	94	9,046	116	11,403	123	11,834	134	11,900
Manitoba.....	24	2,778	55	5,722	63	5,439	65	5,578
Total.....	7,374	1,276,440	7,254	1,253,747	7,315	1,231,856	7,294	1,217,766
	1892.		1893.		1894.		1895.	
New Brunswick.....	946	181,779	1,010	156,086	1,003	136,257	975	122,417
Nova Scotia.....	2,731	425,690	2,715	396,263	2,710	371,432	2,683	343,356
Quebec.....	1,408	162,638	1,426	161,121	1,427	160,590	1,454	158,776
Ontario.....	1,347	141,750	1,370	146,665	1,480	148,525	1,508	148,609
Prince Edward Island...	196	22,706	188	20,970	191	19,650	190	19,323
British Columbia.....	298	23,448	315	24,900	336	26,455	346	25,988
Manitoba.....	81	6,118	89	6,534	98	6,715	106	7,307
Yukon District.....
Total.....	7,007	964,129	7,113	812,539	7,245	869,624	7,262	825,636

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the Registry Books of the Dominion of Canada, on December 31, in each year, both inclusive.

1878.		1879.		1880.		1881.		1882.	
Number of Vessels.	Registered or net Tonnage.	Number of Vessels.	Registered or net Tonnage.	Number of Vessels.	Registered or net Tonnage.	Number of Vessels.	Registered or net Tonnage.	Number of Vessels.	Registered or net Tonnage.
1,142	335,965	1,135	340,491	1,097	336,976	1,087	333,215	1,065	308,980
3,003	553,368	2,975	552,159	2,977	550,448	3,025	558,911	2,026	546,778
1,676	248,349	1,975	246,025	1,889	233,341	1,830	224,936	1,754	215,804
958	135,440	1,006	136,987	1,042	137,481	1,081	139,998	1,112	137,061
322	54,250	298	49,807	288	45,931	273	45,410	248	41,684
51	4,482	60	4,701	63	5,049	74	6,296	84	7,687
17	1,161	22	1,924	21	1,992	24	2,130	23	2,783
7,469	1,333,015	7,471	1,332,094	7,377	1,311,218	7,394	1,310,896	7,312	1,260,777
1887.		1888.		1889.		1890.		1891.	
1,027	255,126	1,009	239,332	1,013	218,873	981	209,460	969	193,193
2,845	498,878	2,851	485,709	2,855	464,431	2,793	464,194	2,778	461,758
1,586	189,064	1,498	178,520	1,455	168,500	1,399	164,003	1,404	162,330
1,275	139,548	1,330	139,502	1,352	141,839	1,312	138,738	1,345	138,914
225	29,031	218	26,586	224	25,506	231	26,080	195	23,316
149	12,789	167	14,249	176	15,241	196	16,024	246	19,767
71	5,871	69	5,744	77	6,091	79	6,475	78	6,197
7,178	1,130,247	7,142	1,089,642	7,153	1,040,481	6,991	1,024,974	7,015	1,005,475
1896.		1897.		1898.		1899.			
964	115,506	923	103,584	903	89,257	920	86,288		
2,669	317,526	2,204	283,066	2,167	262,176	2,121	243,457		
1,469	158,649	1,480	158,077	1,378	144,447	1,375	144,586		
1,525	146,522	1,424	135,349	1,452	134,180	1,488	135,234		
174	16,540	174	15,812	178	15,979	171	14,660		
363	26,622	364	28,604	444	40,304	488	44,415		
115	7,934	115	7,272	121	7,439	126	9,108		
.....	.....	.....	.....	.....	.....	9	1,604		
7,279	789,299	6,684	731,754	6,643	693,782	6,698	679,352		

63 VICTORIA, A. 1900

List of Ports at which Vessels may be Registered, showing the number of New Vessels Built and Registered in the Dominion of Canada, during the year ended December 31, 1899.

PROVINCE OF NEW BRUNSWICK.

Name of Port.	Total Number of Sailing Ships and Steamers.	Total Net Tonnage of Sailing Ships and Steamers.
Chatham ..	8	203
Dorchester.....	Nil.	Nil.
Moncton.....	Nil.	Nil.
Richibucto.....	Nil.	Nil.
Sackville.....	Nil.	Nil.
St. Andrew's..	4	52
St. John.....	19	543
Total.....	31	798

PROVINCE OF NOVA SCOTIA.

Amherst.....	Nil.	Nil.
Annapolis.....	2	245
Arichat.....	6	212
Barrington.....	1	10
Canso.....	2	33
Digby.....	5	134
Guysboro'.....	Nil.	Nil.
Halifax.....	6	124
Liverpool.....	3	578
Lunenburg.....	31	2,847
Maitland.....	1	72
Parrsboro'.....	10	1,234
Pictou.....	3	559
Port Hawkesbury.....	3	42
Port Medway.....	Nil.	Nil.
Shelburne.....	6	476
Sydney.....	5	75
Truro.....	Nil.	Nil.
Weymouth.....	2	375
Windsor.....	2	468
Yarmouth.....	4	60
Total.....	92	7,594

PROVINCE OF QUEBEC.

Amherst (Magdalen Islands).....	Nil.	Nil.
Gaspé.....	Nil.	Nil.
Montreal.....	21	5,198
New Carlisle.....	Nil.	Nil.
Quebec.....	14	745
Total.....	35	5,943

PROVINCE OF BRITISH COLUMBIA.

New Westminster.....	23	715
Vancouver.....	17	755
Victoria.....	11	1,264
Total.....	51	2,734

PROVINCE OF MANITOBA.

Winnipeg.....	13	554
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SESSIONAL PAPER No. 11b

PROVINCE OF ONTARIO.

Name of Port.	Total Number of Sailing Ships and Steamers.	Total Net Tonnage of Sailing Ships and Steamers.
Amherstburg.....	Nil.	Nil.
Belleville.....	Nil.	Nil.
Bowmanville.....	Nil.	Nil.
Brockville.....	Nil.	Nil.
Chatham.....	Nil.	Nil.
Chippewa.....	Nil.	Nil.
Cobourg.....	Nil.	Nil.
Collingwood.....	1	676
Cornwall.....	Nil.	Nil.
Deseronto.....	Nil.	Nil.
Dunnville.....	Nil.	Nil.
Goderich.....	Nil.	Nil.
Hamilton.....	2	15
Kingston.....	9	666
Lindsay.....	2	6
Napanee.....	Nil.	Nil.
Oakville.....	Nil.	Nil.
Ottawa.....	18	799
Owen Sound.....	4	233
Peterboro.....	Nil.	Nil.
Picton.....	1	374
Port Arthur.....	7	28
Port Burwell.....	Nil.	Nil.
Port Colborne.....	Nil.	Nil.
Port Dover.....	Nil.	Nil.
Port Hope.....	Nil.	Nil.
Port Rowan.....	2	31
Port Stanley.....	Nil.	Nil.
Prescott.....	1	484
Sarnia.....	Nil.	Nil.
Saugeen.....	Nil.	Nil.
Sault Ste. Marie.....	Nil.	Nil.
St. Catharines.....	Nil.	Nil.
Toronto.....	5	107
Wallaceburg.....	Nil.	Nil.
Whitby.....	Nil.	Nil.
Windsor.....	Nil.	Nil.
Total.....	52	3,419

PROVINCE OF PRINCE EDWARD ISLAND.

Charlottetown.....	3	56
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YUKON TERRITORY.

Dawson.....	Nil.	Nil.
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SUMMARY.

New Brunswick.....	31	798
Nova Scotia.....	92	7,594
Quebec.....	35	5,943
Ontario.....	52	3,419
Prince Edward Island.....	3	56
British Columbia.....	51	2,734
Manitoba.....	13	554
Yukon District.....	Nil.	Nil.
Total.....	277	21,098

COMPARATIVE STATEMENT of New Vessels Built and Registered in the Dominion

Provinces.	1874.		1875.		1876.		1877.		1878.	
	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.
New Brunswick	90	42,027	65	33,483	61	31,040	54	31,158	56	27,368
Nova Scotia	175	84,480	177	67,106	194	58,771	219	47,980	166	49,784
Quebec	73	20,796	103	22,825	51	17,800	62	19,253	46	10,870
Ontario	50	10,797	53	7,760	47	5,397	28	3,316	30	2,409
Prince Edward Island	88	24,634	83	19,838	62	14,571	62	17,026	38	10,382
British Columbia	5	276	.....	.....	1	121	2	204	2	45
Manitoba .....	.....	.....	.....	.....	.....	.....	3	48	1	15
Add new vessels built in Canada which proceeded to the United Kingdom under a Governor's pass without being registered	490	183,010	480	151,012	416	127,700	430	118,985	339	100,873
Add new vessels which left Quebec for registration in Germany	6	7,746	.....	.....	3	2,721	2	1,943	1	663
Total	496	190,756	480	151,012	420	130,901	432	120,928	340	101,536

Provinces.	1886.		1887.		1888.		1889.		1890.		1891.	
	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.
New Brunswick	34	4,931	18	2,909	32	2,530	50	4,792	35	5,572	43	6,269
Nova Scotia	33	20,948	37	12,310	116	12,965	126	19,645	150	33,907	130	35,523
Quebec	27	2,683	28	2,888	23	2,669	27	3,759	25	4,880	46	4,200
Ontario	52	2,075	66	2,993	62	5,096	45	3,259	41	4,917	44	2,662
Prince Edward Island	12	1,318	7	601	12	1,412	12	1,503	12	2,008	5	1,000
British Columbia	8	154	9	376	18	448	12	840	15	876	41	2,364
Manitoba	3	98	8	439	1	11	8	548	7	218	3	122
Total	229	32,207	224	22,516	264	25,130	280	34,346	285	52,378	312	52,145

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of Canada, on the 31st December, in each year, from 1874 to 1899, both inclusive.

1879.		1880.		1881.		1882.		1883.		1884.		1885.	
Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.
43	19,067	63	18,896	57	18,259	66	16,820	72	21,103	46	12,888	34	7,736
126	39,208	126	31,257	150	40,465	117	26,711	202	35,765	178	42,032	102	24,703
29	7,421	33	8,219	56	5,673	26	6,785	42	6,594	32	3,815	29	4,556
42	2,464	44	3,610	54	5,111	55	4,369	34	4,311	58	4,446	45	4,509
20	5,279	21	3,359	15	4,351	15	3,508	17	5,343	21	5,189	11	1,707
5	788	.....	.....	2	85	8	1,631	5	849	15	675	6	648
.....	.....	1	100	3	116	1	289	2	125	37	3,366	13	320
265	74,227	271	65,441	336	74,060	288	60,113	374	74,090	387	72,411	240	43,179
.....	.....	.....	.....	.....	.....	1	1,029	.....	.....	.....	.....	.....	.....
.....
265	74,227	271	65,441	336	74,060	289	61,142	374	74,090	387	72,411	240	43,179

1892.		1893.		1894.		1895.		1896.		1897.		1898.		1899.	
Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.	Number of Vessels.	Registered or Net Tonnage.
21	1,873	119	2,819	40	2,534	27	714	24	627	33	1,738	31	790	31	798
105	16,446	111	15,089	123	8,721	89	4,762	97	7,704	54	4,259	67	4,962	92	7,594
34	2,620	53	4,220	55	4,412	49	4,335	36	3,969	49	4,227	51	4,139	35	5,943
34	3,684	49	4,126	64	3,137	52	3,732	38	1,757	50	3,850	46	1,872	52	3,419
9	967	3	634	3	183	1	196	3	111	3	226	5	372	3	56
46	2,887	19	944	23	1,900	18	1,709	22	1,466	26	2,429	72	12,228	51	2,734
6	296	8	608	11	356	14	822	7	512	16	365	6	159	13	554
255	28,773	362	28,440	326	21,243	250	16,270	227	16,146	231	17,004	278	24,522	277	21,098

APPENDIX No. 2.

REPORT OF THE MONTREAL HARBOUR COMMISSIONERS FOR THE
YEAR ENDED DECEMBER 31, 1899.HARBOUR COMMISSIONERS OF MONTREAL,
SECRETARY'S OFFICE.

MONTREAL, July 10, 1900.

JOHN HARDIE, Esq.,
Acting Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour, by direction of the Harbour Commissioners of Montreal, to forward herewith; for the information of the Honourable the Minister of Marine and Fisheries, Summarized Statement of the Operations of the Trust for the year ended December 31, 1899.

The net ordinary revenue was \$296,598.33, against \$296,593.42 of the previous year, maintaining the increase of \$41,176.56 obtained in 1898 over 1897, notwithstanding the decrease in tonnage caused by the withdrawal of vessels for transport service to South Africa.

The revenue from imports increased 13 per cent and that from exports decreased 11 per cent, while local wharfages show an increase of 11 per cent.

The cost of management, maintenance and repairs, apart from expenditure on capital account was \$90,716.25, while the interest and annuity (of \$600) were \$152,953.84. The difference as between ordinary revenue and ordinary expenditure was \$52,928.24,

The amount charged to capital account for the year was \$354,292.60, as against \$119,752.36 in the previous year, towards which the city of Montreal contributes \$82,264.89 on account of work on the guard pier and harbour improvements.

The sum of \$300,000 was received on loan from the Dominion of Canada, under the Act 59 Vic., chap. 10, on account of works of improvement carried out in the years 1898 and 1899.

The Dominion of Canada had still to advance on loan to the Commissioners, for harbour improvements, the sum of \$2,400,000, and the amount still chargeable to the city of Montreal for future work as per contract entered into on September 12, 1899, was \$556,372.33, and for the guard pier construction \$10,978.32.

The total bonded debt at the end of the year was \$3,822,000, on which the average rate of interest is about 3 $\frac{1}{4}$ per cent.

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The usual reports for the past year, of the Harbour Master and the Montreal Decayed Pilots' Fund have already been transmitted to you, while those of the Montreal Pilotage District and the Chief Engineer on the works for the improvement and maintenance of the harbour are transmitted herewith.

I have the honour to be, sir,

Your obedient servant,

DAVID SEATH,

Secretary.

HARBOUR COMMISSIONERS OF MONTREAL.
SUMMARIZED Statement of Operations for the Year ended December 31, 1899.

BALANCE AND RECEIPTS.		DISBURSEMENTS AND BALANCE.		Revenue.	Capital.
	\$		\$	\$	\$
Balance from 1898.....	88,924 08	Refunds of wharfage dues.....		151 19	
Held for Montreal Decayed Pilots' Fund, in trust—		Administrative staff—Salaries and fees.....		20,637 32	
Harbour debentures and city stock.....	51,000 00	Miscellaneous expenses—Taxes, heating, printing, advertising, travelling, legal, notarial and other expenses.....		11,957 39	
Cash in City and District Savings Bank.....	2,667 74	Electric lighting of harbour.....		3,845 25	
		Maintenance of dredging.....		316 05	
		Accident account—Provision for legal liability insurance, &c., (see <i>contra</i> for credit).....		1,906 54	
Receipts during 1899—		Harbour surveys.....		391 12	
Collector of Customs, Montreal—		Buoys and beacons.....		113 61	
Wharfage dues on imports.....	114,585 00	Harbour repairs, maintenance of wharfs, &c. (see <i>contra</i> for credit).....		52,325 05	
" " exports.....	138,024 52	Annuity.....		600 00	
Wharfinger local traffic.....		Interest and exchange.....		152,353 84	250 00
Wharfage dues not paid at Custom-house in 1897 and 1898 and collected after audit.....		Harbour of Montreal, establishing boundary.....			
Rentals of harbour track and properties.....		Windmill Point wharf and basin—Dredging, macadamizing, &c.....			26,448 23
For credit of the following accounts—		Harbour enlargement—New approach.....	3,362 26		
Harbour repairs, scrap sold.....		New piers (see <i>contra</i> for credit).....	220,844 35		
Accident account, refund.....		Harbour dredging.....		224,206 61	
Printing, stationery, &c., refund.....		Hochelega construction.....		1,354 04	
Legal and notarial expenses, refund.....		Harbour railway.....		683 82	
Interest charged to city of Montreal.....		Guard pier construction (see <i>contra</i> for credit).....		5,847 77	
Harbour plant—Sale of old engines.....		Flood protection wall.....		16,980 93	
Guard pier construction.....		Harbour plant, deduction made for depreciation (see <i>contra</i> for credit).....		10,355 57	
City flood protection wall—		Real estate No. 2, improvements.....		67,644 05	
City of Montreal's proportion.....	10,353 00	Harbour dredging fleet (see <i>contra</i> for credit).....		1,244 50	
Sand sold.....	2 57	Security deposits repaid to depositors.....		4,120 19	
		Pilotage expenses.....		1,317 75	
Harbour dredging fleet—		Montreal Decayed Pilots' Fund—		1,353 97	
Materials sold.....	752 19	Pensions to old pilots and widows.....	5,189 88		
London Salvage Association, rent, dredges, &c.....	3,368 00	Audit of fund, postage stamps, &c.....	36 00		5,224 88
Harbour enlargement—					
Use of diver.....	6 60				

REPORT ON THE WORKS FOR THE IMPROVEMENT AND MAINTENANCE OF THE HARBOUR OF MONTREAL, FOR THE YEAR 1899.

JOHN KENNEDY, M. INST. C. E., CHIEF ENGINEER.

HARBOUR COMMISSIONERS OF MONTREAL,
CHIEF ENGINEER'S OFFICE,

MONTREAL, March 10, 1900.

DAVID SEATH, Esq.,
Secretary, Harbour Commissioners of Montreal.

DEAR SIR,—I beg to submit, for the information of the Board of Harbour Commissioners, the following report upon the works in the Harbour of Montreal for the year ended December 31, 1899.

NEW WORKS.

The principal new works of the year are :—The completion of the new high level pier in sections 18 and 19 ; the commencement of construction of another pier in sections 13 and 14, and of the shore wharf between that and the entrance of the Lachine Canal ; the enlargement of deep water area in the Windmill Point Basin ; and the widening of the ship channel through the harbour from Victoria pier to the entrance of the Lachine Canal.

The principal details are as follows :

Sections 4s to 5s.—A portion of the roadway on the new wharf on the south-east side of the basin was graded and macadamized. About 43,014 cubic yards of earth, ashes and other filling stuff sent in from city excavations, furnaces, &c., were used in extending the wharf embankment at the lower end of the new wharf.

The Dominion Coal Company last spring built, on the wharf leased to them, an elevated coal pocket with machinery for unloading coal from vessels and discharging it into cars or carts. In order to serve the pocket and other parts of the wharf, the Commissioners, at the request of the Grand Trunk Railway, laid down two railway tracks beneath the pocket, one close in rear of it, and one above winter water level at the rear or south-east side of the wharf embankment. All the tracks were connected with those of the Grand Trunk Railway, and are leased to that company on the same conditions as are the other tracks on the wharfs. The aggregate length of the four tracks laid on the Harbour Commissioners' property is 4,939 feet, and upon a strip of property; the ownership of which is in dispute between the Harbour Commissioners and the Grand Trunk Railway Co., 610 feet; total 5,549 feet.

Sections 5 to 10.—The Windmill Point Basin was deepened, chiefly along the south-east side, opposite sections 7 and 10, by blasting and dredging and by dredging alone for the double purpose of enlarging the deep water area of the basin and for furnishing rock filling for the cribwork of the harbour enlargement works. The quantity dredged was 43,758 cubic yards, measured loose, chiefly shale, and trap rock with some hard pan. Of the rock, 14,840 cubic yards, measured solid, was blasted, and the remainder was dredged without blasting. Expenditure on dredging and blasting \$16,666.85. There was also expended on dredging and depositing chargeable to other works where the material was deposited \$5,042.68.

Entrance to Windmill Basin.—Some blasting and dredging were done for the double purpose of enlarging the entrance channel and for furnishing rock for filling the cribwork of the harbour enlargement works. Quantity of rock blasted, 5,550 cubic yards measured solid ; quantity of rock and earth dredged, 5,936 cubic yards measured loose. Expenditure on dredging and blasting \$5,032.63. There was also expended on dredging and depositing chargeable to other works where the material was deposited \$382.97.

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Harbour Improvement Works, Sections 12, 13 and 14.—Instructions were given by the Commissioners on September 26, 1899, to proceed with the construction of the shore wharf and pier of plan 12 A 2, in sections 12, 13 and 14. The old wharf between the entrance of the canal and the small basin in section 12, was built in 1859 and founded at 14 feet depth, at low water of 13 feet on the lock sill, or 18 feet higher than the foundation of the new wharf which is to connect with it. In order to protect the old wharf foundation and allow of dredging for the new, a row of close piling was driven around the corner of the old wharf and the heads of the piles tied in by anchor bolts, 50 feet long by $1\frac{1}{2}$ in. diameter. The new foundation was then dredged out and the first crib of the new shore wharf was sunk in place on October 6. Another was sunk soon after and a third on November 22.

In dredging out the foundations for the new cribwork, rock of fairly smooth surface was struck at level 65.50 to 68.50 above harbour datum, or 25' 6" to 28' 6" below lowest water. This rock was dredged off to level 64.50 to 62.50 and the cribs founded upon it. The cribs are each 131 feet in length, making 393 feet aggregate length placed before the close of navigation. All were filled and back filled, and they were partly prepared for receiving the concrete retaining wall which is to be built upon them.

Dredging for the foundations of cribs on the north or down stream side of the new pier in sections 13 and 14 was commenced about the middle of September, and by the end of the month two cribs, 131 feet long each, were sunk at the inshore end. Two more cribs of similar length were sunk in November in continuation of the north side of the pier, making an aggregate of 524 feet placed by the close of navigation. A temporary crib of 80 feet long was also sunk in the same line at the inshore end of the pier to retain the end filling until the shore wharf is built. All the cribwork was built up to about level 103.00 (9 feet above low water) and filled and back filled so as to be above ordinary spring water level and allow of building being continued on the approaching opening of navigation. The cribwork is founded on hard earth bottom at level 62.00 to 63.50 (32' 0" to 30' 6" below low water of 13 feet on the lock sill) and it is to be continued up to the top of the pier, instead of being stopped at low water and surmounted by a concrete wall as will be done in the shore wharf adjoining.

Six other cribs of 826 feet aggregate length were at the close of the working season under process of construction, afloat, and had built up to heights varying from 6 to 10 feet.

The building of the new pier will entirely close the deep water channel to the part of the harbour above, and a new channel is therefore being dredged through the Island Shoal clear of the site of the pier. By the close of navigation the new channel had been roughly cut through to depths varying from 14 to 28 feet at low water.

The quantities of the principal items of work on the new shore wharf and pier, in sections 12 to 14, up to the close of navigation are :

Dredging for crib foundations, 34,099 cubic yards; cribwork sunk in place, permanent 917 feet, temporary 80 feet; filling 151,613 cubic yards; cribwork afloat under construction 826 feet.

Expenditure on cribwork \$41,622.39; on dredging and on filling and backfilling of cribwork \$21,806.38; total \$63,488.77.

Harbour Enlargement Works : Sections 17 and 18.—The building of the new pier opposite Jacques Cartier Square, which was commenced in 1898, was resumed last spring and was carried on by day until June 19, and after that by day and night until the virtual completion of the pier in November. Cribwork of a length of 453 feet had been sunk in place at the stoppage of work in 1898; the building of cribs afloat was resumed on April 20, 1899, two cribs of 161 feet each were sunk in place on May 26, and others at intervals until September 9, when the last was sunk, making 1,520 feet sunk in 1899 and 1,973 feet, frontage measurement, in the whole pier. A temporary crib, 60 feet long, was also put down on the down stream side for connecting the inner end of the new cribwork with the old. At the end of August a length of 515 feet of the wharf at the inshore end of the up-stream side had been made ready for use, and on August 31 it was put into service by the berthing of the ss. *Roman* for dis-

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charging and loading. Other parts were afterward made ready for use in succession until the whole had been put into service before the close of navigation.

The cribwork is founded at level 62.00 to 64.00 above datum, or 30 feet 0 inches to 32 feet 0 inches below low water of 13 feet on the old lock sill; the top of the wharf at its edge, is finished off at level 116.50 and the centre of the pier is rounded up to level 118.50. The cribwork is 42 feet in breadth at the bottom and is stepped in to 14 feet at the top; the outer face is sawn square timber, laid with close joints, and the remainder of round timber; the face timber and the front tie timbers, above ordinary summer water level, are of white pine and all the remainder is of hemlock. The timbers are strongly fastened with $\frac{7}{8}$ inch square drift bolts and the cribwork is assisted in sustaining the earth pressure by $1\frac{1}{2}$ inch anchor bolts, placed about 10 feet apart and 17 feet from the top, and running back into the pier to about 64 feet from the face.

The front compartment of the cribwork is filled with rock to a height of 8 to 12 feet from the bottom, and the remainder with earth dredgings. Of the remainder of the pier, about 90 per cent of the filling is of dredgings, chiefly, of very soft silt, and 10 per cent is of scavengings and stuff of all sorts from the city. Much settlement of the filling of the body of the pier is therefore to be expected and in view of this only a small part of the area of the top has been macadamized, and that only lightly, and the remainder has been covered with shale rock dredgings. It is intended to add rock until the expected settlement ceases, after which the roadways and other parts of the pier not required for buildings, platforms, &c., may be suitably paved. The outer end of the pier has two stairways of 9 feet in width, cut down a depth of 13 feet from the top, for affording convenient access to small craft.

The dimensions of the pier and the quantities of materials in its construction are:

Length, up-stream side.....	850 feet
“ down-stream side	800 “
Breadth, at top.....	285 to 300 “
Height at edges above harbour datum.....	116.50 “
“ “ “ lowest recorded water.....	22 feet 4 inches
“ “ “ highest recorded water during navigation season.	6 feet 10 inches
Height above crib foundations.....	52 to 56 feet
Wharf frontage.....	1,978 lineal feet
Wharf area	244,480 square feet
Lumber in cribwork; hemlock, square and round	427,538 lineal feet
Lumber in cribwork; pine, square and round....	102,823 lineal feet
Plank; hemlock and spruce	234,475 feet B. M.
Iron spikes, anchor bolts, &c.	468,300 lbs.
Dredging, in preparing crib foundations.....	80,347 cubic yards
Filling, measured in solid.....	519,000 cubic yards
Expenditure in 1898.....	\$ 40,682 90
“ 1899.....	157,348 98
Total.....	\$198,031 88

Island Shoal.—The dredging away of the shoal has been continued throughout the summer for the purpose of providing channel room past the new piers and for furnish- ing filling required for their construction.

Quantity dredged during the summer 781,514 cubic yards. Expenditure \$72,013.47. Portion charged to works where the material was used, \$68,651.21; charged to Dredg- ing account \$3,362.26.

Section 35.—A piece of siding track, 1,049 feet in length, was laid for connecting the main line on the wharf, used by the Canadian Pacific Railway Company, with a yard for shipping cattle which the company inclosed on the wharf. The track was planked between and on each side of the rails, and was anchored down to blocks buried beneath so as to prevent its being floated or moved by ice in winter. Expenditure, \$1,285.32.

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Guard Pier.—The rounding up of the top of the embankment and finishing it to full height was resumed on August 30, at a point 385 feet from the Victoria Bridge, and was carried on to 5,225 feet from the bridge and there stopped at the close of the working season, December 5. The remainder of the pier is accessible to the floating derricks and can therefore be raised without the use of the land derrick and cars.

The quantities and kinds of stuff placed in the pier in 1899 are :

	Cubic yards.
Dredged from Windmill Point Basin and approach, shale, trap and hard-pan	9,642
Dredged from Island Shoal, hard-pan, gravel and sand.....	51,727
Dredged from Section 12, hard-pan and rock.....	750
Dredged from Section 43, Maisonneuve, stone and sand.....	150
Received from steamships, earth, &c.....	262
Total cubic yards, scow and box measurement	62,531

The expenditures upon the guard pier to the end of 1899, and the proportion payable by the city, are as follows :

Expended to end of 1898.....	\$ 338,919 57	
Expended in 1899.....	16,580 93	
Total Expenditure to end of 1899.....	\$ 355,500 50	
Proportion payable by the city to the end of 1899...	80,593 68	
Balance being net expenditure on the part of the Harbour Commissioners to end of 1899.....	\$ 274,906 82	

REPAIRS.

The total cost of maintenance and repairs of the harbour works in 1899 is \$52,251.97, and it compares as follows with the expenditure of previous years :—

1875.....	\$16,499	1888	\$49,520
1876.....	35,711	1889	51,892
1877.....	26,077	1890.....	56,380
1878.....	18,974	1891.....	49,109
1879.....	18,819	1892	72,175
1880.....	17,330	1893.....	58,644
1881.....	16,159	1894.....	75,455
1882.....	27,962	1895.....	50,081
1883.....	35,768	1896.....	55,211
1884.....	44,869	1897.....	46,259
1885.....	42,158	1898.....	58,847
1886.....	64,989	1899.....	52,252
1887.....	64,984		

The breaking up and clearing away of the harbour ice occurred at an earlier date in spring than the average. The principal movements of the ice at the breaking up, and a movement which took place in winter, were as follows :

On the night of January 4 and 5, after a thaw, a heavy movement of the ice in the river outside of the Guard Pier and past its lower end, accompanied by a sudden rise of the water, took place and caused a movement of the entire field of ice inside the Guard Pier in an upstream direction through a distance of about 28 feet. The field moved in an unbroken mass and broke a number of electric light posts which had been left standing on the wharfs, and destroyed about 120 feet of the Montreal Warehousing Company's new grain carrier on the upper end of the Wind-

mill Point Basin wharf, by breaking and carrying away the feet of the high tressels on which it was supported and causing it to fall. The steamer *Filgate*, which was being wintered in the old canal basin, No. 1, was slightly injured by being shoved against the wharf wall, but the Harbour Commissioners' dredging fleet and the steamer *Paul Smith*, which were being wintered in the harbour just below the canal entrances clear of the wharfs, suffered no damage.

No other movement of ice occurred until the morning of March 16, when a slight shove took place in the main channel near the lower end of the gap, accompanied by a rise of the river from 26 to 29 feet depth on the lock sill. Other movements occurred in the St. Mary's current on April 11 and 13, and opened the central main channel from the Victoria Bridge to the Longueuil Ferry. On the 15th a quantity of ice came down from Laprairie Bay and, passing under the sheet at Hochelaga, caused a rise of the water to 32 feet on the lock sill. On the 16th a quantity of Lake St. Louis ice passed down the Lachine Rapids. On the 17th a movement took place in the Laprairie Bay, and enough ice passed down to completely fill the openings opposite the city and raise the water to 33 feet 8 inches. On the 17th a general movement took place, accompanied by a rise of water to 37 feet 2 inches. Heavy shoves followed on the 18th and 19th, accompanied by rises of water until it reached 38 feet 6 inches on the sill, the height of the top of the revetment wall, and the highest point during spring, at noon of the 19th. After this the ice gradually cleared away and the water fell until on the 24th it was at 26 feet.

Navigation commenced by the running about in the harbour of the Harbour Commissioners' tug, *St. Peter*, on the 21st. The Richelieu and Ontario Navigation Co.'s ferry boat *Longueuil* arrived up from Boucherville on the 24th, and the steam barge *Victoria* from Sorel on the 25th.

The heavy shoving of the ice at the high level of water on the 18th and 19th, caused the lodging of much ice on all the wharfs not protected by the guard pier. The following are the approximate quantities left on the several wharfs at the opening of navigation :—

LOCALITY.	DIMENSIONS.			Quantities.
	Length.	Breadth.	Average Depth.	
	Feet.	Feet.	Feet.	Cub. yds.
Sections 16 and 17, opposite St. Gabriel Street.	150	25	4	694
Section 18, opposite Jacques Cartier Square.	70	90	5	1,166
Section 19, Bonsecours Pier	100	95	3	1,055
Section 20, opposite Bonsecours Market.	150	50	4	1,111
	90	40	4	533
Section 20, Victoria Pier—				
Upper End, aggregate.	25	10	2½	23
Lower End, aggregate	150	100	11	6,111
Sections 21 to 23.	950	100	5	17,600
Sections 23 to 27.	1,030	95	14	50,737
Section 28.	300	15	3	500
Sections 28 and 29	940	50	6	10,444
Sections 29 to 31, small cakes, say.				20
Sections 31 to 33.	1,150	60	8	20,551
Sections 33 to 35.	1,400	50	5	13,000
Section 36.	350	160	8	16,600
Section 37.	490	125	4	9,074
Section 38.	450	120	10	20,000
Section 39.	150	100	5	2,777
Sections 39 and 40.	400	100	9	13,333
Section 46, outer end of Sugar Refinery Pier.	100	15	3	163
Total quantity cubic yards				185,492

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The clearing away of the ice from the sites of the steamship sheds, ferry steamer berths and other places first required for use, was commenced on April 23, and was carried on with gangs of men, horse-scrapers and carts, assisted by two of the floating steam derricks, at such rate as was requisite, and by May 1 the wharfs were practically cleared. The force employed at the beginning was 125 men; by April 23 it had been increased to 350 men; on the 25th it was 700, and from that it was gradually decreased to the completion of the clearing on May 6.

Cost of ice clearing: men's wages and tools, \$6,315.36; derricks' work, \$345; total \$6,660.36.

The pier in section 43, Hochelaga, was seriously injured by the shoving of the ice and the scour of the water across it. The cribwork was not damaged, but at about one-third of the length of the pier from the inshore end, a channel, of 4 to 10 feet deep and 85 feet wide, was cut across the pier, and macadamizing, earth filling and parts of the railway tracks were carried over into the basin at the down-stream side. Nearly the whole of the remaining area of the pier was ploughed across by the ice and much of the macadamizing carried into the basin.

In section 46 the macadamizing of the pier was also badly torn up and parts of it carried over the side, but the cribwork and railway tracks were not injured. The coping and face timber and planking of the wharfs, from section 24 at the Canadian Pacific Railway elevators to section 43, Hochelaga, suffered damage at several places.

The down-stream inner corner of the Victoria Pier, section 19, which is pile work, was badly damaged.

The following are the principal items of repair work done during 1899:

Section 5, Windmill Point Basin.—Screens of 4-inch plank, held by suitable timbers and tie bolts, were made and placed on the upper part of the mouths of the two raceways discharging into the head of the basin, in order to stop the surface current of the races and allow vessels to lie conveniently alongside the wharf. Cost, \$221.89.

Sections 6 and 7.—Strong board fences were placed along the Commissioners' boundary line across the raceways of the Malleable Iron Co. and Peck, Benny & Co.'s to prevent the possibility of persons falling in. The gratings of all the raceways at the mouths of the culverts under the wharfs were also repaired to prevent bathers from being carried in.

Section 15.—The pile work of the down-stream side of the pier leading out to the Island wharf was repaired by cutting the piles down to the water line and substituting a framing and new top timbers and planking. Area, 20 feet by 60 feet. Cost \$267.61.

A new paved stone foot-way was laid across the Island wharf.

Section 16.—An area of 45 by 25 feet, at the outer angle of the wharf, which had been lifted by the ice, was rebuilt with new top timbers and planking and two new piles.

Section 18.—The front of the cribwork above water, which is badly decayed, was strengthened by upright timbers and anchor bolts of 1½ inches by 32 feet, in order to make it stand until the proposed new wharf is built in front.

Section 19.—A new plank walk of 250 by 23 feet was laid throughout the length of the pier for the use of the ferry-boat passengers. Cost \$220.10.

Section 20.—The pile work top of the down-stream corner of the Victoria pier, which was badly damaged by last winter's ice shove, was rebuilt with new piles and new top timbers and planking. Area repaired, 3,500 square feet. Cost \$1,034.27.

The pile work along the inner side of the pier was repaired at several places by cutting and splicing piles and renewing timbers, &c.

A slip of 9 feet wide, 12 feet long and 3 feet deep at lower end, was made in the outer up-stream face of the pier for giving access to small steamers occupying it.

Sections 22 and 23.—The timber of 450 feet of the upper part of the cribwork wharf, which was built in 1862 and had become badly decayed, was entirely removed to a depth of 4 to 6 feet from the top. An examination of the bottom of the front of the wharf by a diver showed some undermining by the scour of the swift current, and the place was protected from further damage by driving a close row of fourteen piles in front. Cost, \$2,856.79.

Section 24.—The cribwork of the wharf, which is old and was founded at about 16 feet depth at low water of 13 feet on the sill, had become undermined by the current and ships' propellers, and by the deepening of the basins to 27 feet at low water, and had settled down and pitched forward at the top throughout a length of 300 feet. It had already been protected and strengthened by close piling in front and it was, last summer, further secured by anchor bolts, 1½ inches in diameter by 48 feet long, put in at about 12 feet apart. The timber work was also renewed to 3 to 4 feet down and built up to proper height, and the filling and roadway in rear made good. Cost, \$1,232.17.

Section 27.—The top of the wharf, which has been damaged by ice shoves, was repaired by renewing 50 feet in length of the upper two courses of coping timber. The filling which had gone out of the top of the cribwork was replaced.

Section 28.—Three places in the timber work of the wharf, of an aggregate length of 150 feet, which had been damaged by ice shoves, were repaired by renewing the upper three front courses and coping and the top planking and sleepers. Cost, \$332.47.

Section 29.—Repairs were made to two places of the timber work where damaged by ice.

Sections 27 to 30.—The face planking, which had been much damaged in places by ice, was renewed or thoroughly repaired over an aggregate length of 1,425 lineal feet of front. The coping was also renewed at several places. Cost, \$199.73.

Sections 30 to 35.—The upper timbers and coping of the cribwork were damaged in many places by the ice. Repairs were made by putting in 756 lineal feet of coping, 225 lineal feet of face timber and renewal of a considerable part of the top planking of 1,500 feet of wharf. Cost, \$529.49.

Section 37.—Subsidence of the wharf filling and timber occurred in different places under the tracks of the coal towers, and repairs were made by wedging up the timbers and replacing the lost filling by broken rock. A careful examination of the front and foundation of the cribwork was made by the Commissioners' diver in December and the whole found in strong, safe condition. About 225 lineal feet of wharf just east of the coal tower tracks was repaired by renewal of the top and face planking and coping. Cost, \$455.88.

Section 43.—The pier, which was seriously damaged by ice and scour, as above described, was repaired by putting about 8,200 cubic yards of earth and rock in the scoured out places; putting down 47 toises of new macadam and levelling and replacing what remained; furnishing rails and ties for 240 feet of railway track; relaying 350 feet more which had been displaced, and securing with anchor bolts the whole 700 feet; putting new top planking on 25 feet of the up-stream outer end and replacing a few face planks which had been torn off. Cost, \$4,233.11.

Section 46.—The macadamizing of the pier, which was somewhat damaged by the ice, was re-surfaced and repaired.

Sections 74 and 75, Longue Pointe.—The macadamizing of the two wharfs were re-surfaced and repaired.

General Repairs.—Ordinary general repairs were liberally made wherever needed upon the roadways and timber work of the wharfs, and the whole kept in good condition. The watering and cleaning of the roadways was also efficiently carried out. Macadamizing stone to the extent of 531 toises was used in the maintenance of the roadways, and was distributed as follows:

	Toises.
Sections 5 to 10	53
Sections 12 to 20	97½
Sections 21 to 30	170½
Sections 31 to 40	119
Sections 41 to 47	91
Total	530½

Electric Lighting.—Tenders for lighting the wharfs by arch lamps of 9.6 amperes were called for in April last, and a contract given to the Royal Electric Co., the lowest tenderers, for lighting for three years, at 15 cents per lamp per night.

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Lighting was commenced on April 26 with three lamps, nine more were added on the following day, and by May, 57 lamps were in operation. The number was gradually increased to 101 lamps on the 15th, to 114 on the 18th and 116 on May 26. On August 11 two lamps were put on the new pier at section 17; on August 25 another was added, and on the completion of the pier in November, five additional lamps were put on, making eight lamps in all on the new pier. Some lamps were removed from the Allans' sheds early in November, and, as the sheds of other companies were taken down, the lamps were removed from them also.

On December 6, the lamps between the Longueuil Ferry and the east end of the harbour were discontinued, and by the 11th the whole of the lighting, with the exception of three lamps at the Longueuil Ferry, had been discontinued. The lights at Longueuil Ferry were kept in operation for the convenience of Longueuil Ferry passengers until December 30, at which date the ferry-boat ceased running and the lights were discontinued.

The greatest number of lamps in use at one time was 122, and the total lighting for the season was equivalent to 25,635 lamps for one night. The total cost was \$3,845.25

NOTES.

Wintering Vessels.—A twin hull cattle boat belonging to Messrs. Gordon, is being wintered in the harbour alongside the Harbour Commissioners' dredging fleet, opposite the entrances of the Lachine Canal and is the only vessel, besides those of the commissioners, which is taking advantage of the winter harbour.

Grain Conveyor.—Montreal Warehousing Company's high level conveyor on sections 5 and 6, Windmill Point Basin, which was demolished by the ice in January, 1899, was rebuilt on strong supports early in the summer, and was lengthened to reach 500 feet along the basin, so as to load large ships. The extension was made under a new agreement between the Harbour Commissioners and the company, dated June 13, 1899, and the former agreement of June 15, 1898, was annulled.

Coal Pocket.—The Dominion Coal Co., built upon sections 4s and 5s, early in summer, an elevated coal pocket of cribwork foundations and steel framing, provided with modern and highly efficient machinery for unloading coal from ships and discharging into carts and railway cars. The pocket is 412 feet by 27 feet and of 50 feet height; the storage capacity is 6,000 tons and the unloading capacity is 1,000 tons per hour.

Cattle Shipping Yard.—The Canadian Pacific Railway Co., inclosed a cattle yard on the wharf on section 32, on space allotted by the Commissioners, for the purpose of receiving cattle from railway cars and sending them to ships by lighters. The yard is 300 feet long by 40 feet wide and is accessible to boats on one side and to cars on the other.

DREDGING PLANT AND DREDGING.

The dredging plant used in 1899 is all owned by the Harbour Commissioners, and consisted of three dipper dredges, five floating derricks, one single land derrick, one drilling and blasting boat, five tug-boats, twenty-one flat deck scows, two hopper bottom scows, a testing boat and a floating shop. Dimensions and other particulars of the different vessels are given in the annexed table.

In addition to the plant which was used, the Commissioners have two dipper dredges which have become unsuited to the present harbour works, and are for sale.

The land derrick was wintered on the guard pier and all the floating plant was wintered in the Windmill Point Basin, opposite sections 6, 7 and 8.

In a movement of the field of ice, which took place on January 4, the floating plant was moved with it a distance of about 28 feet, but suffered no damage.

The repairs to the hulls and machinery of the dredging fleet were made by the Commissioners' own men, with the exception of foundry work and some heavy machine work and forging, which were done at neighbouring shops, and steel castings, which

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were procured partly in Montreal and partly in the United States. The repairs to both dredges and derricks were heavier than usual, mainly for the reason that they were worked both night and day, instead of day only, and that the dredging, where not in rock, was in very tough silt, which required the utmost power of the dredges to break it up.

The following are the principal items of repairs made to the several vessels during the year :—

Dredge No. 1.—Crank shaft pinion renewed in iron and afterwards in steel; iron intermediate spur wheel replaced by a steel one; six foot sheave under deck renewed twice; two new brackets for holding spud rope sheaves below deck; two new sheaves on top of forward spuds; new friction clutch driver for stern spud drum; bucket handle of wood with steel plating, replaced by a new one wholly of steel; plain grate bars replaced by a set of rocker bars; feed water heater taken out and discarded and exhaust pipe altered; funnel renewed; steel bucket rope renewed twice; one pair of steel swinging table ropes renewed; upper steel spud ropes of both forward spuds renewed; stern spud chain replaced by steel rope; anchor straps of back stays of *A* frame renewed; planking of top sides of hull renewed; oak covering board renewed; deck partly renewed; hawse pipes of backing chain renewed three times.

Dredge No. 2.—Heater discarded and taken out; exhaust pipe altered; iron pinion on crank shaft replaced by a steel one; iron pinion on intermediate shaft replaced by one of steel; one spur wheel of main drum temporarily repaired where cracked in rim; main drum temporarily repaired; new bushing and key in six-foot sheave under deck; new bush in six-foot sheave at upper end of boom; lower end of boom strengthened with steel plates; back-stay of *A* frame repaired; steel bucket rope renewed twice; one swinging rope renewed; new hinge for holding forward spud keeper; hawse pipe for backing chain renewed four times.

Dredge No. 3.—New grates with revolving bars put in boiler in place of ordinary grates; heater discarded and taken out; exhaust pipe altered; main hoisting drum temporarily repaired where cracked; six-foot sheave under deck renewed; one bracket for holding forward spud sheaves under deck replaced by an old spare one, and the other replaced by a new one; bed plate of pivot of foot of boom replaced by a new one; forked pivot casting on top of *A* frame replaced by a new one; two large bolts renewed in forward spud hinge; chain for hoisting after spud taken out and replaced by a steel rope; steel bucket rope renewed four times; hawse pipe of backing chain renewed six times.

Derrick No. 2.—Put into drydock and caulked; *A* frame strengthened; clam shell repaired.

Derrick No. 4.—Phosphor bronze bushes of spud drums renewed; clam shell temporarily fitted with teeth for clearing ice off wharfs in spring; steel main ropes of forward spuds renewed; hoisting rope of clam shell renewed; complete set of spuds put on to replace a set broken by a field of running ice in spring; one spud renewed during summer.

Derrick No. 5.—Bevel wheels of spud gearing renewed by two new ones of iron and one of these afterwards replaced by a steel one; clam shell bucket temporarily fitted with teeth for clearing ice off the wharfs in spring; two spuds renewed.

Derrick No. 6.—Bevel wheel of spud gearing renewed in iron; clam shell temporarily fitted with teeth for clearing ice off wharfs in spring.

Tug Aberdeen.—Piston refitted and ground; a broken set of propeller blades replaced by a new set; new rocker grates put in.

Tug St. Peter.—Boiler repaired with a patch on the front of the furnace and another on the side; new head put on rudder to replace broken one; broken stem replaced by a new one.

Drill Boat.—New upright boiler of 4 feet diameter by 10 feet high added to replace a former one which had been taken off; funnel of large boiler renewed; one new drill cylinder made; slides of drill frames repaired; put into dry dock and caulked in the corners and sides and in parts of bottom.

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Scows.—Flat scow No. 31 was largely rebuilt; the bracing of the hog frames, the deck beams, deck and deck covering were all renewed and other parts were overhauled and repaired where requisite. Fifteen other flat scows were lightly repaired in the fender ribbons, decks, sides and ends.

Dredge Boxes.—About 100 boxes were almost wholly re-built and repairs were made to all others.

Derrick Floats.—The three timber floats used in front of derricks 4, 5 and 6, which had become decayed and much damaged, were replaced by new ones of much stronger build.

Punts.—Twelve punts of 16 to 18 feet long, were built to increase the stock or to replace others worn out or destroyed by accident.

Spare.—The following spare parts were made :

A steel bucket handle (afterwards put on dredge No. 1).

A seven-yard dredge bucket.

Two four-yard clam shells of new pattern.

A propeller 7 feet 10 inches diameter (afterwards put on new tug *Robert Mackay*).

Three Douglas fir forward spuds for dredges, 36 inches square by 60 feet.

One Douglas fir after spud for dredges, 24 inches square by 60 feet.

Three Douglas fir spuds for derricks, 21 inches square by 66 feet.

The following buckets were repaired for general use :

Two seven-yard dredge buckets had the lips renewed.

Five new doors were fitted to dredge buckets.

Three old clam shells for the large derricks were thoroughly overhauled and repaired.

Dredges 6 and 7 were cared for but not used.

Derrick No. 3, built in 1875.—The wooden hull had become unfit for service by decay and the derrick was therefore dismantled. The machinery was stored at the shipyard on the pier and the hull used as a floating store for the ship carpenters.

Tug M. P. Davis.—The wooden hull, built in 1879, was unfit for longer use and not worth repairing. The machinery and valuables were therefore taken out and the hull abandoned.

NEW PLANT.

In view of the large extent of the harbour works undertaken, the Commissioners ordered the building of the following additional working plant, which was carried out :

Tugboat *Robert Mackay*, for attending dredges: length between perpendiculars, 71 feet; length all over, 81 feet 9 inches; moulded breadth, 17 feet 6 inches; depth 10 feet; steel hull; mainly according to Lloyd's requirements for highest classification, but in some respects of greater strength, in order to suit it for its special service; fore and aft compound engine, with cylinders of 16 and 32 inches diameter and 24 inches stroke; jet condenser and independent air pumps; boiler with rectangular furnaces and return tubes, having 1,500 square feet heating surface and certified for 140 pounds per square inch working pressure; steam steering gear; steel deck house, having accommodation for day and night crews, and room in wheelhouse for ten passengers. Built by Messrs. Carrier, Laine & Co., at Lévis, Que., according to plans and specifications of the Commissioners' Chief Engineer. Contract price, delivered and equipped complete, \$20,482. Delivery was to have been made by May 1, 1899, but was not made until September 24.

Derrick No. 1.—A floating derrick for unloading dredgings from flat deck scows, with wooden hull, 74 feet 8 inches long by 26 feet 4 inches wide over frames and 76 feet long by 27 feet 6 inches wide over guards, 7 feet 6 inches depth over deck and floor beams and 8 feet over planking. The main machinery and boiler are those of one side of the double land derrick used in the construction of the guard pier, the same as those of the large floating derricks, and of the following particulars: horizontal non-condensing hoisting engine, with two cylinders 12 inches diameter and 14 inches

stroke, driving, by double gearing, a hoisting drum of 24 inches diameter and a tripping drum of 36 inches diameter; swinging engine, with two cylinders 7 inches diameter and 8 inches stroke; spud gear worked from main engines and the spuds lifted and pinned up by wire ropes working on drums, which are driven by friction clutches and held fast by friction brakes; boiler of locomotive type 45 inches diameter of shell and 14 feet length; boom 79½ feet long to centre of upper sheaves, set to a horizontal reach of 69 feet from the centre of turntable and middle line of hull; clam shell (or grapple) bucket, ordinarily used for unloading scows, of 4 cubic yards capacity, closed and lifted by sheaves and a one inch diameter steel rope, which is connected single with the hoisting drum, and opened by a similar rope connected with the tripping drum; main and swinging engines and boiler built by John McDougall, Montreal, in 1892-3; other machinery and the hull built at the Commissioners' shops in 1899; set to work November 9; cost, exclusive of original machinery, \$12,052.46.

Dumping Scows Nos. 36 and 37.—Two dumping scows of 200 cubic yards capacity each, for serving dredges; wooden hulls, chiefly of southern pitch pine. Dimensions of each over all: length, 106 feet; breadth, 26 feet 10 inches; depth, 9 feet 6 inches; five pockets of 40 cubic yards each when filled level with deck; doors, 15 feet 9 inches by 4 feet 6 inches each leaf, giving a clear opening of 8 feet by 15 feet 9 inches, all five pairs opened and closed simultaneously by a pair of hydraulic cylinders worked from the force pumps of the tug or dredge. Built at the Commissioners' shops in summer of 1899. A third similar dumping scow was also built nearly complete, except the gates and the apparatus for working them. Expenditure on the three in 1899, \$25,679.53.

Dredge No. 4.—A contract was made in December, 1898, for the building of a dredge similar to the Commissioners' other dredges, Nos. 1, 2 and 3, but with steel hull and stronger machinery. Delivery was to have been made by June 1 last, but had not been made at the close of navigation last fall, and now cannot be made until the approaching opening of navigation.

Repairing Berth.—The necessity of using every part of the harbour wharfs for last year's shipping deprived the dredging fleet of a repairing berth at any of them. As a temporary measure, the guard pier was taken possession of and a light pile wharf of 116 feet by 50 feet was built on the inner or west side for the use of the dredging fleet and the ten ton hand derrick was placed upon it. The floating machine shop was moored at the end and a wooden carpenter's shop was built on the top of the bank opposite.

The dredging fleet was served throughout the summer by the tugs *St. Peter*, *St. Louis* and *Aberdeen*, and, after October 7, by the new tug *Robert Mackay*. Service was also rendered by the small tug *M. P. Davis* in carrying men and stores, running messages, &c. About one-third its time was occupied in this way, the remainder being occupied in towing timber and other services for the wharf-building work.

The dredges were got to work in the spring as soon as the clearing away of the ice permitted. Dredge No. 1 commenced work on April 26; No. 3 commenced on April 27, and No. 1 on May 1. The completion of the large new pier in sections 18 and 19 by the close of navigation and the undertaking of other works in contemplation involved an extent of dredging beyond the capacity of the three dredges if worked by day only, and two of them were therefore worked night and day as long as was necessary to supply the deficiency. Night work was started by dredge No. 1 on June 19, and by No. 1 on July 3, and both continued night and day work until the close of the working season. Dredge No. 2 worked by day only. Dredge No. 1 was stopped for the season on November 30, No. 2 on December 1, and No. 3 on December 5. All were employed in harbour work throughout the summer, except No. 1, which was used from May 28 to June 23, inclusive, in dredging out the ss. *Gallia*, which ran aground at Isle de Grace, Lake St. Peter, at the time of falling water. The aggregate number of shifts or watches during which they were on duty on the harbour works, reckoning all days of the day dredges and all nights and days of the night-and-day dredges, except those of Sundays and holidays, was: for No. 1, 287 day and night shifts; for No. 2, 187 day shifts, and No. 3, 331 day and night shifts, making in all 805 shifts. The nominal working hours of each shift were eleven, except in spring and fall, when they were ten; and the aggregate for all the dredges throughout the season was 8,485 hours. The aggregate of actual

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working time, that is the time which the dredges actually dredged, exclusive of that lost for repairs, changing positions, detention by ships, irregularities of scow service, and all other causes, was 6,222 hours, or an average of 73½ per cent of the nominal working hours. The percentage of time of actual working is smaller than the average of recent years, mainly because of the conditions incident to night work. Repairs, changing of buckets, changing of places of work, overtaking irregularities in scow service and such like, which, when working by day only could be made good by overtime, must when working both night and day, be made good in working hours, and therefore involve detention.

Derricks Nos. 4 and 5 were set to work on April 24, clearing ice from the wharfs; No. 4 was employed for three days and No. 5 for 8½ days. Derricks No. 2 and 6 commenced unloading scows on April 27, and the new derrick No. 1 on November 9. No. 2 was not worked between July 21 and August 29, and was entirely withdrawn from service on October 18, but the others were kept at work until the end of the season. Derrick No. 4 was worked night and day from the time of commencing night work to the end of the season, and the other derricks were worked sometimes by day and night and sometimes by day only, as found necessary.

Drilling and blasting was commenced by the drill boat on May 1 and work was continued until November 28, when it was sent into Cantin's dock, for slight repairs to the hull previous to being wintered with the fleet in the harbour.

The total outlay for working the whole fleet, except the drill boat, was \$100,162.95, which embraces the entire cost of working the plant and machinery, including repairs, outfit, wages, salaries, management charges, insurances, allowance for depreciation of plant, and all charges of every kind, except interest on capital. The allowance for depreciation of plant is \$15,726.49, and it includes not only the estimated depreciation of the plant in use in 1899, but that upon all the Commissioners' dredging plant whether in use or not. It is also to be noted in making comparison with previous years, that depreciation was not included in the cost of dredging in any year previous to 1899.

The cost of maintaining and working the three dredges and the tugs and scows which served them, was \$74,831.69, or an average of \$92.96 per day per dredge.

The cost of maintaining and working the five floating derricks for unloading scows was \$25,331.26, or \$27.56½ average per day for 919 days' aggregate service.

The following are the comparative costs and quantities of dredging for 1899, and for previous years,—

Years.	Cubic Yards Dredged.	Total Cost	Cost per Cubic Yard.	Remarks.
		\$	\$ cts.	
1875.....	151,719	68,979	0 45	
1876.....	156,082	55,462	0 35 ⁶⁰ / ₁₀₀	
1877.....	173,499	45,103	0 26	
1878.....	211,731	48,748	0 23	
1879.....	189,609	41,006	0 21 ⁵³ / ₁₀₀	
1880.....	186,430	46,914	0 25 ¹³ / ₁₀₀	
1881.....	170,764	54,128	0 31 ⁶⁰ / ₁₀₀	
1882.....	187,339	53,598	0 28 ⁶⁰ / ₁₀₀	Spoon dredges and stone-lifters. Elevator dredges.
	9,429	13,254	1 40 ⁰⁰ / ₁₀₀	
	196,768	66,852	0 33 ²⁸ / ₁₀₀	Totals and average.
1883.....	36,358	17,956	0 49 ³³ / ₁₀₀	Spoon dredges and stone-lifters. Elevator dredges lifting rock and boulders and clearing up.
	6,990	19,385	2 77 ⁰⁰ / ₁₀₀	
	43,348	37,341	0 86 ¹³ / ₁₀₀	Totals and average.
1884.....	125,648	49,468	0 39 ⁵⁷ / ₁₀₀	Spoon dredges and stone-lifters.
1885.....	69,494	28,563	0 41 ¹⁰ / ₁₀₀	" "
1886.....	57,728	25,772	0 44	" "
1887.....	36,993	23,259	0 62	" "
1888.....	73,150	36,690	0 50 ¹⁰ / ₁₀₀	" " Elevator dredges.
	2,077	1,333	0 64 ¹³ / ₁₀₀	
	75,227	38,023	0 50 ⁵⁴ / ₁₀₀	Totals and average.
1889.....	205,283	54,574	0 26 ⁴³ / ₁₀₀	Spoon dredges and stone-lifter. Elevator dredge.
	9,420	2,996	0 31 ⁵⁰ / ₁₀₀	
	214,703	57,570	0 26 ³¹ / ₁₀₀	Totals and average.
1890.....	186,670	53,674	0 28 ⁹⁰ / ₁₀₀	Spoon dredges and stone-lifter.
1891.....	259,267	49,571	0 19 ¹² / ₁₀₀	Spoon dredges. Elevator dredge.
	43,290	14,232	0 32 ¹⁷ / ₁₀₀	
	302,557	63,803	0 21 ⁸⁸ / ₁₀₀	Total and average.
1892.....	361,947	93,595	0 25 ³³ / ₁₀₀	Spoon dredges.
1893.....	235,280	93,050	0 39 ⁰⁰ / ₁₀₀	"
1894.....	312,430	98,858	0 31 ⁰⁴ / ₁₀₀	"
1895.....	496,528	99,400	0 20 ¹⁰ / ₁₀₀	"
1896.....	401,938	103,317	0 25 ¹⁰ / ₁₀₀	"
1897.....	284,844	68,211	0 23 ⁰⁰ / ₁₀₀	"
1898.....	456,458	61,012	0 13 ³⁵ / ₁₀₀	"
1899.....	963,131	100,163	0 10 ¹⁰ / ₁₀₀	"

It will be noticed that notwithstanding the disadvantages of night work, and the addition of the allowance for depreciation of plant in 1899, the average cost of dredging in that year was decidedly lower than in any previous year, and that it was only about one-third to one-half of the usual averages.

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The cost and character of the dredging in different parts of the harbour in 1899 are given below. All the quantities are either scow measurements from the tallied number of flat deck and dumper scow loads of measured average capacity, or box measurement from the tallied number of boxes placed on scows, containing four cubic yards per box.

The cost of dredging in each case includes its proportion of all the costs of maintaining and working the dredges, tugs and scows, as explained on p. 25; but does not include the cost of unloading the dredgings from scows by derricks, which is separately given.

Sections 5 to 10 (Windmill Point Basin).—The dredging of 1899 chiefly consisted in dredging up blasted and partly blasted rock on the south-east side of the basin in sections 7 to 10, and for the remainder in cleaning up the work of former years in different parts of the basin. Total quantity dredged, 43,738 cubic yards, scow and box measurement, shale and trap rock with some earth; average cost $19\frac{2}{3}$ cents per yard; depth of water to which dredging was done, at the then existing stage of water, 30 to 38 feet. Unloading dredgings by floating derricks and filling into cribwork or cars, $3\frac{1}{2}$ cents per yard additional.

Section 11 (approach to Windmill Point Basin).—Deepening and widening the channel; shale and trap rock, part blasted and part not, boulders, gravel and hard-pan; 30 to 38 feet depth; 5,396 cubic yards, scow and box measurement; cost $10\frac{3}{4}$ cents per yard. Unloading by floating derricks and filling into cribwork or cars, $3\frac{1}{2}$ cents per yard additional.

Section 12.—Dredging out old pile and cribwork wharfs, cutting into bank in rear and deepening for site of new cribwork wharf; the cutting was chiefly of soft earth in the upper part, but hardening with increase of depth to hard-pan at the bottom, 34 to 36 feet depth; 18,289 cubic yards, scow and box measurement, cost $17\frac{1}{2}$ cents per yard, part unloaded by floating derricks cost $3\frac{1}{2}$ cents per yard additional.

Cleaning out ships' berths; mud and rubbish overlying hard-pan; 30 to 35 feet depth; 750 cubic yards scow measurement; cost $17\frac{3}{4}$ cents per yard. Unloading by derricks, $3\frac{1}{2}$ cents per yard additional.

Section 14.—Dredging sites for the cribwork of the new pier; sewage deposit, mud and hard-pan; 34 to 36 feet depth; 5,650 cubic yards, scow and box measurement; cost $9\frac{1}{2}$ cents per yard. Unloading by derricks $3\frac{1}{2}$ cents per yard additional.

Section 17.—Dredging sites for the cribwork of the new pier; chiefly tough silt; 35 to 38 feet depth; 57,324 cubic yards, scow and box measurement; cost $7\frac{3}{4}$ cents per yard. Part unloaded by derricks cost $3\frac{1}{2}$ cents per yard additional.

Sections 22 and 23.—Deepening the basin and cleaning out ships' berths; chiefly fine grained hard packed silt; 32 to 35 feet depth; 26,700 cubic yards, scow and box measurement; cost 7 cents per yard. Unloading by derricks, $3\frac{1}{2}$ cents additional.

Section 43.—Cleaning out ships' berths; soft sand and silt; 32 to 36 feet depth; 3,150 cubic yards, scow measurement; cost $11\frac{1}{2}$ cents per yard. Unloading by derricks, $3\frac{1}{2}$ cents additional.

Sections 43 to 46.—Dredging on sides of shoal; chiefly coarse sand; 35 to 40 feet depth; 9,900 cubic yards, scow measurement; cost 1.06 cents per yard. Unloading by derricks, $3\frac{1}{2}$ cents per yard additional.

Island Shoal—Dredging inner side of shoal and making a channel through the shoal; tough silt of variable quality; the upper part, to a depth of 3 to 6 feet, was generally so tough and hard that the bucket teeth did not cut and crumble it like ordinary earth, but split it off in masses with a cleavage like rock; beneath was softer stuff, but still tough, difficult dredging. The depth of water on the shoal where dredged was generally from nothing to 10 feet, and on the remainder from 10 to 20 feet; the depth to which dredging was done was 25 to 38 feet. Dredges worked nearly always night and day. Quantity dredged, 781,514 cubic yards, scow and box measurement; cost $6\frac{3}{4}$ cents per yard. Of this 695,427 yards were unloaded from the scows by derricks into cribwork and in rear in making the new pier in sections 17 and 18, and the new pier and wharf sections 12 to 15. Cost of such unloading, $3\frac{1}{2}$ cents per yard.

Aggregate Dredging.—The aggregate quantity dredged at all places during the year was 963,131 cubic yards, box and scow measurement, and the average cost was 7.551

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cents per yard. Of this quantity 177,510 cubic yards were carried and discharged by dumping scows, the cost of which is included in the dredging. The remaining 785,621 cubic yards were carried on flat scows, either on the open deck from which it was unloaded by clam shells and floating derricks, or in 4 yard boxes which were lifted and dumped by the derricks. All the dredged stuff thus unloaded by derrick was deposited in or behind cribwork for wharf building, and on the site of future wharf extension at Windmill Point, and on cars for making the guard pier. The average cost of the whole derrick work, apart from the scow service, was 3·22 cents per cubic yard, scow or box measurement.

Rock Blasting.—The rock drilled and blasted was Utica shale and trap, the trap being imbedded in the shale in beds, veins and pockets, in the proportion of about two-thirds of trap to one-third shale ; grade line of finished bottom, 38 feet to 30 feet below water surface at the time of working.

Working days, May 1 to November 28	180 days
Working time per day	11 hours.
Number of holes drilled and blasted	4,395 holes.
Average depth of each hole, in rock	7·48 feet.
Average depth of each hole from surface of water	32·10 feet.
Total quantity of rock drilled and efficiently blasted, measured in solid to 6 inches below finished bottom	20·486 cub. yds.
Total cost including depreciation of plant	\$16,273·83
Cost per cubic yard, measured in solid	79·83 cents.

Appended are tables giving additional particulars of the dredging work and dredging plant in 1899.

Yours respectfully,

JOHN KENNEDY,
Chief Engineer.

SESSIONAL PAPER No. 11b

HARBOUR DREDGING.—Statement showing cost of Harbour Commissioners' dredging by different dredges, with their proportion of Tug and Scow Service for 1899.

Vessels.	Dredge Service.		Tug Service.		Scow Service and Sundries.		Dredge with Tug and Scow Service added.		Time of Service.	Cost per Working Day of Dredge.	Quantity Dredged.	Average cost per cubic yard.	Additional cost for unloading by derricks.		Proportions of Materials Dredged.	
	Cost.	Proportion of Cost.	Cost.	Proportion of Cost.	Cost.	Proportion of Cost.	Cost.	Proportion of Cost.					Earth.	Rock.		
Dipper dredge No. 1.....	\$ 14,852 33	cts. 14,852 33	\$ 6,571 05	cts. 6,571 05	\$ 5,330 65	cts. 5,330 65	\$ 26,754 03	cts. 26,754 03	Days or Nights. 287	\$ 93 22	Cub. yds. 320,469	cts. 0635	cts. 032222	p. c. 66½	p. c. 33½	
" No. 2.....	10,845 35	10,845 35	4,281 45	4,281 45	3,473 30	3,473 30	18,600 10	18,600 10	187	99 47	148,435	1253	032222	100	.....
" No. 3.....	15,751 30	15,751 30	7,578 39	7,578 39	6,147 87	6,147 87	29,477 56	29,477 56	331	89 06	494,227	0596	032222	100	.....
Totals and averages.....	41,448 98	41,448 98	18,430 89	18,430 89	14,951 82	14,951 82	74,831 69	74,831 69	805	92 96	963,131	0755	.....	94½	54

For full particulars of materials dredged at different places by the various dredges, see detailed statements in the preceding report.

HARBOUR DREDGING.—Statement showing particulars of Cost of working the different Vessels employed in Harbour Dredging in 1899.

Vessels.	Repairs and Maintenance.	Fuel.	Wages.	Proportion of Salaries of Staff.	Estimated Depreciation of Plant.	GRAND TOTALS.		Service Days or Nights.	Cost per Day or Night.
						Cost.	Total cost.		
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Dipper dredge No. 1	5,510 42	2,290 71	5,096 85	685 40	1,259 95	14,852 33	14,852 33	267	51 75
" No. 2	3,652 07	1,599 36	3,652 84	480 50	1,420 58	10,845 35	10,845 35	187	58 00
" No. 3	4,941 45	2,865 79	5,656 39	725 31	1,564 36	15,751 30	15,751 30	331	47 59
Dipper dredges—Totals	14,103 94	6,764 86	14,446 08	1,890 21	4,244 89	41,448 98	41,448 98	805	£1 49
Floating derrick No. 1	240 76	140 35	513 92	48 07	.....	943 10	943 10	23	41 00
" No. 2	905 92	342 72	1,685 71	157 62	.....	3,512 53	3,512 53	142	24 73
" No. 4	1,565 51	1,057 33	3,905 08	347 79	447 09	7,322 80	7,322 80	281	26 06
" No. 5	1,096 47	851 16	3,861 72	310 94	469 87	6,590 21	6,590 21	224	29 42
" No. 6	902 02	1,025 23	4,211 75	329 81	493 81	6,962 62	6,962 62	249	27 96
Floating derricks—Totals	4,710 68	3,416 79	14,178 18	1,194 28	1,891 33	25,331 26	25,331 26	919	27 56
Tug Aberdeen	851 45	1,863 46	2,741 75	293 16	929 38	6,679 20	6,679 20	313	21 34
" St. Peter	643 02	1,330 08	2,498 65	240 51	562 54	5,219 75	5,219 75	293	17 82
" St. Louis	413 08	784 99	1,746 53	168 47	334 68	3,437 75	3,437 75	203	16 93
" Robert Mackay	165 54	463 49	847 26	79 30	.....	1,555 59	1,555 59	80	19 44
" M. P. Davis	214 49	351 07	784 52	73 52	.....	1,538 60	1,538 60	198	7 77
Tugs—Total	2,287 58	4,798 04	8,618 71	843 96	1,882 60	18,430 89	18,430 89	1,087	16 96
Scows and plant not in use	6,974 56	.....	.....	432 09	7,545 17	.....	14,951 82	.....	.....
Grand totals	28,076 76	14,979 69	37,242 97	4,359 54	15,503 99	.....	100,162 95	.....	.....

HARBOUR DREDGING.—Abstract of Work done by each Dredge for the Harbour of Montreal in 1899.

Vessels.	Places at which Dredging was done.	Time of Service.		Quantities Dredged.		Character of Soil.
		Days and Nights.	Total.	Cubic Yards.	Total Yards.	
Dredge No. 1	Island shoal	238½	287	285,044	320,469	Hardpan, silt and stones.
	New pier, section 17, crib seats	3		3,400		Silt and sand.
	New pier, section 14, crib seats	5½		5,650		Hardpan and some rock.
	New wharf, section 12, crib seats	24½		13,325		Hardpan, sand and timber.
	Section 43, clearing up	4		3,150		Sand, stone, macadam, &c.
Dredge No. 2	Sections 43 to 46, deepening	11½	187	9,900	148,435	Sand.
	Island shoal	57½		54,777		Tough silt and stone, some hardpan and shale.
	New pier, sections 17 and 18, crib seats	27½		39,040		Tough silt and stones.
	New wharf, section 12, crib seats	9		4,864		Hardpan, stones and timber.
	Entrance to Windmill Point	6½		5,996		Trap and shale, some hardpan.
Dredge No. 3	Windmill Point	86½	331	43,758	494,227	"
	Island shoal	276		441,693		"
	New piers, sections 17 and 18, crib seats	16		14,924		Silt, sand and stones, some shale.
	New pier, section 14, crib seats	16½		10,160		Silt, sand and stones.
	Deepening berths, sections 22 and 23	20½		26,700		Silt and stones, hardpan and rock.
Clearing out berth, section 12	1½	750	Gravel, sand and stones.			
	Grand totals		805		963,131	Hardpan, some rock.

SESSIONAL PAPER No. 11b

List of Harbour Commissioners' Dredging Plant, 1899.

Description of Vessel.	HULL.			ENGINES.				Capacity of Bucket.	Depth to which Dredge can work.	Remarks.		
	Length over all.	Breadth of Beam.	Depth over all.	When Built.	Kind of Engine.	Number of Cylinders.	Diameter of Cylinders.				Length of Stroke.	Pressure of Steam.
	Ft. in.	Ft. in.	Ft. in.			Inches.	Inches.					Yds Ft.
DREDGES.												
Boom spoon dredge, No. 1.....	90 0	36 0	9 6	1890-1	Horizontal, non-condensing.	2	16	18	110	7 40	Wooden hull.	
" " No. 2.....	90 0	36 0	10 3	1892		2	16	18	128	7 40	" "	
" " No. 3.....	90 0	36 0	10 3	1894		2	16	18	120	7 40	" "	
" " No. 6.....	77 0	27 0	7 6	1874		1	14	16	85	2 35	Rebuilt and altered, 1892.	
Crane " " No. 7.....	77 3	27 0	7 0	1874	1	14	16	85	1 32	Rebuilt in 1889.		
DERRICKS.												
Clam shell derrick, No. 1.....	76 0	27 6	8 0	1899	Horizontal, non-condensing.	2	12	14	110		Wooden hull.	
" " No. 2.....	57 0	23 6	5 9	1872		2	7	12	85		" "	
" " No. 4.....	75 0	26 10	7 6	1892		2	12	14	110		" "	
" " No. 5.....	75 0	26 10	7 6	1832		2	12	14	110		" "	
" " No. 6.....	75 0	26 10	7 6	1892	2	12	14	110		" "		
Land derrick.....	42 0	40 0		1892-3	2	12	14	110		Wooden framing.		
Drilling and blasting boat.....	80 0	27 0	5 6	1895				110		Altered 1899. Three 5-in. steam drills.		
TUG BOATS.												
Tug St. Louis.....	67 0	15 0	8 7	1875	Vertical non-condensing.	1	16	20	85		Wooden hull (rebuilt in 1891.	
" St. Peter.....	71 6	16 6	8 6	1875		1	20	22	85		" "	
" M. P. Davis.....	40 5	10 7	5 3	1879		1	10	12	95		Wooden hull.	
" Aberdeen.....	79 3	18 3	9 0	1895		1	16	24	125		Steel hull.	
" Robert Mackay.....	81 9	17 6	10 0	1899	1	32	24	140		" "		
Testing boat.....	73 3	14 0	3 1	1897	1	16	24				Two wooden scows, braced 16 ft. apart.	
Floating shop.....	135 0	29 0	10 0			1	32				Wooden hull.	

List of Harbour Commissioners' Dredging Plant, 1899—Concluded.

Description of Vessel.	HULL.			ENGINES.				Capacity of Bucket.	Depth to which Dredge can work.	Remarks.		
	Length over all.	Breadth of Beam.	Depth over all.	When Built.	Kind of Engine.	Number of Cylinders.	Diameter of Cylinders.				Length of Stroke.	Pressure of Steam.
	Ft. in.	Ft. in.	Ft. in.		Capacity.		Inches.				Inches.	
Scows.												
1 flat-deck scow	No. 6.	70 5	18 0	5 0	1873	45 cubic yds.				All wood.		
1 "	No. 11.	70 0	18 3	5 1	1874	45 "				"		
1 "	No. 17.	75 0	20 2	6 0	1876	67½ "				"		
1 "	No. 18.	75 4	20 4	6 3	1878	67½ "				"		
1 "	No. 19.	75 6	20 3	6 5	1878	67½ "				"		
1 "	No. 20.	75 6	20 3	6 3	1878	67½ "				"		
2 "	Nos. 21 and 22.	85 0	25 0	7 5	1891	150 "				"		
2 "	Nos. 23 and 24.	85 0	25 0	6 9	1892	150 "				"		
6 "	Nos. 25 to 30.	85 0	25 0	6 9	1893	150 "				"		
5 "	Nos. 31 to 35.	85 0	25 0	6 9	1893	150 "				"		
2 dump scows	Nos. 36 and 37.	106 0	26 10	9 6	1899	200 "				"		

* The tug M. P. Davis was dismantled in the fall of 1899.

Dredge No. 1 and Derrick No. 4 were hired to the London Salvage Association, in May and June, 1899, for the purpose of floating s.s. Gallia, aground in Lake St. Peter.

SESSIONAL PAPER No. 11b

HARBOUR COMMISSIONERS OF MONTREAL,
 SECRETARY'S OFFICE,
 MONTREAL, January 22, 1900.

F. GOURDEAU, Esq.,
 Deputy Minister of Marine and Fisheries,
 Ottawa.

SIR,—By direction of the Commissioners, at their meeting held on 16th inst, I send you herewith for the information of the honourable the Minister of Marine and Fisheries, a copy of the report of the Acting Harbour Master, for the calendar year 1899.

I have the honour to be, sir,

Your obedient servant,

DAVID SEATH,
Secretary.

HARBOUR COMMISSIONERS OF MONTREAL,
 HARBOUR MASTER'S OFFICE,
 MONTREAL, January 4, 1900.

DAVID SEATH, Esq.,
 Secretary, Harbour Commissioners,
 Montreal.

SIR,—I beg to submit, for the information of the Harbour Commissioners of Montreal, the following as my annual report for the year ending December 31, 1899.

Appended thereto will be found six comparative statements showing respectively, for the past ten years :

1. The number, tonnage and classification of sea-going vessels that arrived in port ;
2. Those that arrived from the maritime provinces ;
3. Number and tonnage of inland vessels ;
4. The dates of the opening and closing of navigation, &c. ;
5. The number and tonnage belonging to the different nationalities ;
6. The number and tonnage of vessels consigned to the different agents.

From these statements it will be seen that 801 sea-going vessels arrived in port during the past season with a tonnage of 1,517,611 tons, a decrease of 67 vessels and 66,461 tons from the previous year.

Of these vessels 761 were built of iron or steel, with a tonnage of 1,507,292, and 40 were built of wood with a tonnage of 10,319.

Of Inland vessels there arrived 8,877 with a tonnage of 1,899,097 tons, an increase over the previous year of 1,936 vessels and 91,205 tons, making a grand total of vessels of all classes of 9,678 vessels and a tonnage of 3,416,708 tons, an increase over the previous year of 1,869 vessels of all classes and 24,744 tons.

Some of the principal items of exports and imports (as obtained from the best sources of information) were :—

EXPORTS.

Lumber to United Kingdom and continental ports—

1899.	1898.
288,862,521 feet	323,435,266, a decrease of 34,572,745 feet.

Lumber to River Plate—

1,201,266 feet	11,993,924, a decrease of 10,792,658 feet.
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	1899.		1898.	
Grain—Wheat	9,852,131 bushels,		8,989,669 bushels.	
Corn	13,274,750	“	19,214,299	“
Peas	1,252,549	“	1,648,705	“
Oats	3,926,564	“	6,781,239	“
Barley	1,081,147	“	321,297	“
Rye	366,061	“	983,979	“
Flaxseed	609,350	“	771,071	“
Buckwheat	179,195	“		
Total	30,541,702	“	33,710,259	“ showing a decrease of 8,168,557 bushels.

	1899.		1898.	
Flour	1,320,372 barrels.	857,168	increase	463,204 barrels.
Meal	40,554 “	39,911	“	643 “
Eggs	177,643 cases.	190,018	decrease	12,375 cases.
Cheese	1,816,985 boxes.	1,836,261	“	19,276 boxes.
Butter	462,115 p'kgs.	300,161	increase	161,954 p'kgs.
Apples	286,473 barrels.	389,508	decrease	103,035 barrels.
Cattle	81,804 head.	94,136	“	12,332 head.
Sheep	58,277 “	33,499	increase	24,778 “
Horses	4,739 “	4,024	“	715 “
Hay	12,000 tons.	19,072	decrease	7,072 tons.

IMPORTS.

	1899.		1898.	
Coal from Great Britain	20,650 tons.	37,808	decrease	17,158 tons.
“ United States	259,493 “	235,983	increase	23,509 “
“ Maritime Provinces	965,014 “	849,863	“	116,151 “
Total	1,245,156 “	1,123,654	increase	121,502 tons.

Of the above quantities there were discharged :

In the harbour	1,023,539 tons.	877,014 tons.		
In the canal	221,617 “	246,640 “		
	1,245,156 “	1,123,654 “		
Cement	200,368 brls.	361,843	decrease	161,475 barrels.
Scrap iron	11,886 tons.	21,066	“	9,180 tons.

There arrived in the harbour the following vessels belonging to the British North Atlantic Fleet, namely, H.M.S. *Talbot*, *Pearl*, *Physche* and the torpedo destroyer *Quail* all of which arrived on September 18, and left again on September 23.

There is a decrease in the number and tonnage of the vessels arriving during the season, but this is accounted for by the fact that many of the regular line steamers were employed during the autumn as transports to South Africa, which, had they made their regular trips to Montreal, would have given a substantial increase in the tonnage over last year.

Owing to the harbour improvements in progress some of the lines had to give up part of the space assigned to them last spring, but provision was made for them elsewhere, and on the whole I think very little inconvenience was felt.

Yours respectfully,

T. BOURASSA,
Acting Harbour Master.

SESSIONAL PAPER No. 11b

PORT OF MONTREAL.

COMPARATIVE STATEMENT showing the Number, Tonnage and Classification of Sea-going Vessels that arrived in Port the past ten years, with the dates of the greatest number in Port at one time.

Years.	Steamships.	Tonnage.	Ships.	Tonnage.	Barques.	Tonnage.	Brigs.	Tonnage.	Brigantines.	Tonnage.	Schooners.	Tonnage.	Total Number of Vessels.	Total Tonnage.	Number in Port.
1890.	624	889,189	9	13,127	33	19,442	2	590	8	1,323	70	6,671	746	930,332	37, Sept. 3
1891.	631	903,043	11	1,643	15	11,054	1	149	9	2,127	58	6,171	725	938,657	46, Aug. 19
1892.	658	1,004,396	8	11,705	21	5,405	1	149	4	809	43	4,243	735	1,036,707	39, July 12
1893.	737	1,128,658	3	4,014	11	8,893	...	...	5	1,856	48	8,356	804	1,151,777	42, July 19
1894.	684	1,079,313	3	4,324	14	9,609	...	...	5	901	28	2,762	734	1,096,909	32, May 23
1895.	592	1,055,611	1	1,545	9	7,714	...	...	7	1,689	31	2,827	640	1,069,386	25, June 18
1896.	669	1,200,543	5	7,350	6	4,003	...	...	9	2,052	20	2,520	709	1,216,468	37, July 29
1897.	752	1,368,395	...	...	7	3,958	...	...	7	1,745	29	4,904	796	1,379,002	40, July 28
1898.	830	1,567,436	2	3,023	12	10,001	...	...	5	1,478	19	2,104	868	1,584,072	43, Aug. 1
1899.	773	1,509,668	...	...	7	3,530	...	...	3	1,048	18	3,365	801	1,517,611	39, July 29

T. BOURASSA,
Acting Harbour Master.

PORT OF MONTREAL.

COMPARATIVE STATEMENT showing the Number, Tonnage and Classification of Sea-going Vessels that arrived in Port from the Maritime Provinces the past ten years.

Years.	Steamships.	Tonnage.	Ships.	Tonnage.	Barques.	Tonnage.	Brigs.	Tonnage.	Brigantines.	Tonnage.	Schooners.	Tonnage.	Total Number of Vessels.	Total Tonnage.
1890.	252	235,722	...	...	...	...	...	...	1	170	42	3,714	295	239,606
1891.	272	260,702	...	...	2	1,462	...	...	2	520	29	3,067	305	266,751
1892.	289	275,040	...	...	3	2,215	1	149	2	340	36	2,214	331	280,958
1893.	333	324,188	...	...	...	...	1	169	...	...	34	2,577	368	326,934
1894.	349	362,945	...	...	3	2,323	...	...	4	609	23	2,230	379	362,107
1895.	256	296,256	...	...	...	...	...	...	5	1,070	30	2,734	291	300,060
1896.	252	292,880	...	...	1	178	...	...	4	734	15	1,188	272	294,981
1897.	298	364,936	...	...	...	...	...	...	2	376	31	1,051	311	366,363
1898.	327	372,274	...	...	...	...	...	...	...	...	14	1,397	341	373,671
1899.	336	415,825	...	...	...	...	...	...	...	...	7	646	343	416,471

T. BOURASSA,
Acting Harbour Master.

PORT OF MONTREAL.

COMPARATIVE Statement showing the Number and Tonnage of Inland Vessels that arrived in port the past ten years, with the greatest number in port at one time.

Years.	Number of Vessels.	Tonnage.	Greatest Number in Port at one time.
1890.....	5,162	966,959	167, Oct. 20
1891.....	5,268	1,119,484	151, Sept. 7
1892.....	5,200	1,049,600	159, Aug. 6
1893.....	5,244	1,153,600	153, July 25
1894.....	4,666	979,809	172, May 20
1895.....	4,498	943,717	165, July 20
1896.....	4,832	1,004,117	160, June 11
1897.....	6,384	1,134,346	200, July 30
1898.....	6,941	1,807,892	216, Aug. 12
1899.....	8,877	1,899,097	219, July 28

T. BOURASSA,
Acting Harbour Master.

PORT OF MONTREAL.

COMPARATIVE Statement showing the dates of the Opening and Closing of Navigation, first arrival from sea and the last departure for sea, the past ten years.

Year.	Opening of Navigation.	Closing of Navigation.	First Arrival from Sea.	Last Departure for Sea.
1890.....	April 14.....	December 3.....	April 30.....	November 24
1891.....	" 17.....	" 17.....	" 27.....	" 21
1892.....	" 13.....	" 23.....	" 23.....	" 27
1893.....	" 24.....	" 4.....	May 3.....	" 23
1894.....	" 12.....	" 26.....	April 27.....	" 24
1895.....	" 20.....	" 6.....	" 27.....	" 25
1896.....	" 22.....	" 19.....	" 28.....	" 23
1897.....	" 17.....	" 19.....	" 30.....	" 24
1898.....	March 31.....	" 12.....	" 26.....	" 28
1899.....	April 24.....	" 30.....	" 27.....	" 29

T. BOURASSA,
Acting Harbour Master.

SESSIONAL PAPER No. 11b

PORT OF MONTREAL.

STATEMENT showing the Nationality and Tonnage of Sea-going Vessels that arrived in port during the Season of 1899, that were navigated by 30,686 seamen.

Nationality.	Number of Vessels.	Tonnage.
British.....	678	1,342,027
Norwegian.....	95	140,334
German.....	8	14,756
Danish.....	6	13,200
American.....	13	5,444
Austrian.....	1	1,850

T. BOURASSA,
Acting Harbour Master.

PORT OF MONTREAL.

NUMBER and Tonnage of Sea-going Vessels that were consigned to the following Merchants during the Season of 1899.

No.	Name of Firms.	Steam.	Tonnage.	Sail.	Tonnage.	Total Vessels.	Total Tonnage.
1	Kingman & Co.....	255	333,275			255	333,275
2	R. Reford & Co.....	102	224,112			102	224,112
3	Elder, Dempster & Co.....	69	205,590	2	211	71	205,801
4	H. & A. Allan.....	74	194,194			74	194,194
5	McLean, Kennedy & Co.....	59	120,765			59	120,765
6	D. Torrance & Co.....	30	107,042			30	107,042
7	Furness, Withy & Co.....	34	87,351	2	599	36	87,950
8	Wm. Johnston & Co.....	22	78,389			22	78,389
9	F. Leyland & Co.....	25	61,326			25	61,326
10	Carbray, Routh & Co.....	21	22,690			21	22,690
11	Hy. Dobell & Co.....	25	19,858			25	19,858
12	J. G. Brock & Co.....	16	18,404	7	534	23	18,998
13	The Intercolonial Coal Co.....	13	16,740			13	16,740
14	The Imperial Government.....	4	10,670			4	10,670
15	Masters.....	14	3,950	1	1,212	15	5,162
16	Anderson, McKenzie & Co.....			8	2,886	8	2,886
17	A. Lemieux.....	8	2,352			8	2,352
18	Five others.....	2	2,900	8	2,501	10	5,401
	Total.....	773	1,509,668	28	7,943	801	1,517,611

T. BOURASSA,
Acting Harbour Master.

WEATHER REPORT FOR 1899.

Date.	Wind (at 8 to 9 a.m.)	Temperature (at 8 to 9 a.m.)	Remarks.
Jan. 1.	West	11 below	Fine day, crossing on ice Longue Pointe
" 2.	North-east	Zero	Snowing.
" 3.	East	29 above	Fine day.
" 4.	South-east	25 "	Raining.
" 5.	Strong south-east	38 "	Fine day. Water 36°6.
" 6.	South-east	22 "	Snow flurry.
" 7.	North-east	22 "	Fine day.
" 8.	West	4 "	Snowing.
" 9.	East	Zero	Crossing to Longueuil.
" 10.	North-west	18 below	Cold day.
" 11.	North	8 "	Fine day.
" 12.	West	Zero	" Roads to St. Lambert. Ice track on river.
" 13.	North	8 above	Dull day.
" 14.	North-east	28 "	Snowing.
" 15.	South-east	30 "	"
" 16.	West	34 "	Fine day.
" 17.	East	38 "	Dull day. Ice shovcd at 2 p.m.
" 18.	West	7 "	Fine day.
" 19.	"	12 "	"
" 20.	East	22 "	"
" 21.	North-east	32 "	Dull day.
" 22.	East	34 "	"
" 23.	West	24 "	Fine day.
" 24.	East	36 "	Rain.
" 25.	North-west	14 "	Fine day.
" 26.	"	22 "	Snowing.
" 27.	West	Zero	Fine day.
" 28.	East	10 above	Dull day
" 29.	West	5 below	Fine day.
" 30.	"	8 "	Dull day.
" 31.	"	8 above	Fine day.
Feb. 1.	North	10 "	"
" 2.	West	12 "	"
" 3.	North-east	6 "	Snowing.
" 4.	North	10 "	Dull day.
" 5.	West	10 "	Fine day.
" 6.	East	8 "	"
" 7.	North	Zero	Ice shove at St. Lambert; road broke away.
" 8.	North-east	6 above	Snowing.
" 9.	West	3 "	Fine day.
" 10.	South-west	4 below	"
" 11.	West	6 "	"
" 12.	"	5 "	"
" 13.	East	3 above	"
" 14.	West	12 "	"
" 15.	North-east	19 "	"
" 16.	West	23 "	"
" 17.	South	32 "	Dull day.
" 18.	South-west	38 "	"
" 19.	South	44 "	Fine day.
" 20.	West	40 "	"
" 21.	North	37 "	"
" 22.	South	36 "	Heavy rain.
" 23.	West	28 "	Fine day.
" 24.	"	12 "	"
" 25.	"	16 "	"
" 26.	"	10 "	Dull day.
" 27.	"	37 "	"
" 28.	East	34 "	Fine day.
March 1.	West	24 "	"
" 2.	North-east	20 "	"
" 3.	"	30 "	Dull day.
" 4.	South-east	38 "	Sleet.
" 5.	South-west	40 "	Dull day.
" 6.	West	26 "	Fine day.
" 7.	Strong north	18 "	Dull day.
" 8.	North-east	24 "	Fine day.
" 9.	West	30 "	"

SESSIONAL PAPER No. 11b

WEATHER REPORT FOR 1899.—Continued.

Date.	Wind (at 8 to 9 a. m.)	Temperature (at 8 to 9 a. m.)	Remarks.
Mar. 10.	East	20 above	Fine day.
" 11.	South	33 "	Dull day.
" 12.	East	28 "	Rainy day.
" 13.	West	26 "	Fine day.
" 14.	North-east	20 "	"
" 15.	East	32 "	"
" 16.	West	26 "	Ice shoved on south side of Gd Pier.
" 17.	North	Zero.	Fine day. Closing the ramps.
" 18.	"	6 above	Fine day.
" 19.	"	22 "	Snowing.
" 20.	North-east	18 "	"
" 21.	West	16 "	Fine day.
" 22.	North-east	23 "	Snowing.
" 23.	East	29 "	Fine day.
" 24.	West	24 "	"
" 25.	East	18 "	"
" 26.	"	28 "	"
" 27.	West	32 "	Dull day.
" 28.	North	32 "	"
" 29.	West	30 "	Snowing.
" 30.	"	30 "	Fine day.
" 31.	North	28 "	"
April 1.	West	32 "	"
" 2.	North	28 "	"
" 3.	West	38 "	"
" 4.	"	32 "	"
" 5.	North-east	30 "	"
" 6.	East	31 "	"
" 7.	North-east	32 "	"
" 8.	"	37 "	Rainy day.
" 9.	South-west	34 "	"
" 10.	East	34 "	Fine day. Crossing at Longueuil.
" 11.	"	38 "	" First shove at 2 p. m.
" 12.	"	40 "	Rainy day.
" 13.	North	44 "	Dull day.
" 14.	East	38 "	Fine day.
" 15.	West	48 "	"
" 16.	"	55 "	"
" 17.	"	50 "	"
" 18.	East	46 "	"
" 19.	West	40 "	"
" 20.	South-east	54 "	"
" 21.	North	42 "	Dull day. Open ramps.
" 22.	West	45 "	"
" 23.	East	55 "	Fine day.
" 24.	"	48 "	" Opening of navigation, Strs. Longueuil & Hochelaga from Boucherville.
" 25.	South-east	52 "	Fine day.
" 26.	"	46 "	"
" 27.	"	47 "	"
" 28.	South	60 "	"
" 29.	East	60 "	Dull day.
" 30.	West	80 "	Fine day.
May 1.	East	58 "	"
" 2.	South-east	52 "	"
" 3.	East	48 "	"
" 4.	"	46 "	"
" 5.	North-east	50 "	"
" 6.	South	58 "	"
" 7.	West	57 "	"
" 8.	North-east	54 "	"
" 9.	"	52 "	"
" 10.	South-west	56 "	"
" 11.	"	66 "	"
" 12.	West	68 "	"
" 13.	South-east	70 "	"
" 14.	North-west	46 "	"
" 15.	East	52 "	"
" 16.	West	53 "	"

WEATHER REPORT FOR 1899—Continued.

Date.	Wind (at 8 to 9a. m.)	Temperature (at 8 to 9 a. m.)	Remarks.
May 17.	East	50 above	Fine day.
" 18.	South-west	57 "	Dull day.
" 19.	North-east	54 "	"
" 20.	East	50 "	Rainy day.
" 21.	West	56 "	Fine day.
" 22.	North-east	52 "	"
" 23.	East	63 "	"
" 24.	West	73 "	"
" 25.	North-east	70 "	"
" 26.	West	72 "	"
" 27.	East	50 "	Rainy day.
" 28.	North-east	58 "	Fine day.
" 29.	South-west	60 "	Rainy day.
" 30.	East	58 "	Fine day.
" 31.	North-west	69 "	"
June 1.	"	76 "	"
" 2.	South	66 "	Dull day.
" 3.	East	65 "	Fine day.
" 4.	"	69 "	Rainy day.
" 5.	West	72 "	Dull day.
" 6.	North-west	80 "	Fine day.
" 7.	South-east	62 "	"
" 8.	West	74 "	Dull day.
" 9.	"	70 "	Fine day.
" 10.	North-east	60 "	"
" 11.	"	69 "	"
" 12.	West	74 "	"
" 13.	"	79 "	"
" 14.	North	78 "	Dull day.
" 15.	West	66 "	Rainy day.
" 16.	"	57 "	Dull day.
" 17.	North-west	69 "	Fine day.
" 18.	West	67 "	"
" 19.	North-east	70 "	"
" 20.	South-west	63 "	Heavy rain and thunderstorm.
" 21.	East	65 "	Fine day.
" 22.	West	68 "	"
" 23.	"	68 "	Dull day.
" 24.	"	74 "	Fine day.
" 25.	North-east	75 "	"
" 26.	East	70 "	"
" 27.	North-east	69 "	"
" 28.	South-east	56 "	Rainy day.
" 29.	North-east	70 "	Fine day.
" 30.	North-west	65 "	"
July 1.	West	74 "	"
" 2.	North	87 "	"
" 3.	North-west	80 "	"
" 4.	West	78 "	"
" 5.	South-west	73 "	"
" 6.	North-west	76 "	Rainy day.
" 7.	South-east	69 "	Fine day.
" 8.	North-east	63 "	"
" 9.	North-west	66 "	Rainy day.
" 10.	"	75 "	Fine day.
" 11.	West	74 "	"
" 12.	North-west	76 "	"
" 13.	East	70 "	"
" 14.	North	74 "	"
" 15.	South-west	74 "	"
" 16.	West	78 "	"
" 17.	North	74 "	"
" 18.	North-east	73 "	"
" 19.	"	60 "	"
" 20.	"	70 "	"
" 21.	East	62 "	Rainy day.
" 22.	"	59 "	Fine day.
" 23.	"	60 "	"
" 24.	"	69 "	"

SESSIONAL PAPER No. 11b

WEATHER REPORT FOR 1899—Continued.

Date.	Wind (at 8 to 9 a.m.)	Temperature (at 8 to 9 a.m.)	Remarks.
July 25.	South-west.	75 above	Fine day.
" 26.	North-west	75	"
" 27.	East	78	"
" 28.	North-west.	76	"
" 29.	West.	75	"
" 30.	North-east.	71	"
" 31.	East.	69	"
Aug. 1.	North	77	"
" 2.	West.	77	"
" 3.	North-west	72	"
" 4.	"	75	"
" 5.	"	79	"
" 6.	West.	78	"
" 7.	North-east	70	"
" 8.	North-west	66	"
" 9.	West	64	"
" 10.	South-west	63	"
" 11.	"	70	"
" 12.	West	69	Rainy day.
" 13.	South-east.	65	Fine day.
" 14.	East	60	"
" 15.	South-west.	68	"
" 16.	North-east.	65	"
" 17.	North-west.	80	"
" 18.	West	76	"
" 19.	North-east.	79	"
" 20.	North-west.	85	"
" 21.	South-west	85	"
" 22.	South-east	78	Rainy day.
" 23.	North-east.	68	"
" 24.	East	66	Fine day.
" 25.	North-west	75	Dull day.
" 26.	South-east	66	Fine day.
" 27.	West	70	"
" 28.	South	72	"
" 29.	South-west	74	"
" 30.	North-west.	74	"
" 31.	"	76	"
Sept. 1.	North-east	62	"
" 2.	"	64	"
" 3.	West	60	Rainy day.
" 4.	North-east.	56	Fine day.
" 5.	South-east.	64	"
" 6.	East.	58	"
" 7.	South-east.	57	"
" 8.	East.	66	"
" 9.	North-east.	60	"
" 10.	West	64	"
" 11.	"	66	"
" 12.	"	61	Rainy day, hail storm.
" 13.	North	59	Fine day.
" 14.	East	51	"
" 15.	North	53	"
" 16.	South-west	54	"
" 17.	South	75	"
" 18.	North-west.	70	"
" 19.	East.	58	"
" 20.	South-east.	55	Rainy day.
" 21.	North-east.	61	Dull day.
" 22.	West.	53	Rainy day.
" 23.	South-east.	45	Fine day.
" 24.	West.	54	Rainy day.
" 25.	South-east	63	"
" 26.	North.	68	"
" 27.	"	49	Dull day.
" 28.	North-west	60	Fine day.
" 29.	South-west	62	"
" 30.	West.	51	"
Oct. 1.	East	36	Cloudy with snow falling.
" 2.	North-east	31	Dull day.

WEATHER REPORT FOR 1899—Continued.

Date.	Wind (at 8 to 9 a.m.)	Temperature (at 8 to 9 a.m.)	Remarks.
Oct. 3.	East	44 above	Fine day.
" 4.	West	48	"
" 5.	North-east	37	"
" 6.	South-west	51	"
" 7.	West	40	"
" 8.	East	46	Rainy day.
" 9.	South-east	48	"
" 10.	West	62	Dull day.
" 11.	East	50	Temperature at 3 p.m. 69 degrees.
" 12.	South-east	63	Dull day.
" 13.	North	54	"
" 14.	North-west	60	Fine day.
" 15.	North	64	"
" 16.	East	52	"
" 17.	West	68	"
" 18.	South-west	60	Dull day.
" 19.	West	57	Fine day.
" 20.	North-east	43	"
" 21.	East	38	"
" 22.	West	45	"
" 23.	South-west	48	"
" 24.	East	47	"
" 25.	South-west	63	"
" 26.	North-west	66	"
" 27.	South-east	44	Rainy day.
" 28.	"	44	"
" 29.	North-west	43	"
" 30.	South-west	46	Fine day.
" 31.	North-east	44	"
Nov. 1.	East	44	Rainy day.
" 2.	North-east	33	Fine day.
" 3.	South	37	"
" 4.	"	42	Rainy day.
" 5.	West	38	Fine day.
" 6.	North-east	42	"
" 7.	West	44	"
" 8.	East	44	Dull day.
" 9.	North-west	42	"
" 10.	North-east	56	Fine day.
" 11.	South-west	28	" First snow of season at 2.30 p.m.
" 12.	North-west	26	" First sleigh roads.
" 13.	North	24	"
" 14.	West	32	Foggy day.
" 15.	South-west	38	Fine day.
" 16.	North	33	"
" 17.	East	27	" Steamer <i>Hamilton</i> to winter quarters.
" 18.	South-west	39	"
" 19.	West	40	"
" 20.	East	39	"
" 21.	South-east	36	"
" 22.	North-east	40	Dull day.
" 23.	"	39	Fine day.
" 24.	"	34	"
" 25.	East	36	"
" 26.	North-east	38	"
" 27.	West	40	"
" 28.	"	42	Dull day.
" 29.	North-east	43	Fine day.
" 30.	North-west	38	"
Dec. 1.	South-west	42	"
" 2.	North-east	43	Dull day.
" 3.	West	48	Fine day.
" 4.	North-east	30	Snowing.
" 5.	North-west	24	Fine day.
" 6.	North-east	24	" Snowing; harbour fleet put into winter quarters opposite harbour office.
" 7.	West	26	Fine day.
" 8.	North-west	23	"
" 9.	North	17	"

SESSIONAL PAPER No. 11b

WEATHER REPORT FOR 1899— *Concluded.*

Date.	Wind (at 8 to 9 a.m.)	Temperature (at 8 to 9 a.m.)	Remarks.
Dec. 10.	South-east	36 above	Fine day.
" 11.	West	41 "	Rainy day ; removing the lights.
" 12.	South-west	57 "	"
" 13.	North-east	41 "	"
" 14.	"	20 "	Fine day.
" 15.	North	24 "	Heavy snowstorm.
" 16.	"	13 "	Fine day.
" 17.	South-east	35 "	"
" 18.	West	37 "	Dull day.
" 19.	South	42 "	Rainy day.
" 20.	West	30 "	Fine day.
" 21.	South	38 "	Dull day.
" 22.	West	30 "	"
" 23.	South-east	32 "	Fine day.
" 24.	North	34 "	Rainy day.
" 25.	South-west	31 "	Fine day.
" 26.	West	24 "	"
" 27.	South-west	24 "	"
" 28.	West	26 "	"
" 29.	South-east	20 "	Snowing.
" 30.	West	1 "	Stormy day ; closing of navigation.
" 31.	"	11 below	Fine day.

T. BOURASSA,

Acting Harbour Master.

APPENDIX No. 3.

TORONTO HARBOUR COMMISSIONERS' REPORT FOR THE YEAR 1899.

SECRETARY of the Toronto Harbour Trust in account with the Commissioners for the year ending 31st December, 1899.

DR.	GENERAL BALANCE SHEET.		CR.		
	\$	cts.	\$ cts.		
Wharf property.....	43,073	72	Bonds (unmatured).....	5,000	00
Office furniture.....	591	91	Profit and loss.....	50,092	20
Cash in bank.....	5,619	02			
Cash in hand.....	7	55			
Commercial Union Assurance Co.....	5,800	00			
	55,092	20		55,092	20

We have examined the books and vouchers and have compared the balance sheet, as above, with the said books and vouchers, and we certify the same to be correct, and to represent a true statement of the affairs of the Trust at this date, December 31st, 1899.

W. R. HARRIS,

S. BRUCE HARMAN,

Auditors.

ARTHUR B. LEE, *Chairman.*

J. T. MATTHEWS,

F. S. SPENCE,

W. A. GEDDES,

JAMES FRAME,

Commissioners.

COLIN W. POSTLETHWAITE,

Harbour Master.

TORONTO, January 5th, 1900.

SESSIONAL PAPER No. 11b

RECEIPTS and Expenditure of the Toronto Harbour Trust for the year 1899.

RECEIPTS.	\$ cts.	EXPENDITURE.	\$ cts.
Cash in bank, Jan. 1	2,138 25	Charges	425 00
" hand " 1	15 65	Premium and interest	375 00
Canadian Pacific Railway	5,000 00	Lights, buoys and beacons	94 20
Harbour dues	11,558 90	Insurance	153 00
City of Toronto, placing buoys	66 67	Salaries	1,740 00
Rents, boat sites at Don	8 00	General repairs	1,704 08
Sale of old material	7 25	Printing and stationery	35 07
Interest on deposits	49 54	Office expenses and rent	775 91
Balance not expended in Ottawa trip	25 15	Dredging	2,668 48
		Expenses to Ottawa	100 00
		Engineer's fees	120 00
		Surveyor's fees	46 00
		Interest on overdraft	6 10
		Bonds (matured)	5,000 00
		Cash in bank	5,619 02
		" hand	7 55
	18,869 41		18,869 41

Examined and found correct,

W. R. HARRIS,
S. BRUCE HARMAN,
Auditors.

TORONTO, January 5th, 1900.

DR.	PROFIT AND LOSS.	CR.	
	\$ cts.	\$ cts.	
Charges	425 00	Balance per ledger	46,069 53
Premium and interest	375 00	Harbour dues	11,558 90
Lights, buoys and beacons	27 53	Canadian Pacific Railway	5,000 00
Insurance	153 00	Interest on deposits	43 44
Salaries	1,740 00	Rent, boathouse sites	8 00
General repairs	1,696 83		
Printing and stationery	35 07		
Office expenses and rent	775 91		
Dredging	2,668 48		
Loss on elevator	4,450 00		
Engineer's fees	120 00		
Surveyor's fees	46 00		
Deputation to Ottawa	74 85		
Balance to credit of profit and loss	50,092 20		
	62,679 87	62,679 87	

Examined and found correct.

W. R. HARRIS,
S. BRUCE HARMAN,
Auditors.

TORONTO, January 5th, 1900.

STATEMENT OF ACCOUNTS FOR THE YEAR 1899 IN DETAIL.

1899.	FURNITURE ACCOUNT.	\$ cts.	\$ cts.
Jan. 1...	Amount per ledger folio 490.....		591 91
	PROPERTY ACCOUNT.		
Jan. 1...	Amount per ledger folio 495.....		43,073 72
	ELEVATOR ACCOUNT.		
Nov. 22....	Amount secured by assurance.....	5,800 00	
Dec. 30....	" written off by profit and loss.....	4,450 00	10,250 00
	GENERAL REPAIR ACCOUNT.		
Feb. 28....	G. Booth & Son, lettering notice boards.....	16 25	
July 28....	F. W. Stean & Co., painting lighthouses, &c.....	132 00	
June —....	Lumber and hardware, breakwater repairs.....	1,146 58	
	Pay roll, labour of carpenters, &c.....	331 10	
	Kivas Tully, engineer's fees on same.....	78 15	
		1,704 08	
Aug. 3....	Nov. 30, sale of old material.....	7 25	1,696 83
	CHARGES.		
Jan. 16....	Bonus to harbour master and deputy.....	125 00	
Dec. 23....	Fees to commissioners and auditors.....	300 00	425 00
	PRINTING AND STATIONERY.		
Feb. 3....	Annual statement, <i>Arcade</i> Printing Co.....	15 00	
Apr. 15....	Import manifests, ".....	5 00	
Aug. 10....	New keys and repairing old ones.....	0 60	
Oct. 13....	Embossed envelopes, J. Bain & Co.....	4 00	
" 13....	Black and red ink ".....	1 05	
Dec. 30....	Pens, pencils and stamps.....	9 42	35 07
	INSURANCE ACCOUNT.		
Jan. 10....	Premiums on lighthouses and elevator.....		153 00
	LIGHT, BUOYS AND BEACONS.		
Apr. —....	Painting can and spar buoys.....	18 10	
May —....	Placing and raising buoys.....	44 00	
" 13....	Notice to mariners and posting same.....	9 50	
Dec. —....	Gas account.....	11 79	
Jan. 17....	New burners for white lighthouse.....	2 00	
" 7....	Chain and links for repairing buoys.....	1 21	
Mar. 11....	Sounding in Queen's wharf channel.....	1 50	
May 12....	Tug for inspecting breakwater and Queen's wharf.....	3 00	
Nov. 27....	Extra labour, repairing buoys.....	3 10	
		94 20	
May 31....	Proportion paid by city waterworks, as per agreement.....	66 67	27 53
	SALARIES.		
Dec. —....	C. W. Postlethwaite, harbour master.....	1,020 00	
" —....	Capt. Wm. Hall, deputy harbour master.....	720 00	1,740 00

SESSIONAL PAPER No. 11b

STATEMENT OF ACCOUNTS FOR THE YEAR 1899, IN DETAIL—*Concluded.*

		OFFICE SUPPLIES.	\$	cts.	\$	cts.
Nov. 1	.....	Rent of offices for one year	650	00		
Oct. 13	.....	Rent of two telephones	90	00		
July 13	.....	Gas account	8	01		
Jan. 21	.....	Directory for 1899	5	00		
" 30	.....	Wire letter box for office door	0	75		
Oct. 5	.....	Subscription to <i>Globe</i> newspaper	5	00		
" 23	.....	Waterworks account for house at Queen's wharf	5	60		
Dec. 30	.....	Diaries for offices	2	00		
		Petty cash	9	55		
						775 91
		DREDGING ACCOUNT.				
June —	.....	W. E. Phinn, per contract	2,493	80		
" —	.....	K. Tully, engineer's fees	124	68		
" —	.....	J. B. Allan, check clerk	50	00		
						2,668 48
		INTEREST ACCOUNT.				
May 31	.....	Interest on deposit in Bank of Toronto	29	70		
Nov. 20	.....	" " " .....	19	84		
Sept. —	.....	Interest on overdraft	49	54		
						43 44
		DEBENTURE ACCOUNT.				
July —	'92	Issued 35 bonds for \$1,000 each	35,000	00		
" —	'99	Paid at maturity, 30 bonds	30,000	00		
						5,000 00
		PREMIUM AND INTEREST.				
July 2	.....	Interest on 10 bonds for half year at 5 per cent.	250	00		
Dec. 30	.....	" 5 " " 5 "	125	00		
						375 00
		ENGINEER'S FEES.				
May 1	.....	R. P. Fairbairn, surveyor's plan for government patents	46	00		
Mar. —	.....	Kivas Tully, professional services	120	00		
						166 00

63 VICTORIA, A. 1900

COMPARATIVE STATEMENT of Goods arrived per Steamer and Sailing Vessel for years 1898 and 1899.

Description of Goods.		1898.	1899.
General merchandise	tons.	16,635	18,918
Coal	"	161,038	187,715
Wood	cords.	246	109
Lake stone	toise.	1,932½	2,909½
Building stone	tons.	595	523
Fruit	barrels.	1,810	4,472
"	boxes.	15,458	4,271
"	baskets.	277,710	403,743
"	bags.		682
Fire bricks		100,900	65,000
Common bricks			
Lumber	feet B. M.	956,000	468,000
Grain	bushels.	37,890	54,030
Sheep, hogs and calves		14	36
Horses, cattle and vehicles		136	183

COLIN W. POSTLETHWAITE,

Harbour Master.

FORTY-NINTH ANNUAL REPORT.

To the Commissioners of the Harbour of Toronto.

GENTLEMEN,—I have the honour to submit my annual report for the year 1899.

The harbour was clear of ice on April 8th, having been frozen over for 116 days.

The ice formed on December 28th, fourteen days later than last year.

The first arrival for the season was the ss. *Lakeside*, with passengers and cargo from St. Catharines on March 30th. The last to arrive was the *Rover*, with a load of stone, on December 18th.

The number of arrivals at this port during 1899 is 3,648, an increase of 255 as compared with 1898.

	1898.	1899.	Increase.	Decrease.	Tonnage 1898.	Tonnage 1899.
Propellers loaded	412	376		36	119,522	118,468
" light	35	30		5		
Steamers loaded	2,183	2,357	174		874,424	923,265
" light	4	1		3		
Sailing vessels loaded	746	876	130		78,546	99,149
" light	13	8		5		
	3,393	3,648			1,072,498	1,140,882

The trade of this port, therefore, is over two and a quarter million tons, registered.

There are 66 vessels wintering here this season, viz., 19 steamers, 14 schooners, 11 propellers, 11 steam launches, 8 sailing yachts and 3 dredges, in all representing about 12,207 tons.

Cash receipts from all sources, including cash on hand from last year, amount to \$18,869.41.

Expenses of all kinds amount to \$13,242.84, leaving a cash balance of \$5,626.27. Coal receipts this year by vessel are: anthracite, 158,957 tons and bituminous, 28,758 tons, in all 187,715 tons, being an increase of 26,677 tons over last year. This is the heaviest importation by vessel since 1873 and is attributable in some measure, perhaps, to the difficulty of obtaining railway cars for this class of freight, resulting to the advantage of vessel owners and mariners generally. The total quantity of coal

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imported by vessel and rail according to returns from the custom-house is anthracite, 365,514 and bituminous, 359,972½, total 725,486½, as against 662,680 tons in 1898.

The fruit crop has been a good one this year, resulting in a large increase in packages carried. A new fruit market has been opened at Grimsby this season. It has been found to be a good fruit centre and shipments have been large.

Dredging has been light this year but sufficient to keep open all channels leading to the coal docks. The city sand pump was employed for a few days at the Queen's wharf removing the deposit from the Bathurst Street sewer, but being needed elsewhere it was very shortly taken away and did not return. Dredging will be required here in the spring.

The highest water during the year was 15 inches above zero on June 4, the lowest was 12 inches below zero on December 6th. Average for the year, 2 inches above zero.

The lamps at Queen's wharf were lighted for the first time on April 4th, and discontinued on December 9th.

The buoys were placed out on May 1st, and taken up on November 29th.

The Government Engineer in charge of the harbour works at the eastern entrance reports as follows ;

'The bar that had formed during the past winter south of the eastern entrance was again removed, and the channel south of the west pier for 850 feet was dredged the full width between the piers, giving a depth of water of 17 feet 6 inches below zero on the harbour gauge at the Queen's wharf.'

The fog horn was sounded on nineteen days, viz., once in April, seven times in May, twice in June, once in July and eight times in October.

On November 22nd the Commissioners' elevator at the Queen's wharf was destroyed by fire. It was partially insured and should the present lessees, the Canadian Pacific Railway require it, the elevator will be rebuilt. It is a satisfaction to record that the incendiary was caught, convicted and sentenced to seven years in the Kingston Penitentiary, all within a month.

On February 21st a deputation composed of the Chairman, the Harbour Master and the Engineer in company with the Mayor and representatives of the council, also the president of the Board of Trade and representatives of the marine section of that board, had an interview in Ottawa with the Hon. the Minister of Public Works for the purpose of asking aid from the Government towards improvements in the Toronto harbour. The views expressed by the deputation were favourably received by the Hon. the Minister and subsequently the sum of \$50,000 was placed in the estimates for diverting the current of the Don into Ashbridges Marsh and so through to the lake, and the Government Engineer, Mr. Temple, was instructed to prepare plans for the same. It is earnestly hoped that this most important work will be pushed forward with all celerity, for it is idle to contemplate any comprehensive scheme for deepening the harbour until this most fruitful source of all the trouble is permanently removed.

The precipitation for the year per returns from the observatory is as follows : rain 25.795 inches, snow reduced to water, 3.180 inches. Total 28.975 inches, or two inches less than last year. This shortage in the rain-fall doubtless is the cause of the low levels in Lake Ontario, to be still further lowered, no doubt, by the recent opening of the canal at Chicago, connecting Lake Michigan and the Mississippi River.

I am, gentlemen,

Your obedient servant,

COLIN W. POSTLETHWAITE,

Harbour Master.

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TORONTO, January 4th, 1900.

SIR,—I have the honour to report that the following quantities of dredging were done at the wharfs, Mr. W. E. Phinn, contractor, at the rate of 12c. per cubic yard.

	Cubic Yards.
Medler & Arnot's Wharf, and entrance.....	3,570
Elias Rogers Co.'s Wharf, and entrance.....	8,295
Princess Street Wharf, and entrance.....	4,507
Electric Light Co.'s Wharf, Scott street.....	3,730
West Market Street Slip.....	1,680
Total.....	20,782

The sand pump belonging to the city worked a few days at the western channel in June, removing a portion of the sand and sewage deposited by the Bathurst Street drain. Deputy Harbour Master Hall reported that after the dredge was removed, a vessel drawing 8 feet 4 inches of water, grounded in the channel, near the outlet of the drain. Additional dredging should, therefore, be done by the city to complete the work as originally required. There was not any dredging done on the Range course, but will probably be required this year, as the water level in Lake Ontario continues low, at present 7 inches below zero. Sundry repairs were made to the planking on the front of the wharf, and the planking of the breakwater was renewed. The light keeper's house was painted, also the Red and Range light houses, and the Storm Signal House.

I remain,

Your obedient servant,

KIVAS TULLY,

Engineer.

A. B. LEE, Esq.,
Chairman Toronto Harbour Commissioners.

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APPENDIX No. 4.

QUEBEC HARBOUR COMMISSIONERS' REPORT FOR THE YEAR 1899.

(Under the Quebec Harbour Commissioners' Act, 1899.)

QUEBEC, January 2, 1900.

To the Honourable SIR L. H. DAVIES, K.C.M.G.
Minister of Marine and Fisheries,
Ottawa.

SIR,—In compliance with the requirements of the Quebec Harbour Commissioners' Act, 1899, I have the honour to report as follows on the doings of the Quebec Harbour Commissioners for the year 1899.

CHIEF ENGINEER'S REPORT.

The annexed report (marked 'A') from the Chief Engineer, Mr. St. George Boswell, conveys information in regard to the progress of the construction of the new wharf on the river front, and the various additions and repairs made to the Louise Docks and other properties of the commissioners during the year.

WHARFINGER'S REPORT.

The annexed report (marked 'B') from the Wharfinger, Mr. P. Flynn, gives the usual information regarding the number of vessels using the Louise Docks and the railway traffic over this portion of the Commissioners' property during the year 1899.

HARBOUR MASTER'S REPORT.

The annexed report (marked 'C') from the Harbour Master, Mr. James C. Sullivan, gives information in regard to the opening and closing of navigation in the harbour, formation of ice, disposal of ballast, &c. During the past season no ballast was dumped into the river, all that was brought here being utilized by the Commissioners in their new works.

At St. Thomas, the Commissioners continue to employ the Harbour Master there to supervise the discharge of ballast, and to see that the regulations are strictly obeyed.

PREMISES LEASED.

Renewals for one year were granted to the following tenants: W. Carrier, store No. 11; E. M. Lennon & Co., stores Nos. 7 and 8; John S. Thom, office in store No. 10; Quebec Coal Co., Reynar's wharf; A. R. Pruneau & Co., Marmette's wharf.

Renewals of five years were granted to the Grand Trunk Railway Company for their wharf, and to Madden & Son for the coal yard they occupy on the embankment.

In these two last cases provision was made that should the Commissioners wish to extend the wharf frontage further up the river, the lease to the Grand Trunk can be cancelled after due notice being given, and in the case of Madden & Son, if commissioners require the ground for other purposes than that of a coal yard, they could cancel Madden & Son's lease.

The coal shed on Wellington wharf, formerly occupied by G. M. Webster & Co., was leased to Whitehead & Turner, and East India wharf and store No. 5 (vacant last year) was leased to E. C. Benson and Jos. Gingras.

An extension of frontage was given in the coal space, Inner Basin, to G. M. Webster & Co., and they were also allotted another space on the north side of the embankment for a hard coal yard.

Provision was also made in the leases to G. M. Webster & Co. for cancellation if the water frontage or ground on north side of embankment was required for other purposes.

Store No. 4, on East India wharf, which was under lease to Mr. John Flood, was badly damaged by fire. It was insured in the Commercial Union Assurance Co. for \$4,000, and the assessed damages of \$1,897 were promptly paid by that company.

Properties that remained unlet during the year were: Atkinson's wharf, and part of store No. 10, and stores No. 4 and 6, East India wharf.

COLD STORAGE WAREHOUSES.

The two large stores Nos. 1 and 2, situated at the eastern end of the Pointe-à-Carcy wharf, were, in 1896, leased to the Quebec Cold Storage and Warehouse Company, who have built an other large warehouse, No. 3, and office between the two former Nos. 1 and 3 are used for ordinary storage; but the company has, at great expense, fitted up No. 2 as a cold store for dairy products, fruit, &c., by insulating with non-conducting substances the walls and floors of the building and of the several rooms into which it is divided, and has installed in the engine room built at the western end, a Linde ammonia refrigeration plant driven by electric motors

The cold air that is generated in a special room is driven by fanners through the shafts to the several rooms, thus regulating the temperature to suit the goods stored therein, and also ventilating the rooms. In a similar manner in winter, warm air is driven into certain rooms to enable the correct temperature to be maintained.

The Canadian Pacific Railway tracks run close alongside all the stores, thus affording the greatest facilities for receiving goods, and also for shipping by ocean steamers.

GREAT NORTHERN RAILWAY COMPANY'S GRAIN ELEVATOR.

By a notarial deed passed on June 30th, 1899, the Commissioners granted a site to the Great Northern Railway Company for a grain elevator of not less than one 1,000,000 bushels, capacity, and also guaranteed the interest to the extent of \$200,000 for twenty years, at three per cent per annum, on bonds that will be known as Quebec Grain Elevator Bonds, to assist the company to build their elevator. Commissioners also granted to same company exemption from harbour dues for a period of five consecutive years to the first ocean steamship company running under traffic agreement with the Great Northern Railway Company, which will make Quebec its terminal point and load here full cargoes of grain and other products from Parry Sound or other points on the Great Northern Railway.

These concessions, which required parliamentary sanction, received the Royal Assent on August 11th, 1899, and are now known and entitled: 'An Act respecting the Quebec Harbour Commissioners,' 62-63 Victoria, Chapter 35.

WORK SHOPS' SITES.

Commissioners have granted under a long lease to the Great Northern Railway Company sites on the northern front of the embankment, where that company will erect extensive work shops for the building and repairing of their rolling stock, and where a large number of hands will be constantly employed. It is expected that the work of building will be commenced early in the spring.

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REPAIRS TO PROPERTY.

Careful attention has been paid, during the year, to the various properties of the Commissioners, to maintain and bring them up to a first-class condition. Details will be found in the chief engineer's report.

REVISION AND CODIFICATION OF LAWS AND BY-LAWS.

Commissioners are pleased to say that the revision of their laws is now completed, their Act (the Quebec Harbour Commissioners' Act, 1899) having passed both Houses. It was assented to and came in force on July 10th, 1899. The by-laws are now being carefully gone over and revised, and it is hoped that they will be completed and ready for sanction before the opening of navigation.

BY-LAW ABOUT EXCESSIVE WHISTLING.

Under their new Act, the Commissioners submitted to and had approved by His Excellency the Governor General in Council, a by-law to prevent and control the excessive use of their steam whistles by vessels in passing through the harbour of Quebec.

IMPROVEMENTS ON SOUTH SIDE OF THE HARBOUR.

By a resolution passed at a meeting held on May 22, \$50,000 was appropriated for improvements on the south side of the harbour, out of the amount of \$350,000 authorized by 61 Victoria, Chapter 48, and 62-63 Victoria, Chapter 35 (the Harbour Commissioners' Act, 1899).

TARIFF CHANGES.

Commissioners have reduced the moorage charges on vessels using their docks and wharfs, and have also reduced the top wharfage charges on grain, coal, coke, salt, cement, earthen-ware, drain-pipes, fire-brick, gypsum, marble and all other stones, phosphates, sand, slate, iron-ore, whiting and scoria blocks. Wood pulp has been made free of top wharfage.

EXPENDITURE ON CAPITAL ACCOUNT.

Particulars of the expenditure on capital account will be found in a statement accompanying this report. In this it will be seen that, practically, all the expenditure on this account has been for the work of extending the Pointe-à-Carcy wharf. Thus, out of a total expenditure of one hundred and twenty-two thousand, four hundred and eleven dollars and sixty-eight cents (\$122,411.68) on capital account, there was for the Pointe-à-Carcy wharf extension an expenditure during 1899 of one hundred and twenty-one thousand five hundred and three dollars and sixty-seven cents (\$121,503.67). Chief Engineer's report gives details as to the progress of this work, particulars as to which was given in the report of 1898.

REVENUE AND EXPENDITURE.

The Commissioners' revenue for 1899 was seventy-seven thousand three hundred and forty-eight dollars and six cents (77,348.06), an increase of three thousand and seventy-one dollars and fifty-nine cents (\$3,071.59), over that of 1898, and the expenditure (including interest on first preference bonds) was forty-four thousand, one hundred and eighty-eight dollars and seven cents (\$44,188.07) leaving a surplus, which includes

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the amount charged to the Department of the Interior, for the ground occupied for immigration purposes, of thirty-three thousand, one hundred and fifty-nine dollars and ninety-nine cents (\$33,159.99).

As included in the receipts of 1898, there was an exceptional item of \$1,890 for premiums on first preference bonds sold. This, if deducted from 1898, would make the receipts and earnings for 1899 four thousand nine hundred and sixty-one dollars and fifty-nine cents (\$4,961.59) better than those of 1898.

The principal increases over 1898 have been in Louise Docks earnings, \$6,233.31 ; customs receipts, \$896.36 ; and the principal decreases in interest and interest and premiums received on bonds, \$3,006.61. Atkinson's wharf and the two large stores on East India wharf having remained unlet during 1899, there was a falling off in the revenues of the properties outside of the docks of \$1,061.54.

GRAVING DOCK.

The Commissioners are pleased to note that the contract has been awarded and that the work of lengthening the Lévis Graving Dock is to be at once commenced. While the Commissioners are satisfied that the lengthening of this dock will be a great boom to the trade of the St. Lawrence, and have constantly urged it upon the honourable the Minister of Public Works, they believe the present tendency of the trade is to build vessels of such length and beam, that the Lévis Graving Dock even as lengthened will not be able to accommodate them.

The Commissioners have therefore strongly urged upon the honourable the Minister of Public Works, to build a second graving dock in Quebec, one that will be capable of meeting this development in large steamers, and able to accommodate any vessel now afloat or likely to be afloat for some years to come.

ACTING CHAIRMAN.

During the absence in Europe of the Chairman (Mr. J. B. Laliberté) Mr. Narcisse Rioux was the presiding officer, having been unanimously elected by the board as acting-chairman.

ICE CUTTING.

Forty-two thousand four hundred and fifty (42,450) blocks of ice, all for local use, have been cut during the winter of 1899-1900, a decrease of twelve thousand six hundred and nine (12,609) blocks as compared with the cut of the previous year.

Care has been taken that all the ice that is cut for domestic uses is perfectly pure, and taken from localities in the harbour as have been selected after an analysis of the ice had been made.

To this report are annexed the various statements conveying the information yearly forwarded to your department in connection with the harbour, as also a complete statement of the Commissioners' account for the year.

I have the honour to be, sir,

Your most obedient servant,

JAS. WOODS,

Secretary-Treasurer.

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A.

HARBOUR ENGINEER'S OFFICE,
QUEBEC, January 2, 1900.James WOODS, Esq.,
Secretary-Treasurer,
Harbour Commission, Quebec.

SIR,—I have the honour to submit herewith the following with reference to the various works in connection with the maintenance and improvement of the Harbour of Quebec, executed during the year 1899.

NEW WORK.

SOUTHERN EXTENSION TO POINTE-À-CARCY WHARF.

The construction of the foundation cribwork for this pier was proceeded with during the winter of 1899, during which time five blocks, aggregating a length of 630 feet, were prepared. The first of these blocks, for the river face of the pier, was sunk in position on May 24 last, the second one on the 29th of the same month, and the third and last on June 22. Of the two blocks for the inner or pond face, prepared during the winter, the first was sunk in position on August 8, and the second on August 26. There still remains an interval of 35 feet to be closed by cribwork, in order to complete this inner face and connect it with the Pointe-à-Carcy wharf. This space had to be left open in order to permit the entrance of dump scows used for filling the area contained between the inner and outer lines of cribwork. As this filling has now been completed, as far as it can be done by dump scows, this space may be closed early next season. The superstructure of this pier has been completed, with the exception of that portion which it was necessary to defer until the work of the dump scows had been completed, and the substructure closing entrance to area within cribs placed in position.

The elevator dredge No. 8 was placed at the Commissioners' disposal by the Department of Public Works, on July 7 last; and from that date until August 5, was employed preparing a foundation for the inner line of cribwork blocks of the south extension to Pointe-à-Carcy wharf. The dredge was then removed to the wet dock, where it continued at work, grading down the basin until November 17, on which date it was removed and taken in charge by the Department of Public Works.

The Commissioners' dredge was employed, during the early part of the season as a steam crane for handling timber used in the construction of the cribwork. On August 5 this dredge was removed to the custom-house pond where she worked excavating the foundations for the inner line of cribwork until August 26, after which she was removed into the wet dock, and at first engaged excavating about 100 tons of coal that had fallen from the cross wall into the dock, subsequently at grading in various parts of the Basin. During the latter part of the season up to December 2 the dredge was employed deepening the custom-house pond along the face of the inner line of the new cribwork. After this date until December 7, she was employed at the removal of a sunken scow at the western end of the wet dock.

To provide the site for a grain elevator, applied for by the Great Northern Railway Co., a portion of the Commissioners' pond has been inclosed by cribwork retaining wall, and the space so inclosed filled in up the level of the surface of the adjacent wharfs with materials furnished by carters.

The quay frontages and surface areas added to the Pointe-à-Carcy wharf by the works executed the past season are as under.

Quay frontage, river face, 350 feet, giving, with old frontage, a continuous river frontage of 580 feet; deep water quay frontage in custom-house pond, 300 feet; quay frontage at elevator site, 170 feet. Surface area of pier extension south of Pointe-à-Carcy wharf, 38,000 superficial feet; surface area of filled portion of custom-house pond, 46,000 superficial feet.

PRINCESS LOUISE EMBANKMENT.

At the request of the collector of customs, a part of the old immigration building on breakwater has been partitioned off and fitted for the inspection of first-class passenger baggage.

One section of this building, that is to say the part formerly used as a disinfecting establishment, has also been repaired, and is now used by the Customs Department as a landing shed for bonded freight.

The north-east and south west corners of the breakwater have been rebuilt, an extra cast iron mooring post put in, and repairs made to the face of the wharf.

An additional length of coal platform has been laid down on the cross-wall, one of the Messrs. Connolly's Bros. derricks having been removed for the purpose of providing the required additional space.

The new freight shed on breakwater has been painted, and the metallic covering of the two cross-wall sheds has been repaired and the roofs painted.

The railway tracks and property generally have been maintained in good order, and minor repairs effected when required.

GENERAL.

The foundation of store No. 11 has been rebuilt on the north and west sides of building.

New fenders have been placed along the wharf frontage leased to the Grand Trunk Railway Co.

The part of the East India wharf, at the eastern end of Arthur Street, has been filled in, planked, and fenced off from the street.

The roof of coal shed on James Street has been repaired, and the required minor repairs to the Commissioners' various properties effected.

The cross wall draw-bridge was operated for the first time on April 14, and for the last time on December 9.

The entrance gates to the wet dock were shut for the first time on May 3, and remained in operation until November 22.

The entrance gates to the wet dock were not opened for the afternoon tide of September 15 and 28; the tide, on the above dates not having risen sufficiently for the purpose.

I have the honour to be, sir,

Your obedient servant,

ST. GEORGE BOSWELL,

Chief Engineer.

B.

HARBOUR COMMISSIONERS' OFFICE,

QUEBEC, January 2, 1900.

JAMES WOODS, Esq.,
Secretary-Treasurer,
Harbour Commissioners, Quebec.

SIR,—I have the honour to submit the following with reference to the traffic of the Louise Docks and Wharfs.

During the past season, forty-six (46) ocean mail steamers, one hundred and thirty-six thousand, eight hundred and fifty-eight (136,858) tons register, used the docks for landing immigrants, baggage, &c., and six hundred and fifty-two (652) tons of western freight.

Sixty (60) steamships of one hundred and sixty-four thousand one hundred and eighty-six (164,186) tons register, landed eight thousand four hundred and twenty-seven (8,427) tons of general cargo.

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Six (6) steamships of twelve thousand eight hundred (12,800) tons register landed one thousand eight hundred and forty-four (1,844) tons of cement.

One (1) steamship of one thousand five hundred and forty-four (1,544) tons register landed one thousand seven hundred and fifty-nine (1,759) tons of railroad iron.

Fourteen (14) steamships of thirty-nine thousand two hundred and fifty (39,250) tons register landed three thousand seven hundred and seventy-six (3,776) tons of salt.

Two (2) steamships of two thousand five hundred and forty-seven (2,547) tons register landed three thousand four hundred and fifty-three (3,453) tons of bricks.

Nine (9) sailing ships of two thousand five hundred and eighty-two (2,582) tons register landed two thousand one hundred and twenty-three (2,123) tons molasses.

Four (4) barges of three hundred and eighty-two (382) tons register landed four hundred and eighty-two (482) tons of sugar.

Twenty-six (26) steamships of twenty-nine thousand three hundred and thirty-nine (29,339) tons register landed sixty thousand nine hundred and forty-four (60,944) tons of coal.

Three (3) sailing ships of three thousand eight hundred and twenty four tons (3,824) register landed four thousand three hundred and seventy (4,370) tons of coal.

Fifteen (15) lower ports steamships of one thousand and eighty-five (1,085) tons register landed seven hundred and five (705) tons coal.

One hundred and thirty-one (131) barges and schooners of eleven thousand six hundred and forty (11,640) tons register landed eighteen thousand nine hundred and ninety (18,990) tons of coal.

Six (6) schooners of four hundred and sixty-nine (469) tons register landed seven hundred and twelve (712) tons of cut stone.

Twenty (20) lower ports steamships of fourteen hundred and forty (1,440) tons register landed three hundred and fifty-seven (357) tons of freight.

Twenty (20) schooners of one thousand and seventy (1,070) tons register landed twenty thousand nine hundred and forty-one (20,941) railway ties.

Seventeen (17) steamships of fifty-six thousand four hundred and twenty-four (56,424) tons register shipped four thousand nine hundred and sixty (4,960) tons of wood pulp.

Seventeen (17) ferry steamers of four thousand two hundred and thirty-three (4,233) tons register shipped sixteen hundred and forty (1,640) tons of wood pulp.

Six (6) steamships of twenty thousand four hundred and eighty (20,480) tons register shipped three thousand four hundred and fifty-eight (3,458) heads of cattle, or one thousand and twenty-six (1,026) tons.

Twenty (20) lower ports steamships of fourteen hundred and forty (1,440) tons register shipped eight hundred and ninety-four (894) tons of general cargo.

Fifty-four (54) steamships of one hundred and twenty-three thousand nine hundred and twenty-six (123,926) tons register loaded part cargoes of timber and deals.

One (1) sailing ship of four hundred and ninety-two (492) tons register loaded part cargo of deals.

Eighteen (18) steamships of twenty-nine thousand nine hundred and fifty (29,950) tons register loaded full cargoes of timber and deals.

Three (3) sailing ships of two thousand seven hundred and sixty-seven (2,767) tons register loaded full cargoes of timber and deals.

Fifteen (15) steamships of forty-five thousand and sixty-one (45,061) tons register shipped four hundred and forty-two (442) tons of freight.

The surface traffic has required the employment of five thousand nine hundred and twenty cars (5,920), being an increase of two thousand five hundred and thirty-seven (2,537) cars over the previous year.

During the past season, the different ocean mail steamers landed eighteen thousand one hundred (18,100) steerage passengers at the Immigration Station, Louise Docks, who were forwarded to their future homes by the Canadian Pacific Railway Company.

No record has been kept of cabin passengers.

The following vessels who had suffered accidents on their outward trip were accommodated in the Louise Basin, where they, in some cases, having discharged the

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whole or a portion of their cargoes, after repairs were made, reloaded and proceeded to sea :—

SS. *Ramilies*,
Merrimac,
Philadelphian,
Almerian,
Gallia,
Ella Sayer,
Parisian.

One steamer, the ss. *Manchester Importer*, returned to take off deck load of deals and then proceeded to sea.

Four hundred and six (406) barges and one hundred and fifty-six (156) schooners paid moorage during the season.

There are wintering on the Louise Docks thirty-five thousand (35,000) Quebec standard of deals.

There are wintering in the upper and lower basins :—

Seven (7) passenger steamers ; two (2) steamships ; two (2) government steamers ; three (3) lightships ; fifteen (15) schooners ; seventeen (17) lighters ; eleven (11) canal boats ; sixteen (16) tug boats ; four (4) steam lifting schooners ; six (6) pontoons ; one (1) brig ; one (1) steam dredge.

The freight sheds on the cross-wall and breakwater are utilized during the winter months for storing grain, salt, &c., which the owners are obliged to remove before the opening of navigation.

The docks are used, from November 20, for wintering a large number of vessels of various tonnage, where they find safe quarters to the opening of navigation.

I have the honour to be, sir,

Your most obedient servant,

P. FLYNN,

Wharfinger.

C.

HARBOUR COMMISSIONERS' OFFICE,

QUEBEC, January 2, 1900.

JAMES WOODS, Esq.,

Secretary-Treasurer,

Harbour Commission, Quebec.

SIR,—I have the honour to submit the following report with reference to the harbour of Quebec for 1899 :—

Navigation in the harbour was open all winter.

The ice in the tidal basin and wet dock broke up on April 15.

The ice in the St. Charles River and north channel broke up and cleared on April 20.

Local navigation from the lower St. Lawrence was opened on April 5 by schooner *St. Laurent*.

Steam schooner *Marie Josephine* left the harbour for the lower St. Lawrence with a general cargo on April 6.

Revenue cutter *Constance* left the harbour for the lower St. Lawrence on April 7.

The mail tender *Rhoda* left the harbour for Rimouski on April 18 on mail service.

The first ocean steamer, s.s. *Savoy*, left the harbour on April 22 for Anticosti with a general cargo.

The first ocean freight steamers from the Mediterranean, s.s. *Fremona* and *St. Mark*, arrived in the harbour on April 22, and put into Indian Cove to await the passing down of the ice in the river between Quebec and Montreal.

The first ocean mail and passenger steamer, s.s. *Dominion*, arrived in the harbour on April 23.

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The ice in the St. Lawrence between Quebec and Montreal passed down on April 26.

All local pontoons were placed in the harbour on April 28.

The first ocean steamer with coal, s. s. *Rydal Holme*, arrived in the harbour on April 26.

The first Richelieu and Ontario Navigation Co.'s steamer left for the Saguenay on May 3.

The first sailing vessel from sea, barque *Hejhi*, arrived in the harbour on May 13.

The limits of the clear water space opposite the city are indicated at night by red lights, and in day time by sign boards.

Ten (10) ballast vessels discharged two thousand eight hundred and fifteen (2,815) tons of ballast into the Commissioners' properties, subdivided as follows:—

Louise Basin (siding)	Tons. 310
Louise Basin (new works)	835
Pointe-à-Carcy and new wharf (new works)	1,670
Total	2,815

The cost of obtaining this ballast has been three hundred and fifty-six dollars (\$356), or about \$1.22 per long ton.

No ballast has been thrown into the river during the past season.

The harbour regulations have been distributed to vessels using the harbour during the season of navigation and the carrying out of them attended to.

In addition to the routine work of the harbour and office, two hundred and fifty-four (254) sea-going steamers have been berthed in the Louise docks, breakwater and Pointe-à-Carcy wharfs, an increase of sixty-one (61) steamers as compared with last year.

Twenty-one (21) sea-going sailing vessels have been berthed at the same wharfs, a decrease of fifteen (15) vessels as compared with last year.

H. M. S. *Crescent*, *Talbot*, *Pearl*, *Psyche* and *Quail* arrived on September 11 and anchored in the harbour.

The last sea-going sailing vessel, barque *Strathmuir*, left for sea on October 22.

The last ocean steamer with coal, s. s. *Polino*, arrived on November 25.

The last ocean, freight steamer, s. s. *Mayflower*, arrived in the harbour on November 23.

The last passenger steamer of the Richelieu and Ontario Navigation Co., *Saguenay*, arrived from Saguenay and way ports on November 14.

The last passenger steamer of the Richelieu and Ontario Navigation Co., *Quebec*, left for Montreal on November 26.

The last ocean, mail and passenger steamer, s. s. *Lake Ontario*, left the harbour on November 23.

The last ocean passenger steamer, s. s. *Laurentian*, left the harbour on November 25.

The last ocean, freight steamer, S. S. *Mayflower*, left the harbour on November 30, at 10.45 p. m.

The ice in the St. Charles River formed on December 27.

Up to January 1 the ice in the north channel had not formed.

Steam schooner *Marie Joséphine* left the harbour for Murray Bay with general cargo on December 10, and returned on December 12.

Notices have been posted in suitable localities warning parties from discharging rubbish of any kind into the harbour, docks, &c., and every precaution is being taken to prevent any violation of the regulations of the Commissioners in that respect.

I have the honour to be, sir,

Your obedient servant,

JAMES C. SULLIVAN,

Harbour Master.

QUEBEC HARBOUR COMMISSIONERS.

SESSIONAL PAPER No. 11b

Dr.

BALANCE SHEET OF DECEMBER 31, 1899.

Cr.

	\$	cts.	\$	cts.	\$	cts.
To Amount at credit of grantees, beach and deep water lots			40,815	90		
Amount at debit sundries for rents, wharfage, &c			8,453	76		
Unsettled claims against the Dominion government			195,492	55		
Breakwater wharf			225,563	08		
Pointe-à-Carcy wharf			288,997	40		
East India			48,562	99		
Grand Trunk			15,740	32		
Wellington			86,541	85		
Atkinson's			51,103	20		
Reynar's			9,918	29		
Pointe-à-Carcy deepening			86,275	36		
Harbour improvements, River St. Charles			3,119,058	98		
Harbour improvements, river front—			19,210	22		
Breakwater curve, &c.			161,730	81		
Pointe-à-Carcy extension			170,941	03		
Cash on hand			785	38		
" La Banque Nationale			31,770	58		
Hopper barge			32,555	96		
Steam crane dredge			5,609	28		
Offices furniture			5,105	21		
Jack-screws account			3,674	97		
Anchor			394	87		
Tools			264	38		
Timber			2,737	26		
Stone			11,725	00		
Pile-driver			537	50		
Bills receivable			33	70		
Suspense Account—			572	96		
Rents for November and December			1,554	14		
Arrears of interest to Dec. 24, on beach and deep water lots			984	24		
			2,538	38		
			4,413,114	18		
					55,461	87
					43,380	00
					3,612,802	42
					153,000	00
					1,897	00
					58	93
					546,513	96

JAS. WOODS,
Secretary-Treasurer.
 L. A. BERGEVIN,
 ARTHUR E. SCOTT, }
Auditors.

HARBOUR COMMISSIONERS OFFICE,
 QUEBEC, January 2, 1900.
 We hereby certify that we have examined the books and vouchers of the Quebec Harbour Commission for the year 1899, and that that balance sheet as found in the Journal folios 570, 571, 572 and 573 is correct.
 QUEBEC, January 3, 1900.

SESSIONAL PAPER No. 11b

Jackscrews on hand.....	394 87			
Anchors	264 38			
Timber	11,725 00			
Stone	537 50			
Tools	2,737 26			
Pile driver.....	33 70			
Office furniture.....	3,674 97			
Bills receivable.....	572 96			
	4,413,114 18			4,413,114 18

HARBOUR COMMISSIONERS OFFICE,
 QUEBEC, January 2, 1900.

JAS. WOODS,
Secretary-Treasurer.

We hereby certify that we have examined the books and vouchers of assets and liabilities of the Quebec Harbour Commission for the year 1899, and we have found the same in all particulars the true position of the trust at that date.

L. A. BERGEVIN, }
 ARTHUR E. SCOTT, } *Auditors.*

QUEBEC, February 3, 1900.

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QUEBEC, January 2, 1900.

EXPENDITURE ON CAPITAL ACCOUNT FOR THE YEAR 1899.

HARBOUR IMPROVEMENTS, RIVER FRONT.

Point-à-Carcy extension	\$ 121,488 67	
Breakwater, curve, &c.	15 00	
	_____	\$ 121,503 67
Harbour improvements, River St. Charles		84 00
Ottawa cove.		587 04
Office furniture.		83 00
Tools account.		70 27
Pile driver.		33 70
Steam crane dredge.		50 00

		<u>\$ 122,411 68</u>

JAS. WOODS,

Secretary-Treasurer.

QUEBEC HARBOUR COMMISSION.

—	1898.		1899.		Difference in 1899.		
	\$	cts.	\$	cts.	\$	cts.	
Tonnage dues.	12,609	69	12,343	84	265	85	Decrease.
Import "	3,442	73	3,915	98	473	25	Increase.
Export "	3,858	82	4,547	78	688	96	"
Harbour "	2,275	98	2,286	41	10	43	"
Property receipts.	45,640	50	50,812	27	5,171	77	"
Interest.	1,591	93	2,135	59	543	66	"
Beach and deep water lots.	1,301	75	1,273	69	28	06	Decrease.
Sundries.	4	80	32	50	27	70	Increase.
Interest and premium on bonds.	3,550	27	.....	.....	3,550	27	Decrease.
	74,276	47	77,348	06	3,071	59	Increase.

HARBOUR COMMISSIONERS' OFFICE.

QUEBEC, February 3, 1900.

To the Chairman and Commissioners,
Quebec Harbour Commission.

GENTLEMEN,—We beg respectfully to report that we have audited the books and vouchers of the commission for the year 1899 and we are pleased to state that we have found everything perfectly correct and in very good order.

We beg to tender our sincere thanks to the secretary for his courtesy and all the facilities possible which he has given us.

We have the honour to be, gentlemen,

Your obedient servants,

L. A. BERGEVIN,
ARTHUR E. SCOTT,

Auditors.

SESSIONAL PAPER No. 11b

APPENDIX No. 5.

BELLEVILLE HARBOUR COMMISSIONERS, REPORT FOR YEAR ENDED
DECEMBER 31, 1899.

BELLEVILLE, January 16, 1900.

To the Honourable
The Minister of Marine and Fisheries
Ottawa.

SIR,—The Harbour Commissioners of the City of Belleville beg to submit herewith a statement of the receipts and expenditure in connection with the harbour for the year ending December 31, 1889.

The report of the harbour master for the year is also inclosed.

The larger portion of the amount under the heading of 'Harbour Improvement' was expended on the western embankment of the river. This embankment is now completed to its southerly end joining the boom piers.

It is expected that it will protect the land on the western side of the harbour from the floods and spring freshets and by confining the river at its mouth (as recommended by the Government engineers) materially lessen the effects of the breaking up of the ice in the spring.

The material used in this work was taken from the dredging done in the harbour during the early part of the summer. The dredge did some excellent work in removing obstructions and in deepening the western channel of the harbour.

I have the honour to be sir,

Your obedient servant,

GEORGE WALLBRIDGE,

Chairman, Harbour Commissioners Belleville Ont.

Dr. STATEMENT of the Receipts and Expenditure of the Harbour Commissioners of Belleville, Ont., for the Year ending December 31, 1899. Cr.

<i>Receipts.</i>	\$	cts.	<i>Expenditure.</i>	\$	cts.
Harbour dues collected during the year, as per harbour master's report.....			Buoys—Placing, removing and painting.....		8 42
Rent of small house on river bank for 10 months to Oct. 31, 1899.....	2,605	38	Booms—Swinging and removing.....		100 00
Less paid out for repairs.....			Plans and surveys for the Department of Public Works.....		19 00
			Ice cutting to relieve flooding.....		37 00
Material—			Harbour Improvement—		
Received from the Bay of Quinté Bridge Co. for material from dredging.....	39	00	For completion of western embankment.....	1,025	65
Received from sale of lumber.....	5	00	For repairs to island embankment.....	179	65
			Interest on overdraft at bank.....		1,205 30
			Salaries—		4 65
			Harbour master, 12 mos.....	600	00
			Tally clerk.....	60	00
			Office Expenses—		
			Rent of office, storehouse and boathouse.....	30	00
			Fuel (for office), \$4.50; repairs to boat, \$5.90.....	10	40
			Stationery and postage, \$7.15; sundries, \$2.25.....	9	40
			Travelling expenses.....	1	50
			Legal advice and papers.....	16	50
			Balance on hand and in bank.....		67 80
Balance on hand January 1, 1899.....	2,670	10			2,102 17
	850	76			1,418 69
	3,520	86			3,520 86

SESSIONAL PAPER No. 11b

DOMINION OF CANADA,
Province of Ontario,
County of Hastings. } In the matter of the Report of the Harbour Com-
missioners of the City of Belleville, for the year ended
December 31, 1899.
To Wit:

I, GEORGE WALLBRIDGE of the city of Belleville, in the county of Hastings, merchant, do solemnly declare that :

1. I am chairman of the Harbour Commissioners of Belleville.
2. That annexed hereto is a statement of the receipts and expenditures of the Harbour Commissioners of Belleville for the year ending December 31, 1899.
3. That the said statement is true and correct as therein set forth.
4. That nothing is wilfully omitted therefrom which should be stated therein, or improperly inserted therein, to the best of my knowledge, information and belief.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of 'The Canada Evidence Act,' of 1893.

GEO. WALLBRIDGE

Declared before me at the city of Belleville, }
in the county of Hastings, this 18th }
day of January, A.D. 1900. }

G. MASSON,
A Notary Public.

BELLEVILLE, January 16, 1900.

To the Honourable
The Minister of Marine and Fisheries,
Ottawa.

SIR,—The undersigned harbour master of the city of Belleville begs to submit the following report for the year 1899.

Navigation opened in Belleville harbour on April 18 and closed on December 9.

Import dues on 14,103 tons coal, less rebate on 181 tons transhipped..	\$ 1,401 25
Dues on 693,147 feet lumber.....	34 63
“ 890,000 shingles.....	26 70
“ 1,233 cords wood.....	61 65
“ 180,000 lath.....	2 27
“ 47 tons cement.....	4 70
“ 1,217 tons merchandise.....	121 70
“ 101 “ salt.....	10 10
“ 291 “ potters' clay.....	17 46
“ 9,500 bush. corn.....	11 87
“ 2,000 “ oats.....	2 50
“ 108½ tons tomatoes.....	10 85
“ 60 cubic feet stone.....	1 20
“ 760 bush. pease.....	95

\$ 1,707 83

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Export dues on 120,485 logs &c.,	\$	759 15
“ “ 97,150 feet lumber		9 71
“ “ 15,731 bush. barley		19 66
“ “ 1,411 “ rye		1 76
“ “ 5,635 “ pease		7 08
“ “ 1,673 “ oats		2 09
“ “ 27,124 “ wheat		33 90
“ “ 83 tons cheese		8 30
“ “ 70,000 shingles		2 10
“ “ 464½ tons merchandise		46 45
“ “ 2,000 feet lumber		0 10
“ “ 300 cubic yards stone		6 00
“ “ 25,000 brick		1 25

Dues collected during the season are as follows : \$ 897 55

Total amount derived from imports \$ 1,707 83

Total amount derived from exports 897 55

\$ 2,605 38

The amount of dues collected show a considerable increase over last year largely due to a greater quantity of coal being received this year.

The dredge did good work in the harbour while working here during last spring removing obstructions in the western channel and also along the docks on the eastern side.

All of which is respectfully submitted.

I have the honour to be, sir,

Your obedient servant,

D. COLLINS,

Harbour Master.

DOMINION OF CANADA, } In the matter of the report of the
Province of Ontario, County of Hastings, } harbour master of the city of Belleville,
To Wit : } for the year ending December 31, 1899.

I, DANIEL COLLINS, of the city of Belleville, in the county of Hastings, harbour master, do solemnly declare that :

I am harbour master at the city of Belleville.

That my report hereunto annexed contains a true, correct and full statement of the revenue from the harbour at the city of Belleville for the year ending on the 31st day of December, 1899.

That the said report is in all other respects true and correct to the best of my knowledge, information and belief.

And I make this solemn declaration, conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of 'The Canada Evidence Act of 1893.'

D. COLLINS,

Harbour Master.

Declared before me at the city of Belleville, }
in the county of Hastings, this 18th day }
January, 1900.

G. MASSON,

A Notary Public.

SESSIONAL PAPER No. 11b

APPENDIX No. 6.

THREE RIVERS HARBOUR COMMISSIONERS REPORT FOR THE YEAR
1899.

COMMISSIONERS :

ALEX. HOULISTON, Esq., Chairman

NAP. LAJOIE, Esq.

HENRY E. HART, Esq.

ARTHUR OLIVER, Esq.

P. A. DROLET, Esq.

GEORGE BALCER, Secretary.

A remarkable feature in this year's statement is undoubtedly the sudden, and we readily admit, rather unexpected large increase in the shipping of the port during the season of navigation 1899.

From an average of some 40 vessels, with 70 to 75,000 tons for the last half decade our ocean traffic increased to 73 vessels with 160,840 tons for Three Rivers wharves alone, bringing up the total number

To 91 vessels with	200,686 tons
As against 43 vessels with	71,264 tons in 1898
And against 49 vessels with	79,689 tons in 1897

i. e. a gain of more than 100 per cent in the number of vessels, and 150 per cent in the tonnage over the best season ever attained.

For years past our traffic has been steadily increasing, and nearly all our former reports bear evidence of a regular marked progress. But neither the general prosperity of the country, nor the unmistakable direct influence of the industrial development in this section of the province could, at the present moment at least, warrant such abnormal increase as witnessed during the season 1899. Some other equally potent factors will therefore have to be sought for.

Foremost amongst the latter are the geographical situation and the natural advantages of a port which, extending for miles right along the main 30 foot channel, thousands of feet in width, can afford to offer to the shipping, at a relatively small outlay, any amount of accommodation not easily met with elsewhere, and facilities for concentrating freight, loading and unloading vessels seldom equaled in other ports. Thus can we explain that with even moderate, and for such a large traffic rather limited improvements, we have at last succeeded in drawing the attention of the larger shipping circles who, up to quite recently, would not have thought of risking one of their big 10,000 ton steamers alongside our wharves.

We candidly admit, when in last year's report we prided ourselves upon an organization capable of meeting, for at least some time to come, all exigencies of modern traffic, we did not expect such numbers of the larger class of vessels applying at once and the same time for space; and freight offering in such quantity as to render our accommodation on more than one occasion totally inadequate. And the sense of responsibility again became apparent as to the urgency for further extending our harbour improvements.

Applying an amount originally designed for local purposes, the commissioners at once commenced the construction of another large 30 foot deep wharf. But the season was scarcely half over when it was found that nothing less than the total completion of the eastern section would accommodate the lumber trade alone; while in the western section the wharves would have to be extended at least 600 to 700 feet for the further accommodation of the also rapidly increasing coal trade.

So much for actual traffic.

But when the initial works at the Shawinigan Falls will be completed; when the gigantic industrial establishments now under construction at that place will be in working order, and others under consideration, be established in Three Rivers, the question arises: will the contemplated increase in our improvements be sufficient to accommodate the constantly increasing traffic?

We know, for instance, that the production of the Laurentide Pulp Co. at the Grand Mère will exceed, this season, 200,000 tons, partly for home consumption, but to a greater extent for export. To produce such quantities it requires, apart from the wood and other raw material, from 25,000 to 30,000 tons of coal, sulphur, clay, &c; all articles to be imported by sea.

With the output of the Radnor forges, and other minor establishments already operating we will not go far astray in saying that, inside of a few years another 500,000 tons of freight will have to be added to, and this as much for the benefit of the ocean shipping as for the land and river carrying trade; and more pertinent than ever will be the question: how to provide for handling all this freight?

And this is not all.

In August last, about the time when the water in the St. Lawrence was at the lowest, the question of shipping cattle from Three Rivers was seriously discussed. The larger steamers, not being able under prevailing circumstances to take their full cargo at Montreal, the interested parties came to the conclusion that our port, being nearer to Montreal and not hampered by the inconveniences of extreme tides, would best be in position to relieve this periodical drawback. And preparations were made to ship from here a portion of the 30,000 head of cattle then remaining to be forwarded, when—owing to the shallowness opposite Champlain River—three (3) steamers in succession met with a slight accident in the main channel. Although the impediment had at once been removed by a government dredge, it was thought advisable to go to Quebec to load the cattle—even at far larger expense—until more accommodation and properly adapted improvements for this particular trade could be established in our port.

Thus it is clear that our accommodations do not even now fully answer the purpose, and as for the coming traffic no time must be lost to provide for every necessary improvement.

But here another serious question arises:

‘Are the commissioners in position to meet the heavy expenses for such largely increased and costly harbour works?’

With the exigencies of modern traffic; the demand and extension of to-day's trade and commerce; the continual increase in the size and draught of vessels, requiring each and all special commodities—Three Rivers not more than Montreal, Quebec or any other port can dispose of sufficient resources to go beyond a certain limit. Trying to raise fresh loans and thus intentionally impairing their finances might be of but poor help; imposing new taxes, or increasing existing harbour dues would be of but scant relief, and a policy of rather doubtful nature, righteously condemned by every one.

Only one logical solution remains:

‘The participation of the Dominion in the expenses for all unavoidable extra harbour works.’

Here as well as in other parts of the country Government's action and intervention is the primary condition for establishing works of purely public interest. Question of local interest, political favour, or excessive *amour de clocher* shall not and do not prevail here. A large view has to be taken of our case, or the present and future development of the trade of the Dominion is but a myth, or the prevailing conditions require the most serious and immediate attention.

Besides, larger ports are not the only ones deserving careful consideration. Trade interests command consideration in every quarter, for every detail and in all its ramifications, and in this our section of the Dominion where new and most powerful factors are at present engaged in preparing an era of unprecedented industrial development—the attention of the government will necessarily have to be particularly directed.

Public opinion is far from adverse to these views, and we have reason to believe that the Government—fully realizing the facts—will not fail to do its duty.

SESSIONAL PAPER No. 11b

COMPARATIVE Statement of Exports and Imports for the Port and District of Three Rivers for the year ending December 31, 1899.

The aggregate volume of 'direct' foreign trade as per custom and consular returns amounted, in 1890, to \$2,235,150 divided into :—

Exports.....	\$1,856,850
Imports.....	378,300

the largest amount for 'direct' transportation ever attained before.

In 1898, the total figured.....	\$1,785,180
In 1897.....	1,633,037

Thus in 1890, we have a surplus of \$450,000, or 30 per cent over the total of the preceding, and \$600,000 or 37 per cent over the year 1897.

In further comparing we find exports in 1899 showing an increase of \$782,000, or 66 per cent over 1898; and \$415,000 or 29 per cent over 1897.

Imports in 1899 fell short of \$232,000 as compared with 1898, but gained \$186,000 over 1897. The large difference with 1898 is accounted for by the importation during that season, of the costly machineries for the Grand'Mére Pulp and Paper Mills. In 1900, larger figures will again appear under the same heading for the mammoth establishments at the Shawinigan Falls.

The progress of our imports following their regular course, further comments are not necessary. Not so with the exports, the details of which may furnish some more useful information.

For the first time in many years our exports to Great Britain exceeded the exports to the United States, and this by a most appreciated figure.

Never before did we send to the mother country more than \$600,000 worth and the average of the last ten years attained about \$500,000. This time we reached the million. A net gain of exactly 100 per cent.

True one may observe that the price of lumber for instance being very high, the increase in our exports do not bear the same interest.

This may partly be the case, but an average of \$11.50 per M. feet B.M. do not vary much with the average of preceding years while it remains even below the average of a good many other seasons. The quantities, on the other hand, are far more suggestive. They exceeded in 1899 by 90 per cent the quantities shipped in 1898 70 per cent of those of 1897, and 80 per cent over 1896.

Another notable feature is the progress in the export of pulp and paper to Great Britain; an article which henceforth will play a prominent figure and show a continual regular increase.

It may also be well to remind that in the foregoing no mention is made of our indirect exports to England. Cheese and butter to the amount of over \$600,000 are still annually shipped via Montreal, and many thousand tons of our hay are carried off every season by the outgoing cattle steamers.

Our export to the United States, in 1899, although larger than in 1898, and about the same as in 1897, show a decrease of some \$140,000 over 1897.

The discrepancy is entirely due to the quantities of lumber shipped and the effect of the \$2 duty levied on the lumber in the United States.

In last mentioned year 42,000,000 feet, at a value of \$374,000, were shipped whereas shipping in 1897 was reduced to twenty-eight and a half million and \$270,000, and in 1898 to even nineteen and a half million with only \$135,000; 1899 coming in again with about 30,000,000 feet and \$265,000, a better average is also obtained, although that average does not give the exact value of the increase in the price which lately so well maintained in the market of the United States.

Pulp wood gained some 10,000 cords over 1898, and about 16,000 over 1897. The quantity shipped in 1899 was 66,350 cords, valued at \$240,000.

Year by year progress has been noted in the export of that article, although the price never varied much. The proposed change in the fiscal policy of the Quebec

Government, imposing an increased stumpage due on pulp wood not manufactured in the province, will undoubtedly have a modifying effect upon next year's export. Still we are under impression that matters will settle themselves, the wood cut on private property not being subject to the government measure and a difference of even \$1.50 per cord of the raw material may not represent a very large percentage in the final value of a ton of paper in the United States.

The shipping of wood pulp to the United States held its own in 1899; the same with most of our other articles of exports.

Exports to other countries continued moderate.

France received three cargoes of lumber and a few hundred tons of charcoal iron.

Spain had but two cargoes of lumber; while some trial shipping with paper had been made to Holland and Belgium; and a commencement of a fairly good opening established with the same product in the Australian colonies.

We may further remark that the total export of our staple representing the respectable amount of 106,000,000 feet lumber valued at \$1,165,000 has been forwarded.

Seventy-six and a half million in 80 cargoes to British and continental markets, and 29,000,000 feet in 490 canal barges, and a small proportion by rail, to the United States. At an average of 44.6 per cent. std., the freight for Europe represents over \$400,000. Adding the other freight, ocean carriers earnings in our port in 1899 did not fall short of a half million dollars.

In conclusion we beg to give an outside opinion as to the value of our port in connection with the present industrial development in our district.

In a communication to the president of the Shawinigan Water and Power Co., the hydraulic and mill engineers speaking of 'Transportation Facilities' reported, after railroad matters as follows.

'While at Three Rivers you have a point which offers most excellent shipping facilities both by rail and water. This will be an especially desirable location at which to manufacture for export, as vessels en route to all parts of the world will touch here. There is no other place where there is a water power of this magnitude which can be economically transmitted to a point reached by ocean going boats. Your company will be able to sell power at Three Rivers cheaper than it can be had at any other sea port in the world.

The following is the summary statement of exports:—

To the United States—

Lumber, thousand feet B.M., 29,800.....	\$	265,535
“ other.....		14,590
Pulp wood, cords, 66,349.....		239,560
Wood pulp.....		144,270
Produce of the field and farm.....		30,555
“ “ mines.....		87,475
Other manufactures and produce.....		6,340
Household effects.....		18,715
	\$	807,040

To Great Britain—

Lumber, thousand feet B.M., 74,500.....	\$	877,380
Square timber.....		1,480
Paper and cardboard.....		124,195
Hay.....		180
	\$	1,003,235

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To France—	
Lumber, feet, B M., 903,500.	\$ 10,055
Charcoal pig iron	7,500
	<hr/>
	\$ 17,555
<hr/>	
To Spain—	
Lumber, feet, B.M., 888,000	\$ 10,000
<hr/>	
To Holland and Belgium—	
Paper and charcoal pig iron	\$ 2,195
<hr/>	
To Australia—	
Paper	\$ 16,835
<hr/>	
Total exports	\$ 1,856,950
<hr/>	

IMPORTS.

From the United States—	
Plants, hardware and machineries	\$ 90,400
Metal	12,950
Drugs, chemicals, &c	7,890
Firebricks, sand, clay, grindstone	5,130
Coal	11,830
Breadstuff and provision	19,130
Cotton and woollen goods	13,245
Fancy goods	4,175
Leather and manufacturing of	26,790
Other manufacture	10,355
Wood and manufacture of	1,795
Raw hides, skins and furs	3,665
“ tobacco	5,475
Books, prints and stationery	3,645
Divers	12,185
Settlers' effects	26,235
	<hr/>
	\$ 254,895
<hr/>	
From Great Britain—	
Cotton and woollen goods	\$ 8,545
Dress and fancy goods	2,565
Manufactured articles	650
Leather	1,260
Sulphur	18,520
China clay	2,700
	<hr/>
	\$ 34,240
<hr/>	
From France—	
Dress and fancy goods	\$ 1,315
Furs	220
Books and stationery	930
Wine and brandy	790
	<hr/>
	\$ 3,255
<hr/>	

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From Holland—		
Gin.....	\$	4,015
From Germany—		
Leather and manufacture of	\$	1,030
Dress and fancy goods.....		125
Divers		420
	\$	1,575
From Austria—		
Furs.....	\$	325
From Lower Provinces—		
24,500 tons coal.....	\$	80,000
Total imports	\$	378,305
Grand total 'direct' transactions—		
Exports.....	\$	1,856,950
Imports.....		378,305
	\$	2,235,255

GEORGE BALCER,

Secretary.

Harbour Commissioners' Office,
Three Rivers, February 24, 1900.

STATEMENT of Number and Tonnage of Sailing Vessels and Steamers entered inward and outward at the port and out-ports of Three Rivers for the year 1899.

OCEAN TRAFFIC.

Return of Vessels Inward.	No.	Tons.	Return of Vessels Outwards.	No.	Tons.
Total arrivals.....	91	200,686	Total departures.....	91	200,686
Steamers	89	198,502	British and Canadian.....	84	189,150
Sailing vessels.....	2	2,184	Norwegian	4	5,748
			Danish.....	2	4,674
			Russian	1	1,114

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PORT OF THREE RIVERS.

Arrived.	No.	Tons.	Cleared For.	No.	Tons.
Steamers	71	158,656	Great Britain	59	136,490
Sailing vessels	2	2,184	Inland ports	10	15,210
			Antwerp	2	5,459
			Spain	2	3,681

OUTPORTS—BATISCAN.

Steamers	3	8,232	Great Britain	3	8,232
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LAKE ST. PETER—PIERREVILLE, LOUISEVILLE.

Steamers	15	31,614	Great Britain	14	28,870
			Antwerp	1	2,744

UNITED STATES.

	Number.	Tonnage.
Port of Three Rivers—United States canal boats	496	47,453
Outports—United States canal boats and barges	185	17,575
	681	65,028

INLAND TRAFFIC.

Bateaux not registered	105	.....
Schooners and barges	56	5,184
Tugs and steamboats	131	13,951
	292	19,135

RECAPITULATION.

Ocean traffic	91	200,686
United States	681	65,028
Local	292	19,135
Grand total	1,064	284,849

(Richelieu and Ontario Navigation Company's steamers, market and local boats not included.)

RECEIPTS and Disbursements of Harbour Commission of Three Rivers for the year 1899.
RECEIPTS.

MONTHS.	COLLECTIONS OF HARBOUR DUES.										PROCEEDS FROM				
	Commissioner's Office.					Custom-house.					Sale of debentures.	Notes issued.	Other sources.		
	On Goods.		Com-mutation.	Rent of wharf and moorage.	Tonnage dues.	On Goods.		Inwards.	Outwards.	Moorage dues.					
	Inwards.	Outwards.				Inwards.	Outwards.								
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	
January	2 97		15 49	3 60	28 27										
February	13 17		11 93	15 70											
March	23 48		163 88	10 83	4 50	200 00									
April	18 73		22 53	20 73		2 00									
May	2 58		3 47												
June	17 23		11 93												
July	117 65		163 88	4 59	25 00	36 00	750 00	500 00							
August	2 58		51 23	28 33		2 30	500 00	1,000 00							
September	17 23		6 20	28 30	40 00	25 00	1,000 00	750 00							
October	117 00		34 56	106 34	30 00	0 90	1,500 00	700 00							
November	325 00		28 40	8 40	227 77	100 00	79 87	146 68	395 01	546 40				795 13	
December			337 68	234 82		377 85	3,629 87	2,146 68	3,345 01	546 40	20,000 00			795 13	

RECAPITULATION.

COMMISSIONER'S OFFICE—

Tonnage dues	\$	325 00
Harbour dues, inwards	\$	337 68
" " outwards		234 82
Commutation		227 77
Rent of wharves and moorage	\$	377 85
		<u>1,503 12</u>

CUSTOM-HOUSE—

Tonnage dues	\$	3,629 87
Harbour dues, inwards	\$	2,146 68
" " outwards		3,345 01
Moorage dues	\$	546 40
		<u>9,667 96</u>

Total collection.....\$ 11,171 08

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PROCEEDS FROM—	
Sale of debentures	\$ 20,000 00
Reimbursement	8 00
Interest on deposits	787 13
Deposit in bank and cash, January 1, 1899	20,795 13
	<u>23,279 70</u>
Total receipts	\$ 55,245 91

RECEIPTS and Disbursements of Harbour Commission of Three Rivers, &c.—*Concluded.*
DISBURSEMENTS.

MONTHS.	EXPENSES FOR ADMINISTRATION.						DISBURSEMENTS CHARGEABLE TO						
	Current expenses.	Salaries and Commissions	Rent.	Printing and Stationery	Travelling and other Expenses.	Refunds.	Engineer's Office.	Repairs.	Construction Account.	Plants and Tools.	Property Account.	Interest Account.	Divers Sinking Fund.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
January..	58 70	159 33	50 00	16 38	.....	.....	24 50	12 00	2,050 00	77 50	.....	1,525 00	202 50
February..	13 74	147 33	50 00	.....	.....	.....	0 50	24 35	3,249 16	.....	.....	.....	.....
March.....	9 65	147 33	50 00	.....	.....	.....	.....	.....	4,355 32	.....	.....	.....	.....
April.....	20 21	147 33	.....	.....	.....	.....	.....	.....	521 43	530 00	.....	.....	.....
May.....	33 23	147 33	.....	28 70	.....	.....	8 20	168 65	1,800 00	150 00	123 33	.....	.....
June.....	15 45	171 33	.....	33 00	.....	15 07	.....	27 65	834 60	42 28	.....	100 00	477 50
July.....	38 04	157 33	50 00	.....	.....	.....	9 60	47 87	1,057 50	43 10	.....	2,275 00	.....
August.....	17 65	157 33	.....	.....	.....	.....	26 25	235 35	1,200 00	136 10	.....	12 50	.....
September..	13 61	157 33	.....	.....	.....	.....	.....	233 88	2,100 00	.....	50 70	.....	.....
October.....	22 73	157 33	50 00	.....	.....	.....	.....	246 56	2,175 00	.....	.....	.....	.....
November..	23 00	157 33	.....	.....	.....	.....	7 15	30 30	4,100 00	.....	.....	.....	.....
December..	13 85	447 41	.....	27 60	.....	284 50	.....	214 35	1,123 50	.....	2 75	.....	.....
	279 76	2,154 04	200 00	105 68	.....	299 57	76 20	1,388 71	24,566 51	448 98	2,744 28	3,912 50	680 00

RECAPITULATION.

ADMINISTRATION—	
Current expenses.....	\$ 279 76
Salaries and commissions.....	2,154 04
Rent.....	200 00
Printing and stationery.....	105 68
Refunds.....	299 57
	\$ 3,039 05
DISBURSEMENTS—	
Engineer's office.....	\$ 76 20
Repairs and general harbour expenses.....	1,388 71
	1,464 91
Construction account.....	\$ 24,566 51
Plants and tools.....	448 98
Property account.....	2,744 28
	27,759 77

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Interest on debentures.....	\$ 3,912 50
Sinking fund.....	680 00
	<hr/>
	4,592 50
	<hr/>
Total disbursements.....	\$ 36,856 23
Deposit in bank and cash, December 31, 1899.....	18,389 68
	<hr/>
Total.....	\$ 55,245 91

GEORGE BALCER,
Secretary-Treasurer.

THREE RIVERS, January 15, 1900.

APPENDIX No. 7

REPORT OF THE PICTOU HARBOUR COMMISSIONERS FOR THE YEAR
ENDED DECEMBER 31, 1899.

Pictou, N.S., January 12, 1900.

F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to inclose you accounts of the Harbour Commissioners, for the Port of Pictou, N.S., for the year ending December 31, 1899. Also, a statement from the Collector of Customs for this port.

Yours very truly,

HENRY G. IVES,

*Secretary.*MEMORANDUM of Receipts and Disbursements on account of Harbour Dues at the Port
of Pictou, N.S., during the year ending December 31, 1899.

1899.	RECEIPTS.	\$	\$
Jan. 1..	Balance in Bank of Nova Scotia	70 00	
Dec. 31..	Harbour dues collected in 1899	675 25	745 25
	DISBURSEMENTS.		
Dec. 31..	Paid harbour master's salary for 1899	200 00	
" 31..	Paid harbour commissioners during 1899	475 25	
" 31..	Balance in Bank of Nova Scotia, reserved to pay harbour master's salary during winter of 1900	70 00	745 25
" 31..	Balance in bank	70 00	

Certified correct,

D. McDONALD,

Collector.

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HARBOUR COMMISSIONERS, Port of Pictou, in account with Henry G. Ives, Secretary.

1899.		\$ cts.	1899.		\$ cts.
Jan. 14	To E. M. McDonald's account for 1898	12 15	Jan. 1	By Balance per account	612 41
" 20	R. Dawson & Son's account for 1898	1 70	Dec. 30	Deposited by collector per his account	475 25
" 26	Jas. McDonald, repairing buoy pump	0 50	" 30	Interest on \$2,500 deposit receipt	128 25
April 4	S. Sutherland for balance due per his account	10 82			
" 4	Interest on mortgage, one year up to Nov. 15, 1898	10 56			
May 2	Mell. McDonald for bushes for channel to East River	4 00			
" 12	John Dalton, pumping buoy	1 00			
" 13	Thos. Fraser, bushing West River	8 00			
" 13	Wm. Livingston, bushing East River, removing log from channel and repairing wharf	23 00			
" 17	Expenses to New Glasgow	2 00			
" 18	Jas. A. Fraser, paint, &c., for buoys	2 13			
" 18	Painting buoys and changing Middle River buoy	6 00			
June 5	Jno. McLennan for puncheon for buoy	3 75			
" 6	Jno. McRea, bushing Middle River	8 00			
" 26	Pumping East River buoy	2 00			
July 6	Commissioners' travelling expenses	14 00			
" 14	SS. Drummond, bushing channel to East River	6 00			
Aug. 23	Joseph Graham, wharfinger, &c., N. Glasgow	25 00			
Sept. 1	G. Reddy, blacksmith, repairing buoys	13 32			
" 5	E. Cameron, tinsmith, repairing buoy	4 85			
Oct. 7	SS. May Queen, placing Harbour buoys	12 00			
" 24	Wm. Livingston, clearing channel East River	1 50			
Dec. 15	Taking in harbour buoys	20 00			
" 30	E. M. McDonald's account 1899	25 00			
" 30	W. B. Ives' account 1899	7 00			
" 30	Secretary's salary	100 00			
" 30	Balance in Bank of Nova Scotia	891 63			
		1,215 91	Dec. 30	By Balance credit in Bank of Nova Scotia 891.63	1,215 91

HENRY. G. IVES,
Secretary.

Pictou, January 1, 1900.

APPENDIX No. 8.

REPORT OF THE HARBOUR COMMISSIONERS OF NORTH SYDNEY
FOR THE YEAR ENDED DECEMBER 31, 1899.OFFICE OF HARBOUR COMMISSIONERS,
NORTH SYDNEY, C.B., July 11, 1900.JOHN HARDIE, Esq.,
Acting Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I beg to hand you herewith inclosed report and financial statement of the North Sydney Harbour Commissioners. I regret the delay in forwarding these papers. They were laid aside for signature and neglected.

Your obedient servant,

WM. HACKETT,
*Secretary.*OFFICE OF HARBOUR COMMISSIONERS,
NORTH SYDNEY, C.B., Jan. 20, 1900.

Number, tonnage and classification of vessels that arrived at this port during the year ending December 31, 1899, navigated by 23,825 seamen :—

	Number.	Tonnage.
Ocean-going steamships	591	569,454
Coasting	139	44,231
Ships	1	1,455
Barques	8	7,240
Barkentines	14	3,746
Brigantines	13	2,405
Schooners	810	58,150
	<hr/> 1,576	<hr/> 686,681

Coal shipments for 1899 :—

General Mining Association, Ltd.	229,000 tons.
Dominion Coal Company, Ltd.	1,541,282 "

WM. HACKETT,
Secy. Harbour Commissioners.

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HARBOUR COMMISSIONERS' Statement of Receipts and Disbursements for Year ending December 31, 1899.

1899.	RECEIPTS.	\$ cts.	1899.	DISBURSEMENTS.	\$ cts.
	Balance on hand Dec. 31, 1898..	1,682 09		Peter McDonald.....	200 00
Jan. 10	Cash from customs, harbour dues	19 93		J. W. Gordon.....	200 00
" 26	" " " " " "	24 69		Joseph Shean.....	400 00
Feb. 28	" " " " " "	14 33		Office.....	50 00
April 24	" " " " " "	13 45		V. E. Bown.....	45 00
May 9	" " " " " "	78 57		Wm. Hackett.....	400 00
" 15	" " " " " "	46 20			
" 22	" " " " " "	52 88			
" 29	" " " " " "	67 88			
June 6	" " " " " "	127 09			
" 12	" " " " " "	71 24			
" 17	" " " " " "	62 73			
" 24	" " " " " "	61 23			
July 1	" " " " " "	48 06			
" 8	" " " " " "	92 66			
" 15	" " " " " "	47 93			
" 22	" " " " " "	82 74			
" 29	" " " " " "	64 39			
Aug. 5	" " " " " "	48 84			
" 12	" " " " " "	71 00			
" 19	" " " " " "	92 42			
" 26	" " " " " "	45 97			
Sept. 2	" " " " " "	65 28			
" 9	" " " " " "	73 36			
" 16	" " " " " "	52 32			
" 23	" " " " " "	47 52			
" 23	SS. Bruce for Aug....	37 35			
" 30	customs, harbour dues	67 80			
Oct. 7	" " " " " "	63 07			
" 14	" " " " " "	42 69			
" 21	" " " " " "	49 10			
" 28	" " " " " "	57 08			
Nov. 4	" " " " " "	30 95			
" 4	SS. Bruce for Sept....	44 44			
" 11	customs, harbour dues	46 90			
" 18	" " " " " "	34 02			
" 25	" " " " " "	59 19			
" 25	SS. Bruce for Oct....	40 78			
Dec. 2	customs, harbour dues	26 61			
" 9	" " " " " "	22 60			
" 16	" " " " " "	31 60			
" 23	" " " " " "	34 26			
" 31	wharfage.....	20 00			
" 31	SS. Bruce, \$44.56 for Nov., \$44.34 for Dec.	88 90			
" 31	customs, harbour dues	23 21		Balance on hand.....	2,680 35
		3,975 35			3,975 35

PETER J. McDONALD,
JAMES W. GORDON,
WM. HACKETT.

NORTH SYDNEY, C.B., January 20, 1900.

APPENDIX No. 9.

REPORT OF THE PILOTAGE AUTHORITY OF MONTREAL
FOR THE YEAR 1899.HARBOUR COMMISSIONERS OF MONTREAL,
SECRETARY'S OFFICE, MONTREAL, February 28, 1900.F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour, by direction of the Harbour Commissioners of Montreal, as the pilotage authority, to transmit, for the information of the honourable the Minister of Marine and Fisheries, the following report of the pilotage district of Montreal, for the year ended December 31, 1899.

The accompanying statement gives the names, earnings, &c., of all the pilots for the past season, and shows a decrease in the latter of \$4,459.57 from 1898, in which year they exceeded those of any previous year by almost \$10,000.

The total amount of pilotage dues was received from the following services, namely :

BRITISH.		
Steamships	\$65,587 51	
Sailing vessels	535 36	
	<hr/>	\$66,122 87
FOREIGN.		
Steamships	\$8,648 81	
Sailing vessels	16 00	
	<hr/>	\$ 8,664 81
Total		<hr/> <hr/> \$74,787 68

Before the opening of navigation, the selection of pilots was made as usual by the Montreal shipping firms, who had been asked in writing if they desired to avail themselves of the privilege granted in by-law 109.

On April 4 Pilot Zéphirin Bouillé, 70 years of age, was granted a renewal of his license for another year, after being examined under the provisions of by-law 103. On May 26, however, he tendered his resignation and was placed on the pension list from August 15.

Before the opening of navigation Pilot François Desjordy, of Lavaltrie, who had been pensioned on May 1, 1897, for impaired eyesight, furnished medical certificates to the effect that his sight had not improved, and was, in consequence, continued on the pension list until May 1, 1900.

There are now 54 pilots on the list, which, in virtue of by-law 99, is limited to 55.

In March, an examination of apprentice pilots was held, at which there were eight candidates, of which Messrs. Anthyme Perrault and Achille Bélanger passed a satisfactory examination, and were granted permits in accordance with by-law 96 of the commissioners.

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The following list gives the names, age, residence and date of license of each apprentice pilot now serving his time under this Authority :

LIST OF APPRENTICE PILOTS.

No.	Name.	Age.	Residence.	Date of License.
1	*Perrault, Anthyme.....	31	Deschambault.....	Oct. 14, 1890.
2	*Bélanger, Achille.....	26	Lotbinière ..	" 11, 1892.
3	Raymond, J. N.....	30	Ste. Anne de la Pérade.....	" 14, 1890.
4	Pleau, J. E.....	29	Deschambault.....	Nov. 11, 1890.
5	Veillet, George.....	30	Ste. Anne de la Pérade.....	July 19, 1892.
6	Labranche, Melville.....	25	Portneuf.....	Oct. 11, 1892.
7	Gagnon, Albert.....	24	Three Rivers.....	" 11, 1892.
8	Paquet, Azarias.....	26	Deschambault.....	" 11, 1892.
9	Gignac, Arthur.....	26	Portneuf.....	" 11, 1892.
10	Paquet, Damien.....	26	Deschambault.....	May 30, 1893.
11	Bourassa, Henri.....	24	"	Oct. 24, 1893.
12	Angers, Alfred.....	23	Ste. Anne de la Pérade.....	Jan. 30, 1894.
13	Gariépy, J. A. U.....	20	St. Alban.....	June 2, 1896.

* Permit issued May 4, 1899 (Art. 96 Harbour Commissioners' By-laws).

Twenty-nine applicants to be placed on the list of apprentice pilots were also examined on August 16, and the commissioners have not yet decided how many new apprentices will be licensed.

LIST OF APPLICANTS FOR LICENSE AS APPRENTICE PILOTS.

No.	Name.	Residence.	Date of Application.
1	Gariépy, A. J. P.....	Lachevrotière.....	Jan. 16, 1894.
2	Frenette, Oswald.....	Portneuf.....	March 1, 1894.
3	Hamelin, Chas. B.....	Champlain.....	Nov. 17, 1896.
4	Perron, Tancrede.....	Deschambault.....	" 28, 1896.
5	Angers, J. B.....	Ste. Anne de la Pérade.....	" 28, 1896.
6	Patoine, J. B., jr.....	Sydney, C. B.....	Dec. 3, 1896.
7	Frenette, Delavoie.....	Portneuf.....	Jan. 25, 1897.
8	Gauthier, Laurent J.....	Deschambault.....	March 26, 1897.
9	Perrault, fils, David.....	"	April 8, 1897.
10	Hamelin, Fortunat.....	"	" 19, 1897.
11	Gauthier, Adélar.....	"	May 6, 1897.
12	Arcand, J. Emilien.....	"	" 7, 1897.
13	Gauthier, Cyriac.....	"	" 9, 1897.
14	Royer, fils.....	Quebec, 306 St. Valier St.....	" 23, 1897.
15	Gariépy, Henri.....	Lachevrotière.....	" 24, 1897.
16	Perrault, Jean.....	Deschambault.....	" 25, 1897.
17	Brunet, Edouard.....	Montreal.....	" 2, 1898.
18	Carpentier, Eugene.....	Champlain.....	June 28, 1898.
19	Fortier, J. Philéas.....	St. Jean, Ile d'Orléans.....	Aug. 27, 1898.
20	Rivard, Frs. Xavier.....	Groindines.....	Sept. 12, 1898.
21	Mayrand, Joseph.....	Lachevrotière.....	Nov. 6, 1898.
22	Arcand Arthur.....	Portneuf.....	" 9, 1898.
23	Frenette, Georges.....	"	" 15, 1898.
24	Gariépy, Hercule.....	Deschambault.....	" 18, 1898.
25	Arcand, Alfred.....	Groindines.....	April 11, 1899.
26	Bouillé, Henri.....	Deschambault.....	Aug. 5, 1899.
27	Lachance, Napoléon.....	River Lafleur, Island of Orleans.....	" 6, 1899.
28	Perrault, Joseph.....	Deschambault.....	" 16, 1899.
29	Labranche, L. Geo.....	Portneuf.....	" 16, 1899.

The amounts received and expended by the harbour commissioners, as pilotage authority of the district, apart from their receipts and disbursements in trust for the

Montreal Decayed Pilots' Fund, of which the annual report and statements have been sent you, were as follows :—

RECEIVED.

From H. & A. Allan, for two copies of evidence re Gallia investigation	\$ 10 00
Pilots, $\frac{2}{7}$ of the pilotage dues on sundry vessels	8 51
Collector of customs, Three Rivers, $\frac{2}{7}$ of the pilotage dues on vessels to and from Three Rivers and Batiscan	22 35
Collector of customs, Sorel, $\frac{2}{7}$ of the pilotage dues on vessels to and from Sorel	7 91
Collector of customs, Montreal, $\frac{2}{7}$ of the pilotage dues on vessels to and from Montreal	1,416 24
Total	\$1,465 01

EXPENDED.

By deficiency, brought forward from 1898	\$ 868 48
Pilots in attendance at examination of apprentices	292 40
Cléophas Auger, pilot, expenses in connection with inspection of the channel	26 37
Dominion Express Company, parcel pilotage agent at Quebec	0 35
Urquhart & Wright, stenographers fees in Gallia investigation	37 00
Geoffrion, Geoffrion & Roy, professional service in connection with pilotage matters	283 15
H. Hains, stenographer's fees re investigation into collision between ss. Turret Court and Ramillies	8 00
Urquhart & Wright, stenographer's fees in Greta Holme Investigation	12 10
Urquhart & Wright, stenographer's fees re investigation into collision between ss. Turret Court and Ramillies	1 50
L. A. Cusson, stenographer's fees in Greta Holme investigation	18 00
Urquhart & Wright, stenographer's fees in Sophie Rickmers Investigation	14 00
N. C. Dufresne, pilot, travelling expenses re Turret Court and Ramillies investigation	8 70
Jos. Paquin, bailiff's fees	1 57
Joseph Thibaudeau, salary as Montreal pilotage agent to Quebec	600 00
Joseph Thibaudeau, allowance for stationery, postage, &c.	19 83
Printing, stationery, &c	31 00
Total	\$2,222 45

The above statement shows a surplus of revenue over expenditure for the year 1899 of \$101.04, but owing to the deficiency brought forward from 1898, there still remains over expenditure for five years of \$757.44.

The tariff of pilotage dues was the same as has been in force since March, 1877, and is as follows :

From the harbour of Quebec to Three Rivers and the opposite side of the River St. Lawrence, or any place above Portneuf and below Three Rivers :

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For the pilotage of any vessel in tow, or propelled by steam (except as hereinafter mentioned), for each foot of draught of water :

Upwards	\$1 50
Downwards	1 50

For the pilotage of any sea-going vessel propelled by steam, for each foot of draught of water :

Upwards	1 75
Downwards	1 75

For the pilotage of any vessel under sail, for each foot of draught of water :

Upwards	2 60
Downwards	1 90

From the harbour of Quebec to Sorel and the opposite side of River St. Lawrence, or any place before Three Rivers and below Sorel :

For the pilotage of any vessel in tow, or propelled by steam (except as hereinafter mentioned), for each foot of draught of water :

Upwards	\$1 50
Downwards	1 50

For the pilotage of any sea-going vessel propelled by steam, for each foot of draught of water :

Upwards	1 87½
Downwards	1 87½

For the pilotage of any vessel under sail, for each foot of draught of water :

Upwards	3 15
Downwards	2 10

From the harbour of Quebec to the harbour of Montreal, or to any place above Sorel and below the harbour of Montreal :

For the pilotage of any vessel in tow, or propelled by steam (except as hereinafter mentioned) for each foot of draught of water :

Upwards	\$2 00
Downwards	2 00

For the pilotage of any sea-going vessel propelled by steam, for each foot of draught of water :

Upwards	2 50
Downwards	2 50

For the pilotage of any vessel under sail, for each foot of draught of water :

Upwards	4 20
Downwards	2 80

From the harbour of Montreal to Sorel, or to any place above Sorel and below Hochelaga, and from Sorel, or any place above Sorel and below Hochelaga, to the harbour of Montreal, for each foot of draught of water for each such pilotage :

Upwards	\$1 00
Downwards	1 00

For the removal of any vessel from one wharf to another, within the limits of the harbour, or from any of the wharfs into the Lachine Canal; or out of the said canal to any of the wharfs in the harbour; or from the foot of the current; or from Longueuil into the harbour; or from the harbour to the foot of the current or to Longueuil; for each service \$5.

The following is a list of accidents and mishaps which called for investigation:

At 1.10 p.m., on May 14, the ss. *Gallia*, in charge of Pilot Zéphirin Bouillé, in rounding Point aux Soldats, a little above Stone Island lighthouse, near Sorel, grounded in the mud.

The pilot reported at length and claimed that the cause of the accident was the sudden jamming of the wheel.

After a careful inquiry and a visit to the scene of the accident, in company with the Chief Engineer of the Department of Marine and Fisheries, the commissioners came to the conclusion that the grounding was due to the three causes:

1. To the inefficiency of the steam steering gear of the vessel.
2. To the want of proper and constant supervision on the part of the captain, as he is always in charge of his ship.
3. To the error of the pilot in allowing the steamer to come at full speed around the bend in the river, and, in consequence, the pilot was suspended for two months.

The vessel was afterwards successfully floated, and an examination of her hull proved that no injury had been sustained.

The following complaint was received from Messrs. Furness, Withy & Co., Ltd.: 'We desire to advise you that Pilot Liboire Perrault, in charge of the ss. *Sophie Rickmers*, when leaving this port on August 10, did some damage to the ss. *Philadelphian* of the Leyland Line. The damage to this steamer can only be attributed to the very faulty handling and incompetent management of this pilot, inasmuch as the damage was caused through his incompetency; and, again, it occupied some time, some two or three hours, to get the steamer clear of her berth. There has been further damage to a barge, which was moored at the end of Victoria Pier, through the steamer having approached too closely to the end and colliding with the barge when turning.

The commissioners held an investigation and suspended the pilot for a period of two months.

Coming up the river on August 5, the ss. *Turret Court* in charge of Pilot Néré Bellisle, about a mile and a half below Pointe à Citrouille lighthouse, Batiscan, ran into ss. *Ramillies*, which was coming from an opposite direction and was heavily loaded.

Both vessels sustained injury, the *Ramillies* had to be beached, but was afterwards got off and both vessels continued their voyage.

Although no complaint was lodged, the commissioners decided to hold an investigation, and, after hearing both pilots, it was deemed advisable to examine one of the officers of the *Turret Court*, who was duly summoned to appear, but failed to do so, and the investigation is still pending.

Coming down the river with the ss. *Greta Holme* on September 4, Pilot Jean Arcand grounded the ship about 250 feet below the black buoy at Point Verchères.

Upon a complaint being made, an investigation was held, the result of which was that the commissioners decided to suspend the pilot for ten months and condemned him to pay the costs of the investigation. The vessel sustained no injury.

Coming down the river on October 25, the ss. *Turret* drawing twelve feet, grounded near Verchères, while in charge of Pilot Arthur Bellisle. No damage to the ship.

A complaint was laid against the pilot by the owners of the vessel, Messrs. Peterson, Tate & Co., and, after a careful investigation, Pilot Bellisle was suspended, until August 1, 1900.

He took a writ of *certiorari*, and the case is pending in the Superior Court.

In connection with these accidents, it may be remarked that about one hundred vessels (out of a total number of 801 sea-going vessels), passed down the channel during the season drawing 26 feet and over and up to 28 feet 7 inches.

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The water in the channel kept at a fairly satisfactory depth throughout the season, except in the three last months, when it went below the normal, 27 feet 6 inches, several times. From May 1 to the close of ocean navigation, the highest mark reached was 36 feet 8 inches, and the lowest 26 feet 8 inches, on October 26.

Appended is a list of ves-els which passed down during the latter part of the season drawing 26 feet and over, with the relative depth in the channel on the day of passage, as indicated by the Government gauge at Sorel :

STATEMENT showing Draught of Steamships for part of Season of 1899, drawing 26 feet and over.

Date.	Steamer.	Draft when stationary in harbour by Pilot's Report.	Depth of water in channel by Sorel Gauge.
		Ft. in.	Ft. in.
Aug. 2	SS. Roman (down)	27 6	28 4
" 3	Sedgemore	26 6	28 4
" 3	Lake Huron	26 0	28 4
" 4	Monteagle	26 0	28 4
" 4	Virginian	26 2	28 4
" 5	Vancouver	26 4	28 4
" 8	Pomeranian	27 8	28 3
" 9	Torr Head	26 0	28 1
" 10	Monterey	26 6	28 1
" 10	Laurentian	27 2	28 1
" 11	Manchester City	26 3	27 11
" 12	Dominion	26 6	27 9
" 13	Hurona	27 0	27 9
" 13	Pinemore	26 6	27 9
" 17	Sardinian	26 2	27 2
" 18	Ikkal	26 6	27 2
" 19	Canbroman	26 0	27 3
" 22	Sarmatian	26 6	28 1
" 25	Milwaukee	27 0	28 2
" 31	Maplemore	26 0	26 7
Sept. 1	Iona	26 6	27 0
" 7	Fremona	26 3	26 9
" 13	Pomeranian	26 0	26 6
" 21	Monterey	26 0	27 6
Oct. 5	Montfort	26 6	28 5
" 5	Ottoman	26 0	28 5
" 7	Vancouver	26 6	28 7
" 8	Manchester Enterprise	26 6	28 5
" 12	Monteagle	26 0	27 8
" 17	Pomeranian	26 6	27 3
Nov. 3	Amarnthia	26 0	28 0

On September 16 an investigation was held by the commissioners on a complaint made by pilots Gédéon Groleau and Jean Arcand against Jean Nault, line pilot, of having piloted the ss. *Gallia* from Sorel to Quebec. The complainants claimed that this ship should have been piloted by a tour de role pilot.

After hearing the parties, the commissioners took the case *en délibéré*.

The semaphores of Cap Santé and Cap à la Roche were worked throughout the season, and were of great benefit to the pilots passing at those places at the lower stages of the tide.

In view of reports that certain vessels had been discharging ashes in the channel, the same notice to mariners as was published in last year's report was sent to the shipping firms and pilots.

The usual edition of the tide-tables which were furnished by the Department of Marine and Fisheries was issued by the commissioners in both English and French and was very freely distributed among the pilots and the shipping firms.

I have the honour to be, sir,

Your obedient servant,

DAVID SEATH,

Secretary.

HARBOUR COMMISSIONERS OF MONTREAL,
SECRETARY'S OFFICE, MONTREAL, January 10, 1900.

F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour, by direction of the Harbour Commissioners of Montreal, to transmit you herewith, for the information of the Honourable the Minister of Marine and Fisheries, the usual statements (1) receipts and disbursements of the Montreal Decayed Pilots' Fund for the year ended December 30, 1899, and (2) assets of the fund at December 30, 1899.

The following is an abstract of the former :—

RECEIPTS.

5 per cent pilotage dues, collected at Montreal.	\$ 3,540 61
“ “ “ “ Three Rivers and Batiscan	55 90
“ “ “ “ Sorel	19 77
“ “ “ “ payable on war vessels &c.	21 27
Amount collected and applied under paragraph 62 of the Pilotage Act.	54 00
	<hr/>
	3,691 55
Interest on investments and cash in bank	2,325 57
	<hr/>
Total.	<u>\$ 6,017 12</u>

DISBURSEMENTS.

Pensions to old pilots and widows of pilots and minors.	\$ 5,189 88
Audit of the fund for 1898.	25 00
Postage stamps and stationery	10 00
	<hr/>
	<u>\$ 5,224 88</u>

Showing a gain for the year of \$782.14.

Pilot Louis Bellisle of Deschambault, who was licensed on February 28, 1872, died on December 28, 1898, aged 53 years, and his widow died on January 3, 1899, leaving three minor children to whose tutor a pension of \$37.33 per quarter was granted.

Retired Pilot George Raymond, of Deschambault, licensed on June 20, 1861, and placed on the pension list on July 1, 1889, died on October 30, 1899, aged 70 years.

Widow J. Leandre Dessureau, of Sorel, who had been a pensioner for nine years, died on April 9, 1899, and as is customary the full pension for the current quarter, ending April 30, was paid to her legal heir.

Pilot Zéphirin Bouillé, of Deschambault, who was licensed on March 1, 1855, and the senior pilot, whose license was renewed at the opening of the navigation season, resigned and was placed on the pension list from August 15, 1899.

At the close of the year there were twenty-two pensioners, namely, nine old pilots, twelve widows and the minors of one pilot.

I have the honour to be, sir,

Your obedient servant,

DAVID SEATH,

Secretary.

MONTREAL PILOTAGE AUTHORITY.

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CR.

DAVID SEATH, Treasurer, in Account with the Montreal Decayed Pilots' Fund.

DR.

1899.	\$	cts.	1899.	\$	cts.
Jan. 1	To	Balance from December, 1898			
" 17		City of Montreal, six months' interest to January 1, on \$5,000 of 5 per cent Montreal city stock	2,667	74	
Feb. 2		Montreal harbour coupons, due January 5, 1899—	125	00	
	R	" Nos. 20 and 102 = 2 x \$15 00 = \$ 30 00			
	"	" 42 and 117-119 = 4 x 50 00 = 200 00			
	"	" 84 = 1 x 60 00 = 60 00			
	"	" 21 and 45-49 = 6 x 25 00 = 150 00			
	"	" 164-172 = 9 x 20 00 = 180 00			
	"	" 289-290 = 2 x 20 00 = 40 00			
	"	" 64, 65, 139-142 = 6 x 20 00 = 120 00			
	"	" 231-246 = 16 x 20 00 = 320 00			
May 31		Collector customs, Montreal, $\frac{1}{4}$ Trinity dues collected in May	1,020	00	
June 16		Five per cent of pilotage dues on tug Sweetstakes from Montreal to Quebec, draft 12 feet.	497	05	
" 30		Collector of customs, Montreal, $\frac{1}{4}$ Trinity dues collected in June.	1	50	
July 19		City of Montreal, six months' interest to July 1, on \$5,000 of Montreal city stock.	564	28	
" 31		Collector of cust. ms, Montreal $\frac{1}{4}$ Trinity dues collected in July	125	00	
" 31		Montreal harbour coupons, due July 5, 1899—	586	00	
	R	" Nos. 20 and 102 = 2 x \$15 00 = \$ 30 00			
	"	" 42 and 117-119 = 4 x 30 00 = 120 00			
	"	" 84 = 1 x 60 00 = 60 00			
	"	" 21 and 45-49 = 6 x 25 00 = 150 00			
	"	" 164-182 = 9 x 20 00 = 180 00			
	"	" 289-290 = 2 x 20 00 = 40 00			
	"	" 64-65, 139-142 = 6 x 20 00 = 120 00			
	"	" 231-246 = 16 x 20 00 = 320 00			
Aug. 23		Pilot J. S. Labranche, $\frac{1}{4}$ of pilotage dues on yacht Thetis, from Montreal to Quebec, draught 9 feet.	1	12	
" 31		Collector of Customs, Montreal, $\frac{1}{4}$ Trinity dues collected in August.	580	98	
Sept. 20		Pilot George Arcand, $\frac{1}{4}$ of pilotage dues on H.M.S. Pearl, Quebec to Montreal, draught 17 feet 2 inches	2	14	
" 25		Pilot Celestin Brunet, $\frac{1}{4}$ of pilotage dues on H.M.S. Pearl Montreal to Quebec, draught 17 feet.	2	12	
		Carried forward			
		By pensions paid to the following, for three months ending February 1—			
		Widow L. David Bouillé, Deschambault.	29	33	
		" Jos Leandre Desureau, Sorel.	37	33	
		" Athanase Dufrene, Deschambault.	37	33	
		" Victor Gagnon, Champlain.	37	33	
		" Placide Gaillardet, St. Grégoire le Grand.	37	33	
		" Alexis Gauthier, Deschambault	32	00	
		" J. Octave Hamelin "	37	33	
		" Joseph Leveillé "	37	33	
		" Adolphe Lisé "	37	33	
		" David Mathieu, Grondines.	32	00	
		" Zéphirin Mayrand, Contrecoeur	37	33	
		" Edouard Naud, Sorel	32	00	
		" Joseph Toupin, Champlain	32	00	
		Old Pilot Cyrille Bellais, Deschambault.	90	00	
		" Danase Cayen, Portneuf	90	00	
		" François Desjordy, Lavaltrie.	90	00	
		" J. B. Dorval, Cap de la Madeline	90	00	
		" Pierre Gagnon, Three Rivers.	90	00	
		" Augustin Naud, Montreal	90	00	
		" David Perrault, Deschambault.	90	00	
		" George Raymond, St. Casimir.	90	00	
		" Treflé Toupin, Roberval.	90	00	
		May 3 By pensions paid to the following for three months ending May 1—			
		Widow L. David Bouillé, Deschambault.	29	33	
		" Joseph Leandre Desureau, Sorel.	37	33	
		" Athanase Dufresnes, Deschambault.	37	33	
		" Victor Gagnon, Champlain	37	33	
		" Placide Gaillardet, St Grégoire	37	33	
		" Edouard Naud, Sorel	32	00	
		" Alexis Gauthier, Deschambault.	32	00	
		" J. Octave Hamelin "	37	33	
		" Joseph Leveillé, Montreal.	37	33	
		" Adolphe Lisé "	37	33	
		" David Mathieu, Grondines	32	00	
		" Zéphirin Mayrand, Contrecoeur	37	33	
		" Joseph Toupin, Champlain	32	00	
		" Louis Bellais, Deschambault, from Decem-ber 28, 1898.	51	00	
		Carried forward			

DR. DAVID SEATH, Treasurer in account with the Montreal Decayed Pilots' Fund—Continued. Cr.

1899.	\$	cts.	1899.	\$	cts.
			Brought forward.....		
Sept. 30	531	90	Old Pilot Cyrille Bellisle, Deschambault.....	90	00
			Damase Cayen, Portneuf.....	90	00
			François Desjorty, Lavaltrie.....	90	00
			J. B. Dorval, Cap de la Madeline.....	90	00
			Pierre Gagnon, Three Rivers.....	90	00
			Augustin Naud, Montreal.....	90	00
			David Ferrault, Deschambault.....	90	00
			George Raymond.....	90	00
			Trefflé Toupin, Normandin.....	90	00
			Riddell Common, audit of this fund for the year ending		
			December 31, 1898.....	25	00
			Aug. 3 By pensions paid to the following for three months, ending		
			August 1—		
			Widow L. David Bouillé, Deschambault.....	29	33
			" Athanase Dufresne.....	37	33
			" Victor Gagnon, Champlain.....	37	33
			" Placide Gaillardet, St. Grégoire.....	37	33
			" Alexis Gauthier, Deschambault.....	32	00
			" J. Octave Hamelin.....	37	33
			" Joseph Leveillé, Montreal.....	37	33
			" Adolphe Lisé, Batiscan.....	37	33
			" David Mathien, Grondines.....	32	00
			" Zéphirin Mayrand, Coutrecoeur.....	37	33
			" Edouard Naud, Sorel.....	32	00
			" Joseph Toupin, Champlain.....	32	00
			" Heirs Louis Bellisle, Deschambault.....	37	33
			" Old Pilot Cyrille Bellisle.....	90	00
			" François Desjorty, Lavaltrie.....	90	00
			" J. B. Dorval, Cap de la Madeline.....	90	00
			" Pierre Gagnon, Three Rivers.....	90	00
			" Augustin Naud, Montreal.....	90	00
			" David Ferrault, Deschambault.....	90	00
			" George Raymond.....	90	00
			" Trefflé Toupin, Normandin.....	90	00
			" Damase Cayen, Portneuf.....	90	00
			Nov. 1 By pension paid to the following for three months ending 1st		
			November—		
			" Widow L. David Bouillé, Deschambault.....	29	33
			" Athanase Dufresne.....	37	33
			" Victor Gagnon, Champlain.....	37	33
			" Placide Gaillardet, St. Grégoire.....	37	33
			" Brought forward.....		
			Collector of customs, Montreal, † Trinity dues collected		
			in September.....	531	90
			To Pilot O. Naud, five-sevenths of pilotage dues on H.M.S.		
			<i>Talbot</i> , Quebec to Montreal and return, draught 21		
			feet.....		
			The Imperial Oil Company, Ltd., pilotage dues on barges		
			52 and 72 Quebec to Montreal, each with draught of		
			8 feet 10 inches = 17 ft. 8 inches at \$2 per foot.....	5	75
			Montreal to Quebec, each with draught of 4 feet 8 inches =		
			9 feet 4 inches at \$2 per foot.....	35	33
			Collected and applied in virtue of sections 58 and 62 of		
			the Pilotage Act—	18	67
			Collector of customs, Montreal, five-sevenths of Trinity		
			dues collected in October.....	470	60

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Nov. 1	Pilot C. Bellisle, five-sevenths of pilotage dues on H.M.S. <i>Quail</i> , Quebec to Montreal, draught 9 feet 1 inch, and Montreal to Quebec, draught 10 feet 1 inch	2 30	" Alexis Gauthier, Deschambault	32 00
" 8	Pilot C. Bellisle, five-sevenths of pilotage dues on tug Peter Smith, Montreal to Quebec, draught 10 feet	1 25	" J. Octave Hamelin "	37 33
" 16	Pilot W. Groleau, 5 per cent of pilotage dues on H.M.S. <i>Psyche</i> , Quebec to Montreal and return, draught 16 feet 10 inches	4 20	" Joseph Leveillé, Montreal	37 33
" 26	Pilot E. Ferrault, five-sevenths of pilotage dues on barge <i>Massasot</i> , Quebec to Montreal, draft 8 feet	0 80	" Adolphe Lisé, Basiscan	32 00
" 30	Collector of customs, Montreal, five-sevenths Trinity dues collected in November	345 25	" David Mathieu, Grouindes	37 33
Dec. 6	Collector of customs, Three Rivers, five-sevenths Trinity dues for season 1899	55 90	" Zéphirin Mayrand, Contrecoeur	32 00
" 15	Collector of customs, Montreal, five-sevenths Trinity dues balance for 1899	24 55	" Edouard Naud, Sorel	32 00
" 27	Collector of customs, Sorel, five-sevenths Trinity dues for season 1899	19 77	" Joseph Toupin, Champlain	37 33
" 31	Montreal City and District Savings Bank, interest at rate of 3 per cent per annum on money at deposit during 1899	35 87	" Hears Louis Bellisle, Deschambault	90 00
			Old Pilot Cyrille Belisle, "	90 00
			" Damase Cayen, Portneuf	90 00
			" François Desjordy, Lavaltrie	90 00
			" J. B. Dorval, Cap de la Madeline	90 00
			" Pierre Gagnon, Three Rivers	90 00
			" Augustin Naud, Montreal	90 00
			" David Ferrault, Deschambault	90 00
			" George Raymond "	90 00
			" Trefik Toupin, Normandin	75 00
			" Zéphirin Bonville, Deschambault	10 00
			Stationery and postage on pensions remitted during 1899	3,459 98
			Balance to January 1900	8,684 86

DAVID SEATH, Treasurer in account with the Montreal Decayed Pilots' Fund—*Continued.*

STATEMENT OF THE FUND.

Nos.	Series.		\$	cts.
		Montreal Harbour debentures—		
20 and 102	R	Due 5th July, 1906, interest at 6 p.c. = 2 × 500.....	1,000	00
42 and 117-119	R	" 5th " 1906 " 6 p.c. = 4 × 1,000.....	4,000	00
84	R	" 5th " 1906 " 6 p.c. = 1 × 2,000.....	2,000	00
21 and 45-49	D	" 5th " 1915 " 5 p.c. = 6 × 1,000.....	6,000	00
164-172	F	" 5th " 1917 " 4 p.c. = 9 × 1,000.....	9,000	00
289-290	G	" 5th " 1918 " 4 p.c. = 2 × 1,000.....	2,000	00
64-65	H	" 5th " 1921 " 4 p.c. = 2 × 1,000.....	2,000	00
139-142	H	" 5th " 1921 " 4 p.c. = 4 × 1,000.....	4,000	00
231-246	J	" 5th " 1924 " 4 p.c. = 16 × 1,000.....	16,000	00
		City of Montreal Consolidated Fund—		
165		Due 1st July, 1910, interest 5 p.c. - 50 × 100.....	5,000	00
		Cash in Montreal City and District Savings Bank at 3 per cent....	3,459	98
			54,459	98

DAVID SEATH,

MONTREAL, 31st December, 1899.

Treasurer.

We hereby certify that we have examined the entries for the year 1899 as recorded on the preceding pages and have found them to agree with vouchers on file, also that debentures and certificates to the amount of \$54,459.98 as described in statement on opposite page have this day been submitted for our inspection.

RIDDEL & COMMON, C.A.,

Auditors.

MONTREAL, 6th February, 1900.

HARBOUR COMMISSIONERS OF MONTREAL,

SECRETARY'S OFFICE, MONTREAL, January 11, 1900.

F. GOURDEAU, Esq.,

Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to inform you that in the report of the Montreal Decayed Pilots' Fund forwarded to you yesterday, I omitted to insert the following:—

'Before the opening of navigation, Pilot François Desjardy, of Lavaltrie, who had been on the pension list since May 1, 1897, on account of impaired eyesight again submitted medical certificates to the effect that his sight had not improved. In view thereof he was continued as a pensioner until May 1, 1900.'

I have the honour to be, sir,

Your obedient servant,

DAVID SEATH,

Secretary.

APPENDIX No. 10.

REPORT OF THE PILOTAGE AUTHORITY OF QUEBEC FOR THE YEAR ENDED DECEMBER 31, 1899.

QUEBEC, January 2, 1900.

To the Honourable Sir L. H. DAVIES,
 Minister of Marine and Fisheries,
 &c., &c., &c.,
 Ottawa.

SIR,—In compliance with the requirements of the Pilotage Act, 36 Victoria, chapter 54, section 22, I have the honour to submit the following report from the Quebec Harbour Commissioners as pilotage authority for the year 1899.

SERVICE OF THE PILOT STATIONS.

The operations of the year began by the sailing, on April 17, of the pilot schooner No. 2 with eight pilots.

On April 28, pilot schooner No. 1 left with twelve pilots, and on May 18, pilot schooner No. 5 took down ten pilots.

On May 4, 10 and 12, twenty pilots were dispatched to pilotage grounds over the Intercolonial Railway.

As usual, all the pilot stations have been provided with pilots during the season through the Intercolonial Railway and the pilot schooners, and the service has been performed to the satisfaction of the commissioners.

OLD PILOTS.

Previous to the opening of navigation, nine of the old pilots who had attained the age of sixty-five and over, were summoned before the commissioners under the authority of the 32nd section of the Pilotage Act, in order to ascertain whether they could continue in the exercise of their duties for the ensuing year. These old pilots had previously to this all passed an examination before a specialist, selected by the pilotage authority, as to their eyesight, colour sight and hearing, and upon this final examination, were all found competent to perform their duties, and their licenses were accordingly renewed for one year.

At a subsequent meeting of the pilotage authority, Pilot George Normand, of Crane Island, after passing all the necessary examinations, had his branch renewed for one year.

PILOTS SUPERANNUATED.

Two pilots have been placed on the retired list during the year, viz. :

Ant. Thos. Chouinard, of Pointe-au-Père.

Jos. Pepin dit Lachance, of Quebec.

Mr. Chouinard was branched in 1864 and had thus seen thirty-five years' service, and Mr. Lachance who received his branch in 1865 had thirty-four years' service to his credit.

ADMISSIONS TO PRACTICE.

Section 24 of the Pilotage Act provides that no new license shall be granted by the pilotage authority of the district of Quebec until the number of pilots in the said district is reduced below one hundred and twenty-five. This limitation having been reached through deaths and superannuations, three apprentices who had passed their time and had been waiting admission for some years, were, after a most thorough examination by the pilotage authority, in which they were assisted by Messrs. L. R. Demers and A. Sansterre, two of the most experienced pilots of the river, admitted to practice as branch pilots for and below the harbour of Quebec, their names being:—

Adélaré Vézina, of St. Michel, Bellechasse,
Jean Baptiste Pouliot, of St. John, Orleans,
Joseph Thivierge, of St. John, Orleans.

The number of pilots on the active list now stands at the prescribed limit of 125.

DEATHS.

Three pilots have died during the year: Mr. Antoine Gobeil, No. 1 on the active list of pilots, Mr. Charles Vézina, No. 7 and Mr. Josalias Philéas Langlois, No. 76.

Messrs. Gobeil and Vézina had a long and successful career as pilots. Mr. Gobeil branched in 1850, having forty-nine years of service to his credit. Mr. Vézina branched in 1854, had forty-four years' service; and Mr. Langlois branched in 1877, had seen twenty-two years of service.

The commissioners are pleased to be able to state that all of these pilots have left good and clear records. Mr. Ant. Gobeil, who had been piloting nearly half a century, a large portion of this time as one of the pilots employed by the Allan Line, has not an accident or complaint of any kind appearing against him in his official record.

TRIALS.

Two complaints were lodged against their pilots by masters of vessels during the season of navigation. The first was by the master of the barge *Rembrandt* against pilot No. 77 for grounding that barge on St. Anne shoals. Vessel came off without damage, but to do so had to discharge a portion of her coal cargo. Vessel left port the day the complaint was lodged (August 30) and as she did not return again during the season case could not be gone on with.

The second complaint was by the master of the ss. *Almerian* against pilot No. 119 for running that vessel ashore at Beaumont Reef. Trial was held on September 18, 20 and 25, the pilot being found guilty and suspended to June 1, 1900.

Complaint was lodged by the Corporation of Pilots against pilot No. 92 for assaulting one of their directors; but on a written apology being made it was withdrawn and action was not proceeded with.

Under the commissioners' by-law authorized by sub-section *j* of section 5, sworn complaint was lodged against pilot No. 19, that owing to the bad condition of his eyesight that he was unable to perform his duties as a pilot. Action was dismissed, it being guaranteed by the direction of the Corporation of Pilots that this pilot had not been allowed and would not be allowed to pilot until his eyesight was perfectly restored to the satisfaction of the commissioners.

A statement annexed to this report conveys all the particulars as to the nature of the complaint and the result of the investigation in each case.

APPRENTICE PILOTS.

Three apprentice pilots having been admitted to practice during the season, leaving five on the list. Of these only three are to be counted, as Messrs. Dugal and Nolet, through their long absence are considered to be dead.

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These three apprentices cannot be admitted to practice before the number of pilots on the active list is reduced to one hundred and twenty-five, as provided for in the Pilotage Act, 36 Victoria, chapter 54, section 24.

PILOTAGE EARNINGS.

According to a return received from the secretary-treasurer of the Corporation of Pilots for and below the harbour of Quebec, their gross earnings for the season have been one hundred and twenty-nine thousand and forty-nine dollars and forty-seven cents (\$129,049.47).

Out of this one hundred and twenty-four thousand three hundred and eighty-six dollars and ninety-five cents (\$124,386.95) was received from eight hundred and sixty-nine British vessels, and the balance, four thousand six hundred and sixty-two dollars and fifty-two cents (\$4,662.52) from sixty foreign craft.

The total expenses (including percentage for pension fund) have been twenty-two thousand six hundred and eleven dollars and thirty-three cents, leaving a balance of one hundred and two thousand four hundred and thirty-eight dollars and fourteen cents, to be divided among an average of 122 and 123 pilots, giving them a net dividend of eight hundred and thirty-two dollars and eighty-three cents (\$832.83) each.

RANGE AND RIVER LIGHTS.

Commissioners have improved their range lights by duplicating them, thus doubling their power and insuring in any case one lamp being in operation.

Commissioners have also urged upon the Department of Marine and Fisheries, that the only satisfactory solution of lighting the traverse would be by the construction of two crib blocks and the erection of permanent lighthouses on them, and have also urged the placing of a revolving light at the west point of the Island of Orleans, a gas buoy on the Beauport Beach, and that any gas buoys not already occulting be made so.

DIRECTORS OF THE CORPORATION OF PILOTS.

At their annual meeting held on the eleventh day of December last, the pilots elected the following directors to their corporation for the ensuing year:

Messrs. L. E. Morin, Ed. Larochelle, sr., Jean Baptiste Tremblay, Arbel Bernier, Léon Labrecque and Jos. Pouliot, jr., and at a subsequent meeting of the new board, Mr. L. E. Morin was unanimously re-elected president.

Annexed to the present report are the various statements, not herein alluded to, which contain all the information yearly conveyed to your department by the commissioners in their capacity of pilotage authority.

I have the honor to be, Sir,

Your most obedient servant,

JAMES WOODS,

Secretary-Treasurer.

PILOTAGE TARIFF.

RATES of Pilotage for the Harbour of Quebec and below, as per by-law passed by the Quebec Harbour Commissioners, on June 18, 1891, and sanctioned by His Excellency the Governor General in Council, on June 26, 1891.

TABLE I.

RATES of Pilotage for the Harbour of Quebec and below, for each foot of draught of water.

From	To	From May 1 to Nov. 10.	From Nov. 10 to Nov. 19.	From Nov. 19 to Mar. 1.	From March 1 to May 1.
Bic Island or any place below the anchorage of Brandy Pots, off Hare Island.....	Anchorage or mooring ground in the basin or harbour of Quebec	\$3.87	\$4.95	\$6.02	\$4.41
The anchorage ground at the Brandy Pots off Hare Island or any place above the said anchorage ground and below St. Roch's Point....	" "	$\frac{2}{3}$ "	$\frac{2}{3}$ "	$\frac{2}{3}$ "	$\frac{2}{3}$ "
St. Roch's Point or any place above this Point and below the Pointe-aux-Pins, on Crane Island.....	" "	$\frac{1}{3}$ "	$\frac{1}{3}$ "	$\frac{1}{3}$ "	$\frac{1}{3}$ "
Pointe-aux-Pins or Crane Island or any place below St. Patrick's Hole.....	" "	$\frac{1}{4}$ "	$\frac{1}{4}$ "	$\frac{1}{4}$ "	$\frac{1}{4}$ "
The anchorage or mooring ground in the Basin of the Harbour of Quebec.....	Bic Island or the place where the pilot shall be discharged in the river below Quebec..	\$3.40	\$4.46	\$5.54	\$3.93

TABLE II.

RATES of Pilotage for the Harbour of Quebec and below.

From	To	\$ cts.
Any wharf in the harbour of Quebec between Pointe-à-Carcy, below, and the west end of the Allan's Wharf above, both inclusive	Any other wharf within said limits	2 50
Any place in the harbour of Quebec, not being a wharf within the above mentioned limits.....	Any other place in the said harbour not being a wharf within the said limits....	5 00

Pilots taking charge of vessels at St. Patrick's Hole or above it, shall be entitled to no more than the sum allowed in Table II for piloting vessels from one part of the harbour to another.

J. B. LALIBERTÉ,
Chairman.

JAS. WOODS,
Secretary-Treasurer.

HARBOUR COMMISSIONERS' OFFICE,
QUEBEC, January 3, 1900.

SESSIONAL PAPER No. 11b

STATEMENT showing the number of Pilots for and below the Harbour of Quebec, on the active list, on December 31, 1899, the number who retired, struck off the active list, or died during the year, the number temporarily suspended, the number who were unable to serve, the number in charge of Government steamers, &c.

Number	Name	Age	Residence	NUMBER OF PILOTAGE EFFECTED.			Casualties and Remarks.
				Inwards	Outwards	Movages.	
1	Antoine Gobeil.....	71	St. John Orleans.....	6	6	1	Employed by the Allan Line—Died suddenly August 11, 1899. Absent one month. Sick part of the season. Employed by the Thompson Line. President of the Corporation of Pilots. Re-elected at last election. Employed by the Black Diamond Line. Sick all the season. One of the directors of the Corporation of Pilots. Re-elected at last election. Office keeper. Employed by the Dominion Line. " " Black Diamond Line. Pensioned July 20, 1899. Master of the Saguenay Station. Sick part of the season. (Absent.) Employed by the Black Diamond Line. Master of pilot schooner <i>Pritee</i> .
2	Charles Francis Brown.....	72	Quebec.....	5	6	4	
3	Paul Faguet.....	68	St. John, Orleans.....	3	4	4	
4	Joseph Pouliot.....	73	" ".....	4	3	4	
5	Georges Normand.....	69	Crane Island.....	4	2	4	
6	David Hamour.....	67	Trois-Pistules.....	4	5	4	
7	Charles Vézina.....	65	St. Michel, Bellechasse.....	4	5	4	
8	Numa Lachance.....	65	" ".....	5	5	4	
9	Joseph Gravel.....	73	Quebec.....	4	4	4	
10	Auguste Conillard Després.....	63	Lauzon, Lévis.....	3	2	4	
11	Jean-Bte. Pouliot.....	58	St. John, Orleans.....	5	2	4	
12	Jean Gobeil.....	63	" ".....	2	1	4	
13	Joseph Faguet.....	62	Quebec.....	5	4	4	
14	Louis Edmond Morton.....	61	" ".....	14	7	1	
15	Moise Lachance.....	62	St. John, Orleans.....	4	3	4	
16	Joseph S. Brown.....	64	Quebec.....	4	5	4	
17	Hubert Raymond.....	60	" ".....	11	11	1	
18	Achille Damour.....	60	St. Valer.....	5	2	4	
19	Joseph Pouliot.....	56	St. John, Orleans.....	0	0	0	
20	Edmond Larochelle, sr.....	56	Quebec.....	0	0	0	
21	Laurent Godbout.....	56	" ".....	1	1	0	
22	Adelme Pouliot.....	60	St. Laurent, Orleans.....	13	11	1	
23	Eart. Pépin dit Laplante.....	54	St. John, Orleans.....	11	11	1	
24	Frs. Xav. Delisle.....	54	Quebec.....	4	3	3	
25	Jos. Pépin dit Lachance.....	65	" ".....	2	2	0	
26	Damien Eugène Boulanger.....	56	Tadoussac.....	0	0	0	
27	Cyprien Langlois.....	55	St. John, Orleans.....	2	3	3	
28	Jean Delisle.....	54	" ".....	9	9	0	
29	Nazaire, Currodeau.....	52	(Absent).....	0	0	0	
30	Charles Normand.....	53	Quebec.....	11	11	1	
31	Napoleon Rioux.....	54	Ste. Petronille, Orleans.....	0	0	0	

STATEMENT showing the Number of Pilots for and below the Harbour of Quebec—Continued.

Number	Name.	Age.	Residence.	NUMBER OF PILOTAGES EFFECTED.			Casualties and Remarks.
				Inwards.	Outwards.	Movages.	
32	Jean-Bte. Tremblay.....	56	Quebec.....	0	0	0	One of the directors of the Corporation of Pilots. Re-elected at last election.
33	Ray. Béquet dit Lamontagne.....	54	Notre-Dame, Lévis.....	13	7	1	Employed by the Beaver Line.
34	Frs. Xav. Lamarre.....	53	St. Valier.....	3	5	4	
35	Moïse Pouliot.....	51	St. John, Orleans.....	14	13	0	Employed by the Dominion Line.
36	Paul Gobeil.....	53	".....	5	3	5	
37	Chs. Alerie Raymond.....	51	Chateau-Richer.....	5	3	4	
38	Victor Vézina.....	54	Quebec.....	16	15	0	Employed by the Thompson Line.
39	L. B. O. Goutron dit Larochelle.....	52	St. Michel, Bellechasse.....	16	15	0	Employed by the Allan Line.
40	Chs. Hermie <i>alias</i> A. Bernier.....	54	".....	0	0	0	One of the directors of the Corporation of Pilots. Re-elected at last election.
41	Louis Robert Demers.....	53	Quebec.....	15	15	2	Employed by the Quebec Steamship Co.
42	Vital Ephrem Chamberland.....	59	St. Michel, Bellechasse.....	8	7	1	Carbay-Routh Co.
43	Joseph G. Dupli.....	52	Quebec.....	18	17	0	Allan Line.
44	Joseph Fortier.....	55	St. John, Orleans.....	13	14	1	Black Diamond Line.
45	Nestor Lechaucé.....	54	".....	14	15	0	Holme Line.
46	Cyrille Audet dit Lapointe.....	54	St. Michel, Bellechasse.....	4	3	4	
47	Joseph Lapointe.....	56	St. Laurent, Orleans.....	5	4	4	
48	Pierre Pepin dit Lachance.....	50	Montréal.....	15	15	0	Black Diamond Line.
49	Théophile Gourdeau.....	55	Lauzon, Lévis.....	10	10	1	"
50	Istode Noël.....	49	St. John, Orleans.....	4	3	4	Sick all the season.
51	Jean Evariste Adam.....	55	Trois Saumons.....	0	0	2	Employed by the Beaver Line.
52	Alfred Larochelle.....	49	St. Michel, Bellechasse.....	8	8	2	International Coal Co.
53	Théophile Corriveau.....	52	Quebec.....	15	17	1	Black Diamond Line.
54	Elzéar Godbout.....	51	".....	7	8	0	"
55	Pierre Gobeil.....	51	St. John, Orleans.....	3	3	4	"
56	Théodule Pepin dit Lachance.....	54	Montréal.....	13	13	1	Head Line.
57	Achille Trefflé Simard.....	48	St. Joseph, Lévis.....	20	18	0	Black Diamond Line.
58	Jean Bte. Patoin.....	48	Montréal.....	11	12	1	"
59	Narcisse l'avoie.....	50	Ste. Luce, Rimouski.....	5	5	4	"
60	Joseph Emilio Couillard.....	48	Quebec.....	7	6	1	Ross Co.'s Line.
61	Louis Albert Royer.....	54	".....	11	12	1	Black Diamond Line.
62	Adélaïde Sautterre.....	48	".....	17	18	0	Allan Line.
63	Onésime Noël.....	47	St. John, Orleans.....	14	17	1	Thomson Line.
64	Napoléon Baillargeon.....	49	Ste. Pétronille, Orleans.....	4	3	4	

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65	Jos. Frs. X. Bernier	47	Quebec	17	15	0	"	Donaldson Line.
66	Frs. X. Demeule	47	St. John, Orleans	0	0	0	Master of pilot schooner Vigie.	Employed by the Black Diamond Line.
67	Louis Honoré Lapiere	49	Notre Dame, Lévis	12	12	0	"	Leyland Line.
68	Jos. Eugène Lachance	45	St. John, Orleans	15	18	1	"	"
69	David Arthur Bouffard	45	St. Laurent, Orleans	4	3	5	"	Elder, Dempster Line.
70	Jean Théophile St. Laurent	48	Quebec	17	16	1	Sick one month.	Employed by the Black Diamond Line.
71	Jacques Georges Dugas	47	St. Joseph, Lévis	3	3	4	"	"
72	Joseph Victor Gourdeau	52	St. Pétronille, Orleans	11	12	1	"	"
73	Louis <i>alias</i> Trefflé Delisle	45	Trois Pistoles	4	4	4	"	"
74	J. Bte. Couillard	48	Cap St. Ignace	4	4	4	"	"
75	Chs. Pelletier	49	St. Michel, Bellechasse	3	4	4	"	"
76	Jos. <i>alias</i> Philéas Langlois	53	St. John, Orleans	0	0	0	Died the April 30, 1899.	"
77	Nazaire Delisle	50	Quebec	4	3	5	"	"
78	J. E. Bonaventure Lavioie	47	St. Luc, Rimouski	5	2	4	Employed by the Hamburg-American Packet Co.	"
79	Adjutor Baillargeon	45	St. Pétronille, Orleans	13	19	1	"	Allian Line.
80	Samuel Rioux	46	Quebec	23	15	0	Employed by the Black Diamond Line.	"
81	Charles Octave Clavet	43	St. Michel, Bellechasse	13	14	1	"	Johnson Line.
82	Paul Lachance	43	Quebec	11	12	1	"	"
83	Arcadius Jouvin	41	St. Luc, Rimouski	5	3	4	"	"
84	Léon Labrecque	44	St. Laurent, Orleans	0	0	0	One of the directors of the Corporation of Pilots.	Re-elected at last election.
85	Paul Lachance	44	St. John, Orleans	9	9	1	Employed by the Ross Line.	Re-elected
86	Joseph Pouliot	43	"	0	0	0	One of the directors of the Corporation of Pilots.	Re-elected at last election.
87	Joseph Laroche	42	St. Michel, Bellechasse	4	3	4	Employed by the Carbray-Routh Company's Line.	"
88	Adjutor Lachance	41	"	11	13	1	"	Head Line.
89	Frs. Gaudreau	48	Quebec	17	16	1	"	"
90	Arthur Koenig	48	L'Islet	5	3	5	Master of pilot's schooner <i>Moutte</i> .	"
91	Eugène Anctil	40	St. Jean Port Joly	0	0	0	"	"
92	David Dumas	46	Notre Dame, Lévis	4	2	4	"	"
93	Joseph Lachance	45	St. Laurent, Orleans	12	12	1	Employed by the Black Diamond Line.	"
94	Paul Pâquet	41	St. John, Orleans	3	4	4	"	"
95	Alphonse Pouliot	47	Chateau Richer	5	4	4	"	"
96	Elzéar Normand	96	L'Islet	5	6	4	"	"
97	Jean Bte. Bernier	40	"	19	17	1	"	Donaldson Line.
98	Joseph Paquet	38	St. John, Orleans	4	4	4	"	"
99	Jean A. Lachance	37	Quebec	4	5	4	"	"
100	Arthur Baillargeon	42	"	10	13	1	"	"
101	Joseph Vézina	38	St. Laurent, Orleans	5	3	4	"	"
102	Herménégilde Guenard	41	St. Thomas, Montmagny	3	4	4	"	"
103	Elzéar Desrosiers	46	Quebec	7	5	1	"	"
104	John J. A. Irvine	104	Green Island	4	1	3	"	"
105	Frédéric Bouffard	42	St. Laurent, Orleans	4	3	4	"	"
106	Jules Asselin	38	St. Michel, Bellechasse	13	14	1	"	"
107	Prudent Marmen	40	Beauport	3	2	4	Sick during three months.	Black Diamond Line.
108	Lucien Lachance	38	Notre Dame, Lévis	16	16	1	Employed by the Thompson Line.	Black Diamond Line.
109	Alfred Dion	41	"	12	13	1	"	Dominion Line.
110	Camille Bernier	41	Quebec	24	17	1	"	"
111	Moïse Blouin	48	St. John, Orleans	5	3	4	"	"
112	Moïse <i>alias</i> Laurent Godbout	39	Quebec	14	13	0	"	Elder-Dempster Line.

STATEMENT showing the Number of Pilots for and below the Harbour of Quebec—Continued.

Number	Name.	Age.	Residence.	NUMBER OF PILOTAGES EFFECTED.			Casualties and Remarks.
				Inwards.	Outwards.	Movages.	
113	Alfred Godreau.	46	Cap St. Ignace.	3	4	4	Employed by the Black Diamond Line. " " Leyland Line. Carbray-Routh Company's Line. Johnson Line. " " Employed by the Elder-Dempster Line.
114	Alfred Raymond.	38	Kamouraska.	4	5	4	
115	Phileas Lachance.	39	St. John, Orleans.	14	15	1	
116	Joseph H. Talbot.	37	Berthier.	8	8	1	
117	Moïse Arthur Lachance.	36	St. John, Orleans.	3	4	4	
118	Louis Frs. Tivierge.	33	"	5	2	4	
119	Jos. Emilien <i>alias</i> Emilie Lachance	33	"	9	9	1	
120	Alphonse Asselin.	34	St. Michel, Bellechasse.	13	14	1	
121	Edmond Larochelle.	33	"	11	12	1	
122	Joseph Plante.	33	St. Paul's Bay.	5	3	4	
123	Alphonse Pâquet.	33	St. John, Orleans.	4	4	4	
124	Paul <i>alias</i> Napoléon Pouliot.	40	"	3	4	4	
125	Arthur Dorion.	43	St. Joseph, Lévis.	4	5	4	
126	Adélaïde Bernier.	38	Quebec.	14	18	1	

Certified.

JAMES WOODS,
Secretary-Treasurer.

HARBOUR COMMISSIONERS' OFFICE,
QUEBEC, January 2, 1900.

SESSIONAL PAPER No. 11b

QUEBEC HARBOUR COMMISSION.

STATEMENT of Trials held, during the year 1899, before the Quebec Harbour Commissioners under the authority of the Pilotage Act, 36 Vic., chap. 54, and 45 Vic., chap. 32, sec. 4.

Name of Pilot Tried.	Nature of Complaint.	Date of Trial.	Result.
Jos. Emilien <i>alias</i> Emile Lachance.	Running SS. "Almerian" ashore at Beaumont Reef.	10th, 20th and 25th of September	Found guilty and suspended to the 1st June, 1900.
Joseph Pouliot	Incapable of performing his duties as a pilot owing to the bad condition of his eyesight.	27th June.	Dismissed.

HARBOUR COMMISSIONERS' OFFICE,
QUEBEC, 2nd January, 1900.

Certified,
JAS. WOODS,
Secretary-Treasurer.

QUEBEC HARBOUR COMMISSION.

LIST of Apprentice Pilots immediately under the Quebec Harbour Commissioners' Pilotage Authority, on the 31st December, 1899.

Number.	Names.	When Indentured.	Remarks.
1	George Dugas	11th April, 1871	Absent since the fall of 1877. Absent since the fall of 1878. It is stipulated in the indentures of those apprentices that they will not be admitted to pass their examination before the number of Pilots is reduced to 125 as provided for by the Act 45th Vic., cap. 32.
2	Ernest Nolet	19th March, 1874	
3	Léonidas Lachance	" " "	
4	Eudore Langlois	" " "	
5	Frs.-X. Eustache Wm. Doiron.	12th July, " "	

HARBOUR COMMISSIONERS' OFFICE,
QUEBEC, 2nd January, 1900.

Certified,
JAS. WOODS,
Secretary-Treasurer.

QUEBEC, December 30, 1899.

F. GOURDEAU, Esq.
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to forward a detailed statement in duplicate of the moneys received and expended by the Decayed Pilot Fund of Quebec, for the year 1899; a similar statement in duplicate of the moneys received and expended by the Corporation of Pilots for the year just ended; all of which revised and certified:—

The total amount of receipts was \$129,049 47
The total expenditure was 22,611 33

Leaving a balance of \$106,438 14

to be distributed among an average of 122 to 123 pilots, giving to each a net dividend of \$832.83.

One hundred foreign vessels paid in \$4,662.52 and eight hundred and sixty-nine British vessels paid in \$124,386.95.

All of which is respectfully submitted.

F. X. DION,
Secretary-Treasurer.

THE CORPORATION OF PILOTS.

STATEMENT of Moneys received and disbursed by the Corporation of Pilots for the Decayed Pilot Fund of Quebec during the year 1899.

RECEIPTS.	\$	cts.	<i>One Pilot at \$96.</i>	\$	cts.
To balance of 1898.....	23,890	69	Pelletier, François.....	96	00
The Municipality of St. Joseph de Lévis, capital remitted.....	3,210	00	<i>Three Pilots at \$88.</i>		
To percentage of contributions of pilots.....	8,968	60	Charest, Pierre.....	88	00
Interest on investments.....	3,403	50	Pouliot, Paul.....	88	00
Interest from savings bank.....	642	48	Raymond, Léandre.....	88	00
	40,115	27	<hr/>		
			<i>One Pilot at \$57.</i>		
EXPENDITURE.			Forbes, James.....	57	00
By pensions.....	7,438	22	<hr/>		
By relief.....	499	98	WIDOWS.		
By salaries.....	550	00	<i>Twenty-two Widows at \$70.</i>		
By deposit in savings bank.....	31,520	00	Widow Audet, George dit Lapointe...	70	00
Balance on hand.....	107	07	" Bernier, J. Bte., on account...	52	50
	40,115	27	" Brown, Charles.....	70	00
			" Caron, Maximin.....	70	00
PENSIONERS RELIEVED BY THE FUND.			" Delisle, Magloire.....	70	00
Gobeil, Jean.....	88	87	" Dumas, Charles.....	70	00
Chouinard, Thomas.....	50	00	" Dumas, François.....	70	00
Adam, J. E.....	100	00	" Dion, J. Bte.....	70	00
Després, Auguste.....	50	00	" Dick, Jos., died Sept. 24, 1898.	10	50
Pouliot, Joseph.....	200	00	" Godbout, Laurent.....	70	00
Langlois, Philéas.....	11	11	" Girard, Dominique.....	70	00
	499	98	" Gobeil, Antoine, pensioned August 11, 1899.....	15	40
PENSIONERS AT THE EXPENSE OF THE FUND.			" Jouvin, Hilaire, on account...	52	50
<i>Amount paid to Each during the year from November 1, 1898, to November 1, 1899.</i>			" Laprise, Louis.....	70	00
<i>Ten Pilots at \$120.</i>			" Langlois, Paul.....	70	00
Bouffard, David.....	120	00	" Lavoie, Louis Joseph.....	70	00
Chassé, Jean.....	120	00	" Lapierre, Pierre.....	70	00
Couillard, Jos. Phil.....	120	00	" Marcoux, Edouard.....	70	00
Demers, Victor.....	120	00	" Pelletier, Alexis.....	70	00
Genest, Edouard.....	120	00	" Pouliot, Jean.....	70	00
Dufresne, Jérémie.....	120	00	" Vaillancourt, Alex.....	70	00
Lapointe, Antoine.....	120	00	" Vézina, Charles, pensioned September 15, 1899.....	8	75
Pouliot, Joseph.....	120	00	<hr/>		
Talbot, J. Bte.....	120	00	<i>Eighteen Widows at \$66.</i>		
Ménard, Régis.....	120	00	Widow Bâquet, Annibal.....	66	00
	1,200	00	" Coulombe, Jean.....	66	00
<i>Three Pilots at \$110.</i>			" Fontaine, Louis.....	66	00
Verreault, Dominique.....	110	00	" Delisle, F. X.....	66	00
Chouinard, Thos., pensioned Apl. 1, 1899	64	17	" Dumas, Hubert.....	66	00
Lachance, Jos., pensioned July 19, 1899.	31	10	" Forgues, Narcisse.....	66	00
	205	27	" Fontaine, Pierre.....	66	00
<i>Two Pilots at \$100.</i>			" Guénard, Michel.....	66	00
Després, Abraham, died Jan. 2, 1899...	17	25	" Lachance, F. X.....	66	00
St. Laurent, Amable, died Dec. 19, 1898	13	25	" Lachance, Barth.....	66	00
	30	50	" Lamarre, Jean Frs.....	66	00
<i>Two Pilots at \$98.</i>			" Laprise, Pierre.....	66	00
Dick, Ovide.....	98	00	" Lemieux, Pierre.....	66	00
Lapointe, Cyrille.....	98	00	" Marticotte, Isaie.....	66	00
	196	00	" Morency, Joseph.....	66	00
			" Raymond, Joseph, died April 14, 1899.....	30	25
			" Ruelland, Pierre, arrears.....	16	50
			" " " year.....	66	00
			" Thievierge, Louis.....	66	00
			<hr/>		
			1,168 75		

SESSIONAL PAPER No. 11b

STATEMENT of Moneys received and disbursed by the Corporation of Pilots for the Decayed Pilot Fund of Quebec, &c.—Continued.

<i>Nine Widows at \$65.</i>		<i>Six Widows at \$40.80.</i>		\$	cts.
Widow Adam, J. E.	65 00	Widow Dandurand, Jacques.	40 80		
" Babin, Damase.	65 00	" Keable, André.	40 80		
" Demers, Edouard.	65 00	" Morency, Guillaume.	40 80		
" Dorion, Eustache.	65 00	" Pelletier, D. F.	40 80		
" Fortin, Nicholas.	65 00	" Rouleau, Pierre.	40 80		
" Genest, Amable.	65 00	" Dallaire, Napoleon.	40 80		
" Gaudreau, François.	65 00				
" Lapointe, Joseph, on account.	48 75				
" Leclerc, Ls. Ol.	65 00				
	568 75				244 80
<i>Six Widows at \$63.</i>		<i>Six Widows at \$38.40.</i>			
Widow Boucher, Antoine, died March 4, 1899.	21 70	Widow Caron, Fabien.	38 40		
" Cinq-Mars, David.	63 00	" Côté, Magloire.	38 40		
" Crépault, Louis.	63 00	" Langlois, Louis (A.R.) on acct.	28 80		
" Curodeau, Pierre.	63 00	" McNeil, Thomas.	38 40		
" Mercier, Magloire.	63 00	" Turgeon, Alfred.	38 40		
" Roy, Alexis.	63 00	" Larochelle, Laurent.	38 40		
	336 70				220 80
<i>Nine Widows at \$60.</i>		CHILDREN.			
Widow Després, George, pensioned November 9, 1898.	59 10	Child of Boutin, Ths., inf., on acct. (1)	13 50		
" Fournier, Amable.	60 00	" Couillard, Hilaire. (1)	18 00		
" Glynn, Dennis.	60 00	" Dugas, Jean, inf. (1)	18 00		
" Langelier, Fabien.	60 00	" Forbes, Isaac, inf., ac (2)	24 75		
" Langlois, Julien.	60 00	" Fortin, Nicholas, inf., ac (1)	9 00		
" Laroche, J. Bte.	60 00	" Giroux, Jean, inf. (1)	18 00		
" Lavoie, A. (L. M.)	60 00	" Jahan, Joseph, inf. (1)	18 00		
" Noël, Henri.	60 00	" Langlois, Joseph, inf. (1)	18 00		
" Ross, Pierre.	60 00	" Laprise, P. S., 15 years old. (1)	14 35		
	539 10	" Toussaint, P., inf. (1)	18 00		
<i>Nine Widows at \$58.</i>		" Plante, Jos., inf. (1)	18 00		
Widow Talbot, J. Bte.	58 00	" Noël, François, inf. (1)	18 00		
" Langlois, Philias, pensioned April 30, 1899.	29 00	" Chouinard, Chs., inf. (1)	18 00		
" Caron, Germain, died May 28, 1899.	34 30	" Gobeil, Jean, inf. (1)	18 00		
" Côté, François.	58 00	" Asselin, Louis, inf. (1)	18 00		
" Dion, Jean.	58 00				259 60
" Koenig, C. F.	58 00	RECAPITULATION OF PENSIONS.			
" Lachance, Ovide.	58 00	10 Pilots at \$120.	1,200 00		
" Levesque, Joseph.	58 00	3 " 110.	205 27		
" Pineau, Benjamin.	58 00	2 " 100.	30 50		
	469 30	2 " 98.	196 00		
<i>Five Widows at \$48.</i>		1 " 96.	96 00		
Widow Côté, Célestin.	48 00	3 " 88.	264 00		
" Desrosiers, P.	48 00	1 " 57.	57 00		
" Dion, Joseph.	48 00	22 Pilots.			
" Lachance, F. X. (M.L.) arrears.	12 00	22 Widows at \$70.	1,329 65		
" " " "	48 00	18 " 66.	1,168 75		
" Turgeon, Edouard.	48 00	9 " 65.	568 75		
	252 00	6 " 63.	336 70		
	252 00	9 " 60.	539 10		
		9 " 58.	469 30		
		5 " 48.	252 00		
		6 " 40 80.	244 80		
		6 " 38 40.	220 80		
		90 Widows.			
		16 Children at \$18.	259 60		
		128 Pensioners.	7,438 22		

63 VICTORIA, A. 1900

STATEMENT of Moneys received and disbursed by the Corporation of Pilots for the Decayed Pilot Fund of Quebec, &c.—*Concluded.*

DR.		CR.	
RECEIPTS.	\$ cts.		\$ cts.
To balance of 1898.	23,890 69	By pensions, relief paid during the year 1899 :—	
To Trustees of Quebec roads, 1 year's interest to July 1, 1899, on \$22,800, at 6 per cent.	1,368 00	By relief.	499 98
The City of Quebec, 1 year's interest to July 1, 1899, on \$9,000, at 7 per cent.	630 00	By arrears of pensions to Dec. 31, 1898.	39 00
Treasury Department, 1 year's interest to July 1, 1899, on \$20,000, at 5 per cent.	1,000 00	By quarter ending Jan. 31, 1899.	1,895 40
Church Trustees, St. Fulgence, 1 year's interest on \$2,500, at 5 per cent.	125 00	" April 30, 1899.	1,834 92
Guillaume Bouchard, 1 year's interest on \$2,400, at 5 per cent.	120 00	" July 31, 1899.	1,851 70
The Municipality of St. Joseph de Lévis, 1 year's interest on \$3,210, at 5 per cent.	160 50	" Oct. 31, 1899.	1,817 20
The Savings Bank, 1 year's interest on current account.	642 48	Salary of secretary and assistant.	550 00
Contributions of pilots.	8,968 60	Deposits at savings banks—National Bank and Quebec Bank.	31,520 00
The Municipality of St. Joseph de Lévis, capital remitted.	3,210 00	By balance on hand.	107 07
			40,115 27
	40,115 27	STATEMENT OF FUND.	
		Moneys loaned.	56,700 00
		Money in savings bank.	31,520 00
		Money in secretary-treasurer's hands.	107 07
			88,327 07
		To deduct arrears of pensions due this day.	150 10
			88,176 97

F. X. DION,
Secretary-Treasurer.

We, the undersigned, officially appointed to examine the books and accounts of the Decayed Pilot Fund of Quebec, certify to having made a minute examination and to having found everything correct.

J. J. B. TURCOTTE,
Accountant.

TREFFLÉ SIMARD,
THÉOPHILE CORRIVEAU,
Auditors.

QUEBEC, December 30, 1899.

SESSIONAL PAPER No. 11b

F. X. DION—in current account with the Corporation of Pilots of Quebec to December 31, 1899.

Dr.		\$ cts.	Cr.		\$ cts.
To	Balance of 1898.....	1,310	24	By	Expenses pilots' boats.. \$ 735 58
	Reserve fund of 1898.....	500	00		Less..... 11 90
	Pilots' retirement fund.....	750	00		723 68
	Customs, Montreal.....	79,141	34		Pilots' expenses..... \$ 594 61
	" Three Rivers.....	2,322	71		Less..... 1 00
	" Chicoutimi.....	301	59		593 61
	" Tadoussac (St. Etienne) ..	525	75		Expenses pilot boat <i>La Mouette</i>
	" Sorel.....	710	73		" " <i>La Vigie</i>
	" Batiscan.....	404	24		" " <i>La Price</i>
	" St. Thomas de Montmagny	1,336	98		General expenses..... \$ 2,440 15
	" Trois Pistoles.....	405	77		Less..... 0 50
	Interest: Banque Nationale.....	103	48		2,439 65
	Fines.....	160	00		Provisions.. \$ 1,006 74
	Lost time.....	2,506	28		Less..... 12 97
	Pilotage collected at Quebec..	43,900	36		993 77
					Rent..... \$ 476 50
					Less..... 50 00
					426 50
					Apprentices' wages.....
					365 58
					Seamen's wages.....
					402 05
					Cooks' wages.....
					435 34
					Indemnity to directors.....
					600 00
					Indemnity to captains.....
					280 00
					Indemnity to Saguenay station....
					250 00
					Pilot boat shares.....
					3,500 00
					Insurance.....
					101 93
					Pilotage remitted.....
					222 07
					Salaries of employees.....
					1,550 00
					Retired pilots' fund.....
					1,000 00
					Decayed pilots' fund.....
					8,968 60
					Reserve fund.....
					500 00
					Dividends.....
					109,002 00
					Balance.....
					1,266 14
		134,379	47		134,379 47

F. X. DION,

Secretary-Treasurer.

We, the undersigned, officially appointed to examine the books and accounts of the Corporation of Pilots, certify to having found them correct.

J. J. B. TURCOTTE,

Accountant.

J. THÉOPHILE CORRIVEAU,

TREFFLÉ SIMARD,

Auditors.

QUEBEC, December 30, 1899.

APPENDIX No. II.

REPORT OF THE PILOTAGE AUTHORITY, VICTORIA, B.C., FOR YEAR ENDED DECEMBER 31, 1899.

F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour, by direction of the commissioners, to transmit herewith the pilotage returns for the Pilotage District of Victoria and Esquimalt, in the Province of British Columbia, for the year ending December 31, 1899, as required by section 22 of chapter 80 of the Revised Statutes of Canada, 1886, in the hope that the same will reach your department in ample season for embodiment in the supplement to your annual report, of which kindly furnish me with a copy when issued, and accept my thanks in anticipation. Our chairman, Mr. Rithet, is generally in San Francisco at New Year's, or he would sign returns.

I have the honour to be, sir,
Your most obedient servant,

EDGAR CROW BAKER,
Secretary-Treasurer P. A.

PILOTAGE Returns, Victoria and Esquimalt Pilotage District, B.C.,
January 1 to December 31, 1899.

LICENSED PILOTS.

No.	Name.	Age.	Date of Issue.	Seniority.	Remarks.
1	John Thompson.....	50	April 23, 1880....	Dec. 4, 1898.....	Originally a B. C. Pilot.
2	Samuel W. Bucknam..	49	March 6, 1891....	March 6, 1891....	Victoria and Esquimalt District.
3	John Newbv	50	April 10, 1891....	April 10, 1891....	“ “ “ “
4	Thomas Bebbington...	53	Feb. 25, 1893....	Feb. 25, 1893....	Originally a N. W. and Yale pilot.

N.B.—The foregoing is a list of licensed pilots, who are the only ones who have prosecuted such calling in the above named district.

There are no masters and mates acting under license from this Pilotage Authority, all the certificates previously granted having expired by effluxion of time.

Clauses I., II., III., page 213, supplement to 19th annual report, with reductions on pages 200 and 201, supplement to 21st annual report, and also those on pages 181 and 182, supplement to 26th annual report (*i.e.* Order in Council, July 1, 1893), apply to this year also.

Same Acts and parts of Acts as last year apply to 1899, and list of exempted vessels and Puget Sound rates remain the same.

EDGAR CROW BAKER,
Secretary-Treasurer.

VICTORIA, B.C., December 31, 1899.

SESSIONAL PAPER No. 11b

PILOTAGE DUES collected, January 1 to December 31, 1899.

Month.	British.	Foreign.	Total.	Remarks.
	\$ cts.	\$ cts.	\$ cts.	
January.....	313 25	766 25	1,079 50	} N.B.— The total \$13,724.87 does not include sums of \$500 collected from Puget Sound steamers and \$47.37 pilotage outwards in certain cases to credit of Pilotage Authority.
February.....	317 00	720 25	1,037 25	
March.....	397 00	715 50	1,112 50	
April.....	423 00	763 75	1,186 75	
May.....	291 87	851 50	1,143 37	
June.....	418 00	841 50	1,259 50	
July.....	378 50	818 00	1,196 50	
August.....	388 00	904 25	1,292 25	
September.....	340 75	798 25	1,139 00	
October.....	512 75	661 50	1,174 25	
November.....	323 50	672 50	996 00	
December.....	280 75	827 25	1,108 00	
	4,384 37	9,340 50	13,724 87	

VICTORIA, B.C., December 31, 1899.

EDGAR CROW BAKER,
Secretary-Treasurer.

Cr.

RECEIPTS and EXPENDITURE, January 1 to December 31, 1899.

Dr.

Date.	Nature of Receipt.	Amount.	Date.	Head of Service.	Amount.
1899.		\$ cts.	1899.		\$ cts.
January 1.	To Balance from last year	1,514 39	April 5.	By V. and E. pilots, division surplus, 1898.	1,514 39
Jan. 1 to Dec. 31	Pilotage dues, 12 months.	13,724 87	Jan. 1 to Dec. 31	V. and E. pilots, earnings as per receipts	12,352 39
" "	Certificate fees, Puget Sound Steamers	500 00	" "	Secretary-treasurer, 12 months' salary	600 00
" "	Pilotage outwards in certain cases to credit of Pilotage Authority	47 37	" "	Office expenses, rent, fuel, light, &c.	333 75
		15,786 63	December 31.	Balance to credit of Pilotage Authority	986 10
		15,786 63			15,786 63

EDGAR CROW BAKER,
Secretary-Treasurer.

Approved and certified correct.
 MATTHEW T. JOHNSTON, }
 HERBERT G. SIMS, } *Commissioners.*

APPENDIX No. 12.

REPORT OF THE PILOTAGE AUTHORITY OF NANAIMO, B. C., FOR THE YEAR 1899.

NANAIMO, B.C., January 10, 1900.

The Honourable
The Minister of Marine and Fisheries,
Ottawa, Canada.

SIR,—I have the honour to forward for the information of the Dominion Government, the pilotage returns of this Pilotage Authority, for the year ending December 31, 1899, in accordance with the Pilotage Act.

I am, sir,

Your obedient servant,

GEORGE NORRIS,

Acting Secretary, Nanaimo Pilotage Authority.

Pilotage Returns of the Nanaimo Pilotage Authority for the year ending December 31, 1899, in accordance with the "Pilotage Act, 1886."

Names of Pilots.	Age.	Service.
Morrison, Daniel	59	District.
Bendrot, Jas. Peter.....	39	"
Christensen, Jas.....	58	"
Butler, Jas Edgar.....	38	"
Owens, William David....	33	"
Sabiston, John F., sr.....	73	Retired Sept. 30, 1896.

Rates of pilotage dues, etc.

Half pilotage	\$1 per foot.
Full "	2 " "
Gulf "	10 per diem.

Special rates for mail steamers and tugs.

Total amount received for pilotage dues.

Pilotage dues from British ships.....	\$ 9,139 00
" " Foreign "	13,362 50
	<hr/>
	\$22,501 50

Receipts.

Balance from 1898.....	Nil
Receipts for year 1899.....	Nil
Pilotage dues.....	\$22,501 50
License fees.....	50 00
	<hr/>
	<u>\$22,551 50</u>

Expenditure.

Paid pilots	\$17,601 57
Pilots' expenses	3,415 83
Ex-pilot's allowance	600 00
Secretary-treasurer	600 00
Rent of office	120 00
Cleaning office	30 00
Printing, postage and stationery	92 10
Refund of steamer <i>Miowera's</i> pilotage paid into the fund twice by Commissioner Quennell.....	92 00
	<hr/>
	\$22,551 50
	<hr/>

E. QUENNEL, *Chairman,*

GEORGE NORRIS, *Acting Secretary.*

NANAIMO, B.C., January 10, 1900.

SESSIONAL PAPER No. 11b

APPENDIX No. 13.

REPORT OF THE PILOTAGE AUTHORITY OF YALE AND NEW WESTMINSTER FOR YEAR 1899.

VANCOUVER, B. C., January 6, 1900.

To The Honourable
The Minister of Marine,
Ottawa.

SIR,—I have the honour to forward to you herewith statement of accounts and of the affairs of the Yale and New Westminster Pilotage Authority for the year just ended, 1899.

At a meeting of the commissioners held in my office yesterday the 5th inst., my accounts were audited and signed by the chairman, and I was instructed to forward to you. This I do, enclosing, 'Receipts and Expenditure,' 'Ledger Balance' and 'Statement.'

I am also sending true copies to your agent for this province, Capt. James Gaudin, Victoria.

I have, sir, the honour to be

Your obedient servant,

C. GARDINER JOHNSON,

Secretary to the New Westminster Pilotage Authority.

RECEIPTS.

Balance in bank, January 5, 1899	\$ 810 10
Pilotage earnings for year 1899	17,112 90
	-----\$ 17,923 00

DISBURSEMENTS.

Paid pilots January 5, 1899	\$ 810 10
Paid pilots during year 1899	12,275 78
Office expense account, 1899	909 50
Pilotage expense account, 1899	3,125 85
Balance in bank	801 77
	-----\$ 17,923 00

C. GARDINER JOHNSON,

Secretary Yale and New Westminster Pilotage Authority.

Approved,

RICHARD ALEXANDER,
Chairman.

VANCOUVER, B.C., January 5, 1900.

LEDGER BALANCE.

Assets.

Bank of Montreal	\$ 801 77
Bank of Montreal—	
Savings department	\$ 614 63
Less special cheque to order of commissioners	100 00

	\$ 514 63
Interest, 1899	15 80

	530 43
	-----\$ 1,332 20

Liabilities.

Reserve fund	\$	514 63	
Interest, 1899.....		15 80	
		<hr/>	\$ 530 43
Pilotage earnings not disbursed.....			801 77
			<hr/>
			1,332 20

C. GARDINER JOHNSON,

Secretary, Yale and New Westminster Pilotage Authority.

Approved,

RICHARD ALEXANDER,

Chairman.

VANCOUVER, B.C., January 5, 1900.

No. of License.	Name of Pilot.	Age.	Service in.	Remarks.
1 First Class..	William Ettershank.	57	License to pilot vessels of any size or description within the limits of Yale and New Westminster pilotage authority.	Active.
2 " ..	George W. Robertson	49		
3 " ..	H. Robson Jones....	43		
4 " ..	William Johnson....	43		

NOTE.—Pilotage dues now in force are same as approved by Order in Council Saturday, the 28th day of April, 1894.

INWARDS.

17 British steamers.....	\$	2,896 90
243 Foreign steamers.....		4,536 00
19 British sailers.....		615 50
11 Foreign sailers.....		303 00
		<hr/>
		\$ 8,351 40

OUTWARDS.

64 British steamers.....	\$	2,967 00
258 Foreign steamers.....		4,662 75
19 British sailers.....		683 75
11 Foreign sailers.....		448 00
		<hr/>
		8,761 50
		<hr/>
		\$ 17,112 80

Remaining in port December 31, 1899.—Senator (in Westminster), \$43.75; Latona, \$20; Saga, \$21.25; Guy C. Guy, \$28; Altear, \$26; Aorangi, \$53.25; Empress of India, \$66.25.

C. GARDINER JOHNSON,

Secretary, Yale and New Westminster Pilotage Authority.

Approved,

RICHARD ALEXANDER,

Chairman.

VANCOUVER, B.C., January, 1900.

APPENDIX No. 14.

REPORT OF PILOTAGE AUTHORITY OF HALIFAX FOR YEAR 1899.

HALIFAX, N.S., January 9, 1900.

Hon. Minister Marine and Fisheries,
Ottawa.

SIR,—I beg leave to transmit for the information of the department the enclosed returns of the Pilotage Authority of the district of Halifax, N.S., viz. :—

- Statement of receipts and expenditures.
- Statement of superannuation fund.
- Return outward of vessels, British and Foreign.
- Return inward of vessels, British and Foreign.
- List of licensed pilots.
- List of pensioners.
- Balance sheet with amount paid each pilot.

Respectfully,

Your obedient servant,

J. TAYLOR WOOD,

Secretary-Treasurer.

STATEMENT of Receipts and Expenditures for the year ended December 31, 1899.

DR.	\$ cts.	CR.	\$ cts.
Salary	600 00	Balance on hand, Dec. 31, 1898	1,576 18
Rent	325 00	Outward pilotage	1,634 45
Printing, legal expenses, &c.	1,302 54	Commissions	1,485 09
Deposit savings	800 00	Interest	476 85
Balance on hand	1,798 53	Licenses, bonds, &c.	85 00
	5,257 57		5,257 57

J. TAYLOR WOOD,

Secretary-Treasurer.

63 VICTORIA, A. 1900

OFFICE OF COMMISSIONERS OF PILOTS,
December 30, 1899.

BALANCE Sheet.

Dr.	\$ cts.	Cr.	\$ cts.
Cash.....	1,798 53	Superannuation Fund.....	15,854 71
Union Bank, special deposit.....	3,088 59	Outward pilotage.....	4,198 53
" superannuation.....	481 81		
Savings Bank.....	7,084 31		
Dominion Stock.....	5,200 00		
Union Bank.....	2,400 00		
Total.....	20,053 24	Total.....	20,053 24

E.O.E.

Amount paid pilots..... \$ 23,033 63
 " each pilot..... 1,096 84

J. TAYLOR WOOD,
Secretary-Treasurer.

OFFICE OF COMMISSIONERS OF PILOTS,
HALIFAX, N.S., December 31, 1899.

LIST of persons on the Pension Roll.

Name.	Age.	Residence.	Amount of Pensions per Annum.
			\$ cts.
John Fleming.....	86	Ketch Harbour.....	100 00
John Johnson.....	76	Bear Cove, Halifax Co.....	100 00
Patrick Hayes.....	77	Herring Cove, Halifax Co.....	100 00
Bernard Gallagher.....	74	Halifax.....	100 00
Joseph Reno.....	73	Herring Cove, Halifax Co.....	100 00
Mrs. Lucinda Nickerson.....	65	Sambro, Halifax Co.....	30 00
Mrs. Mary Smith.....	63	Halifax.....	30 00
Mrs. Charles Martin.....	67	".....	30 00
Mrs. Charles Glazebrook.....	54	".....	30 00
Mary Glazebrook.....	10	".....	15 00
Chas. Glazebrook.....	8	".....	15 00
Mrs. Daniel Martin.....	41	".....	30 00
Thomas Martin.....	13	".....	15 00
Leo Martin.....	9	".....	15 00
Elizabeth Martin.....	7	".....	15 00
Barbara Martin.....	6	".....	15 00
Catherine Martin.....	4	".....	15 00
		Total.....	755 50

J. TAYLOR WOOD,
Secretary-Treasurer.

SESSIONAL PAPER No. 11b

OFFICE OF COMMISSIONERS OF PILOTS,
December 31, 1899,

LIST of Pilots, Port of Halifax.

No.	Name.	Residence.	Age.
1			
2	William Fleming	Halifax	33
3	James Holland	Duncan's Cove	63
4	William Baker	Halifax	64
5			
6	Frank Thomas	Herring Cove	24
7			
8	William Hayes	Herring Cove	25
9	Hugh Monroe	Halifax	64
10	Jeremiah Holland	Duncan's Cove	67
11	Edward Byers	Halifax	58
12	James Hanrahan	Ferguson's Cove	62
13	William Beazley	"	59
14	John Hayes	Halifax	49
15	James Spears	"	41
16	John F. Beazley	"	39
17	William Gorman	Herring Cove	25
18	Charles F. Martin	Halifax	34
19	William White	Ferguson's Cove	42
20	Thomas Hayes	Halifax	40
21	Thomas Reno	Herring Cove	39
22	Frank Mackey	Halifax	27
23	Henry Latter	"	35
24			
25			
26	James Fleming	Halifax	60

J. TAYLOR WOOD,
Secretary-Treasurer.

OFFICE OF COMMISSIONERS OF PILOTS,
December 31, 1899.

RETURN of vessels entered Outwards at the Port of Halifax, N.S., from January 1, 1899, to December 31, 1899, (subject to compulsory Pilotage.)

BRITISH.

Schooners.	Brigantines.	Barque- tines.	Barques.	Ships.	Steamers.	Barges.	Tonnage.	Pilot Fees.
8	4	11	2	2	565	18	822,251	\$ cts. 7,134 06

FOREIGN.

4	1	4	29	1	113	6	227,502	1,789 99
Total... 12	5	15	31	3	678	24	1,051,753	\$8,924 05

63 VICTORIA, A. 1900

RETURN of vessels entered Inward at the Port of Halifax, from January 1, 1899, to December 31, 1899, (subject to compulsory pilotage.)

BRITISH.

Schooners.	Brigantines.	Barquentines.	Barques.	Ships.	Steamers.	Barges.	Tonnage.	Pilot Fees.
74	15	10	2	2	654	48	851,015	\$ cts. 13,841 50

FOREIGN.

25	1	4	29	.....	116	4	230,486	3,182 20
Total... 99	16	14	31	2	770	52	1,081,501	\$17,023 70

J. TAYLOR WOOD,
Secretary-Treasurer.

OFFICE OF COMMISSIONERS OF PILOTS,
December 31, 1899.

SUPERANNUATION FUND.

Cr.	\$ cts.	\$ cts.
Balance, December 31, 1898		15,090 92
Commissions.....	740 69	
Interest	476 85	
Licenses and bonds.....	85 00	
		1,302 54
Less paid pensions.....		16,393 46
		538 75
		15,854 71
DR.	\$ cts.	\$ cts.
Union Bank.....	481 81	
" (special).....	3,088 59	
Savings bank.....	7,084 31	
Dominion stock.....	5,200 00	
		15,854 71
1900.		
Jan. 9. Transferred from general fund.....		2,515 53
		18,370 24

E.O.E.

J. TAYLOR WOOD,
Secretary-Treasurer.

SESSIONAL PAPER No. 11b

APPENDIX No. 15.

REPORT OF PILOTAGE AUTHORITY FOR DISTRICT OF MIRAMICHI,
N.B., FOR 1899.

NEWCASTLE, MIRAMICHI, January 10, 1900.

MAJOR F. GOURDEAU,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to inclose herein the pilotage returns of the district of Miramichi, N.B., for the year ended December 31, 1899.

I am, sir,

Your obedient servant,

R. R. CALL,

*Secretary-Treasurer to Pilotage Commissioners.*PILOTAGE Returns for the Pilotage District of Miramichi, N.B., year ending
December 31, 1899.

Class of Vessel.		
<i>Vessels reported Inwards—</i>		
British steamers.....	52	
" sailing vessels.....	35	
Foreign steamers.....	2	
" sailing vessels.....	62	151
<i>Vessels reported Outwards—</i>		
British steamers.....	50	
" sailing vessels.....	29	
Foreign steamers.....	2	
" sailing vessels.....	65	146
<i>Vessels Removed—</i>		
British steamers.....	24	
" sailing vessels.....	4	
Foreign steamers.....	1	
" sailing vessels.....	22	51
<i>Vessels—Extra Services—</i>		
British steamers.....		
" sailing vessels.....		
Foreign steamers.....		
" sailing vessels.....		1

NATIONALITIES of Vessels piloted Inwards for 1899.

British.....	87	Russian.....	2
Norwegian.....	47	Swedish.....	2
Italian.....	8		
Austrian.....	3		151
German.....	2		

R. R. CALL,

Secretary-Treasurer to Pilotage Commissioners.

PILOTAGE Returns for the Pilotage District of Miramichi, N.B., year ending
December 31, 1899.

Class of Vessel.	Amount.	Amount.
	\$ cts.	\$ cts.
<i>Total amount of Pilotage Inwards—</i>		
British steamers	2,929 51	
" sailing vessels	905 08	
Foreign steamers	109 03	
" sailing vessels	1,710 28	
		5,653 90
<i>Total amount of Pilotage Outwards—</i>		
British steamers	3,223 61	
" sailing vessels	748 02	
Foreign steamers	101 78	
3 sailing vessels	2,230 53	
		6,303 94
<i>Total amount of Removals—</i>		
British steamers	184 00	
" sailing vessels	32 00	
Foreign steamers	4 00	
" sailing vessels	150 00	
		370 00
<i>Total amount of Extra Services—</i>		
British steamers		
" sailing vessels		
Foreign steamers		
" sailing vessels	27 00	27 00
Total		12,354 84

R. R. CALL,

Secretary-Treasurer to Pilotage Commissioners.

RATES of Pilotage chargeable at Miramichi, N.B., on all vessels, British and Foreign,
for the year 1899.

When Inward Bound	\$2.25 per ft.
In addition to the above, for all vessels propelled wholly or in part by steam	2 c. per ton.
Sailing vessels towing from entrance of harbour Inwards	$\frac{1}{2}$ of \$2.25
When Outward Bound	\$2 per ft.
In addition to the above, for all vessels propelled wholly or in part by steam	2 c. per ton.
Sailing vessels towing from landing berth to sea	$\frac{1}{2}$ of \$2
Removals are not compulsory, but when pilots are employed the rate for removal and mooring of vessels over 300 tons is	\$4
Where the distance of removal exceeds four miles, fifty per cent additional on the above rate.	
Steam tugs towing barges with cargo Inwards, may depart without being compelled to take a pilot on tug or barges Outward, or paying any outward pilotage, after having paid full pilotage on tug and barges Inward.	

R. R. CALL,

Secretary-Treasurer to Pilotage Commissioners.

JOHN C. MILLER,
Chairman.

SESSIONAL PAPER No. 11b

PILOTAGE Returns for the Pilotage District of Miramichi, N.B., year ending December 31, 1899.

No.	Names.	Ages.	For what service.	Remarks.
2	Louis Jimmo.....	45	Full license.....	Resigned, May 23, 1899.
6	Francis Martin.....	65	".....	"
7	Maxime Martin.....	54	".....	"
9	Angus McLean.....	66	".....	"
10	Alexander Wilson.....	53	".....	"
12	George Savoy.....	55	".....	"
22	Wm. Walls, sr.....	45	".....	"
26	John McCallum.....	47	".....	"
27	James Nowlan.....	48	".....	"
28	Dudley P. Walls.....	53	".....	"
29	George Sutton.....	48	".....	"
30	James A. Nowlan.....	44	".....	"
31	George T. Tait.....	42	".....	"
32	Joseph Jimmo.....	44	".....	"
33	James McCallum.....	55	".....	"
35	John Martin.....	40	".....	"
36	Asa Walls.....	40	".....	"
37	Wm. Walls, jr.....	42	".....	"
38	John Nowlan.....	43	".....	"
39	Patrick Nowlan.....	40	".....	"
40	Hugh McLean.....	32	Inwards only.....	"
41	Michael J. Jimmo.....	32	Full licence.....	"
42	George M. Nolan.....	43	".....	"
43	Christopher C. McLean.....	52	".....	"
44	George Savoy.....	55	".....	"

R. R. CALL,
Secretary-Treasurer to Pilotage Commissioners.

JOHN C. MILLER,
Chairman.

The Miramichi Pilots in account with R. R. Call, Secretary-Treasurer.

1899.	DR.	\$	cts.
May 1..	To amount voted to be returned the Dominion Coal Co., pilotage inwards of barge "Grandee," grounded in November, 1898.....	43	88
" 27..	D. Doyle's account for horse-hire.....	1	00
" 27..	Paid Alexander Martin.....	20	00
Aug. 8..	Amount refunded schr. "Bessie".....	18	00
" 8..	Amount refunded barque "Ajax".....	13	00
" 8..	Paid for telegrams.....	26	73
" 11..	Paid on account of legal expenses.....	220	00
Dec. 30..	Paid Anslow Bros.' account for printing.....	7	00
" 30..	R. R. Call, secretary-treasurer, postage and stationery.....	3	50
" 30..	R. R. Call, secretary-treasurer, 3 per cent commission on \$12,354.84.....	370	66
" 30..	Paid pilots on account.....	1,411	80
" 30..	Amount not yet distributed.....	10,219	28
		12,354	84
1899.	CR.		
Dec. 30..	By amount of inward pilotage.....	\$5,653	90
" 30..	Amount of outward pilotage.....	6,303	94
" 30..	Amount for removals.....	370	00
" 30..	Amount for extra services.....	27	00
		12,354	84

R. R. CALL,
Secretary-Treasurer to Pilotage Commissioners.

JOHN C. MILLER,
Chairman.

APPENDIX No. 16.

REPORT OF PILOTAGE AUTHORITY FOR DISTRICT OF SHEDIAC
FOR 1899.PILOTAGE OFFICE,
SHEDIAC, N.B., January 6, 1900.F. GOURDEAU, Esq.,
Deputy Minister of Marine,
Ottawa.

SIR,—The pilotage authority for the port of Shediac, N.B., beg leave to submit the following report for the year ended December 31, 1899.

Names of Pilots in District.	Age.	Service.
1. Edward McDonald.....	67	Full district.
2. Doicity P. LeBlanc.....	61	"
3. Thomas McGrath.....	53	"
4. Olaf Hendricksen.....	47	"
5. Paul P. Leblanc.....	53	"

Number of vessels reported liable to pay pilotage :

	Inwards.	Outwards.
Foreign sailing vessels.....	21	21
British, none.		

Nationality of above vessels reported inwards during 1899 :

Norwegian.....	20
Danish.....	1
Total.....	21

The total amount received for pilotage services for the year was as follows :

From foreign vessels..... \$843.40

This amount was all paid to the above pilots.

The rates of pilotage for this district are as follows :

For pilotage inwards and outwards, \$1.25 per foot draught of water. Each
remove \$2.W. A. RUSSELL,
Secretary to Pilotage Commission of Shediac.

APPENDIX No. 17.

REPORT OF PILOTAGE AUTHORITY FOR DISTRICT OF THE COUNTY OF CHARLOTTE, N.B., FOR 1899.

F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa, Canada.

SIR,—I have the honour to inclose herewith pilotage returns for the district of the County of Charlotta for the year 1899.

I am, sir, your most obedient servant,

C. E. O. HATHEWAY,
Commissioner and Secretary.

Pilotage returns for the district of the County of Charlotte, N.B., for the year 1899.

Licensed Pilots Acting.	Age.	Residence.
Wellington Cline	58	Parish of West Isles, County of Charlotte.
Joseph Boyd	64	" Campobello, "

Pilot Boat License.

Schooner "Olga," register 10 tons, Joseph Boyd, master, licensed August 2, 1899.

Amount of Pilotage collected by Pilots.

British vessels, \$143.50; foreign vessels, \$166.50; total, \$310.

No.	Description of vessel piloted.	Nationality.	Tonnage.	No. of vessel piloted.	Description	Nationality.	Tonnage.
Four schooners . . .	British . . .	764	Six schooners . . .	Foreign . .	1270		
One brig	" . . .	143					
		907				1270	
Total tonnage, 2177.							

Receipts by Pilotage Authority.

For license to one pilot boat	5 00
Regulations	2 00
	7 00

Charges.

Postage and stationery	1 00
Commissioner and secretary, St. Andrew's	6 00
	7 00

C. E. O. HATHEWAY,
Commissioner and Secretary.

Rates of Pilotage in the District.

Longest pilotage distance, inwards or outwards, \$2.25 per foot draught of water.

Second " " 1.60 "

Third " " 1.50 "

From or to Campobello, 20 cents per foot less than above rates.

Fourth pilotage distance inwards or outwards \$1 per foot draught of water.

From November 1 to April 1, 20 cents per foot in addition to above rates.

To or from St. Andrews harbour to ballast ground, vessels 80 tons and under 300 tons, \$2.50 each; 300 tons and upwards, \$3 each.

Removing a vessel from one loading place or harbour to any other loading place or harbour inside St. Andrews Bay, vessels 80 tons up to 200 tons, \$4; over 200 tons and up to 300 tons, \$5; over 300 tons and up to 400 tons, \$6; exceeding 400 tons, \$8 each.

Removing a vessel from any loading place inside St. Andrews Bay to any harbour or loading place outside St. Andrews Bay and within the district, pilotage inwards or outwards, vessels 80 tons and under 200 tons, \$6; 200 tons and under 300 tons, \$8; 300 tons and under 400 tons, \$10; 400 tons and upwards, \$12 each.

C. E. O. HATHEWAY,
Commissioner and Secretary.

APPENDIX No. 18.

REPORT OF THE PILOTAGE AUTHORITY OF HARVEY, N.B., FOR THE YEAR ENDED DECEMBER 31, 1899.

Description of Vessel.	Name and Nationality.	Tonnage.	Amount of Pilotage.	
			\$	cts.
S.S.	Touborg, Nor.	1,063	16	50
"	Touborg, 2nd voyage, Nor.	1,063	17	00
Bark	Ophelia, Nor.	1,127	18	25
"	Nova Scotia, Nor.	1,110	15	00
"	Dictator, Nor.	526	20	25
S.S.	Manuka, Br.	1,125	20	50
"	Indianapolis, Br.	1,593	21	00
"	Rockcliff, Br.	1,496	16	00
Ship	Savona, Br.	1,583	14	00
S.S.	Salopia, Br.	1,549	20	00
		12,235	178	50

Fees received \$5 00
 Expenses 7 50

GEO. A. COONAN,
Secretary, Pilotage Commissioners.

HARVEY, December 31, 1899.

SESSIONAL PAPER No. 11b

HENRY J. PYRE, PILOT No. 1, FOR LISCOMB.

May 19	Montevideo	Ship	Trojan	Windsor	1,595	G. Armstrong	22 00	24 00	46 00
" 23	Antwerp	Barque	Dapinae	Knogen, Norway	898	Christian	15 00	17 00	32 00
Aug. 27	Iceland	Barquentine	Transport	Norway	276	O. R. Lund	7 00	8 00	15 00
Sept. 1	Boston	S. S. Ship	Bogstead	Christiana	1,982	Gullisen	26 00	28 00	*36 00
" 22	Liverpool	Barque	Hannah	"	897	Dahl	17 00	17 00	17 00
									146 00

* One-third less.

DANIEL LANG, PILOT No. 2, FOR LISCOMB.

Aug. 26	Manchester	S. S. Ship	Indianapolis	Barrow	1,592	G. Black	22 00	24 00	*30 66
---------	------------	------------	--------------	--------	-------	----------	-------	-------	--------

One-third less S.S.S.

CHARLES RILEY, PILOT No. 3, FOR LISCOMB.

June 10	Para	Barque	Desideria	Franckstand	704	S. Samuelson	13 00	15 00	28 00
---------	------	--------	-----------	-------------	-----	--------------	-------	-------	-------

LEWIS WILSON, PILOT No. 4, FOR LISCOMB.

May 26	Liverpool	Barque	Normanvicke	Arundel	680	J. G. Tergisen	13 00	15 00	28 00
--------	-----------	--------	-------------	---------	-----	----------------	-------	-------	-------

ARTHUR MCKINLEY, PILOT No. 5, FOR LISCOMB.

Sept. 22	Liverpool	Barque	Haana	Christiana	897	J. Dahl	15 00	15 00	15 00
Oct. 15	St. Mary's	"	Montreal	Windsor	699	Larkin	13 00	*15 00	23 66
									38 66

WILLIAM PRIDE,
Secretary to Commissioners.

APPENDIX No. 20.

REPORT OF PICTOU PILOTAGE AUTHORITY FOR YEAR ENDED DECEMBER 31, 1899.

F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—Enclosed you will please find Pilotage Returns, for the port of Pictou, N.S., for the season ending 1899.

I am, sir, your obedient servant,

W. H. NOONAN,
Secretary.

TOTAL amount received for Pilotage Dues for Season ending 1899.

	\$ cts.	\$ cts.
Total amount received for pilotage dues for season ending 1899		2,128 90
Of this amount—		
Received from steamships	1,912 90	
" sailing ships	216 00	2,128 90
Of this amount—		
Received from British ships	482 09	
" Foreign ships	1,646 81	2,128 90

Certified Master,

A. B. BELANGER, ss. "Campana."

Earnings of Pilots for 1899.

No.	Name.	Age.	Amount.	Total.
			\$ cts.	\$ cts.
1	Jas. Fraser	68	28 00	
2	Wm. A. Cook	61	126 09	
3	Chas. A. Cooke	53	235 81	
4	Geo. W. Powell	48	127 68	
5	Danl. McLeod	58	64 00	
6	Danl. S. Smith	48	138 92	
7	Angus Smith	42	1,196 37	
8	McGregor Fraser	31	186 03	
				2,102 90

SESSIONAL PAPER No. 11b

RECEIPTS and Expenditures of all moneys received by or on behalf of the Pilotage Authority in respect of Pilots or Pilotage.

RECEIPTS.		\$ cts.	\$ cts.
Received pilotage dues as per statement.....		2,128 90	
from 7 pilots renewing bonds.....		7 00	
Capt. Belanger, ss. "Campana," C license.....		40 00	
McGregor Fraser, license.....		20 00	
balance due secretary.....		760 81	
			2,956 71
EXPENDITURES.		\$ cts.	\$ cts.
Paid pilots for pilotage.....		2,102 90	
" secretary's salary.....		200 00	
" balance due from 1898.....		653 81	
			2,956 71

JOHN A. FISHER,
 JOHN R. DAVIS,
 JOS. GRAHAM,
 JAMES YORSTON,
 H. MCKENZIE,
Commissioners Port of Pictou.

APPENDIX No. 21.

REPORT OF PILOTAGE AUTHORITY, DISTRICT OF ST. JOHN, N
FOR 1899.OFFICE OF PILOTAGE AUTHORITY,
DISTRICT OF ST. JOHN, N.B., January 5, 1900.F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa.SIR,—Inclosed herewith please find our annual returns for pilotage for the district
for the year ending December 31, 1899, which, I trust, you will find in order.

I remain,

Your obedient servant,

J. W. THOMAS,
Secretary St. John Pilot Commissioners.

STATEMENT of Receipts and Expenditures for the Year ended December, 1899.

INCOME ACCOUNT.		\$	cts.	\$	cts.
RECEIPTS.					
Licenses to 30 pilots at \$5.....		150	00		
" 6 boats at \$10.....		60	00		
25 cents per foot on outward pilotage from Port of St. John to date.....		1,965	85		
25 " " " Musquash ".....		5	25		
				2,181	10
EXPENDITURES.					
J. & A. McMillan, stationery, &c.....		18	20		
Auditing accounts for 1898.....		25	00		
Office rent, 1 year to November 1, 1899.....		100	00		
Salary, Secretary Treasurer, 1 year to date.....		800	00		
				943	20
Amount transferred to Pilot Fund Account.....				1,237	90
				2,181	10

J. W. THOMAS,
Secretary.

SESSIONAL PAPER No. 11b

STATEMENT of Pilot Fund Account for Year ended December 31, 1899.

PILOT FUND ACCOUNT.		\$	cts.	\$	cts.
DR.					
To pensions paid 3 pilots.....		463	15		
" 7 widows and 2 children.....		504	00		
Funeral expenses, Mrs. Geo. Thomas.....		20	00		967 15
" Henry Thomas.....		20	00		
					40 00
To Balance.....					1,007 15
					10,179 57
CR.					
By Balance, December 31, 1898.....					11,186 72
Interest on Dominion Savings Bank deposit, 12 months to July 1, 1899 :--					9,690 52
Per Pass Book No. 744.....		128	34		
" No. 10260.....		129	96		
Amount transferred from Income Account.....					258 30
					1,237 90
					11,186 72
By Balance to credit of Pilot Fund, December 31, 1899.....					10,179 57

J. W. THOMAS,
Secretary.

STATEMENT of Finances of the St. John Pilot Commissioners, as per audit,
December 31, 1899.

INVESTMENT ACCOUNT.		\$	cts.	\$	cts.
On deposit in Dominion Savings Bank, per Pass Book No. 744.....		4,406	96		
" " " No. 10260.....		4,462	68		
					8,869 64
CURRENT ACCOUNT.					
In Bank of New Brunswick.....					1,309 98
					10,179 57

J. W. THOMAS,
Secretary.

PILOTS individual earnings for the year 1899.

	\$ cts.	\$ cts.
Total amount of pilotage received.....	29,484 83	
LESS—25 cents per foot deducted from outward pilotage for office expenses, Pilotage Fund, &c.....	1,965 85	27,518 98
<i>Contra.</i>		
Bennett, James.....	1,378 47	
Cline, Richard.....	1,785 29	
Cline, Alfred.....	427 75	
Cline, Richard B.....	866 13	
Conlin, Patrick.....	335 00	
Daley, Charles.....	370 62	
Doyle, James.....	2,248 07	
Doherty, Joseph.....	2,357 11	
Doody, P. George.....	149 63	
Lahey, William.....	753 13	
Lahey, Frank L.....	958 00	
Mantle, James E.....	696 75	
Miller, James H.....	550 50	
Murray, Wm.....	6 00	
McPartland, James.....	490 50	
Quinn, William.....	1,062 33	
Reed, James.....	570 88	
Rogers, Bart.....	1,458 62	
Spears, John.....	1,045 23	
Spears, Henry.....	1,702 40	
Spears, Martin.....	965 35	
Spears, James S.....	503 63	
Sherrard, John L. C.....	830 85	
Sproul, John.....	184 50	
Stone, Thomas J.....	885 51	
Scott, William.....	724 75	
Scott, Richard.....	531 00	
Thomas, John S.....	1,390 25	
Thomas, Robert.....	363 63	
Traynor, Thomas.....	2,027 10	27,518 98

J. W. THOMAS,
Secretary.

RETURN of Vessels arriving at the Port of St. John, N.B., subject to pilotage for the year ending December 31, 1899.

	British.	Foreign.	Total.
Schooners.....	125	231	356
Brigs and brigantines.....	6	1	7
Ships.....	5	4	9
Barques and barquentines.....	18	23	41
Steamers.....	158	7	165
	312	266	578
Amount of pilotage received.....	\$ 21,038 80	\$ 8,446 03	\$ 29,484 83

J. W. THOMAS,
Secretary.

SESSIONAL PAPER No. 11b

LICENSED Pilots, Port of St. John, N.B., for the year 1898-99.

Name.	Age.	Residence.	Remarks.
Bennett, James	42	St. John, N.B.	
Cline, Richard	74	"	
Cline, Alfred	42	"	
Cline, Richard B.	29	"	
Conlin, Patrick	49	"	
Daley, Charles	63	"	
Doyle, James	62	"	
Doherty, Joseph	53	"	
Doody, P. George	59	"	
Lahey, William	70	"	
Lahey, Frank L.	28	"	
Mantle, James E.	53	"	
Miller, James H.	22	"	
Murray, William	25	"	
McPartland, James	65	"	
Quinn, William	52	"	
Reed, James	53	"	
Rogers, Bart.	42	"	
Spears, John	50	"	
Spears, Henry	48	"	
Spears, Martin	42	"	
Spears, James S.	54	"	
Sherrard, John L. C.	65	"	
Sproul, John	63	"	
Stone, Thomas J.	46	"	
Scott, William	43	"	
Scott, Richard	48	"	
Thomas, John S.	51	"	
Thomas, Robert	58	"	
Traynor, Thomas	46	"	
McAnulty, John	61	Musquash, N.B.	Licensed for Musquash only.

J. W. THOMAS,
Secretary.

APPENDIX No. 22.

REPORT OF PILOTAGE AUTHORITY OF SYDNEY, C.B., FOR THE YEAR
ENDED DECEMBER 31, 1899.

NORTH SYDNEY, January 26, 1900.

F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa, Canada.

DEAR SIR,—I beg to wait on you with returns in connection with the pilotage authority district of Sydney, for the year ending December 31, 1899, showing :

Balance due per account.....	\$ 718 80
Amount on deposit.....	1,000 00
	\$ 1,718 80

Which I trust will be found correct.

Your obedient servant,
DANIEL McLEAN,
Secretary.

NORTH SYDNEY.

	Number.	Tonnage.
British steamers.....	154	90,593
Foreign ".....	67	46,933
British sailing vessels.....	36	11,015
Foreign ".....	11	3,064
Relief.....	15	2,258
	283	153,853

PILOTAGE RECEIVED.

From British vessels.....	\$ 2,555 52
From foreign ".....	1,944 50
From relief.....	55 50
	\$ 4,550 52

SESSIONAL PAPER No. 11b

INTERNATIONAL.

	Number.	Tonnage.
British steamers	229	317,853
Foreign "	94	138,695
British sailing vessels.....	17	10,892
Foreign "	6	3,497
Relief	5	3,197
	351	474,134

PILOTAGE RECEIVED.

From British vessels.....	\$ 11,254 00
From foreign "	5,211 00
From relief.....	38 00
	\$ 16,503 00

RECAPITULATION.

Port.	Number of Vessels.	Tonnage.	Amount.
North Sydney.....	283	153,853	\$ cts. 4,550 52
International	351	474,134	16,503 00
	634	627,987	21,053 52

MASTERS LICENSED.

No.	Name.	Vessels.	Class.	Amount.
				\$ cts.
2	P. Lechance.....	Polino	Steamer	100 00
3	R. Fraser.....	Coban.....	"	100 00
4	D. C. Fraser	Bonavista.....	"	100 00
5	E. Couillard.....	Greetlands.....	"	100 00
9	J. Reed.....	Cape Breton.....	"	100 00
10	D. A. Scott.....	Harlow	"	100 00
11	W. H. Gould.....	Louisburg	"	100 00
12	J. Delisle.....	Tiber	"	100 00
				800 00

63 VICTORIA, A. 1900

DR.

SYDNEY Pilotage Authority.

CR.

1898.		\$	cts.	1899.		\$	cts.
To paid total pilotage	\$21,053 52			By Total pilotage, per return	21,053 52		
Less—Relief	88 50			License to pilots	110 00		
	\$20,965 02			Boats licensed	16 00		
“ Commission	1,048 19			Masters licensed	800 00		
		19,916 83		Balance on hand	513 98		
Collectors (per agreement)		631 25		Interest	35 00		
Head collectors, office rent & fuel		50 00		Deposit receipt, Union Bank	1,000 00		
Superintendent of pilots		200 00					
Expenses of five commissioners		175 00					
Books, printing and stationery		22 17					
Telegrams and postage		14 30					
Bank charges, drafts, Sydney		15 15					
Relief, per statement		535 00					
Amount of deposit in bank		1,000 00					
Secretary and treasurer's salary		250 00					
Balance carried down		718 80					
		23,528 50					
				January 23, 1899.			
				By Balance brought down	718 80		
				Amount on deposit, Union Bank	1,000 00		
					1,718 80		

SESSIONAL PAPER No. 11b

STATEMENT showing each Pilot's Earnings for Year ending December 31, 1899.

No.	Names.	Amounts.
		\$ cts.
1	William Ratchford.....	603 54
2	John Cann.....	603 54
3	John T. Mullins.....	603 54
4	Andrew Ratchford.....	603 54
5	John Fraser.....	603 54
6	James McGilvary.....	603 54
7	Angus McNeil.....	603 54
8	John Carroll.....	603 54
9	George Brown.....	603 54
10	L. Connell.....	603 54
11	James Carroll.....	603 54
12	D. D. Petrie.....	603 54
13	John McNeil.....	603 54
14	Peter Burke.....	603 54
15	James Shanahan.....	603 54
16	Will Brown.....	603 54
17	Thos. Ratchford.....	603 54
18	Geo. D. Townsend.....	603 54
19	John B. McGilvary.....	603 54
20	Lawrence Ling.....	603 54
21	James Fraser.....	603 54
22	Tom McNeil.....	603 54
23	John T. Laffin.....	603 54
24	Thomas Robberts.....	603 54
25	Bernard Carroll.....	603 54
26	Joseph Brown.....	603 54
27	Bernard Mullins.....	603 54
28	D. A. McInnis.....	603 54
29	E. D. Cann.....	603 54
30	Walter Handrigan.....	603 54
	APPRENTICES.	
1	William Langille.....	301 77
2	Vincent McGilvary.....	301 77
3	Michael Curran.....	301 77
4	Thos. Rudderham.....	301 77
5	Ernest Richardson.....	301 77
6	John Mahon.....	301 78
		19,916 83

ANTHONY GANNON,
Head Collector.

STATEMENT of Relief.

Date.	Name.	Amount.
1899.		\$ cts.
Jan. 7.	Pilot John Curren	25 00
" 8.	Widow Madère	20 00
Mar. 10.	Margaret Petrie	15 00
May 3.	Pilot D. McGilvray	100 00
" 12.	Widow Madère	20 00
" 15.	Family Doyle	15 00
" 15.	Widow Mullins	30 00
" 15.	" Young	30 00
" 15.	" J. Carroll	15 00
June 5.	Family Doyle	15 00
" 6.	Margaret Petrie	20 00
" 12.	Widow Brown	15 00
" 14.	Isabell McGilvray	15 00
" 15.	Widow J. McGilvray	15 00
Aug. 15.	" Carroll	30 00
" 15.	" McInnis	30 00
" 29.	May Petrie	15 00
Oct. 12.	Isabell McGilvray	15 00
Dec. 21.	May Petrie	15 00
" 21.	Widow Daley	30 00
" 21.	Pilot J. Curren	20 00
" 21.	Widow Gillvray	15 00
" 21.	" Brown	15 00
		585 00

SESSIONAL PAPER No. 11b

APPENDIX No. 23.

REPORT OF PILOTAGE AUTHORITY FOR CARAQUET FOR YEAR
ENDED DECEMBER 31, 1899.

CARAQUET, December 26, 1899.

To the Honourable the Minister of Marine and Fisheries,
Ottawa.

SIR,—I beg to inclose statement of pilotage paid to pilots in the pilotage district of Caraquez, during the year 1899, also statement of account of receipts and expenses of myself, the secretary to the pilotage commissioners.

I have the honour to be, sir,

Your obedient servant,

PHILIP RIVE,

Secretary to Pilot Commissioners.

PHILIP RIVE, Secretary of Pilot Commissioners in account with the Pilotage Authority of Caraquet, 1899.

Dr.		
To received boat license,	Xavier Poulain, pilot.....	\$ 1 00
"	Alex. Wilson, pilot.....	1 00
"	Chas. Vibert, pilot.....	1 00
"	Larose Gauvin, pilot.....	1 00
"	Peter LeBoutillier.....	1 00
"	Auguste Poulain.....	1 00
"	Jos. X. Chiasson.....	1 00
		<hr/>
		7 00
		<hr/>
		7 00

CARAQUET, December 26, 1899.

PHILIP RIVE,
Secretary to Pilot Commissioners.

STATEMENT of Pilotage paid to Pilots in the Pilotage District of Caraquet during the Year 1899.

Name of Vessel.	Nationality.	Rig.	Tonnage.	Date of Arrival.	Name of Pilot Inwards.	Date of Sailing.	Name of Pilot Outwards.	Pilotage Inwards and Outwards.
Alliance.....	British.....	Schooner.....	99	May 19.....	Chas. Vibert.....	May 23.....	Chas. Vibert.....	\$ cts. 23 10
Helen E. Henry.....	".....	".....	294	July 17.....	".....	July 28.....	".....	20 80
Alliance.....	".....	".....	99	Aug. 6.....	".....	Aug. 9.....	".....	22 10
George and Mary.....	".....	".....	83	" 19.....	Jos. X. Chiasson.....	Oct. 1.....	Jos. X. Chiasson.....	20 00
Resolute.....	".....	".....	76	" 23.....	Chas. Vibert.....	Sept. 16.....	Chas. Vibert.....	18 00
Alliance.....	".....	".....	99	Oct. 7.....	".....	Nov. 18.....	".....	22 90
Hibernica.....	".....	Brigantine.....	168	" 9.....	Alex. DeGrace.....	" 25.....	Alex. DeGrace.....	26 20
Mary Glaasen.....	".....	Barque.....	182	" 22.....	Chas. Vibert.....	" 14.....	Chas. Vibert.....	23 40
								<hr/>
								176 50

CARAQUET, December 26, 1899.

PHILIP RIVE,
Secretary to Pilot Commissioners.

SESSIONAL PAPER No. 11b

APPENDIX No. 24.

REPORT OF THE PILOTAGE AUTHORITY OF BATHURST, N.B., FOR THE YEAR ENDING DECEMBER 31, 1899.
 STATEMENT showing the number of vessels, collections and disbursements, Pilotage District of Bathurst, N.B., season 1899.

Pilots.	British Vessels.				Foreign Vessels.				Total.	Disbursements.		*Pilotage Rates.							
	Inwards.		Outwards.		Inwards.		Outwards.			Amount.	To whom.	Outside Bar.		Outside Bar.					
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.				In.	Out.	In.	Out.				
		\$ cts.		\$ cts.		\$ cts.		\$ cts.				\$ cts.	\$ cts.	\$ cts.	\$ cts.				
Wm. Daly.....	3	53 80	3	86 20	8	150 80	8	120 80	391 02 20 58 411 60	Pilots, Commissioners and Secretary.	1	20	0	80	1	40	1	00	
Nazaire Ache.....																			
Frederick Reynolds																			

* Shipping from ballast ground to loading berth \$4; steamers one cent per ton extra.

J. H. STEWART,
Secretary.

Pilots—
 WILLIAM H. DALY,
 NAZAIRE ACHE,
 FREDERICK REYNOLDS.

Commissioners—
 JOHN E. O'BRIEN,
 PATRICK J. BURNS,
 THOMAS LEAHY,
 SAMUEL MELANCON.

APPENDIX No. 25.

PILOTAGE AUTHORITY FOR THE DISTRICT OF PARRSBORO', N.S.,
FOR 1899.

AMOUNT of Pilotage Fees collected for the year 1899, was as follows :—

Dr.	\$ cts.	Cr.	\$ cts.
13 British vessels paid.....	786 75	Paid pilot Anderson.....	523 13
8 foreign " "	342 00	" George	401 17
Received license fees on 3 barges at \$35 each.....	105 00	" Pettis.....	91 58
Received commissions on collections at Port Greville.....	21 65	Placed to credit of commission account.	286 14
Received commission on collections at Advocate Harbour.....	46 62		
	1,302 02		1,302 02

Names and Ages of P.lots, &c.

Names.	Age.	—
Robert Anderson	46	Full district.
James George	59	"
George E. Pettis.....	61	"
Baxter McLellan.....	41	For Spencer's Island only.
J. Ephriam Morris.....	38	For Advocate Harbour only.

The rates vary from 75c. to \$2.75 per draught foot on sailing vessels and 50c. extra on steamers as per inclosed tariff.

E. GILLESPIE,
Secretary P. P. Authority.

PARRSBORO, N.S., December 7, 1899.

SESSIONAL PAPER No. 11b

APPENDIX No. 26.

REPORT OF PILOTAGE AUTHORITY FOR THE PORT OF LOUISBOURG,
CAPE BRETON, FOR YEAR ENDING DECEMBER 31, 1899.

Amount collected for pilotage.....	\$2,665 14	
Less Secretary's commission at 4 per cent...	106 60	
	<hr/>	\$2,558 54
Paid expenses, receipt books and telegrams..	3 81	
" for oars.....	3 00	
" eight pilots.....	2,551 73	
	<hr/>	2,558 54
Average each pilot.....		\$318 96
Received from foreign vessels.....		\$1,028 22
" British ".....		1,636 92

No change in pilots except W. P. Cann retired, and John E. Tutty, age 40, appointed in his place.

I certify the above to be correct.

PHILIP TOWNSEND,

Secretary, Pilotage Authority, Port of Louisbourg.

LOUISBOURG, CAPE BRETON, July 14, 1900.

APPENDIX No. 27.

REPORT OF PILOTAGE AUTHORITY FOR KINGSTON, KENT CO., N.B.,
FOR YEAR ENDING DECEMBER 31, 1899.

KINGSTON, KENT CO., N.B., December 7, 1899.

F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa,

DEAR SIR,—The pilot commissioners of this port held their annual meeting at the office of Mr. J. W. Brait, Kingston, Kent Co., N.B., all being present except Messrs. Walker and Hudson.

The Commissioners moved and decided that the following pilots, being duly qualified and agreeing to comply with rules and regulations, to be granted licenses, viz. : William Irving, James Long, Albert Long, William Long, Henry D. Irving and John Curwen for season 1899.

Thirteen square rigged vessels, 6,556 tons register, and one steamer 1,796 tons have loaded and sailed from this port without any report of damage this season.

Position of bar from lighthouse on south beach N.E. by N. 400 fathoms to buoy, then N.N.E. 150 fathoms and E. by N. 100 fathoms across bar. Depth on bar, 11 feet water L. W. O. springs.

Yours obediently,

JAMES GORDON,

Secretary Pilot Commissioners.

SESSIONAL PAPER No. 11b

APPENDIX No. 28.

REPORT OF THE PILOTAGE AUTHORITY OF PUGWASH FOR THE YEAR
ENDED DECEMBER 31, 1899.OFFICE OF PUGWASH PILOT COMMISSION,
PUGWASH, July 24, 1900.To Deputy Minister of Marine and Fisheries,
Ottawa.

I hereby submit the following report for the year ending 1899 :—

There were 19 vessels, paying \$620.00.

Four British steamships	\$160 00
One Danish steamship	40 00
Fourteen Norwegian barques	420 00
Total.....	<u>\$620 00</u>

Pilots.	Age.
J. O. Reid	45
Neill McIver	40
Clarence Reid	40
George Cooper	48
George Huther	54
Andrew Seaman	54
Alfred E. Seaman	22

No other money has been received or expended by the Pilot Commission.

I am, sir, yours respectfully,

HENRY SMITH,

Secretary Pilot Commission.

APPENDIX No. 29.

REPORT OF THE PILOTAGE AUTHORITY OF THE COUNTY OF RICHMOND FOR THE YEAR ENDED DECEMBER 31, 1899.

ARICHAT, July 18, 1900.

Deputy Minister Marine and Fisheries,
Ottawa.

DEAR SIR,—In reply to your letter of the 10th inst., I beg to say that I have but a small report to make, as there is but one pilot in the pilotage district of the County of Richmond. Since the tonnage has been changed from 80 to 150 tons for compulsory, the St. Peters Canal pilots did not secure their licenses, and again the steamers are all the go now. The only report is as follows :

John Gayetch, Pilot No. 1,—	
July 16, piloted British brig "C.R.C.", 239 tons.....	\$13 50
December 26 " " " "	13 50
Total	<u>\$27 00</u>

December 30, three-masted schr. "Harry W. Loose," 298 tons, did not pay his pilotage. Capt. promised to send the payment but did not. And when there was branch pilots at St. Peters Canal the vessels went through and did not pay several times.

Yours truly,

ISIDORE LE BLANC,

Secretary.

APPENDIX No. 30.

PILOTAGE RETURN, DISTRICT OF BUCTOUCHE, PROVINCE OF NEW BRUNSWICK, FOR THE YEAR 1899.

(Act 36 Vic., cap. 54, sec. 24.)

BUCTOUCHE, N.B., July 11, 1900.

JOHN HARDIE, Esq.,
Acting Deputy Minister Marine and Fisheries,
Ottawa.

SIR,—I beg to acknowledge receipt of yours of 10th inst., and to apologize for neglect in omitting to forward pilotage returns for this district in due time.

The pilots did not report, as requested, at end of the season, and the matter was afterwards overlooked.

I now inclose herewith as notified, hoping they will reach within required time.

Your obedient servant,

JOHN C. ROSS,
Secretary Buctouche Pilotage Authority.

BUCTOUCHE, N.B., July 14, 1900.

1st. Names and ages of pilots licensed :—

Calixte Léger	Age 67 years.
Joseph Crossman	“ 48 “

2nd. The above pilots are licensed to undertake the pilotage of vessels of every description within and throughout the pilotage district of Buctouche.

3rd. Pilotage dues are charged as per section 12 of rules and regulations for the District, viz.: One dollar and fifty cents per foot draught of water, both inward and outward bound.

4th. Total amount of pilotage dues paid, \$50.25. Of this amount \$38.25 was paid by one foreign vessel (German), the only one liable to pilotage under the regulations, and \$12 by schooner (British), by which employment of pilot was optional.

5th. The pilotage dues as above were paid to the pilots who performed their duties as such to the respective vessels.

6th. No new licenses were issued during the year and no expense incurred by the authority.

JOHN C. ROSS,
Secretary of Buctouche Pilotage Authority.

APPENDIX No. 31.

REPORT OF THE PORT WARDEN OF MONTREAL FOR THE YEAR
ENDED DECEMBER 31, 1899.

MONTREAL, January 6, 1900.

Honourable Sir L. H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour, by direction of the council of this board and in compliance with section 31 of the Act governing the Port Warden office, 45 Vic., chap. 45, to transmit herewith documents as follows:—

1. Port Warden's report for year 1899.
2. Audited statement of receipts and expenditures of the Port Warden office for the year ending December 31, 1899.
3. Statement of investments of Port Warden Surplus Funds.

I have the honour to be, sir,

Your obedient servant,

GEORGE HADRILL,

Secretary.

MONTREAL, Dec. 11, 1899.

To the President and Council,
of the Montreal Board of Trade.

GENTLEMEN,—I have the honour to submit the annual report of the business of this office, with statements of exports, receipts and expenditures for the year 1899.

Navigation opened by the arrival from sea of the ss. *Dominion* at 3 p.m., April 27, and closed with the departure for sea of the ss. *Mayflower* at 7.30 a.m. on Nov. 29, one day later than the last departure last year. We have had a remarkably mild and open fall, there being no ice, and little evidence of the approach of winter when the ss. *Mayflower* sailed. The harbour plant and dredges worked until Dec. 6.

The first sailing vessel to arrive was the schooner *Potanoc* on June 3, with a cargo of molasses from Barbadoes.

The first vessel to enter the Gulf of St. Lawrence this season by the way of the Straits of Belle Isle was the ss. *Springwell* for Quebec, which was reported to have passed through the straits on June 22. Later, a number of steamers attempted to come by that route and were compelled, owing to the amount of field ice encountered, to bear up for Cape Race and pass south of Newfoundland.

Four hundred and thirty-four over sea or foreign going vessels of all kinds were entered at this office, with a tonnage of 1,092,955 tons, being a decrease of 82 vessels and 119,792 tons less than last year. This decrease was in a great measure caused by underwriters discriminating against the St. Lawrence route, the tramp class of vessel which usually come at the opening of navigation for full cargoes of grain and lumber being prevented from coming to the St. Lawrence owing to the high rate of insurance charged on the hulls of the vessels, and in the latter part of the season by a number of the regular line steamers being withdrawn, having been taken up by the Imperial Government as transports for South Africa.

SESSIONAL PAPER No. 11b

The business of the port, which in 1898 was abnormally increased by tonnage diverted from United States ports by the Spanish-American war, has been decreased this season by the withdrawal of ships for transport purposes before alluded to.

The business to the lower ports this season consisted of: Entered, 344 vessels of all classes, with a tonnage of 402,325 tons, against 330 vessels of all classes last year, with a tonnage of 348,500 tons, being an increase of 14 vessels and 53,825 tons over the business of last year.

Clearances of vessels loaded for the lower ports this season were as follows: 105 vessels of all classes with a tonnage of 91,045 tons, against 115 vessels last season with a tonnage of 88,600 tons, a decrease of 10 vessels but an increase of 2,445 tons. The difference in the lower port trade between the number of vessels entered and cleared at this office is accounted for by 239 vessels going hence light, being solely in the coal carrying trade.

The South American lumber trade from this port has been very poor this season, owing, possibly, to the scarcity of sail tonnage. There have been only two vessels loaded for the River Platte from Montreal this year.

The water in the ship channel the past season has been somewhat lower than last year, more especially since the end of August. Notwithstanding the low water in the ship channel, the river between Montreal and Quebec has been comparatively free from accident, the stranding of the ss. *Galia* on Stone Island, near the head of Lake St. Peter, on May 14, and the mishap to the ss. *Parisian* when leaving this port on Aug. 31 not being attributable to lack of water in the ship channel.

The shipments of various kinds for the past season manifested and reported at this office as per attached statement.

All of which is respectfully submitted.

I am, gentlemen, your obedient servant,

ARCHIBALD REID,

Port Warden.

63 VICTORIA, A. 1900

COMPARATIVE STATEMENT of Shipments for the Years 1898 and 1899 as per Manifests reported at Port Warden's Office.

Description.	1898.	1899.	1899.		
			Increase.	Decrease.	
Wheat	Bush.	9,151,996	10,103,232	951,236	
Peas	"	1,721,914	1,341,336		380,578
Barley and rye	"	1,368,633	1,469,954	101,321	
Oats	"	6,858,031	3,971,337		2,886,694
Corn	"	19,612,637	13,214,668		6,397,969
Flax seed	"	776,887	868,450	91,563	
Total grain		39,490,098	30,968,977	1,144,120	9,665,241
					1,144,120
Total decrease of grain					8,521,121
Flour, meal, &c	Brls.	1,006,381	1,209,202	292,821	
Ashes	"	1,014	1,449	435	
Apples	"	395,255	287,502		107,753
Cheese	Boxes	1,878,793	1,858,573		20,220
Butter	Pckgs	273,923	460,598	186,675	
Eggs	"	201,644	192,251		9,393
Box meat	"	160,884	123,708		37,176
Lard	"	101,221	175,083	73,862	
Dead meat	Qtrs.	17,279	62,893	45,614	
Pulp	Tons	15,920	594		15,326
Sundries	"	43,503	45,031	1,528	
Hay	"	7,124	8,890	1,766	
Oil cake	"	7,242	7,558	316	
Phosphates	"	627	190		437
Minerals	"	4,127	3,967		160
Lumber	Ft. B. M.	330,840,915	284,643,393		46,197,522
Cattle	Head	98,184	81,806		16,378
Horses	"	5,918	4,734		1,184
Sheep	"	34,844	57,875	23,031	
Paper	Tons	19	6,065	6,046	
Dried grains	"	1,849	3,149	1,300	

Revenue, 1898.....	\$ 12,417.93
" 1899.....	11,339.96
Decrease	\$ 1,077.97

SESSIONAL PAPER No. 11b

STATEMENT of Oversea or Foreign going Vessels

Description.	1898.		1899.	
	No.	Tons.	No.	Tons.
Steamers.....	497	1,198,078	422	1,088,347
Ships.....	3	4,215	.....	.....
Barques.....	12	9,246	5	2,645
Brigs and schooners.....	4	1,208	7	1,963
Totals.....	516	1,212,747	434	1,092,955

Decrease of 82 vessels and 119,792 tons.

STATEMENT of Lower Port Arrivals.

Steamers.....	316	347,151	332	401,219
Brigs and schooners.....	14	1,349	12	1,106
Totals.....	330	348,500	344	402,325

Increase of 14 vessels and 53,825 tons.

CLEARANCES for the Lower Ports.

Steamers.....	105	87,769	95	90,211
Brigs and schooners.....	10	831	10	834
Totals.....	115	88,600	105	91,045

Decrease, 10 vessels ; increase, 2,445 tons.

SESSIONAL PAPER No. 11b

STATEMENT of the Investment of the Surplus Funds of the Port Warden's Office at Montreal, and of interest accruing therefrom during the year ended December 30, 1899.

Date.	—	Amount.	Per cent for 12 mos.	Interest.
		\$		\$ cts.
Feb. 16, '80	Expended \$2,380.34 in purchase of Dominion Government Stock	2,300	3½	80 50
Aug. 16, '80	Expended \$7,254.11 in purchase of city of Montreal Registered Stock	7,000	5	350 00
April 18, '84	Expended \$5,031.34 in purchase of city of Montreal four per cent Registered Stock (Nos. 1720, 1721, 1722, 1723, 1724=5 at \$1,000)	5,000	4	200 00
Mar. 14, '87	Expended \$10,320.75 in purchase of city of Montreal Consolidated Fund Stock	10,000	4	400 00
	Loans to Montreal Board of Trade Building Fund to December 30, 1899	45,000	4	1,800 00
June -2, '99	Additional loan to Montreal Board of Trade Building Fund	5,000	4 for 7 m.	116 67
				2,947 17

FRED W. EVANS,
Treasurer.

GEO. HADRILL,
Secretary.

MONTREAL, January 5, 1900.

APPENDIX No. 32.

REPORT OF PORT WARDEN AT QUEBEC FOR THE YEAR ENDED
DECEMBER 31, 1899.PORT WARDEN'S OFFICE,
QUEBEC, December, 1899.F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—As requested by the 30th section of the Port Warden Rules, I beg respectfully to submit the following annual statement of the business transacted in this office during the year ending December 31, 1899, as follows.

One hundred and two steamers were surveyed for clearance outward after taking part cargo on board at this port, having previously shipped part cargo of grain and other goods at Montreal.

Eleven steamers and eleven sailing vessels were surveyed, their hatches opened and cargo examined on their arrival from sea.

Four steamers were surveyed on account of grounding and stranding in the River St. Lawrence below and above Quebec.

Two steamers were surveyed on account of ice damage.

Two steamers were surveyed on account of damage to propeller.

Three steamers were surveyed on account of collision damage.

Four steamers were surveyed on account of excessive deckload and a portion removed.

Eleven surveys were held on damaged goods in store and on wharfs.

The receipts and disbursements of this office were as follows :—

Receipts from all sources.....	\$ 1,103 50
Expenses.....	423 50
	<hr/>
Balance net receipts	\$ 680 00

Besides the above there were several vessels damaged by stranding and otherwise that did not come under the Port Warden rules.

Seven steamers took live stock at Quebec during the season, amounting in all to 3,267 cattle and 734 sheep, on which was collected \$52.69, which was deposited in the bank of Montreal to the credit of the Receiver General.

With much respect,

I am your obedient servant,

W. SIMONS,

Port Warden.

SESSIONAL PAPER No. 11b

QUEBEC, December, 1899.

RETURN of cattle and sheep shipped at the port of Quebec during the season of 1899, with the names of steamers and amount of fees collected.

Date.	Name of Vessel.	Number of Sheep.	Number of Cattle.	Amount of Sheep.	Amount of Cattle.
1899.				\$ cts.	\$ cts.
Sept. 1.	Maplemore, ss		342		5 13
" 3.	Ottoman "		586		8 79
" 7.	Roman "	734	263	3 67	3 95
" 9.	Sedgemore "		671		10 07
" 22.	Pinemore "		342		5 13
Oct. 22.	Sedgemore "		467		7 01
" 29.	Pinemore "		596		8 94
		734	3,267	3 67	49 02

RECAPITULATION.

Seven steamers took 3,267 cattle from this port.....\$ 49 02
 One " " 734 sheep " " 3 67
 Total amount of fees received for inspection of fittings.....\$ 52 69

W. SIMONS,

*Port Warden and Inspector of
 Cattle and Fittings.*

APPENDIX No 33.

REPORT OF THE PORT WARDEN OF HALIFAX FOR THE YEAR ENDING
DECEMBER 31, 1899.

PORT WARDEN'S OFFICE,
HALIFAX, N.S., December 31, 1899.

F. GOURDEAU, Esq.
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my report for the year ending December 31, 1899, accompanied by a statement of the receipts and expenditure during that period.

Surveys were held by me on twenty-nine steamers and one sailing vessel which arrived at this port in a damaged condition during the year. The necessary repairs were made to the vessels, and those of them bound to other ports with their cargoes proceeded to their destinations where those of them now due have arrived safely.

I have the honour to be, sir,

Your most obedient servant,

DAVID HUNTER,
Port Warden.

STATEMENT of Receipts and Expenditure of the Port Warden, Halifax, N.S., from
January 1 to December 31, 1899.

Dr.	\$ cts.	Cr.	
To amount of fees received.....	2,304 80	By Paid assistants, office expenses, &c.	1,395 '37
		Amount reverting to Port Warden.	909 43
	2,304 80		2,304 80

I hereby certify that the above is a true and correct statement of the receipts and expenditure of the Port Warden at Halifax, N.S., during the year 1899.

DAVID HUNTER,
Port Warden.

SESSIONAL PAPER No. 11b

APPENDIX No. 34.

REPORT OF THE PORT WARDEN FOR THE PORT OF NORTH SYDNEY
FOR YEAR ENDED DECEMBER 31, 1899.PORT WARDEN'S OFFICE,
January 3, 1900.F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to report as follows : during the past season I have held the following surveys :—

On 3 steamships.

On 4 sailing vessels.

These were all on vessels which arrived here in a damaged condition and had considerable repairs done at this port.

My total fees received were.....	\$91 00
Office rent and expenses.....	10 00
	<hr/>
Net fees received.....	\$81 00

As directed by you, I called on the executors of Captain Mackay, the late Port Warden, who informed me there were no books to hand over, as all his memorandum was kept in private books. They also informed me he had done no port warden work during the past year.

I have the honour to be, sir,

Your obedient servant,

ANDREW NISBET,

Port Warden.

APPENDIX No. 35.

REPORT OF PORT WARDEN FOR PORT OF PICTOU FOR YEAR ENDED
DECEMBER 31, 1899.

PICTOU, N.S.

January 3, 1900.

On survey on Russian <i>Bark Lima</i>	\$ 8 00
Two surveys on barge <i>Grandee</i> of St. John, Newfoundland. . .	26 00
	<hr/>
	\$34 00
Expenses—	
Thos. Robly Dub	\$10 00
Sundry	5 00
	<hr/>
	15 00
Balance	<hr/>
	\$19 00

W. C. MUNRO,
Port Warden.

SESSIONAL PAPER No. 11b

APPENDIX No. 36.

REPORT OF THE PORT WARDEN FOR RIMOUSKI THE YEAR ENDED
DECEMBER 31, 1899.

RIMOUSKI, December 5, 1899.

Honourable Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my report as Port Warden at Rimouski. I
neither visited nor collected money from a single vessel during last season.

I have the honour to be, sir,

Your obedient servant,

CAPT. ELZ. HEPPELL,

Port Warden.

APPENDIX No. 37.

REPORT OF THE PORT WARDEN FOR THE PORT OF PORT HAWKESBURY FOR THE YEAR ENDED DECEMBER 31, 1899.

F. GOUDREAU, Esq.,
Deputy Minister Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of the doings of this office for the year ending December 31, 1899. Also the names of all the vessels on which surveys were held by the port warden of Port Hawkesbury during the year just closed.

I have the honour to be, sir,
Your most obedient servant,

D. W. HENESEY,
Port Warden.

NUMBER of Vessels, Rig and Name of Damaged Vessels Surveyed by me.

1899.		\$
May 25...	Schooner <i>Maggie Smith</i> of Lunenburg wrecked at Harbour La Buche, N.S., was 80 tons, and purchased by D. Anderson and repaired by him as a coasting vessel.	10 00
" 29...	Schooner <i>Maranda</i> of Gloucester, U. S., Edward Morris master, was 103 tons; was repaired here and arrived at her port of destination.....	5 00
June 23...	Iron schooner <i>Clifton</i> of Louisburg was thoroughly repaired here, and classed in the American Bureau of Shipping by me.....	30 00
Nov. 23...	The barque <i>Gudrun</i> of 487 tons was thoroughly repaired here, and caulked from keel to gunwale, and her cargo of lumber reloaded, and is now ready to sail, this being all the vessels surveyed by me during the past year.....	18 00
		63 00

I do hereby certify that the above is true and correct to the best of my knowledge and belief.

D. W. HENESEY,
Port Warden.

APPENDIX No. 38.

REPORT OF THE PORT WARDEN FOR PRINCE EDWARD ISLAND FOR YEAR ENDED DECEMBER 31, 1899.

PORT WARDEN'S OFFICE,
PRINCE EDWARD ISLAND, December 31, 1899.

To SIR L. H. DAVIES,
Minister of Marine and Fisheries.
Ottawa.

SIR,—I have the honour to submit my annual report of the business of my office during the past year.

Navigation remained open later than usual, which enabled vessels to get to sea in safety.

I am glad to report no loss of any grain-laden vessels from the Island this season.

I have the honour to be, sir,

Your obedient servant,

H. P. WELSH.

RECEIPTS and Expenditure of the Port Warden's Office, Prince Edward Island for the Year ending December, 1899.

Date.	Receipts.	Amount.	Date.	Expenditure.	Amount.
1899.	To fees derived from grain-laden vessels	\$ 73 00	1899.	By Expense of office	6 75
	Survey on damaged goods..	14 00		Commissions to deputies....	33 66
	Survey of wrecks.....	18 00		Balance	86 92
	Other surveys.....	22 33			
		127 33			127 33

I hereby certify the above to be a correct statement.

H. P. WELSH.

CHARLOTTETOWN, P.E.I., December 31, 1899.

APPENDIX No. 39.

REPORT OF THE PORT WARDEN FOR THE PORT OF YARMOUTH,
N.S., FOR THE YEAR ENDED DECEMBER 31, 1899.

YARMOUTH, N.S., January 2, 1900.

F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I now make my report as Port Warden for Yarmouth, N.S., for year ended December 31, 1899.

I have been called on three times to hold surveys on vessels arriving in damaged conditions, three times for seaworthiness, nine times for survey of hatches of vessels arriving with cargo and once for survey of cargo of ss. *Castillian*

Total net amount of fees collected was \$2.00.

I remain your obedient servant,

EBEN SCOTT,
Port Warden.

SESSIONAL PAPER No. 11b

APPENDIX No. 40.

REPORT OF THE PORT WARDEN AT THE PORT OF MONCTON, N.B.,
FOR THE YEAR ENDED DECEMBER 31, 1899.

MONCTON, N.B., December 30, 1899.

F. GOURDEAU, Esq.,
Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I beg to report that during the year ended December 31, 1899, I held a survey on the hatches of schooner *Sam Slick* damaged at this port, and issued a certificate in accordance with the facts ascertained and received a fee of two dollars and fifty cents (\$2.50) for my services.

No other business transacted during the year.

Yours very respectfully,

JAMES HAMILTON,

Port Warden.

APPENDIX No. 41.

REPORT OF THE PORT WARDEN FOR ST. ANDREWS, N.B., FOR THE
CALENDAR YEAR ENDED DECEMBER 31, 1899.

April	1—	Survey on hatches, schooner	<i>Adelade</i>	\$ 1 50
"	3—	"	" <i>Nellie J. Crooker</i>	2 50
"	12—	"	" <i>Annie M. Allen</i>	2 50
"	14—	ground ties	" <i>Annie M. Allen</i>	2 00
June	11—	hatches	" <i>Clement</i>	2 50
August	2—	Pilot Boat No. 1.		1 00
				\$12 00

I hereby certify that this is a true and correct statement of all dues collected by me as Port Warden for the year 1899.

JOHN WREN,
Port Warden.

St. ANDREWS, N.B., January 4, 1900.

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APPENDIX No. 42.

REPORT OF THE PORT WARDEN FOR THE PORT OF CHATHAM, N.B.,
FOR YEAR ENDED DECEMBER 31, 1899.

CHATHAM, N.B., December 18, 1899.

Department of Marine and Fisheries,
Ottawa.

DEAR SIRs,—Inclosed please find copy of the only survey held at this port for the season of 1899; amount of fee, \$10. The Miramichi River is closed with ice five miles below Chatham, and no vessels expected to arrive.

I remain your obedient servant,

W. MUIRHEAD,

Port Warden.

(Copy.)

I, William Muirhead, Port Warden of the Port of Chatham, N.B., Dominion of Canada, certify that I have examined alterations and repairs made on the hull of barque *Ruth* recently converted into a coal barge, and find that she has been thoroughly caulked and repaired in a workmanlike manner. I also find her tight, sound and seaworthy and fitted to carry a full cargo of lumber to Sydney, Halifax, or elsewhere that she may be towed.

WILLIAM MUIRHEAD,

Port Warden.

DOMINION OF CANADA,	}
PROVINCE OF NEW BRUNSWICK,	
PORT OF CHATHAM,	
July 22, 1899.	

Fee, \$10.

APPENDIX No. 43.

REPORT OF THE PORT WARDEN OF VANCOUVER FOR YEAR ENDED
DECEMBER 31, 1899.

VANCOUVER, B.C., January 4, 1900.

HON. SIR L. H. DAVIES,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour of submitting to you my annual report as Port Warden of the port of Vancouver, B.C., for the year ending December 31, 1899.

Amount received for the surveys of hatches of vessels.	\$272 00
Surveys of cargoes	40 00
	<hr/>
	\$312 00

I have the honour to be

Your obedient servant,

MALCOLM McLEOD,

Port Warden.

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APPENDIX No. 44.

REPORT OF PORT WARDEN OF VICTORIA AND ESQUIMALT, FOR
THE YEAR ENDED DECEMBER 31, 1899.

VICTORIA, B.C., January 3, 1900.

The Deputy Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour of submitting my annual report as Port Warden for the ports of Victoria and Esquimalt for the year ending December 31, 1899.

Amount of fees received for surveys on the hatches of 28 vessels.	\$140 00
Amount received for surveys on cargoes, hulls, &c.....	334 50
	<hr/>
Total fees received.....	\$474 50

I have the honour to be, sir,

Your obedient servant,

CHAS. E. CLARKE,

Port Warden.

APPENDIX No. 45.

PORT WARDEN'S REPORT, WHITNEY PIER, SYDNEY, C.B., FOR
THE YEAR ENDED DECEMBER 31, 1899.

Minister Marine and Fisheries,
Ottawa.

SIR,—I have the honour to report to you the proceedings of this office for the year 1899. Surveys held on 41 steamships. Fees collected as follows :

Surveys on hull seaworthiness	\$328 00
Office rent and expenses	56 00
	\$272 00

The offices discharged were of the usual description.

I have the honour to be, sir,

Your obedient servant,

JAMES CARLIN,

Port Warden.

APPENDIX No. 46.

HARBOUR MASTERS.

TABLE showing the names of Ports proclaimed under certain Dominion Acts, the provisions of which are found in Chapter 86, Revised Statutes of Canada, for the appointment of harbour masters; the dates of proclamation; the names of the harbour masters appointed; the dates of the appointment of harbour masters; the amount which each of their salaries is not to exceed; the amount of fees collected by each of them during the calendar year ended December 31, 1899, and the overplus, if any, paid into the credit of the Receiver General.

PROVINCE OF ONTARIO.

Name of Port.	Date of Proclamation.	Name of Harbour Master.	Date of Appointment.	Amount from the	Amount collected in	Amount paid over to
				fees of office salary not to exceed.	1899.	Receiver General.
				\$ cts.	\$ cts.	\$ cts.
Collingwood	Mar. 3, '77	Andrew Lockerbie	Mar. 3, '77	200 00	96 00	.....
Depôt Harbour	June —, '98	J. F. Pratt	June 15, '98	200 00	80 00	.....
Fort William	July 7, '91	Thos. E. Oakley	May 21, '97	400 00	494 50	94 50
French River	June 20, '93	E. Borron, jun.	June 20, '93	200 00	68 00	.....
Goderich	April 28, '76	William Marlton	May 8, '94	300 00	125 00	.....
Midland	July 22, '82	John White	July 13, '97	200 00	221 50	21 50
Farry Sound	Mar. 24, '83	Frank Strain	April 26, '98	200 00	40 00	.....
Penetanguishene	Feb. 2, '77	Francis Densome	June 3, '81	200 00	18 00	.....
Port Arthur	May 12, '84	B. Guerard	May 21, '97	200 00	114 00	.....
Port Stanley	Jan. —, '98	Frank E. Shepherd	Jan. 15, '98	200 00	51 50	.....
Rondeau	" 4, '78	W. R. Fellowes	Dec. 17, '88	100 00	26 50	.....
Southampton	Sept. 23, '75	W. H. Johnston	Oct. —, '82	100 00	56 50	.....
Sarnia	July 25, '85	Robert McAdam	May 3, '86	300 00	.....	.....

PROVINCE OF QUEBEC.

Amherst	Sept. 14, '78	John Cassidy	Sept. 2, '78	200 00	12 50	.....
Bersimis	July 31, '91	Earl D. Chase	July 31, '91	200 00	.....	.....
Carleton	Dec. 8, '81	Joseph E. Cullen	Mar. 30, '96	200 00	.....	.....
Chicoutimi	June 17, '85	Ainsworth Sturton	June 8, '86	200 00	.....	.....
Grand Entry	Feb. 19, '92	Hugh Clarke	Dec. 8, '98	200 00	.....	.....
Gaspé	Sept. 25, '74	Francis G. Eden	April 3, '89	500 00	.....	.....
House Harbour	Aug. 9, '87	C. Lafrance	Dec. 10, '96	200 00	8 00	.....
Lachine	April 19, '80	.....	.....	.....	.....	.....
Matane	Oct. 19, '77	L. J. Levasseur	Dec. 12, '96	200 00	61 50	.....
Métis	Feb. 7, '78	J. H. Ferguson	Mar. 10, '96	200 00	57 50	.....
New Carlisle	" 25, '89	John C. Hall	Jan. 17, '95	200 00	6 00	.....
New Richmond	April 15, '82	Henry Leblanc	April 3, '82	200 00	39 50	.....
Oak Bay	Mar. 27, '80	Jas. D. Sowerby	Mar. 22, '80	200 00	22 00	.....
Paspebiac	May 12, '77	Hugh Christie	May 22, '77	150 00	22 50	.....
Port Daniel	Mar. 25, '89	J. Enright	Sept. 11, '90	200 00	5 00	.....
Rimouski	" 5, '77	A. P. St. Laurent	May 13, '96	200 00	17 50	.....
Rivière Ouelle	July 22, '82	.....	.....	100 00	.....	.....
St. Thomas	Jan. 2, '86	L. Dionne	Oct. 22, '96	200 00	71 00	.....
St. Johns	Within the Harbour of Montreal	G. H. Farrar	Mar. 20, '97	500 00	637 00	137 00
Sorel		Pierre Guevremont	May 20, '90	300 00	280 50	.....
Trois Pistoles	Mar. —, '98	Edouard T. Pettigrew	April 11, '99	100 00	36 00	.....

TABLE showing the names of Ports proclaimed under the Dominion Acts, &c.—*Con.*

PROVINCE OF NEW BRUNSWICK.

Name of Port.	Date of Proclamation.	Name of Harbour Master.	Date of Appointment.	Amount from the fees of office salary not to exceed.		Amount collected in 1899.		Amount paid over to Receiver General.
				\$	cts.	\$	cts.	
Alma	May 2, '98	Gideon W. Parsons	May 2, '98	100	00	30	50	
Bathurst	" 30, '73	M. T. Daley	April 21, '96	200	00	48	00	
Black's Harbour and Beaver Harbour	Sept. 22, '83	E. W. Cross	Sept. 17, '83	100	00	9	50	
Buctouche	May 30, '73	H. Hutchinson	April 17, '97	100	00	6	50	
Campbellton	" 30, '73	A. J. Venner	" 12, '93	200	00	109	50	
Campobello	" 30, '73	W. E. Sulis	Dec. 16, '92	100	00	1	00	
Cape Tormentine	" 30, '73	John Tucker	May 7, '95	200	00	31	00	
Caraquet	" 30, '73	Louis Poirier	April 17, '83	150	00	6	50	
Chatham	" 30, '73	R. J. Walls	" 13, '98	300	00	318	50	18 50
Cocagne	" 30, '73	H. Bourgeois	Mar. 12, '97	100	00			
Dalhousie	" 30, '73	W. S. Smith	" 19, '88	200	00	209	00	8 92
Dorchester	" 30, '73	F. C. Palmer	April 15, '93	200	00	19	50	
Fredericton	" 30, '73							
Grand Manan, North	Sept. 18, '76	James Pettis	May 21, '88	100	00			
Grand Manan, South	Aug. 22, '89	Abel Wilcox	Aug. 22, '89	100	00	3	00	
Gull Rock Channel	Jan. 14, '98	Wm. L. Kent	Jan. 14, '98	100	00			
Great Shemogue	May 17, '75	Vacant		100	00			
Harvey	" 30, '73	Jas. E. Bishop	June 22, '97	100	00	53	50	
Heron Channel	July —, '97	Duncan Robertson	July 15, '97	200	00	44	00	
Hillsborough	May 30, '73	John O'Shaughnessy	April 13, '98	100	00	182	50	82 14
Hopewell Cape	Aug. 25, '91	John H. Christopher	June 26, '99	200	00	25	50	
Ledge of St. Stephens	May 30, '73	W. McBean	" 12, '94	100	00			
Letete, &c	Sept. 22, '83	Jacob Cook	Nov. 26, '97	100	00	1	00	
Little Shippegan and Miscou Gully	May 1, '86	Donald Harper	April 19, '86	100	00			
Little Shemogue	Sept. 5, '88	Vacant		100	00			
Moncton	May 30, '73	E. P. Cook	April 11, '95	200	00	9	50	
Musquash	Mar. 26, '74	J. McNulty	Sept. 28, '96	100	00			
Newcastle	May 30, '73	John Niven	July 7, '73	300	00	162	50	
North Joggins	" 30, '73							
Port Elgin and Raie Verte	Feb. 6, '73	R. Anderson	June 2, '93	200	00	20	00	
Pokemouche	July 7, '83	Alfred Blanchard	Mar. 7, '99	100	00			
Richibucto	May 30, '73	James Alexander Jardine	May 11, '74	200	00	51	00	
Rockland	" 30, '73							
Sackville	" 30, '73	John A. Bowser	Aug. 8, '98	200	00			
St. Andrew's	" 30, '73	John Wren	May 6, '84	100	00	89	00	
St. George	" 30, '73	Alexander Dick	Aug. 29, '84	100	00	12	00	
St. Martin and Quaco	" 14, '74	Joseph Carson	May 14, '74	100	00	13	00	
Shediac	" 30, '73	Alexander McQueen	" 19, '76	300	00	79	00	
Shippegan	" 30, '73	John DeGrace	Aug. 10, '80	100	00	6	50	
Tracadie	" 7, '74	Theodore Savoy	Sept. 23, '99	100	00			
Waterside	Sept. 3, '89	Wm. Riley Copp	" 3, '89	100	00			
West Isles	Feb. 4, '79	Thos. K. Parker	Feb. 4, '79	200	00			

PROVINCE OF NOVA SCOTIA.

Advocate	May 15, '80	Wm. Mills	Mar. 17, '99	100	00	28	00	
Annapolis	Mar. 12, '75	John Lindgren	July 7, '98	200	00	70	00	
Apple River	Aug. 14, '86	Robt. Field	Sept. 9, '90	200	00	14	50	
Archat	April 22, '79	C. P. Terrio		200	00	20	50	
Baddeck	Sept. 23, '75	Alex. McAulay	Dec. 10, '90	100	00			
Barrington	July 10, '82	B. Kenney	July 6, '93	200	00	17	00	
Bayfield	" 11, '79	John McDonald	" 11, '79	200	00			
Bay St. Lawrence	April 21, '87	G. Zwicker	April 21, '87	200	00			
Bear River	Sept. 25, '74	Wm. McFadden	Sept. 27, '97	100	00	32	00	
Beaver Harbour	July 24, '80	Henry Hawboldt	" 22, '88	100	00	2	50	
Big Harbour	June 9, '83	Donald McKenzie	May 28, '83	100	00			

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TABLE showing the names of Ports proclaimed under the Dominion Acts, &c.—*Con.*

PROVINCE OF NOVA SCOTIA—*Continued.*

Name of Port.	Date of Proclamation.	Name of Harbour Master.	Date of Appointment.	Amount from the fees of office salary not to exceed.		Amount collected in 1899.		Amount paid over to Receiver (General).
				\$	cts.	\$	cts.	
Bourgeoise River	May 1, '86	E. C. Bouchie	April 19, '86	100	00		3 00	
Bridgewater	" 6, '74	William Oakes	Jan. 28, '96	100	00		89 00	
Bras d'Or, including New Campbellton	" 6, '74	Wm. Livingstone	Feb. 13, '94	200	00		11 00	
Cape Canso	June 6, '76	William A. H. Oliver	Mar. 2, '99	100	00		113 00	13 00
Cape Negro or North East Harbour	May 18, '81	A. D. Perry	May 18, '81	200	00		15 00	
Chester	Sept. 8, '83	A. C. Corkum	July 8, '96	100	00			
Cheticamp	April 20, '76	Fulgence Aucoin	April 15, '76	100	00			
Clark's Harbour	June 1, '81	J. B. Brannen	June 1, '81	200	00		5 50	
Clementsport	May 1, '77	J. M. LeCain	Oct. 18, '98	150	00		6 50	
County Line to Grand Narrows	June 9, '83	Vacant						
Crow Harbour	Sept. 30, '88	A. Ehler	Aug. 30, '97	100	00			
D'Escousse	Jan. 23, '85	Arthur Pertus	March 6, '90	100	00		26 50	
Digby	Feb. 19, '78	Israel Hersey	May 23, '97	200	00		50 50	
East Bay	Aug. 25, '83	Donald McInnis	April 5, '86	100	00			
Fourchu	May 22, '89	Neil MacLean	May 22, '89	100	00		1 00	
Gaberouse	March 3, '79	John Wm. Hardy	Nov. 2, '86	100	00		2 00	
Glasgow and Cape Breton Pier, Sydney	Oct. 30, '80	Angus McQuarrie	Oct. 30, '80	300	00		59 00	
Guysborough	Jan. 15, '89	Thos. O'Connor	" 31, '93	100	00		9 00	
Halifax	No proclamation required by Act	J. F. Butler	Sept. 21, '93	1,800	00		1,751 50	
Hantsport	June 27, '84	Edward Davison	June 7, '84	225	00		199 50	
Ingonish, North Bay of	Mar. 22, '81	William Thomson	Mar. 24, '81	200	00			
" South	Oct. 9, '84	John J. Donovan	Dec. 26, '98	100	00			
International Pier, Sydney	" 30, '80	Michael J. Neville	Oct. 30, '80	300	00		335 00	35 00
Isaac's Harbour	" 30, '89	Andrew J. Blakely	" 30, '89	100	00		11 00	
Jeddore	Sept. 20, '90	Wm. Jennox	Sept. 20, '90	100	00		9 50	
Jordan Bay	Oct. 25, '76	M. D. McKenzie	Oct. 25, '76	150	00		12 00	
Kelly Cove	Feb. —, '99	Jos. B. Huskins	Feb. 17, '99	100	00			
LaHave or Getson's Cove	Mar. 12, '75	George Henry Zwicker	Feb. 25, '75	300	00		24 50	
L'Ardoise, Upper and Lower	Aug. 22, '84	George Burke	Aug. 20, '84	100	00		1 00	
Lingan	July 12, '81	Thomas Laffin	July 12, '81	200	00			
Liscombe	May 18, '81	David Rosenheiser	Aug. 9, '88	200	00		40 00	
Little Bras d'Or Lake between McKay's Point and Grand Narrows	April 25, '84	Daniel Campbell	April 17, '99	100	00			
Little Bras d'Or Lake from McKay's Point to Washadebuck Rivers	" 25, '84	Alex. J. McNeil	" 25, '84	100	00			
Little Glace Bay	Aug. 3, '74	E. Douglas Rigby	May 8, '84	200	00		7 00	
Little Narrows and Cranberry Point	June 9, '83	K. McLennan	Nov. 1, '97	100	00		2 00	
Liverpool	Jan. 19, '77	Isaac V. Dexter	Oct. 7, '99	200	00		6 00	
Lockeport	May 18, '81	E. A. Capstick	May 18, '81	200	00		35 00	
Louisburg	Mar. 17, '79	H. C. V. Lavatte	Oct. 13, '98	200	00		323 10	123 10
Lunenburg	Dec. 3, '75	John Loye	Dec. 10, '96	150	00		128 00	
Mabou	July 17, '80	Finlay Rankin	June 23, '80	100	00		1 50	
Mahone Bay	May 16, '87	Lewis Knaut	Feb. 3, '98	200	00		32 00	
McNair's Cove	Mar. 12, '75	Ronald McEachen	Mar. 8, '75	150	00			
Main à Dieu	July 31, '86	John Farrell	July 21, '86	100	00			
Maitland	May 26, '85	Vacant						
Marble Mountain	" 26, '92	D. McDonald	" 26, '92	200	00		1 50	
Margaretsville	Mar. 26, '78	Robert Early	Mar. 26, '78	100	00			

TABLE showing the names of Ports proclaimed under the Dominion Acts, &c.—*Con.*PROVINCE OF NOVA SCOTIA—*Concluded.*

Name of Port.	Date of Proclamation.	Name of Harbour Master.	Date of Appointment.	Amount from the fees of office salary not to exceed.		Amount collected in 1899.		Amount paid over to Receiver General.	
				\$	cts.	\$	cts.	\$	cts.
Margaret's Bay	July 16, '75	Peter Francis Boutillier	July 7, '75	100	00	41	50		
Margaree	June 12, '86	Nicholas Deagle	Feb. 27, '93	100	00				
Marie Joseph	Jan. —, '95	John Davis	Jan. 23, '95	100	00				
Middle South Island	April —, '96	S. Wynacht	April 1, '96	100	00	10	00		
Merigomish	Mar. 26, '78	D. McGregor	Mar. 22, '93	100	00	1	50		
Meteghan Harbour	June 8, '97	B. F. Robicheau	June 8, '97	100	00	10	50		
Meteghan River	Feb. 10, '88	L. A. Comeau	" 1, '97	100	00	8	50		
Musquodobit	May 19, '82	David Williams	May 19, '82	100	00	9	00		
New Haven	June 9, '83	H. A. McLeod	Aug. 17, '89	100	00				
Neil's Harbour	" 9, '83	A. Hayman	May 28, '83	100	00				
Northport	" 27, '82	John M. Burns	June 27, '82	100	00	40	50		
North-west Cove, Coleman's Cove and Aspotogan Harbour	Dec. 22, '76	P. Boutillier	" 30, '92	200	00				
Parraborough	Oct. 22, '73	Edward Walter Beaty	Oct. 22, '73	300	00	159	50		
Petit de Grat	June 3, '95	S. Boudrot	June 5, '95	200	00	4	50		
Petite Rivière Bridge	July 7, '83	John Nelson Parks	Apr. 27, '88	100	00				
Plaster Harbour	May 6, '74	Vacant							
Port George	" 1, '77	Charles B. Weaver	May 1, '77	150	00				
Port Greville	Mar. 13, '80	Wm. Cochrane	Oct. 26, '98	200	00	38	50		
Port Hawkesbury	July 16, '75	Daniel Henesey	July 9, '75	200	00	97	50		
Port Hood	" 16, '75	John Murphy, jun.	" 9, '75	200	00				
Port la Tour	Apr. 14, '81	Wm. Sholds	Feb. 15, '98	200	00				
Port Lorne	Mar. 27, '86	Freeman Beardsley	June 9, '97	200	00	2	50		
Port Maitland	May 26, '85	Josiah Ellis	Dec. 10, '96	200	00	1	50		
Port Morien	Mar. 3, '79	Hector McDonald	Mar. 3, '79	400	00	1	50		
Port Mulgrave	" 8, '76	David Murphy	Oct. 12, '92	200	00	17	50		
Port Medway	June 25, '79	S. Manthorn	Feb. 2, '99	200	00	12	50		
Pubnico	Sept. 27, '82	D. Q. Amireau	Sept. 27, '82	100	00	50	00		
Pugwash	Oct. 22, '93	C. T. De Wolfe	May 6, '95	100	00	74	00		
Ritcey's Cove	Sept. 26, '84	J. B. Ritcey	Apr. 21, '96	100	00	29	00		
River John	Mar. 26, '78	H. Campbell	June 11, '91	100	00	0	50		
St. Ann's, including Fuchs's Cove	Apr. 20, '81	Vacant		200	00				
St. Mary's River	May 18, '81	Wm. Pride	Dec. 20, '93	200	00	16	50		
St. Peter's	Jan. 24, '81	Peter McNeil	Sept. 17, '83	200	00	80	50		
Sambro	Dec. 27, '79	Ben Smith	May 27, '90	200	00	11	00		
Sheet Harbour	May 14, '74	H. Hall	Apr. 13, '98	200	00				
Shelburne	Aug. 27, '77	John C. Morrison	May 4, '97	200	00	161	00		
Ship Harbour	June 2, '84	Conrad Marks	June 2, '84	100	00				
Smith's Mountain, St. Ann's	" 8, '83	Geo. E. Fader	Apr. 11, '98	100	00				
Spencer's Island	May 22, '99	Baxter McLellan	May 22, '99	100	00				
Tatamagouche	Feb. 27, '78	W. McKenzie	Mar. 29, '93	200	00	Nil.			
Tidnish	July 5, '82	Charles Fields	June 30, '84	100	00	25	00		
Torbay and Whitehaven	May 18, '81	Andrew Haley	Dec. 10, '97	200	00	34	50		
Tusket	Mar. 18, '75	Charles W. Hatfield	Mar. 7, '87	100	00				
Tusket Wedge	Dec. 19, '99	Hilaire LeBlanc	Dec. 19, '99	100	00				
Victoria Pier, South Bar, Sydney	July 25, '84	Ernest Richardson	Nov. 1, '97	200	00				
Wallace	Oct. 22, '73	Jas. D. Patton	Feb. 14, '96	100	00	5	00		
West Arichat	Aug. 20, '90	A. B. Poirier	Oct. 7, '96	100	00	18	50		
West Bay	May 8, '84	John McInnes	May 9, '84	100	00	Nil.			
West Port	Mar. 8, '87	Geo. Welsh	Jan. 29, '98	200	00	39	50		
Weymouth	May —, '94	R. Payson	May 29, '97	200	00	29	00		
Whycocomagh	Oct. 29, '73	Neil McKinnon	Oct. 8, '75	100	00				
Wood's Harbour	Feb. 19, '92	S. K. Woods	July 19, '92	200	00	8	50		
Yarmouth	Mar. 18, '75	Ebenezer Scott	Oct. 19, '77	250	00	235	00		

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TABLE showing the names of Ports proclaimed under the Dominion Acts, &c.—*Con.*

PROVINCE OF PRINCE EDWARD ISLAND.

Name of Port.	Date of Proclamation.	Name of Harbour Master.	Date of Appointment.	Amount from the fees of office salary not to exceed.		Amount collected in 1898.		Amount paid over to Receiver General.
				\$	cts.	\$	cts.	
Alberton and Cascumpec.	July 15, '74	John McKay	May 11, '97	200	00			
Bay Fortune	Apr. 10, '75	John R. Coffin	Apr. 29, '78	200	00	7	50	
Brudenell	July 25, '85	Vacant		200	00			
Cape Traverse	May 23, '84	Vacant		100	00			
Cardigan River, including Cardigan Bridge	July 2, '78	Hercules McDonald	July 2, '78	200	00	Nil.		
Cardigan River, from head of river to north bank Mitchell River	May 16, '78	D. Stewart	May 7, '97	100	00			
Cove Head	" 15, '80	James D. McMillan	" 15, '80	100	00			
Charlottetown and Hillsboro River	July 15, '74	David Small	Feb. 19, '77	400	00	128	00	
Crapaud	" 15, '74	Wesley Myers	June 17, '74	200	00	6	00	
Egmont	" 15, '74	George Bollum	Nov. 3, '85	200	00	Nil.		
Georgetown	" 15, '74	Samuel Hemphill	Dec. 1, '87	200	00	29	00	
Grand River	April 10, '75	Wm. Chas. Jenkins	May 4, '97	200	00			
Grand River, down to and including Poplar Point and Chapel Wharf	May 16, '78	Vacant		200	00			
Malpeque	July 10, '74	J. Champion	Dec. 10, '96	200	00			
Miminegash	April 17, '80	Jno. McCormick	May 1, '99	100	00	25	00	
Montague Bridge	April 7, '97	Welton Porter	April 7, '97	200	00	14	50	
Murray Harbour	June 17, '74	Wm. Miller	June 17, '74	200	00			
Murray River	May 16, '78	Geo. McLeod	Feb. 9, '97	200	00	6	00	
New London	July 15, '74	Wm. Bell	Aug. 25, '96	200	00	1	00	
Pinette	" 15, '74	Daniel McAulay	Dec. 18, '97	200	00			
Port Hill	" 15, '74	W. C. Brown	June 20, '98	200	00			
Pownal	" 10, '79	Michael Haley	Mar. 30, '97	100	00	Nil.		
Rollo Bay	April 10, '75	Vacant		200	00			
Rustico	May 17, '75	Felix Buote	Mar. 1, '97	200	00	1	50	
St. Peter's Bay	April 10, '75	Albert Anderson	Oct. 16, '98	200	00			
Souris East and West	" 10, '75	Wm. McDonald	Sept. 21, '99	200	00	18	00	
Summerside	July 15, '74	Wm. Stymest	Oct. 20, '97	200	00	59	00	
Tignish	April 22, '90	Vacant		100	00			
Tracadie	May 17, '75	Donald Campbell	Aug. 27, '95	200	00	Nil.		
Tryon	April 12, '77	Vacant		200	00			
Vernon River Bridge	May 19, '74	John Finlay	Oct. 9, '84	200	00	1	00	
West River	" 17, '75	Vacant		200	00			
Wood Island	" '99	James Young	May 22, '99	100	00			

PROVINCE OF BRITISH COLUMBIA.

Chemains	March '97	Lewis G. Hill	Mar. 2, '97	200	00	176	50	
Comox	April '96	Geo. H. Rowe	April 25, '96	200	00	104	50	
Nanaimo and Departure Bay	" 10, '75	Harry Cooper	Feb. 25, '97	500	00	389	50	
New Westminster	Jan. 23, '80	P. T. Powers	" 13, '99	400	00	86	50	
Quadra	April 17, '77	Vacant		300	00			
Vancouver, including Burrard Inlet	Feb. 22, '85	Malcolm McLeod	Jan. 14, '97	600	00	454	20	
Victoria and Esquimalt	Mar. 20, '78	C. E. Clarke	Nov. 3, '94	600	00	536	00	

F. GOURDEAU,

Deputy Minister of Marine and Fisheries.

STATEMENT showing returns respecting shipping and discharging Seamen, &c.—Continued.
NOVA SCOTIA—Concluded.

Name of Port.	Name of County.	Name of Shipping Master.	For Half-year ended June 30, 1899.		For Half-year ended December 31, 1899.		Total Seamen Shipped.	Total Seamen Discharged.	Total Amount.
			Seamen Shipped.	Seamen Discharged.	Seamen Shipped.	Seamen Discharged.			
			\$ cts.		\$ cts.				
French Cross	King's	J. E. Orpen							
Great Bras d'Or	Cape Breton	D. Campbell							
Guyssboro'	Guyssborough	W. Cameron			1,333	1,225	2,826	2,375	2,125 50
Halifax	Halifax	H. Bligh	1,493	1,150				28	22 40
Hantsport	Hants	J. W. Lawrence	28	28					
Harbour au Bouche	Antigonish	E. Corbet							
Harbourville	King's	Chas. E. Morris							
Isaac Harbour	Guyssborough	J. D. Griffin							
Joggins	Cumberland	J. Moffat							
Jordan Bay	Shelburne	M. D. McKenzie							
Langan	Cape Breton	Matthew Roche							
Little Bras d'Or	Cape Breton	P. Collins							
Liscomb	Guyssborough	James Henlow							
Liverpool	Queen's	J. J. V. Dexter	106	50	63	56	169	106	116 30
Locheport	Shelburne	J. R. Ruggles	218	40	38	5	236	45	141 50
Londonderry	Colchester	J. A. Blaikie							
Louisbourg	Cape Breton	Wm. Lewis							
Lunenbourg	Lunenbourg	Alfred G. Heisler	420	385	331	281	761	766	575 30
Mahone Bay	Lunenbourg	A. F. Zwicker							
Main à Dieu	Cape Breton	R. McDougall							
Maillard	Hants	Alex. Roy	1				1		50
Margaree	Inverness	M. A. Dunn							
Margaretsville	Annapolis	D. W. Lanners							
Meteguish	Pictou	D. McGregor							
North-East Harbour	Meteguish	E. U. Doucet	55	24	47	35	102	59	68 70
North Sydney	Shelburne	G. B. Swaine	4		12	11	16	11	11 30
Parrsborough	Cape Breton	Janics Armstrong	83	24	114	84	197	108	130 90
Port Acadia	Cumberland	D. K. Holmes	123	83	150	137	273	220	202 50
Port Celestina and Little Glace Bay	Pictou	M. Campbell	47	3	49	12	96	15	52 50
Port Gilbert	Digby	A. Bourneuf							
Port Greville	Cape Breton	J. J. Campbell							
Port Hawkesbury	Digby	James Bngay							
	Cumberland	James Kerr							
	Inverness	D. A. McDonald							

STATEMENT showing returns respecting shipping and discharging Seamen, &c.—*Concluded.*
BRITISH COLUMBIA.

Name of Port.	Name of County.	Name of Shipping Master.	For Half year ended June 30, 1899.		For Half year ended December 31, 1899.		Total Seamen Shipped.	Total Seamen Discharged.	Total Amount.
			Seamen Shipped.	Seamen Discharged.	Seamen Shipped.	Seamen Discharged.			
Ahouset.....	Clayoquot.....	<i>C. R. McDougall</i>							\$ cts.
Clayoquot.....	Clayoquot.....	<i>John Grace.</i>							
Hesquiat.....	Vancouver.....	<i>A. J. Brabant</i>							
Kynquod.....	Nanaimo.....	<i>W. J. Feker</i>	111	94	21	95	132	189	39 00
Masset Inlet.....	Queen Charlotte Id.	<i>Charles Harrison.</i>							
New Westminster.....	New Westminster.	<i>Peter Grant.</i>	12	3	16	24	28	27	15 20
Uchuelct.....	Barcelly Sound.....	<i>Geo. Fraser.</i>	520	524	18	153	1,021	982	54 90
Vancouver.....	New Westminster.	<i>D. McPhaiden</i>	713	364	501	458	1,165	728	479 75
Victoria.....	Victoria.....	<i>H. G. Lewis</i>			452	364			335 20

SESSIONAL PAPER No. 11b

APPENDIX No. 48.

LIST of Certificates of Competency granted to Masters and Mates of FOREIGN SEA-GOING VESSELS, during the year ended June 30, 1899.

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was passed.	Fee.
	1898.					\$ cts.
3322	Aug. 11.	David Lougher.	Master.	Yarmouth, N.S.	Halifax, N.S.	15 00
3323	" 23.	Alvin K. Webb.	"	Halifax, N.S.	"	15 00
3324	Sept. 22.	Chas. Hayward.	Mate.	Burlington, N.S.	"	8 00
3325	" 27.	John Carlson.	"	Mahone Bay, N.S.	St. John, N.B.	8 00
3326	" 27.	Edmund J. Spicer.	Master.	Parrsboro, N.B.	"	15 00
3327	" 27.	John Alfred Ridley.	2nd Mate.	St. John, N.B.	"	8 00
3328	" 29.	Sydney Pearson.	Mate.	Vancouver, B.C.	Victoria, B.C.	8 00
3329	Nov. 3.	Daniel Malman.	Master.	Hillsboro, N.B.	St. John, N.B.	15 00
3330	" 3.	James McGrath.	Mate.	Parrsboro, N.B.	"	"
3331	" 3.	Angus McEachren.	Master.	Chatham, N.B.	"	15 00
3332	" 21.	Alfred S. Wilkins.	"	Ken. pt, N.S.	Halifax, N.S.	15 00
3333	Dec. 6.	Edgar O. Smith.	"	Barrington, N.S.	Yarmouth, NS	15 00
3334	" 6.	Frederic R. Currier.	"	Yarmouth, N.S.	"	15 00
3335	" 16.	Alonzo Hunter.	Mate.	Windsor, N.S.	Halifax, N. S.	8 00
3336	" 27.	Duncan E. Morris.	2nd Mate.	Advocate Harbor, N.S.	St. John, N.B.	8 00
3337	" 27.	Angus J. MacDonald.	"	Pinnette, P.E. Island.	"	8 00
3338	Feb. 7.	Norman E. Smith.	"	Yarmouth, N.S.	Yarmouth, NS	8 00
3339	" 7.	Jcseph U. Blakeney.	Master.	Dartmouth, N.S.	Halifax, N. S.	15 00
3340	" 7.	Knowlton Marsters.	"	Burlington, N.S.	"	15 00
3341	" 16.	Ernest Kinney.	"	Yarmouth, N.S.	"	15 00
3342	Mar. 22.	Horace McCully.	2nd Mate.	Masstown, N.S.	"	8 00
3343	" 22.	John Chas. Shaw.	"	Main à Dieu C.B., N.S.	"	8 00
3344	" 10.	Award L. Brinton.	Mate.	Port Lorne, N.S.	Yarmouth, NS	"
3345	" 19.	Arnold Hotson.	2nd Mate.	Vancouver, B.C.	Victoria, B.C.	8 00
3346	" 27.	B. H. Morehouse.	"	Sandy Cove, N.S.	St. John, N.B.	8 00
3347	" 27.	John A. C. Carlsson.	Master.	St. John, N.B.	"	15 00
3348	May 4.	Arthur G. Morris.	"	Mid. Musquodoboit, N.S.	Halifax, N. S.	15 00
3349	" 5.	Laurent Vigneault.	Mate, limited to F & A vessels.	House Harbour, M. I.	Quebec.	8 00
3350	" 5.	André Simard.	Mate.	Quebec.	Quebec.	8 00
3351	June 1.	Andrew Sproul.	2nd Mate.	Castruse, Ireland.	Victoria, B.C.	8 00
3352	" 8.	Edward Holland.	Master.	Louisburg, C.B., N.S.	Halifax, N. S.	"
3353	" 14.	Matthew John Davis.	Mate.	Clifton, N.S.	"	8 00
3354	" 14.	James C. McPherson.	2nd Mate.	Port Daniel, Que.	"	8 00
3355	" 14.	John Roy Andrews.	"	Hantsport, N.S.	"	8 00
3356	" 26.	Russell S. Ramsay.	"	Malpeque, P.E.I.	St. John, N.B.	8 00

LIST of Certificates of Competency granted to Masters and Mates of INLAND and COASTING VESSELS, during the year ended June 30, 1899.

Number of Certificate.	Date of Certificate.	Name.	Grade.	Address.	Where Examination was passed.	Fee.
	1898.					\$ cts.
2464	July 6.	Chas. Haggblom.	Master.	Blenheim, Ont.	St. Catharines.	15 00
2465	" 7.	C. J. Stewartman.	"	Waubaushene, Ont.	"	15 00
2466	" 7.	Jas. Allan McDonald.	"	Georgetown, P.E.I.	Halifax.	15 00
2467	" 7.	Thomas Wilson.	"	Vancouver, B.C.	New Westminster.	15 00
2468	" 11.	Fenwick Hatt.	"	Liverpool, N.S.	Halifax.	15 00
2469	" 11.	Philip J. Campbell.	"	Cardigan, P.E.I.	"	15 00
2470	" 11.	Frank Beaumont.	"	Abort Farm, Brace- bridge, P.O., Muskoka, Ont.	St. Catharines.	15 00
2471	" 11.	Abel E. Wade.	"	Grenville, Que.	Ottawa.	15 00
2472	" 11.	Wm. Thomas Jones.	"	Gravenhurst, Ont.	St. Catharines.	15 00
2473	" 11.	Wm. E. McPherson.	"	Sydney, C.B., N.S.	Sydney.	15 00
2474	" 11.	James H. Nicholson.	"	Belleville, Ont.	Kingston.	15 00
2475	" 11.	George Murdoch.	"	Sherbrooke, N.S.	Halifax.	15 00
2476	" 20.	Edwd. C. Robinson.	"	Goderich, Ont.	St. Catharines.	15 00
2477	" 20.	Loran A. Kenney.	"	Shag Harbour, N.S.	Yarmouth.	15 00
2478	" 20.	James Martin.	"	Dartmouth, N.S.	Halifax.	15 00
2479	" 20.	Ernest S. Daniels.	Mate.	Victoria, B.C.	Victoria.	6 00
2480	" 20.	Louis Trudeau.	Master.	Montreal, Que.	Ottawa.	15 00
2481	" 18.	Wm. Allard.	"	Carleton, P.Q.	Dalhousie.	15 00
2482	" 18.	Gilbert A. Arthur.	"	Pictou, Ont.	Kingston.	15 00
2483	" 29.	Wm. Cooper Leliard.	Mate.	Owen Sound, Ont.	St. Catharines.	6 00
2484	Aug. 3.	Archibald Field.	Master.	Ladner, B.C.	New Westminster.	15 00
2485	" 3.	Edwd. T. McLennan.	"	Vancouver, B.C.	"	15 00
2486	" 5.	Stanley C. Grenville.	"	Kingsville, Ont.	St. Catharines.	15 00
2487	" 4.	Edwd. Willcox.	"	Quebec, P.Q.	Quebec.	15 00
2488	" 4.	Pierre Imbeau.	"	Pointe aux Bouleaux, P.Q.	"	15 00
2489	" 4.	David G. Kurtz.	"	Nelson, B.C.	Nelson.	15 00
2490	" 6.	Henry Perrault.	"	Parry Harbour, Ont.	St. Catharines.	15 00
2491	" 6.	Wm. McKenna.	"	Brewers Mills, P.O., Ont.	Kingston.	15 00
2492	" 6.	Robt. Harmon.	"	Lindsay, Ont.	"	15 00
2493	" 10.	Geo. Hy. Stephens.	Mate.	Sydney, C.B., N.S.	Sydney.	6 00
2494	" 10.	Wm. James Murdoch.	Master.	Sherbrooke, N.S.	Halifax.	15 00
2495	" 10.	Robt. Geo. Evans.	Mate.	Victoria, B.C.	Victoria.	6 00
2496	" 10.	John Power.	"	New Westminster, B.C.	Victoria.	6 00
2497	" 11.	Andrew Charlebois.	Master.	French River, Ont.	St. Catharines.	15 00
2498	" 11.	Robt. C. Graham.	"	Enterville, N.S.	Yarmouth.	15 00
2499	" 11.	Alfred H. Bickmore.	"	Alport, Ont.	St. Catharines.	15 00
2500	" 13.	Wm. Hetherington.	"	Toronto, Ont.	"	15 00
2501	" 18.	Henry E. Petrie.	"	Little Glace Bay, C.B., N.S.	Sydney.	15 00
2502	" 18.	Richard Hynes.	"	Codroy, Newfoundland.	"	15 00
2503	" 18.	Phileas Coude.	Mate.	Baie St. Paul, P.Q.	Quebec.	6 00
2504	" 18.	Richard F. Martell.	Master.	Main-a-Dieu, C.B., N.S.	Sydney.	15 00
2505	" 19.	Horace Sicotte.	"	Valleyfield, Que.	Ottawa.	15 00
2506	" 22.	Hans George Schon.	"	Victoria, B.C.	Victoria.	15 00
2507	" 22.	Ludger Portelance.	Mate.	Ottawa, Ont.	Ottawa.	6 00
2508	" 22.	Uriah H. Lyons.	Master.	Barrington, N.S.	Halifax.	15 00
2509	" 23.	Oliver H. P. Rogers.	"	New Westminster, B.C.	N. Westminster.	15 00
2510	" 24.	Edward Smith.	"	Brewer's Mills, Ont.	Kingston.	15 00
2511	Sept. 22.	Wm. McReily.	Mate.	Harbourville, N.S.	Sydney.	6 00
2512	" 22.	Zéphir Dénault.	"	Beauharnois, P.Q.	St. Catharines.	6 00
2513	" 22.	Jason Huckabone.	"	Fembroke, Ont.	Kingston.	6 00
2514	" 22.	Frank Spinner Carter.	Master.	New Westminster, B.C.	N. Westminster.	15 00
2515	" 22.	Sam. Geo. Mortimer.	Mate.	Vancouver, B.C.	Victoria.	6 00
2516	" 22.	Joseph E. Duquette.	Master.	Cornwall, Ont.	Kingston.	15 00
2517	" 22.	Hypolite Lacouline.	"	St. Charles de Limoulin, P.Q.	Quebec.	15 00
518	" 22.	James W. Cates.	Mate.	Victoria, B.C.	Victoria.	6 00
2519	" 22.	Hans Blackstad.	Master.	"	"	15 00
2520	" 22.	Danl. A. Foster.	"	Pictou, N.S.	"	15 00

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LIST of Certificates of Competency granted to Masters and Mates of INLAND and COASTING VESSELS, &c. — *Continued.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was passed.	Fees.
	1898.					\$ cts.
2521	Sept. 22.	Chas. Johnson	Mate	Nakusp, B.C.	Victoria	6 00
2522	" 22.	David Petro	Master	Bobcaygeon, Ont.	Kingston	15 00
2523	" 22.	Irene Yergean	"	Notre Dame de Pierreville, P.Q.	Quebec	
2524	" 22.	Ernest J. Martell	"	Main-à-Dieu, N.S.	Sydney	15 00
2525	" 22.	A. LeB. Peatman	"	St. John, N.B.	St. John	15 00
2526	" 22.	Elzear Tremblay	"	Murray Bay, P.Q.	Quebec	15 00
2527	" 27.	Henry Whitfield Colwell	"	St. John, N.B.	St. John	15 00
2528	" 27.	Odber R. Farrell	Mate	Annapolis, N.S.	St. John	6 00
2529	" 27.	Wm. P. Bennett	Master	Windsor, N.S.	Halifax	15 00
2530	" 27.	Eugene Fortin	"	Lévis, Que.	Quebec	15 00
2531	" 27.	John D. Williams	Mate	Canso, N.S.	Sydney	6 00
2532	Oct. 7.	James Achd. Johnston	Master	Young's Cove, Ont.	Kingston	15 00
2533	" 10.	Wm. Henry Elder	"	Gravenhurst, Ont.	St. Catharines	15 00
2534	" 11.	Elijah B. Runley	"	Lions Head, Ont.	"	15 00
2535	" 11.	Wm. John Cole	Mate	Manitowaning, Ont.	"	6 00
2536	" 14.	Fred'k D. Forrest	Master	Windsor, Ont.	"	15 00
2537	" 14.	Stephen C. Court	Mate	Victoria, B.C.	Victoria	6 00
2538	" 19.	Robt. Bailey	Master	Vancouver, B.C.	"	15 00
2539	" 19.	J. Cloude Butterfield	"	Port Moody, B.C.	"	15 00
2540	" 19.	John L. Souter	"	Arrowhead, B.C.	"	15 00
2541	" 24.	A. T. Corb tt	"	Bracebridge, Ont.	St. Catharines	15 00
2542	" 24.	Alex. P. Larson	Mate	Gravenhurst, Ont.	"	6 00
2543	" 27.	James D. Varcoe	Master	Lindsay, Ont.	Ottawa	15 00
2544	" 27.	Stratford T. Eyre	"	Windsor, Ont.	St. Catharines	15 00
2545	" 28.	Edward Winter	"	"	"	15 00
2546	" 28.	Albert Defoe	"	Bobcaygeon, Ont.	Kingston	15 00
2547	Nov. 3.	John E. Peterson	"	Windsor, N.S.	Yarmouth	15 00
2548	" 16.	H. Marshall O'Hara	"	Isaac's Harbour, N.S.	Sydney	15 00
2549	" 16.	T. L. Roberts	"	Advocate Harbour, N.S.	St. John	15 00
2550	" 16.	Wm. Chas. Phillips	"	Toronto, Ont.	St. Catharines	15 00
2551	" 16.	Olof Westerland	"	Vancouver, B.C.	Victoria	15 00
2552	" 16.	Andrew L. Brownlee	"	Victoria, B.C.	"	15 00
2553	" 17.	Frederick Travis	"	Burritt's Rapids, Ont.	St. Catharines	15 00
2554	" 21.	Silas H. Ormiston	"	Gabarus, C.B., N.S.	Sydney	15 00
2555	" 30.	Maynard Fielden	Mate	Hantsport, N.S.	Yarmouth	6 00
2556	" 30.	Seraphin Marinville	Master	Champlain, Que.	Quebec	15 00
2557	Dec. 3.	Donald Sinclair	Mate	Rat Portage, Ont.	St. Catharines	6 00
2558	" 5.	Dan. Wm. Crow	Master	Chatham, Ont.	"	15 00
2559	" 5.	Jas. Alex. Bailey	Mate	Gravenhurst, Ont.	"	6 00
2560	" 6.	Thos. E. Smith	Master	Necun Teuch, N.S.	Halifax	15 00
2561	" 7.	Joseph Kemp	"	Montreal, Que.	Sydney	15 00
2562	" 7.	Robt. J. Stroud	"	Milford Bay, Ont.	St. Catharines	
2563	" 10.	Alfred Mortimer	"	Mortimer's Pt., Muskoka	"	15 00
2564	" 13.	Arthur A. Batten	"	Collingwood, Ont.	"	15 00
2565	" 13.	John Gloundison	Mate	Victoria, B.C.	Victoria	6 00
2566	" 16.	Fredk. L. Foote	"	Yarmouth, N.S.	Yarmouth	6 00
2567	" 28.	F. Copperthwaite	Master	Birdsalls, Ont.	Kingston	15 00
2568	" 28.	Joseph Lodge	Mate	Lunenburg, N.S.	Lunenburg	8 00
2569	" 28.	James F. Lunan	Master	Collingwood, Ont.	St. Catharines	15 00
2570	" 29.	Wm. E. Lockhart	"	Yarmouth, N.S.	Yarmouth	15 00
2571	" 29.	Harry L. Innes	"	Sandwich, Ont.	St. Catharines	15 00
	1899.					
2572	Jan. 3.	J. W. Smith	"	Newdy Quoddy	Halifax	15 00
2573	" 4.	Wm. George Cox	"	Collingwood, Ont.	St. Catharines	15 00
2574	" 14.	George R. Wood	"	Port Dalhousie, Ont.	"	15 00
2575	" 14.	Paul Zellinsky	"	Victoria, B.C.	Victoria	15 00
2576	" 14.	Michael Goulding	"	"	"	15 00
2577	" 14.	Wm. Mackenzie	"	Vancouver, B.C.	"	15 00
2578	" 17.	Wm. E. James	Permit to act as master, 1899	Combermere, Ont.	Ottawa	5 00

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LIST of Certificates of Competency granted to Masters and Mates of INLAND and COASTING VESSELS, &c.—Continued.

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was passed.	Fee.
	1898.					\$ cts.
2579	Jan. 14	John Martin	Master	Peterborough, Ont.	Kingston	15 00
2580	" 17	H. D. A. Cameron	"	Lower Montague, P.E.I.	Sydney	15 00
2581	" 17	John McDonald	"	Goderich, Ont.	St. Catharines	15 00
2582	" 14	Laurent Roy	"	Wenoway, Que.	Ottawa	15 00
2583	" 23	Arthur D. Kelly	"	Prescott, Ont.	Kingston	15 00
2584	" 24	James J. Tyson	Mate	Wiarion, Ont.	St. Catharines	6 00
2585	" 24	Herbert N. McMaster	Master	Deseronto, Ont.	Kingston	15 00
2586	" 24	Thos. H. Harding	Mate	Yarmouth, N.S.	St. John	6 00
2587	" 27	Wm. Jas. Ferguson	Master	Wiarion, Ont.	St. Catharines	15 00
2588	" 27	Francis B. Burke	"	Penetanguishene, Ont.	"	15 00
2589	Feb. 2	Wm. Vienen, jr	"	New Westminster, B.C.	N. Westm'ster	15 00
2590	" 3	D. A. McKinnon	"	St. Catharines, Ont.	St. Catharines	15 00
2591	" 4	John Fredk. Noël	"	Victoria, B.C.	Victoria	15 00
2592	" 7	Andrew McDonald	Master	Hantsport, N.S.	Halifax	15 00
2593	" 7	L. R. Maguire	Mate	Mulgrave, N.S.	Mulgrave	6 00
2594	" 7	W. J. Murdoch	Master	Sherbrooke, N.S.	Halifax	15 00
2595	" 7	Charles Kane	Mate	Halifax, N.S.	"	6 00
2596	" 7	David R. Christopher	Master	Hopewell Cape, N.B.	St. John	15 00
2597	" 16	Wm. Heater	"	Victoria, B.C.	Victoria	15 00
2598	" 16	Benjamin Axhorne	Mate	"	"	6 00
2599	" 16	Henry Parsons	Master	"	"	15 00
2600	" 16	Archd. Conrad	"	Lunenburg, N.S.	Lunenburg	15 00
2601	" 16	Frederick Wood	"	Wiarion, Ont.	St. Catharines	15 00
2602	" 16	Wm. Sencabaugh	"	Georgetown, P.E.I.	Halifax	15 00
2603	" 16	Jonas Johnson	"	New Westminster, B.C.	New Westminster	15 00
2604	" 21	John Hodgson	"	Montreal, Que.	St. Catharines	"
2605	" 22	R. W. Williams	"	St. John, N.B.	St. John	"
2606	" 24	Pierre Aussant	"	St. Joseph de Sorel, Que.	Quebec	15 00
2607	" 24	David W. Spence	"	Southampton, Ont.	St. Catharines	15 00
2608	March 2	W. E. Parnell	"	Mill Village, N.S.	Yarmouth	15 00
2609	" 3	Lars Carlgren	Mate	St. John, N.B.	St. John	6 00
2610	" 3	Ludwig Anderson	Master	Vancouver, B.C.	Victoria	15 00
2611	" 3	George Heater	"	Victoria, B.C.	"	15 00
2612	" 7	Donald McPherson	"	"	"	15 00
2613	" 7	Stephen Martin	"	"	"	15 00
2614	" 7	I. J. Sanburn	"	"	"	15 00
2615	" 7	Donald McLennan	Mate	Kaslo, B.C.	"	6 00
2616	" 7	H. R. Bilton	"	Victoria, B.C.	"	6 00
2617	" 7	Chas. I. Harris	Master	"	"	15 00
2618	" 7	Geo. Wm. Matheson	"	"	"	15 00
2619	" 7	John Macleod	Mate	Nelson, B.C.	"	6 00
2620	" 9	Joseph Seguin	Master	Hudson Heights, Que.	Quebec	15 00
2621	" 9	Albert E. Lewis	"	Bruce Mines, Ont.	St. Catharines	15 00
2622	" 9	Sol. Esrom Pride	"	Sherbrooke, N.S.	Halifax	15 00
2623	" 9	Harry S. Morris	Mate	Advocate Harbour N.S.	St. John	6 00
2624	" 14	Wm. E. Morris	Master	Canso, N.S.	Halifax	15 00
2625	" 14	Hector Duval	"	Nicolet, Que.	Quebec	15 00
2626	" 16	Wm. F. Waesley	"	Gravenhurst, Ont.	St. Catharines	15 00
2627	" 16	Rémi Filteau	"	St. Antoine de Tilley, Que.	Quebec	15 00
2628	" 16	Ferdinand Côté	"	"	"	15 00
2629	" 17	Donald MacAulay	"	Southampton, Ont.	St. Catharines	15 00
2630	" 20	Robert F. Geldert	"	Lunenburg, N.S.	Lunenburg	15 00
2631	" 21	Reuben Chute	"	Hampton, N.S.	"	15 00
2632	" 22	Léon Prigent	Mate	Melocheville, Que.	Kingston	6 00
2633	" 22	James E. Mann	"	Toronto, Ont.	St. Catharines	6 00
2634	" 22	Hugh Ross	Master	Port Robinson, Ont.	"	15 00
2635	" 23	Martin B. Westhaven	"	Lunenburg, N.S.	Lunenburg	15 00
2636	" 23	Geo. H. Selig	"	Vogler's Cove, N.S.	"	15 00
2637	" 23	Ammon H. Zink	"	Lunenburg, N.S.	"	15 00
2638	" 23	John C. Walters	"	"	"	15 00
2639	" 24	Geo. F. Fortney	"	Winnipeg, Man.	Winnipeg	"
2640	" 29	Joseph Laforaist	"	St. Ignace, Que.	Quebec	15 00
2641	" 29	James Harrigan	"	Lunenburg, N.S.	Lunenburg	15 00
2642	" 29	W. A. McCoffrey	"	Ottawa, Ont.	Ottawa	15 00

SESSIONAL PAPER No. 11b

List of Certificates of Competency granted to Masters and Mates of INLAND and COASTING VESSELS, &c.—Continued.

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was passed.	Fee.
	1899.					\$ cts.
2643	Mar. 29	Alonzo D. Oakes	Master	Bridgewater, N.S.	Lunenburg	15 00
2644	Apr. 5	Joseph A. Smith	"	Lunenburg, N. S.	"	15 00
2645	" 5	Harris V. Dexter	"	Brooklyn, N.S.	"	15 00
2646	" 6	Octave Marceau	"	Quebec	Quebec	15 00
2647	" 6	Edward A. Dillon	Mate	Main-à-Dieu, C.B., N.S.	Sydney	6 00
2648	" 6	John J. Johnson	"	Rathburn P. O., Ont.	St. Catharines	6 00
2649	" 10	Freeman H. Lohnes	Master	Lunenburg, N. S.	Lunenburg	15 00
2650	" 12	Jas. Brown Foote	"	Owen Sound, Ont.	Kingston	15 00
2651	" 12	John Bain Currie	"	Collingwood, Ont.	St. Catharines	15 00
2652	" 12	Arthur Lefebvre	"	Valleyfield, Que.	"	15 00
2653	" 12	Benj. Garvie	"	Kemble, Ont.	Kingston	15 00
2654	" 12	Alex. Gordon	"	North Sydney, C.B., N.S.	Sydney	15 00
2655	" 12	Frem. Torangeau	"	Buckingham, Que.	Ottawa	15 00
2656	" 12	Joseph Gagné	"	Quebec, P.Q.	Quebec	15 00
2657	" 12	Wm. E. B. Ferris	Mate	St. John, N.B.	St. John	6 00
2658	" 12	John C. Woods	Master	Windsor, Ont.	Kingston	15 00
2659	" 12	Stanley Fisher	"	Port Mouton, N.S.	Halifax	15 00
2660	" 12	Herbert Barker	Mate	West Selkirk, Man.	Winnipeg	6 00
2661	" 19	Louis Laforest	Master	St. Ignace, Que.	Quebec	15 00
2662	" 19	Wm. Kirby	Mate	Naktusp, B.C.	Victoria	6 00
2663	" 19	Allen Frailek	"	Kaslo, B.C.	"	6 00
2664	" 19	B. L. Johnson	"	Liverpool	"	6 00
2665	" 19	Wilson Smith	"	Bonaventure, Que.	Halifax	6 00
2666	" 19	Wm. Mather	"	Ruthven, Ont.	St. Catharines	6 00
2667	" 19	Cornelius O'Connor	"	Midland, Ont.	"	6 00
2668	" 19	J. B. Peters	Master	New Westminster, B.C.	N. Westm'ster	15 00
2669	" 19	Peter J. Shaw	"	Lakeport, Ont.	St. Catharines	15 00
2670	" 19	John Howe	"	Port Dalhousie, Ont.	"	15 00
2671	" 19	Alex. Vance	"	West Selkirk, Man.	Winnipeg	15 00
2672	" 19	Wm. McMaster	"	Chatham Station, N.B.	St. John	15 00
2673	" 22	Harry D. Ollard	"	Victoria, B.C.	Victoria	15 00
2674	" 24	Sherman Gasson	Mate	Lymp-ton, N.S.	Yarmouth	15 00
2675	" 24	Wilfred J. Kane	Master	Kaslo, B.C.	Victoria	15 00
2676	" 24	Robert Fenton	"	New Westminster, B.C.	N. Westm'ster	15 00
2677	" 24	James Quinn	Mate	Oakville, Ont.	St. Catharines	6 00
2678	" 24	Chas. H. Hansen	Master	Loggerville, N.B.	New Castle	15 00
2679	" 26	Jeremiah Downey	"	Rat Portage, Ont.	Winnipeg	15 00
2680	" 26	Chas. Williston	"	Douglastown, N.B.	New Castle	15 00
2681	" 26	Robert F. Lipsett	Mate	Guy'sboro', N.S.	Sydney	6 00
2682	" 26	Alex. McNab	Master	Owen Sound, Ont.	St. Catharines	15 00
2683	" 26	Thomas Runcinan	"	Dresden, Ont.	"	15 00
2684	" 26	Wm. Williams	"	Rat Portage, Ont.	Winnipeg	15 00
2 85	" 27	Geo. S. Wilband	"	Vancouver, B.C.	N. Westm'ster	15 00
2686	" 27	B. H. Morehouse	Mate	Sandy Cove, N.S.	St. John	6 00
2687	May 1	W. H. Wenborne	Master	Wolfe Island, Ont.	St. Catharines	15 00
2688	" 1	Joseph E. Goodwin, jr	"	Toronto, Ont.	St. Catharines	15 00
2689	" 1	Joseph Couillard	"	Montebello, Que.	Ottawa	15 00
2690	" 3	F. E. Dale	"	Port Stanley, Ont.	St. Catharines	15 00
2691	" 4	J. B. Lacroix	"	Carillon, Que.	Ottawa	15 00
2692	" 4	W. H. Porter	Mate	Fort Erie, Ont.	St. Catharines	6 00
2693	" 4	John Gosse	Master	Vancouver, B.C.	Victoria	15 00
2694	" 4	David Bremner	"	Victoria, B.C.	"	15 00
2695	" 10	John Marks	"	Toronto, Ont.	St. Catherines	15 00
2696	" 4	A. J. Dickens	"	Chatham, N.B.	St. John	15 00
2697	" 4	John Anderson	"	Church Point, N.B.	"	15 00
2698	" 6	Alfred Robinault	Mate	Valleyfield, Que.	Valleyfield	6 00
2699	" 6	Wm. A. McPherson	Master	Pictou Landing, N.S.	Halifax	5 00
2700	" 10	H. J. Davis	"	Rat Portage, Ont.	Winnipeg	15 00
2701	" 10	Peter McPhail	"	Sarnia, Ont.	St. Catharines	15 00
2702	" 10	Harkley Pierce	Mate	"	"	6 00
2703	" 10	Emil Raulose	"	Victoria West, B.C.	Victoria	15 00
2704	" 10	J. R. Graner	Master	Vancouver, B.C.	"	15 00
2705	" 10	Martin Stone	"	Victoria, B.C.	"	15 00
2706	" 10	Wm. Watts	"	Harrison Hot Spring, B.C.	"	15 00
2707	" 15	Geo. F. Watts	"	Kingston, Ont.	Kingston	15 00

LIST of Certificates of Competency granted to Masters and Mates of INLAND and COASTING VESSELS, &c.—Continued.

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1899.					\$ cts.
2708	May 15.	F. A. Lewis	Master	Louisburg, N.S.	Sydney, C.B.	15 00
2709	" 15.	John McMann	"	Millerton, N.B.	New Castle	15 00
2710	" 16.	Fred S. Inness	"	Liverpool, N.S.	Yarmouth	15 00
2711	" 16.	Jackson Croggins	"	Westport, N.S.	"	15 00
2712	" 16.	Charley Johnson	"	Nanaimo, B.C.	Victoria	15 00
2713	" 16.	Frederick Hogan	"	New Westminster, B.C.	N. Westm'ter.	15 00
2714	" 16.	Hugh, Kelly	"	Toronto, Ont.	St. Catharines	15 00
2715	" 16.	Thos. Kimmitt	"	St. Catharines, Ont.	"	15 00
2716	" 16.	Peter McKinnon	"	Glamis, Ont.	"	15 00
2717	" 16.	Alexander McKinnon	"	Tiverton, Ont.	"	15 00
2718	" 16.	Sidney Mowry	"	Huntsville, Ont.	"	15 00
2719	" 17.	Donald McPhee	Mate.	Uptergrove, Ont.	"	6 00
2720	" 17.	Wm. J. Foote	Mate.	Sutton West, Ont.	St. Catharines.	6 00
2721	" 17.	Chas. S. Boucher	Master.	Chatham, N.B.	New Castle	15 00
2722	" 17.	Michael P. Stillar	"	Sturgeon Falls, Ont.	Ottawa	15 00
2723	" 22.	B. E. Rudderham	"	North Sydney, C.B., N.S.	Sydney	15 00
2724	" 26.	Chas. G. Bacher	"	Kaslo, B.C.	Victoria	15 00
2725	" 27.	J. A. Henderson	"	Lakeport, Ont.	St. Catharines.	15 00
2726	" 26.	Simon Kelly	"	Fogmout, Ont.	Ottawa	15 00
2727	" 29.	Chas. F. Barkhouse	"	Falmouth, N. S.	Windsor	15 00
2728	" 31.	Lemuel C. Creaser	"	Lower La Have, N.S.	Lunenburg	15 00
2729	" 31.	James A. Ritchie	"	Victoria, B.C.	Victoria	15 00
2730	June 14.	James A. Young	Mate.	Toronto, Ont.	St. Catharines.	6 00
2731	" 14.	Edwin L. Hughes	Master.	St. John, N.B.	St. John	15 00
2732	" 14.	Nelson A. Smith	Mate.	Cheverie, N.S.	"	6 00
2733	" 15.	Samuel Coates	Master.	Vancouver, B.C.	Victoria	15 00
2734	" 15.	Robert Simons	Mate.	Garden Island, Ont.	Kingston	6 00
2735	" 16.	John Playter	"	Babbean P.O., Ont.	"	3 00
2736	" 16.	John McDonald	Master.	North Sydney, N. S.	Sydney	15 00
2737	" 16.	Wm. M. Thomas	Mate.	Port Robinson, Ont.	St. Catharines.	6 00
2738	" 16.	James P. Stephenson	"	St. Andrews, Ont.	Kingston	6 00
2739	" 16.	Wm. W. Sadler	"	Lindsay, Ont.	"	6 00
2740	" 16.	F. X. Laviolette	"	St. Ours, Que.	Quebec	6 00
2741	" 19.	David Andrews	"	Windsor, Ont.	St. Catharines.	6 00
2742	" 19.	Henry Hebb	Master.	Lunenburg, N.S.	Lunenburg	15 00
2743	" 19.	Louis Levesque	"	Chicoutimi, P.Q.	Quebec	15 00
2744	" 19.	Judson Ferris	"	Lincoln Parish, Sun- bury Co., N.B.	St. John	15 00
2745	" 19.	Thomas Sughrue	"	D'Arcy P.O., Howe Is- land, Ont.	Kingston	15 00
2746	" 22.	L. M. Hatfield	Mate.	Arcadia, N.S.	Yarmouth	6 00
2747	" 22.	Henry Milot	"	Roberval, Que.	Quebec	6 00
2748	" 22.	Wm. Shaw McPhee	"	Westmond, Montreal	"	6 00
2749	" 23.	Archie S. Campbell	Master.	Stewartville, Ont.	Ottawa	15 00
2750	" 23.	Neil Neilson	"	Heron Island, Resti- gouche, N.B.	Dalhousie	15 00
2751	" 26.	Russell S. Ramsay	"	Malpeque, P. E. I.	St. John	15 00
2752	" 27.	George E. Gilley	"	New Westminster, B.C.	N. Westm'nstr.	15 00
2753	" 27.	Wm. P. Cann	"	Louisburg, N.S.	Sydney	15 00
2754	" 29.	Malcolm McKechnie	"	Providence Bay, Ont.	St. Catharines.	15 00

SESSIONAL PAPER No. 11b

List of Certificates of Service granted to Masters and Mates of INLAND and COASTING Vessels, during the year ended June 30, 1899.

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was passed.	Fee.
	1898.					\$ cts.
3336	July 7.	Ernest W. Spencer.....	Master..	Victoria, B.C.....	Victoria, B.C.	8 00
3337	" 29.	Thos. Hayden.....	"	Osborne, Shelb'ne Co., NS	Lunenb'rg, NS	8 00
3338	Aug. 19.	John Kean.....	Mate.....	Kingston, Ont.....	Kingston, Ont	4 00
3339	Oct. 18.	John Tuttle.....	Master.....	".....	"	8 00
	1899.					
3340	Mar. 29.	Geo. A. Huff.....	"	Albemi, B.C.....	Victoria, B.C.	8 00
3341	Apr. 6.	Robt. Colwill.....	"	Port Hope, Ont.....	St. Catharines.	8 00
3342	" 19.	Philip H. Poirier.....	"	D'Escousse, C. B., N.S.	Pictou, N.S.	8 00
3343	" 27.	Burpee Tupper.....	"	Spencer's Island, N.S.	Parrsboro', NS	8 00
3345	June 27.	J. E. Cornwall.....	"	Sombra, Ont.....	St. Catharines.	8 00

APPENDIX No. 49.

STATEMENT of Wrecks and Casualties reported as having occurred to British, Canadian and Foreign Sea-going Vessels, in Canadian Waters, and to Canadian Sea-going Vessels, in other Waters, for the twelve months ended June 30, 1899.

Date of Casualty.	Name of Ship.	Age of Ship.	Port of Registry.	How rigged. Iron or Wood. Steam or Sail.	Register Tonnage.	Port sailed from. Port bound to.	Place where Casualty happened.	Cause and Nature of Casualty.	Lives Lost.	Remarks.
1897.										
April —	Agnes.....	30	Halifax, N.S.	Schr., wood, sail.	21	Cape Breton to Halifax, N.S.	At the mouth of Sheet Harbour, N.S.	Broke from her anchorage and drifted to sea and has not been heard of since.	.....	Total loss, 350 Cargo, 200 \$
1898.										
April 8	Alki	15	American.....	" .....	.....	Point Townsend to Seattle.	Seaforth Channel, B.C.	Engine went wrong .....	.....	Trifling loss.
Sept. 8	Athlon	19	Windsor, N.B.	Barque, wood, sail	1308	Dublin to New York ..	Atlantic Ocean ..	Run into by a steamer and was abandoned.	.....	Total loss; amount of loss not re- ported.
May 12	Admiral .....	.....	Quebec.....	Wood, steamer	408	Dalhousie, N.B., to Gaspé, Que.	Below Lavaltrie Range Light, P.Q.	Mistake on the part of the pilot in working her range light.	.....	Trifling accident.
Sept. 26	Arabia	1	Hamburg	Schooner, iron, steam.	2331	Hamburg.....	Cape LaRoche, River St. Lawrence, Que..	Stranded.....	.....	Partial loss; an- count of damage not reported
Oct. 10	Alma	17	Charlottetown, P.E.I.	Schr., wood, sail.	.....	Charlottetown to North Sydney, N.S.	Half a mile below Bea- vers Narrows, St. Peter's Inlet.	Heavy wind and narrow channel.	.....	Partial loss, 8,000
Nov. 25	Anita	15	St. John, N.B.	"	45	Shulee, N.S., to Bar- baboe, B.W.I.	6 miles S.E. from Apple River Light, N.S., Bay of Fundy.	Damaged in heavy sea .. ther.	.....	" 250
Oct. 26	A. J	19	"	"	124	Parrboro', N.S., to Windsor, N.S.	Off Hantsford, U.S. ...	Filled with water and went down.	.....	Total loss, 450
Sept. 14	Albert	8	"	Barque, wood, sail	531	Hillsboro', N.B., to Preston, G.B.	1 mile below Preston Dock, England.	Damaged in collision .....	.....	Partial loss, 1,000
Dec. 5	Alfaranta	23	Yar mouth, N.S.	Schr., wood, sail.	48	Mabou, N.S., to Mar- Hood, N.S., to Mar- garee, N.S.	Margaree Harbour, N.S.	Stranded in a heavy sea .....	.....	Cargo, 200 50
Oct. 16	Arngarda	Norway	Barque, wood, sail.	986	Liverpool, England, to Campbellton, N.B.	200 yards from Miscou Light, Gulf of St. Lawrence.	No particulars reported	Total loss; amount of loss not re- ported.

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Month	Ship Name	Origin	Destination	Wrecked At	Cause	Losses	Total loss
Nov. 27	Amiel Corkum	Lunenburg, N.S.	Schr., wood, sail.	Lying in N. E. Harbour, Shelburne Co., N.S.	Broke from her moorings.		900
Dec. —	Annie G	Yarmouth, N.S.	"	Bay of Fundy.	This vessel was found derelict near Mud Island, water logged and dismantled.	2	
"	12 Aurora	American	Barque, wood, steam.	Near Bois Blanc Island Ont.	Destroyed by fire		Partial loss, 600 Cargo 80
Nov. 27	Agnes May	St. John, N.B.	Schr., wood, sail.	Salem Harbour, Mass., U.S.	Damaged in the hurricane of the 27th Nov., 1898.		Partial loss, 100
Dec. 5	Amy D	Parraboro', N.S.	"	Cutler, Maine, U.S.	Stranded in storm.		" 1,000
1899.							
Jan. 4	Ava	"	"	Sand Island, Alabama, U.S.A.	Went ashore		Total loss, 4,000
1898.							
Feb. —	Albatros	St. John, N.B.	Bktn., wood, sail.	Cardiff to Rio Janerio.	Cardiff Roads.		Partial loss, 2,250
1899.							
Mar. 25	Athle	Parraboro', N.S.	"	Pensacola, Florida, to British Honduras.	Stranded in fog		" 1,500
Jan. 10	Angola	Windsor, N.S.	Barque, wood, sail.	Cardiff to Cape Town.	At Sea		Partial loss; amount of damage not reported.
May 30	Anna McGee	Quebec	Steamer	Yarmouth	Gannet Rock Ledge, near Cape Foucher, U.S.		Total loss, 2,500
"	3 Amorette	Charlottetown P. E. I.	Schr., wood, sail.	Peters to Arichat.	Herring Rocks entrance to Arichat Hbr., N.S. too close to shore.		" 200
Feb. 7	Avalon	Windsor, N.S.	"	St. John to New York.	Beverly Harbour, U.S.A.		Partial loss, 1,500
Mar. —	Aldine	Yarmouth, N.S.	Bgtn., wood, sail.	Yarmouth to Buenos Ayres.	Gulf Stream, American Coast.		Partial loss. Cargo; amount of damage not reported.
Sept. 23	Athol	Parraboro', N.S.	Schr., wood, sail.	St. John, N.B. to Ad. vocate, N.S.	Cumberland Bay, N.S.		Partial loss, 100
June 27	Abana	St. John, N.B.	"	St. John, N.B. to New York.	Cape Ann, bearing S. W. by W. 5 M., Boston Bay.		" 600
1898.							
June 3	Bertha Maud	St. John, N.B.	"	St. John, N.B. to Salem, Mass.	Salem Harbour, Mass., U.S.A.		Partial, 500 Cargo, 100
Sept. 20	Bessie A	New Maitland, N.S.	"	Cherrie, N.S., to Cal. Minas Basin, N.S.	Minas Basin, N.S.		Partial loss, 300

STATEMENT OF Wrecks and Casualties reported as having occurred to British, Canadian and Foreign Sea-going Vessels in Canadian Waters, &c.—Continued.

Date of Casualty.	Name of Ship.	Age of Ship.	Port of Registry.	How Rigged. Iron or Wood. Steam or Sail.	Register Tonnage.	Port sailed from. Port bound to.	Place where Casualty happened.	Cause and Nature of Casualty.	Lives Lost.	Remarks.
1898.										
Sept. 14	Bertha	13	Valparaiso	Wire, wood, sail.	975	Moodyville to Valparaiso.	15 miles outside Cape Flattery, North Pacific Ocean.	Casualty caused by heavy fog.		Extent of damage not known.
"	Buteshire	22	St. John, N.S.	Barque, wood, sail.	899	Buenos Ayres, Barbadoes, to Ship Island, Mass.	On the bar off Chandelem Island, 12 M., Gulf of Mexico.	Owing to a strong current vessel got out of her course.		Total loss, 5,000
"	Blue Bell	27	Sydney, C.B., N.S.	Schr., wood, sail.	25	Bras d'Or Lake, C.B., to Sydney, C.B.	Point Aconi, C.B., N.S.	A wind storm cause of casualty.		Total.
"	Balance	27	Halifax, N.S.	"	63	New Campbelltown, Gt. Bras d'Or to Pictou, N.S.	3 miles east of Pictou Light, Gulf Shore, N.S.	The vessel's sails were lost in a gale.		Total loss, 300
"	Barbara witz.	15	Victoria, B.C.	"	239-20	Victoria, B.C., to Kitkatha, Skeena River.	Browning Island, Kitkathle Inlet.	Stranded owing to an error in the navigation of the ship.		"
Oct. 12	Brisk	33	Lunenburg, N.S.	"	33	North Sydney, C.B., to Newfoundland.	10 miles off Low Point Light, C.B., N.S.	Stranded owing to an error in the navigation of the ship.		1,000
Nov. 27	Berma	30	Dorchester, N.B.	"	95	Joggins, N.S., to St. John, N.B.	Apple River, Cumberland Bay, N.S.	Vessel filled owing to the big gale and went down.		800
Nov. 30	Belle of the Bay	23	Guyabono, N.S.	Schr., wood, sail.	20	Montague, P. E. I., to Pictou, N.S.	Near Chance Harbour, N.S.	Casualty caused by thick weather.		Partial loss, 200
"	Blanche M. Thobourn.	14	Shelburne, N.S.	"	95-83	Louisburg to Shelburne	Liverpool Harb'r, N.S.	Parted chains while lying at the harbour at Liverpool, in a gale, and became a partial loss.		2,000
Feb. 1	Benton	8	Parrsboro, N.S.	Schr., wood, sail.	159	Havana, Cuba, to Pagsagouli,	Chandeleur Isl'd, Miss., American coast.	Stranded		Total loss, 6,000
"	Brazil	17	Windsor, N.S.	Barque, wood, sail.	344	Savannah to New York	25 miles E. of Fire Isl'd, American coast.	"		5,900
1899.										
Feb. 9	Bahama	7	"	Schr., wood, sail.	321	Surinam to New York	North Atlantic	Damaged in gales.		Partial loss, 1,000
Mar. 29	Bertha May	9	Yarmouth, N.S.	Bgen., wood, sail.	319	Boston to Philadelphia	Atlantic Ocean.	Badly damaged in rough weather.		7,000

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Date	Name	Origin	Destination	Contents	Incident	Result	Loss	Remarks
Jan 31 to Feb 10 1898.	17 Windsor, N.S.	Bktn. sail.	17 Windsor, N.S.	Bktn. sail.	Stranded in rough weather.	Total loss.	800	Ant. of loss not reported.
May 25	Bessie Carson	Schr., wood, sail.	Parrsboro', N.S.	Schr., wood, sail.	Ran ashore.	Partial loss.	800	
July 15 1897.	Cunaxa	Barque, iron, steam.	Liverpool	Barque, iron, steam.	Collided with the steamer Repton.	Very slight damage.		
Dec. 9 1898.	Coban	Schr., iron, steam.	Montreal, Que.	Schr., iron, steam.	Lost propeller	Partial loss.	150	
July 1	Charles	Schr., wood, sail	Yarmouth, N.S.	Schr., wood, sail	Did not keep a proper look-out.	Total loss.	9,000	
July 27	Clifford C.	Schr., wood, sail.	St. John, N.B.	Schr., wood, sail.	Fault of the navigation of the ship.	Partial loss.	100	
May 16	Canada	Iron, steam	Montreal, Que.	Iron, steam	Collided with another vessel in a heavy squall.	"	500	
" 16	Cacouna	Schr., iron, stm	"	Schr., iron, stm	Collision.	"	200	
" "	Castlemoor	Schr., steel, stm	South Shields.	Schr., steel, stm	Fault in compass	Partial loss.	Amt. of damage not reported.	
June 1	Compana	Schr., iron, stm	Quebec	Schr., iron, stm	Casualty caused by thick fog.	Partial loss.	250	
Oct. 15	Captain	Schr., wood, steam.	St. John, N.B.	Schr., wood, steam.	Listed over owing to being too much loaded on one side.	Partial loss.	200	
" 11	Confederate	Schr., wood, sail	Charlottetown	Schr., wood, sail	Lost main mast	Total, Cargo,	108	
" 27	Century	Egtn., wood, sail.	Jersey	Egtn., wood, sail.	Big storm	Total loss.	150	
Nov. 27	Chieftain	Schr., wood, sail.	St. John, N.B.	Schr., wood, sail.	Damaged in big gale of Nov. 27, 1898.	Partial loss.	9	
" 29	City of Ainsworth	Str., wood	New Westminister, B.C.	Str., wood	Sprung a leak	Total loss.	3,000	
" 29	Christian Moore	Schr., wood, sail.	Windsor, N.S.	Schr., wood, sail.	Wrecked in the gale of Nov. 27, 1898.	Partial loss.	800	
" 11	Camden	Barge, wood, sail.	(American)	Barge, wood, sail.	About 15 miles east of Gaspe, Que.	Total loss.	1,100	
" 27	Campion	Egtn., wood, sail.	Digby, N.S.	Egtn., wood, sail.	Parted claims and stranded.	Partial loss.	700	
Apr. 29	Carlotta	Schr., wood, sail.	St. John, N.B.	Schr., wood, sail.	Heavy gale.	"	100	
Dec. 17	Cygnat	"	Parrsboro', N.S.	"	"	"	600	
Oct. 4	Clifford C.	"	St. John, N.B.	"	Went ashore in a thick fog.	"	500	
May 4 1899.	Charles F. Sear	Schr., wood, steam.	(American)	Schr., wood, steam.	Stranded and injured by ice.	Partial loss, Cargo,	500	

344 Savannah LaMar, Jamaica, to New York.
 78 Parrsboro', N.S., to St. George, N.B.
 2048 Garston to Chatham, N.B.
 689 Sydney, C.B., to St. Johns, Nfld.
 1456 St. John, N.B., to Run-corn, Eng.
 96 Boston, Mass., to St. John, N.B.
 48 Montreal to Quebec.
 1451 Montreal, Que., to Sydney, C.B.
 1846 North Shields, Queens-town, to Quebec.
 1154 Pictou to Montreal.
 21 Was laid up at Rowan's Point, Indian town, St. John, N.B.
 49 Kelly's Cove, C.B., to St. John, N.B.
 181 Papebiac to Grand River, N.B.
 72 St. John, N.B., to Alma, N.B.
 193 Nelson, B.C.
 197 New York, U.S., to Yarmouth, N.S.
 659 Cleveland, Quebec, to New York.
 99 Boston, Mass., to Salem, Mass.
 210 New York to Florida.
 77 Parrsboro' to (Grand Off Quaco, N.B., Bay of Fundy).
 97 St. John, N.B., to Salem, Mass.
 136 Lubec, Me., to Magdalen Islands.

Several hundred yards from Lory Island.
 Magaguadavie River, N.B.
 In the Miramichi River, N.B.
 Atlantic Ocean
 Near Cape Sable, Seal Island, N. Atlantic.
 Thatcher's Island, N. Atlantic.
 Near Sorrel, St. Lawrence River, Que.
 Matawa River, St. Lawrence River.
 W. point of Grand Anse, Gaspe coast, Que.
 Rowan's Point, Indian town, St. John, N.B.
 Straits of Northumberland.
 Malbay Cove, Gaspe County, Que.
 Pisarince, St. John Co., N.B.
 Kootenay Lake, B.C.
 Vineyard Haven, U.S.
 About 15 miles east of Gaspe, Que.
 West Quoddy, N.S.
 On the passage from New York to Fernandina, Fla.
 Off Quaco, N.B., Bay of Fundy.
 Green Island, Me., U.S.
 White Sands, Murrey Harbour, P. E. I.

Stranded in rough weather.
 Collided with the steamer Repton.
 Lost propeller
 Did not keep a proper look-out.
 Fault of the navigation of the ship.
 Collided with another vessel in a heavy squall.
 Collision.
 Fault in compass
 Casualty caused by thick fog.
 Listed over owing to being too much loaded on one side.
 Lost main mast
 Big storm
 Damaged in big gale of Nov. 27, 1898.
 Sprung a leak
 Wrecked in the gale of Nov. 27, 1898.
 Rough weather
 Parted claims and stranded.
 Heavy gale.

Total loss. Amt. of loss not reported.
 Partial loss, 800
 Very slight damage.
 Partial loss, 150
 Total loss, 9,000
 Partial loss, 100
 " 500
 " 200
 Partial loss. Amt. of damage not reported.
 " "
 Partial loss, 250
 Total, Cargo, 200
 Total loss. Amt. of loss not reported.
 Partial loss, 150
 Total loss. Amt. of loss not reported.
 Total loss, 3,000
 Partial loss, 800
 Total loss, 1,100
 Partial loss, 700
 " 100
 " 600
 Partial loss, 500
 Cargo, 500

STATEMENT of Wrecks and Casualties reported as having occurred to British, Canadian and Foreign Sea-going Vessels in Canadian Waters, &c.—Continued.

Date of Casualty.	Name of Ship.	Age of Ship.	Port of Registry.	How Rigged. — Iron or Wood. — Steam or Sail.	Register Tonnage.	Port sailed from. — Port bound to.	Place where Casualty happened.	Cause and Nature of Casualty.	Lives lost.	Remarks.
1898.		Yrs								\$
Nov. 27 1899.	Carita.	18	Port Medway, N.S.	Schr., wood, sail.	94.47	Liverpool to Newburg, U.S.	Vineyard Haven Harbour, U.S.	Strong gales and high sea.		Total loss. Amt. of loss not reported.
June 19 1899.	Crestline.	6	Hawkesbury, N.S.	"	242	Sydney, N.S., to Halifax, N.S.	25 miles off Liscomb, N.S.	Sprung a leak and foundered.		Total loss, 1,000
Nov. 27 1898.	Canaria.	23	Windsor, N.S.	"	341	St. Lucia, B.W.I., to St. John, N.B.	Vineyard Haven Harbour, U.S.	Damaged by storm. Vessel was at anchor in Vineyard Haven Harbour.		Partial loss, 3,000
June 23 1898.	Deerhill.	21	St. John, N.B.	"	324	Buenos Ayres	San Nicholas, La Plata River, Argentine Republic.	Stranded.		" 450
Sept. 4 1899.	Darja.	16	"	Brig. wood, sail.	97	Alma, N.B., to Sydney, C.B.	North Atlantic.	Strong gales.		" 5,000
Nov. 27 1899.	Druid.	7	St. John, N.B.	Schr., wood, sail.	331	St. John, N.B., to Martins, N.B., to Alma, A. Co., N.B.	St. John, N.B.	Stranded in the gale of Nov. 27, 1898.		Partial loss, 300
Dec. 12 1899.	Dear Hill.	6	"	"	287	St. John, N.B., to Santos, Brazil.	Abandoned lat. 35 42, long. 52 49, North Atlantic.	Tremendous gales and heavy seas.		Total loss, 15,000 Cargo, 4,250
Nov. 27 1899.	Delta.	5	Windsor, N.S.	"	109	New York to Cheverie.	Vineyard, Haven, U.S.A.	Damaged in the gale of Nov. 27, 1898, being run into by another vessel.		Partial loss, 1,500
Feb. 11 1899.	Delight.	45	Charlottetown, P.E.I.	"	171	St. John's, Nfld., to Sydney, C.B.	At sea.	Heavy seas and rough weather; ship abandoned after she became unmanageable.		Partial loss; amount of damage not reported.
Sept. 13 1898.	Delta.	30	Halifax, N.S.	Barque, iron, steam.	28	St. John's, Nfld., to Victoria, B.C.	Marine Head, Mary's Bay, Nfld.	St. Ran ashore in the fog and strong gale.		Total loss; amt. of loss not reported.
June 19 1898.	Danube.	11	Victoria, B.C.	Schr., iron, steam.	117	Victoria, B.C. to Skagway.	"	Stranded.		Partial loss, 20,000
April 4 1898.	Ettie.	11	St. John, N.B.	Schr., wood, sail.	117	St. John to New Haven.	Off Highland Cape Cod, North Atlantic.	Heavy gales.		Partial loss, 150 Cargo, 600

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Sept. 16	Express	6	Lancaster, Eng	Schr., steel,	298	Halifax to Barrington	Bon Portage Island,	Stranded.	Total loss,	80,000
"	4 Evolution	9	Parrsboro', N.S.	steam.	173	Liverpool to St. John,	Atlantic Ocean	Heavy weather	Partial loss,	1,200
Nov.	Earl of Aberdeen	4	"	Schr., wood, sail.	416	New York to Halifax,	East River, New York Harbour, American Coast.	Collision.	Cargo, Partial loss,	200 300
"	27 Ellen	28	Halifax, N.S.	"	32	Pictou to Margaree	Island side Port Hood Harbour, C.B., N.S.	Driven ashore by storm.	Partial loss; amount of damage not reported.	200
"	27 Evelyn	24	St. John, N.B.	"	70	Boston, Mass., to St. John, N.B.	Salem Harbour, Mass., U.S.	Dragged anchor in the gale of the 27th inst.	Partial loss,	200
"	27 E. Mayfield	N'w	Parrsboro', N.S.	"	75	Rockland, Me	Near George's Head, American Coast.	Driven ashore in gale of Nov. 27, 1898.	"	1,000
"	20 E. Raymond	Yarmouth, N.S.	"	"	97	Port Gilbert, N.S., to Ralsport, Me.	Coast of Maine.	Stranded.	Total loss,	1,500
Dec.	6 Ellen	28	Halifax, N.S.	"	32	Pictou to Margaree	Margaree Harbour	Strong current and rough sea.	"	200
Nov.	9 Edw'd A. Horton	28	Digby, N.S.	"	67	Digby to fishing ground	North Point Brier Island, Bay of Fundy.	Stranded.	"	2,000
Jan.	7 Ella May	10	Parrsboro', N.S.	"	96	Parrsboro' to Grand Manan.	Beaver Harbour, Bay of Fundy.	Dragged anchor and became a total loss in a gale.	"	2,500 300
"	14 Edith N. McInnis	6	American	"	62	Gloucester to Shelburne.	Near Cape Sable Island Lighthouse.	Was carried on the island by a strong gale.	Cargo	300
Mar.	29 E. Mayfield	1	Parrsboro', N.S.	"	75	Parrsboro' to Annapolis.	East side Digby Gut, N.S.	Went ashore in a gale.	Partial loss; amount of damage not reported.	1,080
Jan.	Ernest de Cost	9	Halifax N.S.	"	107	Aruba, D.W.I., to Barbados.	Chica, Santo Domingo.	Sprang a leak.	Total loss; amount of loss not reported.	400
Nov.	27 Estella R.	14	St. John, N.B.	"	49	St. John to Fredericton	St. John River, Upper Greenwich, N.B.	Stranded in big storm of Nov. 27, 1898.	Partial loss,	100
Sept.	8 Eva Stewart	18	Parrsboro', N.S.	"	98	Yarmouth, N.S., to Parrsboro'.	Bulls Bluff, Minas Channel.	Went ashore in a fog.	Partial loss,	100
Sept.	20 Fanny Young	14	Port Hawkesbury, N.S.	"	88	Boston to Halifax	Coast of Nova Scotia.	Stranded.	"	300
May	24 Florence	14	Quebec	Tug, wood, steam.	113	Montreal to Sorel	Three Rivers, St. Lawrence River.	Error in judgment of pilot	"	200
Nov.	27 Free Trade	3	Parrsboro', N.S.	Schr., wood, sail.	77	Boston, U.S., to Wolfville, N.S.	American coast.	Damaged, caused by the big gale of Nov. 27, 1898.	"	300
Jan.	6 Florence Abbott	22	Sydney, C.B.	"	98	Sydney to Halifax	Western end of Madme Island.	Stranded.	Total loss,	1,000
1898.										
Nov.	27 Florence R. Hewson.	6	Parrsboro', N.S.	"	289	New York to Halifax.	Off Cape Sable Island, N.S.	Casualty caused by heavy gale.	2 Partial loss,	1,200

STATEMENT of Wrecks and Casualties reported as having occurred to British, Canadian and Foreign Sea-going Vessels in Canadian Waters, &c.—Continued.

Date of Casualty.	Name of Ship.	Age of Ship.	Port of Registry.	How Rigged. Iron or Wood. Steam or Sail.	Register Tonnage.	Port Sailed from. Port Bound to.	Place where Casualty happened.	Cause and Nature of Casualty.	Lives lost.	Remarks.
1898.		Yrs								\$
Sept 15	Galaka	10	Lunenburg, N.S.	Schr., wood, sail.	98-20	Lunenburg, N.S., to Main-a-Dieu, St. Seat. Burin, Nfld. to L'Anse-au-Loup, N.S.	to L'Anse-au-Loup, N.S.	A heavy strong current.		Total loss, 3,000 Cargo, 3,500
Oct. 15	G. Walter Scott.	15	Parraboro', N.S.	"	75	Parraboro', N.S., to West Bay Beach, N.S.	West Bay Beach, N.S.	Strong gale		Partial loss, 115
Oct.	Glenlivet	15	"	Schr., iron, steam.	1,008	"	"	Collided with a barge in the dark.		Slight damage.
May 19	Garner	7	New Carlisle, Que.	Schr., wood, sail.	140	Gaspé to Cape Cove.	Cape Despair, Gulf of St. Lawrence.			Total loss, 5,000
Nov. 27	Greta.	9	St. John, N.B.	"	123	St. John, N.B., to New Haven, U.S.	Huntington Bay, Long Island, N.Y.	Stranded in the hurricane of Nov. 27, 1898.		Cargo, 4,000 Total loss, 1,015
Jan. 2	Glad Tidings	6	Lunenburg, N.S.	"	99-47	Lunenburg to Island.	Turk's N th side Gulf Stream, Atlantic Ocean.	Became unmanageable in rough weather and became a total loss.		Cargo, 4,000 Partial loss, 300
1898.										
Dec. 21	Garfield White	9	Parraboro', N.S.	"	99	Apple River, St. John.	Apple River, N.S.	Stranded		Partial loss, 2,000
1899.										
Feb. 15	Galatea	17	St. John, N.B.	Barque, wood, sail.	1122	Turk's Island to Boston	Gulf Stream	Became water-logged in bad weather.		Total loss, 15,000 Cargo, 3,000
"	Greenwood	74	Victoria, B.C.	Wood, steamer	89-77	Laid up		Burnt		Total loss.
1898.										
Nov. 27	Georgia E.	5	St. John, N.B.	Schr., wood, sail.	89	Bristol, R.I., to St. John, N.B.	Vineyard Haven, Mass.	Ran into during the gale of Nov. 27, 1898.		Partial loss, 500
1899.										
Mar. 29	Gleaner	19	Parraboro', N.S.	"	96	Parraboro' to St. John.	4 miles from Isle Haute, Bay of Fundy, N.B.	Sprang a leak and went down suddenly.		Total loss, 1,000 Cargo, 291
May 17	Geo. L. Colwell	17	(American)	Schr., wood, steamer.	371	Quebec to New York	Near Richibucto Light, N.B.	Rough weather		Partial loss, 250
Jan. 13	G. H. Perry	8	Yarmouth, N.S.	Schr., wood, sailing.	99	St. John to Boston, Mass.	Sheldrake Rock n'r Bass Harbour, Maine, U.S.	At anchor and was carried on the rocks by wind.		" 900

SESSIONAL PAPER No. 11b

Date	Name of Vessel	Origin	Destination	Material	Value	Cause of Wreck	Amount of Damage
Feb. 6	Grestlands	Quebec	Near Long Island, U.S.	Schr., iron, steam.	703	Damaged by heavy seas.	" amount of damage not reported.
July 24	Greville	Parraboro, N.S.	Port William River, N.S.	Schr., wood, sail.	57	Carried under the bridge and dismantled.	Partial loss, 300
Nov. 27	Grandee	Sydney, N.S.	Chatham, N.B., to Louisburg, C.B.	"	1265	Violent gale and thick snow storm.	" 7,000
Sept. 7	Gasper Embree	Chatham, N.B.	to Mouth of Flat River, P.E.I.	Schr., wood, sailing.	95	Casualty caused by mistake of the master.	" 200
1898.	Garrance	Liverpool, Eng.	to Burrard Inlet, B.C.	Iron, steamer.	2485	Defect in engines which did not answer the master's signals.	Cargo, 200 Damage trifling.
Oct. 15	Helena M.	Parraboro, N.S.	West Bay, Minas Basin, N.S.	Schr., wood, sail.	55	Strong gale.	Partial loss, 100
" 17	Howard	Lunenburg, N.S.	to Winthrop Head, Mass., U.S.A.	Schr., iron, sail.	118-80	Misjudged effect of tide.	" 2,000
Nov. 27	Henry Nickerson	Parraboro, N.S.	Off Cape Spencer, Bay of Fundy, N.B.	Schr., wood, sail.	70	Caught in the gale of Nov. 27, 1898.	" 350
Dec. 26	Hydra	Charlottetown, P.E.I.	Near Glace Bay Pier, C.B., N.S.	"	67	Driven on Mackenzie's Reef by wind and tide.	" 500 Cargo, 1,150
Oct. 1899.	Hattie May	Halifax, N.S.	Off New York.	"	149	Captized in a hurricane.	Total loss, 2,000
May 1898.	Hiram Lowell	(American)	Pleasant Bay, M.I.	"	95	Stranded.	Partial loss; amt. of damage not reported.
Nov. 22	Irna	British.	Halifax Harbour, N.S.	"	233	"	Total; amount of loss not reported.
Sept. 22	Joseph Hay	New York, U.S.A.	Cape Enrage, Chignecto Bay, Bay of Fundy, N.S.	"	165	Bad weather cause of casualty.	Partial loss, 300
Aug. 20	Jos. C. Morgan	Shelburne	Lockeport, N.S., to New York.	"	35-57	Thick fog.	Total loss, 500
Oct. 17	J. W. Durant	Parraboro, N.S.	New York to Wolfville, Wolfville River, N.S.	"	124	The vessel fell over at the wharf owing to a bad berth.	Partial loss, 1,500
" 9	James Barber	St. John, N.B.	West Quoddy Light, Me., Atlantic.	"	80	Collision.	" 450
Sept. 25	J. N. Fault	Halifax, N.S.	Port George to Rock-Petit Mansarock, Me. land.	"	68	Stranded.	Total loss.
Nov. 12	John T. Cullinan	St. John, N.B.	Tynemouth Creek Bar, St. Martins, N.B.	"	98	"	Partial loss, 800
Dec. 1	John B. Dolliver	Port Medway, N.S.	Near Round Island, C.B.	"	35-01	Vessel at anchor parted chains and became a total loss.	Total loss, 500
Feb. 21	John D. Payson	Yarmouth, N.S.	Vessel stranded near the Coast of Maine.	"		"	Total loss.

STATEMENT of Wrecks and Casualties reported as having occurred to British, Canadian and Foreign Sea-going Vessels in Canadian Waters, &c.—Continued.

Date of Casualty.	Name of Ship.	Age of Ship.	Port of Registry.	How Rigged. Iron or Wood. Steam or Sail.	Register Tonnage.	Port Sailed from. Port Bound to.	Place where Casualty happened.	Cause and Nature of Casualty.	Lives lost.	Remarks.
1899.		Yrs								\$
Jan. 29	Jersey Lily	13	Shelburne, N.S.	Schr., wood, sail.	96-43	Lockeport, N.S., to Halifax, N.S.	20 miles from Scatarie Island, N.S.	Foundered in heavy weather.		Total loss, 2,800
Jan. 20	Josaphine	10	(American)	Steamer	617	Buffalo, U.S., to Shelburne, N.S.	Yarmouth Harb., N.S.	Swung on the rocks.		Total, 34,000
Sept. 11	J. V. Troop	20	St. John, N.B.	Ship, wood, sailing.	1295	Baban, Philippine Isl'd to Liverpool.	Banco Island, China Sea	Gale and shallow water.		Partial loss; amt. of damage not reported.
1899.										
June 11	Juventa	23	Lunenburg, N.S.	Schr., wood, sail.	32	Whitehead, N.S., to Halifax	7 miles from Liscombe Light.	Struck a submerged object which caused a leak.		Total loss, 400
July 15	L. C. Haley	7	Yarmouth, N.S.	Schr., wood, sail.	43	Halifax to Yarmouth.	Coast of Nova Scotia, Canada.	Stranded.		" 1,000
April 8	Loanda	19	Windsor, N.S.	"	1447	Cardiff to Hong Kong.		Supposed to have struck a sunken wreck.		Partial loss 1,500
Aug. 25	L. M. Smith	15	"	Bktn., wood, sail.	379	Miragoane to New York	White Cay, Bahamas.	Ran ashore.		Total loss 9,000
June 20	Livonian		Glasgow	Schr., steel, steamer.	2635	London to Montreal	Red Island Reef, River St. Lawrence.	Stranded in a fog.		Partial loss, amount of damage not reported.
	Lobelia		West pool.	Schooner, iron, steam.	1,913	New Castle to Montreal	Gulf of St. Lawrence, Canada.	Foundered.		Trifling loss.
Oct. 1	Lakota	2	Parrsboro', N.S.	Schr., wood, sail.	124	Black River, Jamaica, to City Point.	Gulf of Mexico.	Supposed to have capsized.	6	Total loss, 6,000
Nov. 27	Levuka	5	"	"	76	Parrsboro' to Perry Maine, U.S.	Gleason's Cove, Perry River, Maine, U.S.	Dragged anchors and went ashore in the big gale of Nov. 27, 1898.		Total loss, 2,500
"	Lena Maud	5	St. John, N.B.	"	98	St. John, N.B., to Boston, Mass.	Head gear lost near Portland, Nor. Atl.	Heavy weather carried away head-gear and did other damage.		Partial loss, 125
"	Lima	27	(Russian)	Bktn., wood, sail.	970	Loading deals at Bay Verte, N.S.	Bay Bay Verte Reef.	Stuck on a reef.		Partial loss, 2,000

WRECKS AND CASUALTIES.

SESSIONAL PAPER No. 11b

Dec. 27	Leonard B	7	Parrsboro', N.S. (British)	Schr., wood, sail.	121	New York to Wolfville, N.S. Sydney, N.S., to Char- lottetown, P.E.I.	Vineyard Haven, U.S. Cape George, N.S.	Collision Ran ashore.	Partial loss, Total loss, amount of loss not re- ported.	1,200
1899.	"	"	"	"	"	"	"	"	"	"
Jan. 14	Leader	3	Lunenburg	"	97-45	Lunenburg to Placentia Bay, Nfld.	Supposed to be near Beaver Hbr., N.S.	Supposed to have cap- sized in a squall or caught on reefs.	Total loss, Cargo, 2,000	4,000
May 10	Lady Speedwell	17	Halifax, N.S.	"	55-61	Pictou, N.S., to Chat- ham, N.B.	1½ miles from Cape Journmain, Lt.	Stranded in thick and foggy weather.	Total loss, 1,000	1,000
July 23	Lizzie M	22	"	"	37	Halifax to Canso	"	Filled and sank.	Total loss, amount of loss not re- ported.	"
1897.	"	"	"	"	"	"	"	"	"	"
Oct. 19	Marie Sarah	"	Quebec	"	"	"	River du Loup, River St. Lawrence.	"	Total loss, amount of loss not re- ported.	"
1898.	"	"	"	"	"	"	"	"	"	"
Aug. 6	Melinda	16	Parrsboro', N.S.	Schr., wood, sail.	88	Parrsboro to Yarmouth	Cape St. Mary, N.S.	Stranded.	Partial loss, 600	600
1898.	"	"	"	"	"	"	"	"	"	"
Sept. 19	Maggie Smith	18	Lunenburg, N.S.	"	82-59	Pictou, N.S., to Syd- ney, C.B.	Syd-Off Harbour Bouche, N.S.	Stranding.	Partial loss.	"
1898.	"	"	"	"	"	"	"	"	"	"
Sept. 30	Manauence	23	Liverpool, Eng.	Schooner, iron, steam.	1672	Vancouver to Wrangle, Alaska.	Wrangle Narrows, Alaska.	Casualty caused by strong tide.	Partial loss, amount of casualty not reported.	"
July 8	Milwaukee	1½	"	Schr., steel, steamer.	4755	London to Montreal to London.	Richelieu Rapids, St. Lawrence River, Que.	Low water.	Partial loss, amount of damage not re- ported.	1,600
Oct. —	M. E. Jackson	"	Sydney, N.S.	Sailing	"	Sydney to Chatham	Buctouche Beach	Stranded.	Total loss, 1,600	1,600
Nov. 23	Mistletoe	23	St. John, N.B.	Bark, wood, sail.	787	New York to Ship Is- land.	Barbadoes	Stranded	Total loss, 8,000	8,000
Feb. —	May Flower	8	Lunenburg, N.S.	Schr., wood, steamer.	2-99	Lockeport	South Coast of U.S.	Stranded.	Total loss, Cargo, 20	700
Dec. —	Margaret J.	1½	Halifax, N.S.	Schr., wood, sail.	56	Sydney, C.B., to Wine Harbour.	Wedge Island.	"	Total loss, 1,800	1,800
"	Mariner	"	(American)	"	78	Fishing.	Sable Island.	"	Total loss, amount of loss not re- ported.	"
1899.	"	"	"	"	"	"	"	"	"	"
May 13	Matilda Hopewell	39	Sydney, N.S.	"	89	Sydney to Halifax	Black Rock entrance to Great Bras d'Or, N.S.	Stranded in thick fog and strong tide.	Total loss, 1,000	1,000
Feb. 16	Mary P	15	Charlottetown P.E.I.	"	144	Barbadoes	Caribbean Sea	Struck on a reef, causing vessel to leak badly. Abandoned.	Total loss, amount of loss not re- ported.	"

STATEMENT OF Wrecks and Casualties reported as having occurred to British, Canadian and Foreign Sea-going Vessels in Canadian Waters, &c.—Continued.

Date of Casualty.	Name of Ship.	Age of Ship.	Port of Registry.	How Rigg'd. Iron or Wood. Steam or Sail.	Register Tonnage.	Port sailed from. Port bound to.	Place where Casualty happened.	Cause and Nature of Casualty.	Lives lost.	Remarks.
1899.		Yrs								\$
Feb. 11	Melbourne	6	Yarmouth, N.S.	Schr., wood sail.	170	Macoris to New York.	North Atlantic.	Heavy gales		Partial loss, 100
" 18	Myrtle Purdy	15	St. John, N.B.	"	85	River Herbert to Parrsboro, N.S.	Mouth of Anzac River, Cumberland Bay.	Wind died away and vessel caught on bank and filled with water.		Partial loss, 200
1898.										
Sept. 16	Nevada	4	Lunenburg, N.S.	"	135	Lunenburg to Lunenburg to Ponce, P. Rico.	North Atlantic Ocean.	Foundered		Total loss 5,000
May 8	Nyanza	7½	"	"	116-13	Lunenburg to Magdalen Islands.	2 miles south of Entry Island, Magdalen Islands, G. St. Lawrence	Struck the ice and foundered.		Total loss, 5,000 Cargo 3,000
Aug. 17	Newburgh	10	Windsor, N.S.	"	505	New York to Windsor, N.S.	North side of Briar Island, Bay of Fundy.	Went ashore.		Partial loss 2,700
Nov. 27	Nellie Doc	31	St. John, N.B.	"	110	Harvey, N.B., to New York.	East side of Vineyard Haven, Mass.	Stranded in heavy gale of Nov. 27, 1898.		Total loss, 2,000 Cargo, 800
" 12	Norka	2	Lunenburg, N.S.	"	153-71	Lunenburg to Ponce, P. Rico.	140 miles S.E. of Bermuda, N. Atlantic.	Sprung a leak.		Partial loss, 147
" 27	Narcissus	15	"	"	98-93	Boston to Shelburne.	At sea.	Foundered		Total loss, 4,000 Cargo, 3,000
1899.										
July 19	Nancy Anna	39	Parrsboro, N.S.	"	35	Diligent River, N.S., to West Bay, N.S.	Salter's Point, Diligent River, Minas Gut, N.S.	Grounded on the rocks at mouth of river and afterwards drifted off.		Partial loss, 1,700
Sept. 22	Oliver Eldridge	28	Gloucester, U.S.	"	48	Gloucester, U.S., to Lunenburg, N.S., to Gloucester, U.S.	St. Peter's Island, N.S.	"		Total loss, 2,000
Nov. 30	Olivette	21	St. John, N.B.	Wood'n steamer.	201	Vessel was laid up for repairs at St. John, N.B.	Hilyard's Blocks, St. John, N.B., North End.	Fire		" 7,700
1899.										
Jan. 7	Orion	14	Charlottetown, P. E. I.	Schr., wood sail.	77-72	St. Pierre to Souris, P. E. I.	On bar in Lunenburg Harbour, N.S.	Stranded		Total loss, amount of loss not reported.

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" 8 Orion.....	10	"	"	77-72	"	"	"	Cape Breton coast, Louisburg Light, N.S.	Stranded; broke main and fore boom.	Total loss, 1,000 Cargo, 75
1898. Nov. 27 Pefetta	8	Windsor, N.S.	"	124	St. John, N.B., to Bridgeport.	"	"	Vineyard Sound, U.S.	Run into during the gale of Nov. 27, 1898.	Partial loss, 500
Dec. 16 Parisian		Lunenburg, N.S.	"	107	Sydney to Halifax.....	"	"	300 yds. from White Head Light.	Stranded.....	2 Total loss, amount of loss not reported. 6,000 Cargo, 4,600
Sept. 27 Pioneer	19	Victoria, B.C.	"	66	Victoria, B.C.....	"	"	North Pacific.....	Vessel has not been heard of since sailing.	Total loss, 3,000 Cargo, 1,000
1899. Feb. 1 Pefetta	9	Windsor, N.S.	"	135	New York to St. John.	"	"	Petit Manan Reef, Maine, about half a mile from Lighthouse.	Stranded.....	Total loss, 3,000 Cargo, 1,000
1898. Dec. 16 Parisian	16	Lunenburg, N.S.	"	107	Louisburg, C.B., to Halifax, N.S.	"	"	Whitehead, N.S.....	"	2 Total loss, amount of loss not reported.
1899. Feb. 8 Potance	4½	Liverpool, N.S.	"	231	St. John, Nfld., to Pernambuco.	"	"	North Atlantic.....	Damaged in a hurricane.	Partial loss, amount of damage not reported.
May 5 Persia	12½	Windsor, N.S.	Bktn., wood, sailing.	578	Antigua, W.I., to New York.	"	"	North Atlantic, Lat. 24° 30', long. 70° 20'.	Struck by a whirlwind.....	Partial loss, amount of damage not reported.
Sept. 25 Prince Rupert...	5	London.....	Schr., steel, steam.	620	Digby Light, Bay of Fundy.	"	"	"	Struck a submerged log, carrying away one of the floats and other damage.	Partial loss, 1,000
April 24 Prince Rupert..	5	"	"	620	St. John, N.B., to Digby, N.B.	"	"	Near Digby Light, Bay of Fundy.	Struck a submerged log.....	" 9,000
" 12 Pioneer	23	Arichat, N.S.	Schr., wood, sail.	32	Ship laid up for winter.	"	"	Pinette Harbour, P.E.I.	Heavy drifting ice caused schooner to drag and finally sank.	Total loss, 300
1898. July 15 Repton	4	London ..	Bktn., steel, steam.	1882	Shields to Fleetwood.	"	"	In the Miramichi River, N.B.	Collided with the steamer <i>Canacuz</i> .	Partial, 500
" 4 R. L. T.		Lunenburg, N.S.	"		Boston to Savannah.....	"	"	"	Foundered in collision with ss. <i>Chemskt</i> .	Trifling damage.
Sept. 8 Rossland	1	Vancouver, B.C.	Wood, steam.	531-50	Arrowhead, B.C., to Roseton, B.C.	"	"	Lower Arrow Lake, B.C.	Collision.....	Partial loss, 250
Nov. 27 Rebecca W	17	Windsor, N.S.	Schr., wood, sail.	115	Shuice, N.S., to Barba- does, B.W.I.	"	"	6 miles south-east from Apple River Light, N.S., Bay of Fundy.	Heavy weather.....	Total loss, 1,500 Cargo, 13,850
" 27 Rondo	16	St. John, N.B.	"	123	St. John, N.B., to Fall River, Mass.	"	"	Vineyard Haven, Mass., U.S.	Collision, caused by the gale of Nov. 27, 1898.	Partial loss, 500
" 26 Robert Ewing..	6	Parrsboro', N.S.	Bktn., wood, sail.	422	New York, U.S., to Halifax, N.S.	"	"	Vineyard Sound, U.S.	Dragged anchors in the gale of Nov. 27, 1898.	Total loss, amount of loss not reported.
" 27 Renfrew.....		Halifax, N.S.	"	41-99	"	"	"	Hart's Island, Canso, N.S.	"	

STATEMENT of Wrecks and Casualties reported as having occurred to British, Canadian and Foreign Sea-going Vessels in Canadian Waters, &c.—Continued.

Date of Casualty.	Name of Ship.	Age of Ship.	Port of Registry.	How Rigged. Iron or Wood. Steam or Sail.	Register Tonnage.	Port sailed from. Port bound to.	Place where Casualty happened.	Cause and Nature of Casualty.	Lives lost.	Remarks.
1899.		Yrs								\$
Mar. 8	Roy	13	St. John, N.B.	Schr., wood, sail.	90	St. John, N.B., to Boston, Mass.	Near Thatcher's Island, North Atlantic.	Heavy gale.		Total loss, 1,000 Cargo, 1,145
1898.										
Mar. —	R. Carson	11	"	"	99	Loading at St. John, Boston.	Gardner's Creek, John.	St. Stranded		Partial loss, 2,000 Cargo, 420
1899.										
Jan. 25	Ranona	9	Charlottetown P.E.I.	Bktn., wood.	404	Savannah to Queens town, Ire.	At sea.	Rough weather.		Partial loss, amount of loss not reported.
Mar. 21	R. Marrow	16	Maitland, N.S.	Barque, wood, sailing.	1156	Pensacola, Fla., to Buenos Ayres.	River Plate, S.A.	Grounded on the Ortez Bank.		Partial loss, amount of damage not reported.
Sept. 7	Rewena	17	Truro, N.S.	Schr., wood, sail.	38	Minasville to West Bay, Parrsboro'.	Minasville River, Minas Basin, N.S.	Damaged at mouth of Minasville River by running against a raft.		Partial loss, 100
1898.										
June —	Shemandoah	6	Annapolis, N.S.	"	198	New York	Chesapeake Bay, U.S.	Burnt.		Total amount of loss not reported.
Aug. 10	Stadacona	13	Parrsboro', N.S.	Bk., wood, sail	1011	Philadelphia to Cape Town.	Atlantic Ocean	Big gale.		Partial loss, 200
Sept. 4	Stella Maud	7	St. John, N.B.	Schr., wood, sail.	98	Hartford to St. John, N.B.	Point Jude, Rhode Island.	Thick fog		" 125
" 10	Spring Bird	29	Halifax, N.S.	"	92	Pugwash, N.S., to Margaree, N.S.	Margaree Harbour, N.S.	Rough weather.		Total loss, 200
Oct. 17	Sunshine		Windsor, N.S.	Schooner	86	Wolville, N.S.	to 4 mile from Light House, N.S.	Baccaro Strauted.		Total loss, amount of loss not reported.
Aug. 24	Silver Cloud	18	Digby, N.S.	Schr., wood, sail.	45	St. John, N.B., to Digby, N.S.	Partridge Island, Bay of Fundy.	Collision in thick fog		Partial loss, 400 Cargo, 1,000
Oct. 2	Syanara	14	Bridgetown, Barbadoes.	"	299	Savannah to St. John, N.B.	Quarantine Station, Savannah, Georgia, U.S.	Driven ashore by hurricane.		Partial loss, 3,000

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Date	Name of Vessel	Country	Material	Tonnage	Origin	Destination	Cause of Wreck	Persons on Board	Partial loss, amount of damage not reported.
Nov. 27	Spinaway	British	Bktn., wood, sail.	325	North Sydney to Vancouver	Spencer's Island, N.S.	Sprang leak in heavy gales.	2	Partial loss, amount of damage not reported.
" 14	Sabrian	St. John, N.B.	Schr., wood, sail.	111	North Sydney to Vancouver	Spencer's Island, N.S.	Damaged in collision, caused by strong current.	600	Partial loss, 600
" 3	Stikine Chief	Vancouver, B.C.	Wood, steam.	119	to St. Michaels.	Alaskan waters, North Pacific.	Parted chains while being towed.	3,000	Total loss, amount of loss not reported.
Dec. 9	Saxon	St. John, N.B.	Schr., wood, sail.	19	Wallace, N.S., to Boston, U.S.	Green Island, near Cape Sable Island.	Missed while attempting to work up into Clark's Harbour and went on shore on Green Island before the anchor could be got ready.	500	Partial loss, amount of damage not reported.
"	Sarah E. Ellis	"	"	21	Hall's Harbour	Apple River, N.S.	Parted cables and stranded.	500	Partial loss, amount of damage not reported.
Nov. 27	Success	Halifax, N.S.	"	296	Halifax, N.S.	Halifax Harbour, N.S.	Stress of weather and thick snow storm.	500	Partial loss, 500
" 25	Salina	Parrsboro', N.S.	Barque, wood, sail.	60	Philadelphia to Sagua, Cuba.	Entrance of Sagua, Cuba.	Casualty caused by buoys being taken up and not replaced.	90	Cargo, 90
Dec. 7	Surprise	"	Schr., wood, sail.	120	Parrsboro', N.S., to Hillsboro', N.B.	Parrsboro' River, middle ground Basin of Minas, N.S.	Stranded.	500	Total loss, 500
Nov. 27	Seraphine	Digby, N.S.	"	498	Clements Port, N.S., to Boston, U.S.	U.S. Coast, Newfound-land.	Chains parted and vessel drifted on shore.	2,500	Serious casualty, supposed to be a total loss.
"	Scottish King	London, Eng.	Steamer, steel.	111	Antwerp to Boston	Seals Cove, Newfound-land.	Stranded	360	Total loss, 360
1899.									
Jan. 2	Saborina	St. John, N.B.	Schr., wood, sail.	79	Cheverie to Weymouth States coast (Maine).	Eastern side of Fisher's Island, United States coast (Maine).	"	100	Partial loss, 100
Feb. 15	Susan Annie	Parrsboro', N.S.	"	90	North Head to Parrsboro', N.S.	Off Isle Haute, Bay of Fundy, N.S.	Caught in the ice.	150	"
Mar. 28	Sam Slick	Windsor, N.S.	"	9	St. John, to Spencer's Island, N.S.	Bay of Fundy	"	100	"
May 4	Silver Spray	Parrsboro', N.S.	"	446	West Bay to Ports down the Bay.	Off Isle Haute, Bay of Fundy.	Capsized in a squall.	amount of damage not reported.	2,000
Feb. 14	Severn	Windsor, N.S.	"	438	Sabane la Mar to New York.	Entrance to Havana, Cuba.	Not enough sea room.	1,300	Cargo, 1,300
"	Siddartha	Sackville, N.B.	Barque, wood, sail.	41-46	Jacksonville, Florida, Liverpool.	At sea	Rough weather and sea caused the vessel to spring a leak.	180	Total loss, amount of loss not reported.
May 28	Samoa	Lunenburg, N.S.	Schr., wood, sail.	41-46	Lunenburg to George- town, N.S.	Coast of Guysboro' Co., N.S.	Strong tide and wind.	2,000	Total loss, 2,000
July 30	Sea Nymph	Halifax, N.S.	"	41-46	North Sydney to St. Pierre.	St. 3 miles off Low Point, C. Breton coast, N.S.	Sprang a leak and foundered.	1,700	Total loss, 1,700

STATEMENT of Wrecks and Casualties reported as having occurred to British, Canadian and Foreign Sea-going Vessels in Canadian Waters, &c.—Continued.

Date of Casualty.	Name of Ship.	Age of Ship.	Port of Registry.	How Rigged. — Iron or Wood. — Steam or Sail.	Register Tonnage.	Port sailed from. — Port bound to.	Place where Casualty happened.	Cause and Nature of Casualty.	Lives lost.	Remarks.
1898.		Yrs								\$
Mar. 21	Springwood	2	Shelburne, N.S.	"	98	Boston, U. S. A., to Lockeport, N.S.	Lower Middle Shoal, Boston Hbr., U.S.	Grounded and sprang a leak.		Partial loss, amount of damage not reported.
Sept. 15	Sarah F.	13	Parrsboro', N.S.	"	89	Parrsboro', N.S., to Seal Island, N.S.	Off Green Island, Yarmouth, N.S.	Sprang a leak and foundered.		Total loss, 1,200 Partial loss of cargo, 450 Partial loss, 500
"	Sebago	14	Portland, Me.	"	254	Hillsboro', N.B., to Newark, N.J., U.S.	Near Musquash, Light Bay of Fundy, N.B.	Collision; was run into by another vessel, the <i>Vineyard</i> , through carelessness on the part of the <i>Vineyard</i> .		Total loss, 500
"	S. G. Irwin		Arichat, N.S.	"	98	Louisburg to Yarmouth	South shore, N.S.	Sprang a leak and foundered.		Partial loss, 200
"	Sea Bird	31	St. John, N.B.	"	80	St. John, N.B., Rockland, Me.	Coast of Maine, U.S.A.	Ran into by the <i>Marie Delphine</i> .		Partial loss, 3,000
1898.										
July 13	Treasurer	14	Parrsboro', N.S.	Ship, wood, sail.	1386	Loilo to New York	Off Hatteras, Atlantic Ocean.	Heavy sea and gale.		200
Oct. 9	Temperance Bell	28	St. John, N.B.	Schr., wood, sail	91	Boston to St. John	Quoddy Id., North Atlantic.	Collision		Trifling loss.
Nov. . . .	Turrent Chief	2	Newcastle	Steamer, steel.	1192	Quebec	St. Lawrence River, near Quebec.	Stranded.		Partial loss, 1,000 Cargo, 125
"	Tay	11	St. John, N.B.	Schr., wood, sail.	125	St. John, N.B., to New York.	Vineyard Haven, Mass., U.S.A.	Damaged in collision in the storm of Nov. 27, 1898.		Partial loss, amount of damage not reported.
April 21	Tees	6	Victoria, B.C.	Schr., steel, steam.	6	Victoria to Skagway, Alaska.	McLaughlin Bay, B.C.	Stranded.		Partial loss, 2,500
1899.										
Mar. 24	Tees	6	"	Schr., iron, steam.	569	"	Seaforth Channel, B.C.	Stranded on the rocks through error of mate in giving orders.		

WRECKS AND CASUALTIES.

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Feb. 6	Theodore H. Rand	21	Parrsboro', N.S.	Ship, wood, sail.	1198	Mobile to Havre, France.	At sea, Atlantic Ocean	Struck by heavy seas	"	5,000
July 19	True	35	Sackville, N.B.	Schr., wood, sail.	61	Parrsboro', N.S., to Hopewell, N.B.	Off Cape Split, Minas Gut, Bay of Fundy.	Struck by a squall.	"	100
1898.										
June 14	Unanima	30	St. John, N.B.	Barque, wood, sail.	747	New York to Pernambuco.	Gulf Stream.	Heavy gales	"	700
Oct. 16	Uranos	25	Norway	Bk., wood, sail	474	Porsgrund to Garston old Docks.	Albright Island, Magdalen Island.	Fog and current	Cargo, 100 Total loss, 8,000	
April 24	Ulunda	13	Halifax, N.S.	Schr., iron, steam.	1096	Halifax, N.S., to Johns, Nfld.	Halifax Harbour, N.S.	Stranded.	Partial loss, amount of damage not reported.	
Feb. 19	Venture	10	Victoria, B.C.	Schr., wood, sail	48	Victoria, B.C., to sailing grounds.	Vancouver Island, B.C.	Dragged her anchors and stranded.	Partial loss, 1,000	
Nov. 9	Vado	9	St. John, N.B.	" " " "	99	Boston, Mass., to Bangor, U.S.	Chunn Cap Island, Me.	Stranded	Total loss, 3,000	
" 27	Vera B. Roberts.	new	Parrsboro', N.S.	" " " "	124	Loading at Pereaux wharf, N.S.		Damaged in gale	Partial loss, 159	
Dec. 14	Vamoose	7	St. John, N.B.	" " " "	319	Sydney, N.S., to St. John, N.B.	Mouth of Long Island Sound, U.S.A.	Error in the navigation of the vessel.	Total loss, 1,500 Cargo, 1,487	
June 23	Victorian	new	Victoria, B.C.	Wood, steam.	716	Victoria to St. Michaels, Alaska.	Hot Springs Bay, 117 from Wrangle.	Stranded	Partial loss, 600	
" " " "	Vinton	8	Weymouth, N.S.	Schr., wood, sail.	94		Bay of Fundy.		Total loss, amount of loss not reported.	6
Nov. " "	Vanilla	15	Lunenburg, N.S.	" " " "	96	Yarmouth to Louisburg	At sea	Foundered in gale of Nov. 27, 1898.	Total loss, amount of loss not reported.	4
Aug. 9	Wellman Hall	6	Parrsboro', N.S.	" " " "	136	New York to Newfoundland.	New York Harbour.	Collided with a tug which was being towed.	Partial loss 800	
Sept. 27	Walter Miller	8	St. John, N.B.	" " " "	124	New York, U.S., to St. John, N.B.	30 miles from Monhagan, Me., U.S.	Heavy gale	" 250	
Nov. 2	Westmeath	3	Sunderland	Schr., steel, steam.	4,485	Hamburg to Montreal.	North Atlantic, abandoned.	Heavy gales	Total loss	1
Dec. 5	Wm. H. Stevens.	"	American	Prop'r, wood, steam.	"	Duluth to Buffalo	Near Bois Blanc Island, Ont.	Damaged in a big snow-storm.	Partial loss, 200	
1899.										
Jan. 2	Willie D.	2	Parrsboro', N.S.	Schr., wood, sail.	98	Parrsboro', N.S., to Calais, Me.	Bay of Fundy shore	Went ashore	Total loss, amount of loss not reported.	
July 1	Wendell Burpee.	10	St. John, N.B.	" " " "	99	Fredericton, N.B., to Salem, Mass.	Partridge Island, St. John Harbour, N.B.	Collision	Partial loss, 800	
1898.										
Sept. 22	Zina, M.	18	Parrsboro', N.S.	" " " "	70	Parrsboro', N.S.	Island Reef, Grindstone Island.	Heavy gale.	Partial loss, 2,500 Cargo, 400	1

STATEMENT of Wrecks and Casualties reported as having occurred to Canadian Inland Vessels and to other Vessels in the Inland Waters of Canada, during the twelve months ended June 30, 1899.

Date of Casualty.	Name of Ship.	Age of Ship.	Port of Registry.	How Rigged. Iron or Wood. Steam or Sail.	Register Tonnage.	Port Sailed from. Port Bound to.	Place where Casualty happened.	Cause and Nature of Casualty.	Lives lost.	Remarks.
1898.		Y'rs								
Oct. 23	Hector	3	Montreal, Q.	Barge	539	Kingston, Ont., to Charlotte to Kings- ton, Ont.	Near Nicholson's Is- land, Lake Ontario, on Prince Edward Coast shore.	Driven on shore by wind.		Partial loss, 2,000
Sept. 17	J. H. Jones	10	Goderich, Ont.	Prop'l'r, wood, steamer.	98	Warton	Upper Georgian Bay, Lake Huron.	Collided with Str. Pacific		Partial loss, amt. of damage not reported.
Oct. 22	James A. Walker	11	Kingston, Ont.	Steamer, wood.	98	Kingston, Ont., to Charlotte to Kings- ton, Ont.	100 yards from Nichol- son's Island, Lake Ontario.	Foundered.		Total loss, amount of loss not report- ed.
"	Kildonan	10	Montreal, Que.	Barge	499	"	Near Nicholson's Is- land, Lake Ontario.	Blown on shore		Partial loss, 2,000
1899.										
Sept. . .	Lingar	17	St. Catharines, Ont.	Wood, sailing vessel.	384	Buffalo to Depot Har- bour, Georgian Bay.	65 miles north of God- erich, Lake Huron.	Nature of casualty not reported.		Extent of loss not reported.
Aug. 9	Ontario		Sarnia, Ont.	Steamer		Sarnia to Nepigon	East point of Battle- Island, Lake Superior	"		Total loss, 7,000
1898.										
Sept. 17	Pacific	15	Owen Sound, Ont.	Wood, steam	624	Collingwood to Sault Ste. Marie.	Upper Georgian Bay, Lake Huron.	Collided with Str. J. H. Jones.		Partial loss, 50
Nov. 3	Pacific	15	"	Schr., wood, steamer.	624	"	G. T. R. dock, Colling- wood, Ont.	Destroyed by fire		Total loss, 30,000
Nov. 15	Princess Louise	20	Kington, Ont.	Wood, steamer	94	Kingston to St. John's to Lacolle.	At wharf, Lacolle, P. Q.	Fire		" 3,500
1898.										
Oct. 27	P. C. Minch.		Chicago, U.S.	Steamer, wood			Tecumseh Bay, Cove Island.	Driven ashore in a gale.		Total loss, amount of loss not report- ed.
1899.										
Oct. . .	Red River	17	Winnipeg, M.	Wood, stean	113 20	Selkirk	Little George's Island, Lake Winnipeg.			Partial loss, 10,000

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1898. Nov. 13	Sophy	3	Kingston, Ont	Steamer, wood	17.50	Laid up for the winter in Kingston Harbour	Laid up for winter in Kingston Harbour. Total loss,	5,500
1899. Aug. 26	S. L. Tilley	18	St. Catharines, Ont.	Steam	769	Kingston, Ont., to Cleveland, Ohio.	9 miles from Fairport, Lake Erie.	..... Cargo,	46,000 200
"	5 Tramp	4	Peterboro, Ont	Steamer, wood	1.70	At anchors	McCracken's Landing, Story Lake, Ont.	..... Total loss,	500