

19  19  
**BRITISH COLUMBIA**

**A Complete Guide to the Province**  
Combined with a  
**Faithful Record of Conditions**  
**at the Beginning of 1920**  
and Embodying  
**Comparisons with Previous Years**



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## Foreword

***B**RITISH COLUMBIA is frequently quoted as the richest in natural resources of all the provinces of the Dominion Confederation. Certain it is this province possesses the greatest variety of natural resources.*

*And it is in the development of these great natural riches that the future of British Columbia is assured, for development is bound to come, because the world needs the materials.*

*Already great strides have been made in the utilization of the stores of mineral, fish, timber and agricultural resources of the province, but although much has been done, and some fine records made, no one source of wealth has been really tapped—hardly more than scratched.*

*All that is needed is that capital should continue with labor in an intelligent endeavor to utilize these great stores of raw materials as the basis of many important industries. In that way British Columbia may become a great industrial province, and one of the wealthiest communities in the Empire.*

*In these pages we shall endeavor to give a glimpse of British Columbia's natural riches, what has already been done in the way of development, and the future possibilities of the province.*



# British Columbia 1919-20



A DESCRIPTIVE, PICTORIAL and STATISTICAL RECORD of the growth and development of the most western Canadian province, furnishing a reliable guide to investors and those who may contemplate forming business or other connections either within or without the province.

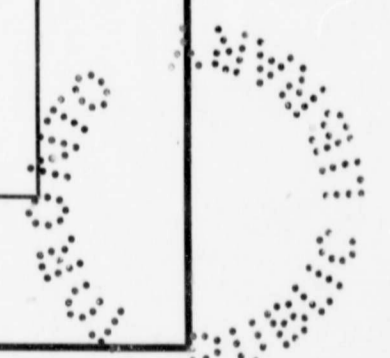
A synopsis of the contents are translated into the following languages:

French	Russian	Japanese
Spanish	Italian	Chinese

Vancouver, British Columbia, Canada

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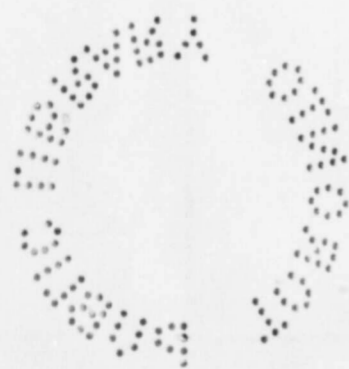
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# Brief History of British Columbia

THE reason why British Columbia's wide fertile areas were the last to be discovered by the daring navigators who opened up commerce on the Great Pacific Coast line was the vast sea distance of more than 15,000 miles from Great Britain, as will be seen by a glance over the map on the next page.

Its alleged earlier discovery by Spanish claimants of the Juan de Fuca type may be ignored, as its real history from the white man's and British standpoint began with the famous voyage of that "terrible man to the King of Spain" during the years 1577-9, the daring navigator, Sir Francis Drake, who was deservedly knighted for that feat by Queen Elizabeth.

Drake, who said that he "hated nothing so much as idleness," sailed his good ship, the "Golden Hind," from England in 1577 along the 15,000 miles course through the Straits of Magellan, with 60 men, and landed on the West Coast, which he named "New Albion"—then extending from California to Alaska—on his voyage as the first Englishman to circumnavigate the world.

## BEGINNING OF THE FUR TRADE

The next historic event dominating the history of British Columbia was the prolonged visit of that greatest of navigators, Captain Cook, who sailed up the North Pacific Coast in 1778 and traded with the native Coast Indians, whose confidence he so admirably won that trade and information became practicable along the Coast, where he began the Fur Trade when he explored and charted Nootka Sound and other areas.

The publication in England of Captain Cook's Fur Trading with the Indians at Nootka stimulated English merchants and adventurers, who were the first in the field, and for several years later held monopoly of the fur trade that enabled England to establish British rights to ownership of British Columbia.

It is significant of Captain Cook's colonizing ability and discernment that his previous voyage had been to New Zealand, carrying goats, sheep and pigs for future settlers there. Unfortunately during his next voyage Captain Cook was killed by the South Pacific Islanders, and thus prevented from bringing a similar nucleus of domesticated animals to facilitate the settlement of this new country, which, until then, was regarded as inaccessible mountain territory beyond limited areas along the coast.

Three of Captain Cook's lieutenants were engaged by the King George's Sound Company to develop the new fur trade, but the Spaniards sought to reclaim it by sending naval ships to Nootka, where meantime Meares was fur-trading and negotiating exclusive trading treaties with native chiefs by means of two ships, and there building another named the "North-West America"—the first ship built on the Coast.

The commercial success of Meares and his trade associates in England, China and the East Indies roused the envy of the Spanish traders, who joined with certain American Coast traders in a conspiracy to oust Meares and his men from their Nootka and other Coast settlements.

During the absence of Meares' ships, two American Traders' ships sailed into Nootka harbour followed by a third and the Spanish Ship-of-War "Princessa," mounting 26 cannons.

On the 4th of May, 1788, the Spanish Commander dropped disguise and notified the Captain of Meares' returned ship that he had orders from Madrid to seize all ships found up the Coast. The British crews and ships were seized as they returned singly, and the Spaniards announced Spanish sovereignty over all America from Cape Horn, in Patagonia, to Alaska.

Then this Coast became a "test case," as France supported Spain's claims. The British Government insisted upon the captured vessels being restored and the owners indemnified. Spain refused until war seemed impending, but finally after protracted negotiations, the Spaniards were reluctantly compelled to restore all property. The British agreed neither to navigate nor fish within 10 miles of Spanish settlements, and in the end the British flag was permanently raised over Nootka in 1794.

After Captain Cook's massacre, Captain George Vancouver was instructed by the British Government to take charge of and explore this diversified coast. Vancouver Island and the surrounding coast territories were mostly surveyed for nautical purposes and named by him during the years 1792-4.

## SIR ALEXANDER MACKENZIE'S OVERLAND DISCOVERIES

While Vancouver was exploring the Coast inlets, sounds, islands, etc., Sir Alexander Mackenzie, then a partner in the North West Fur Company, became fired with the ambition to discover an overland route from the Great Lakes of Eastern Canada to the Pacific Ocean.

Leaving the East in October, 1792, and wintering at Fort Fork, he started with 7 men in May, 1793, to track across what is now Central British Columbia, aided by two Indians.

After overcoming unprecedented difficulties, Mackenzie and his men arrived at Dean's Channel (that northerly inlet of the Pacific Ocean above Bella Coola, on the coast between the Queen Charlottes and Vancouver Island), where he inscribed on the rock upon which they rested while defending themselves from the Indians, these words:

"Alexander Mackenzie, from Canada by land, the Twenty-second of July, one Thousand Seven Hundred and Ninety-three."

Alexander Mackenzie was later knighted for his achievement, which disclosed to the Canadian and British people a vastly larger view of the valuable territory they have since been able to occupy across the prairies and British Columbia.

He discovered the practical "North West Passage" by land, and by the publication of his Journal attracted the British people through their fur companies to send pioneers through the vast area of Western Canada, where the efforts of commerce and intercourse with native Indians had previously been limited to the narrow strip of the British Columbia coastline.

Among the leading pioneers who followed up Mackenzie's discoveries we have only space to merely name David Thompson (a London Blue Coat boy), promoted to supervise the Western

Agencies of the North West Fur Company, who thrice crossed to the west of the Rockies, by the Kootenays, Howe Pass and Kicking Horse Pass, to Fort Kamloops, along the Thompson River, named after him.

He was followed by the boldy resolute Simon Fraser (after whom the great Fraser River was named), who crossed the Rockies by the Northern Peace River Pass in the spring of 1806.

With 19 voyageurs and two Indians, in four canoes, he hazarded the dangerous trip down the Fraser canyons and rapids, via what is now Fort George and Lillooet, down to the outlet of the Fraser into the Straits of Georgia, near the present Vancouver City.

Lack of space forbids more than passing reference to the rivalries between the American (X. Y.) Co. and the British (Hudson's Bay) Company, until they culminated in the Red River fight in the year 1816, when 21 out of the 28 Hudson's Bay men were killed. That forced amalgamation in 1821, after negotiations led to the convention of 1818 between the United States and Great Britain, equitably dividing between the two nations trading rights west of the Rockies, between California and Alaska, but without definite location of the International Boundary.

In 1838 the Hudson's Bay Company acquired from the British Government absolute power over the whole of the British territory west of the Rocky Mountains. Their wisely organized service and considerate treatment of the natives won the confidence of the Indians. A central trading station was established with an extensive farming settlement, consisting of farm and store employees and settlers, mostly from Scotland, who developed the area upon which Victoria City has been built.

The rush of gold miners in 1849 to California led adventurous miners to search for gold in British Columbia, up the Fraser River, etc.

Many of these, with other British settlers who followed, composed the pioneers and prospectors, who with the Hudson's Bay employees constituted the white inhabitants of British Columbia, until Vancouver Island was established as a Crown Colony under the first Governor, Richard Blanshard, in 1850.

In 1856 the first elected Assembly met to legislate local enactments, mainly directed to enforce law and order amongst the increasing numbers of gold miners and prospectors, together with the affairs of the Indians, who were assuming an unfavorable attitude to the prospectors invading their hunting and fishing areas.

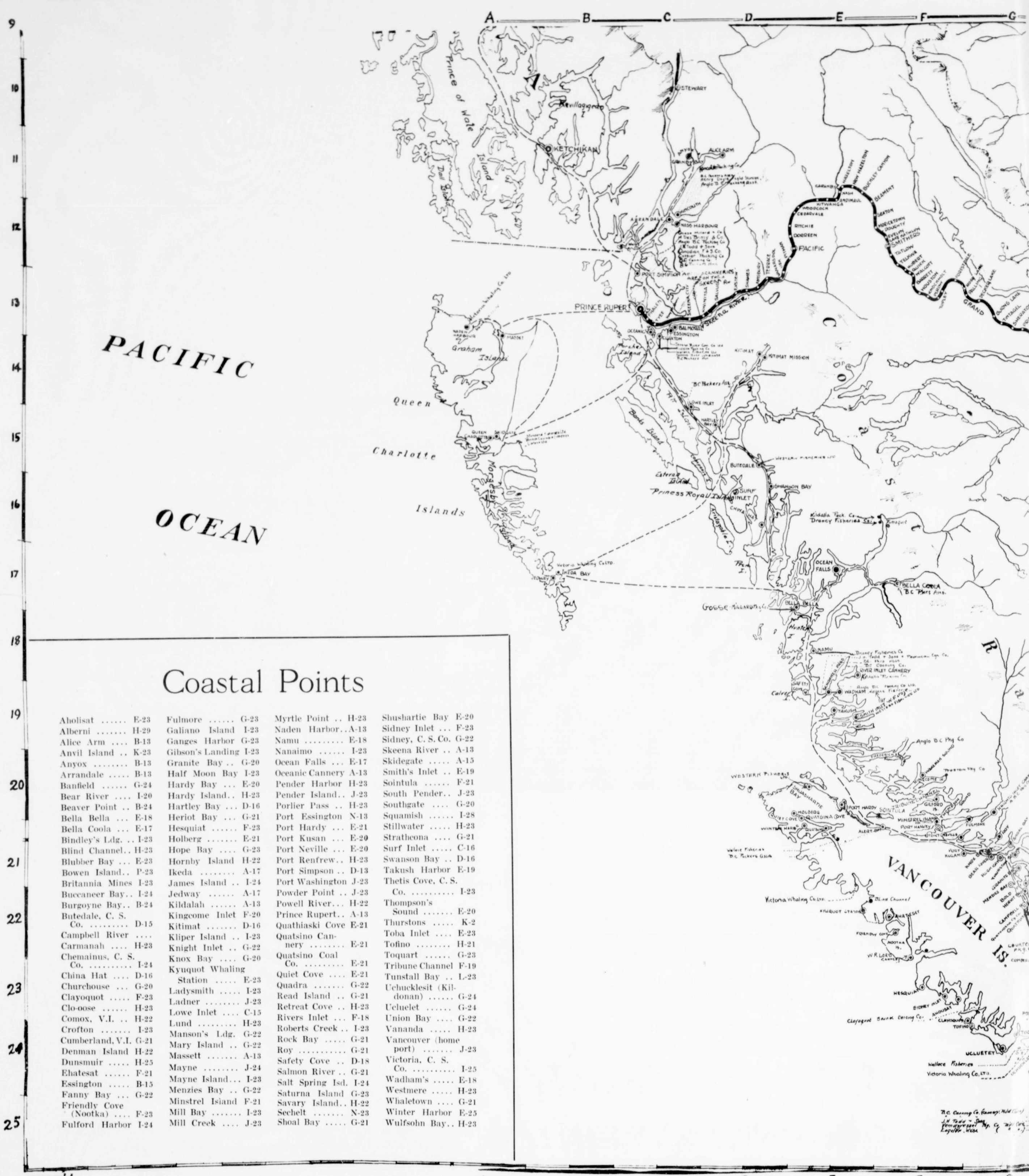
In 1858 the privilege of exclusive trading with the Indians was withdrawn by the British Parliament.

During 1866 the Mainland Colony was united with Vancouver Island into the one Colony of British Columbia, which became confederated with the other parts of Canada as a Province in July, 1870.

By that compact the Canadian Government undertook to build a railway, which eventually became the Canadian Pacific Railway, that has formed the greatest factor in the development of British Columbia, as may be seen by reference to the article on the Railways in B. C.

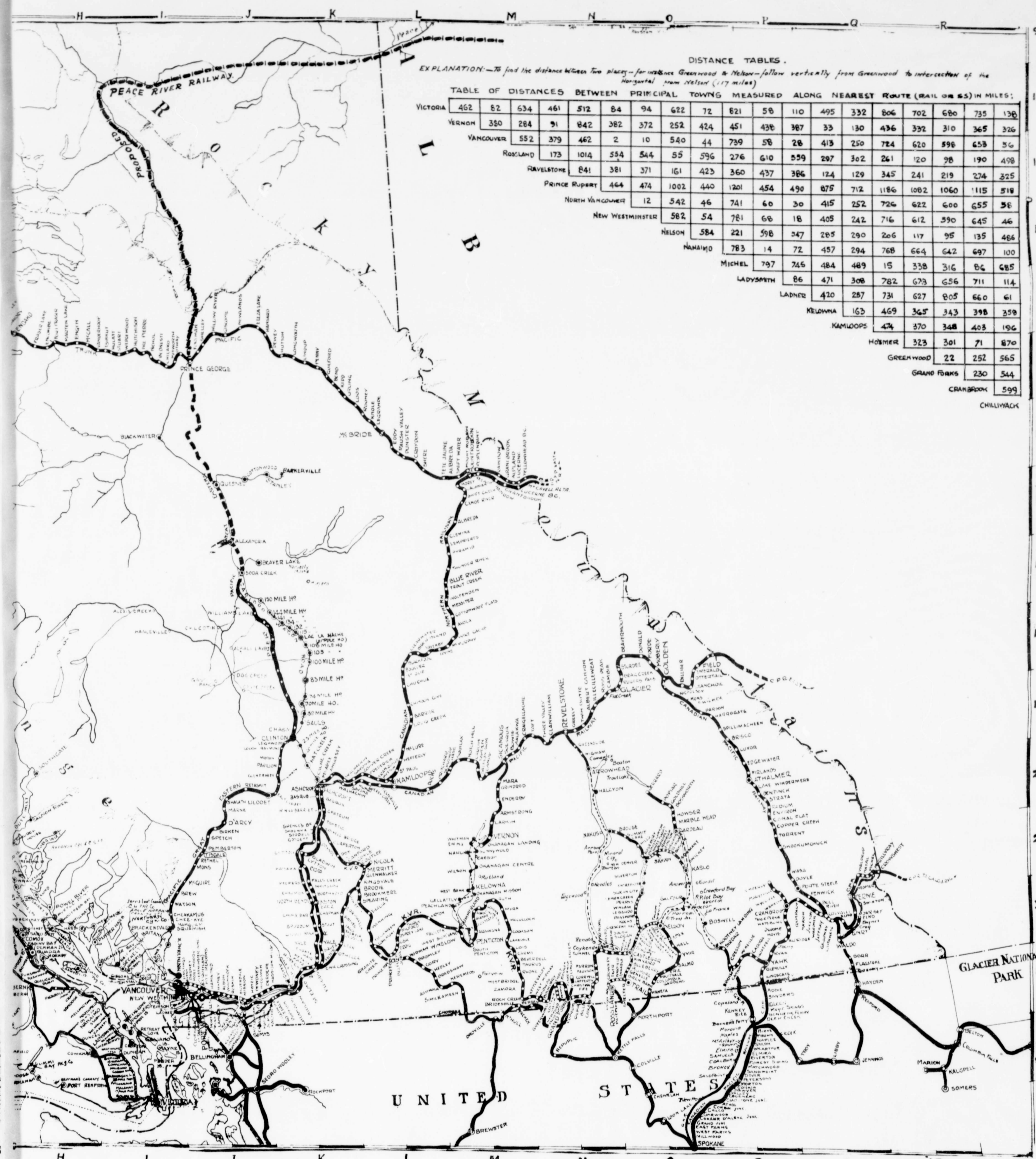
That great transcontinental railway was completed to the Pacific Coast in 1885.





Coastal Points

Aboliat	E-23	Fulmore	G-23	Myrtle Point	H-23	Shushtarlie Bay	E-20
Alberni	H-29	Galiano Island	L-23	Naden Harbor	A-13	Sidney Inlet	F-23
Alice Arm	B-13	Ganges Harbor	G-23	Nami	E-18	Sidney, C.S.Co.	G-22
Anvil Island	K-23	Gibson's Landing	L-23	Nanaimo	E-13	Skeena River	A-13
Arnox	B-13	Granite Bay	G-20	Ocean Falls	E-17	Skidegate	A-15
Arsandale	B-13	Half Moon Bay	L-23	Pender Harbor	H-23	Smith's Inlet	E-19
Bear River	E-20	Hardy Bay	E-20	Port Neville	E-20	Somblula	F-21
Beaver Point	H-24	Hartley Bay	D-16	Port Renfrew	H-23	South Pender	J-23
Bella Bella	E-18	Heriot Bay	G-21	Port Simpson	D-14	Southeast	G-20
Bella Coola	E-17	Hesquiat	F-23	Port Hardy	E-21	Squamish	L-28
Bindley's Ldg.	L-23	Holberg	E-21	Stillwater	H-23	Strathcona	G-21
Blind Channel	H-23	Hope Bay	G-23	Surf Inlet	C-16	Thompson's	E-20
Blyther Bay	E-23	Hornby Island	H-22	Takush Harbor	E-19	Thurston's	K-2
Bowen Island	F-23	Iketa	A-17	Takush Harbor	E-19	Toha Inlet	E-23
Britannia Mines	L-23	James Island	L-24	Thetis Cove, C.S.	E-23	Tofino	H-21
Buccaner Bay	L-24	Jedway	A-17	Thompson's	E-20	Toquart	G-23
Burgoyne Bay	B-24	Kildalah	A-13	Thompson's	E-20	Trihams Channel	F-19
Butedale, C.S.	E-23	Kingcome Inlet	F-20	Thurston's	K-2	Unstall Bay	L-23
Co. Co.	D-15	Kihmat	D-16	Toba Inlet	E-23	Uchekuck (Kil-	G-24
Campbell River	E-23	Kiper Island	L-23	Tofino	H-21	donan)	G-24
Carmanah	H-23	Knights Inlet	G-22	Toquart	G-23	Uchekuck (Kil-	G-24
Chemainus, C.S.	H-23	Knox Bay	G-20	Trihams Channel	F-19	Uchekuck (Kil-	G-24
China Hat	D-16	Kyuquot Whaling	E-23	Unstall Bay	L-23	Uchekuck (Kil-	G-24
Churchouse	G-20	Ladysmith	L-23	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Clayoquot	F-23	Ladner	J-23	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Clousoe	H-23	Low Inlet	C-15	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Comox, V.I.	H-22	Land	H-23	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Crofton	H-23	Manson's Ldg.	G-22	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Cumberland, V.I.	G-21	Mary Island	G-22	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Denman Island	H-22	Masset	A-13	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Dunsuir	H-23	Mayne	J-24	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Ehatesat	F-21	Mayne Island	L-23	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Eslington	H-15	Menzies Bay	G-22	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Fanny Bay	G-22	Minstrel Island	F-21	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Friendly Cove	F-23	Mill Bay	L-23	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
(Nootka)	F-23	Mill Creek	J-23	Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24
Fulford Harbor	L-24			Uchekuck (Kil-	G-24	Uchekuck (Kil-	G-24



EXPLANATION:—To find the distance between two places—follow the line between them and then vertically from the horizontal line to the table.

DISTANCE TABLES.

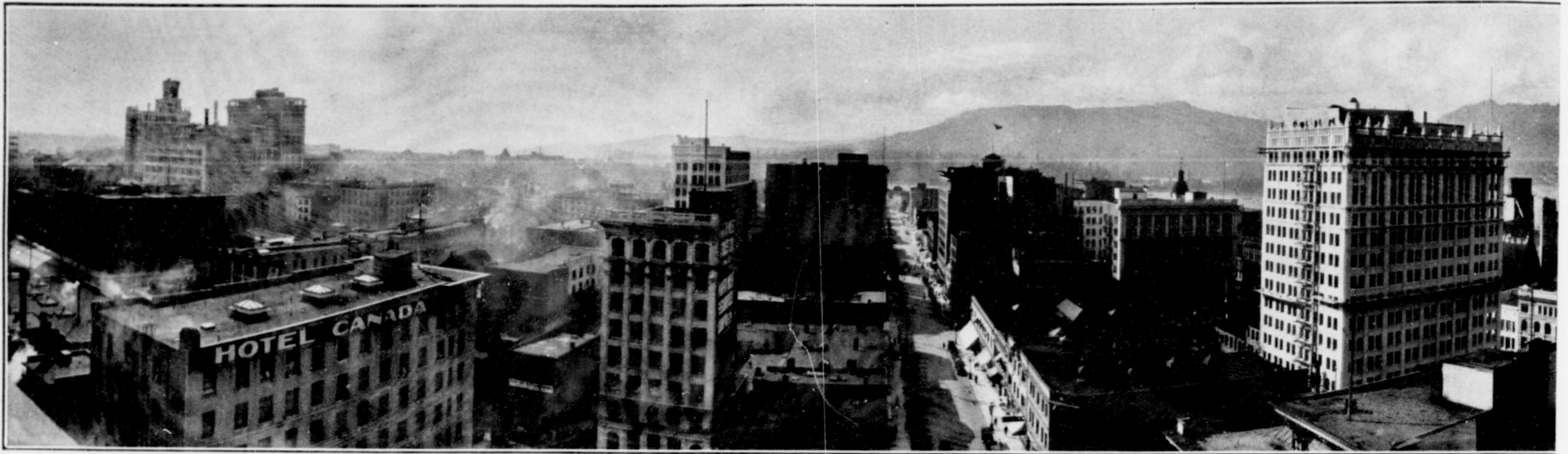
TABLE OF DISTANCES BETWEEN PRINCIPAL TOWNS MEASURED ALONG NEAREST ROUTE (RAIL OR ROAD) IN MILES.

VICTORIA	452	82	634	461	512	84	94	622	72	821	58	110	495	332	806	392	310	345	136
VENON	380	284	91	842	382	372	252	424	45	397	33	130	436	392	310	345	136		
VANCOUVER	552	379	462	2	10	540	44	739	58	28	413	250	784	620	598	658	350		
ROKLAND	173	1014	534	544	55	596	276	610	559	287	362	261	120	98	190	498			
RAVENSHEAD	841	381	371	161	423	360	457	386	124	129	345	241	219	234	225				
PRINCE RUPERT	464	476	1002	440	1002	440	454	430	878	712	1186	1062	1060	1118	518				
NORTH VANCOUVER	12	342	46	741	60	30	415	252	726	622	600	655	56						
NEW WESTMINSTER	582	54	781	66	18	405	242	716	612	590	645	46							
NELSON	584	221	598	247	285	290	266	117	95	135	484								
NANAIMO	783	14	72	157	294	768	664	642	697	100									
MICHEL	797	745	484	469	15	358	316	64	685										
LADYSMITH	86	471	308	782	678	656	711	114											
LANEY	410	287	731	627	805	660	61												
NELSONIA	163	469	365	343	318	359													
KANLOPS	474	370	348	408	196														
HOMER	323	301	71	870															
GREENWOOD	22	251	565																
GRAND BANKS	230	544																	
CHAMBERS	599																		
CHILLIWACK																			

Abbotsford	J-22	Baynes	Q-22	Bromley	L-22	Chinook Cove	L-19	Crescent Valley	Q-21	Encombe	H-14	Fraser River	H-12	Haig	K-22	Inverness	Q-12
Adamant	Q-21	Beaman	E-11	Brew	C-22	Cloate	N-22	Creston	N-23	End of Track	N-23	Junction	H-12	Haleyton	Q-12	Inverholme	L-22
Adya	M-22	Bear Creek	O-18	Bull River	Q-21	Bulky Canyon	E-11	Christina	N-22	Enklako	G-14	Frederick	L-20	Hale	M-23	Ioco	K-22
Agassiz	K-22	Beasley	Q-21	Burnaby, B.C.	K-16	Chic-Chua	Q-21	Crow's Nest	R-22	Endersby	N-19	Frutidale	Q-22	Hammond	J-22	Irvine	M-18
Alberni, V.I.	H-22	Beaver Lake	K-16	Elie, V.I.	J-23	Cornwall	N-19	Crow's Nest	R-22	Engen	H-14	Galloway	P-13	Haney	J-22	Jackman	M-16
Alberni, V.I.	H-22	Beavermouth	N-19	Elie, V.I.	J-23	Burns Lake	G-13	Clayburn	J-22	Enterprise	Q-22	Gerrard	Q-22	Hansard	J-14	Jaffray	Q-22
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# The Principal Cities and Towns



PANORAMIC VIEW OF

**ABBOTSFORD**—A small town situate in the Fraser Valley, 51 miles from Vancouver, 39 miles east of New Westminster. Served by the C. P. R., B. C. E. R. and G. N. R. Population 300.

**AGASSIZ**—A village on the C. P. R. main line, 70 miles east of Vancouver. Site of Dominion Government Experimental Farm. Population of village and immediate district 750.

**ALBERNI**—On west coast of Vancouver Island, adjoining Port Alberni, on branch of E. & N. Railway. Also served by steamship from Victoria. Population 850.

**ANYOX**—A mining town 90 miles north of Prince Rupert, the sole industry being that of the Granby Mining, Smelting & Power Co. Ltd. C. P. R., G. T. P. and Union Steamship Companies' boats give regular service from Vancouver and Prince Rupert. Population 2,000.

**ARMSTRONG**—On branch line of C. B. R. between Sicamous and Vernon. Will shortly be served by C. N. R. also. Centre of a first-class farming district. Population 1,000.

**ASHCROFT**—204 miles east of Vancouver on the main lines of the C. P. R. and C. N. R. Stock-raising and mining district. Population 500.

**BRITANNIA BEACH**—Company town of the Britannia Mining & Smelting Company, Ltd., 35 miles north of Vancouver. Steamship service from Vancouver. Population 2,000.

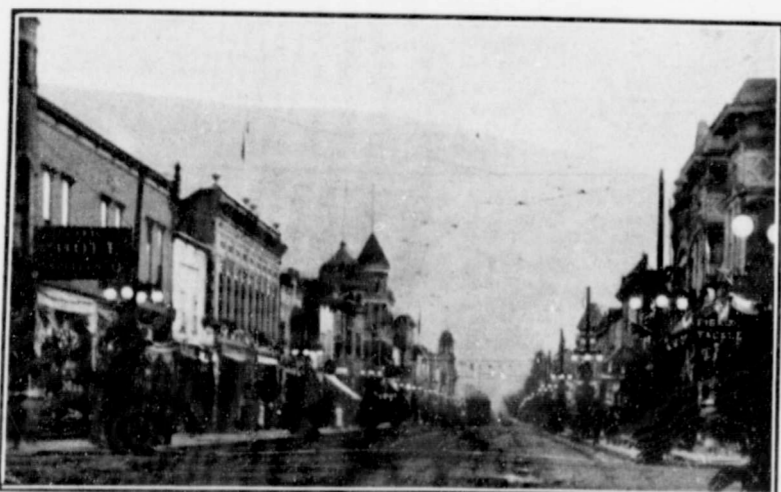
**CHILLIWACK**—60 miles east of Vancouver on C. N. R. and B. C. E. R. Agricultural and dairying district. Population 1,600.

**CLOVERDALE**—25 miles east of Vancouver on the G. N. R. and B. C. E. R. Farming and lumbering district. Population 300.

**COURTENAY**—On east coast of Vancouver Island, 140 miles north of Victoria. Served by E. & N. R., C. P. R. and Union Steamship Companies' boats at Comox wharf. Farming, coal mining and logging district. Population 600.

**CRANBROOK**—Divisional point on C. P. R., Crow's Nest Branch. Lumbering, mining and farming principal industries. Population 3,000.

**CRESTON**—On C. P. R., Crow's Nest Branch. Lumbering, dairying and fruit-growing district. Population 700.



NELSON

**CUMBERLAND**—A coal-mining town on Vancouver Island. Nearest railway station at Royston (E. & N. R.), 4 miles. Population 3,000.

**DUNCAN**—40 miles north of Victoria on the E. & N. R. Centre of an important dairying, poultry-raising and lumbering district. Population 1,200.

**ENDERBY**—On C. P. R. branch line, 23 miles from Sicamous Junction. Lumbering district. Population 800.

**FERNIE**—On the Crow's Nest line, C. P. R., and G. N. R. Principally a coal-mining town. Population 4,500.



NEW WESTMINSTER

**GOLDEN**—On main line of C. P. R. and also Cranbrook-Golden Branch of the same railway. Lumbering, mining and farming. Population 900.

**GRAND FORKS**—A city on the Kettle Valley and Great Northern Railways. Farming and mining principal industries. Population 3,500.

**GREENWOOD**—On C. P. R., 117 miles west of Nelson. Mining town. Population 700.

**HAZELTON**—On G. T. P. Railway, 177 miles east of Prince Rupert. Farming, ranching and mining. Population 500.

**KAMLOOPS**—On C. P. R. and C. N. R. Ranching, farming and mining principal industries. Population about 5,000.

**KASLO**—On Nakusp-Kaslo Branch of C. P. R., also served by C. P. R. lake steamers on Nelson-Lardeau line. Fruit-growing, lumbering and mining. Population 1,500.

**KELOWNA**—On east side of Okanagan Lake. Daily service C. P. R. steamers between Penticton and Okanagan Landing. Dairying and fruit and vegetable growing. Population 3,000.

**LADNER**—Reached by G. N. R. from New Westminster (15 miles), a government ferry from Woodward's Landing connecting with automobile service to Vancouver. Principally a dairying and farming district. Population 2,000.

**LADYSMITH**—A coal-mining town 60 miles north of Victoria on the E. & N. R. Population 2,000.

**LILLOOET**—On the P. G. E. Railway, 160 miles from Vancouver via Squamish. Fruit-growing and ranching district in centre of a gold-mining country. Population 350.

**MERRITT**—On a branch of the C. P. R., 40 miles from Spence's Bridge (C. P. R. main line). Coal mining; the surrounding district being largely devoted to stock-raising. Population 1,800.

**MISSION CITY**—40 miles east of Vancouver on main line of C. P. R. Fruit-growing and canning, dairying and lumbering principal industries. Population 800.

**NAKUSP**—On the Nakusp & Slocan Branch of the C. P. R. Also on route of Arrow Lake steamers. Lumbering and fruit-growing. Population 450.

**NANAIMO**—On the E. & N. R., 72 miles from Victoria; also served by the C. P. R. Steamships from Vancouver (38 miles). Principal industry, coal-mining. Population 9,000.

**NELSON**—Principal city in Eastern British Columbia. On C. P. R. and G. N. R. Headquarters for C. P. R. lake steamers to different parts of the Kootenay district. Mining, lumbering and fruit-growing centre. Population 6,500.

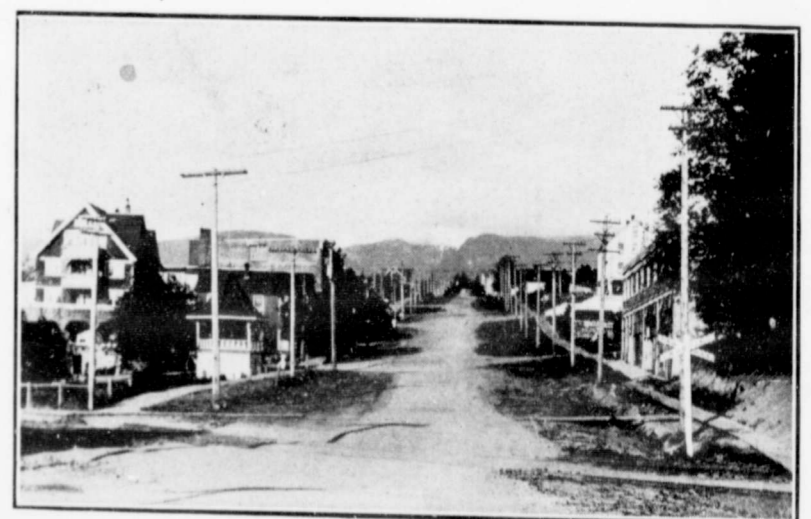
**NEW HAZELTON**—On G. T. P. Railway, 180 miles east of Prince Rupert. Mining and farming district. Population 150.

**NEW WESTMINSTER**—On branch line of C. P. R., connecting with main line at Westminster Junction. Also G. N. R. and B. C. E. R. (Vancouver 15 miles.) Freshwater harbor on Fraser River. Principal industries lumbering and fishing. Population 16,000.

**NICOLA**—On Kettle Valley Railway. Centre of stock-raising country. Population 200.

**NORTH VANCOUVER**—An incorporated city (suburb of Vancouver), reached by fifteen-minute trip on ferry boat from Vancouver. Principal industries are shipbuilding and lumbering. Population 12,000.

**PHOENIX**—A mining town on branch lines of C. P. R. and G. N. R. Population 700.



PORT ALBERNI

# The Principal Cities and Towns



DOWNTOWN SECTION, VANCOUVER

**PENTICTON**—Divisional point on the Kettle Valley Railway, location of general office of that railroad. Terminus of Okanagan Lake steamers. Fruit-growing and canning principal industries. Population 3,000.

**PORT ALBERNI**—Adjoining Alberni, on west coast of Vancouver Island, on branch of E. & N. R. Lumbering and fishing principal industries. Population 950.

**PORT MOODY**—Twelve miles from Vancouver, on main line of C. P. R. Principal industry, lumbering. Population 1,500.

**POWELL RIVER**—Company town of the Powell River Company, manufacturers of paper. Population 1,500.

**PRINCE GEORGE**—Largest city of Central British Columbia, on main line of G. T. P. Railway, between Prince Rupert and Edmonton, Alta. Summer steamer service from Soda Creek connecting with auto stage to Ashcroft, main line C. P. R. Mining, lumbering and farming principal industries. Population 1,850.

**PRINCE RUPERT**—Western terminus of G. T. P. Railway. Steamer service of G. T. P., C. P. R. and Union Steamship Companies connecting with the south and north, including Alaska. Mining and fishing are principal industries. Population 4,000.

**PRINCETON**—Coal and copper mining town on Kettle Valley and G. N. Railways. Population 750.

**QUESNEL**—220 miles north of Ashcroft (C. P. R.), 100 miles south of Prince George (G. T. P.), connected with these points by steamer and auto stage. P. G. E. Railway, now constructing, will shortly reach this point. Mining and farming principal occupations. Population 500.

**REVELSTOKE**—Divisional point on main line

of C. P. R., 379 miles from Vancouver. Mining, lumbering, stock-raising and fruit-growing are the principal industries. Population 3,500.

**ROSSLAND**—On branch of C.P.R. from Nelson, and also G. N. R. Mining and lumbering. Population 2,000.

**SALMON ARM**—On C. P. R., 313 miles east of Vancouver, also steamer connection with Kamloops. Fruit-growing is principal industry, with some dairying, mixed farming and lumbering.

**SIDNEY**—Connected with Victoria by B. C. E. R. Fishing and lumbering principal industries. Population 1,200.

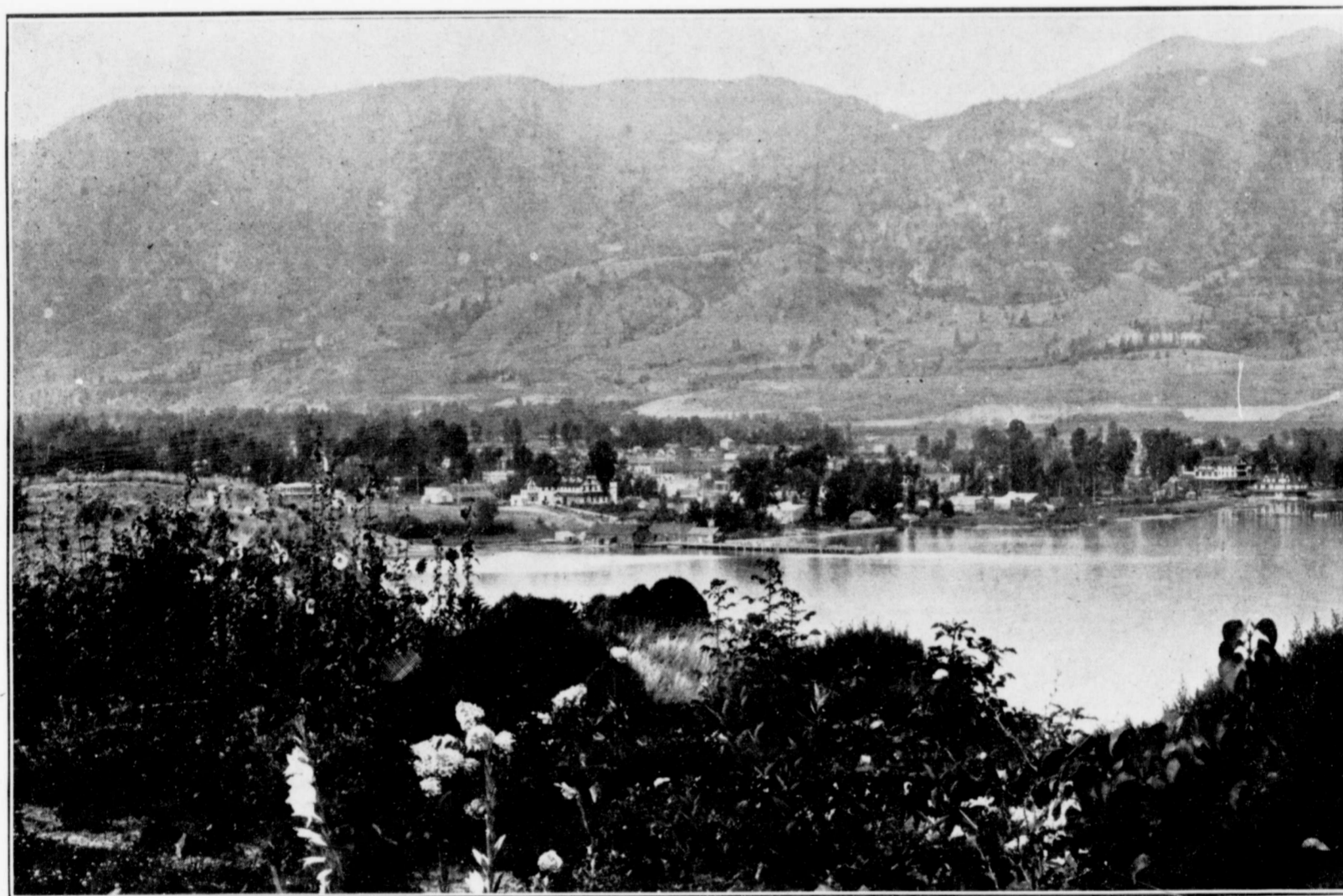
**STEVESTON**—On the Fraser River, 15 miles

**VICTORIA**—Second city of British Columbia in both size and business importance. Location of the Provincial Parliament buildings. Situate at the southern end of Vancouver Island. The E. & N. Railway (subsidiary of C. P. R.) connects Victoria with the principal places on Vancouver Island. The Canadian National Railway is being constructed, and in course of time will link up Victoria with other places on the island. There is frequent steamer service between ports on the mainland of British Columbia and on the Pacific Coast of the United States, while most of the Transpacific boats call here. Victoria has a good harbor and is in every way a modern city. During the latter years of the war shipbuilding has been the principal industry, otherwise lumbering is the most important occupation. Population 60,000.

**VANCOUVER**—The largest city in British Columbia, and, therefore, on the Canadian Pacific Coast. The C. P. R., Great Northern, C., M. & St. P., Union Pacific, Canadian National, Kettle Valley, Fraser Valley (electric) and Pacific Great Eastern Railways connect with all parts of the province, Canada and the United States. Coastwise steamers of the C. P. R., G. T. P., Pacific Steamship Company, Union Steamship Company and other lines connect with all points on the coast between Alaska and Mexico. There are regular

ocean steamer services between this point and Australia, China, Japan, Siberia, and also to European ports via the Panama Canal. Vancouver has eighty miles of waterfrontage and forty miles of anchorage. The industries of the city number something over 400, and include lumbering, shipbuilding, foundries, food products, pulp and paper, clothing, etc., employing between 27,000 and 30,000 people. Population: City 110,000; with suburbs, 175,000.

**WEST VANCOUVER**—Residential district for Vancouver business people. Frequent ferry service from Vancouver and also served by P. G. E. Railway from North Vancouver. Population 1,100.



PENTICTON

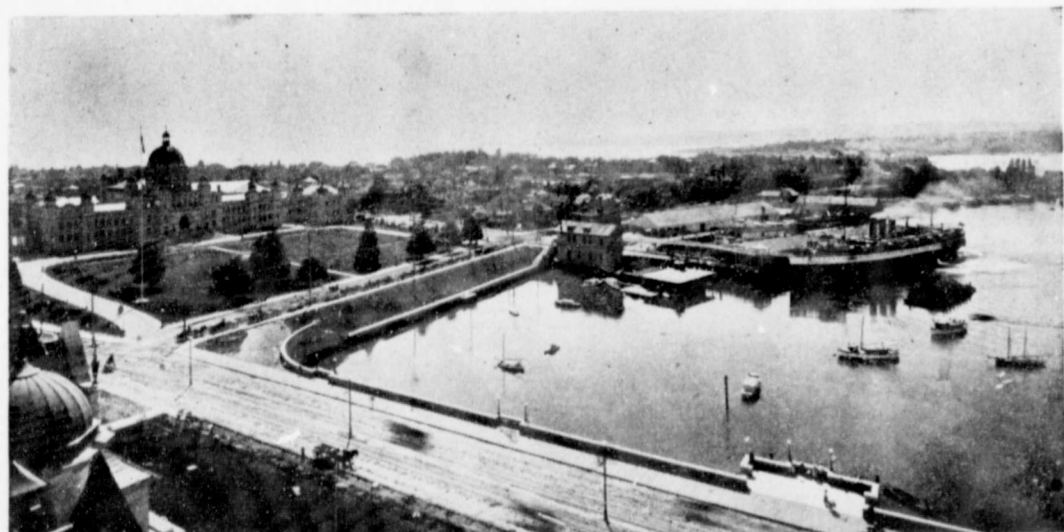
south of Vancouver, with electric interurban car connections. Headquarters of Fraser River salmon canneries. Population 1,100.

**SUMMERLAND**—Nearest station one mile (West Summerland), on Kettle Valley Railway. Fruit and vegetable-raising and lumbering. Population 1,800.

**TELKWA**—On G. T. P. Railway, 60 miles east of Hazelton. Mining and ranching principal industries of district. Population 300.

**TRAIL**—A mining and smelter town on the Nelson - Rossland branch of C. P. R. Population 4,000.

**VERNON**—Terminus of C. P. R. branch line, 46 miles south of Sicamous, on main line. Centre of largest fruit-growing district in British Columbia, with considerable activity in mixed farming and cattle-raising. Population 4,000.

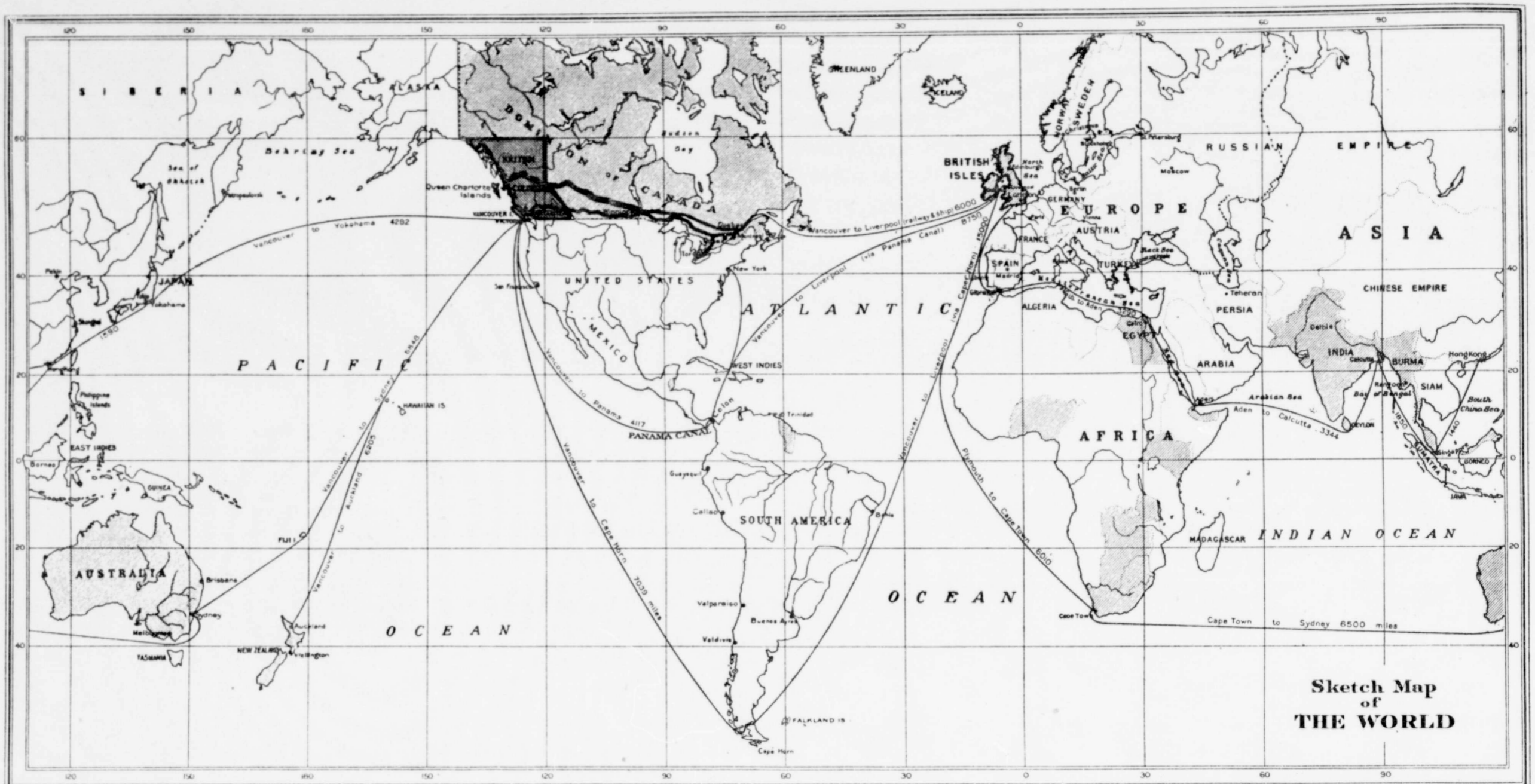


VICTORIA



VICTORIA

# British Columbia's Place in the World and British Empire



NOTE—The old All-Sea route from the British Isles, by its vast length of 15,000 miles, retarded development. Now the Panama Canal route reduces the sea-distance by 42 per cent., to 8,750 miles, and the direct "Railway and Ship" route (via Montreal) to 6,000 miles—only 40 per cent. of the old distance.

THE above map locates British Columbia's geographical position in the world and the empire as the western province of Canada, outlined by the stronger bounded K-shaped area between the Rocky Mountains and the Pacific Ocean.

Its latitude, between the 49th and 60th parallels, together with superior maritime advantages, ensure its people climatic conditions similar to Great Britain and Ireland. The southwestern part of British Columbia has a finer climate than England—more like that of Southern France.

The beneficial influences of the warm Japan Current, flowing across the Pacific to its shores, ensure to British Columbia even more practical advantages in life than those which the Gulf Stream, flowing across the Atlantic, give to the British Isles.

Britain's commercial and other special advantages over other leading nations of Europe are largely developed through her western location,

which British Columbians similarly enjoy, in a greater potentiality, through occupying the Western Gateway of Canada, with the great fertile areas of the three prairie provinces as a vast productive hinterland, ensuring permanent prosperity.

The opening of the Panama Canal for regular steamship traffic between British Columbia and Europe has reduced the voyage to England by 42 per cent.—to 8,750 miles, whereas traffic formerly had to traverse 15,000 miles around by South America.

The "cross-hatched" areas on the map locate the outstanding portions of the empire with which direct sea transit is available to and from British Columbia.

The thick lines across Canada denote the great transcontinental lines of the Canadian Pacific and the Canadian National Railways. Both of these vast organizations run their passenger and freight ships across both the Atlantic and Pacific Oceans.

Through those ever growing channels of

intercourse British Columbia has practically become the halfway route between Europe, Eastern Canada and Australia and New Zealand.

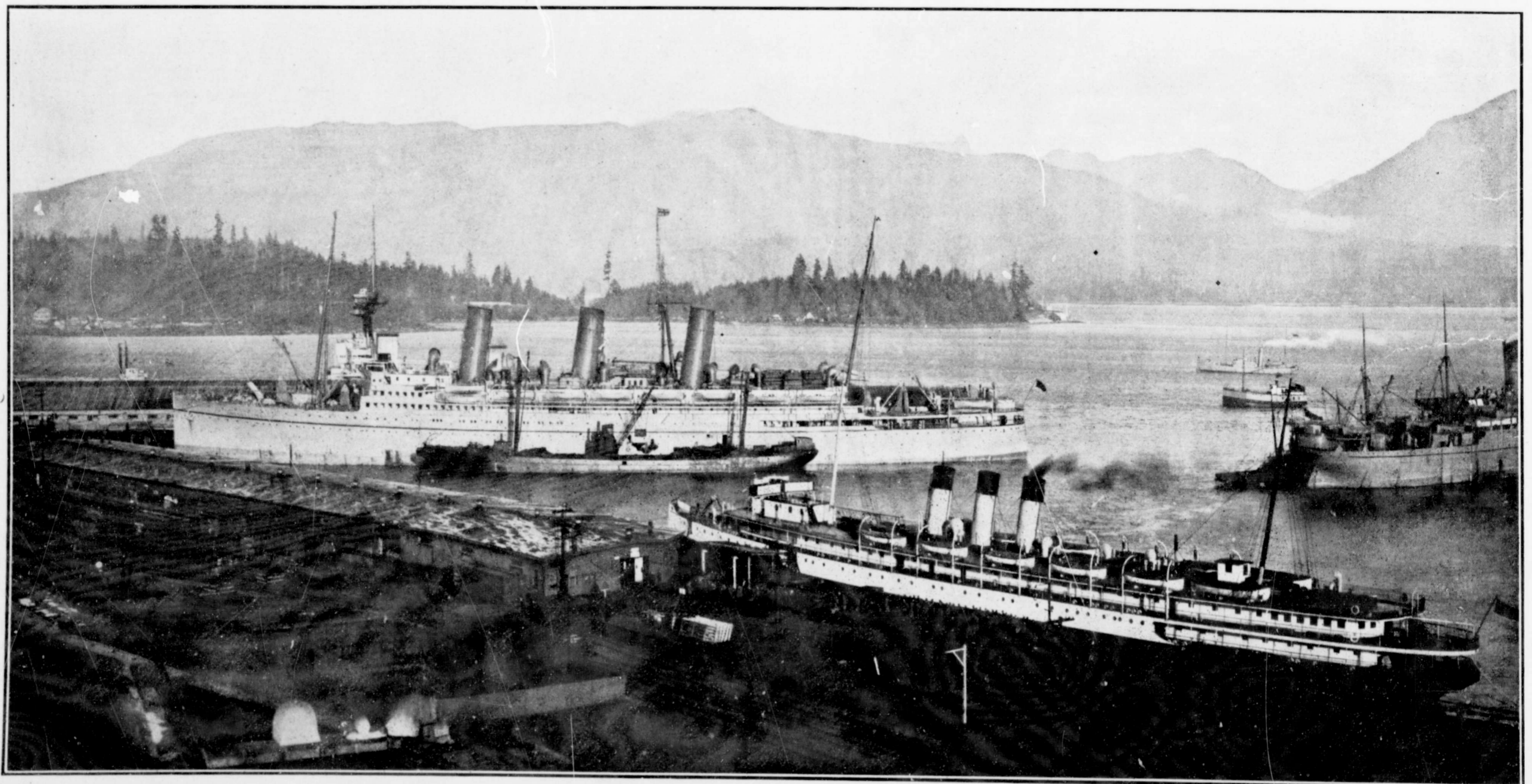
But what is most significant of all is the great factor that British Columbia is becoming the transit route between the teeming millions of Chinese, Japanese, Siamese and Siberians trading with and visiting Europe and America, and the fact that British Columbia can supply much of the produce they need.

World-wide observers are now being impressed with the developments of trade and commerce across the Pacific Ocean, around which the world's greatest development during the coming years is surely extending.

During the nineteenth century the Atlantic traffic developed, but the potentialities of the growing Pacific trade will more rapidly arise on the Pacific Ocean during the twentieth century.

There is no part of the world that will derive more lasting benefits from these impending Pacific developments than British Columbia.

The Area of British Columbia is about 288,263 Square Miles





- KEY TO BIRD'S-EYE MAP
- |   |                       |  |
|---|-----------------------|--|
| 1. Mount Garibaldi.                       | 28. Stanley Park.     | 40. To Alaska and Prince Rupert.       |
| 2. To Fort George.                        | 29. Marine Drive.     | 41. To Nanaimo.                        |
| 3. To Fort George.                        | 30. Point Grey.       | 42. To Victoria.                       |
| 4. Pulp Mills.                            | 31. Marpole (Burnie). | 43. To Honolulu, Australia and Orient. |
| 5. Mount Elsmere.                         | 32. Steveston.        | 44. To Seattle, Tacoma, San Francisco. |
| 6. Mount Wrottesley.                      | 33. Lulu Island.      | 45. Loco, Oil Refinery.                |
| 7. Bowen Island.                          |                       |  |
| 8. Point Atkinson.                        |                       |  |
| 9. White Horse (Essex Bay).               |                       |  |
| 10. North Shore Marine Drive.             |                       |  |
| 11. Black Mountain.                       |                       |  |
| 12. The Lions.                            |                       |  |
| 13. Britannia Mines.                      |                       |  |
| 14. Mount Grouse.                         |                       |  |
| 15. West Vancouver.                       |                       |  |
| 16. Coquitlam Canyon.                     |                       |  |
| 17. North Vancouver.                      |                       |  |
| 18. Lynn Valley and Seymour Canyon.       |                       |  |
| 19. Wigwam Inn.                           |                       |  |
| 20. North Arm, Burrard Inlet.             |                       |  |
| 21. Coquitlam Lake and River.             |                       |  |
| 22. City of Coquitlam.                    |                       |  |
| 23. Colony Farm.                          |                       |  |
| 24. Port Moody.                           |                       |  |
| 25. Fraser Mills                          |                       |  |
| 26. New Westminster.                      |                       |  |
| 27. City of Vancouver.                    |                       |  |
| 29. Ferry to Ladner.                      |                       |  |
| 34. Pacific Highway to Seattle and South. |                       |  |
| 35. Crescent Beach.                       |                       |  |
| 36. Ocean Park.                           |                       |  |
| 37. White Rock.                           |                       |  |
| 38. To Chilliwack and Fraser Valley.      |                       |  |
| 39. To Chilliwack and Fraser Valley.      |                       |  |

# Railways in British Columbia

The total railway mileage in operation, including branch lines, is approximately as follows:

	Miles
Canadian Pacific Railway Co. ....	1,812
Grand Trunk Pacific Railway Co. ....	703
Canadian National Railways .....	525
Great Northern Rly. Co. and its controlled companies .....	420
Pacific Great Eastern Railway Co. (owned by the B. C. Government) .....	290
British Columbia Electric Railway Co. ....	281*
Esquimalt & Nanaimo Rly. (C. P. Rly. Co.)....	198
White Pass and Yukon (in B. C.) .....	33
Total lines in use.....	4,262
In course of construction .....	310
	4,572

\* Including 150 miles of street railways in Vancouver, Victoria and Westminster cities—the remaining 131 miles being interurban and electric developing railways in the agricultural districts, giving direct access to the cities.

fish, metals, etc., required by the prairie provinces, from which in return it draws grain, meats, etc., supplies for consumption beyond the increasing quantities grown in B. C.

Much larger quantities of grain are now beginning to be railed from the prairies to Vancouver for export across the Pacific to China, Japan and other countries, and via the Panama Canal to European countries.

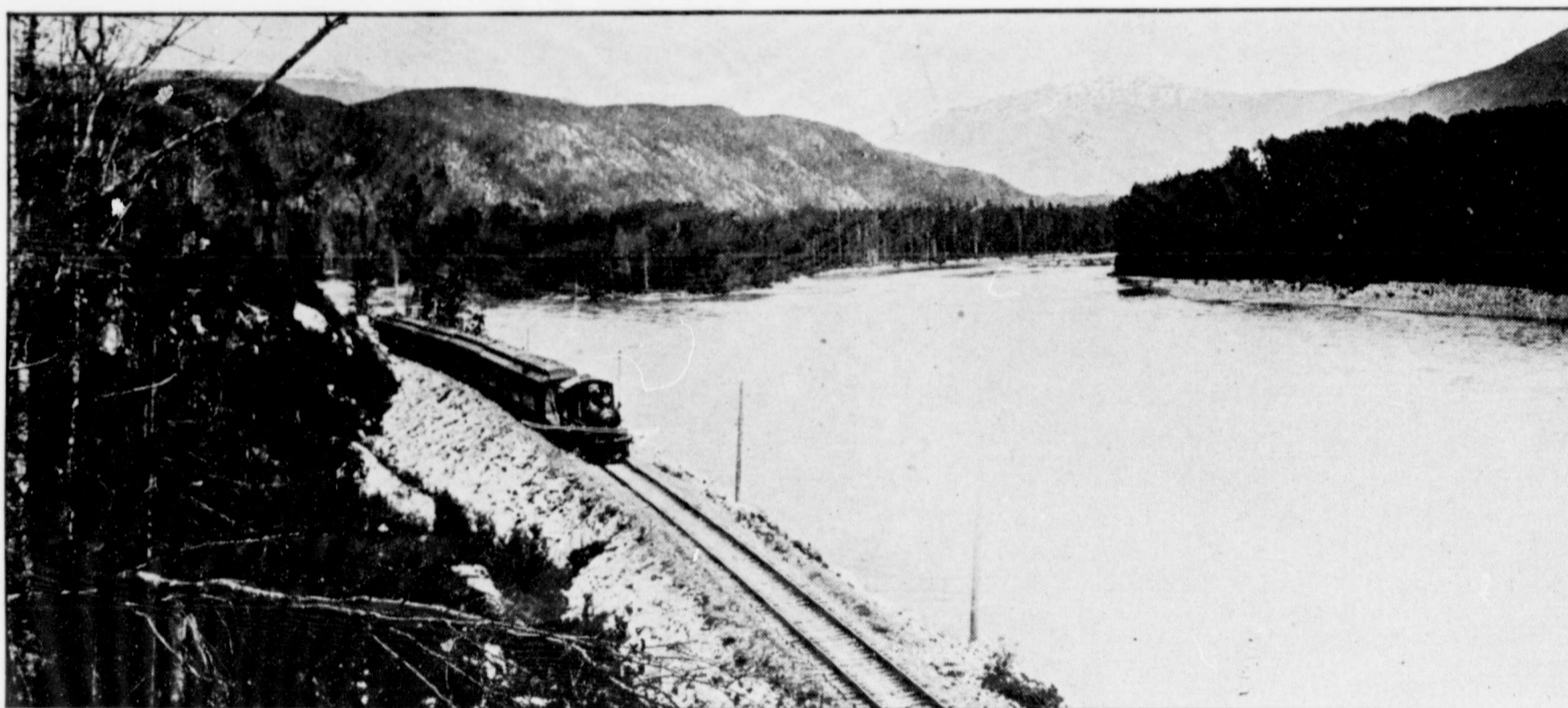
Those extending developments of traffic so largely brought about by the enterprise of the Canadian Pacific Railway Company have fully earned for that vast undertaking the title of the "World's Greatest Highway."

Now it is interesting to glance back to the origin of the C.P.R., which resulted directly from the Federation of British Columbia with the other provinces of Canada in 1871, when the Dominion

Ultimately, in 1880, the syndicate of original shareholders was found daring enough to begin the great work, and continue construction until the greatest of transcontinental railways reached the Pacific Coast near Vancouver in 1885.

We need not dilate upon the extraordinary difficulties those pioneer railway-builders had to overcome in building through hundreds of miles of territory traversed in cutting through the Rocky Mountains, Selkirk Range and Coast Range, along grim river gorges and valleys where snowslides, glaciers and high forests overhung.

Their undaunted courage in pushing that enterprise through stands out the more markedly when it is remembered that the total population then west of the Great Lakes, including the northern territories and British Columbia, only num-



bered 168,165 people—less than the 175,000 people now located around its Pacific terminus in Greater Vancouver, during the intervening 34 years.

That is one of the most significant evidences of the helpful influences resulting from the operations of the Canadian Pacific Railway in British Columbia.

The long 15,000 miles dangerous voyage from Great Britain via the Magellan Straits, to British Columbia, was thenceforward replaced by 5,691 miles of a swift and comfortable trip across 2,633 miles of sea, between Liverpool and Quebec, and 3,058 miles of easy rail ride from Quebec to Vancouver. The total of 5,691 miles to B. C. thus has been reduced to require only about 10 per cent. of the time formerly required to traverse the old Magellan route.

## Canadian Pacific Railway Co.

A stream of immigrant settlers soon began to come in and settle along and near to that great trunk railway, which later found it advisable to build the numerous branch lines south of its main line, as shown on the railway map.

The dominant influence exercised by the Canadian Pacific Railway Company over the development of British Columbia may be appreciated by noting the following brief summary of its activities, which extend far beyond its railway traffic, as will be seen from the later short account of its shipping and other operations between Pacific ports.

The fact that the Canadian Pacific Railway extends 18,549 miles in a network of lines across Canada, terminating on the Pacific Coast at Vancouver, is more significant when the more forceful factor is borne in mind that about 60 per cent. of its mileage is west of the Great Lakes, serving the southern portions of the vast areas of the fertile prairie provinces and rich territory in British Columbia.

The Western mileage serves most of the vast areas into which the impending influx of settlers from the United States and Europe will increasingly flow during the ensuing years of world-wide reconstruction following the Great War. Those, with the existing populations of Western Canada, will all tend to help the permanent prosperity of British Columbia, which produces the timber, fruit,

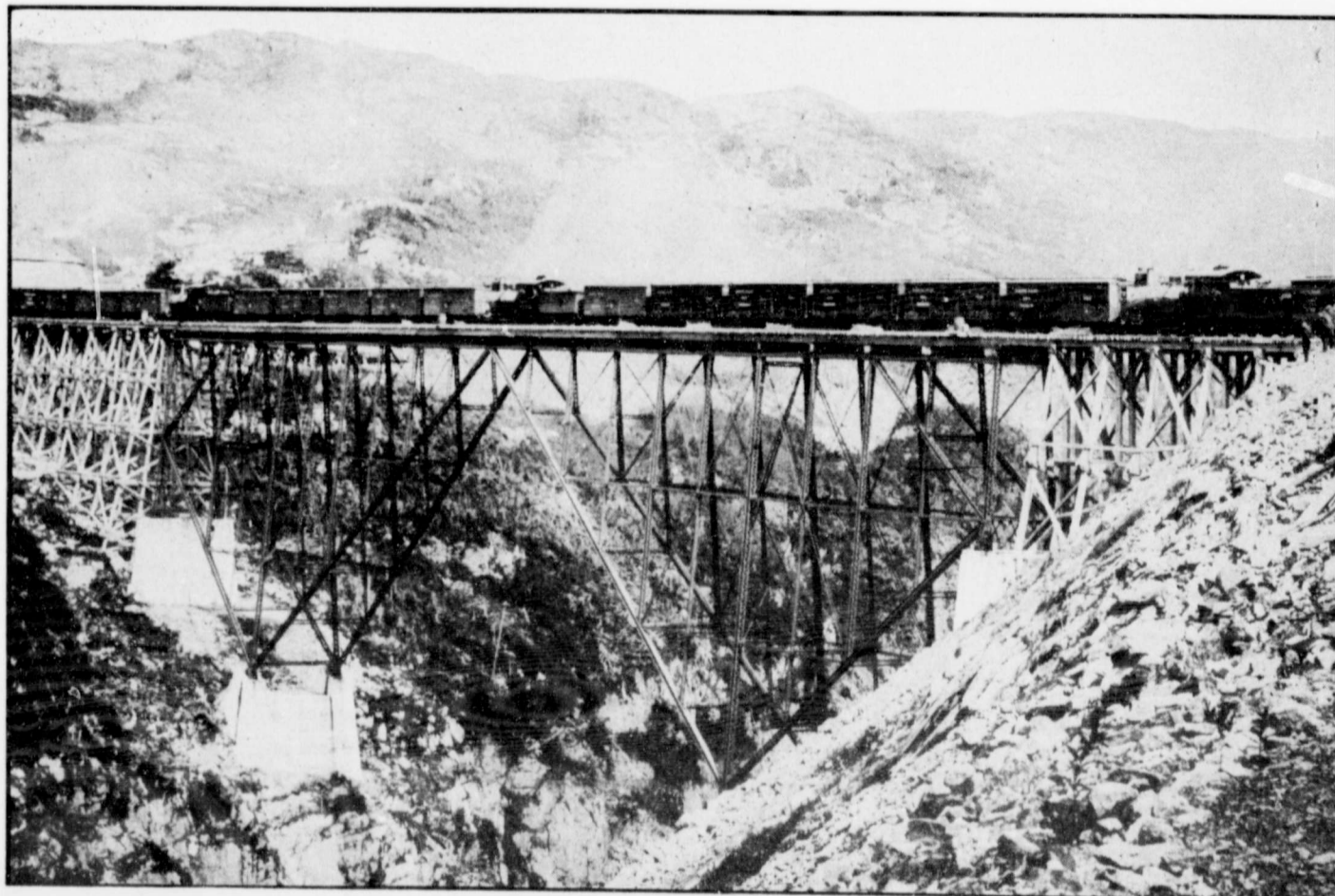
Government undertook to have a railway built from the Eastern provinces to the Pacific Coast, and to begin it within two years.

The stupendous magnitude of the undertaking so far alarmed many of the Dominion legislators that they feared the contract with British Columbia could not be fulfilled. Some argued that the costly gigantic railway would never earn sufficient for "axle grease," and that British Columbia was an impenetrable "Sea of Mountains."

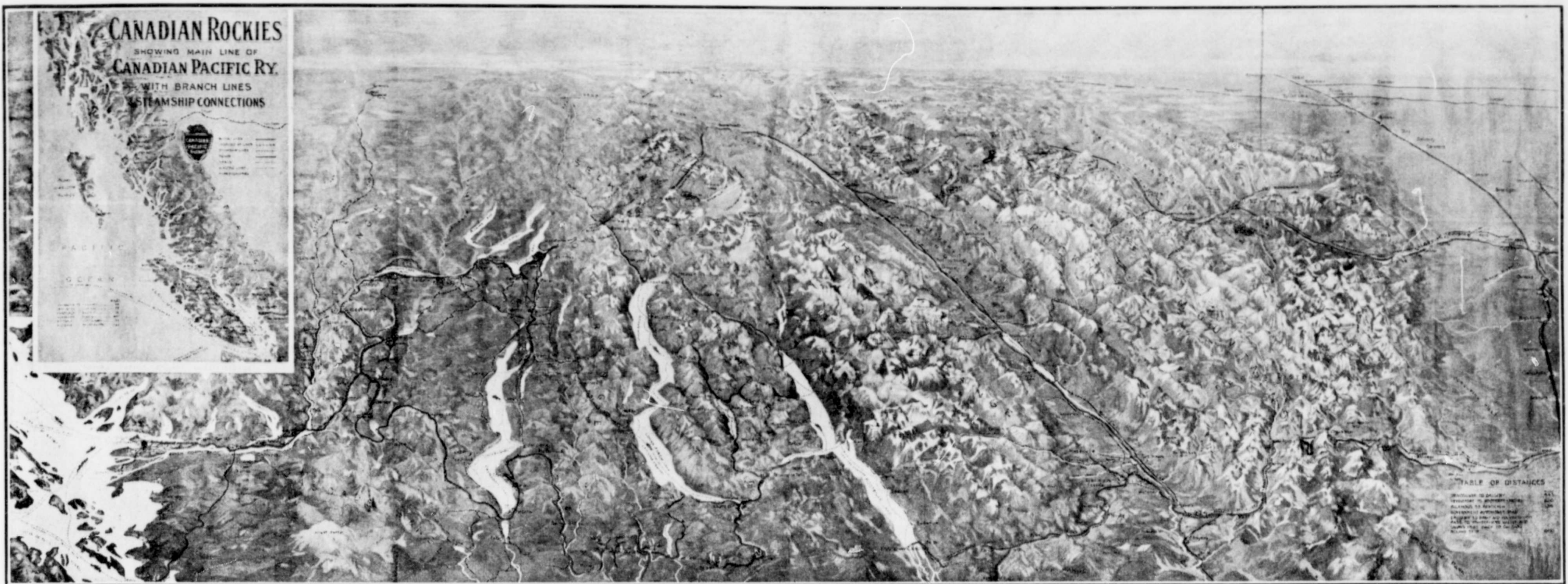
We can now realize how completely the highly successful career of this "Greatest Railway in the World" has belied those baneful forebodings which, during nine years, delayed the commencement of this mighty enterprise.

The Dominion Government that promised British Columbia the railway was only saved from defeat by including in the Address to the Throne a promise "that the line should be constructed and worked by private enterprise."

Despite liberal promises of Government assistance in both cash and land, capitalists were loath to take up what was then generally considered a hazardous and speculative enterprise.



RELIEF MAP OF THE CANADIAN ROCKIES



Sequence of Mountain Ranges: Valley and Lake Series: FRASER COAST CASCADE OKANAGAN GOLD ARROW SELKIRK KOOTENAY PURCELL and and ROCKY MOUNTAINS WINDERMERE VALLEYS

THIS reproduction of the Canadian Pacific Railway Company's relief-map of the "Canadian Rockies," shows at a glance the general physical features of the southern quarter-area of British Columbia. It ranges 700 miles from Victoria, in the southwest, to Calgary on the east — the last 5 miles being in flatter Alberta.

Its scale is approximately 150 miles per inch (increasing northwards), while the inset map of the coastal zone approximates 4400 miles per inch.

Glancing from the Coast eastwards, the six grand mountain ranges are seen trending and decreasing in a northwesterly direction, ridged in the following sequence from the Coast, as the Coast, Cascade, Gold, Selkirk, Purcell and Rocky Mountains.

Between them are the beautiful and fertile valleys named the Fraser, Okanagan, Arrow, Kootenay and Windermere Valleys, the extent of which in each case is minimized for scenic effect.

The first and last pairs of valleys range about 200 miles apart. The distance between each pair of the middle three valleys approximates 150 miles.

Northwestwards stretches the great grazing country of Cariboo, up which the early gold-seekers trailed until the Government built the Cariboo Road,—shown by the dotted line, which also indicates the series of roads in the cattle-grazing country south of the Kamloops and Shuswap lakes.

The lakes and rivers issuing from them, beyond adding charm to the scenery of their districts, provide the most pleasant and economic means of transport for both passengers and merchandise. Further, they furnish a constant supply of fresh fish and sport, while providing highly valuable water-powers for irrigation, domestic and industrial purposes.

The black, winding lines denote the railway tracks laid through the valleys, which, along the northern part traversed by the main line of the C. P. Ry. Co., are hidden in parts by the perspective of the mountains in front, but may be traced along the intervening valleys linked to sight by the "Spiral Tunnel" on the main line, and the "climbing-curve" across the Crow's Nest Pass in the southeast.

Eastwards stretch the vast prairie provinces of Alberta, Saskatchewan and Manitoba, which, together form the vast "hinterlands" of about 475,000,000 acres of agricultural lands, whose ever growing population will increasingly require the Timber, Fish and Mineral products of British Columbia's acreage, which approximates 228,000,000 acres—or practically half the size of the other three western provinces of Canada combined.

Beyond the products of British Columbia's vast resources, its ports must, during future years, export and import the great bulk of the agricultural and other merchandise (especially wheat and cattle), that will certainly pass via the Pacific Ocean to China, Japan and Europe, now that the

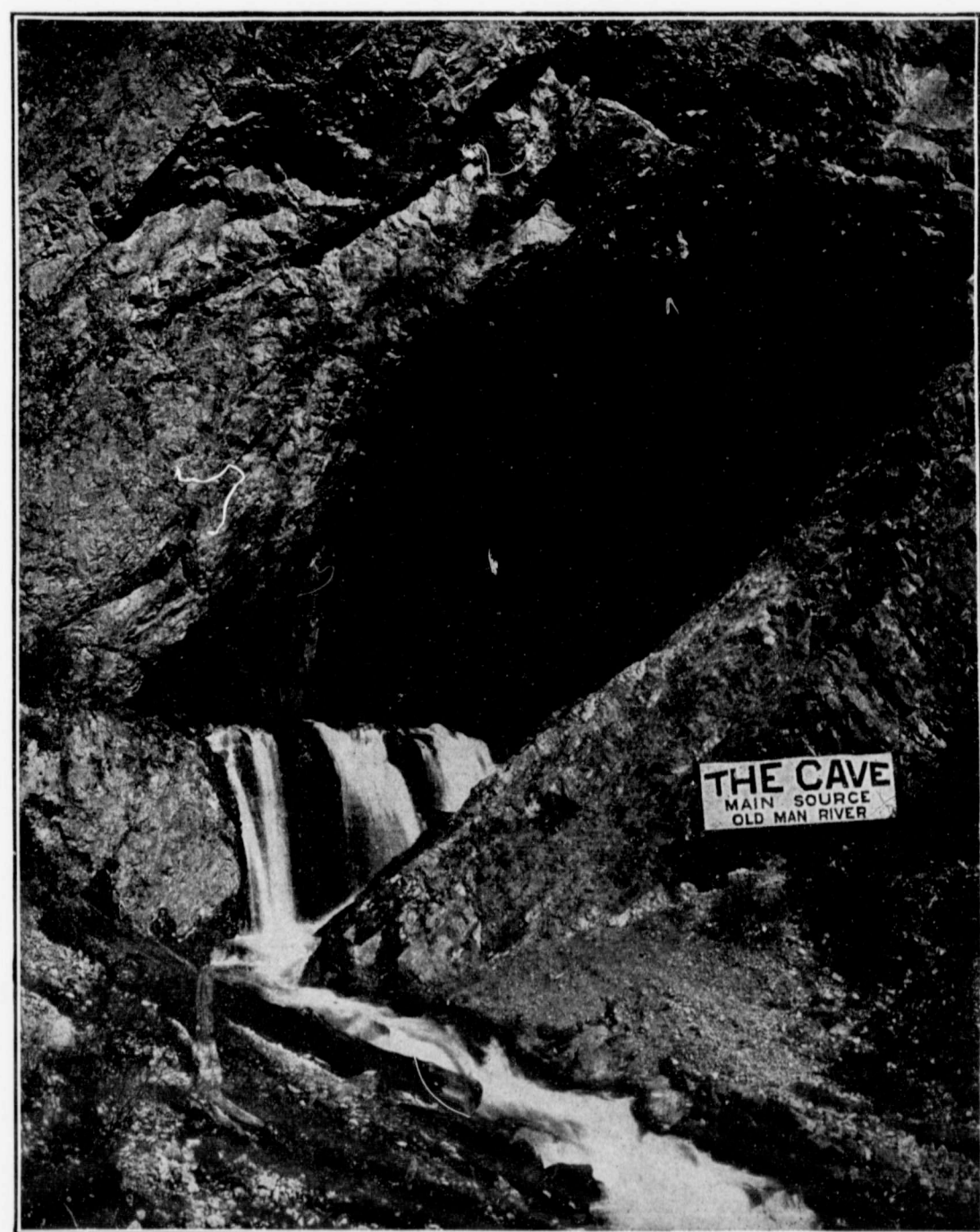
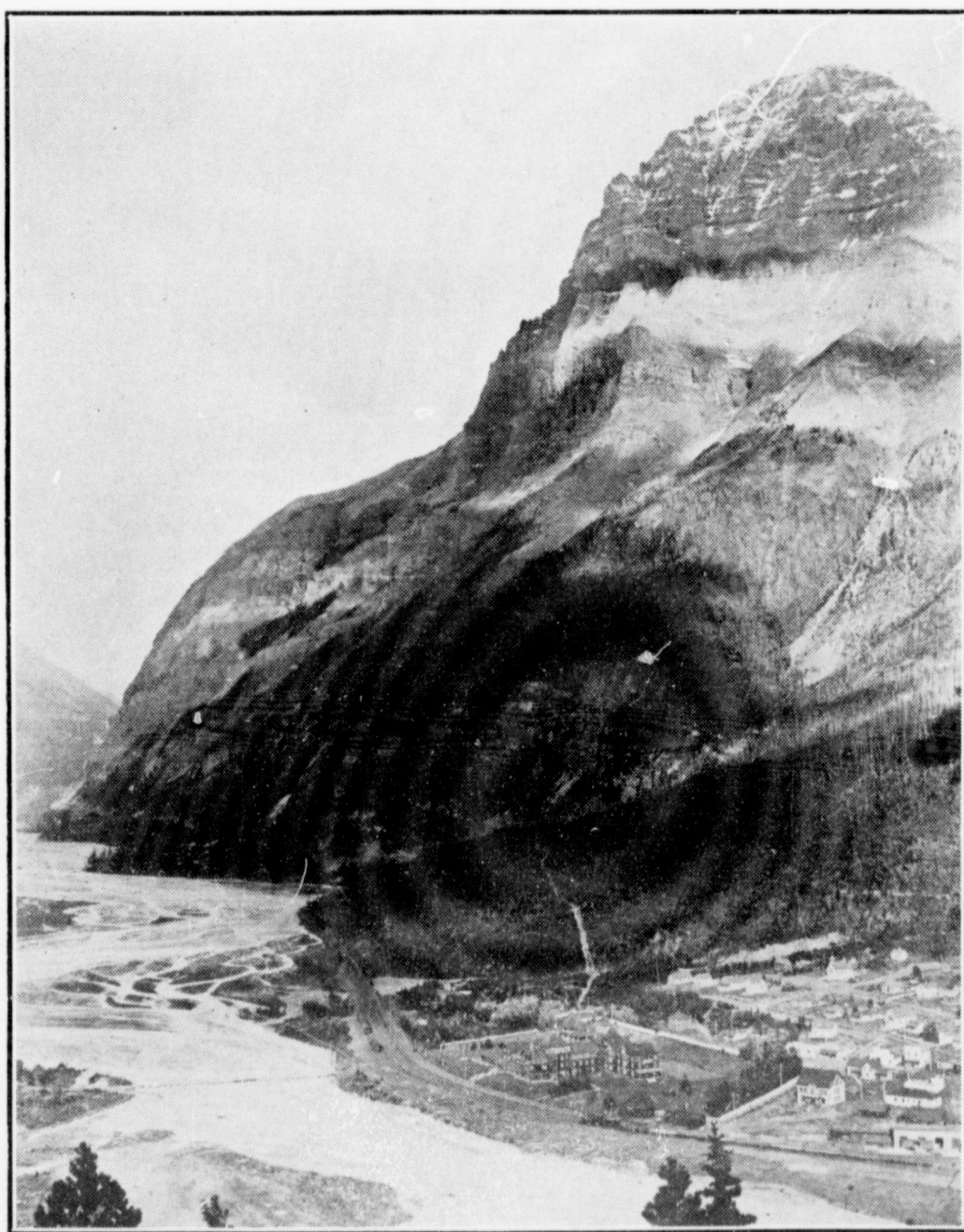
Panama Canal has matured a safe channel halving the former all-sea voyage in distance and time around South America.

Not a "Sea of Mountains"

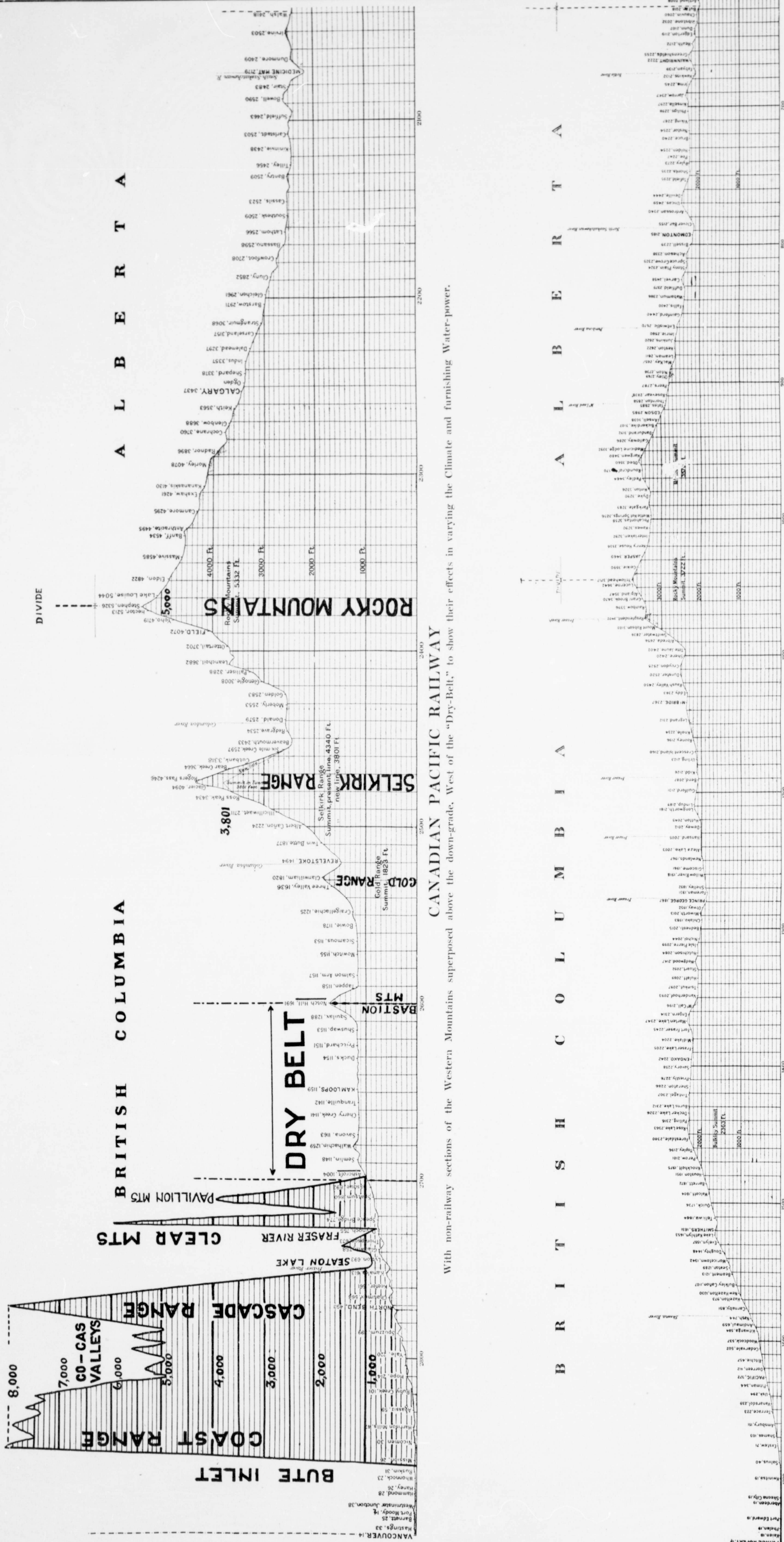
Readers should not let the prominence of the mountains in the above perspective view lead to the wrong impression that this province is "a sea of mountains," as an ignorant politician tried to make Canadian electors believe when trying to catch votes by trying to prevent the building of the C. P. Ry. to the Pacific Coast.

Had that unworthy decrier of this naturally rich part of the Empire and the healthiest part of Canada, simply referred to the Encyclopaedia Britannica XXXIII, page 124, he could have there seen that 71.6 per cent. of the 15,990 square miles area of Switzerland is described as "Productive," and that it supports a population of more than 3,300,000 persons, forming the healthiest and happiest nation in the world—though it has none of the maritime advantages British Columbians enjoy.

British Columbia is like an enlarged replica of Switzerland, expanded to about 22 times its size, and on that basis it might be argued that British Columbia could ultimately support about 70,000,000 people, whereas its population is now only about 450,000. But there is good reason to believe that it will ultimately maintain about 100 times its present population.



Profiles of the Grand Trunk Pacific and Canadian Pacific Railways Across British Columbia and Alberta



CANADIAN PACIFIC RAILWAY

With non-railway sections of the Western Mountains superposed above the down-grade, West of the "Dry-Belt," to show their effects in varying the Climate and furnishing Water-power.

GRAND TRUNK PACIFIC RAILWAY—FROM THE PACIFIC OCEAN TO THE ALBERTA-SASKATCHEWAN BOUNDARY

Because this railway is 20 per cent. longer than the Canadian Pacific Railway between the Pacific Coast and Saskatchewan, the above profile is reduced to 80 per cent. of the scale used for the C. P. R. profile below, to present each on the largest scale the page can show. That reduction foreshortens the G. T. P. profile, as evidenced by its maximum height at the "Divide," registering 3,717 feet, compared to the 5,326 feet at their "Divide," which is 1,609 feet, or 43 per cent., higher than the G. T. P. These two profiles, as railway sections across British Columbia, indicate the general altitudes and undulations of the country traversed. They are typical of the topography of British Columbia, which dips to lower altitudes across the central and northern latitudes of the province.

But both profiles, by grading down river routes to their Pacific ports, fail to portray the existence of the Coast Range, Cascade and minor mountain chains, which we have projected above the wavy down-grade of the C. P. R. profile below, to direct attention to their existence straight westward along latitude 50° 20' shown by the egg-marked horizontal line shown on the "Climatological." That mountain barrier from Ashcroft, on the western fringe of the Dry Belt, forced the C. P. R. constructors to turn southward from that station to Hope, where the western trend along the Fraser River led. The undulations of the Coast Range extend from Vancouver up to Alaska, with branches therein at the valleys of the Fraser, Bella Coola, Skeena and Neus rivers, shown on the map of drainage basins.

# Ocean Shipping from the Port of Vancouver

THE Canadian Pacific directors were quick to realize the immense importance of the Pacific Ocean trade to their railway's prosperity. They therefore in 1891 decided by a bold stroke of policy to bring the ports of China and Japan within the sphere of their activities, by developing their now well known lines of "Empress" steamships to run regularly between Vancouver, Yokohama, Hong Kong, etc.

Since then, the original trio of transpacific ships have been steadily increased by the addition of ships of about threefold the individual capacity of the original combined passenger and freight vessels.

During the present year, the transpacific trade has so rapidly increased that the company has found it necessary to greatly extend its pier and wharfage accommodation at Vancouver.

As readers generally are not concerned as to whether ocean traffic to and from British Columbia ports comes in ships owned by the Canadian Pacific Railway Company or other owners, we do not tabulate their records separately, because we consider that readers will be more interested in the collective results shown in the article and tables under the headings of Imports and Exports.

The following are the regular lines in operation from Vancouver:—

*The Canadian Pacific Ocean Services, Ltd.*—Transpacific lines to China and Japan and Manila, with the S.S. "Empress of Russia," "Em-

press of Asia," "Empress of Japan," "Monteagle" and "Methven," are now operating according to schedule.

Canadian Pacific ships at present diverted from this port and temporarily employed by the Canadian and British Governments transporting troops, etc., returning across the Atlantic, comprise eight vessels.

*The Canadian - Australasian Royal Mail Steamship Line* (operated by the Union S.S. Co. of New Zealand, Ltd.), comprising the new steamer "Niagara" and the "Makura," gives a four-weekly service to Honolulu (Hawaiian Islands), Suva (Fiji), Auckland (N.Z.), and Sydney (Australia), with connections to all other New Zealand, Australian and Tasmanian ports. This Company also operates cargo steamers at short intervals from Vancouver and other Pacific Coast ports to New Zealand and Australian ports.

*The Ocean Steamship Co., Ltd.*, and *The China Mutual Steam Navigation Co., Ltd.* (Blue Funnel Line, local agents, Dodwell & Co., Limited) operates a four-weekly service between Vancouver and Manila, P. I., via Japan and China ports. Owing to the war, the direct service between United Kingdom and Vancouver, via Panama, was temporarily suspended, but it is expected will shortly be resumed.

*Harrison Direct Line*—Pacific Coast agents, Balfour, Guthrie & Co.—operates a direct service between United Kingdom ports and Vancouver

via Panama Canal. This line was kept in operation during the war until all the remaining vessels were commandeered by the British government. This service was maintained in spite of the heavy losses endured, the line having lost 24 vessels sunk by submarines, raiders and mines, and also despite the heavy demand for its vessels in other services. The line has already resumed sailings and will return to the regular monthly service as soon as it can possibly be arranged.

*East Asiatic Line*—Local agents, C. Gardner Johnson & Company, has been temporarily suspended owing to the war.

*Osaka Shosen Kaisha*—Regular sailings every two weeks from Vancouver to all ports in Japan and China, also Vladivostok, Singapore, Bombay,

*The Canadian Robert Dollar Steamship Co., Ltd.*, operates a monthly service from Vancouver to Oriental ports, making calls at Shanghai, Hongkong and Manila. The boats operated on this run comprise the "Melville Dollar," "Harold Dollar," "Bessie Dollar" and two chartered boats.

*The Maple Leaf Steamship Company, of New York*—This service will resume sailings in October.

*The Ocean Transport Company, Ltd.*, operates a direct monthly service of fast freight steamers between Yokohama, Kobe, Shanghai, Manila, Hongkong, Singapore and the Pacific Coast. Local agent, B. W. Greer.

# Coastwise Shipping from the Port of Vancouver

THE *Canadian Pacific Railway Company's British Columbia Coast Steamship Service*: The following are the regular lines at present in operation:

Vancouver-Victoria double daily mail service in connection with the transcontinental railway, comprising S.S. "Princess Adelaide," S.S. "Princess Charlotte," S.S. "Princess Alice" and S.S. "Princess Royal."

The three-funnel twin-screw steamers, S.S. "Princess Charlotte" and S.S. "Princess Victoria," make double daily service to and from Vancouver, Victoria and Seattle.

The new steamer, "Princess Margaret," built for the above lines, has been taken over by the Admiralty.

The turbine steamer, "Princess Patricia," operates a summer months' double daily service between Vancouver and Nanaimo, continuing one round trip per day during the winter.

The S.S. Charmer plies between Vancouver, Nanaimo, Union Bay, Comox and Powell River, making three trips weekly.

The S.S. "Princess Alice" and "S.S. "Princess Mary" sail every week to Skagway, calling at Alert Bay, Prince Rupert, Ketchikan, Wrangell and Juneau.

The S.S. "Princess Ena," carrying freight, makes regular sailings between Vancouver and all coast points on the mainland and on Vancouver Island, also making connections for Skidegate and other points on Queen Charlotte Islands.

The S.S. "Princess Beatrice" operates weekly to Butedale, calling at Powell River, Campbell River, Quathiaski Cove, Blind Channel, Alert Bay, Rivers Inlet Canneries, Namu and Ocean Falls.

The S.S. "Princess Maquinna" gives a service between Victoria and West Coast of Vancouver Island, sailing on the 1st, 10th and 20th of the month.

Tugs "Nanoose," "Qualicum," "Nitinat" and "Dola" tow car ferry barges, Transfers Nos. 1, 2, 3, 4, 6 and 7, conveying railway freight cars between Vancouver, Esquimalt, Ladysmith, Newport, Genoa Bay and James Island.

Balfour, Guthrie & Company are also Pacific Coast agents of the Australian Commonwealth line of steamers owned by the Australian Government and operating between Australian ports, British Columbia and other points on the Pacific, and it is hoped that a regular service will shortly be arranged.

*Pacific Steamship Company* (successors to Pacific Coast Steamship Company and Pacific Alaska Navigation Company.)

Steamers "President" and "Governor" calling at Vancouver every week in the B. C. Puget Sound-California service. Freight only.

Steamers "Admiral Watson" and "Admiral Evans"—Vancouver-Southwestern Alaska service, by way of Seattle.

Steamer "Senator," Vancouver to Nome, St. Michaels and Kotzebue Sound ports, service by way of Seattle, during the open season.

Additional freight service is provided between any of these routes when conditions require same.

*Grand Trunk Pacific Coast Steamship Co.*—Operates the three-funnel twin-screw 3,500-ton steamers, S.S. "Prince Rupert" and "Prince George," speed 18½ knots, in a bi-weekly service, Vancouver to Prince Rupert and Anyox, and Vancouver to Victoria and Seattle.

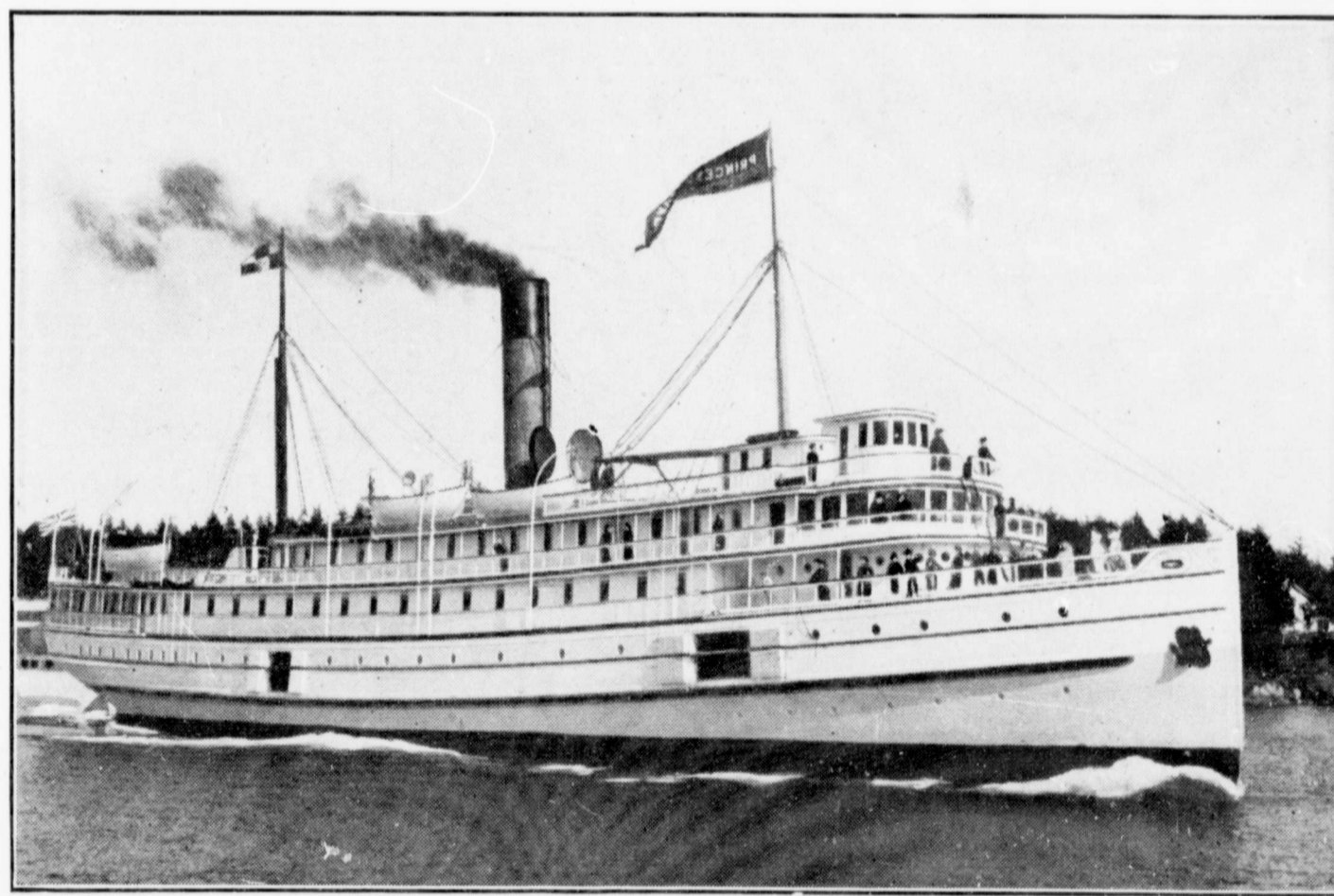
S.S. "Prince John," weekly service from Prince Rupert to Queen Charlotte Island points.

the Skeena and Naas Rivers. It also provides frequent sailings to Van Anda, Powell River, Lund and Campbell River.

Its fleet consists of the following steamers: T.S.S. "Chelohsin," T.S.S. "Cowichan," T.S.S. "Venture," S.S. "Camosun," S.S. "Cheakamus," S.S. "Cassiar," S.S. "Coquitlam," S.S. "Chasina," S.S. "Chilco" and S.S. "Chilliwack."

These steamers run under contract to the Trade and Commerce Department and also the Post Office Department for the carriage of mails to all points.

*Halibut Fleets*—*New England Fish Company* operates out of the port of Vancouver in the halibut fishing, the S.S. "New England," the auxiliary power schooner Tyee, and the auxiliary gas



ONE OF THE SMALLER BOATS IN B. C. COAST SERVICE

S.S. "Prince Albert" to Prince Rupert and way points fortnightly.

*The Terminal Steam Navigation Company, Ltd.*, operates daily between Vancouver and Howe Sound, S.S. "Ballena" from Vancouver to Newport and connecting with the Pacific Great Eastern Railway, the S.S. "Bowena" to Bowen Island and the S.S. "Britannia" to Bowen Island and way points.

*Union Steamship Company of B. C., Ltd.*, head offices, Vancouver, agencies in Prince Rupert and Victoria, affords a weekly service to Ocean Falls, Surf Inlet, Prince Rupert, Anyox, Port Simpson, Port Essington, all canneries on

schooners Tartoo, Tassoo, Inskip, Skaler, Kitgora, Kano and Nesto.

*The Canadian Fishing Co., Ltd.*, operates the S.S. "Celestial Empire," S.S. "Flamingo," S.S. "Kingsway," S.S. "Canada," S.S. "Imbricaria" and the auxiliary power schooners "Pescawha" and "Carlotta G. Cox."

*Mosquito Fleet*—The local fleet of tugs and barges required to tow logs and for carrying supplies to and from the lumber mills and logging camps, and the fleet of fishing boats and steamers employed in the salmon and deep-sea fishing, aggregate several thousand tons and are constantly being increased.



# Harbours and Docks of British Columbia

IT MAY be said without exaggeration that every year adds to the importance of the many natural harbours situated in British Columbia. It is intended, therefore, in this article to deal briefly with those ports which, from their situation, extent and resources, are likely to figure prominently in the future.

Starting from the north and working southwards, the first harbour of commercial consequence is that known as Prince Rupert, situated on Kaien Island, adjoining the Tsimpsean Peninsula. This harbour is of special interest since it serves as the western terminus of the Grand Trunk Pacific Railway.

The harbour itself is landlocked, spacious and free from rocks. It is about 14 miles in length and has an entrance about 2,000 feet in width at its narrowest point. It is, further, of considerable depth and affords excellent anchorage for vessels of almost any size.

About 550 miles south of Prince Rupert is the world-famous port of Vancouver. This harbour is undoubtedly one of the finest on the coast. The anchorage is entirely landlocked, with an average depth of from 15 to 18 fathoms at low water. In the short neck between Stanley Park and West Vancouver, known as the First Narrows, and forming the entrance to the anchorage, a current of from six to eight knots per hour is encountered; in the harbour itself, however, there is no current of any kind. As is uniformly the case on the west coast of the Dominion, both pilotage and dock dues are very moderate. The wharves, which are owned by the Canadian Pacific Railway, the Grand Trunk Pacific Railway and several private firms, are equipped in the most up-to-date fashion, and contain every facility for the rapid handling of the already considerable passenger and freight traffic which passes through the port.

The future of Vancouver as a shipping port is not open to doubt. It is, indeed, more than probable that when the resources of the Dominion are fully developed it will form one of the most important ports of the world.

Masset Inlet is the first harbour reached after leaving Skidegate, and is situated 90 miles due west of Prince Rupert. There is a bar at the entrance which is at present a great drawback, but which can be removed, being an outcrop of sandstone rock. There is about 12 feet of water at low tide, so that at most stages of the tide it is navigable for average steamers.

The tide is very strong at the entrance to Masset Inlet, as the channel is only half a mile in width for 15 miles, when the inlet opens to a beautiful sheet of water dotted with islands. The channel is quite deep, and any vessel coming into the harbour would have amply water all the way up to the head of the inlet.

The shores of the inlet are more abrupt than those of Hecate Strait and Dixon Entrance, there being frequent signs of sandstone and hardpan outcrop. There is usually a clay bank from 20 to 50 feet high and a ridge along the immediate shore.

Victoria is situated to the southeast of Vancouver Island, which should not be confused with the City of Vancouver on the mainland. This spot was chosen in 1841 as the administrative centre and the chief depot of the western department of the Hudson's Bay Company. After acting for some years as the capital of the old colony of Vancouver Island, on the union of colonies in 1886, became the capital of British Columbia. The harbour, which has much in the way of scenery to recommend it, was at that time in every way equal to the requirements of such shipping as came to it.

With the advent of larger vessels, however, the disadvantages of the port have become more noticeable, and today ocean-going vessels, such as the Eastern liners of the Canadian Pacific Railway, are compelled to make use of what is known as the outer harbour.

The inner harbour, which constitutes the old port, is only suitable for vessels of comparatively shallow draught, as the channel leading to the wharf is both tortuous and encumbered with shoals. The average depth, however, has been dredged to 20 feet at low water, and the coasting steamers which berth here, though drawing no more than 15 feet, are very commodious and splendidly equipped. The port possesses large and roomy warehouses and every facility for handling cargo in large quantities.

## DOCKAGE AND WAREHOUSE FACILITIES

### ON SOUTH SIDE OF BURREARD INLET.

#### Canadian Pacific Railway Company:

Total length of existing wharf line .....	5,440 ft.
Extension Pier "D" .....	1,292 ft.

6,732 ft.

Total area of present wharves .....	537,720 sq. ft.
Extension Pier "D" .....	89,860 sq. ft.

627,580 sq. ft.

Total area of present sheds .....	262,700 sq. ft.
Extension Pier "D" .....	76,800
Extension Shed I .....	8,250

347,750 sq. ft.

Pier "A"—700 ft. long, 184 ft. wide.
Pier "D"—400 ft. long, 150 ft. wide; extension, 542 ft.
Total length of pier when extension completed, 942 ft.

#### Grand Trunk Pacific Steamship Company:

Dock .....	550 ft. x 100 ft.
Shed .....	500 ft. x 70 ft.
Capacity .....	35,000 square feet.

#### Great Northern Railway (leased to Balfour, Guthrie & Co.):

Dock .....	470 ft. x 127 ft.
Shed .....	400 ft. x 100 ft.
Capacity .....	40,000 square feet.

#### Great Northern Railway (leased to The Dollar Steamship Co.):

Dock .....	470 ft. x 127 ft.
Shed .....	400 ft. x 100 ft.
Capacity .....	40,000 square feet.

#### C. Gardner Johnson & Co.:

Dock .....	700 ft. x 120 ft.
Shed .....	620 ft. x 90 ft.
Capacity .....	55,800 square feet.

#### Union Steamship Co. of B. C., Ltd.:

Dock .....	435 ft. x 90 ft.
Capacity .....	66,086 square feet.

#### New England Fish Co. and Canadian Fishing Co., Ltd.:

Main Dock .....	180 ft. x 140 ft.
Shed .....	140 ft. x 110 ft. (double-decker)
Total Capacity .....	56,000 square feet.
Cold Storage Dock .....	210 ft. x 136 ft.
	180 ft. x 96 ft. (4 stories high)

#### Government of Canada:

Wharf .....	800 ft. x 300 ft.
Shed No. 1 .....	678 ft. x 80 ft.
Capacity .....	42,000 square feet.
Shed No. 2 .....	843 ft. x 97 ft. 9 in.
Capacity .....	82,305 square ft.

#### Evans, Coleman & Evans:

Pier No. 1—Dock .....	600 ft. x 91 ft.
—Shed .....	590 ft. x 62 ft.
—Capacity .....	36,580 square feet.
Pier No. 2—Dock .....	732 ft. x 100 ft.
—Shed .....	632 ft. x 75 ft.
—Capacity .....	54,865 square feet.

The harbour of Esquimalt, distant about four miles from Victoria, is one of the best on Vancouver Island. It is safe in approach, both by day and night, with an average depth of 30 feet at low water. For over 40 years the British Pacific squadron was stationed here, and until its removal Esquimalt possessed an efficient naval dockyard. This was dismantled. The drydock, however, remains in constant use. It is the only one of its kind to be found on the Coast, and is greatly valued by shipping on that account.

The harbour of Esquimalt is in many respects so superior to Victoria that the visitor, comparing the two sites, is led to wonder how it came about that the latter was preferred as that of the capital of the province. The explanation is to be found in the nature of the surrounding country, to clear which required more labor in 1841 than the Hudson's Bay Company was prepared to devote to the work. Much of the glory of Esquimalt departed with the Pacific squadron.

Nanaimo is a safe land-locked haven, situated on the eastern coast of the island, and a distance of about 73 miles from Victoria and 33 from Vancouver. The depth of the water throughout is similar to that of Esquimalt, and the anchorage is sheltered from the strong winds of the Straits of Georgia, locally known as the "Gulf," by Protection Island, which thus daily earns its name.

The city boasts of a population of about 10,000 persons and is second in size and importance on Vancouver Island. Coal mines are being worked in the neighborhood, and the port is equipped with every facility for loading of coal, either for bunkering or cargo.

New Westminster, on the mainland, is situated 15 miles from the mouth of the Fraser River. The ocean trade of this port is limited. A number of steamers, however, ply from New Westminster to various towns on the river. Vessels drawing 20 feet can reach port on flood tide. The Royal City, however, cannot be compared with Vancouver and Esquimalt.

The salmon-canning industry attracts a certain number of ocean-going vessels to Steveston, at the mouth of the Fraser. The town, however, cannot properly be included among the large shipping ports of the province.

Ladysmith, Boat Harbour and Union Bay may be mentioned together as forming with Nanaimo the principal coaling stations of the Coast. All these ports are provided with every modern appliance for the loading of ships with coal. These harbours provide safe anchorage, with sufficient depth of water for every class of vessel.

It is interesting to note that there are but few satisfactory harbours to be found on the western shores of Vancouver Island, since the depth of the water in the various inlets is such as rarely to permit vessels to anchor. About 8 miles from Victoria is William Head, where the Dominion Quarantine Station is situated. With the exception of certain coasting vessels, which are examined by health officers at Victoria, all ships trading from foreign ports to British Columbia are boarded here by medical officers, who give a clean bill of health or detain the ship as the case may be. The station itself is well equipped and carefully organized.

A shipping regulation of considerable importance is that which enacts that cargo from one provincial port to another shall be carried in British or Canadian bottoms. A similar enactment by the United States Government prohibits British and Canadian ships participating in the coastal trade of America. Towage off the western coast is almost entirely in the hands of American owners. As, however, by the regulation just mentioned, an American tug would be prevented from bringing a British ship from one provincial port to another, certain American tugs are sailed under the red ensign.

Finally, it may be noted the navigation along the entire coast requires the most careful study. Beyond the shelter of the islands, rough seas are frequently encountered, whilst in the channels the tides are often a source of danger to the unwary. Vessels wishing to pass through Seymour Narrows plan to reach that point at slack water, for so great is the rush of the tide at other times that no boat can safely steam against it, whilst to run before it would be to court disaster, and at numerous other points on the coast a knowledge of the prevailing conditions is similarly essential to successful navigation.

There remains, however, a great number of safe harbors, many of which, though unknown today, are destined to become of no little importance in the future. The one outstanding port is that of Vancouver, and it may be repeated that this port will ultimately become one of the most important ports of the world.

A modern port developing policy has recently been adopted for Vancouver by the government of Canada and the harbor commissioners of Vancouver. Better facilities for handling the increasing volume of cargo and improved accommodation for the thousands of travellers, who pass through this city on their way to the Orient, are the principal features of the proposed expansion.

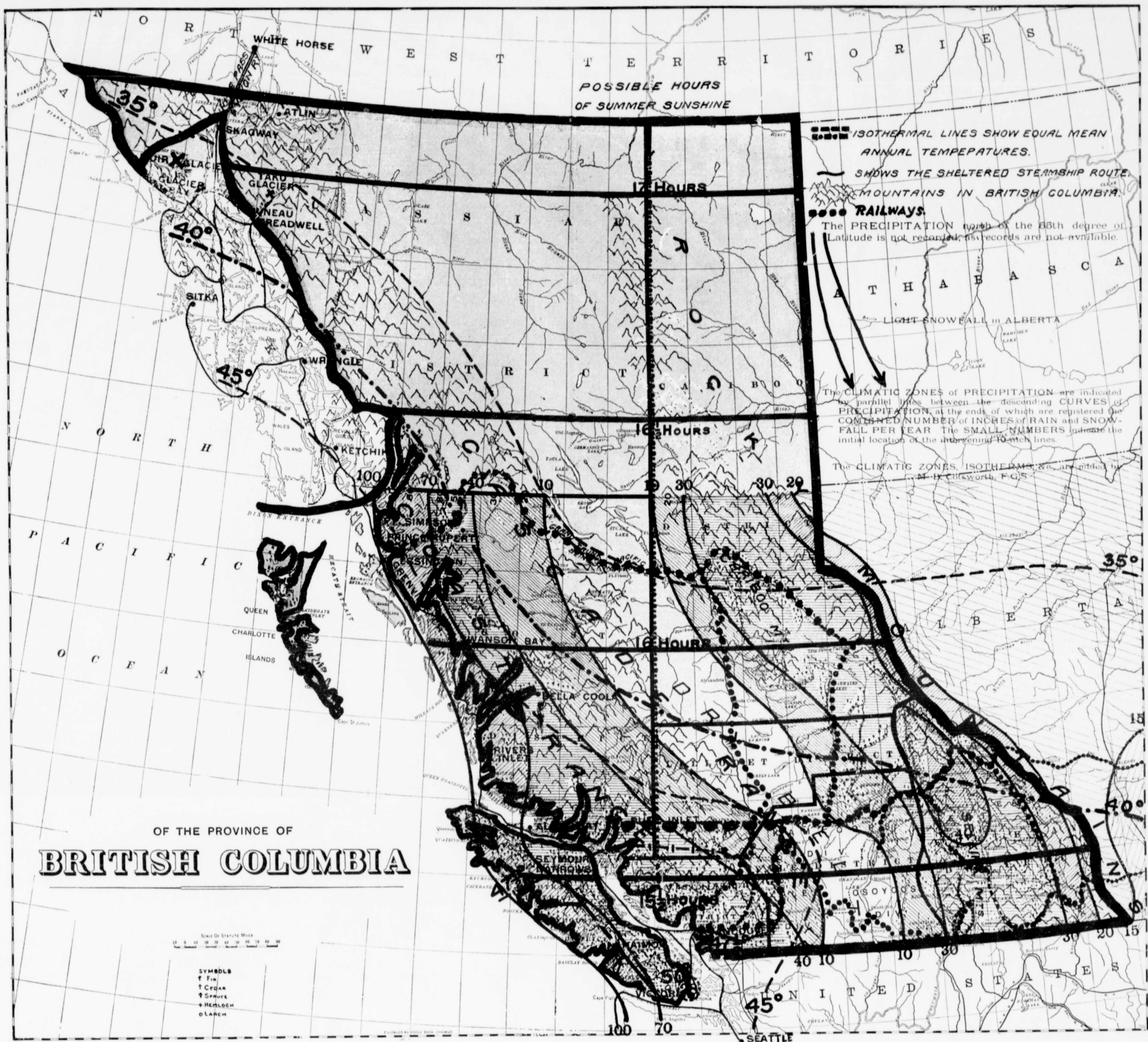
Two large double deck reinforced concrete piers are projected, one to be built by the Canadian Pacific Railway Company at a cost of approximately \$4,000,000, and for which the contract for the dredging and filling has already been awarded, and the other pier by the Canadian government, valued at \$5,000,000, which is to be finished by the end of 1921.

Both these docks will be capable of berthing four ships at the same time, with a separate compartment for the cargo from each boat.

Not only has the government given attention to cargo and trade accommodation, but steamers arriving at Vancouver and requiring repairs will be able to receive the necessary attention without going to some other port. This service will be rendered by the new government drydock, capable of taking the largest boat which has ever passed through the Panama Canal. The dock is to be built by the Coughlan Shipbuilding Company, under subsidy from the Dominion government, and is to be completed by the end of 1921.

No effort is being spared to make Vancouver a modern port on the Pacific.

## Climatic Advantages



THE extraordinary climatic advantages of British Columbia are derived from the important factors we have outlined on the above map, and here briefly described in the order of their importance:—

1. **LATITUDE**—Its latitude, ranging from 49° to 60° North, establishes it within the healthiest range of the temperate zone, wherein the most vigorous races of mankind always tend to develop and prosper.

2. **MARITIME**—The fact of this being a maritime province, embracing the whole of Canada's western coast-line, is further enhanced by the controlling factor of the earth's rotation causing the prevailing winds to come across the Pacific Ocean to this Coast laden with moisture, which adds immensely to the potential wealth and developing advantages of British Columbia—as amply evidenced by the chapters briefly noting the extent of water-powers, navigable rivers, lakes, etc.

3. **JAPANESE CURRENT**—The beneficial influences of the warm Japan current which, while adding to the moisture value, moderates the climate up the whole length of the British Columbia coast to the Alaska boundary.

4. **MOUNTAINS**—The direction of the mountains which, happily for British Columbia, generally parallel the coast-line in a northwesterly direction from the southern boundary, as indicated on the above map. That northwesterly trend of the mountains is a controlling factor in regulating the distribution of the rainfall throughout the province, and providing that valued shelter for the great valleys trending in the same direction. Had the mountain trends been east or west, the fertile valleys would have been wind and storm

swept worse than the prairies and northern states of U.S.A., whence the storm-worn settlers come to British Columbia to enjoy the sheltered climate during their winters and later years of retirement.

5. **FERTILITY**—The fertile nature of the soil is generally derived from the wonderful effects of glacial erosion during the immense period of glaciation, which deposited the silt and glacial soils along the valleys, former lake bottoms, deltas of rivers; also the large areas of bench-lands and plateaus upon which much of the best fruit-growing land is located.

6. **RAINFALL**—The distribution of the rain-falls is noted on the map by the curved medium lines which parallel the coast and are numbered 100, 70, 40 and 10, denoting those numbers of inches of rain falling on the average, per year—100 inches up the West Coast of Vancouver Island and the Mainland Coast northwards—but not including Queen Charlotte Islands, which, through having fewer mountains of about half the height of those along the 100 inches and over coast-line, only has an average of about 55 inches.

The 70 inches precipitation curve runs up the centre of Vancouver Island, and thence along the western slope of the Coast Range mountains.

The 40 inches curve begins on the southern boundary at the 121st Meridian and trends off to the 129th Meridian at the central line across the province, up to which observations have been taken.

The 10 inches rainfall curve is shown from the 120½ Meridian on the south to 126½ on the central line, forming the western boundary of the "Dry Belt" that is bounded on the east by the 10-inch curve line, east of which extends the 30-inch belt, near the centre of which is the oval 40-inch rainfall area developed by the moister air

current reaching that zone up the great Fraser Valley, through which the Canadian Pacific Railway operates.

7. **SUNSHINE**—The central dotted line down the 124th Meridian registers the maximum hours of sunshine on mid-summer day, extending from 15½ hours in the south to 17½ hours on the northern boundary.

As sunshine is a great factor in promoting vegetable and animal growth and the prosperity of settlers, it is worthy of note that in the settled portions of British Columbia the yearly hours of sunshine nearly double those of Great Britain. That is one reason why British Columbia fruit trees produce about twice the amount of fruit the same kinds of trees produce in Britain.

The long hours of summer sunshine enjoyed in the northern territory enable wheat, etc., to be harvested about 90 days after it is sown; therefore, some farmers can earn much in shorter seasons, and by co-operation, groups can come down to the Coast to live comfortably through the winter season.

8. **TEMPERATURE**—The mean annual temperatures are indicated by the dash lines showing 50° around Victoria, 47½° for the rest of Vancouver Island and the Vancouver district on the mainland; 45° along the Northwest Coast; 40° from Southern Alaska to Southern Alberta, and 35° from the northwestern boundary to Central Alberta.

9—The dotted curves mark the tracks of the chief railway lines, whose profiles on the following page serve to explain how the rain and snow-fall is varied and re-laid.

All the above combined give to British Columbia a greater diversity of climate and more advantages than possessed by any other country.

# Lands and Land Settlement

**P**UBLIC lands are administered by the minister in charge of the Department of Lands. All inquiries connected therewith should be directed to the Deputy Minister of Lands at Victoria, B.C.

The total area is about 248,488,320 acres, including lakes, mountains and waste land.

The greatly broken and varied nature of British Columbia's area, when contrasted with the flat prairie provinces, should be considered by the prospective settlers. The larger areas available are in the Central Interior and Peace River districts. Land suitable for settlement in the West Coast, Southern Interior and the Kootenay is generally scarce, because settlers and purchasers have naturally taken up those areas first. Except in the Peace River District few areas of farming extent are ready available for the plough.

In most districts considerable land clearing costs have to be incurred before land can be brought under cultivation.

Approximately 41,814,991 acres have been disposed of thus:

	Acres
Crown granted .....	12,278,841
Indian reserves .....	753,931
Railway grants .....	4,138,334
Railway belt (administered by Dominion Government, Interior Department) ..	17,050,000
Peace River block (administered by Dominion Government, Interior Department) ..	3,500,000
Kootenay road reserve .....	288,000
Applications to purchase .....	511,932
Pre-emptions .....	992,001
Surveyed mineral claims .....	409,066
Park and game reserves .....	1,892,886
	41,814,991

In 1918 there were 206,673,329 acres still vested in the crown by right of the province, made up as follows:

	Acres
Timber licenses and leases surveyed ..	7,685,029
Timber licenses and leases unsurveyed ..	2,385,097
University reserve .....	771,401
Lands under coal and grazing licenses and leases .....	648,480
Reverted lands surveyed .....	1,887,000
Reverted lands unsurveyed .....	342,000
Surveyed for pre-emption .....	2,586,978
Unalienated and unsurveyed lands .....	190,367,344
	206,673,329

## Leasing and Crown Granted Land

Provision is made in the Land Act for granting leases for homesite purposes, not exceeding 20 acres, subject to the performance of specified residence and improvement duties, among them being the erection of a dwelling during the first year of tenancy. The lessee is entitled, at the expiration of this lease-term, to a free crown grant, provided all the terms of the lease have been fulfilled.

Provision is also made for granting leases in any desired area for grazing or industrial purposes, but the greater part of the crown range will be administered under the "Grazing Act" (1919) by an annual permit system, instead of long-term leases.

Regulations applicable thereto may be obtained from the commissioner of grazing, or the lands department in Victoria, showing the procedure to be followed in forming grazing districts and associations.

## Pre-emptions

Any unoccupied, unreserved and surveyed lands (not being part of an Indian settlement) may be pre-empted—that is, a free grant of 160 acres may be obtained on the completion of certain residence and improvement duties as prescribed in the "Land Act." These are briefly:

Any British subject, being the head of a family, a widow; a feme sole over 18 years of age and self-supporting; a woman deserted by her husband, or a bachelor over 18 years, may, for agricultural purposes only, pre-empt land to the extent of 160 acres, but such right shall not extend to foreshore or tidal lands, nor to the bed of the sea, nor lands covered by navigable waters.

Any alien, upon making a declaration of his intention to become a British subject, may also acquire the right to pre-empt.

Application in the form of a statutory declaration showing nationality, land applied for, that the land is not timber land, should be made

to the commissioner for the district, accompanied by a fee of \$2. After the record is granted the pre-emptor must enter into occupation within 60 days of the date of record, and upon completion of actual improvements to the extent of \$10 per acre, including the clearing and bringing under actual cultivation of at least five acres, and five years' residence (defined as continuous *bona fide* residence of the pre-emptor or his family on the land recorded by him) he shall be entitled to receive a certificate of improvement therefor, the fee for which is \$2, and a crown grant of the land on the payment of \$10.

Provision is made whereby a pre-emptor can obtain a record and not enter into immediate occupation, but in this case he must spend each year \$300 in actual improvements (exclusive of buildings) and file proof each year of having done so. He must reside on the land for two years before issue of the crown grant, which will not be issued until at least five years after the date of the pre-emption record.

Intending pre-emptors should apply to the Deputy Minister of Lands at Victoria for full information.

## Lands for Purchase

Any unoccupied and unreserved crown lands (not being part of an Indian settlement) may be purchased, but crown grants will not issue until the land has been improved in accordance with the Land Act.

If land sought to be purchased is surveyed, the application must be accompanied by 25 per cent. of the purchase price according to classification, i.e., for first-class land, \$5 per acre, or for second-class land, \$2.50 per acre. The balance to be payable in three equal annual instalments, together with interest at 6 per cent. on the unpaid balance.

If the land is unsurveyed, it must be staked, advertised, and applied for in accordance with the Land Act. The application to be accompanied by a deposit of 50 cents per acre.

If the application is accepted, the land must be surveyed at the expense of the applicant and payment made in full within six months from the date of acceptance.

The Land Settlement Board was appointed in 1917 to administer the Land Settlement and Development Act. Its primary purpose is to promote increased production in British Columbia.

The board does not administer unalienated crown lands which still remain under the direct control of the Minister of Lands.

To facilitate profitable occupation of lands already alienated, the Board gives special attention to crown granted lands convenient to transportation and markets.

These lands are being gradually acquired by the board and offered for sale on easy terms of payment and on reasonable conditions of occupation, improvement and cultivation to *bona fide* agricultural settlers who are qualified and willing to assume the responsibilities of Canadian citizenship.

Important reclamation and development works are also being carried on in connection with various dyking, draining and irrigation projects.

The loaning of money to farmers for development purposes is another feature of the board's work, particulars of which may be obtained on application to the secretary of the board in the Parliament buildings at Victoria.

On agricultural lands under the jurisdiction of the board, any returned soldier, having been a resident of British Columbia previous to enlistment and service in the Canadian or Imperial Expeditionary Forces, is entitled to one abatement of \$500 on the price of land purchased by him through the Land Settlement Board, title to which will be granted only after the balance of the purchase money has been paid and all other conditions of occupation, cultivation and other settlement duties are complied with.

Returned soldiers buying land from the Land Settlement Board, whether previously resident in British Columbia or not, are entitled to make application to the "Soldier Settlement Board of Canada" for a loan under the provisions of the "Federal Soldiers' Settlement Act."

The Land Settlement Board aims to make it possible for the intending farmer to help himself

to earn a fair living under congenial circumstances.

While partly paternal in its control, the board is not a benevolent institution, but conducted on business principles and practical lines to facilitate settlement of the most desirable unoccupied agricultural lands. Settlement areas are being selected in different districts where climatic and soil conditions are suitable for various classes of agricultural and horticultural enterprise.

## British Columbia Soldiers' Settlement

The British Columbia Government have appointed a special superintendent in the Parliament buildings, Victoria, to facilitate: first, soldier housing under the Better Housing Act; second, agreements with cities and municipalities conserving the Dominion Government's loan for housing accommodation; construction of houses on soldiers' homesites, and general supervision of soldier settlement in British Columbia.

## Social Life

In the coast and interior cities where railways, roads and steamship facilities for transportation are available, the conveniences and enjoyment of social life are noticeably prevalent. Water supply needed for healthy development is abundant as evidenced by the numerous rivers, lakes, etc. The great value of that abundant supply now being also used for developing electric light and power adds much to the comforts and economic advantage of the people in driving mill, farm and other appliances. It is also of great value for irrigating the great fruit and other areas in the dry belt zone.

The mild climate encourages outdoor life and enhances the pleasure of golfing, yachting, boating, fishing, etc., throughout the province. These are abundantly available around the larger cities of Vancouver, Victoria and Prince Rupert, and so counteract the dangers of over-crowding, which is largely precluded by the ramifications of the arms of the sea, ensuring fresh air and open spaces.

About one-half of the province's population of 400,000 are settled in and around the coast cities, the other half being resident in the comfortably sized interior towns and rural communities.

The newness of the country provides an ever-extending amount of work in railway, road, bridge, trail and ferry building; clearing of land, farming, mining, fishing, building up and carrying on new industries, new houses, buildings and settlements. Those ensure that no one willing and able to work with energy and perseverance, need lack a reasonable living.

While new settlers of hardy white nationalities are desirable, there is also wide scope for more capital to be invested in the above mentioned productive works.

British Columbians generally enjoy practically all the requisites of social life. Nearly every community has its churches of various denominations, and good schools serve every settlement having more than ten children of school age. High schools are established in all the larger cities and leading agricultural areas. The University of British Columbia is progressing steadily in Vancouver. By those facilities the education of British Columbia children in both religious and secular knowledge is amply provided for.

All important points can be reached by railway, steamboat or public roadways. Hotel accommodation is provided for business, travel and pleasure.

Hospitals have been established at suitable points by the provincial and civic authorities, varying in size from the largest in Vancouver, having 1,000 beds, to the smaller scattered hospitals having six or eight beds for patients. Where a hospital has not been provided, the government gives a grant in aid to the local medical man to secure his services for cases where a sparse population could not otherwise support a medical practitioner.

Newspapers are almost too abundant. Nearly every business community of more than 1,000 inhabitants has its weekly paper; while such cities

as Vancouver, Victoria and Prince Rupert have daily newspapers, both morning and evening. Smaller cities, such as New Westminster, Nanaimo, Kamloops, Vernon, Nelson, etc., issue morning or evening papers daily.

The climatic conditions resemble those of Great Britain and Ireland so far as the lower half of British Columbia is concerned, and like Sweden and Norway in the northern half.

Vancouver Island and the lower mainland south of the Canadian Pacific Railway have a climate similar to the South of England and France.

The lure of the coast advantages, beauties of the mountains and vales, added to the natural fertility of the soil and abundant sunshine, are yearly attracting increasing numbers of Canadians from the prairie and eastern provinces to remove to British Columbia.

These with other attractions of open-air life make British Columbia the ideal province for Anglo-Saxon settlers.

The increasing numbers of children in British Columbia schools evidences that this province is developing an increasing local population.

Experience proves that people who have lived in British Columbia, earned a competence and retired to their native countries, in the vast majority of cases quickly return to enjoy its greater freedom, lofty mountains, fertile valleys, majestic rivers, extensive lakes, rippling brooks and beautiful shores. They can seldom be satisfied to dwell outside this attractive province.



A SETTLED DISTRICT IN THE LOWER FRASER VALLEY

### Notes for Prospective Settlers

To the practical lumberman, miner, fisherman, farmer, horticulturist and dairyman, this province offers a comfortable living and ultimate independence, provided that he works right, uses his opportunities and perseveres. Skilled mechanics and trade union men have good chances for success. Reliable laborers who work aright do well, but other men without a trade, clerks and semi-professional men are warned that their chances for employment are not good.

Men and women who are unable or unwilling to turn their hand to manual labor in an emergency, are not encouraged to come to British Columbia unless they have sufficient money to support themselves for six months while seeking employment.

Settlers whose chances of success are good are men of small or moderate means, having energy, health and self reliance, with an aptitude to adapt themselves to new surroundings. Such a one should have almost \$2,000 to \$3,000 on arrival to make his first payment for land and support his family whilst awaiting returns from the sale of his produce. In some cases it is advisable to work for wages until he "learns the ways of the country."

To avoid risk of loss in transit, settlers are advised to place the bulk of their money in bankers or express companies drafts in their home land, payable at the desired point in British Columbia.

The Provincial Government agents will inform settlers concerning lands open for settlement, farms for sale, rates of wages, stores, banks, etc.

### Settlers' Effects

The following and similar articles classed as "Settlers Effects," are admitted into Canada free

of duty: Wearing apparel, books, usual and reasonable furniture and other household effects, instruments or tools of trade, occupation or employment; guns, musical instruments, domestic sewing machines, typewriters, bicycles, carts, wagons and other highway vehicles; agricultural implements and live stock for the farm, but not to include live stock or articles for sale, nor for use as contractors' outfit, nor vehicles or implements moved by mechanical power, nor machinery for use in any manufacturing establishment.

All the foregoing are free if actually owned by the settler for at least six months before his removal to Canada and subject to regulations by the Minister of Customs; provided that any dutiable articles entered as "Settlers' Effects" may not be so entered unless brought by the settler on his first arrival or otherwise cannot be disposed of without payment of duty until after twelve months' actual use in Canada.

### Live Stock

A settler may bring into Canada, free of duty, live stock for the farm on the following basis, if actually owned for at least six months before his removal to Canada, and has brought them into Canada within one year after his arrival, viz.:

If horses only are brought in, 16 allowed; if cattle only are brought in, 16 allowed; if sheep only are brought in, 60 allowed. If horses, cattle, sheep and swine are brought in together, or part

of each, the same proportions as above are admissible.

Duty is payable on live stock in excess of the above.

A mare with colt under six months old is reckoned as one animal. A cow with calf under six months old is reckoned as one animal.

### Land Clearing

Because land of agricultural fertility is largely located in the more or less timbered areas, the cost of, and time required for, land clearing needs careful consideration by prospective settlers. Logged-off or lightly wooded land should be inspected personally, and the cost of clearing and bringing into cultivation or seeding for pasture carefully ascertained.

The varied sizes and numbers of stumps per acre and present war-sprung prices of machinery, labor, etc., prevent reliable estimates of the cost of clearing from being quoted.

Inexperienced persons should not over-estimate their ability to clear land economically, but should either employ practical men or get reliable advice from the government agent in the district. Alder, small spruce and poplar rot quickly, but fir, cedar and pine need blasting out.

Settlers are recommended to consider the nature and location of the land, its distance from transportation facilities and markets, schools, water supply and other advantages, before selecting the land best suited for their requirements.

### Irrigation

The development of irrigation projects in the Southern Interior and in the Southern parts of the Kootenays is steadily progressing. Considerable areas have been irrigated by private enterprise and the Provincial Government is undertaking some extensive irrigation works in the south

of the Okanagan Valley, and has other projects under consideration.

Most of the best fruit lands in those districts require irrigation water during the growing season to mature full crops. In some sections irrigation is essential. The southeastern part of Vancouver Island, while producing fair crops under general conditions, would produce much more if irrigated in July and August.

So many factors of importance enter into the economic functions of irrigation systems, such as the necessary quantity of water needed to secure the best results on different kinds of surface and sub-soils, proper storage and distribution arrangements; the suitability of wooden lined steel and concrete flumes, etc., that it is satisfactory to know that these matters are receiving the careful consideration of the British Columbia Government, which is also giving helpful supervision over the systems that are already constructed by private enterprise.

### SYNOPSIS OF AGRICULTURAL CONDITIONS IN BRITISH COLUMBIA, YEAR 1918.

Owing to the spring of 1918 being later than average and the scarcity of labour, the value of agricultural production only slightly exceeded that of the previous year, yet prices realized were such as to result in an increase in the total value of 31 per cent. over 1917. The outstanding increases occurred in meats, fruits and fodders.

Total imports of food products during 1918 show an increase of 11 per cent. over the previous year, due to high prices.

Whilst figures are not available showing exports, the total value is estimated to have been \$5,000,000, consisting chiefly of fruits and vegetables.

### Fruits

The total production of all fruits in 1918 shows an increase of only 0.7 per cent. over 1917, yet the great increased prices realized throughout resulted in a total value 53 per cent. greater than 1917, and 332 per cent. since 1913. The quantity in the same period shows an increase of 189 per cent.

### Vegetables

Although the area of potatoes in 1918 was slightly less than the previous year, the total yield was 35 per cent. greater, whilst owing to increased prices the total value was 89 per cent. greater.

The total area of root-crops was 25 per cent., and the total yield 40 per cent., greater than in 1917.

A marked increase in the total yield of tomatoes occurred, especially in the Okanagan Valley, and where the average price was \$20 per ton for cannery purposes.

The total area sown to grain as shown by the June census was 11 per cent. greater than in 1917. Owing to unfavorable weather, a larger percentage than usual was cut as hay or green feed, thus reducing the area of threshing grains to slightly below 1917. The total yield of all grains was 34 per cent. below 1917, yet high prices realized resulted in the total value being only 14 per cent. less.

### Fodders

The total area of all fodders was 2.2 per cent. lower than 1917. Unfavorable growing conditions also reduced the average yield of clover and timothy, so that the total yield of all fodders was 4 per cent. lower than 1917.

Prices were exceedingly high; clover and timothy averaging \$33 and wild hay \$20 as against \$17.50 and \$15 in 1917. The total value of fodders in 1918 was 70 per cent. greater than 1917.

### Live Stock

Horses show a decrease in numbers of 20 per cent. since 1917, due to large numbers being exported and the increased use of motors in the Province.

Cattle show an increase in total number of 3 per cent. over the previous year. Dairy cattle still continue to show an increase in numbers, there being 4 per cent. more dairy cows recorded in 1918 than in 1917.

Sheep increased in numbers over 20 per cent. over 1917. Not only were many imported for breeding purposes, but breeders have, as during the previous two or three years, reserved the ewes from the market for breeding purposes.

Swine increased in numbers 6 per cent. over 1917.

Poultry, owing to the continued high prices of feed-stuffs, show a falling-off in numbers of 27 per cent. Notwithstanding, the total value of poultry and eggs during the year shows an increase of 11 per cent., due to the high prices prevailing.

# Agricultural Development

TABLE NO. 1—AGRICULTURAL PRODUCTION, BRITISH COLUMBIA, YEARS 1917-18.

**Meats**  
The total quantity of meats marketed during the year increased 30 per cent., whilst the total value was 78 per cent. greater. The chief increase was in beef. The total value of meats imported during the year was 31 per cent. greater than in 1917.

**Dairy Products**  
The cold, backward spring and subsequent drought in the lower mainland and Vancouver Island sections of the Province had the effect of materially reducing the milk-flow among dairy herds. There was a marked increase in the quantity of butter manufactured by creameries.

It is interesting to note the increase in the quantity of cheese manufactured during the year, this being 250,674 pounds as against 43,400 pounds in 1917, and 18,000 pounds in 1916. The total value of all dairy products in 1918 increased 13 per cent. over 1917.

Total imports of dairy products during the year increased in value 11 per cent. over 1917.

To put a conservative estimate of \$10 per acre on the estimated 50,000,000 acres of agricultural land within the province—most of it still in its virgin state—would yield an estimated valuation of \$500,000,000. That would be below the mark when we consider that ordinary cultivated farm land is worth from \$50 to \$200 per acre, and part of the highly developed fruit lands have reached a producing value of \$1,000 per acre.

Through British Columbia farming, though now in its infancy, we are gradually realizing some idea of the coming vast potential wealth of the many fertile valleys along the coast and sheltered between the three great mountain ranges ridged in a northwesterly direction from the southern boundary. Those ranges protect vegetation and live stock from the prevailing westerly winds.

Approximately \$50,000,000 was the value of British Columbia's agricultural products in 1918.

Agriculture is the basis of national and provincial economic wealth and human welfare. Practical farming calls forth effective application of the best knowledge developed by agricultural science co-operating with nature's forces of growth and fertility to mature production.

Haphazard methods of farming are now obsolete and not sufficiently profitable. The advantages of both practical and scientific training to young farmers have been evidenced increasingly through the food strain under which different nations have struggled during the Great War.

Young students and returned soldiers who have enjoyed the benefits of an agricultural college course in animal husbandry, dairying, poultry, horticulture, chemistry, botany, entomology and other applied sciences have greater chances of commercial success than their less informed competitors.

Social life on the farm is now more attractive and farm work has become more congenial, as improved educational and recreational facilities, labor saving appliances, electric energy, rural mail delivery, increased railway and electric transportation, improved roads, rural telephones, mutual associations, are all adding to the pleasures and conveniences of farm life in British Columbia.

## Co-operation

There is an ever increasing disposition among British Columbia farmers to organize and work together. They recognize that the success of one adds to the prosperity of his neighbor and district. They have learned that mutual co-operation saves time, money and effort to all who unitedly buy, sell and distribute collectively.

The great success attained by the Fraser Valley Milk Producers' Association of more than 1,000 members in permanently ensuring the stability and profitable nature of their business in both selling their produce as well as buying their supplies of fertilizers, feed, machinery, etc., is highly encouraging to farmers in other districts.

Of the about 50,000,000 acres ultimately available for various branches of agriculture, about 50 per cent., or 25,000,000 acres, are only suitable for cattle range or pastoral purposes. About 2,000,000 acres in the Southern Interior are adapted for fruit growing and other forms of horticulture requiring warm congenial climatic conditions and intensive cultivation.

The greater portion of the remaining 23,000,000 acres of agricultural land is covered with timber, heavily in the West Coast District and becoming lighter in the Southern Interior, Kootenays, Central Interior, Northern Interior and Peace River in the order named.

Description.	1917		1918	
	Quantity.	Value.	Quantity.	Value
Horses .....	No. 2,142,100	\$ 3,208,652	.....	\$ 1,651,069
Beef cattle .....	" 2,315,173	.....	.....	.....
Dairy cattle .....	" 438,580	.....	.....	679,365
Sheep .....	" 527,632	.....	.....	835,905
Swine .....	.....	.....	.....	.....
Total live stock .....	.....	\$ 8,632,137	.....	\$ 9,698,879
Beef and veal .....	lb. 12,870,000	\$ 1,584,000	16,250,000	\$ 2,625,000
Pork and pork products .....	" 944,000	152,000	1,680,000	450,000
Mutton .....	" 193,800	38,000	255,000	75,000
Total meats .....	14,007,800	\$ 1,774,000	18,185,000	\$ 3,150,000
Butter .....	lb. 1,859,474	\$ 812,763	2,260,386	1,114,997
Cheese .....	" 43,400	13,020	250,674	67,682
Milk (as fresh) .....	gals. 11,329,420	4,054,210	10,516,354	4,335,363
Total dairy products .....	.....	\$ 4,879,993	.....	\$ 5,518,042
Poultry .....	lb. 3,020,460	\$ 755,100	3,036,772	971,447
Eggs .....	doz. 4,077,540	1,631,016	3,155,691	1,672,516
Total poultry products .....	.....	\$ 2,386,116	.....	\$ 2,643,963
Apples .....	lb. 64,624,000	\$ 1,887,514	57,775,490	\$ 2,415,887
Other tree-fruits .....	" 16,110,000	551,684	21,407,967	1,172,411
Small fruits .....	" 3,692,000	445,756	5,846,064	826,862
Total fruits .....	84,426,000	\$ 2,884,954	85,029,521	\$ 4,415,160
Potatoes .....	tons 76,320	\$ 1,755,360	102,690	\$ 3,320,300
Other vegetables .....	" 76,810	2,120,192	103,732	3,255,553
Total vegetables .....	153,130	\$ 3,875,552	206,422	\$ 6,575,853
Hay (clover and timothy) .....	tons 258,508	\$ 4,549,741	217,400	\$ 7,228,600
Other fodders .....	" 154,630	2,199,491	178,684	4,235,074
Total fodders .....	413,138	\$ 6,749,142	396,084	\$11,463,674
Grains .....	bu. 4,198,014	\$ 4,783,030	2,778,904	\$ 4,096,686
Honey .....	lb. 370,000	\$ 74,000	450,000	\$ 126,000
Nursery stock .....	.....	.....	.....	.....
Wool .....	lb. 300,000	.....	300,000	180,000
Hops .....	" 269,686	133,842	.....	.....
Rabbits .....	.....	.....	.....	76,051
Total miscellaneous .....	.....	\$ 208,842	.....	\$ 382,051
Indian products .....	.....	\$ 1,488,084	.....	\$ 1,500,000
Grand totals .....	.....	\$37,661,850	.....	\$49,444,308

\*Other fodders were increased abundantly through the extraordinary dry season shrinking the grass crop, thereby leading farmers to cut considerable areas of partly matured oats to make oat-hay for winter feed

AGRICULTURAL IMPORTS (VALUES) CHART— YEARS 1917 AND 1918

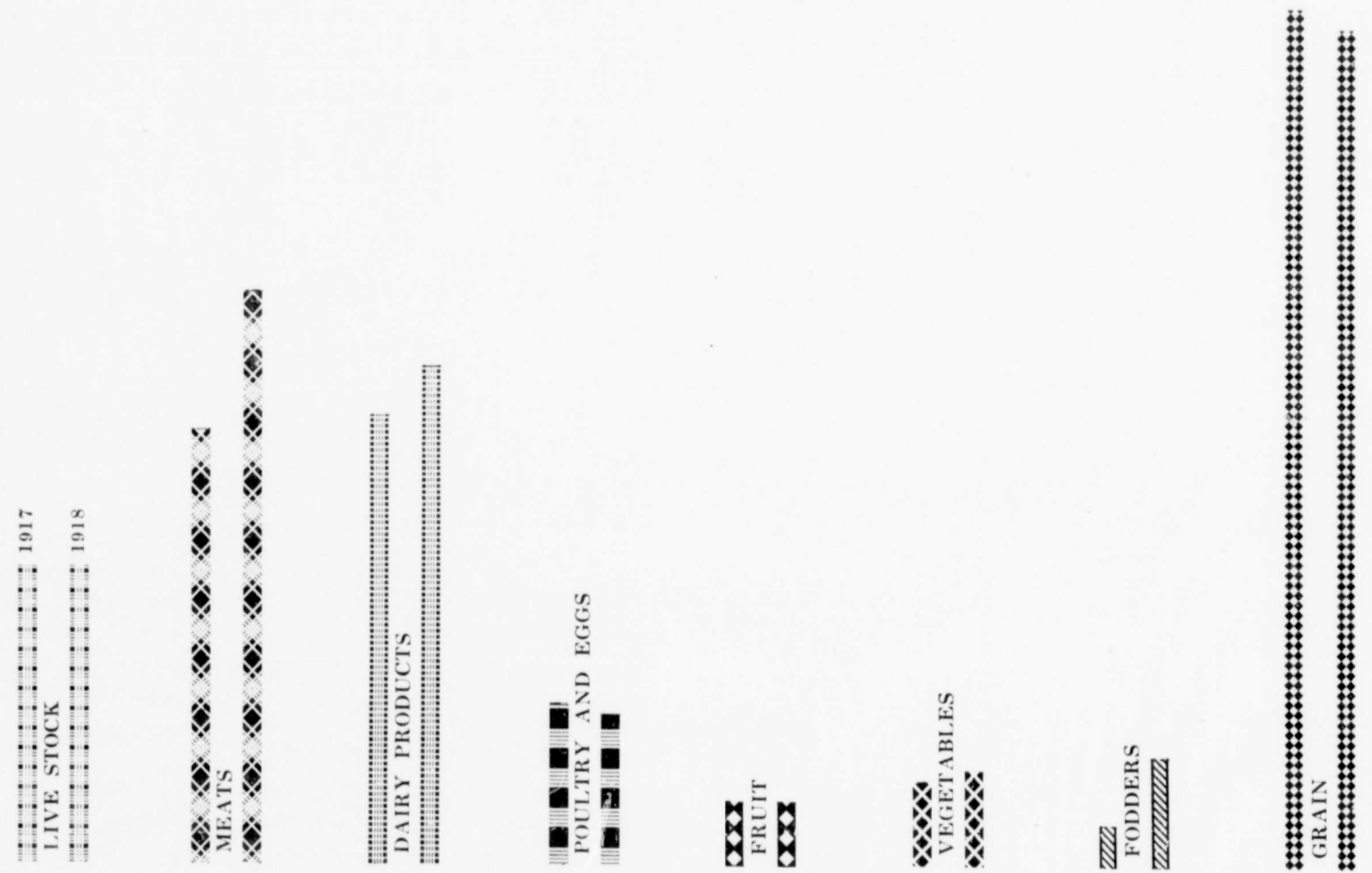


TABLE No. 2—BRITISH COLUMBIA AGRICULTURAL IMPORTS, YEARS 1917-18 (Values Only)

Description—	Total Imports	
	1917	1918
Live stock .....	\$ 2,469,562	\$ 2,514,111
Meats .....	3,649,415	4,776,387
Dairy products .....	3,733,355	4,137,222
Poultry products .....	1,269,463	1,242,828
Fruits .....	454,213	519,315
Vegetables .....	697,615	768,219
Fodders .....	371,147	910,432
Grains .....	7,116,653	6,987,139
Miscellaneous .....	24,783	49,793
Totals .....	\$19,786,206	\$21,905,446

# Agricultural Production—Grain Growing, Etc.

ALTHOUGH grain has not been grown extensively in British Columbia, the Peace River District is sure to produce large grain crops after the Peace River Extension Railway (recently sanctioned by the legislature) is constructed and operated in conjunction with the hundreds of miles of navigable waterways flowing through and adjoining that fruitful territory.

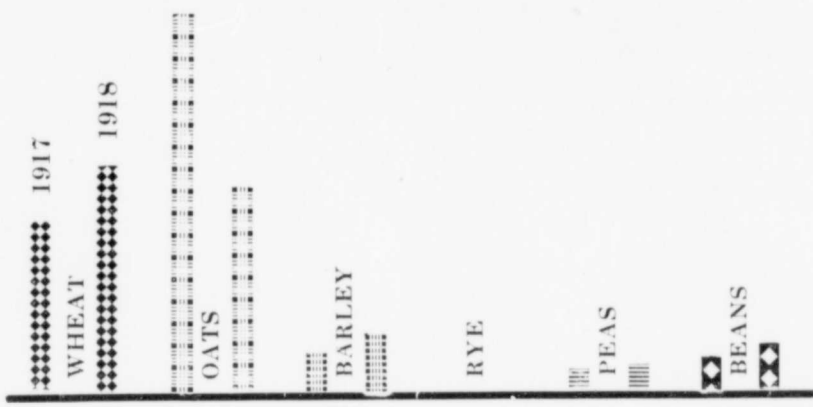
The Central Interior (where railways are now being projected) will combine grain growing with dairying and stock raising facilities.

The Southern Interior has produced some excellent No. 1 hard wheat; but generally the soft varieties are grown.

The Coast and Islands districts grow wheat for poultry food, and oats for feeding horses and cattle in both grain and fodder farms.

The value of grain raised during 1917 was \$4,783,030 and in 1918, \$4,096,686, but in the 1918 season much larger quantities were cut and dried for fodder, which was consequently increased in value from \$6,749,142 in 1917 to \$11,463,674 in 1918.

GRAIN CROP VALUES CHART, YEARS 1917 AND 1918



*Special Crops*

Tobacco is being produced in considerable quantities in the Okanagan district, where also peppers, melons, etc., grow well. Corn (maize), hops, onions, flax, etc., are successfully grown in nearly all the agricultural areas of the Southern Interior, where tomato growing for canneries and evaporators is developing into a profitable industry.

The variety of climatic and soil conditions unite in developing great variety in the agricultural possibilities of British Columbia not only for the farmer, but also for the best trained specialists who are thereby being attracted to this richly endowed province.

*Dry Farming*

In some of the drier portions of British Columbia there are bench lands and small table-land areas ranging above the levels to which irrigation by gravitation can be economically applied. As much of this surface consists of sedimentary silts and other rich soils on which dry farming can be profitably developed, the Provincial Government has demonstrated success by some interesting experiments during recent years.

In 1913, experimental dry farms were established, one at 105-Mile House in Cariboo, about the centre of the northern half of the "dry belt," and the other at Quilchena, near the centre of the lower half of that elevated, warm, sunny region, which many persons from other parts of Canada and abroad seek to live in to improve their health while earning a living.

At 105-Mile House, where the precipitation averages about 12 inches per year, the average crops per acre for the last three years were:

Crop	Bushels
Wheat—	Bushels
Marquis .....	35.3
Red Fyfe .....	34.4
Galgos .....	34.3
Huron .....	33.1
Durum .....	32.6
Oats—	Bushels
Garton .....	95.3
Banner .....	73.4
New Marrat .....	72.4
Abundance .....	71.1
O. A. C. 72 .....	70.1

Field peas, alfalfa, timothy, clover, fall wheat and general vegetables were successfully grown. The Quilchena results were very similar, but there potatoes were raised during 1918 yielding as below:

Crop	Tons Per Acre
Table Talk .....	19.15
Money Maker .....	18.15
New Queen .....	15.47

AGRICULTURAL PRODUCTION (VALUES) CHART—YEARS 1917 AND 1918

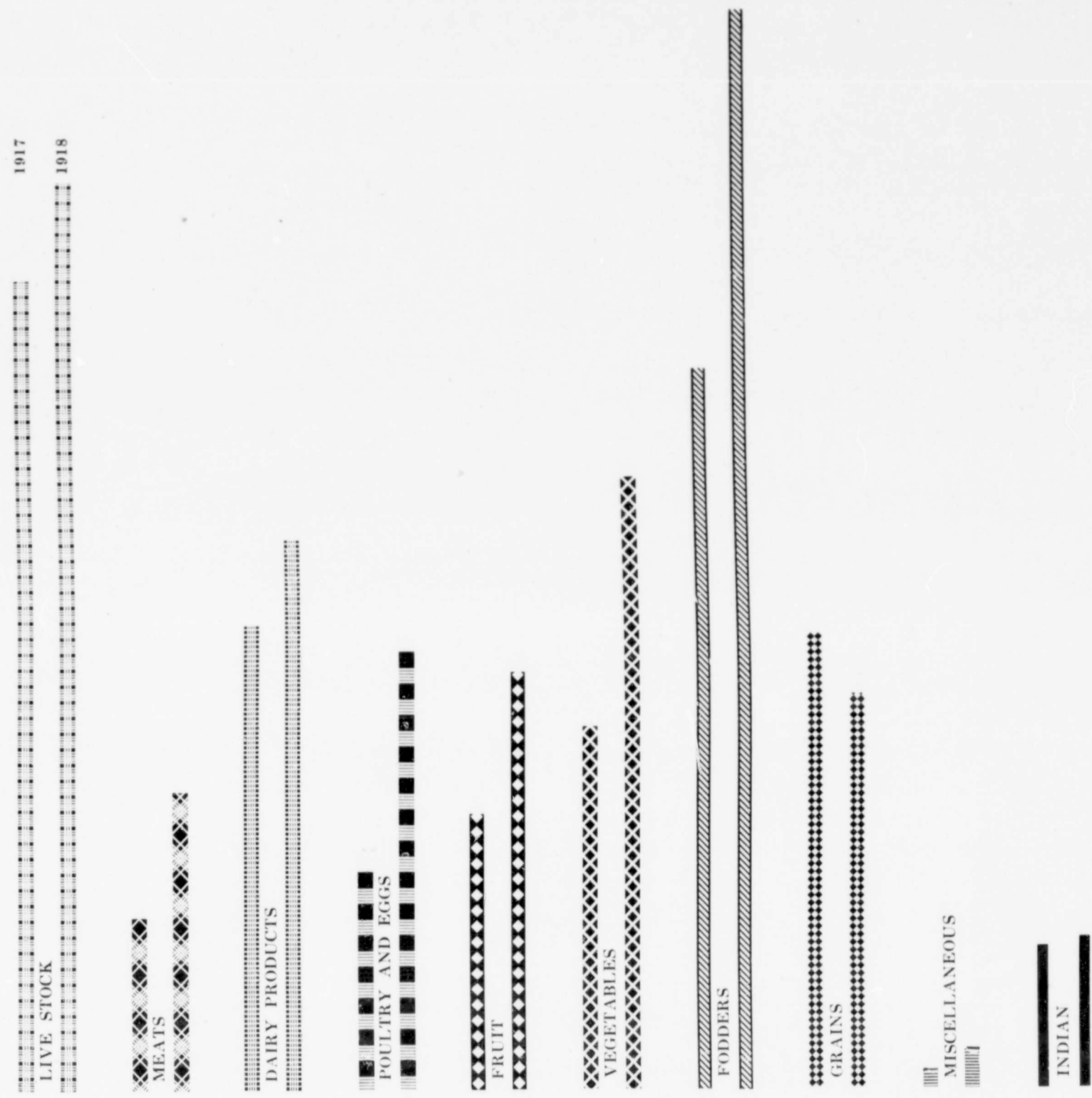


TABLE NO. 3—CROP AREAS, YIELDS AND VALUES, BRITISH COLUMBIA, YEARS 1917 AND 1918.

Crop	Year	Acres	Average Yield Bushels	Total Yield Bushels	Price per Bushel	Value
Wheat	1917	21,337	29.00	618,773	\$1.99	\$1,231,358
	1918	36,200	22.50	816,200	2.10	1,710,170
Oats	1917	60,234	53.75	3,237,577	.90	2,913,819
	1918	39,000	39.75	1,550,250	1.00	1,550,250
Barley	1917	5,524	29.25	161,577	1.28	206,819
	1918	7,927	26.50	210,065	1.47	308,795
Rye	1917	911	28.66	26,109	1.75	45,691
	1918	820	30.00	24,600	2.07	50,922
Peas	1917	1,338	23.75	31,777	2.46	83,933
	1918	2,193	21.50	47,149	3.00	141,447
Beans	1917	2,117	15.00	31,755	6.60	209,583
	1918	2,748	18.50	50,838	4.20	213,520
Corn for husking	1917	222	35.00	7,770	3.92	30,458
	1918	325	32.00	10,400	4.35	45,240
Other grain-crops	1917	2,349	....	82,676	....	61,369
	1918	3,893	....	69,402	....	76,342
Total grains	1917	94,032	....	4,198,014	....	\$4,783,030
	1918	93,196	....	2,778,904	....	\$4,096,686

# Poultry, Bees and Field Crops

**P**OULTRY raising is one of the most attractive branches of British Columbia agriculture. It is one of the best paying lines of mixed farming, and when capably conducted by experienced breeders specializing on adequately equipped poultry farms, meets encouraging success.

The constantly increasing demand for fresh eggs ensures higher prices for local than for the balance imported from the prairies and United States.

When well selected hens are efficiently provided for, they are the most profitable transformers of farm vegetable growth into finished products for sale, both as eggs and dressed poultry.

There have been some failures on the part of inexperienced beginners who bought land at inflated prices or lacked sufficient capital and knowledge to apply it to best advantage. But many poultry breeders have been successful during recent years.

The mild climate and constantly good local markets have naturally attracted the majority of poultry raisers to settle in the coast districts and Vancouver Island.

Poultry and egg-production as profitable adjuncts to mixed farming are so well known that we need not detail that useful factor in farm life.

With the exception of the mountain regions where exceptionally heavy snowfall and long winters prevail, the poultry industry can be successfully established in almost any part of British Columbia, especially if producers raise their own cereals for feeding their flocks.

Most poultry farmers thus far have relied upon egg production and considered dressed poultry as only a side line, but as the price of meat has increased the demand for dressed poultry has improved.

The most popular breeds are White Leghorns, White Wyandottes, Rhode Island Reds, Plymouth Rocks and Orpingtons.

Nearly every district has its poultry association or farmers' institute through which grain for feed is purchased in car lots by members co-operatively at reduced prices.

Day-old chicks and ducklings are obtainable from local breeders—a great convenience to persons not having proper hatching facilities.

Geese, ducks and turkeys were raised advantageously during the last two years.

1917—	Produced	Imported	Consumed
Poultry	\$ 755,100	\$ 205,453	\$ 960,553
Eggs	1,631,016	1,064,010	2,695,026
Total	\$2,386,116	\$1,269,463	\$3,655,579
1918—	Produced	Imported	Consumed
Poultry	\$ 971,447	\$ 182,208	\$1,153,655
Eggs	1,672,516	1,060,620	2,733,136
Total	\$2,643,963	\$1,242,828	\$3,886,791
Increase	\$ 257,847	.....	\$ 231,212
Decrease	.....	\$ 26,635	.....

\*The significant fact that \$1,242,828 worth of poultry products needed in British Columbia were imported during 1918—32 per cent. of the total consumption—proves conclusively the scope there is for further development of poultry production.

There are both local and provincial poultry associations to co-operatively help the industry. The annual egg-laying contests operated by the agricultural department, open to the world, proves that British Columbia reared stock win over outside competitors.

Bulletins are issued by the agricultural department at Victoria on the management and care of poultry, etc.

## Bees

The bright sunshine, abundant rainfall and other climatic and botanic advantages, produce an abundant natural flora on which bees thrive during about seven months of the year in which they can harvest the nectar. The ever increasing demand for good honey at remunerative prices, together with the careful supervision of honey producers, eradication of bee diseases, etc., by the government, ensures the permanent success of this adjunct to prosperous agriculture.

Not only the fruit grower but farmers generally who produce clovers, alfalfa and other flowering crops, derive great practical benefits from the work of bees in cross-pollination. The production of honey grew from 20 tons in 1910 to about 225 tons, valued at \$126,000, in 1918. The 1918 average production *per hive* was 48 pounds; but 100 to 200 pounds per hive is common under favorable conditions.

## Fodder Crops

Native grasses, vetches, etc., grow abundantly in most parts of the province. They are very nutritious and extra strong in growth wherever the typical British Columbia rainfall prevails, or where irrigation is used in the "dry belt."

The extraordinary growth of the wild pea-vine in many parts of the Central and Northern Interior, and through the great Peace River District in the open and thinly wooded areas, provides excellent grazing for pioneer and settlers' stock.

Corn (maize), clovers, timothy, alsike, alfalfa, brome grass, sainfoin, etc., grow in profusion when rightly cultivated. Because of higher prices and extra large quantities of clover being cut for "oat-hay" fodder in 1918, the value of fodders produced increased from \$6,749,142 in 1917, to \$11,463,674 in 1918.

## Root Crops

The rich soils, plenty of moisture and bright sunshine, produce abundant root crops for which there are ready markets for such as are not required to feed cattle, etc., on the farm.

The merit of British Columbia potatoes was established in 1911, when British Columbia won the \$1,000 Stillwell trophy at New York, in open competition with all North America, at the great Land Show which brought forth the products of the best cultivators in the United States and Canada.

This tabulation summarizes the values of root crops produced, imported and consumed:

1917—	Produced	Imported	Consumed
Potatoes	\$1,775,360	\$ 34,970	\$1,790,330
Other veg.	2,120,192	394,115	2,514,307
Canned veg.	.....	159,062	159,062
Total	\$3,875,552	\$588,147	\$4,463,699
1918—	Produced	Imported	Consumed
Potatoes	\$3,320,300	\$116,591	\$3,436,891
Other veg.	3,255,553	258,636	3,514,189
Canned veg.	.....	138,479	138,479
Total	\$6,575,853	\$513,706	\$7,089,559
Increase	\$2,700,301	.....	\$2,625,860
Decrease	.....	\$74,441	.....

The large increase in the value produced was mainly caused by the extraordinary demands for British Columbia potatoes, carrots and other vegetables for evaporating factories sending the light evaporated vegetables for use by the Allied nations during the Great War.

The experience and facilities thus acquired will be of permanent value to farming in British Columbia, because evaporated vegetables will find a constant market in the Prairie Provinces, Yukon, Alaska, etc., whose citizens British Columbia can best supply.

FODDER CROP VALUES CHART, YEARS 1917 AND 1918

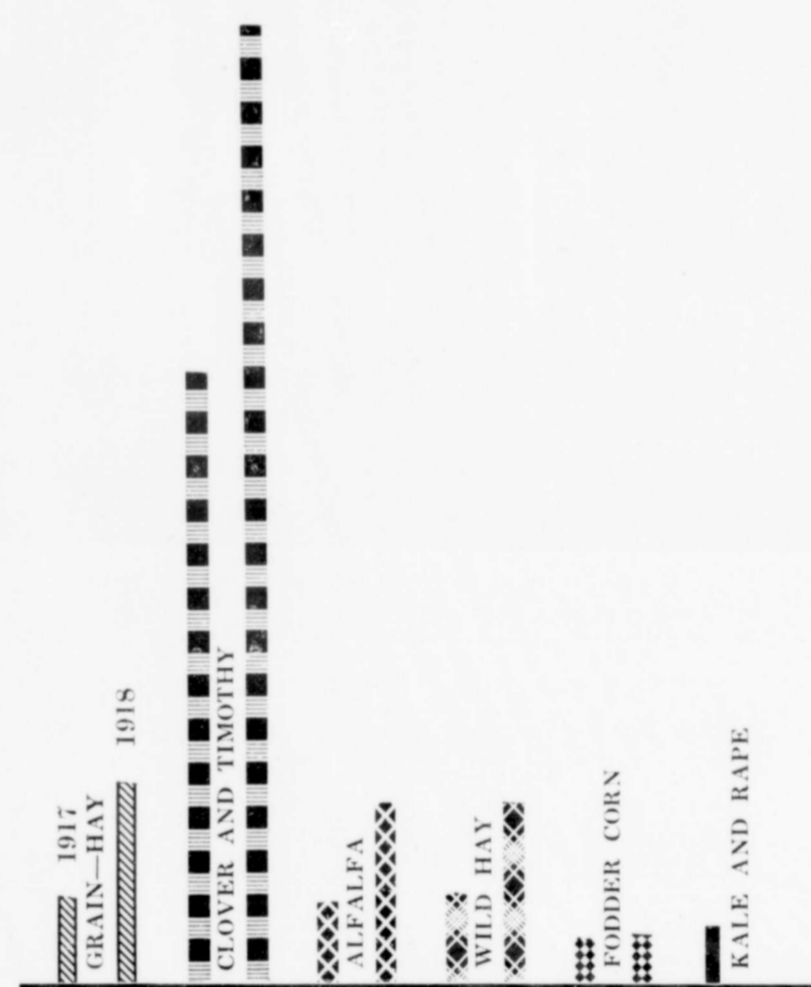
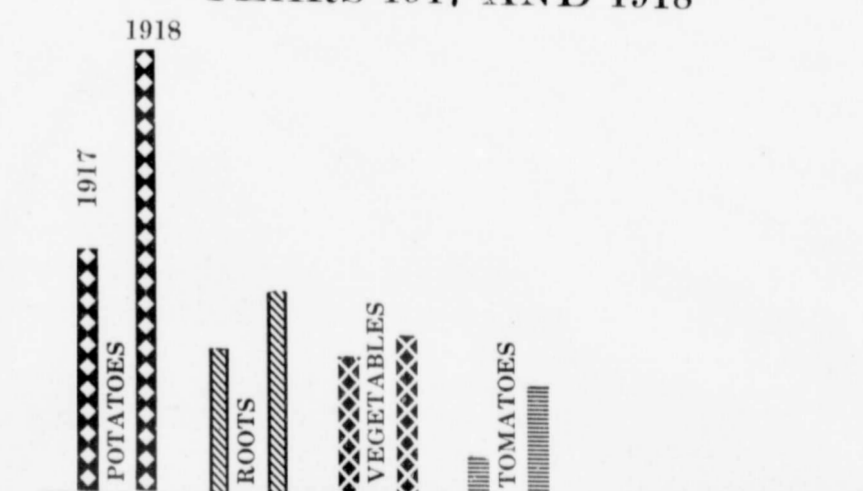


TABLE NO. 4—CROP AREAS, YIELDS AND VALUES IN BRITISH COLUMBIA, YEARS 1917 AND 1918.

Crop	Year	Acres	Average Yield Tons	Total Yield Tons	Price	Value
Grain-hay (mostly oats)	1917	18,890	2.00	37,780	\$15.60	\$ 589,368
	1918	25,016	2.22	55,536	26.60	1,477,258
Clover and Timothy	1917	129,254	2.00	258,508	17.60	4,549,741
	1918	114,414	1.90	217,400	33.25	7,228,600
Alfalfa	1917	8,681	3.00	26,043	19.25	501,328
	1918	12,268	3.25	39,900	32.25	1,286,800
Wild Hay	1917	32,445	1.20	38,934	15.00	584,010
	1918	43,950	1.43	62,848	20.16	1,267,016
Fodder Corn	1917	2,239	7.00	15,673	15.00	235,095
	1918	2,016	10.10	20,400	10.00	204,000
Kale and Rape	1917	1,810	20.00	36,200	8.00	289,600
	1918	Not yet recorded	.....	.....	.....	.....
Total Fodders	1917	193,319	.....	413,138	.....	6,749,142
	1918	197,664	.....	396,084	.....	11,463,674
Potatoes	1917	15,264	5.00	76,320	23.00	1,755,360
	1918	15,013	6.84	102,688	32.33	3,320,300
Roots	1917	4,590	10.34	47,461	21.33	1,012,343
	1918	5,758	11.56	66,562	21.90	1,457,900
Market Vegetables	1917	2,392	10.07	24,083	36.35	875,417
	1918	3,810	5.99	22,833	46.00	1,050,318
Rhubarb	1917	.....	.....	529	31.05	16,425
	1918	.....	.....	410	52.68	21,599
Tomatoes	1917	.....	.....	4,737	45.60	216,007
	1918	.....	.....	13,927	52.11	725,736
Total Vegetables	1917	.....	.....	153,130	.....	3,875,552
	1918	.....	.....	206,420	.....	6,575,853
Total Miscellaneous	1917	.....	.....	269,730	.50	134,865
	1918	.....	.....	.....	.....	540,000

ROOT CROP VALUES CHART, YEARS 1917 AND 1918



# Live Stock and Dairying

**T**HE dairy cow is a highly important factor in British Columbia. It produces about 19 per cent. of the food of the population and has proved eminently successful.

The sheltered advantages of the valleys of fertile soil produce such luxuriant growths of nutritious clovers, grasses, alfalfa and other roots, also native vetches and general fodder crops such as maize (corn, which grows vigorously), that they indicate that British Columbia will become highly productive in dairy produce for export like Denmark and New Zealand in the not very distant future.

The warm and moist climatic conditions on areas along the west coast and among the many large sheltered islands fringing that extensive coastline on which about 50 per cent. of the provincial population live, clearly denote the coast district as the best for present enterprise in dairying.

In the interior agricultural districts near centres of population, dairying prospects are good for practical farmers possessed of moderate capital. Besides providing continuous employment and bringing profitable returns, dairying greatly helps efficient rotation of farm crops, so increasing the fertility and productivity of the land.

There are many tracts of unoccupied land, some partly cleared, but mostly uncleared, which,

crease of 13 per cent. The total imports of dairy produce in 1918 reached \$4,137,222, proving that the present local consumption can use 75 per cent. more than is now produced. That shows ample scope for would-be dairy farmers.

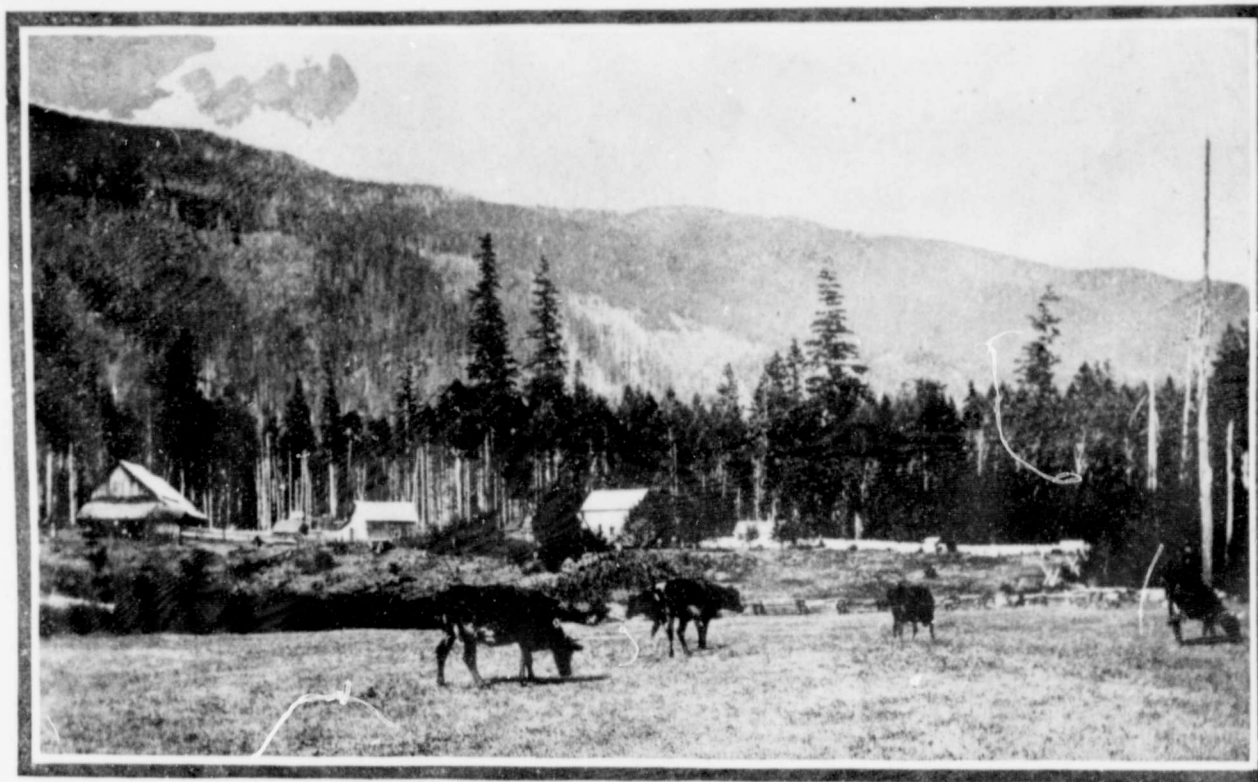
Because live stock are the most useful animals for converting wild and farm vegetable growths into meat, milk and other saleable commodities, they are essential to good farming on any large scale.

They yield profitable work for farmers and their hired help during the winter and can happily forage fairly well for themselves during the busy summer months.

Before the agricultural areas were opened up to settlers by railway developments large cattle ranches with wide ranges were preferred, and some are still operated successfully. But the present tendency is to raise smaller herds by improved stock on better cultivated farms.

afflicted and have to be destroyed. Nearly all the agricultural areas are well adapted for raising live stock, but the open range country of the interior offers better advantages for extensive stock production.

The live stock produced in 1917 were valued at



\$8,632,137. In 1918 that was raised to \$9,698,879, an increase of more than 12 per cent.

Although British Columbia is well adapted to produce all the cattle and meats she consumes, the fact that this province during 1918 imported \$2,486,802 worth of live stock, and \$3,837,609 worth of meat, proves that there is ample scope for cattle raising in British Columbia.

Hundreds of sheepmen in Montana and other western states who have capital are anxious to secure new pasturages.

The steady influx of settlers and the breaking up of the ranches into small farms has made it hard for the sheepmen to continue in the north-western states.

British Columbia has many opportunities to offer these American sheepmen. The immense open country of the interior makes excellent sheep range, and possibilities are offered in the interior valleys which cannot be equalled elsewhere upon the continent for the raising of lambs.

British Columbia needs such settlers. Not only in the well-known parts of the interior but north towards the Peace River country, opportunities are offered the American stockmen such as were unfolded in the western states fifty years ago.



if rightly developed and cultivated, will be suitable for dairy farming.

In some of the drier districts in the interior large and profitable crops for dairy feed and sale can be grown through the aid of irrigation.

Ample supplies of pure water are generally available, forming a valuable help and asset to the dairy farmer. In the extensive Fraser Valley, artesian water is abundant, having force enough when simply tapped by a bore pipe to rise without other motive power, to serve the farmstead, dairy barns and other outbuildings, drinking troughs, etc., with continuous flows of pure water.

In 1918 there were 26 creameries, four condenseries and four cheese factories in use.

The neighboring city markets for dairy produce are good and increasing with the expanding industrial coast and transpacific trades. The value of British Columbia dairy products in 1917 was \$4,879,993, and in 1918 \$5,518,042, an in-

The financial help given by the government during recent years towards the importation and distribution of pure-bred animals for breeding purposes has produced marked improvement in the herds and encouraged the production of live stock.

The government also helps by requiring that cattle imported into British Columbia must have passed the tuberculin test; and provides compensation where British Columbia cattle are found



## VALUES DERIVED FROM COWS AND OXEN, FOR THE YEARS 1917 AND 1918 COMPARED

	1917		1918	
	Produced	Imported	Produced	Imported
Cattle (Beef and Dairy) . . .	\$5,523,825	\$2,469,562	\$6,532,540	\$2,514,111
Meat (Beef and Veal) . . .	1,584,000	3,649,415	2,625,000	4,776,387
Dairy Produce . . . . .	4,879,993	3,733,355	5,518,042	4,137,222
	\$11,987,818	\$9,852,332	\$14,675,582	\$11,427,720
	\$21,840,150		\$26,103,302	



# Fruit Growing in British Columbia

THE attractions of fruit growing in the healthy, pleasant valleys of British Columbia are already widely known, through the merits of the orchard products of the growers, who have raised British Columbia fruit culture to commercial proportions which are steadily increasing, as evidenced by the following values of fruit production during the last three years:

1916	\$2,176,662
1917	2,884,954—increase 33%
1918	4,415,160—increase 53%

The estimated area of land suitable for growing fruit is about 2,000,000 acres, mostly located between the International boundary along the 49th parallel, to the 52nd parallel.

Near the coast, fruit may be grown as far north as Hazelton and the Portland Canal mining

district along the 55th parallel, but that region is not recommended for growing on a commercial scale. North of that right to the northern boundary of the province, along the 60th parallel, native berries of many kinds and such garden varieties as raspberries and strawberries flourish during the short summer season.

Full car loads of apples were first shipped east in 1903. The growth of fruit culture has increased from 20,000 acres in 1905, producing crops valued at \$1,000,000, to 33,000 acres in 1910, producing crops valued at \$2,000,000, to 40,000 acres in 1918, producing crops valued at \$4,415,160.

British Columbia fruit won its first gold medal at the Royal Horticultural Show in London in

1904. This province also carried off the gold medals in 1906, 1907, 1908 and 1910, and in 1910 won the highest fruit prize in the Empire, the Hogg Memorial Gold Medal. Equal success attended her exhibit in Toronto and at the Northwest Fruit Growers' Exhibit in Vancouver in 1907, and at Spokane in 1909 when British Columbia won 13 first prizes out of 14 entries.

In 1910 at the first Canadian apple show in Vancouver, British Columbia scored her crowning triumph in competition with the world's foremost growers.

The British representatives of the leading London newspapers wrote: "The judges were hard-headed experts, making their awards from the purely commercial standpoint." The "Free press," of Christchurch, New Zealand, wrote: "Never before in the history of the world has the apple caused so much commotion as it produced at the exhibition at the commercial capital in British Columbia."

"Every apple growing province in Canada, the United States, etc., was represented. British Columbia exhibitors won 476 prizes and diplomas, including the best offered."

To enable readers to appreciate the varied conditions experienced in different districts through the physical characteristics of the province in climate, the adjoining map is divided into the nine typical fruit districts described below.

No. 1 comprises the south half of Vancouver Island, the adjacent islands and the lower mainland south of the 50th parallel and west of the 121st meridian. Here small fruits are eminently successful.

Here good varieties of apples, pears, plums, prunes, cherries and nuts also grow to perfection. Under-drainage is necessary because of the wet, mild winter season.

No. 2 includes the valleys of the Fraser, Thompson and other rivers running through the upper "dry belt" where irrigation is necessary. But intending growers have not there to bear the cost of heavy clearing and drainage required in the coastal districts. The fruits grown produce the highest quality for all the varieties named in No. 1.

No. 3 district is within the southern part of the "dry belt" at lower elevations than No. 2, and so enjoys a semi-tropical climate. Because it has abundant sunshine it is most favorable for the open growth of grapes, peaches, apricots and

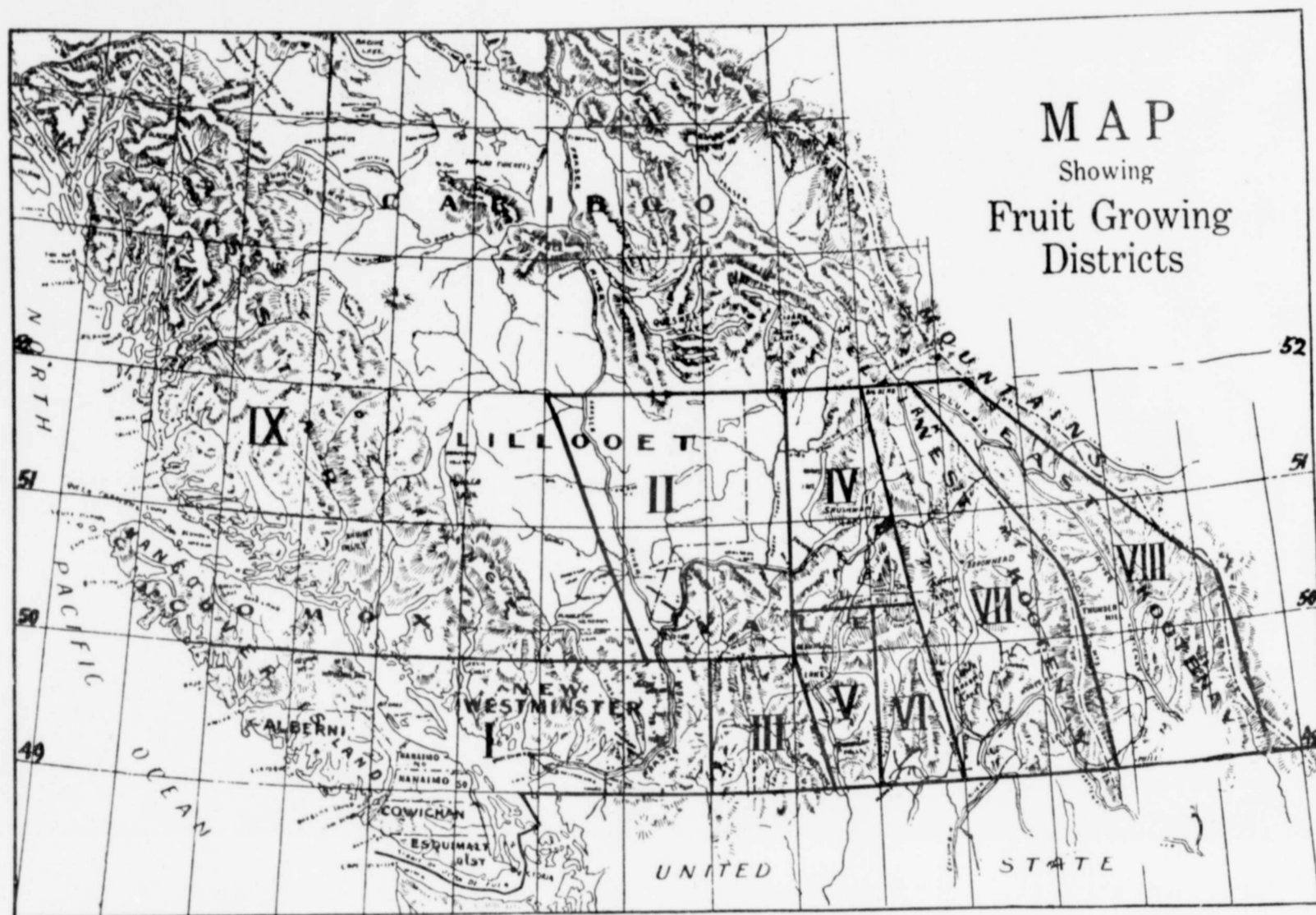


TABLE NO. 5—FRUIT VALUES PRODUCED IN FOLLOWING DISTRICTS DURING YEARS 1917 AND 1918.

N.B.—Roman numbers heading columns denote district numbers on the map of fruit districts.

	Year	Ia	Ib	II and IV	III, V and VI	VII and VIII
		Islands	Lower Mainland	Thompson	Okanagan and Boundary	East and West Kootenay
Apples						
\$1,887,514	1917	\$ 87,846	\$ 50,359	\$ 78,750	\$1,627,877	\$ 42,682
2,319,227	1918	79,488	73,056	155,264	1,826,350	185,069
Crabapples						
148,226	1917	1,097	.....	13,000	132,008	2,121
96,660	1918	1,317	1,222	9,236	81,632	3,253
Pears						
70,266	1917	11,335	10,717	2,000	43,845	2,369
165,053	1918	14,615	31,606	2,252	109,100	7,480
Plums and Prunes						
159,172	1917	11,240	26,769	840	113,297	7,026
200,646	1918	14,270	16,066	3,258	158,225	8,827
Peaches						
68,165	1917	300	.....	.....	65,532	2,333
212,305	1918	281	.....	.....	207,539	4,485
Apricots						
36,979	1917	.....	.....	.....	35,700	1,279
66,878	1918	.....	.....	.....	66,864	14
Cherries						
68,876	1917	15,718	2,852	750	41,553	8,093
141,129	1918	17,290	31,419	2,565	73,425	16,430
Other tree fruits, 1918 only						
.....		.....	.....	.....	386,400	.....
Strawberries						
189,437	1917	76,274	75,332	2,475	.....	35,356
305,268	1918	153,317	153,317	8,098	6,436	48,705
Raspberries						
169,938	1917	3,257	143,174	6,250	.....	17,257
379,591	1918	4,773	325,322	12,915	6,010	30,571
Blackberries						
34,139	1917	744	32,838	.....	.....	557
58,126	1918	829	53,540	.....	1,129	2,628
Loganberries						
11,388	1917	7,723	2,090	1,575	.....	.....
18,597	1918	6,446	5,991	6,160	.....	.....
Red Currants						
4,784	1917	1,083	1,980	.....	70	1,651
10,007	1918	1,238	4,638	.....	.....	4,131
Black Currants						
19,676	1917	1,954	10,674	.....	1,440	5,608
27,643	1918	2,931	15,727	.....	44	8,941
Gooseberries						
16,394	1917	6,359	7,084	.....	.....	2,951
19,888	1918	5,725	6,335	1,308	1,520	5,000
Mixed Currants and Gooseberries						
.....	1917	.....	.....	1,350	.....	.....
.....	1918	.....	1,203	2,612	4,107	.....
Totals						
\$4,415,160	1917	\$224,930	\$363,869	\$106,990	\$2,061,322	\$129,193
.....	1918	237,915	\$719,262	\$203,668	\$2,928,781	\$325,534



similar delicate fruits, in addition to the hardier varieties named in No. 1, where sufficient water for irrigation is economically available.

No. 4 comprises the more abundant natural rainfall area around the lakes and rivers cross-hatched on the larger climatological map. There the soil is generally rich and the climate is suitable for maturing apples, pears, plums, cherries, and without irrigation.

No. 5 is the renowned Okanagan Valley, the most important fruit growing area in British Columbia. All the fruit of the temperate zone are grown successfully by the aid of irrigation. Most modern methods of cultivation and facilities for shipping and marketing are used in this district, where new orchards are now being extended southward towards the International boundary.

No. 6, known as the Kettle Valley area, has good land areas and favorable climatic conditions, but irrigation is generally needed. It can grow the varieties of fruit listed in No. 1.

No. 7, the West Kootenay, is extensive and around the Kootenay and Arrow Lakes and along the Columbia River has numerous areas. Irrigation is not generally required. In its northern

half the varieties of fruit trees begin to be limited to the hardier varieties, but the quality produced is very good.

No. 8, the East Kootenay, is very similar to No. 7 from which it is separated by the Dog-tooth Mountains. The southern half contains fairly large areas of thinly wooded lands where small fruits grow very successfully, and fruit trees are grown on a commercial basis. But north of the 50th parallel farmers are advised to keep fruit culture within the kitchen orchard varieties.

No. 9 covers the extensive coast region and includes the northern part of Vancouver Island, the Queen Charlotte Islands and north of the 50th parallel. Therein numerous valleys and small plateaux extend considerable distances inland from the coast. In those many of the hardier fruits

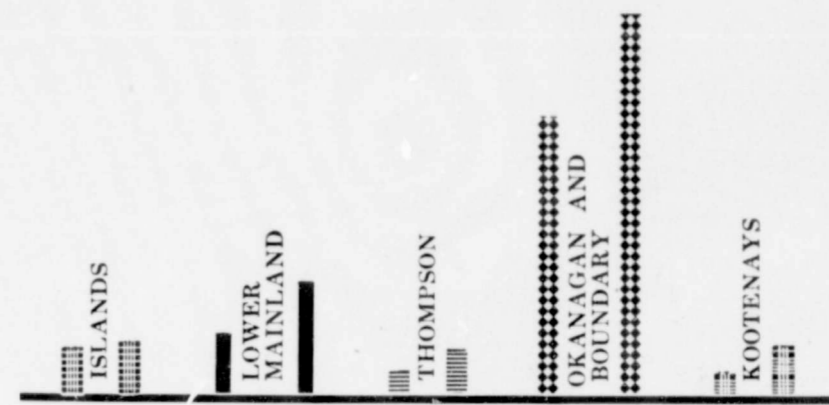
grown in No. 1 can be grown, but they produce less than in No. 1, and the quality is not so good.

No. 10—Further north in the Central Interior, the hardier varieties of fruit trees have been successfully grown at Hazelton and small orchards have been planted along the Grand Trunk Railway to the Yellowhead Pass.

In view of the diverse climatic and soil conditions of those ten districts there are local characteristics of moisture, prevailing or seasonable favorable or unfavorable winds, exposure, shelter, etc., to be carefully considered by settlers selecting locations and deciding the varieties most suitable for cultivation.

The expert assistants of the agricultural department at Victoria have prepared suitable bulletins for free distribution, and will be glad to reply to the enquiries of prospective settlers.

CHART 5—TOTAL VALUES OF FRUIT PRODUCED IN DISTRICTS DURING YEARS 1917 AND 1918



This chart proves that the Okanagan District thus far dominates the production of fruit in British Columbia by producing 66½ per cent. of the 1918 values received.

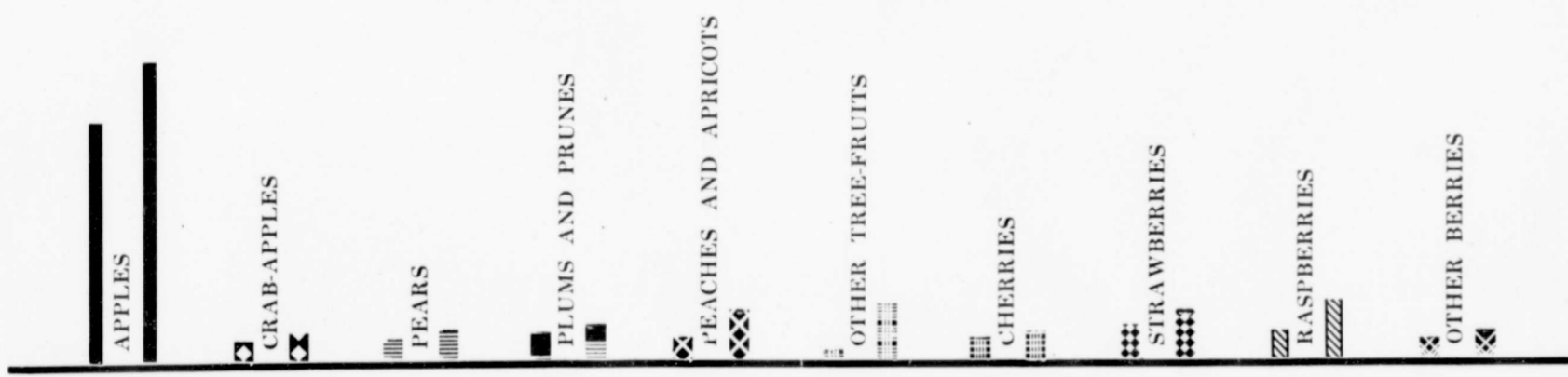


TABLE NO. 5—CARS OF FRUIT PRODUCED IN DISTRICTS, YEARS 1917 AND 1918.

(Basis.—Minimum weight per car: Apples, crabapples and pears, 12 tons; balance, 10 tons.)

Kind	Year Districts—	Districts					Total Cars
		Islands Ia	Lower Mainland Ib	Thompson Watershed II	Okanagan and Boundary III to VI	Kootenay VII and VIII	
Apples	1917	104.9	64.4	112.9	2,352.7	58.4	2,693.3
	1918	84.8	83.2	162.9	1,761.2	202.7	2,294.8
Other Tree-fruits	1917	38.7	55.3	27.6	589.5	23.0	734.1
	1918	39.7	65.3	18.8	624.5	35.6	783.9
Total Tree-fruits	1917	143.6	119.7	140.5	2,942.2	81.4	3,427.4
	1918	124.5	148.5	181.7	2,385.7	238.3	3,078.7

CHART 6—TOTAL VALUES OF CHIEF VARIETIES OF FRUIT PRODUCED—IN YEARS 1917 AND 1918



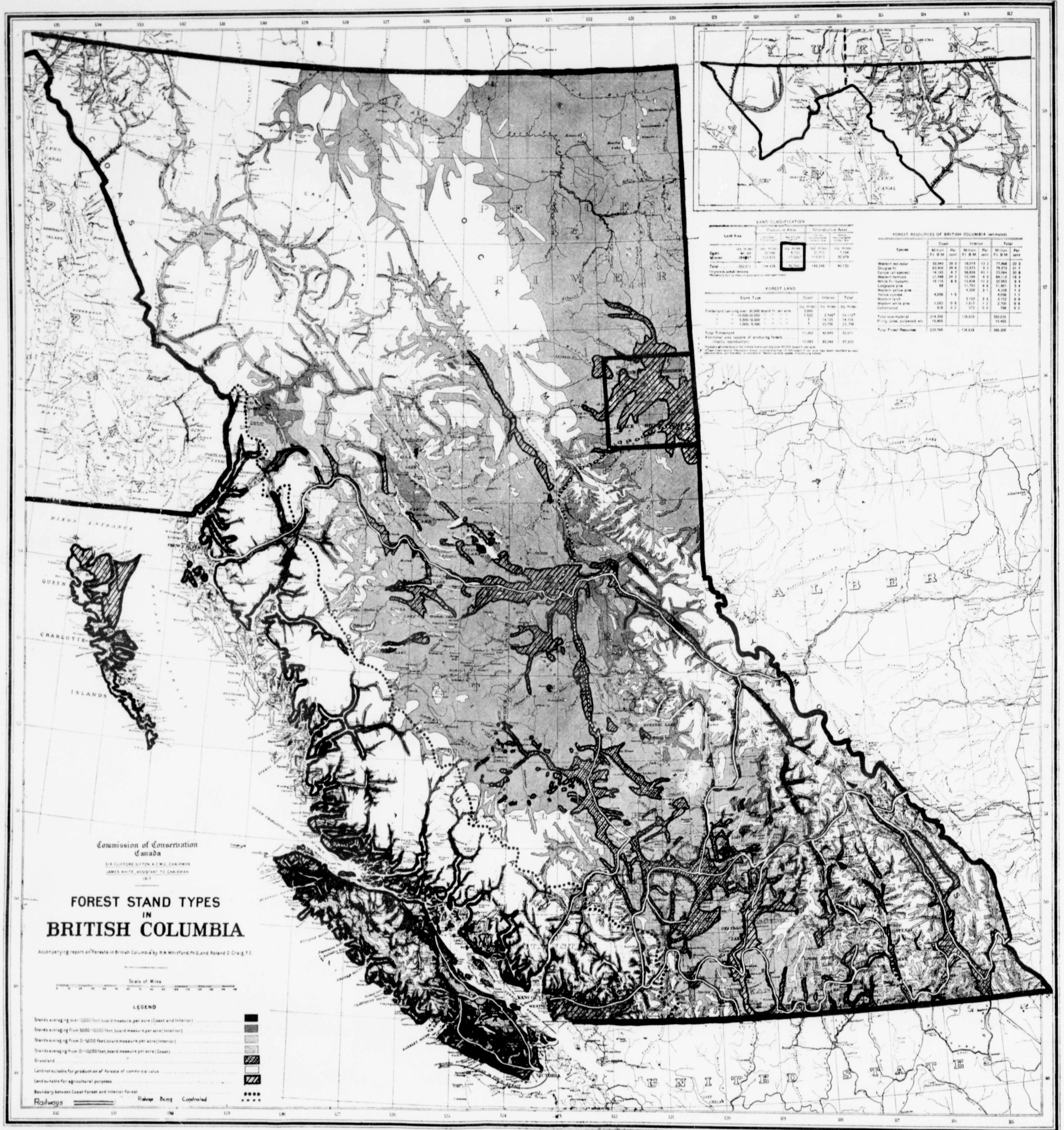
The above proves the predominance of apple-growing.

TABLE NO. 6—FRUIT PRODUCTION, BRITISH COLUMBIA (TONS AND VALUE), YEARS 1917 AND 1918.

Description.	Year	Per Cent. of Cars	Quantity (Tons)	Price per 100 lbs.	Value	Per Cent. of Value
Apples	1917	75	32,312	\$ 2.92	\$1,887,514	65
	1918	69	27,541	4.21	2,319,227	53
Crabapples	1917	7	3,180	2.33	148,226	5
	1918	3	1,347	3.50	96,660	2
Pears	1917	2	923	3.80	70,266	3
	1918	4	1,790	4.61	165,053	4
Plums and prunes	1917	..	2,225	3.58	159,172	6
	1918	6	2,103	4.77	200,646	4
Peaches	1917	3	866	3.94	68,163	2
	1918	6	1,972	5.30	212,305	5
Apricots	1917	1	386	4.79	36,979	1
	1918	2	512	6.53	66,878	2
Cherries	1917	1	475	7.25	68,876	3
	1918	2	629	11.20	141,169	3
Strawberries	1917	2	860	11.01	189,437	6
	1918	3	1,075	14.19	305,268	7
Raspberries	1917	2	615	13.82	169,938	6
	1918	4	1,274	14.89	379,591	8
Blackberries	1917	..	136	12.55	34,139	1
	1918	..	181	16.06	58,126	1
Logan berries	1917	..	43	13.24	11,388	..
	1918	..	105	8.86	18,597	..
Bush-fruits	1917	1	192	10.64	40,854	2
	1918	2	288	11.33	65,280	2
Tree-fruits other than apples, not otherwise provided ..	1917	..	3,699	5.22	386,400	9
	1918	..	..	..	..	..
Totals	1917	..	42,213	..	\$2,884,954	..
	1918	..	42,516	..	4,415,160	..



# Forest Resources of British Columbia



LAST year the forest resources were very carefully estimated by the Commission of Conservation for Canada as approximately 366,300,000,000 feet Board Measure, which, when valued at the current nominal price of \$1.00 per thousand on the stump, is worth about \$366,300,000.

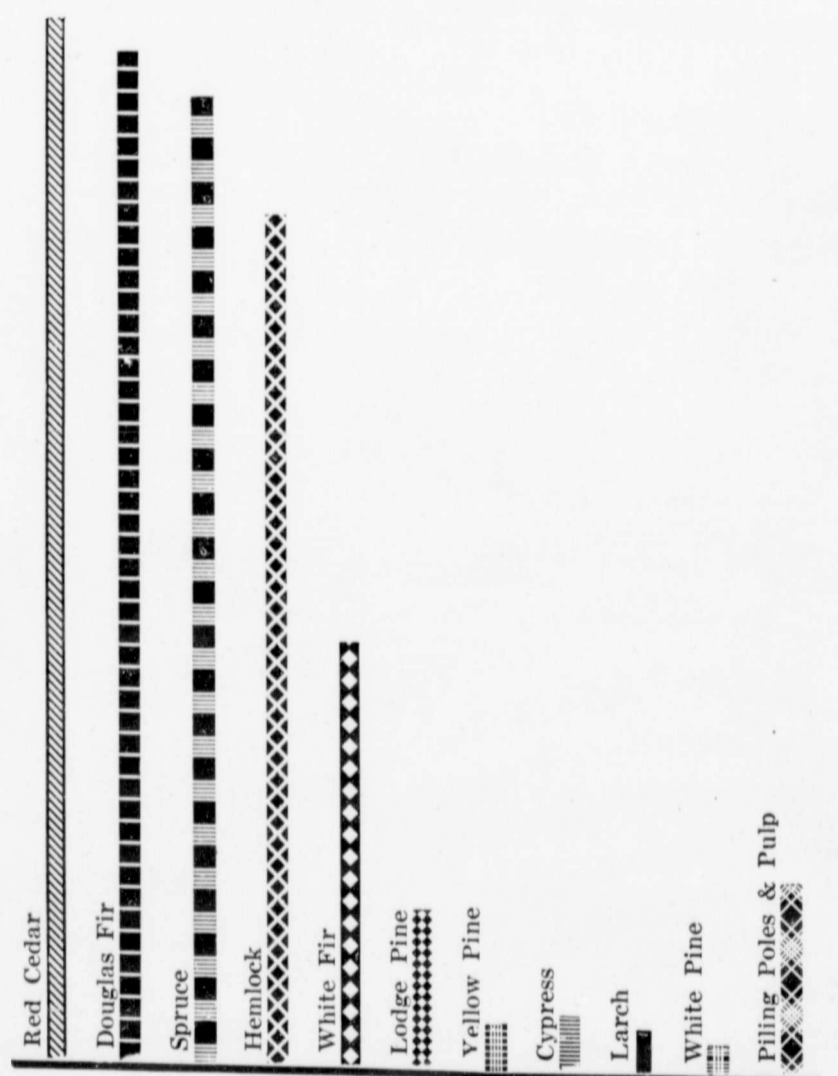
From that reliable basis we may form some slight idea of the great value of those timber

resources, in view of the facts that they are growing more rapidly than they are being cut, and will provide increasing scope for the employment of both capital and labor in saw mills, wood factories, etc., during the coming years, and during centuries to come.

That is assured by the fertile land and climatic advantages which ensure abundance of moisture and sunshine at the best growing temperatures prevailing.

SPECIES	COAST		INTERIOR		TOTAL	
	Million Ft. B.M.	Per Ct.	Million Ft. B.M.	Per Ct.	Million Ft. B.M.	Per Ct.
Western Red Cedar	59,949	16	18,019	5	77,968	21
Douglas Fir	63,400	17	12,573	4	75,973	21
Spruce	14,165	4	58,899	16	73,064	20
Western Hemlock	51,948	14	12,164	4	64,112	18
White Fir (Balsam)	19,115	5	13,838	4	32,953	9
Lodgepole Pine	68	..	11,793	3	11,861	3
Western Yellow Pine	..	..	4,208	1	4,208	1
Yellow Cypress	4,056	1	..	..	4,056	1
Western Larch	..	..	3,152	1	3,152	1
Western White Pine	1,083	..	1,617	1	2,700	1
Cottonwood	516	..	272	..	788	..
Total Saw Material	214,300	..	136,535	39	350,835	96
Piling, Poles, Pulpwood, etc.	15,465	4	..	..	15,465	4
Total Forest Resources	229,765	61	136,535	39	366,300	100

CHART OF B. C. FOREST RESOURCES



# Timber Development

NO exact estimate can be given as to the extent of the forests of British Columbia. The lavish way in which in this respect Nature has endowed the province caused men for many years to imagine that the supply of timber in the country was to all intents and purposes inexhaustible. They were far from apprehending the true value of their possessions. To the early settler the gloomy forests appeared a hindrance rather than a source of wealth. They prevented communication. They occupied land which the pioneer coveted, and the timber that they contained had not reached in those days a value that caused any man seriously to regard them as a source of revenue.

Viewed in the light of that reasoning, to attempt to estimate the value of the forests and to take steps to conserve them then appeared unnecessary. For many years, therefore, timber was included in the purchase price of land. To quote a prominent member of the British Columbia Forestry Commission, it was "thrown into the bargain along with the deer and the scenery." Fortunately the amount of capital available at that time for stumpage investment was strictly limited, and the fact that timber was to be had practically for nothing did not cause any excessive amount of forest land to be taken up.

Affairs were not destined long to remain in this condition. In 1886 the Canadian Pacific Railway had reached the coast, the Pacific seaboard had been linked with the seaports of Eastern Canada, settlers had commenced to flow into the country, and for the first time the most accessible timber of the province secured a slight market value. This fact was not without its influence over the government, and in 1888 a royalty of 50 cents was placed upon every thousand feet of lumber cut.

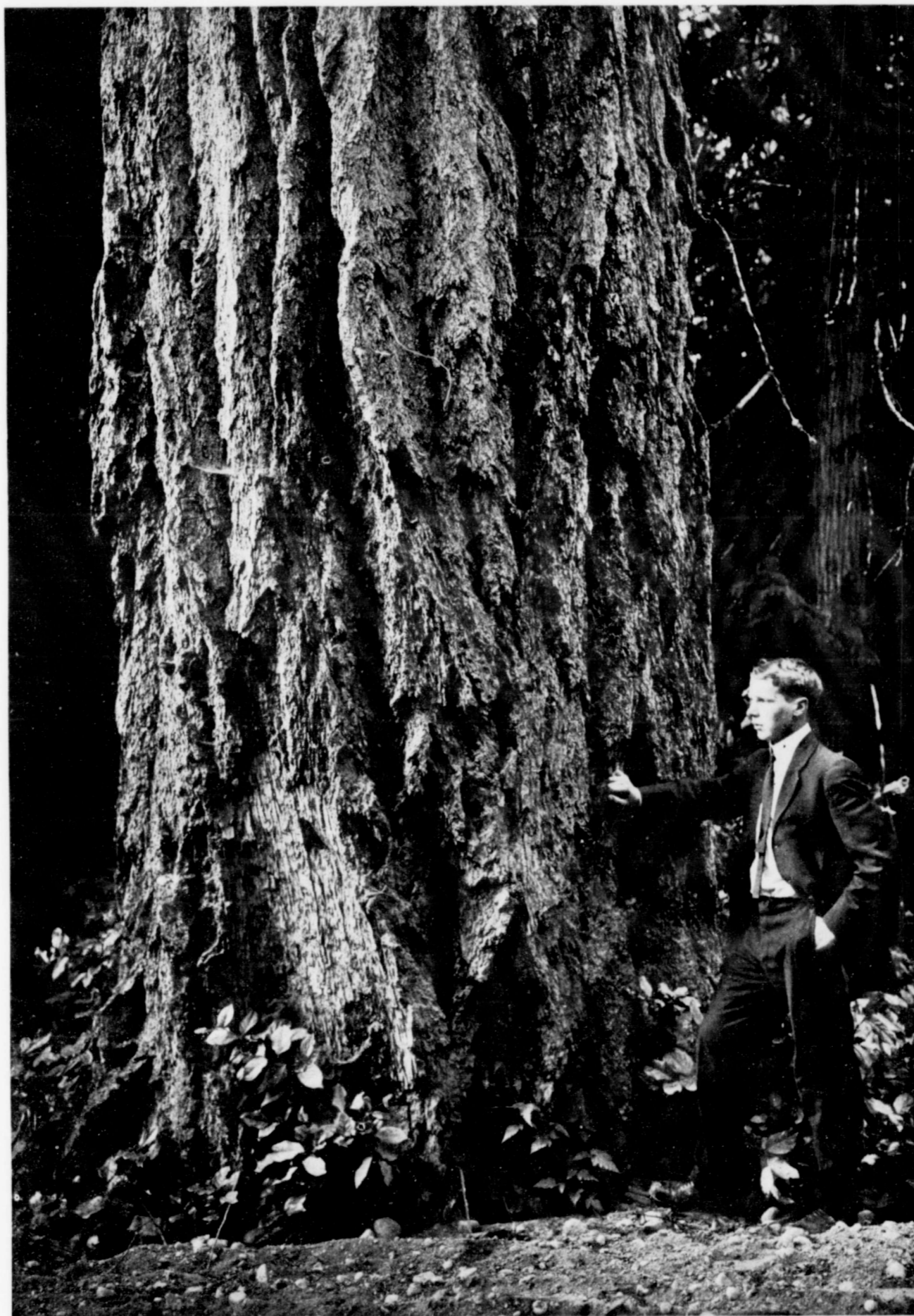
The same legislature, by leasing Crown timber at the cheap rental of 10 cents per acre to bona fide operators, considerably encouraged the establishment of new sawmills. The trend of legislation was merely to encourage the commercial use of forest lands. The province was expending its timber capital, though fortunately not to any great or serious extent, nor did any other view of the necessities of the situation find adequate expression and support for a period of seventeen years. Then, in 1905, the entire forest policy of British Columbia underwent a revolutionary change.

It may be well at this point to summarize very briefly the state of affairs responsible for the great change then made in British Columbia forest management.

About 1½ million acres of Crown timber lands had passed by sale or by railway grant into private ownership and out of government control; another million acres had been transferred to lessees. Probably 30 billion feet of standing timber had been alienated. The old leasehold system again had fulfilled its purpose, inasmuch as it had served to establish the lumber industry firmly in the province. Forest fires, caused in the first place generally through carelessness on the part of some pioneer or logger, were beginning to assume serious proportions, and over all loomed the outstanding fact that though the value of timber showed every indication of increasing in the future, no part of the increase when it took place would, under the existing arrangements, revert to the government and the people of the province.

This was the situation when in 1905 the government at one stroke abolished both the leasing method then in force and the limited non-transferable licences, and propounded a scheme by which any private individual could enter into what was virtually a partnership with the government

in every square mile of Crown forests. There was neither sale, auction nor lease. The incoming partners were not asked to invest capital; they could, if they wished, allow such forest land as they were interested in to remain untouched whilst the value of the timber increased. To secure such a partnership it was necessary for the applicant merely to register his application. The arrangement, however, was by no means so one-sided as it would at first sight appear to have been; for, though the transferable licences conveyed options to cut timber during a 21-year period on specified square miles of forest, it was left entirely to the government to fix from year to year the amount of the annual payment that should be made for the renewal of this right.



The situation has been most aptly described by Mr. A. C. Flumerfelt, of the British Columbia Forestry Commission, in the following terms: "The government freely admitted investors to partnership in Crown timber, it is true, but it did so absolutely on its own terms, and it frankly admitted that only the future rise in stumpage and lumber values would enable it to say what these terms should be." In fact, the partnership arrangement could have been stated thus: "Here," might have said the government, "are immense forests that will be put to no use for many years to come. They produce no revenue, they are in constant danger of destruction by fire, and it is beyond our power financially to give them any efficient protection. Moreover, the province needs revenue now, in its growing time and youth. Therefore we will place these forests in private management under our supreme control, and we shall frame regulations from time to time in order to make sure that the timber is properly looked after. The revenue needed by the province and that needed for the conservation of the forest we shall obtain by requiring investors to pay for their privileges—so much a year for their partnership rights and so much as royalty on any timber they may cut. As the 'market' or 'prospective' or 'speculative' value of stumpage rises we will take our fair share of the 'unearned increment' by requiring a larger payment to be made

to us. As the profits of lumbering operations increase we will take our fair share of these by requiring a larger royalty. To begin with, we shall require the same royalty that we have been obtaining for the last seventeen years, viz., 50 cents a thousand feet, and we shall require an annual payment of about one and three-fifths cent per thousand."

As the result of this clever and imaginative piece of legislation 9 million acres of timber land were taken up by investors within three years, the number of licences increasing within that time from less than 1,500 to over 15,000. The gain to the province by the substitution of the new system for the old was incalculable. An immediate revenue was received, the forests were safeguarded both by the fact that it lay within the interests of the licensee to preserve them and by virtue of the ultimate control retained by the government, and a share in the increasing value of the timber was, by the power reserved by the legislature to increase the annual payment made by licensees, secured to the province for all time.

The next interesting development in forestry legislation within British Columbia occurred within the next two years. The legislative effort of 1905, phenomenally successful as it had been in curing those ills with which it was designed to cope, was soon found to have brought with it difficulties of its own. To quote Mr. Flumerfelt once again: "It is evident that no ordinary situation had been created. Nine million acres of some of the choicest timber in the world represents a property of enormous magnitude, and the transfer of this from the government to a partnership in which a very large number of private individuals were placed in active management gave rise inevitably to a host of most complex problems. For example, think for a moment of the difficulty of adjusting the claims of the government, the operator and the investor upon any point where they should happen to conflict. The government, in fact, had practically gone into the timber business on a vast scale, and it was faced by the triple duty of securing to the people of the province fair treatment for their forests and fair prices for the timber sold, of giving equitable treatment to the investor in Crown stumpage, and of building up by wise assistance the active operations of the lumbering industry. Since 1905 this duty

had become (as Stevenson has said of honesty in modern life) 'as difficult as any art.'"

It should be remembered also that detailed information as regards unlicensed timber lands was non-existent; their exact nature and extent was unknown. Again, the annual revenue from forestry sources had by this time amounted to 2½ million dollars as against a revenue in 1904 from similar sources of \$455,000. Taking all these facts into account, therefore, it was decided to stop the issue of licences and to place the remaining timber lands under reserve until such time as further sales should become necessary.

In the meantime the government set about the task of securing some fuller and more reliable information on which to base a policy in consonance with the facts and difficulties of the situation. To this end, in 1909 a Royal Commission was appointed, known as the British Columbia Forestry Commission, to investigate forestry matters within the province and to study such methods as had been adopted to promote the conservation of forest lands in the United States and elsewhere in Canada. It was not to be expected that the commission could within any reasonable time provide exact figures in every case, since such a work would take many years to conclude. A very considerable amount of reliable and most interesting information was, however, amassed by the commission, and it was upon the report which

it presented that the active forest policy now prosecuted by the government was formulated.

As illustrating the remarkable uncertainty which had existed in the past on the subject of the extent of forest lands in Canada, the commission remarks that for years the forests of Canada were supposed to cover 800 million acres. This positive assertion has been reduced to the hesitating statement that there may be 500 or 600 million acres, and Dr. Fernand puts the "truly merchantable" area at 300 million acres.

Confusion in these matters is partly due to the difficulty of differentiating between forest that has, or is about to have, commercial value and forest that is, and is likely to remain, without it; so that estimates have appeared which confuse mere woodland area with territory containing merchantable timber.

The commission estimated the total stand of merchantable timber in the province as follows:

Tenure	Acreage	Aver. Stand per Acre, Ft. B.M.	Total Stand
Vancouver Island Crown Grant timber	318,000	35,000	11,130,000,000
Mainland Crown Grant timber	552,000	say 10,000	5,520,000,000
E. & N. Railway Co.	375,000	14,300	5,380,000,000
C. P. R., unpublished	.....	.....	.....
Timber leaseholds	619,000	20,000	12,380,000,000
Special licence timber	9,000,000	12,000	108,000,000,000
Mill timber on pulp, etc., leaseholds	387,000	.....	4,640,000,000
<b>Total</b>	<b>11,251,000</b>	<b>at least 12,000</b>	<b>147,050,000,000</b>
Reserved timber land, conjectured to be one-fourth total forest area under provincial jurisdiction, say, roughly..	3,750,000	licences, same as on	45,000,000,000
<b>Total</b>	<b>15,001,000</b>		<b>192,050,000,000</b>

Under the control of the Dominion Government, in the railway belt, extending 20 miles on each side of the Canadian Pacific Railway, the merchantable stand of timber is estimated to be between 40 and 50 billion feet, nearly half of which would appear to have been alienated.

One further paragraph from the report of the Forestry Commission may well be quoted, from the very clear way in which it sums up the position which the province at present occupies in forestry matters generally: "With its 240 billion feet or more of merchantable timber, probably half the stand of Canada, the province faces a rising market east, west and south—for exhaustion of local supply will cause the southern tariff barriers to crumble gradually away. The bulk of this timber is Crown property; most of it is under government control; and the rate of growth upon the Pacific coast is twice the average for the United States. To cap the climax, the provincial policy has made the government a sleeping partner in forest exploitation—a sharer in the profits of the lumbering industry."

The principal trees indigenous to the province are the following: White fir, western white fir, mountain balsam, large-leafed maple, vine maple, red alder, arbutus, western birch, canoe birch, western dogwood, red cedar, American larch, mountain larch, western larch, white spruce, western black spruce, black spruce, white-marked pine, scrub pine, white mountain pine, yellow pine, western crabapple, balsam, poplar (aspen), cottonwood, cherry, Douglas fir, western white oak, lance-leaved willow, willow, western yew, giant cedar, yellow cypress or cedar, western hemlock and Alpine hemlock.

The Douglas fir, the most widely distributed and valuable tree found on the Pacific Coast, grows as far north as 51 degrees, where it is supplanted by the cypress or yellow cedar, red cedar, hemlock and spruce.

The following figures relating to the growth of the Douglas fir, which abounds in the province, convey the average result from 153 trees measured in East Wellington, B.C.:

Age	Diameter Outside Bark at 4 1/2 Ft. from Ground	Approx. B.F. Contents (B. C. Rule) to 10 In. Top Inside Bark
60 years	8 1/2 inches	
70 "	10 "	
80 "	12 "	40 B.F.
90 "	14 "	65 "
100 "	15 1/2 "	95 "
110 "	17 "	145 "
120 "	18 1/2 "	200 "
140 "	21 "	320 "
160 "	24 "	500 "
180 "	26 "	630 "
200 "	27 1/2 "	740 "
220 "	28 1/2 "	812 "
240 "	29 1/2 "	885 "
260 "	30 1/2 "	960 "

Concerning the very important matter of reforestation, it may be noted in passing that the question is far more intricate than is generally imagined. The prevalent idea that a forest destroyed by fire will in the course of time recreate itself is frequently fallacious. Too often the productivity of the soil is destroyed with the timber. It is probable, however, that natural reforestation will take place in British Columbia, where protection from fire is given to both the young and old growth of trees and where timber is taken

from the forests on proper and scientific methods. The importance, therefore, of an adequate system of fire protection needs no emphasis.

An interesting suggestion is that which proposes to cover those hillsides which have been denuded of their fir, spruce and cedar with various descriptions of soft-wood deciduous trees, adapted to the manufacture of pulp and paper.



The report of the Forestry Commission having been presented, the government proceeded to embody the recommendations contained in it in a forestry bill, which was introduced in the legislature by the minister of lands in 1912. This piece of legislation is of especial interest, since it forms not only the logical conclusion to the efforts that have been made towards the formulation of a sound forest policy, but also the foundation of a system that is destined steadily to increase in importance as the years go by.

Fire Prevention

In the matter of fire prevention strong measures were taken to prohibit the accumulation of logging slash, the railways were called upon to secure the removal of debris on their rights-of-way, supervision of logging camps was ensured, a fire patrol system was equipped and organized throughout the province, and public attention was drawn to the necessity for combined effort against an element that in the past few years had destroyed on the continent much more timber than the lumbermen had cut. The cost of fire prevention is shared jointly by the timber-owners and the government. One cent per acre is levied on timber-holders for the protection of their property, and a trifling contribution is required from operators on account of the expense caused by the supervision of their operations. Some idea of the thoroughness with which the government has taken up this branch of timber conservation may be gathered from the fact that it is intended to cover the forest system with a rough-and-ready telephone system, with which the patrolmen will be able at any point to make connection by means of portable light wire. Trail-cutting, the construction of fire lines, the establishment of lookout stations on high elevations, and other similar works are daily increasing the efficiency of the service.

Amongst other matters the Forestry Act, 1912, secures to the government the right to reserve suitable forest lands for the perpetual growing of timber, the Lieutenant-Governor-in-Council being empowered by proclamation to constitute such an area as a permanent forest reserve. The influence which these reserves may exert in the future, especially in the case of a monopoly control of timber prices, affords food for interesting thought.

The Act further provides that no timber shall be cut or carried away from any timber limit included in any special timber licence until the licensee has at his own expense had the said timber limit surveyed by a surveyor approved of by the minister responsible for forest matters.

An interesting clause permits the licensee, with the consent of the owner, the use of any land over which it may be necessary for him to transport timber or other forest produce, a right-of-way to a timber limit thus being assured.

All timber cut on Crown lands granted since March 12, 1906, must be used in the province, or, if the timber is to be exported in the form of boards, joists, laths, etc., the work of manufacture must, under the Act, be performed within the province, unless log exports are for special purposes authorized by government licences.

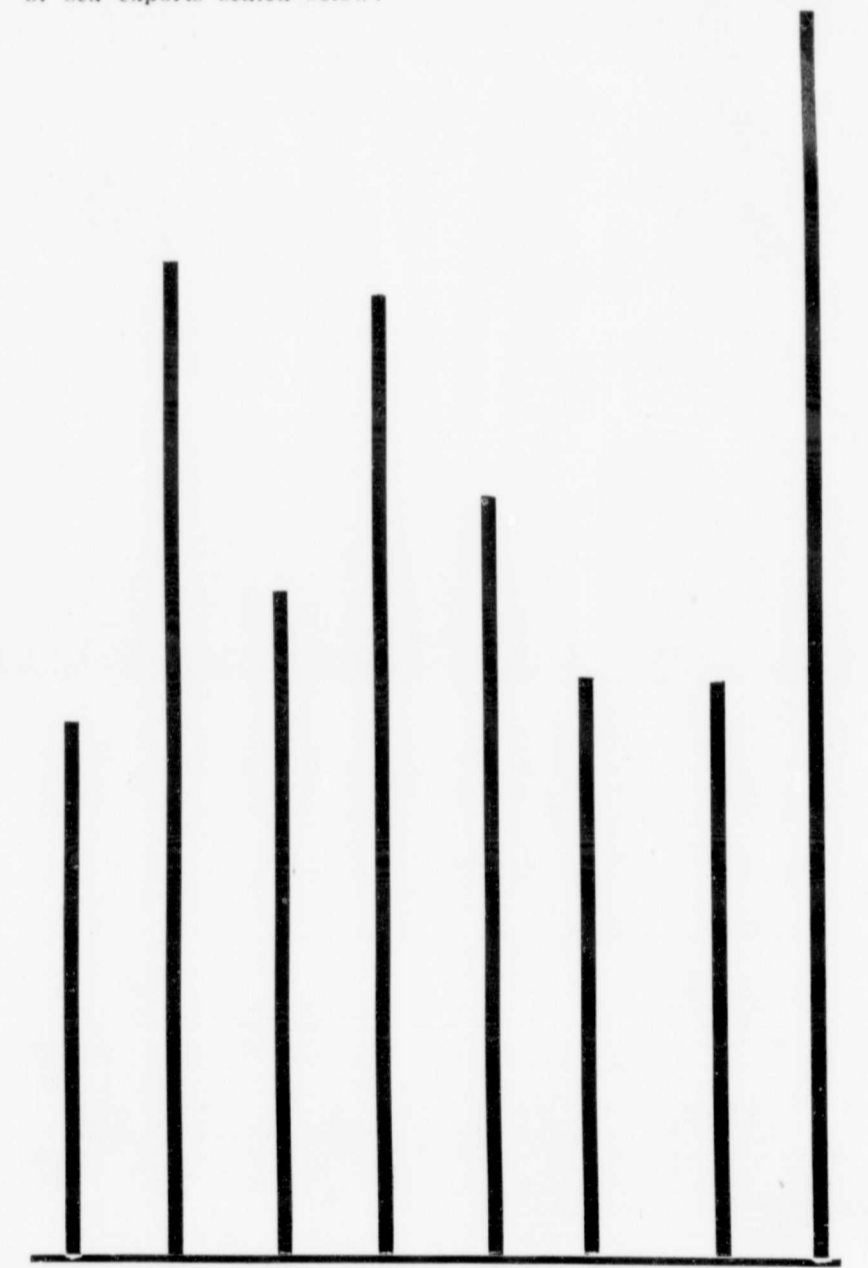
This brief article dealing with so comprehensive a subject as forestry within British Columbia

must of necessity leave out such details as interested readers may obtain from the Government Forestry Department.

What has been written, however, should suffice to show that the casual disregard of forest lands exhibited by the earlier settlers has now given place to government management on broad, scientific and energetic lines.

EXPORT OF LUMBER BY SEA FROM BRITISH COLUMBIA

N.B.—The best markets for B. C. lumber exports are in the prairie provinces of Alberta, Saskatchewan and Manitoba (when harvests are good), for all of which transportation is by railway. But when harvests are poor, the surplus of the "cut" is generally exported by sea to other countries—hence the wide variations of sea exports scaled below:



The above scale is based upon the following record of total lumber exported by sea:—

Year	Quantity in Feet, B.M.
1895	40,745,000
1900	74,981,000
1905	49,812,000
1910	73,218,000
1915	56,701,000
1916	43,676,523
1917	43,922,563
1918	93,033,304

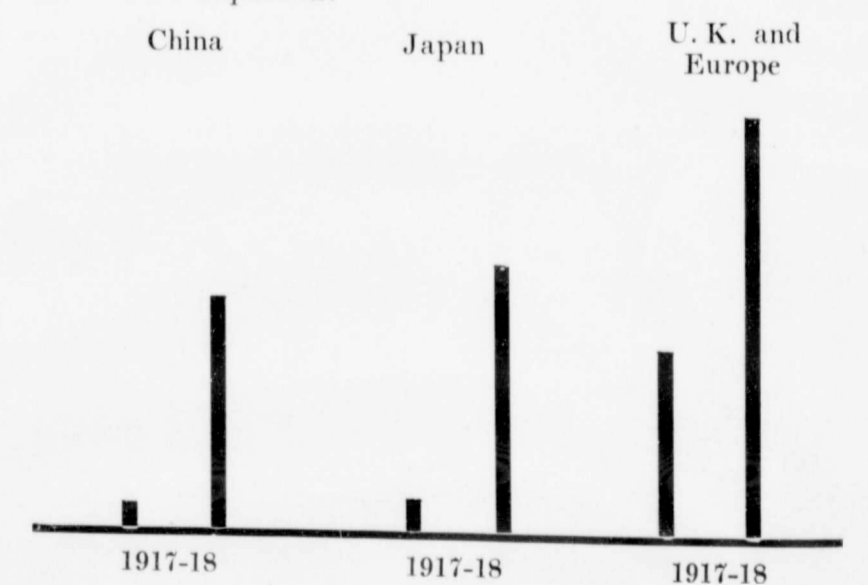
The marked increase during 1918 is caused by the extra shipments to China and Japan, where an extensive trade is rapidly developing, as the following figures prove:—

Year	China	Japan
1917	1,639,938	1,590,246 feet B.M.
1918	17,024,536	19,803,335 feet B.M.

The exports to the United Kingdom and other European countries show a similar increase, thus:—

1917	13,534,756 feet B.M.
1918	31,275,399 feet B.M.

The above three most significant increases are scaled below for comparison:—



# Lumber and Timber Trade

**D**URING 1918, the last war year, the fluctuating demand caused by the emergency nature of all business and scarcity of shipping was experienced in the lumber industry of the province.

The prairie business, for building houses, business premises and farm buildings, is of great and permanent value, British Columbia timber products being marketed throughout Alberta, Saskatchewan and Manitoba provinces, which are rapidly increasing in population.

The Eastern Canada market is steadily increasing. It is estimated that over 150,000,000 feet of British Columbia lumber, lath and dimension were shipped to Eastern Canada during 1918. This is a record, and when compared with the 40,000,000 to 50,000,000 feet volume of pre-war business, is very satisfactory; and it is even more encouraging to note the greater increase developed during 1919.

The department's trade commissioner's report on this market may be summed up as follows: "British Columbia, during the past two or three years, has obtained a footing which requires only sustained effort to secure for British Columbia timber a market for at least 250,000,000 feet a year. Our business can increase in all grades and all lines from box shooks to clear timbers and finish. British Columbia lumber is in this market to stay, if the needs of the market are studied and our mills supply the material desired."

During the past three years some preliminary work has been done in investigation and development of overseas markets. While good railway systems provide adequate transportation facilities to the east, expansion to the west in the direction of the Pacific markets of China, Australia, South Africa and South America was strangled during the war through lack of ships. Consensus of opinion is emphatic that round the Pacific is the

real and ultimate overseas market for British Columbia timber. The increased shipments during 1919 amply justify that prospective development.

At present Great Britain is the chief market with shipping, and there is in addition an enormous emergency demand in sight for timber for reconstruction work. Tonnage has controlled the situation. All importations to Great Britain have been handled by the timber controller, and up to the present any business which British Columbia could do must be through government channels. Large orders have been secured and a considerable quantity shipped.

The year 1918 brought British Columbia timber into prominence in connection with the war. The rapid development of the Royal Air Force, with its ever-increasing demand for more machines, made spruce for aeroplane construction of vital importance to the success of the Allies.

The output of aeroplane spruce began to show early in 1918 and the production of accepted stock increased from month to month until the armistice was signed, as shown by the following table:

## TOTALS OF PRODUCTION, SHIPMENT AND SALES OF LUMBER

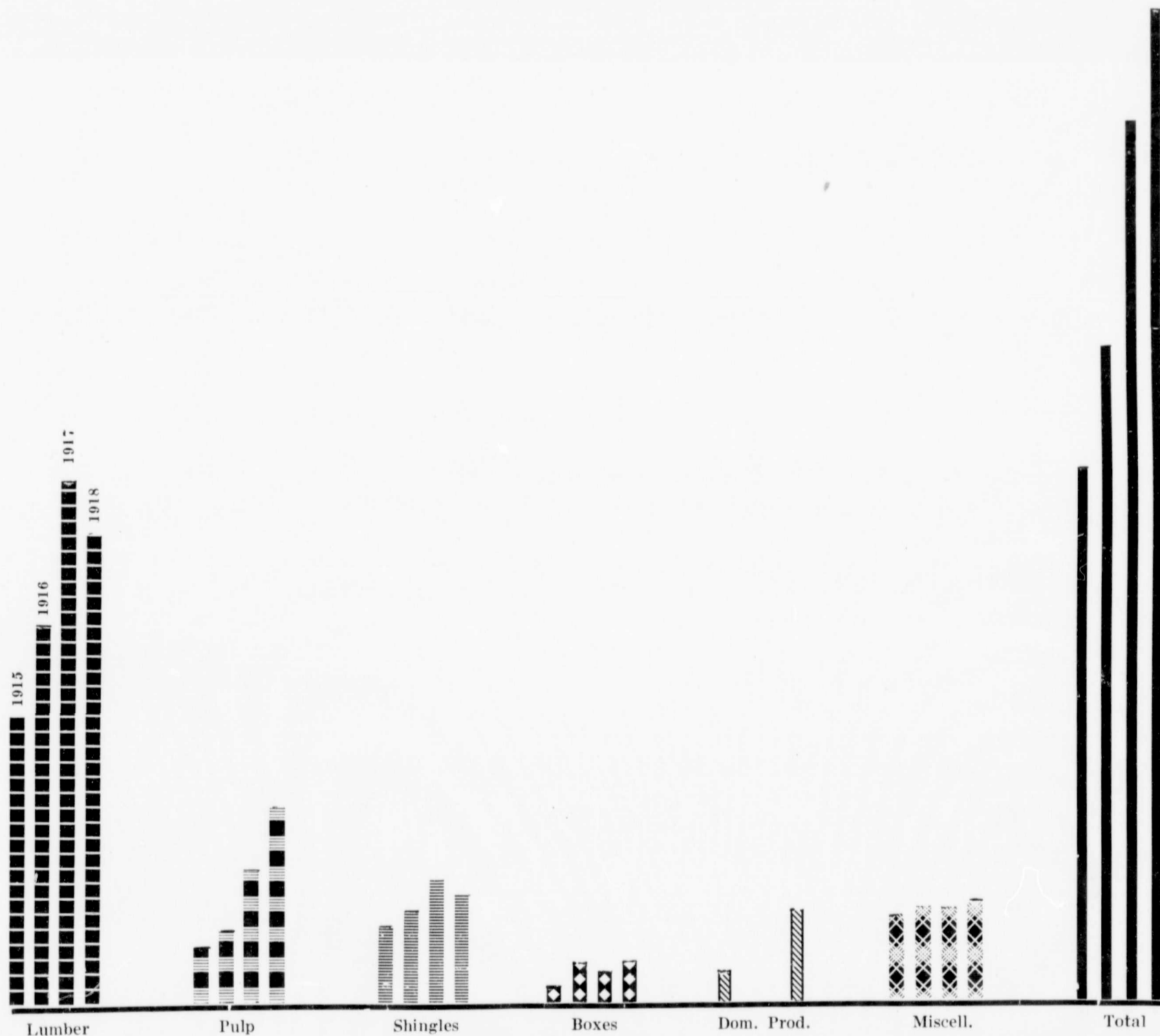
	1910 to 1919 (September 30th)									
	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
	Million Feet	Million Feet	Million Feet	Million Feet	Million Feet	Million Feet	Million Feet	Million Feet	Million Feet	Million Feet
<b>LUMBER CUTS</b>										
Coast Manufacturers	600	739	902	781	540	428	630	775	768	9 mths. to
Mountain Manufacturers	428	450	360	376	235	155	260	315	295	Sept. 30
<b>Total</b>	<b>1,028</b>	<b>1,189</b>	<b>1,262</b>	<b>1,157</b>	<b>775</b>	<b>583</b>	<b>890</b>	<b>1,090</b>	<b>1,063</b>	<b>1,338</b>
<b>LUMBER SHIPMENTS—BY RAIL</b>										
Coast Manufacturers	263	341	471	421	338	300	506	537	530	
Mountain Manufacturers	377	420	440	335	210	262	330	300	225	
<b>Total</b>	<b>640</b>	<b>761</b>	<b>911</b>	<b>756</b>	<b>548</b>	<b>562</b>	<b>836</b>	<b>837</b>	<b>755</b>	
Local Sales—Coast Manufacturers	248	326	390	280	170	98	112	174	150	
Local Sales—Mountain Mfrs.	Not recorded					Not recorded				
<b>FOREIGN SHIPMENTS—BY WATER</b>										
Coast Manufacturers	68	47	51	46	36	70	40	44	93	
<b>Total Sold (excluding Mountain Local Sales)</b>	<b>956</b>	<b>1,134</b>	<b>1,352</b>	<b>1,082</b>	<b>754</b>	<b>730</b>	<b>988</b>	<b>1,055</b>	<b>998</b>	

## SHIPMENT AND PRODUCTION OF AEROPLANE SPRUCE AND FIR, JANUARY TO NOVEMBER, 1918

	Spruce, Ft.	Fir, Ft.
January	116,000	209,000
February	500,000	375,000
March	470,000	289,000
April	499,000	212,000
May	1,019,000	876,000
June	1,825,000	829,000
July	2,165,000	987,000
August	3,024,000	1,530,000
September	4,487,000	1,475,000
October	5,229,000	1,060,000
November	6,850,000	1,382,000
<b>Total</b>	<b>26,124,000</b>	<b>9,224,000</b>

At this time British Columbia was more than equalling the entire production of the Western States, with all their resources in men and material, a result accomplished in eight months.

## TIMBER PRODUCTS CHART OF VALUES DERIVED DURING THE YEARS 1915 to 1918.



The slight reductions in the values received for Lumber and Shingles during the year 1918 (compared with the year 1917) was caused by the want of ships for export, restricted by submarines during the war.

Now that the war is over and ships are becoming available, the output of Timber products is steadily increasing. During the first 6 months of 1919 contracts for 100,000,000 feet have been made with the British Government and importers in Great Britain.

Increasing quantities are being sent to France and Belgium in the French ships built by British Columbians for the French and other European governments.

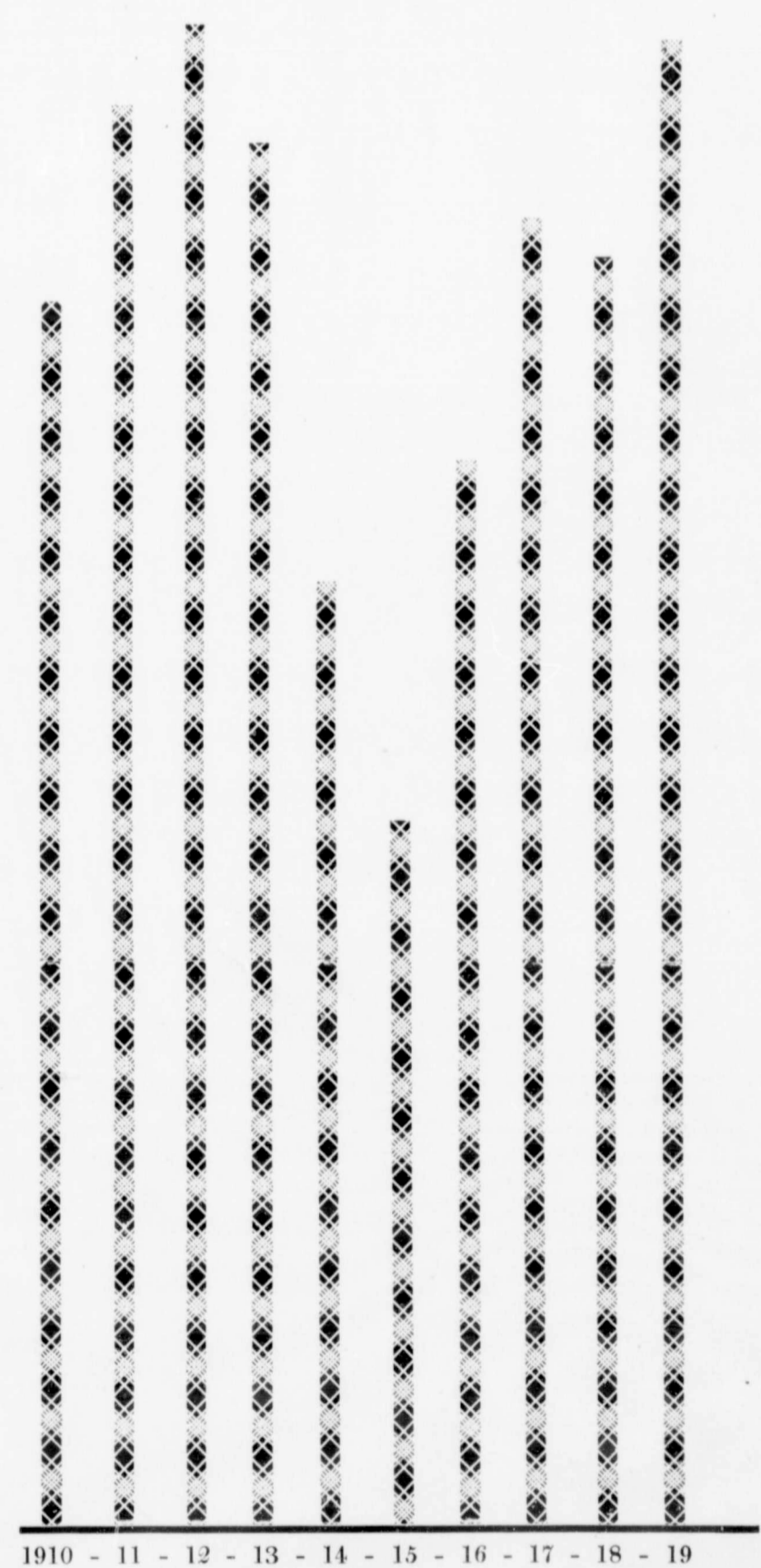
Larger contracts are now being filled for Australia and China, while the great agricultural developments in Alberta, Saskatchewan and Manitoba together ensure a large accession of business during 1919 and future years.

## TIMBER PRODUCTS AND THEIR VALUES

PRODUCT.	1915	1916	1917	1918
Lumber	\$15,500,000	\$21,075,000	\$28,225,000	\$26,219,697
Pulp	3,200,000	3,520,000	6,835,034	10,517,250
Shingles	3,500,000	4,500,000	6,900,000	5,805,417
Boxes	750,000	1,833,000	1,611,880	1,845,195
Product of Dominion lands	1,800,000			4,953,829
Miscellaneous	4,400,000	4,600,000	4,728,555	4,820,135
<b>Totals</b>	<b>\$29,150,000</b>	<b>\$35,528,000</b>	<b>\$48,300,469</b>	<b>\$54,162,523</b>

## QUANTITIES OF LUMBER CUT IN B. C., YEARS 1910 TO SEPT. 30th, 1919

(Scaled 200 Million Feet B.M. per inch)  
1st 9 months only of the year 1919



# Saw and Shingle Mills and Subsidiary Wood-working Industries



THERE are approximately 390 mills in the province which manufacture either lumber or shingles. It is estimated that if operated to capacity these mills could turn out about 2,500,000 M. board feet yearly—over twice as much as they have done in any of the last few years. In spite of this fact, new mills are being constructed every year. Over 60 per cent. of the mills are situated on the coast, and they manufacture 85 per cent. of the total cut. Vancouver and vicinity, which includes New Westminster, is the largest milling centre. Nearly 75 per cent. of the lumber and shingle production of the province is in that district.

The following table shows the distribution of the saw and shingle mills throughout the province:

District	Up to 15 M. Ft. Daily Capacity	15 M. Ft. to 40 M. Ft. Daily Capacity	Over 40 M. Ft. Daily Capacity	Shingle Mills	Total
Cranbrook	7	6	16	1	30
Fort George	5	10	1	..	16
Hazelton	7	1	..	1	9
Kamloops	2	3	4	1	10
Lillooet	20	..	..	..	20
Nelson	10	7	9	11	37
Tete Jaune	1	1	1	..	3
Vernon	9	12	4	..	25
Totals east of Cascades	61	40	35	14	150
Island	22	13	14	12	61
Vancouver	36	35	32	66	169
Prince Rupert	3	5	1	1	10
Totals west of Cascades	61	53	47	79	240
Totals in province	122	93	82	93	390

The wood-working industries have not been developed in British Columbia to the extent which

might be expected in a region where the raw materials are so abundant and so cheap. This may be attributed, in part, to the small local population, but undoubtedly sufficient effort has not been made to establish them. The lack of hardwood shuts out such industries as furniture and wagon manufacture, but there are considerable supplies of maple and cottonwood which might be used for these purposes. The number and importance of the subsidiary forest industries are, however, steadily increasing, the principal products being sash and doors, boxes, cooperage, wooden pipe, veneer, and creosoted products such as wood block paving, ties, piles and poles.

British Columbia Forest Branch Bulletin No. 19 gives a list of 16 firms manufacturing sash and doors, 47 making boxes, 7 cooperage, 5 veneer and 2 creosoting plants. There are in addition two or three wood pipe factories. Some firms are now preparing to put ready-made houses on the market.

The extension of these industries is of great importance from the standpoint of conservation, since, as a rule, they provide a use for grades and sizes of wood which cannot be profitably marketed as lumber.

The waste in the manufacture of lumber in this province is appalling to one accustomed to more conservative methods. Huge slabs of absolutely clear wood, 3 to 6 inches thick, are sold for fire-wood or sent to the fuel pile, and ends of boards and timbers which could well be used for box-making purposes are sold for kindling wood or

sent to the refuse burner. The burner is the most conspicuous thing about a British Columbia saw-mill. The fire never goes out and it furnishes a pillar of flame by night and a cloud of smoke by day. Heavy saws are necessary to "break down" the large logs, but it is not unusual to see 1-inch lumber being cut with a saw that takes out a 3/8-inch to 1/2-inch kerf. It is estimated that at least 25 per cent. of the tree is left in the woods and another 30 to 35 per cent. is wasted in the mill through lack of more economical methods.

That closer utilization is profitable has been demonstrated beyond question by some of the more progressive manufacturers in the Pacific States. In a number of mills in California short ends and blocks are worked into stock for the manufacture of beehives, incubators, etc., thereby saving a large amount of material which, in British Columbia, goes to the burner.

A campaign against waste in the lumber industry is urgently needed. A large and profitable field for research is open in this direction. The possibilities of extracting from sawmill waste such articles of commerce as turpentine, oils, acetic acid and alcohol call for immediate investigation. Now that large quantities of hemlock are being used for pulp and lumber, an effort should be made to use the bark for tanning purposes.

If the principles of forestry are ever to be adopted in this province, closer utilization must be practised. Intensive manufacture will result in enhanced stumpage values, which in turn will render the forest more worth protecting and encourage reproducing by reforestation.

# Pulp and Paper Industry

**P**ULP and paper manufacture has been established on a commercial basis since 1912. Six pulp mills have been established, all situated on the coast. Of these only two convert the pulp into paper.

The first plant was started at Port Mellon, on Howe Sound, for the experimental stage. The building of this mill was followed by others at Mill Creek (on Howe Sound), Swanson Bay, Powell River, Ocean Falls and Port Alice, on the north coast of Vancouver Island. A seventh pulp mill is under construction at Beaver Cove.

The original Swanson Bay plant was built by the Canadian Pacific Sulphite Pulp Company, Limited. The company was reorganized in 1916 under the name of the Empire Pulp & Paper Mills. It has since been taken over by the Whalen Pulp & Paper Company, Limited, who control also the pulp mills at Mill Creek and Port Alice. The Swanson Bay plant now has a capacity of fifty tons sulphite pulp per day. There is a sawmill in connection, in which the higher grades of logs are manufactured into lumber. The plant is situated in the centre of an immense pulpwood area, all of which is tributary to the plant by protected waterways. In connection with the plant 84,180 acres of timberland is held under pulp lease.

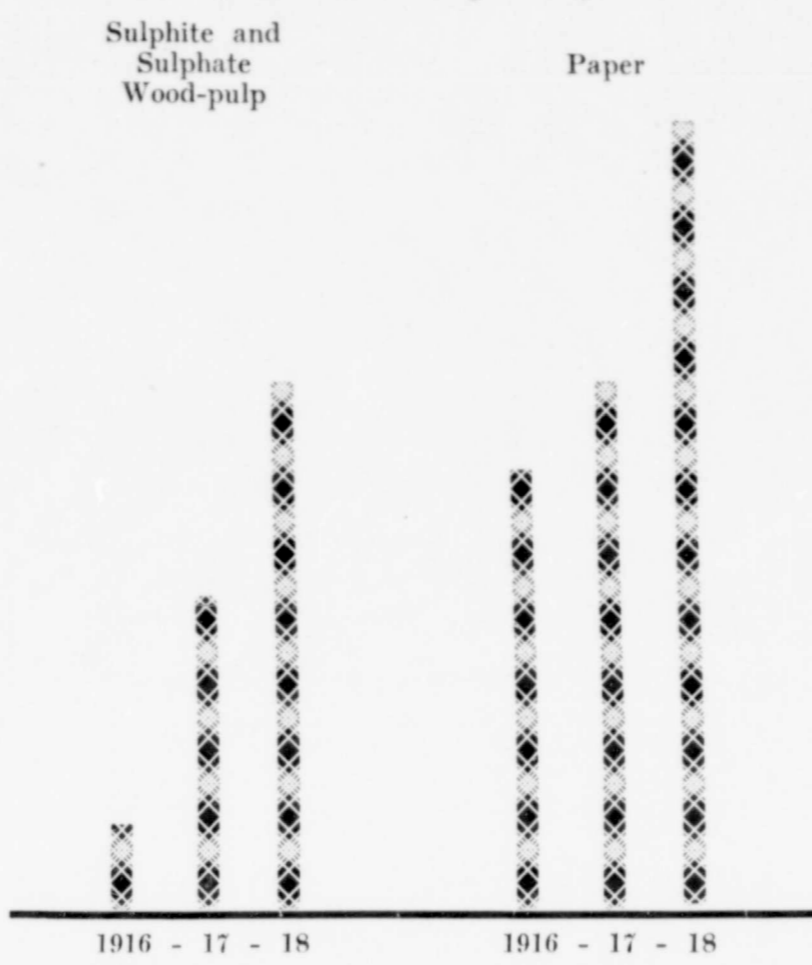
The Mill Creek plant, on Howe Sound, has been operating steadily since its completion in 1912, and has a capacity of about 90 tons per day. As none of the old pulp leases were appurtenant to this mill, it for some time depended for its supply of pulpwood on purchasing logs from independent operators. Within the last few years, however, the company has taken advantage of the provisions for timber sales, and has acquired a considerable amount of pulp timber under what are known as pulp licences.

The Port Alice plant has just been completed and is turning out 70 tons of pulp per day. This mill is surrounded by 55,679 acres of pulp leases.

The Ocean Falls plant is situated on Cousins Inlet, a branch of Dean Channel, about 180 miles south of Prince Rupert and 300 miles north of Vancouver. The original company was a failure, but the plant has been successfully operated since being taken over by San Francisco capitalists under the name of Pacific Mills, Limited. The new

## PRODUCTION OF WOOD-PULP AND PAPER IN YEARS 1916 TO 1918

(Scale 40,000 tons per inch)



owners have greatly improved the mill, and have installed paper-making machinery, now producing approximately 200 tons of news print and kraft paper daily. Pulp leases covering 80,000 acres are held by this company, and there are also vast supplies of pulpwood on other lands in the vicinity.

The Powell River mill is situated at the outlet of Powell River, on Malaspina Strait, about 80 miles northwest of Vancouver. It is owned by the Powell River Company; has been in operation continuously since completion, and is one of the most thriving industries in the province. Both sulphite and mechanical processes are used to reduce the wood to pulp, which is manufactured into paper at the plant, the capacity of the paper mill being about 250 tons per day. The present company acquired the mill site, water power and 134,500 acres of timber in pulp leases from the Canadian Industrial Company. These leases are nearly all situated 100 miles north of the mill, as the timber in the immediate vicinity is chiefly Douglas fir and red cedar. The logs can, however, be safely and cheaply towed to the mill

through the channels protected by Vancouver Island. This mill, in addition to its own cut, uses a considerable amount of pulpwood purchased from independent loggers, whose main cut is for lumber purposes.

The practice with the majority of pulp mills is to operate a sawmill in order to take full advantage of the better class of timber, while in some instances shingle mills and box factories are also operated to make use of the varieties of timber not suitable for pulp-making.

Aside from the abundance of timber for pulpwood, British Columbia offers exceptional water power facilities for the development of the pulp and paper industry. The mild climate of the coast region permits of continuous operation throughout the year, and the harbors remain open to navigation. As the streams are fed, during the summer, to a large extent from melting snow and ice on the mountain tops, and in the winter by heavy rain, the flow is continuously sustained as a sure and economical waterway for floating down the logs and conveying the products direct to the markets of the world.

The growth of the wood-pulp industry in British Columbia is illustrated by figures secured by the Forestry Branch of the Department of the Interior. Reports were evidently not secured from the Swanson Bay and Ocean Falls plants when they were originally in operation.

Year	Pulpwood Used, Cords	Average Value per Cord
1911	150	\$7.60
1912	35,067	5.51
1913	84,173	4.77
1914	80,013	5.33
1915	90,535	6.08
1916	108,997	5.32
1917	.....	.....
1918	.....	.....

The output of the mills during 1914-1918 has been as follows:

Year	Sulphite Wood-pulp (tons)	Paper (tons)
1914	10,698	45,816
1915	13,000	50,307
1916	14,389	65,229
1917	46,507	79,003
1918	78,242	120,483

## Shipbuilding

**T**HE success of shipbuilding in British Columbia has been demonstrated during the past four years by the construction of four distinct types of boats. Passenger vessels were not tried, but freighters were made a specialty of, with the result that during the past five years the shipyards of the Province of British Columbia added 330,000 tons of shipping to the fleet of the allied forces.

This tonnage was delivered in wooden schooners, wooden steamers, small steel freighters and in 8,800-ton carriers, some to private owners, but the major portion to the Imperial Munitions Board and the French Government. All boats for private owners were constructed of wood, but the heavier tonnage was built of steel.

Outside of a few minor parts in the wooden boats, the entire vessels were built of Douglas fir cut from the forests of British Columbia. During the construction of the wooden steamers for the Imperial Munitions Board nearly 7,000 men were employed in the different wooden shipyards, while the steel shipyards operating at the same time utilized about 5,000 men in the various departments of construction.

The first boats to be built were long, rakish schooners, with a tonnage of 2,500. These boats

were five-masted bald-headed schooners, and nearly all fitted with auxiliary power. A shortage of engines forced one of these vessels to go to sea as a wind-jammer, but her engine was later installed.

Good beams characterized the construction of the 2,500-ton steamers for the Imperial Munitions Board, and the rivalry between the different yards on the mainland and on Vancouver Island gave impetus to the building to such an extent that record time was made in turning out these boats.

One company, being slack on orders after delivery of the I.M.B. steamers, decided to build six schooners for its own use. These were built similar to the original wooden vessels with the exception that they carried topsails and considerably more canvas in all sails. Auxiliary power was also installed in these schooners.

Greek interests had two wooden steamers similar to the Imperial Munitions Board boats built in a yard near Vancouver, and these vessels are now operating in the neighborhood of the West Indies.

The French Government let contracts in this province for the construction of 40 wooden steamers. The smaller type were in the 1,500-

tonnage class, and the larger ones were 3,200 tons. These steamers on completion carried lumber from British Columbia to the United Kingdom instead of sailing light.

The heaviest steel freighters were built in the Coughlan shipyards and went up to 8,800 tons, of which 10 of these boats were built and delivered to the Imperial Munitions Board. This yard also took on contracts for four Canadian steamers in the 5,100-ton and the 8,100-ton classes.

Another smaller steel shipyard built 4,300-ton and 4,800-ton steamers during the call for hurry-up tonnage. Shipbuilding in British Columbia was proven a success, and although born of emergency the industry is expected to grow under normal ship-plate delivery conditions and the advantages of open ports the year round.

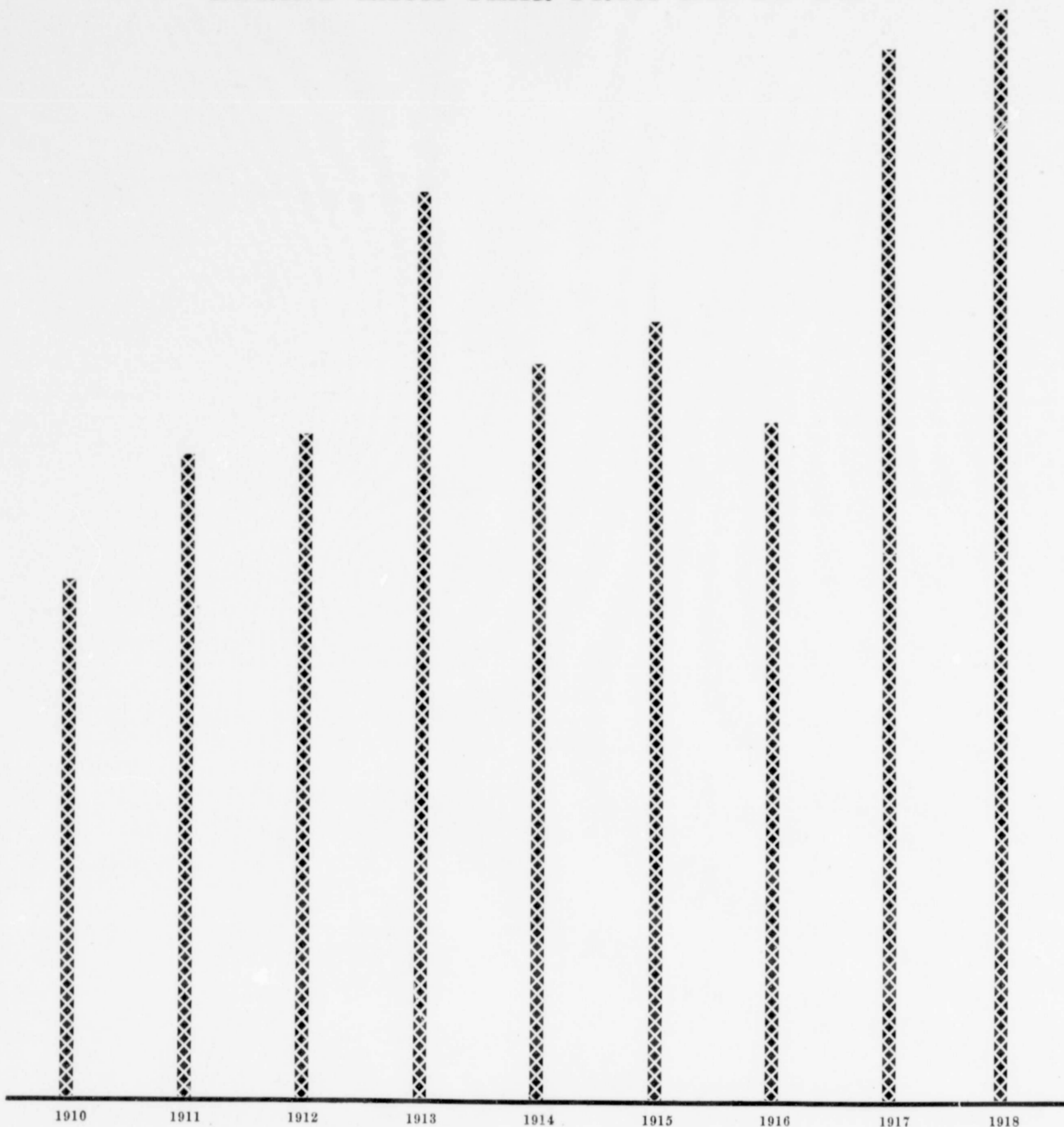
At the close of 1919 the Coughlan yards had four steel vessels under construction for the Canadian government, with two more on order. Another yard in the vicinity has one under construction and two more on order. Two steel vessels are being built in Victoria and two more at Prince Rupert—all on Canadian government account.

No wooden boats are either under construction or on order.



# British Columbia Fisheries

SALMON CHART, SHOWING THE NUMBER OF CASES PACKED DURING EACH YEAR FROM 1910 TO 1918



British Columbia Salmon—Number of Cases packed during the year 1918, and the preceding 8 years.

Packed by Districts.	Socketeye	Red Springs	White Springs	Chums	Pinks	Cohoos	Blueback and Steelh'ds	Grand Total
Districts.	Cases	Cases	Cases	Cases	Cases	Cases	Cases	Cases
Fraser River District.....	16,849	15,192	4,853	86,215	18,388	40,111	4,395	206,003
Skeena River District.....	123,322	16,013	6,828	22,573	161,727	38,759	4,994	374,216
Rivers Inlet District.....	53,401	957	452	6,729	29,542	12,074	.....	103,155
Naas River District.....	21,816	2,332	1,820	40,368	59,206	17,061	1,305	143,908
Vancouver Island District.....	9,091	25,460	4,864	251,266	57,035	40,732	4,215	392,663
Outlying District .....	51,980	5,581	3,002	90,464	201,847	42,331	1,007	396,212
<b>Grand Totals .....</b>	<b>276,459</b>	<b>65,535</b>	<b>41,819</b>	<b>497,615</b>	<b>527,745</b>	<b>191,068</b>	<b>15,916</b>	<b>1,616,157</b>
<b>Packed by Districts Previous Years—</b>	<b>1917</b>	<b>1916</b>	<b>1915</b>	<b>1914</b>	<b>1913</b>	<b>1912</b>	<b>1911</b>	<b>1910</b>
Fraser River District.....	377,988	106,440	289,199	328,390	732,059	173,921	301,344	223,148
Skeena River District.....	292,219	223,158	279,161	237,634	164,055	254,258	254,410	222,035
Rivers Inlet District.....	95,302	85,383	146,838	94,890	68,096	137,697	65,684	39,720
Naas River District.....	119,495	126,686	104,289	109,052	53,423	71,162	101,066	129,398
Vancouver Island District.....	377,884	307,635	313,894	341,073	336,268	359,538	226,461	147,900
Outlying District .....	294,597	145,763	.....	.....	.....	.....	.....	.....
<b>Totals .....</b>	<b>1,557,485</b>	<b>995,065</b>	<b>1,133,381</b>	<b>1,111,039</b>	<b>1,353,901</b>	<b>996,576</b>	<b>948,965</b>	<b>762,201</b>

The foregoing compares the salmon pack in B. C. to the year 1918. Below we record an analysis of the salmon for 1919, showing its sources and species—also the species of other fish taken from B. C. waters:—

Salmon	Fraser	Skeena	Rivers Inlet	Naas	Vancouver Island	Other Districts	Total Cases
Socketeye .....	29,628	189,945	56,258	28,259	15,678	54,677	369,445
Red Springs .....	14,519	19,661	967	2,408	28,476	7,148	73,179
Pink Springs .....	704	3,624	234	585	1,076	2,854	9,077
White Springs .....	3,502	2,656	241	581	6,461	4,764	18,295
Bluebacks .....	15,613	.....	.....	.....	8,645	65	24,323
Steelheads .....	328	2,672	2	789	.....	702	4,493
Cohoos .....	39,253	36,559	9,038	10,900	44,884	34,936	175,670
Pinks .....	39,363	117,303	6,538	29,949	43,186	110,300	336,63r
Chums .....	15,718	31,457	7,089	24,041	128,013	165,717	372,035
<b>Total .....</b>	<b>158,718</b>	<b>398,877</b>	<b>80,367</b>	<b>97,512</b>	<b>276,519</b>	<b>381,163</b>	<b>1,393,156</b>

The B. C. Department of Fisheries reports:—

### Whaling

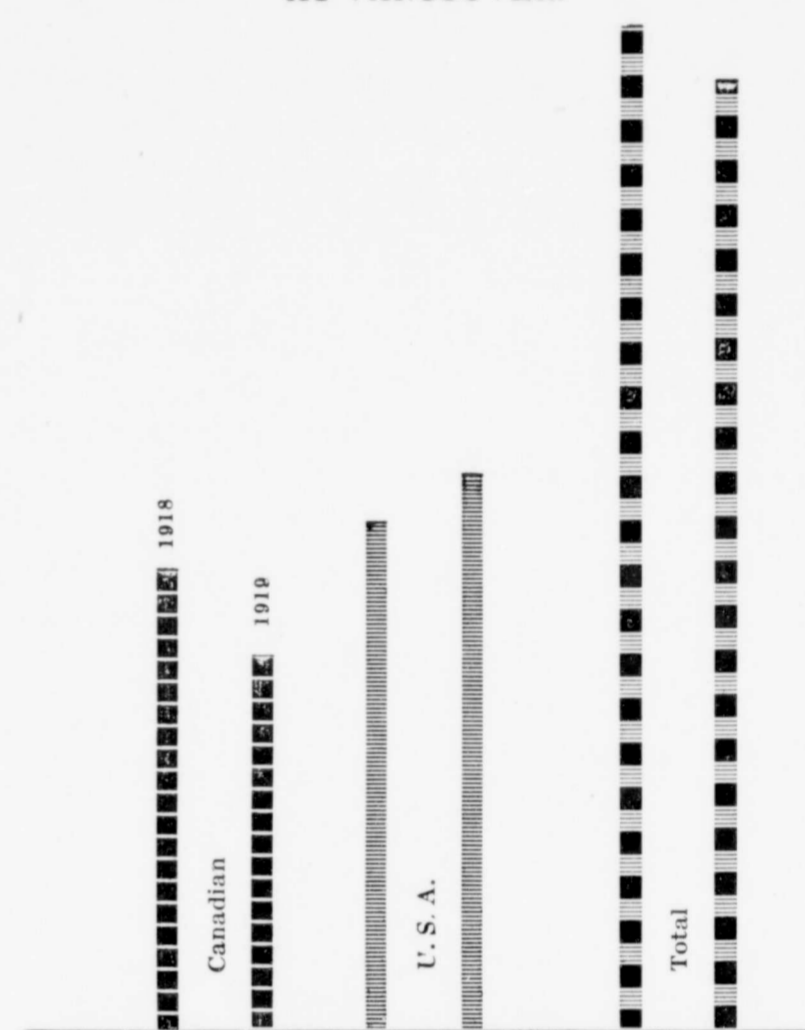
“Whaling during 1918 was most successful. Three stations were operated on our Coast. The following statement, furnished the department by the Consolidated Whaling Company of Victoria, gives the number and species of whales landed at each of their stations during 1918:—

Station	Sperm	Sulphur Fin.	Sci.	Hump	Right	Bot.	Nose	Total
Kyuquot .....	12	4	88	101	41	—	—	246
Rose Harbour .....	17	12	69	15	25	1	1	140
Naden .....	5	15	51	14	29	—	—	114
<b>TOTALS .....</b>	<b>34</b>	<b>31</b>	<b>208</b>	<b>130</b>	<b>95</b>	<b>1</b>	<b>1</b>	<b>500</b>

Halibut Landed at the Port of Vancouver During the Years Ended March 31, 1918 and 1919.

From Canadian vessels, 1918.....	3,584,711 lbs.
From Canadian vessels, 1919.....	2,882,166 lbs.
From U. S. vessels, 1918.....	3,912,226 lbs.
From U. S. vessels, 1919.....	4,239,626 lbs.
<b>Total, 1918 .....</b>	<b>7,496,937 lbs.</b>
<b>Total, 1919 .....</b>	<b>7,121,792 lbs.</b>

HALIBUT CHART OF WEIGHTS LANDED AT VANCOUVER.



The following are for the previous year, as later figures are not available. These are important as proving the extending use of other fish.

Other Fish	Value
Black Cod .....	\$ 879,404
Hake and Husk .....	1,090
Herring .....	1,192,654
Shad .....	675
Halibut .....	1,721,012
Soles .....	78,649
Flounders .....	23,601
Skate .....	10,117
Smelts .....	14,270
Oolachans .....	10,991
Brill .....	51,410
Octopus .....	1,656
Rock Cod .....	8,688
Pilchards .....	11,810
Whiting .....	2,725
Gray Fish .....	4,480
Oysters .....	32,202
Clams and Quahaugs .....	84,000
Dulse, Crabs and Cockles .....	48,424
Trout .....	10,350
Sturgeon .....	9,790
Perch .....	4,920
Salmon Roe .....	13,184
Fur Sealskins .....	6,540
Whale Oil .....	342,247
Other Fish Oil .....	23,892
Fertilizer and Bone Meal .....	16,725
Mixed Fish, etc. ....	26,036
<b>Total .....</b>	<b>\$4,689,812</b>

### Canned Whale-Meat

“A total of 29,585 cases of whale-meat was canned at the company’s station of Kyuquot in 1918. The pack was made in round 1-lb. flat tins similar in all respects to salmon, each case containing forty-eight tins. The commissioner’s assistant made a careful inspection of canning operations, and in his report said:

“The canning plant at the Kyuquot whaling station, where the meat of the whale is canned, is up-to-date in every respect. I followed the process through every detail. Every feature of it, from the cooling of the meat to the sealing of the can, is in every respect all the most fastidious could wish. I sampled the contents of many cans taken from the pile of those canned previous to my visit. The contents, to my taste, equalled the best canned beef or mutton in the market. There can be no question but that canned whale-meat will command a market.”

“A rapid expansion in output is anticipated.

### Pilchards

“The run of pilchards to the estuaries of the west coast of Vancouver Island was greater than

"previously reported. Heretofore they have not been noted on the west coast in waters south of Barkley Sound. This year they were taken in numbers by the salmon-traps in Juan de Fuca Strait and in nets in Esquimalt Harbor, Cadboro Bay and Haro Strait as far north as Mayne Island. The fish were large and fat. Many were sold fresh and several salmon canners packed them in 1-lb. and 1/2-lb. cans. They meet with a ready sale.

#### Deep-Sea Trawling

"The distinguishing feature of the fishery year was the successful operating of deep-sea trawling vessels from our ports. Experiments conducted in 1917 out of Prince Rupert demonstrated that there were 'banks' adjacent to that port where trawling could be conducted, and which resulted in the successful operations of 1918. The trawler, 'James Carruthers,' made forty-nine trips out of Prince Rupert between February 28 and December 19, occupying 151 days, which resulted in the landing of some 2,000,000 lb. of fish consisting of flounders, sole, witch, brill, cod, skate and a limited amount of halibut. The average trip of the trawler from dock to dock was three days. On being dressed, the fish were placed in cold storage and frozen, and marketed principally in the Northwest, under provisions of Order No. 18 of the Canada Food Board, being retailed from 10 to 11 cents per pound; the Dominion Fisheries Department assuming two-thirds of transport charges. The trawlers' operations were limited because of the lack of a market. The catch was in excess of the demand. There is no longer a question as to lack of supply or suitable trawling 'banks.' Given a market, an abundant supply is assured.

"The bulk of the catch was, as stated, marketed in the Northwest. Heretofore, that section has been supplied only from the Coast with salmon and halibut. Other salt-water fishes were unknown. The sale of Pacific flatfish and cods was stimulated by an active publicity campaign conducted by the Canada Food Board. Sales in 1918 were sufficiently large to warrant the belief that a permanent market can be established provided the price of that year can be maintained. There is no question as to the food values of trawl-caught fish. They are the equal of any food-fishes with the exception of salmon.

"They have more flavor than halibut, and can be sold at less than half the price of either salmon or halibut. Evidence of the value in which they are estimated is demonstrated by the fact that the landing of trawl-caught fish at the chief ports of Great Britain, notwithstanding the war, between May 4 and September 14, 1918, totalled 1,658,764,000 lb. During the last four months of 1917 an average of 1,500,000 lb. per month of trawl-caught fish were landed in San Francisco.

"In face of the declining catch of our estuary and halibut fisheries, it is encouraging to record the success of deep-sea trawling from our ports; a success so great as to warrant the belief that eventually a large fleet of trawlers will operate from our ports.

"The Department gives considerable attention to the operation of the trawlers. Curtailed as operations were by a limited market and cold storage capacity, they were extensive enough, as stated, to warrant exploitation. In advancing measures for the engagement of returned overseas service men, the Commissioner stated:—

"In formulating measures for the engagement of returned overseas men, full consideration should be given to the fisheries. Deep-sea trawling conducted out of British Columbia ports in 1917 and 1918 were profitable and afford evidence of the wealth of food-fishes that await exploitation. What are required at this time to reap the wealth are more suitable vessels and more trained men to operate them. These wants can be supplied on the Pacific Coast by the establishment of a trawling school—a school for the training of men to engage in deep-sea trawling-fishing—by providing a number of suitable vessels equipped for deep-sea fishing and officered by experienced navigators, engineers and fishermen to act as instructors, and to which returned overseas men could be apprenticed for instruction in navigation; the assembling and operation of steam and gas engines; the construction, care, casting and hauling of trawl-nets; and the dressing, storing, packing and shipment of the fish caught.

"In consequence, it is suggested that the government provide a number of suitably

equipped vessels, man them with capable instructors, and engage them in training returned overseas men in deep-sea trawling-fishing. The men during their apprenticeship to be paid a good living wage and given a bonus from the ship's earnings, after capital expenditures have been paid, that would eventually give the apprentices, who by that time are experienced men, the ownership of the vessel.

"Well managed, the operations of such vessels would be sufficiently profitable to furnish the means for operation and maintenance and create a sinking fund that would reimburse the government and permit the vessel being transferred to the men to be worked on their own. There is room for at least ten such training-ships on the Pacific Coast of Canada, each of which could provide tuition for twenty-five apprentices. Such a school as is here suggested could be directed and operated in connection with the Naval Training School now established at Esquimalt.

"In addition to the practical trawling sea school here suggested, there should be established at Prince Rupert and Vancouver fish curing and packing schools for the practical training of overseas men in the curing, packing and marketing of fish, and through which the catches of the training-trawlers could be marketed.

"Men graduated from the land school could be sent in to the Northwest and established as wholesale and retail handlers of both frozen and cured fish, first as the agents of the schools, and so bonused as to eventually acquire their plant and the business they have been enabled to establish.

"The establishing and maintenance of such schools as are here suggested will not provide for the engagement of a large number of returned men, but it does provide for a number and will materially assist in building up a food-providing class of hardy men in a field where men are needed and where they may gainfully engage."

Further particulars desired may be obtained by application to the "Commissioner of Fisheries," Victoria, B. C.

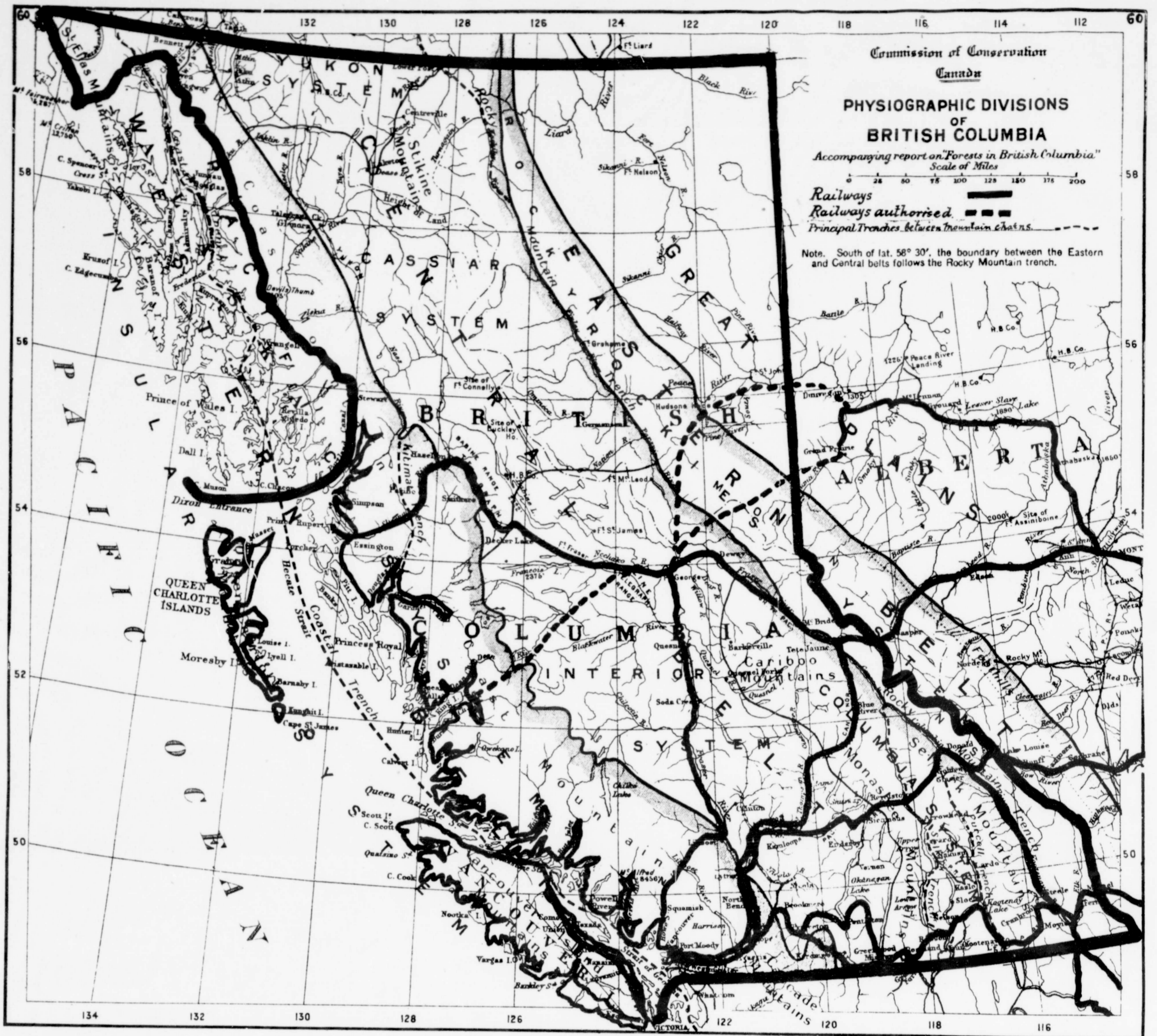
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# Water Powers



IN a country so vast as British Columbia, with its great unpopulated and unexplored areas, it is impossible to do more than briefly refer to some of the undeveloped water powers which have been examined by the Canadian Commission of Conservation, the Dominion Water Power Branch of the Department of the Interior, Ottawa, the Water Rights Branch of the Lands Department of the Provincial Government of British Columbia, and by private enterprise. Much information, however, is available and will be willingly placed at the disposal of bona fide inquirers by responsible officials of these government departments—preferably the Water Rights Commissioner of British Columbia, who is in closest touch with the latest developments.

On the lower mainland of the province, within a reasonable distance of the port of Vancouver, in addition to the large powers that have already been tabulated in the preceding table, there are many other large powers awaiting development. Among those that may be referred to are Lillooet Lake (now called Allouet), 30 miles east of Vancouver, where it is possible to develop 25,000 h.p. economically by means of a storage dam at the outlet of the lake, and a flume line six miles long conveying the water to a point six miles westerly, where a head of 290 feet will be available at a power house site near the tidal waters of the Pitt River. Farther up the Fraser River is its tributary, the Chehalis River, with possibilities of 30,000 to 40,000 h.p.; and going still farther east, about 90 miles from Vancouver is Jones Lake, which will give 35,000 h.p. under a head of 2,200 feet. Near this power is also the Chilliwack river and lake, with possibilities of a further 80,000 h.p., and going still farther east we find the Coquihalla River, capable of developing 20,000 h.p. North of Howe Sound, along the line of the

Pacific Great Eastern Railway, is the Cheakamus river and falls, with a possible development of 50,000 h.p.

A very interesting undeveloped power project in the vicinity of Vancouver is that proposed by the Westminster Power Company, which contemplates two developments, one on the Meslilooet or Indian River, with a head of approximately 400 feet, and another using the flowage from three tributary creeks of the Indian River under a head of approximately 2,000 feet. The two proposed developments are close together, about 3 miles from the head of the North Arm of Burrard Inlet and about 20 miles from Vancouver. It is understood that a total of about 40,000 h.p. is possible of development there.

The basin of the Fraser River and its extensive tributaries offer a great field of study for the utilization of many water powers. The Fraser River is 695 miles long and receives the drainage of an area of 91,700 square miles, including 2,300 square miles of lake water. Of its principal tributaries, the Thompson drains 21,800 square miles and is 270 miles long; the Chilcotin drains 7,500 square miles and is 145 miles long; the Black Water drains 5,600 square miles and is 140 miles long; the Nechaco drains 15,700 square miles and is 220 miles long; the Stuart is 220 miles long, the North Thompson 185 miles, and the South Thompson 120 miles. The Fraser River rises near the summit of the Yellowhead Pass at an altitude of 3,710 feet. In 52 miles it falls to 2,400 feet near Tete Jaune Cache; thence flows northwest in the "inter-montane" valley to latitude 54 degrees; then, like the Columbia at the Big Bend, it turns westward and southward. At Fort George, near its most northerly point, it is at an altitude of 1,900 feet—a descent of 500 feet in about 200 miles. Steamers have ascended it to

Base map from plate of Map of Dominion of Canada, Dept. of Interior

Tete Jaune Cache, a circumstance which indicates a swift-flowing stream without considerable fall at any point. The Grand Trunk Pacific grade on its banks would probably debar extensive damming except below the mouth of Bear River. During the season of navigation, steamers ply between Fort George and Soda Creek, which would, for the present, prevent the utilization of power sites on this stretch—such as Cottonwood Canyon. The construction of the Pacific Great Eastern Railway down this river, however, will probably result in the abandonment of this steamship line. Below Chimney Creek the river enters the Fraser canyon, to emerge near Hope. Between Fort George and Lillooet, about 255 miles, it falls 1,240 feet. Allowing a fall of, say, 3 1/3 feet per mile for the 150 miles between Fort George and Chimney Creek, there is left a descent of nearly 740 feet in the 105 miles between the latter and Lillooet. Between Lillooet and Lytton bridge it falls 244 feet in 40 miles, and between the bridge and Hope it falls 300 feet in 60 miles, having an altitude at Hope of about 115 feet above sea level.

Below Lytton, irrespective of the difficulty—if not impossibility—of harnessing this raging torrent, the presence of the Canadian Pacific and Canadian National lines debar any attempt to generate power in this portion of its course. Above Lytton, as indicated above, there is even a greater fall per mile than below; but here, again, the construction of the Vancouver branch of the Canadian National Railway may make it impossible to utilize this stretch—irrespective of the difficulties connected with the handling of the flow of a great river that has, in places, a range of 50 feet between high water and low water.

The Thompson is the largest affluent of the Fraser. It is 270 miles long—to the head of the North Thompson—and drains an area of 21,800

square miles. The foregoing remarks respecting the Fraser River canyon apply in large measure to the canyon of the Thompson above its confluence with the Fraser. The North Thompson—main branch—is 155 miles long and rises near Tete Jaune Cache, at an altitude of about 2,400 feet. Forty miles below, at the head of the canyon, it is at elevation 2,066, a descent of 336 feet—8 feet per mile. At the “stillwater” below the canyon it is 1,925 feet, a fall of 141 feet in four miles. At its confluence with the South Thompson, near Kamloops, it is at altitude 1,153, a descent of 1,267 feet in the 170 miles from the headwaters. The Raft, Mad, Blue and Clearwater tributaries are important streams with steep descent.

The South Thompson is 120 miles long. It is navigable from Kamloops to Shuswap Lake and contains no water powers. Its upward continuation, the Shuswap, falls 130 feet between Enderby and Mable Lake. It drains Mable Lake, a reservoir 20 miles long and from half a mile to a mile wide. Adams River carries the discharge of Adams Lake a magnificent sheet of water, 37 miles long and one and a half miles wide. Between Adams Lake and the South Thompson the river descends 220 feet in five miles. The proposed installation on this stream will utilize a head of 165 feet.

Among other rivers that may be referred to is Cayoosh Creek, which empties into the Fraser opposite Lillooet village. Between Anderson and Seton lakes it falls 58 feet in four miles, and between Seton Lake and the Fraser there is a descent of 134 feet in seven miles. Bridge River is a considerable tributary and drains a portion of the Coast Range to the north of Cayoosh Creek. By driving a tunnel from the valley of the latter a head of 1,500 feet could be obtained.

The Chilcotin River drains an area of 7,500 square miles and is 145 miles long. Between Puntzee Lake, in its upper waters, and the mouth it falls 1,750 feet. Its south branch, the Chilko, falls about 2,400 feet between Chilko Lake and the Fraser. As Chilko Lake is about 50 miles long and from 4 to 5 miles wide, there is excellent storage available.

The Quesnel River drains the southern portion of the Cariboo mountains. Between Quesnel Lake and the mouth it falls 350 feet. Between Cariboo Lake and the Fraser, its north branch falls 650 feet. Quesnel Lake, 60 miles long and 3 miles wide, would provide excellent storage.

The Blackwater River drains an area of 5,600 square miles and is 140 miles long. It falls about 1,700 feet between Tascha Lake—an expansion—and the Fraser.

The Nechaco drains an area of 15,700 square miles and is 255 miles long. Between Ootsabunkut

Lake and the Fraser it falls 860 feet, of which 82 feet is in the short stretch between Ootsabunkut and Nataalkuz lakes. Its north branch, the Stuart, is 220 miles long. The Nechaco basin contains a number of large lakes, including Ootsabunkut, 40 miles long, Cheslatta 25, Francais 60, and Fraser 12 miles; also Stuart Lake, with an area of 221 square miles, and Tacla, 135 square miles.

On the north fork of the Fraser, about 35 miles from its confluence with the main stream, there is a fall 80 feet high.

The Columbia River has a total length of 1,150 miles, of which 465 miles are in Canada. It drains, in Canada, an area of 39,300 square miles. It rises in Upper Columbia Lake, in the great “inter-montane” valley between the Rockies and the Selkirks. From the lake it flows northward to latitude 52 degrees, turns westward at the “Big

other streams that fall in below the “Big Bend,” although the same remark applies to the last named as to the Beaver.

The Kootenay has a total length of 400 miles, drains an area of 15,500 square miles, and rises in the Rocky Mountains about 20 miles southeast of Leancoil station, on the Canadian Pacific. As, in the upper portion of its course, it flows in a great valley parallel to the Upper Columbia, then crosses the ranges to get into the “inter-montane” valley and then follows this valley, it is probable that most of the large powers must be looked for where it crosses the ranges. The Simpson, Cross, Palliser, White, Bull, St. Mary, Elk and other tributaries of the Kootenay are large streams with heavy falls and rapids.

The Kootenay follows the “inter-montane” valley southward into Montana, turns westward and then northward into Canada, to empty itself into Kootenay Lake, thence westward to its confluence with the Columbia. Between Kootenay Lake and the Columbia it falls 350 feet in 25 miles, affording many valuable powers. The Slocan, Lardeau, Duncan and other tributaries of the Lower Kootenay are large streams with considerable fall.

The Pend d'Oreille River falls into the Columbia near the International boundary. With the exception of about 12 miles near its mouth and the upper portion of the Flathead tributary, it lies wholly within the United States. It has a total drainage of about 30,000 square miles. It has been gauged by the United States Reclamation Service just below the mouth of Priest River. The minimum flow recorded was 5,419 cubic feet per second, on February 2, 1905; the next lowest, 7,852 cubic feet per second, was taken on January 19 of the same year. There are two power sites on this stream, near Waneta, B. C., which can be developed under heads of 75 and 50 feet, giving an estimated capacity of 65,000 and 45,000 h.p., respectively.

The Kettle, the Similkameen and their tributaries are also affluents of the Columbia. While they contain numerous water power sites, the summer flow is considerably less than that of the glacier-fed streams.

Between the Skenna and the Fraser no stream cuts across the Coast range. Consequently in this area all the rivers are short and steep, but on account of the very heavy precipitation on the west slope of the Coast range they carry a heavy flow of water.

The Squamish empties into Howe Sound. It is 34 miles long and between Green Lake and its mouth, a distance of 33 miles, falls 2,070 feet. Eight hundred feet of this fall occurs between Daisy Lake and the mouth of the Minatch, a dis-



Bend” to flow round the north end of the Selkirks, then flows southward through the valley between the Gold range and the Selkirks. Above Golden it is a sluggish, navigable stream, and, therefore, not available as a source of power. The tributaries that fall in from the east are small mountain torrents of little value from a power standpoint. The Dutch, Toby, Salmon and Spillimacheen are important tributaries with a large low-water discharge from the glaciers and snowfields of the Selkirks. The Beaver, a western tributary, and the Kicking Horse, an eastern branch, carry a large volume of water, but owing to the construction of the Canadian Pacific Railway along their banks, economic development on a large scale might be difficult. The Blueberry is an important stream and falls nearly 2,000 feet between its source in the Howe Pass and the Columbia. Wood River and other tributaries of Canoe River are glacier-fed torrents, and doubtless contain many valuable powers; similarly with Goldstream, Downie, Carnes, Incomappleux, Illecillewaet and

### CAPACITY OF THE PRINCIPAL WATERPOWERS AS AT PRESENT DEVELOPED IN THE PROVINCE OF BRITISH COLUMBIA

OWNER	SITUATION	PRESENT CAPACITY INSTALLED HORSEPOWER	PURPOSE FOR WHICH ENERGY IS UTILIZED
West Kootenay Power & Light Co., Ltd.	Kootenay River and Kettle River, near Nelson	23,000	Mining, smelting, light and industrial power.
British Columbia Electric Railway Co., Ltd.	Goldstream, near Victoria	3,000	Light, industrial power and street railways.
British Columbia Electric Railway Co., Ltd.	Lake Buntzen, Burrard Inlet	84,500	Light, industrial power and street railways.
Western Canada Power Co., Ltd.	Stave Lake, near Ruskin	26,000	Industrial power (26,000 h.p. now being added).
British Columbia Electric Railway Co., Ltd.	Jordan River, Vancouver Island	25,000	Light, industrial power and street railways.
Ocean Falls Co., Ltd.	Link River, Ocean Falls	11,200	Wood pulp and lumber manufacture.
Canadian Collieries (Dunsmuir) Ltd.	Puntledge River, near Nanaimo	9,400	Coal mining.
Powell River Co., Ltd.	Powell River	24,000	Newsprint paper manufacture.
Granby Consolidated Mining, Smelting & Power Co., Limited	Falls Creek, Granby Bay	7,325	Copper mining and smelting.
City of Nelson	Kootenay River, near Nelson	4,000	Mining, industrial power and light.
City of Kamloops	Barriere River, near Nelson	2,800	Light and industrial power.
Britannia Mining & Smelting Co., Ltd.	Britannia Creek, Howe Sound	2,735	Copper mining and reduction.
Hedley Gold Mining Company	Similkameen River, near Hedley	2,650	Gold mining.
City of Prince Rupert	Woodworth Lake, near Prince Rupert	1,650	Light and industrial power.
Swanson Bay Forests, Wood Pulp & Lumber Mills, Limited	Swanson Bay	1,250	Wood pulp and lumber manufacture.
City of Revelstoke	Illecillewaet River, near Revelstoke	600	Light and industrial power.
Other small developments described hereafter		890	Mining, municipal and hotel lighting, salmon canning.
Total horsepower at present installed		230,000	

tance of 9 miles, and 450 feet between the former and the forks of the Tcharkamisht.

The Homathko River rises in the Coast range at an altitude of 3,530 feet and is 92 miles long. Between Waddington canyon, 29th mile from tide water, and Murderer's Bar, 32nd mile, it falls 350 feet; between the junction with the west branch, 37th mile, and head of Great Canyon, 40th mile, it falls 470 feet.

The Bella Coola River also rises in the Coast range and is about 60 miles long. Between the mouth of Driver River and Bentinck North Arm it falls 1,100 feet.

Dean River (also called Salmon River) rises in the Coast range near the headwaters of the Blackwater and Nechaco. Between the confluence with the Iltasyouco and the mouth it falls 2,321 feet in 46 3/4 miles; between "Salmon House," at the 24th mile, and the "third crossing," quarter of a mile below, it descends 181 feet.

The Kemano River empties into Gardner Inlet. Between Siffleur Lake and tidewater, 18 miles, it falls 3,753 feet. Between the ninth and twelfth miles from the mouth it descends 1,035 feet; of this descent, 214 feet occur in 1,000 feet horizontal.

Other rivers south of the Skeena that are known to contain valuable powers, but for which no details are available, are the Southgate, falling into Bute Inlet; the Klinaklini, into Bute Inlet; the Owikano, into Rivers Inlet; the Kitlope, into Gardner Canal; and the Kitimat, into Douglas Channel.

The Skeena River drains an area of 19,300 square miles and is 335 miles long. Between Hazelton and its mouth it has a fall of 725 feet, but the construction of the Grand Trunk Pacific

Railway will probably prevent damming it to raise the water to any considerable height. The Babine River, a tributary, drains Babine Lake, which has an area of 306 square miles. Between the lake and Kitkargas village, a distance of about 40 miles, it falls 1,000 feet.

Other important streams are the Naas, drain-

ing 7,400 square miles and 205 miles long; the Stikine, with a drainage basin 20,300 square miles in area and 355 miles long, and the Taku, draining 7,600 square miles.



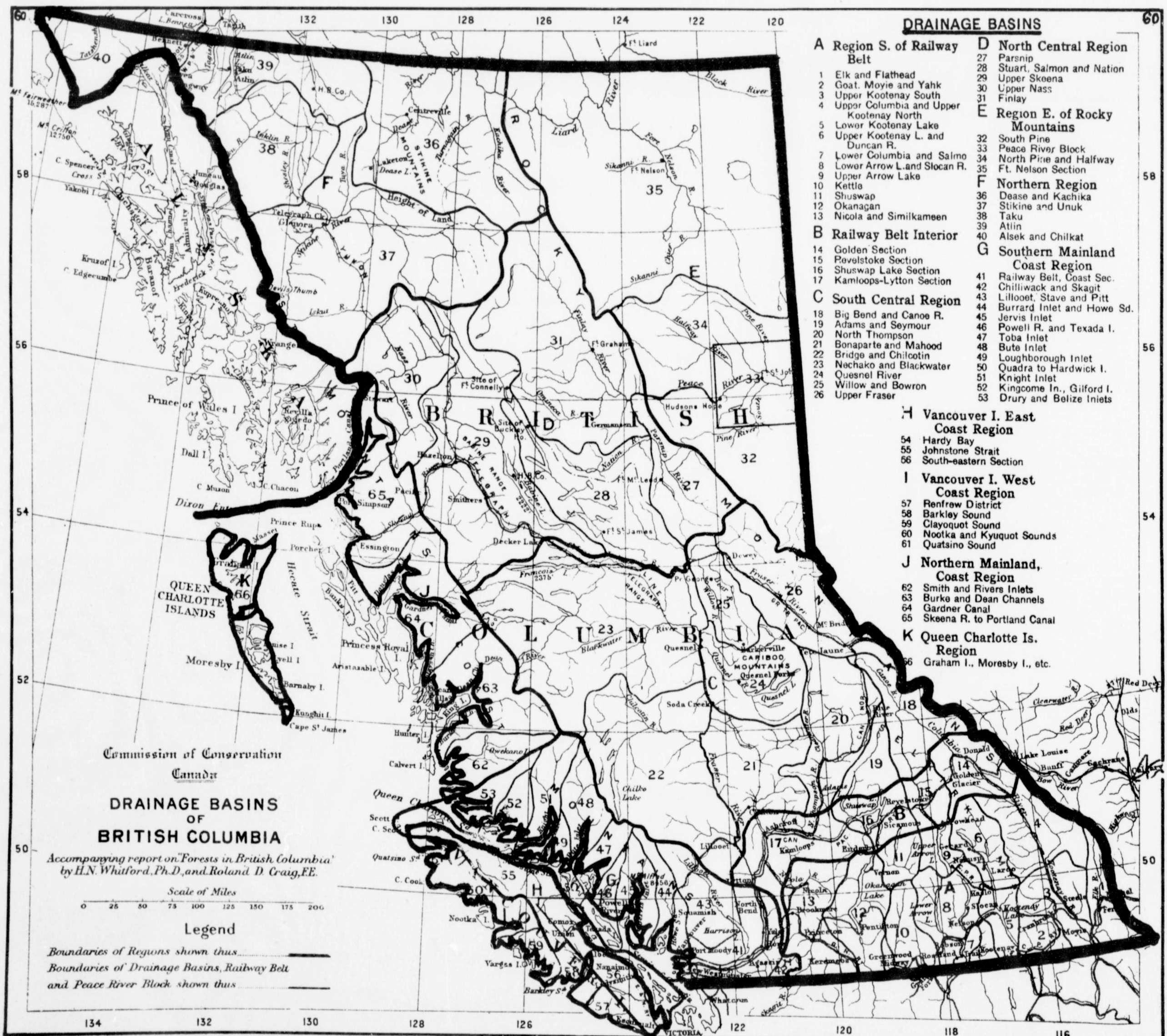
ing 7,400 square miles and 205 miles long; the Stikine, with a drainage basin 20,300 square miles in area and 355 miles long, and the Taku, draining 7,600 square miles.

The Peace River drains the northeastern portion of British Columbia. Between the junction of the Finlay and Parsnip—where it takes the name "Peace"—and the eastern boundary of the

province, there are no water powers. Its south branch, the Parsnip, is 145 miles long. Below the confluence of McLeod River there are no rapids in the Parsnip. Above the McLeod it is unsurveyed except the rough survey made by Mackenzie in 1793. Some of its eastern tributaries, such as the Misinchinea, are torrential streams carrying a good flow of water. The Nation River, another tributary, is unexplored.

The north branch of the Peace—the Finlay—is 250 miles long. It ranges in width from 90 feet where it issues from the Fishing lakes, to 900 feet near its mouth. Its navigation for 200 miles above its mouth, with the exception of Deserter Canyon, is easy. Deserter Canyon is situated about 90 miles above the mouth, is about half a mile long, and in the narrowest place scarcely exceeds a hundred feet in width. The walls at the lower end are high. Where the Finlay flows through the Long Canyon above its confluence with the Tochieca it is a succession of canyons, riffles and rapids for many miles. The Long Canyon is 5 miles long. The river, in places, is narrowed to less than 100 feet in width and contains numerous wild rapids. The total depth of the gorge at the upper end exceeds 600 feet.

The Omineca, or south branch of the Finlay, is by far the largest tributary of the latter. The Black Canyon, 5 miles from its mouth, is about half a mile in length, and varies in width from 100 to 200 feet. Its walls are usually vertical, and, in places, exceed 150 feet in height. Six miles above the mouth of the Oslinea the Omineca flows through the Little Canyon. Between the mouth and quiet water, 9 miles above Little



Canyon, the river falls 425 feet in a distance of 35 miles, an exceptionally high grade for a river of this size.

#### Vancouver Island Water Powers

Vancouver Island is rich in water powers, and from approximate estimates the total possibilities of them all cannot be less than 500,000 h.p. In addition to those powers already described, at Goldstream, Puntledge and Jordan River, there are several great powers awaiting development, the largest of which is that at Campbell River, on the northeast coast of the island. This water power, providing storage in Buttles Lake and the Upper and Lower Campbell lakes, is capable of a development of 150,000 h.p. at a conservative figure. Among other large powers are those at Great Central Lake, Sproat Lake and Stamp Falls near Alberni, Qualicum Falls, Cowichan

Lake, Shawnigan Lake and Nanaimo River. The island has, in addition to those mentioned, innumerable small powers that may be made commercially successful if used for the exploitation of the mineral resources of the island.

#### Administration of Water Powers

The administration of all water powers in British Columbia is now vested in the province, including those within the railway belt formerly administered by the Dominion Government.

The province has been divided into thirty-one water recording districts, the boundaries of which follow as nearly as possible the main watersheds, and a local recorder, in most cases the government agent, appointed for each district. The local recorder acts as a recorder, the active administration in the more important districts being in the hands of a district engineer, whose duties

are defined by the Water Act, 1914, and who is subject to the Comptroller of Water Rights, whose office is at Victoria, B.C., and in whom alone is vested the power to approve an application and grant a licence. The printed forms of notice, application, etc., may be obtained on application to the office of any water recorder, district engineer, or to the comptroller's office.

Licences may be granted for the use of water for any of the following purposes: Domestic, waterworks, mineral trading, irrigation, mining, steam, fluming, hydraulicking, miscellaneous, power, clearing streams, storage, conveying and lowering water.

Note—For much of the information regarding undeveloped powers we are indebted to "Water Powers of Canada," by L. G. Denis and A. V. White, published by the Commission of Conservation, Ottawa, 1911; and "Water Powers of British Columbia," by G. R. G. Conway, the eminent consulting electrical engineer, of New York, U.S.A., who developed the British Columbia Electric Railway power, and was employed by the Canadian Government to report upon the water powers for development throughout Canada.

## British Columbia's Appeal to the Sportsman

NO finer field for the sportsman can be found throughout the North American continent than that which the Province of British Columbia provides. To the great variety of big game to be found must be added a vast number of splendid trout streams and some of the most magnificent salmon fishing in the world. In addition there are a number of varieties of game birds—some natives, and others which have been acclimatized—all affording excellent sport.

The Rocky Mountain big horn or brown sheep

Cassiar district, but the saddleback and Yukon sheep are only to be secured in the extreme north.

Moose are extremely plentiful in the Cassiar district, and may be found in fair numbers almost anywhere north of the 53rd degree of latitude. Moose are also found in the northern portion of the East Kootenay district.

Mountain goats are numerous all over the province wherever there are high, rugged mountains.

Of the three species of deer, the Columbian is very numerous on Vancouver Island and points on

Caribou are plentiful and easily obtained in the Cassiar district, and also on certain of the Queen Charlotte Islands.

Mountain caribou are plentiful in the Selkirks, in the southern part of the province, and also in the northern part of the province from the Rockies to the Pacific Ocean.

Wapiti are found on Vancouver Island and in the East Kootenay district.

Many varieties of ducks and geese abound in all sections. They are found in the interior until



stands alone as a sporting animal among the big game to be found within the province. This species of sheep is found in the Lillooet, Okanagan and Similkameen districts, and in the Rocky Mountains of the East Kootenay. The Lillooet district has the largest number, but these sheep attain their highest stage of development in the Rocky Mountains.

Three other species of sheep, in addition to the big horn, are found in the northern part of the province. They are the black sheep, saddleback and Yukon. The black sheep is easily obtained in

the mainland west of the Cascade Mountains. The white-tailed deer is peculiar to the southern interior. The mule deer is found mostly in the dry belt.

Black and grizzly bears can still be found almost anywhere in British Columbia.

The cougar is plentiful on Vancouver Island and over the southern part of the province.

The timber wolf is to be met with throughout the province, but is particularly numerous along the northern coast, the coyote existing almost anywhere in the interior.

the frost freezes the lakes and streams, when they migrate to the coast.

California quail are numerous on Vancouver Island. There are several other species, but not in large numbers.

Grouse are found in some parts of the interior of the province and on Vancouver Island.

Most of the pheasants are in the Fraser Valley, having been imported from Great Britain and China. They do very well if properly cared for, and despite an open season each year, have increased considerably in number.



# Mines and Minerals

**D**URING the early "seventies" an eastern politician, in his efforts to prevent the construction of the Canadian Pacific Railway, declaimed that British Columbia was "a sea of mountains," inferring that this province was of little value to the Dominion.

Lack of information prevented him from finding out the vast potential mineral wealth in British Columbia mountains, which the Dominion's "Advisory Council on Industrial and Scientific Research" have now recognized to the extent that they have enthusiastically urged the Dominion Government, "as an important part of its reconstruction policy, to devote special attention to the mineral resources of this province as a valuable factor in sustaining national credit," which we can thereby strengthen to bear the financial burdens imposed by the Great War.

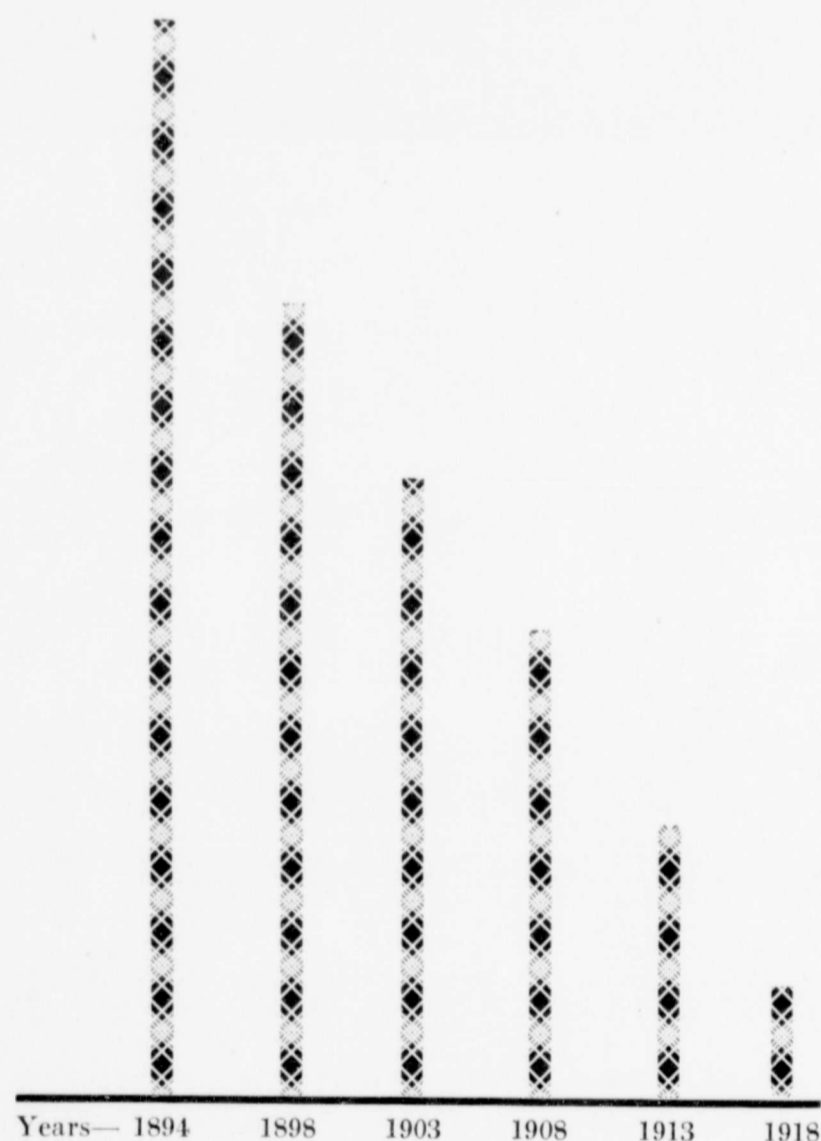
### Increased Production

That there is justification for that expectation is evidenced by the fact that during the last 25 years the mineral production of British Columbia has risen from \$3,588,413 per year to the \$41,083,093 value produced in the year ended December 31st, 1918, which exceeded that of 1917 by 11 per cent.

As the mineral wealth produced during those 25 years totalled about \$552,000,000, or about \$2,600 per head of the then average population (of which only a small part was engaged in mining), that vast production in such a short period proves that there is great scope for development

TABLE 1 — MINERAL PRODUCTION OF B. C. IN THE 25 YEARS, 1894 to 1918

Values scaled for comparison.



Year	Value
1894	\$ 4,225,717
1895	5,643,042
1896	7,507,956
1897	10,455,268
1898	10,906,891
1899	12,393,131
1900	16,344,751
1901	20,086,780
1902	17,486,550
1903	17,495,954
1904	18,977,359
1905	22,461,325
1906	24,980,546
1907	25,882,560
1908	23,851,277
1909	24,443,025
1910	26,377,066
1911	23,449,072
1912	32,440,800
1913	30,296,398
1914	26,388,825
1915	29,447,508
1916	42,290,462
1917	37,010,392
1918	41,083,093

Total ..... \$551,925,748

The increased value raised from \$4,225,717 in 1894, to the \$41,083,093 in 1918 is thus proved to be \$36,857,376, which is 872 per cent. more in those 24 years.

during the ensuing period of after-war reconstruction.

### Railway and Road Facilities

Happily, the opening up of the province through the extensions of the Canadian Pacific Railway and recent construction of the Canadian Northern, Grand Trunk Pacific and Pacific Great Eastern railways, have provided British Columbia with efficient facilities for tapping all the great mineral districts, as may be seen by referring to the larger map herein and the notes on Railways.

Those facilities are increased by the extensive development of trunk and branch roads constructed during the last 10 years, as outlined in the Road section hereof and the sketch map.

### Highly Mineralized Areas

A large part of British Columbia's area of 390,344 square miles is so highly mineralized that it is rightly regarded as the richest mineral region of North America.

In length it extends 700 miles northwards from the City of Victoria to the Portland Canal and Atlin districts. In breadth it ranges about 500 miles on the average between the Coast and the Alberta or eastern boundary.

The *Coast Range* is proving an attractive field for prospectors. The two largest copper mines in the British Empire are therein located, the Britannia Mine on Howe Sound, 40 miles north of Vancouver, and the Anyox Mine in Lat. 55½ and Long. 130. Along that range, silver, lead, zinc, iron, etc., are found in large quantities.

The *Interior Plateau* has an average width of about 100 miles, and an elevation averaging about

4,000 feet. Its tertiary sedimentaries carry coal, lignite, clays, etc. Its mineral products are gold (both placer and lode), copper, silver, lead, zinc, mercury, etc.

The *Gold Range* is the richest mountain mining area. This range includes Rossland, the richest gold camp yet discovered—also the Cariboo gold fields.

In the Sullivan Mine of East Kootenay is located the largest silver-lead-zinc mine in the world.

There are also attractive deposits of copper, zinc, tungsten, iron, etc., along this range.

In the *Rocky Mountain Range* only small areas have been prospected, proving that copper, silver, lead, zinc, etc., occur, as evidenced by the development of the Monarch Mine at Field and others.

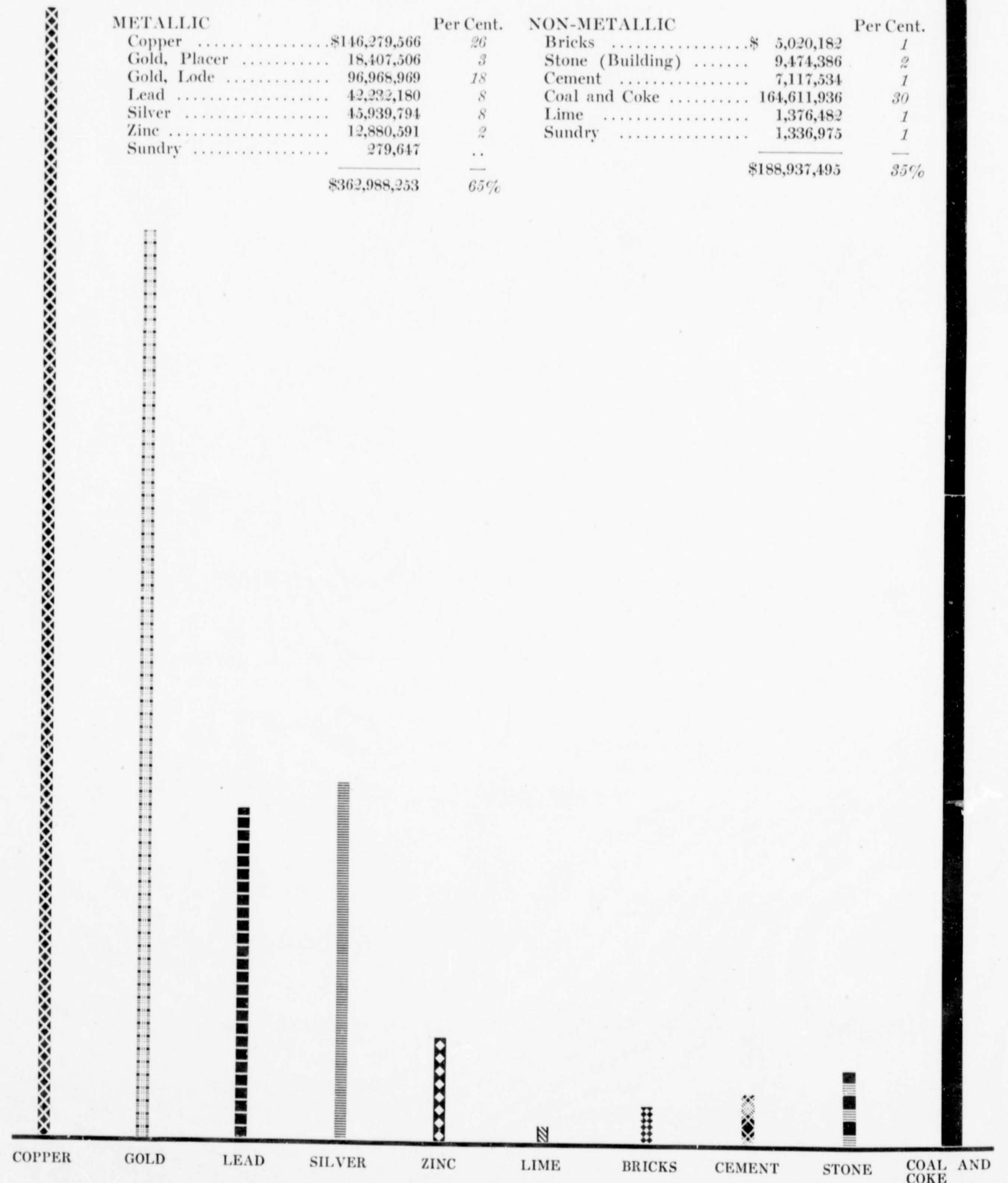
The probability that large deposits of phosphates may be developed (as found near Banff and through the area southwards), is important in their bearing upon agricultural development.

### Coal Fields

The coal fields extend over large areas of the province, the most important are those of Vancouver Island (where they load direct into ocean and coastwise ships), and the Crow's Nest area in the Southern Kootenay, by which the C.P. Railway serves that mining district and the prairie provinces.

In the Central and Northern coal areas, served by the Grand Trunk Pacific Railway, are the Bulkley, Groundhog, Peace River and Atlin districts. Beyond those westward are the coal areas on Queen Charlotte Islands. The above wide distribution of extensive coal areas will

TABLE 2—MINERAL PRODUCTS FROM WHICH THE ABOVE \$551,925,748 VALUES WERE DERIVED DURING THE YEARS 1894 TO 1918



abundantly provide for the economic development of our great provincial resources.

**Brief History of B. C. Mining**

In 1852 the Hudson's Bay Company opened the Nanaimo Coal Mine—now the Canadian Western Fuel Co. That year witnessed the discovery of gold quartz in the Queen Charlotte Islands. Placer deposits of gold were then found near Kamloops and other interior places. These led to the celebrated "gold rush" of miners and prospectors from the Western United States.

**Gold Seekers Rush In**

By the year 1858 more than 11,000 of such miners located in and around Yale, on the Fraser River, which is pictured below as typical of B. C. mining centres.

Prospectors and gold seekers pushed further up the river by 1860, when rich placer gold deposits were found at Quesnel Forks and Antler Creek in the Cariboo district.

In 1861 Williams and Lightning creeks were discovered in Cariboo, which as a district produced \$2,000,000 in gold for the 1500 men then working.

Then followed the Big Bend rush of 7,000 miners up the Columbia. Between 1869 and 1872 the greatest rush pushed into the Omineca district, extending into Cassiar during 1872; and, following the Yukon gold excitement, a further rush set into Cassiar in 1889.

Those incoming miners collectively laid the foundation of the placer gold mining, which has produced \$75,500,000 to December 31, 1918.

**Prospectors Proved Mining Practicable**

Those successive rushes of miners into British Columbia are recorded because they supplied the hardy men who became the rustling prospectors who found the coal, iron, silver, copper, lead, zinc, etc., deposits, in then accessible parts of the province, and thus made successful mining practicable.

In 1886 the iron ores of Texada Island were worked and shipments made to Irondale, in the State of Washington, for the production of pig iron, because the British Columbia people lacked a blast furnace.

**Development of Mining**

The practical development of mining began about the year 1893, when the Rossland Mine produced 1170 ounces of lode gold, while the Slocan production was trebled to 227,000 ounces of silver and 2,135,023 pounds of lead.

In 1894 the first local smelter was built to extract silver and lead from the ores produced in the Ainsworth district.

During 1895 the Provincial Government established its Bureau of Mines under Col. the Hon. James Baker, who got the renowned Dr. G. M. Dawson, of the Geological Survey of Canada, to select the first Provincial Mineralogist in Mr. W. A. Carlyle, who gave highly appreciated service until he retired in 1898. He was succeeded that year by Mr. W. Fleet Robertson, the present mineralogist, who has so ably directed the B. C. Bureau of Mines during the last 20 years.

His experience has established such a well-deserved reputation for authenticating reliable facts and prudent advice, that we cannot do better than refer persons practically interested in mining development to him as Mineralogist, for any practical information they can reasonably expect to obtain from the Provincial Bureau of Mines.

**Smelters Established**

In 1896 Dunsmuir & Sons established the first coking plant in British Columbia at Union Bay, near their collieries, to supply the Trail and Nelson smelters with coke.

That enabled the Hall Mines, Limited, to complete and get their smelter to work at Nelson, and in the same year A. Heinze built the next smelter at Trail to smelt Rossland ores. In 1896 the Lucky Jim Mine began shipments of zinc ore.

By 1898 there were mills equipped with 223 stamps, producing \$1,244,180 of lode-gold per year.

In 1898 the Greenwood smelter was put into use, and two other smelters, at Boundary Falls in the Kootenay and Ladysmith on Vancouver Island, respectively, were established.

During 1898 the celebrated Granby Company was organized to work the productive group of claims they bought at Phoenix in West Kootenay. That established the largest copper mining and smelting enterprise in the province, beginning production in 1901.

As copper mining became more profitable, the Granby Co. in 1910 acquired the Hidden Creek Mine, now known as "Anyox," on Observatory Inlet (adjoining the Portland Canal on the Northwest Coast), and within two years proved up ore reserves sufficient to rank that as the second largest copper mine in the Empire.

During 1914 the Granby Company built and blew in its coast smelter at Anyox—now the largest producer of copper in British Columbia. In that 1914 year the Granby Company first produced spelter on a commercial scale at Trail, where a copper refinery was added to the Granby establishment in 1916.

During 1916 the Britannia Mining and Smelting Company completed its new mill at Britannia Beach with a capacity of 2,500 tons of ore per day.

In 1917 the Canada Copper Corporation took over the smelter and mines of the B. C. Copper Company and developed the Copper Mountain Mine till it now ranks as the third largest copper mine in the British Empire.

During 1918 that corporation began construction of its mill at Allenby, B. C., which has recently been completed to turn 2,000 tons of ore per day to profitable account.

Yet in view of these successful developments, all authorities who know of the vast field for future mining enterprise in British Columbia are convinced that we have only been passing through the initial stages of that great future development which is about to be steadily expanded through the seven chief mining divisions.

**Prospective Development**

The increase of 872 per cent. in the total annual values of minerals produced in British Columbia since 1894—as proved by Table 3—is indicative of the extensive development we may expect to experience during the more progressive peaceful years of world-wide reconstruction we are now entering upon, after the Great War's devastations.

That reconstruction will inevitably bring great expansion of trade in British Columbia mineral production, because more copper, gold, lead, zinc, and other metals will be needed. Beyond these will come increased development in building materials such as bricks, building and paving stones, cement, etc.

But the greatest development may be expected in the production of pig iron, steel rails, girders, etc., through the establishment of blast furnaces and steel rolling mills along the Coast, to utilize the many iron ore deposits now accessible to economic transportation, as briefly summarized below:

	Approximate Quantities Tons
Texada Island .....	5,000,000
Nootka .....	5,000,000
Redonda Island .....	4,000,000
Queen Charlotte Islands .....	Extensive
Copper River .....	5,000,000
Kamloops .....	Extensive
Fort George .....	Extensive
Crow's Nest Pass .....	Extensive

The facts that the British Columbia Government has this year authorized sufficient expenditure to establish electric furnaces to smelt iron ores; and that there is an abundance of water and electric-power readily available near all these iron deposits, lead us to expect that extensive developments in the production of iron and steel will soon add considerably to the value of mineral production in British Columbia.

The Portland Canal district, lying approximately 120 miles north of Prince Rupert, promises to be the world's mining Mecca of 1920.

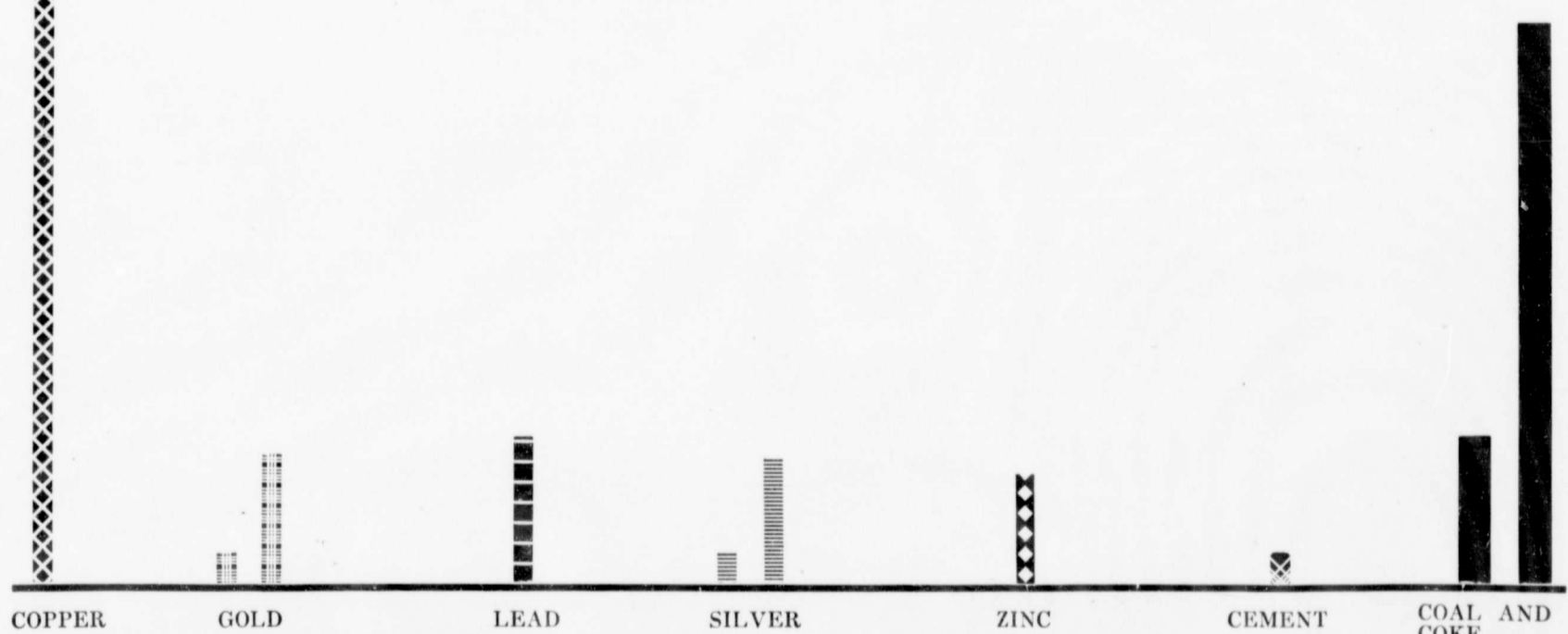
It is no exaggeration to say that no mining discoveries since Cobalt have attracted the attention which developments at Alice Arm, Salmon River, Bear River and Marmot River are now exciting all over the world.

The extent of the territory in which big showings are found is greater than Cobalt, and the values are within appreciable comparison of the famous silver camp. Eventually the district will be demarcated or localized into several camps, as it really is today. There is much good territory yet to be prospected and the vast proportion of what is already staked has not even been scratched. That such rich showings at so many widely-scattered points should have been discovered argues well for not only the possible number of producing mines but for the extent and permanence of the ore bodies.

British Columbia, as a result of activities in the northern camps, will loom large on the mining horizon of the world during this year and the result should be a recrudescence of mining greater than any in the history of the province.

TABLE 3—VALUES OF MINERAL PRODUCTION DURING THE YEARS 1894 AND 1918 COMPARED

NON-METALLIC			METALLIC		
	1894	1918		1894	1918
Bricks (estimated) .....	\$ 40,000	\$ 165,000	Copper .....	\$ 16,324	\$15,681,946
Stone (estimated) .....	51,600	75,000	Gold, Lode .....	129,229	2,367,190
		War reduced	Gold, Placer .....	419,084	318,318
		War reduced	Lead .....	167,875	2,944,627
Cement (estimated) .....	.....	500,000	Silver .....	470,219	2,601,120
Coal and Coke .....	3,038,859	11,460,340	Zinc .....	.....	2,501,573
Lime (estimated) .....	30,000	100,000			
Total .....	\$3,160,459	\$12,300,340	Total .....	\$1,202,731	\$26,414,774
		31%			69%





# Manufactures of the Province

COMMODITY	CITY	NO. OF FIRMS	COMMODITY	CITY	NO. OF FIRMS	COMMODITY	CITY	NO. OF FIRMS
Acetylene Gas	Vancouver	1	Brick Manufacturers	Albion	1	Colors—Oil (see Paints)		
Acetylene Welding	Vancouver	9	"	Armstrong	1	Confectioners	Vancouver	12
"	Victoria	3	"	Castlegar	1	"	Victoria	2
"	Prince Rupert	1	"	Cloverdale	1	"	Mission	1
"	Westminster	1	"	Cowichan	1	Cooperage Stock	Vancouver	6
Acids	Vancouver	1	"	Cranbrook	1	"	Westminster	1
"	Victoria	1	"	Enderby	1	"	Victoria	1
"	Barnet	1	"	Fernie	1	"	South Vancouver	1
"	Trail	1	"	Grand Forks	1	"	Uchuellet	1
Anchor	Vancouver	3	"	Hancy	1	Copper Sulphate	Trail	1
"	Victoria	1	"	Kamloops	1	Covers—Automobile	Vancouver	3
Angles—Steel	Vancouver	4	"	Kelowna	1	"	Victoria	2
"	Port Moody	1	"	Kilgard	1	Clams—canned	Nanaimo	1
Apples—Evaporated	Kelowna	3	"	Nanaimo	1	Cream—evaporated		
"	Keremeos	1	"	Nelson	1	(See Milk—condensed)		
"	Chilliwack	1	"	Penticton	1	Creameries	Vancouver	9
Artificial Limbs	Vancouver	1	"	Vernon	1	"	Victoria	2
Asbestos	Vancouver	1	"	Wellington	1	"	Westminster	3
Asphaltum	Vancouver	2	Breweries	Victoria	3	"	Armstrong	1
"	Victoria	1	"	Grand Forks	2	"	Chilliwack	1
Auto Bodies, etc.	Vancouver	5	"	Vancouver	1	"	Clayburn	1
"	Victoria	2	"	Westminster	1	"	Courtenay	2
Auto Gears	Vancouver	5	"	Merritt	1	"	Cranbrook	1
Auto Springs	Vancouver	1	"	Michel Prairie	1	Creameries	Duncan	1
Awnings	Vancouver	3	"	Kamloops	1	"	Ganges Harbour	1
"	Victoria	2	"	Nanaimo	1	"	Grand Forks	1
"	Prince Rupert	1	"	Revelstoke	1	"	Hefley Creek	1
"			"	Trail	1	"	Kamloops	1
Barrels, Casks, etc.	Prince Rupert	1	Bridges—Steel	Vancouver	3	"	Kelowna	1
"	Vancouver	5	"	Victoria	1	"	Ladner	1
"	Victoria	1	Brooms	Vancouver	4	"	Nanaimo	1
Babbitt Metal	Vancouver	3	Brushes	Vancouver	2	"	Nelson	1
Baby Carriages	Vancouver	1	Buckets—Mine and Dredge	Vancouver	2	"	Revelstoke	1
Bacon	Vancouver	3	"	Victoria	2	"	Salmon Arm	1
Badges—Metal	Vancouver	6	Building Paper	Vancouver	1	Creosoting Works	Vancouver	1
"	Victoria	1	"	Victoria	1	"	North Vancouver	1
Bags	Victoria	2	Butter (see Creameries)					
"	Vancouver	4	Cabinet Makers	Vancouver	10	Desks—Office	Vancouver	3
"	Prince Rupert	1	"	Victoria	2	Dessicated Vegetables	Vancouver	3
Bale Ties—Wire	Vancouver	1	Calendars	Vancouver	3	"	Kelowna	2
Bars—Steel	Vancouver	4	"	Victoria	1	"	Armstrong	1
"	Port Moody	1	Cans—Tin	Vancouver	1	"	Chilliwack	1
Bathing Suits—Knitted	Vancouver	3	Canvas Goods	Vancouver	6	"	Marpole	1
Baskets—Fruit	Westminster	3	"	Victoria	3	"	Westminster	1
"	Vancouver	1	"	Prince Rupert	1	Dies	Vancouver	9
Baskets—Wicker	North Vancouver	1	Capstans—Ship	Vancouver	8	"	Victoria	1
Bedding	Vancouver	2	"	Victoria	4	Disinfectants	Vancouver	5
"	Victoria	1	"	Westminster	1	Distillers	Westminster	1
"	Nelson	1	Carriage Builders	Vancouver	7	Druggists—Manuf.	Vancouver	5
Beds—Camp	Vancouver	3	"	Victoria	4	Doors & Sash	Vancouver	12
Bedsteads—Iron and Brass	Vancouver	3	"	Vancouver	6	"	Victoria	4
Belting—Lace	Grimmett	1	Cars—Mine	Vancouver	2	"	Westminster	3
Belting—Leather	Vancouver	1	"	Victoria	2	"	Cranbrook	1
Biscuits	Vancouver	3	Carriages—Doll	Vancouver	3	"	Eburne	1
"	Victoria	1	"	Westminster	1	"	Grand Forks	1
Blocks—Building, Hollow	Vancouver	2	Cartons	Victoria	3	"	Uchuellet	1
"	Victoria	2	"	Vancouver	2	"	Wattsburg	1
"	Westminster	1	Castings—Brass	Vancouver	16	Doore—Fireproof—(See Sheet Metal)		
"	Cloverdale	1	"	Victoria	6	Dye and Cleansers	Vancouver	1
Blocks—Paving, Creosoted	Vancouver	2	"	Westminster	2	"	Victoria	1
Blouses and Waists	Vancouver	6	"	North Vancouver	2	Earthenware	Clayburn	1
Blowers—Pressure	Vancouver	3	"	Prince Rupert	1	"	Victoria	1
Bluestone—Copper Sulphate	Trail	1	"	Kamloops	1	Electric Apparatus, etc.	Vancouver	9
Blue Prints	Vancouver	5	"	Nelson	1	Electroplaters	Vancouver	3
"	Victoria	1	Castings—Iron	Vancouver	16	"	Victoria	1
Boats—Sail, Row, etc.	Vancouver	7	"	Victoria	7	Electrotypers	Vancouver	2
"	North Vancouver	1	"	Westminster	2	"	Victoria	2
"	Westminster	2	"	North Vancouver	2	Elevator Enclosures	Vancouver	1
Boilers—Marine	Vancouver	13	"	Prince Rupert	1	Engineering Works	Vancouver	27
"	Victoria	4	"	Nelson	1	"	Victoria	7
"	North Vancouver	2	"	Fernie	1	"	Westminster	5
"	Westminster	1	Castings—Steel	Vancouver	2	"	Prince Rupert	3
Boilers—Stationary	Vancouver	9	"	Victoria	1	"	Nanaimo	1
"	North Vancouver	2	"	Westminster	1	"	Nelson	1
"	Victoria	1	Cattle Food	Vancouver	3	"	Vernon	1
"	Westminster	1	Cattle Food	Victoria	1	Engines—Gas & Gasoline	Vancouver	9
"	Nelson	1	Ceiling (see Sheet metal)			"	Victoria	3
Bolts—Iron and Steel	Vancouver	6	Chemicals	Victoria	3	"	Westminster	1
"	Westminster	2	"	Anyox	1	"	Kamloops	1
"	Victoria	3	Certificates—for Bonds, etc.	Vancouver	2	Engines—Hauling, Hoisting and Winding	Vancouver	8
"	Port Moody	1	"	Victoria	1	"	Victoria	4
"	Eburne	1	Cement	Bamberton	1	"	North Vancouver	1
Books—Acct. and Loose Leaf	Vancouver	5	"	Vancouver	3	"	Westminster	1
"	Victoria	2	Cereals	Victoria	1	"	Kamloops	1
Bookbinders	Vancouver	6	"	Victoria	1	Engines—Logging	Vancouver	6
"	Victoria	2	Cheese	Vancouver	1	"	Victoria	3
Boots and Shoes—Leather	Vancouver	1	"	Chilliwack	1	"	Westminster	1
Boxes—Cigar and Tobacco	Vancouver	1	"	Revelstoke	1	"	Kamloops	1
Boxes—Paper, fancy and plain	Vancouver	2	Cider	Vancouver	1	"	Nelson	1
"	Victoria	1	"	Victoria	1	Engines—Marine	Vancouver	7
Boxes—Tin	Vancouver	1	Cigars	Vancouver	6	"	Victoria	4
Boxes—Wooden and Shooks	Vancouver	8	"	Westminster	5	"	North Vancouver	1
"	Victoria	3	"	Victoria	5	"	Prince Rupert	1
"	Westminster	4	"	Nanaimo	4	Engines—Steering	Vancouver	3
"	Kelowna	3	"	Nelson	1	"	Westminster	1
"	Canford	1	"	Prince Rupert	1	Engravers—Brass (See Name-plates)		
"	Creston	1	"	Revelstoke	1	Engravers—Jewelry and Plate	Vancouver	6
"	Fruitvale	1	"	Rossland	1	Engraving—Photo	Vancouver	2
"	Jaffray	1	Cleaners—Vacuum	Vancouver	1	"	Victoria	1
"	Nakusp	1	Cloaks, Suits, etc. (Ladies)	Vancouver	6	Evaporated Fruits (See Fruit Canners)		
"	Nelson	1	Clothing—Cotton, Duck, etc.	Vancouver	7	Excelsior—(Wood Wool)	Vancouver	2
"	Penticton	1	"	Victoria	1	Explosives	Vancouver	2
"	Prince Rupert	1	"	Victoria	1	"	Victoria	1
"	Summerland	1	"	Vancouver	2	"	Nanaimo	1
"	Wattsburg	1	Coal Collieries	Vancouver	2	Extracts—Flavoring	Vancouver	4
"	Wycliffe	1	"	Victoria	2	"	Victoria	1
Bands—Burning	Vancouver	4	"	Victoria	2	Fans—Ventilating	Vancouver	3
"	Victoria	2	"	Cassidy	1	Fencing—Iron & Wire, Ornamental	Vancouver	3
Brass—Architectural	Vancouver	1	"	Fernie	1	"	Victoria	1
Brass—Memorial	Vancouver	1	"	Merritt	2	"	Westminster	1
Brass—Spun	Vancouver	1	"	Michel	1	Fertilizer Material	Vancouver	6
Brass Railings	Vancouver	3	"	Middlesboro	1	"	Victoria	4
"	Victoria	1	"	Nanaimo	1	Fireclay Products	Clayburn	1
Bread—Wholesale Bakers	Vancouver	6	"	Nanoose Bay	1	"	Kilgard	1
"	Victoria	3	"	Princeton	1	Fish—Canned (see Salmon)		
"	Westminster	2	"	Wellington	1	Fish, Frozen	Vancouver	2
Brick—Fire, Stove, etc.	Clayburn	1	Coal Tar Products	Vancouver	2	"	Prince Rupert	3
"	Kilgard	1	"	Anyox	1	"	Westminster	2
Brick Manufacturers	Vancouver	9	"	Sidney	1			
"	Victoria	7	Cocoa	Vancouver	1			
"	Alberni	1	Coffee Roasters & Grinders	Mission	1			
			"	Vancouver	6			
			"	Victoria	2			

BRITISH COLUMBIA 1919-20

COMMODITY	CITY	NO. OF FIRMS	COMMODITY	CITY	NO. OF FIRMS	COMMODITY	CITY	NO. OF FIRMS
Fish Merchants, Wholesale	Vancouver	13	Lumber Mills (Continued)	Annable	1	Pattern Makers	Vancouver	18
" " "	Prince Rupert	7	" " "	Baynes Lake	1	" " "	Victoria	6
" " "	Victoria	6	" " "	Bradner	1	" " "	Westminster	1
" " "	Westminster	2	" " "	Canford	1	" " "	North Vancouver	2
" " "	Steveston	1	" " "	Castlegar	1	Peanut Butter	Vancouver	3
" " "	Alberni	1	" " "	Chase	1	Penstocks	Vancouver	5
" " "	Nanaimo	2	" " "	Chemainus	1	" " "	Westminster	1
" " "	Nitinat	1	" " "	Cranbrook	2	Pharmaceutical Preparations		
" " "	Nootka	1	" " "	Creston	1	(see Druggist Mfrs.)		
" " "	Quathiaska	1	" " "	Duncan	1	Photographs—Industrial and		
" " "	Redonda	1	" " "	Enderby	1	Commercial	Vancouver	3
" " "	Sidney	1	" " "	Flagstone	1	Pickles	Vancouver	4
Fish—Smoked	Vancouver	5	" " "	Genoa Bay	1	Pickles	Victoria	1
" " "	Prince Rupert	1	" " "	Gerrard	1	" " "	Arrow Park	1
Flags	Vancouver	1	" " "	Grand Forks	1	" " "	Mission	1
Flooring—Sanitary	Vancouver	1	" " "	Green Point	1	Piles and Poles	Vancouver	4
Flour—Rice	Vancouver	2	" " "	Jaffray	1	" " "	Victoria	1
" " "	Victoria	1	" " "	Kamloops	2	" " "	Abbotsford	1
Flour—Wheat	Vancouver	2	" " "	Kelowna	2	" " "	Chase	1
" " "	Victoria	1	" " "	Marpole	1	" " "	Chemainus	1
" " "	Eburne	1	" " "	Mt. Lehman	1	" " "	Coquitlam	1
Flour—Wholewheat	Vancouver	1	" " "	Nanaimo	1	" " "	Elko	1
Forgings—Bronze	Vancouver	6	" " "	Nelson	1	" " "	Fort Steel	1
" " "	Victoria	2	" " "	Penticton	1	" " "	Genoa Bay	1
" " "	Westminster	1	" " "	Port Moody	1	" " "	Green Point	1
Forgings—Iron & Steel	Vancouver	16	" " "	Revelstoke	1	" " "	Jaffray	1
" " "	Victoria	4	" " "	Summit Lake	1	" " "	Nakusp	1
" " "	North Vancouver	2	" " "	Victoria	7	" " "	Nanoose	1
" " "	Prince Rupert	1	" " "	Waldo	1	" " "	Revelstoke	1
Foundries—Iron	Vancouver	15	" " "	Wardner	1	" " "	Rosedale	1
" " "	Victoria	6	" " "	Wasa	1	" " "	Smithers	1
" " "	Westminster	2	" " "	Wattsburg	1	" " "	Waldo	1
" " "	Fernie	1	" " "	Westminster	8	" " "	Wardner	1
" " "	Grand Forks	1	" " "	Willow River	1	" " "	Wycliffe	1
" " "	Kamloops	1	" " "	Wycliffe	1	Pipe—Cast Iron	Vancouver	10
" " "	Nanaimo	1	Machinery Works	Vancouver	6	" " "	Victoria	4
" " "	Nelson	1	" " "	Victoria	2	" " "	Westminster	2
Frames—Window & Door wood (See Doors & Sash)			" " "	Westminster	2	Pipe—Concrete, Sewer	South Vancouver	1
(See Doors & Sash)			" " "	North Vancouver	2	Pipe—Earthenware and		
Frames—Window, Metal	Vancouver	3	" " "	Kamloops	1	Cement	Victoria	2
" " "	Westminster	1	" " "	Nelson	1	" " "	Vancouver	1
Fruit—Canned	Vancouver	2	" " "	Prince Rupert	1	Pipe—Lead	Vancouver	2
" " "	Burton	1	Machinery—Canning	Vancouver	4	Pipe—Riveted	Vancouver	5
" " "	Chilliwack	1	" " "	Westminster	3	" " "	Victoria	2
" " "	Kelowna	1	" " "	Victoria	1	" " "	North Vancouver	1
" " "	Keremeos	1	Machinery—Electrical	Vancouver	8	Pipe—Wood Stave (see Lumber		
" " "	Mission	1	Machinery—Logging	Vancouver	8	Mills)		
" " "	Okanagan Centre	1	" " "	Victoria	3	Platters—Brass, Copper,		
" " "	Penticton	1	" " "	Westminster	2	Nickel and Silver	Vancouver	6
" " "	Vernon	1	" " "	North Vancouver	1	" " "	Victoria	1
" " "	Westminster	1	Machinery—Mining	Vancouver	8	Poles (see Piles)		
Funnels—Ship	Vancouver	4	" " "	Victoria	2	Polish—Furniture	Vancouver	4
" " "	Victoria	3	" " "	Westminster	2	Polish—Shoe and Leather	Vancouver	1
" " "	North Vancouver	1	" " "	Nelson	1	Pork and Pork Products	Vancouver	4
Furnaces—Hot Air	Vancouver	2	Machinery—saw, shingle &			Posters—Handpainted	Vancouver	2
" " "	Westminster	1	planing	Vancouver	14	Pottery	Victoria	1
Furniture—Manufacturers	Vancouver	12	" " "	Victoria	2	" " "	Clayburn	1
" " "	Victoria	4	" " "	Westminster	3	Powder—Blasting, Sporting,		
" " "	Nelson	1	" " "	Kamloops	1	etc.	Vancouver	2
Galvanizers	Vancouver	1	" " "	Nelson	1	" " "	Nanaimo	1
" " "	Victoria	1	Machinery—Woodworking	Vancouver	5	Printers—Copperplate	Vancouver	2
Gasoline	Vancouver	2	" " "	Westminster	1	Printers—Rollers and Sup-		
Gearing—machine cut	Vancouver	5	Machinists	Vancouver	32	plies	Vancouver	1
" " "	Victoria	2	" " "	Victoria	9	Printers—in Rolls	Vancouver	1
" " "	Westminster	1	" " "	Westminster	5	Publishers	Vancouver	4
Girders—Iron & Steel	Vancouver	3	" " "	Prince Rupert	3	" " "	Victoria	2
" " "	Victoria	1	" " "	Nanaimo	1	Pulleys—Iron and Steel	Vancouver	6
" " "	Westminster	1	" " "	Nelson	1	" " "	Victoria	1
Glass	Vancouver	3	" " "	Vernon	1	" " "	Westminster	1
" " "	Victoria	1	Macaroni & Vermicelli	Vancouver	2	" " "	Nelson	1
Gloves—Canvas	Vancouver	2	" " "	Fernie	1	" " "	Kamloops	1
Gloves—Leather	Vancouver	3	Maps	Vancouver	3	Pulleys—Split Wood	Vancouver	3
" " "	Marpole	1	" " "	Victoria	1	Pulp (see Wood Pulp)		
Grease—Lubricating	Vancouver	2	Marble	Vancouver	4	Pumps—Air, Force and Lift	Vancouver	4
Gunpowder	Vancouver	2	" " "	Victoria	1	" " "	Victoria	2
Handles—Broom	Vancouver	1	Matches	Vancouver	1	Pumps—Ship	Vancouver	4
Harness & Saddlery	Vancouver	3	" " "	Vancouver	2	" " "	Victoria	1
" " "	Victoria	1	" " "	Victoria	1	Railings—Iron (bank, office and		
Hats—Ladies	Vancouver	1	" " "	Nelson	1	balcony)	Vancouver	1
" " "	Victoria	1	Metal—Electro, Stereo, Lino			" " "	Westminster	1
Heaters & Apparatus	Vancouver	7	and Babbitt	Vancouver	1	Refrigerators	Vancouver	3
" " "	Victoria	1	Metal Polish	Vancouver	1	" " "	Victoria	2
Ice—Artificial	Vancouver	3	Metal—Spinners	Vancouver	1	Rice and Rice Products (see		
" " "	Victoria	2	Metal—Stamping	Vancouver	2	Flour—Rice)		
Ink—Printing & Lithographg	Vancouver	1	Milk & Butter (see Creameries)			Rollers—Printers'	Vancouver	1
" " "	Victoria	1	Milk—Condensed	Vancouver	3	Roofing—Prepared Asphalt,		
Ink—Writing & Copying	Vancouver	1	" " "	Courtenay	1	Tarred Rubber, etc.	Vancouver	1
Insulating Materials	Vancouver	1	" " "	Ladner	1	Rugs—Fluff	Victoria	1
Iron Goods—Galvanized	Vancouver	1	Monumental Works	Vancouver	5	Sails	Vancouver	1
Iron—Bars	Victoria	1	" " "	Victoria	1	" " "	Vancouver	2
" " "	Vancouver	2	Mope	Vancouver	2	" " "	Victoria	1
" " "	Port Moody	1	Motion Pictures	Vancouver	1	Salmon—Canned (see Can-		
" " "	Eburne	1	Motors—Gasoline	Vancouver	4	neries)	Prince Rupert	1
" " "	Victoria	1	" " "	Victoria	1	Sash (see Doors and Sash)		
Jam	Vancouver	3	" " "	Westminster	1	Sash—Weights, Iron & Lead	Vancouver	4
" " "	Brilliant	1	Mouldings (see Lumber Mills)			" " "	Victoria	2
" " "	Kelowna	1	Nails—Wire	Vancouver	1	Scientific Instruments	Vancouver	1
" " "	Mission	1	Nameplates—Brass	Vancouver	4	Sheet Metal Works	Vancouver	27
" " "	Nelson	1	" " "	Victoria	1	" " "	Victoria	4
" " "	Summerland	1	Neckwear—Silk	Vancouver	2	Shingles	Vancouver	17
Jewellers—Manuf.	Vancouver	6	Netting—Wire	Vancouver	2	" " "	Westminster	8
Kalsomine	Victoria	1	Nursery Stock	Vancouver	3	" " "	Aldergrove	1
Knitted Goods—Woolen	Vancouver	3	" " "	Victoria	1	" " "	Chemainus	1
Labels	Vancouver	3	Nuts—Iron and Steel	Vancouver	1	" " "	Chilliwack	1
Labels on Rolls	Vancouver	1	" " "	Westminster	1	" " "	Creston	1
Ladders—Step	Vancouver	1	" " "	Port Moody	1	" " "	Eburne	1
Lamus—Gasoline	Vancouver	1	Office and Shop Fixtures	Vancouver	2	" " "	Genoa Bay	1
Lard and Its Compounds	Vancouver	2	" " "	Victoria	1	" " "	Green Point	1
Laths (see Lumber Mills)			Oil—Fish	Victoria	1	" " "	Hatzie	1
Lead—Bullion & Pig	Vancouver	2	Oil—Floor	Vancouver	6	" " "	Marpole	1
" " "	Trail	1	Oil—Fuel Burners	Vancouver	3	" " "	Mt. Lehman	1
Lead—White	Vancouver	1	" " "	Victoria	1	" " "	Murrayville	1
Leather Belting	Vancouver	1	Oil Fuel—Petroleum	Vancouver	2	" " "	Nakush	1
Leather Lace	Grimmet	1	Oil—Lubricating	Vancouver	2	" " "	Nelson	1
Leather & Leather Goods	Vancouver	5	Overalls	Vancouver	6	" " "	Port Moody	2
" " "	Grimmet	1	" " "	Victoria	1	" " "	Revelstoke	1
" " "	Victoria	1	Oxygen—Gas	Vancouver	1	" " "	Ruskin	1
" " "	So. Westminster	1	Packing—Asbestos	Vancouver	1	" " "	Salmo	1
Lighting Systems	Vancouver	1	Paint—Manfrs.	Vancouver	5	Shipbuilders	Vancouver	7
Lime	Vancouver	1	" " "	Victoria	4	" " "	Victoria	4
" " "	Poplum	1	Pans—Bakers and Confec.	Vancouver	1	" " "	Westminster	3
Lithographers	Vancouver	2	" " "	Vancouver	4	" " "	North Vancouver	2
" " "	Victoria	1	Pants—Working	Victoria	1	" " "	Prince Rupert	1
Logging Companies	Vancouver	25	" " "	Victoria	1	Shirts—Cotton (Men's)	Vancouver	2
" " "	Victoria	1	Paper—Book and Newsprint	Vancouver	3	" " "	Victoria	1
" " "	Port Haney	1	Paper—Kraft	Vancouver	1	Shirts—Work	Vancouver	4
Lumber Mills	Vancouver	22	Paper—Pulp (see Wood Pulp)	Vancouver	1	" " "	Victoria	1
" " "	Abbotsford	1	Paper—Rulers	Vancouver	3	Shoe Rivets	Vancouver	1
" " "	Alberni	1						

# Banking and Finance

COMMODITY	CITY	NO. OF FIRMS
Shoes (see Boots)		
Shooks—Box (see Boxes)		
Show Cases	Vancouver	2
Show Cases (see Cabinet Makers)	Victoria	1
Signs	Vancouver	6
"	Victoria	2
Smelting Companies	Vancouver	1
"	Victoria	1
"	Anyox	1
"	Trail	1
Smoke Stacks	Vancouver	9
"	North Vancouver	1
"	Victoria	4
"	Westminster	1
"	Kamloops	1
Soap—Laundry and Toilet	Vancouver	3
"	Victoria	1
Solder	Vancouver	1
Spices—Whole and Ground	Vancouver	5
"	Victoria	2
Stairs—Iron	Vancouver	3
"	Westminster	1
Stamps—Metal and Rubber	Vancouver	4
"	Victoria	1
"	Westminster	1
Stamps—Steel	Vancouver	3
Standards—Cast Iron (Street Lighting)	Vancouver	7
"	Victoria	2
"	Westminster	2
Staples—Wire	Vancouver	1
Steel Castings	Vancouver	1
"	Westminster	1
"	Port Moody	1
Steel Plates—Construction	Vancouver	4
"	Victoria	2
"	Westminster	1
Stencils—Brass (see Stamps Rubber)		
Stone—Artificial, Building	Vancouver	1
Stone—Crushed	Vancouver	2
"	Westminster	1
Stone Cutters	Vancouver	3
"	Victoria	1
Stoves—Heating and Cooking	Vancouver	2
"	Victoria	1
Stump-pullers	Vancouver	2
"	Victoria	1
Sulphite Pulp (see Wood Pulp)		
Sweaters and Sweater Coats	Vancouver	3
Switchboard and Steel Cabinets	Vancouver	1
Syrup—Sugar	Vancouver	3
Tanks—Steel	Vancouver	9
"	Victoria	4
"	North Vancouver	1
"	Westminster	1
"	Prince Rupert	1
"	Kamloops	1
Tankage (see Fertilizer Material)		
Tanks—Wood (see Wood Tanks)		
Tarpaulings	Vancouver	3
"	Victoria	2
"	Prince Rupert	1
Tents (see Tarpaulings)		
Ties—Railway, Creosoted	Vancouver	1
"	North Vancouver	1
Tile—Drain	Vancouver	1
"	Victoria	3
"	Clayburn	1
"	Kelowna	1
"	Kilgard	1
Tile—Hollow, Structural (see Block Building)		
Tins	Vancouver	1
Tools—Machine	Vancouver	5
"	Victoria	4
"	Westminster	1
Toys and Small Hardware	Vancouver	3
"	Westminster	3
"	North Vancouver	1
Vacuum Pipes	Vancouver	1
Valves—Automatic	Vancouver	1
Varnish	Vancouver	3
"	Victoria	2
Vegetables—Canned	Vancouver	2
"	Burton	1
"	Kelowna	1
"	Keremeos	1
"	Westminster	1
Vegetables—Dessicated (see Dessicated Vegetables)		
Veneers	Westminster	4
Ventilators (Marine)	Vancouver	4
"	Victoria	1
Vinegar	Vancouver	2
"	Victoria	2
Wagons—Delivery (auto)	Vancouver	5
"	Victoria	1
Water—Aerated	Vancouver	4
"	Victoria	6
"	Cranbrook	1
"	Nanaimo	1
"	Nelson	1
"	North Vancouver	1
"	Salmon Arm	1
Welding (see Acetylene Welding)		
Whale Meat	Victoria	1
Whale Oil	Victoria	1
Wheelbarrow—Wooden	Vancouver	1
Wheels—Trolley	Vancouver	3
"	Victoria	3
White Lead	Vancouver	1
Winches	Vancouver	8
"	Victoria	5
"	Westminster	2
"	North Vancouver	1
Windows—Fireproof (see Sheet Metal Workers)		
Wire—Coiled	Vancouver	1
Wire Goods	Vancouver	3
Wood Pulp	Vancouver	4
"	Beaver Cove	1
"	Quatsino	1
Wood Tanks	Vancouver	3

**B**ANKS operating in British Columbia are extended branches of chartered banks whose head offices are in Montreal, Toronto, Hamilton, Ottawa and other large cities of Eastern Canada. Their chains of connecting banks extend through all the prairie and eastern provinces, thus helping to unify the systems which have in that way developed the stability and elasticity required to cover Canada's expansive harvest operations and the movement of the crops to the ports and milling points now trending to develop more fully along the B. C. seaboard at Vancouver, Victoria, Prince Rupert, etc.

The following brief summary of branches of the leading banks in B. C. indicates their order of importance:

NAME OF BANK	NUMBER OF BRANCHES
Canadian Bank of Commerce	41
Royal Bank of Canada	38
Bank of Montreal	26
Bank of British North America	15
Imperial Bank of Canada	14
Merchants Bank of Canada	8
Northern Crown Bank	7
Union Bank of Canada	7
Other banks with less branches, totalling	27
Total	183

As those 183 branches serve B. C.'s population of about 400,000 people, there is a branch for each 2,200 persons—thus providing ample facilities for savings and business interchange of money values.

The constant trend of population to migrate from the eastern and prairie provinces westwards, indicates that ample banking developments will be furnished as required.

Because the banking laws of British Columbia are those which prevail over the whole of Canada, as prescribed in the Bank Act, the banking position cannot fairly be viewed from a provincial standpoint. All the funds of each united chain of banks, from the Atlantic to the Pacific coast, are behind the credit and facilities available in each province.

The banking law throughout Canada requires all banks to be incorporated under Dominion charter and open to inspection by Canadian government officials. Banks can only commence after \$500,000 of their capital has been subscribed, and \$250,000 thereof paid to the finance minister at Ottawa.

The Canadian government alone has power to issue notes for amounts less than \$5.00; but the banks have power to issue, and do issue, notes of \$5.00 and multiples of \$5.00, for the security of which they must deposit, in gold or approved securities, with the minister of finance, 5% of their average circulation to form the "Bank Circulation Redemption Fund."

This fund is used entirely to meet notes of banks unable to redeem their issues, in specie or legal tenders, and any interest due thereon. Thus in case the payments made from this fund exceed the contributions of any particular bank, whose notes are so redeemed, the other contributing banks are required to recoup the fund in the ratio of the amounts standing to their credits.

Banks are safeguarded from the dangers of real estate speculation by the Act prohibiting acceptance of real estate as security for a loan, until repayment thereof is overdue — monthly returns made to the Dominion government, who exercise direct supervision over the banks.

About 70 per cent. of the money deposited in banks within the province is used for commercial and business purposes.

Bankers' "clearing houses" are operated in Vancouver, Victoria and Westminster for daily facilitating the clearances between competing banks.

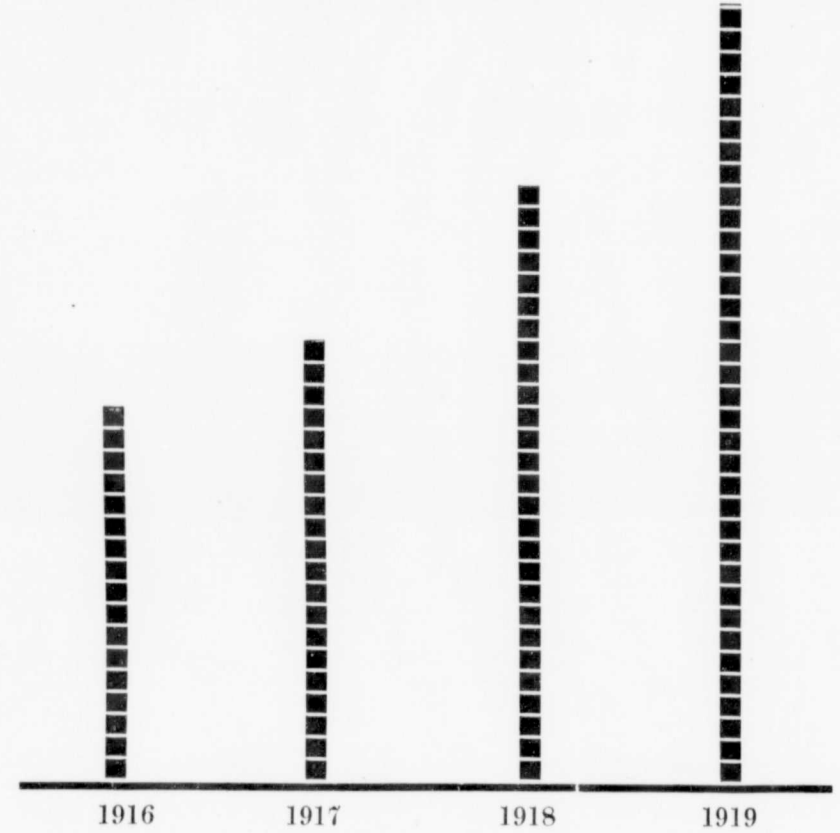
Full particulars of the Canadian currency, note circulation, bank assets, liabilities, reserves, dividends, etc., are regularly published in the Canadian "Official Gazette" and the "Canadian Year-Book," to which readers are referred for further particulars.

## Trust Companies

Trust companies were brought under direct supervision of the provincial government by the Trust Companies' Regulation Act in 1911. But as unfortunate abuses resulted from the ulterior efforts of undesirable exploiters, stronger powers of supervision were enacted by the remodelled Act

## VANCOUVER BANKING CHART

Years ended March 31st, 1916 to 1919.



The above demonstrate the steady business development in and around Vancouver.

of 1914, strengthened by amendments in 1916. Particulars of these, together with the Annual Reports, may be obtained from the provincial inspector of Trust Companies at Victoria, from whom reports on the stability of any existing trust company may be obtained.

## Limited Liability Companies

Founded upon the British "Companies Clauses Act," similar control is being exercised by the Provincial Registrar of Companies, under the "Companies Clauses" and "Companies Mortgage Debenture Acts of 1897," with the fuller Companies Act of 1910 and subsequent amendments requiring the annual filing of capital accounts, balance sheets, lists of shareholders, etc., with the registrar of companies in Victoria, from whom such particulars may be obtained on payment of the copying fees.

The financial strength of such companies generally has been considerably increased during recent years.

## BANKING RETURNS.

### VANCOUVER CLEARING HOUSE.

Comparative Statement of Clearings for Years Ended March 31st, 1916, 1917, 1918, 1919.

	1915-1916	1916-1917	1917-1918	1918-1919
April	\$ 21,295,868	\$ 21,859,400	\$ 30,333,013	\$ 42,986,756
May	22,669,043	26,080,473	33,163,457	43,706,931
June	22,500,450	27,124,891	33,960,212	43,887,564
July	23,712,152	27,481,846	35,285,172	44,671,102
August	24,246,715	28,550,714	38,527,759	54,436,964
September	24,360,842	29,690,373	39,130,527	52,006,202
October	24,596,929	31,475,214	44,978,846	49,908,856
November	26,324,641	31,158,064	42,660,326	53,721,900
December	25,703,746	30,021,584	39,105,578	53,721,900
January	21,974,554	28,757,111	38,174,171	45,750,031
February	21,002,208	24,628,127	24,229,519	51,550,193
March	25,216,415	29,080,730	37,633,390	45,039,214
Total	\$283,603,563	\$335,908,527	\$437,181,970	\$581,387,613

# Imports and Exports

## STATEMENT SHOWING THE VALUE OF GOODS IMPORTED FOR CONSUMPTION AT THE B. C. PORTS OF VANCOUVER AND VICTORIA

DURING THE FISCAL YEARS ENDED MARCH 31st, 1917 AND 1918

DUTIABLE GOODS	Vancouver		Victoria	
	1917	1918	1917	1918
Ale, Beer and Porter	\$ 37,246	\$ 20,610	\$ 8,930	\$ 4,792
Animal diving	58,714	43,436	548	1,285
Antiseptic Surgical Dressings	15,220	21,383	2,534	2,058
Bagatelle Tables	1,290	1,185	84	74
Bags which contained Cement	71	75	.....	.....
Baking Powder	.....	84	.....	.....
Balls, Cues and Raeks for Bagatelle Tables	437	263	.....	.....
Baskets	13,015	8,663	945	1,328
Baths, Bath Tubs, etc.	6,857	10,979	759	2,529
Belting, all kinds, except rubber and leather	35,712	58,429	4,325	5,305
Belts, all kinds, n.o.p.	1,841	2,273	274	181
Bells	1,531	2,258	345	161
Blacking, Shoe and Shoemaker's Ink	13,605	16,593	830	1,212
Blinds of wood, metal or other material, except textile or paper.	.....	419	31	.....
Blue, Laundry, all kinds	11,318	4,427	1,308	948
Boats	1,064	25	90	15
Books, Periodicals and other printed matter	109,159	184,350	24,316	29,145
Boot, Shoe and Stay Laces	14,849	20,516	245	267
Boots, Shoes and Slippers, except rubber and leather	33,206	87,507	4,709	5,773
Braces and Suspenders, and parts of	6,774	4,986	1,491	912
Brass and manufactures of	139,451	209,114	18,028	11,402
Breadstuffs, viz.: Arrowroot, Biscuits, Rice, Macaroni, Sago, and Tapioca	175,110	272,788	17,500	99,532
Grain, Flour and Meal	477,337	1,103,353	89,491	68,428
Bricks, Tiles and manufactures of Clay, n.o.p.	17,642	11,305	5,951	4,213
Brooms and Brushes	38,804	36,524	1,857	2,441
Buttons	16,213	16,871	783	1,044
Candles	2,566	537	806	210
Cane, Reed or Rattan, Split and manufactures of	1,347	1,987	894	1,018
Carriages of all kinds, Railway Cars, Trucks and parts of	258,692	604,794	38,730	48,517
Carpets, n.o.p.	1,002	444	.....	.....
Carpet, Linings and Stair Pads	83	.....	.....	.....
Carpet Sweepers	393	212	134	150
Celluloid, manufactures of	1,889	2,566	681	521
Cement	1,081	937	.....	38
Chalk, prepared	1,449	1,639	37	241
Charcoal	812	592	275	311
Chicory	478	.....	.....	.....
Church Vestments	131	268	130	40
Cider	502	3,634	452	970
Clocks, Clock Cases, Keys and Movements	22,076	25,377	5,711	3,685
Cloth, coated or sized for manufacture of blue or black print cloth	.....	.....	.....	.....
Clothes Wringers	689	363	281	149
Coal, Bituminous, and Dust	27,328	33,267	5,637	13,053
Cocoa Carpeting, Mats and Matting	397	1,782	.....	.....
Cocoanuts	877	1,011	499	317
Cocanut, desiccated	10,699	18,699	2,131	1,253
Cocoa Paste, Chocolate Paste, Shells, Nibs and other preparations	74,709	40,112	6,831	8,067
Coffee, all kinds, n.o.p.	273,752	263,700	29,822	24,364
Collars	973	742	1,013	882
Combs, dress and toilet	2,530	3,700	460	1,249
Copper and manufactures of	6,964	8,509	1,930	734
Cordage of all kinds	31,546	39,242	32,609	9,256
Corks and other manufactures of corkwood	4,861	9,257	222	1,638
Corsets, Clasps, etc.	31,105	32,335	6,693	7,972
Costumes and Scenery, Theatrical	.....	1,675	.....	.....
Cotton, manufactures of	737,033	767,888	134,562	119,490
Crape, black	193	192	.....	.....
Curtains, made up	8,765	7,016	968	777
Cyclometers and Pedometers	1,017	2,249	30	5
Drugs, Dyes, Chemicals, Medicines	231,228	300,038	40,143	623,526
Earthenware and China	98,236	145,825	64,347	81,420
Eggs	87,210	144,261	11,411	16,691
Elastic	4,100	3,773	987	1,372
Electric Light Carbons and Points	3,629	3,732	397	393
Electric Apparatus, Motors, etc.	104,021	197,844	12,761	38,728
Embroideries, n.o.p.	2,413	3,352	52	633
Emery Wheels and manufactures of Emery	13,643	23,778	278	434
Express Parcels	64,660	62,447	21,414	18,098
Fancy Goods	120,815	143,984	50,665	60,135
Feather Beds, etc.	.....	.....	46	37
Featherbone	.....	.....	.....	.....
Fertilizers	2,900	1,589	4,161	15
Fibreware, n.o.p.	2,114	3,515	125	121
Fireworks	3,059	5,959	1,291	1,983
Fish (see Free Goods)	142,764	127,294	28,318	37,621
Flax, Hemp, Jute and manufactures of	119,430	158,920	22,449	24,592
Foundry Facings	389	944	27	436
Fruit and Nuts (see Free Goods)	931,226	1,116,972	126,692	164,265
Furniture, wood, iron or other material	38,887	45,605	8,759	6,175
Furs and manufactures of furs (see Free Goods)	6,986	6,512	871	464
Fuses	31,738	34,872	.....	.....
Glass and manufactures of	124,954	196,841	34,940	35,068
Gloves and Mitts	35,164	36,421	9,210	7,529
Gold, Silver and manufactures of	15,243	9,607	3,448	2,097
Grease, Axle	7,452	16,062	1,442	1,253
Gunpowder and other explosives, etc.	26,708	33,681	3,172	1,780
Gutta-percha, Indiarubber and manufactures of	224,709	247,484	29,878	26,266
Hair and manufactures of	1,248	1,322	418	198
Hats, Caps and Bonnets	92,133	126,345	21,253	23,142
Hay	9,956	4,763	17,964	4,074
Honey	8,544	7,219	4,737	1,736
Hops	126	512	999	992
Ink	9,295	18,306	1,726	1,355
Iron and Steel and manufactures of (see Free Goods)	2,345,808	3,673,706	302,274	303,877
Ivory	149	254	22	18
Jellies, Jams and Preserves	18,635	3,541	3,355	1,103
Jewellery	28,176	35,523	6,125	3,198
Knitted Goods	8,432	8,250	2,296	1,521
Launches, pleasure, steam, gasoline or other motor power	1,400	140	1,285	2,125
Lead and manufactures of	10,749	23,396	48,498	26,289
Leather and manufactures of	261,387	217,570	50,476	34,858
Lime	11	.....	32	.....
Lime Juice and other fruit juices	4,232	13,131	942	2,828
Lithographic Stones, not engraved	\$ 16	.....	.....	.....
Machine Card Clothing	22,663	.....	.....	.....
Magic Lanterns and Slides therefor	6,081	\$ 48,874	\$ 173	\$ 67
Malt	.....	12,902	.....	.....
Malt Extract	3,211	5,429	.....	.....
Marble and manufactures of	9,167	2,248	576	382
Mattresses	25	130	75	25
Mats, door or carriage, other than metal, n.o.p.	11	14	.....	.....
Metals and manufactures of	137,535	249,581	12,641	20,172
Milk, Condensed and Fresh	16,634	17,897	274	405
Mineral Substances, n.o.p.	40,201	64,353	2,199	4,119
Mineral and Aerated Waters	2,815	13,977	981	6,203
Mucilage	677	208	287	93
Musical Instruments	78,450	127,184	5,692	12,184
Mustard	16,347	9,879	7,224	2,357
Oils, all kinds, n.o.p.	3,415,054	5,109,811	240,699	272,058

(Continued on second column, page 44)

## VANCOUVER EXPORTS TO THE UNITED STATES ONLY

ABSTRACT OF ANNUAL DECLARED EXPORT RETURN

Statement showing values of Declared Exports from Vancouver, B. C., Canada, to the United States of America during the year ended December 31, 1918, and a comparison with the preceding year:

ARTICLES	1917	1918
Animals, live:		
Cattle	\$ 86,690	\$ 31,472
Other	8,361	6,137
Automobiles	5,649	14,459
Breadstuffs:		
Bran and shorts	18,901	.....
Corn	11,938	.....
Oats	213,228	223,786
Rice	117,356	100,252
Rice grits	46,438	77,252
Sago flour	33,472	575
Tapioca	37,228	121,127
Wheat	410,909	.....
Wheat flour	200,611	29,303
Brick:		
Common	3,321	13,382
Fire	93,126	137,736
Canned goods	25,070	23,672
Chemicals, drugs and medicines:		
Bark, cascara	10,706	16,085
Gum kauri	.....	37,703
Chrome ore	.....	30,892
Circus and theatrical goods	66,669	20,828
Coal	66,824	120,241
Cocoa beans	11,830	.....
Copper:		
Blister	10,741,467	10,026,549
Ore	4,261,016	4,312,552
Cotton and wool manufactures:		
Army blankets	39,766	.....
Other	43,387	5,945
Drums, empty	12,820	.....
Eggs	86,623	.....
Electrical fittings	18,531	.....
Explosives	71,208	.....
Fertilizers	22,081	14,481
Fibres, and manufactures of:		
Burlap	11,367	.....
Hemp	.....	48,634
Fish:		
Fresh, frozen—		
Cod	28,248	45,448
Halibut	116,982	166,036
Herring	18,260	15,949
Salmon	160,292	238,229
Other	17,582	36,649
Fresh, unfrozen—		
Halibut	29,982	39,957
Salmon	368,941	335,735
Other	2,251	183
Preserved—		
Herring, canned	.....	29,799
Herring, pickled	78,920	178,971
Herring, salted	98,711	337,325
Salmon, canned	92,168	416,848
Salmon, pickled and salted	35,914	53,083
Other	9,044	14,393
Fruits and nuts:		
Fruits—		
Apples	27,481	42,914
Currants	59,470	41,098
Nuts—		
Cocanut, desiccated	17,056	165,430
Copra	52,874	129,578
Other	17,552	13,022
Furs, undressed	135,217	290,378
Glass: Watch crystals	.....	15,129
Gold:		
Bullion	3,202,181	88,986
Concentrates	327,460	721,836
Grease: Vegetable tallow	.....	50,615
Hides and skins:		
Calf	58,999	3,443
Cattle	523,451	790,124
Sheep	42,816	24,723
Household effects	220,427	311,952
Ice	.....	23,383
India rubber	255,871	1,060
Iron and steel, manufactures of:		
Iron, pig	.....	14,003
Iron, round	57,406	.....
Machinery	109,660	98,643
Rails, steel	11,036	1,189
Junk	283,780	226,423
Lime	60,301	72,999
Liquors	200,969	15,073
Meat and dairy products:		
Meat products—		
Beef, fresh	10,552	.....
Pork, fresh	16,473	.....
Preserved meats	16,585	21,729
Sausage casings	29,309	764
Dairy products—		
Butter	13,572	21,329
Cream, fresh	.....	45,373
Milk, preserved	41,485	88,372
Molasses	1,443	18,007

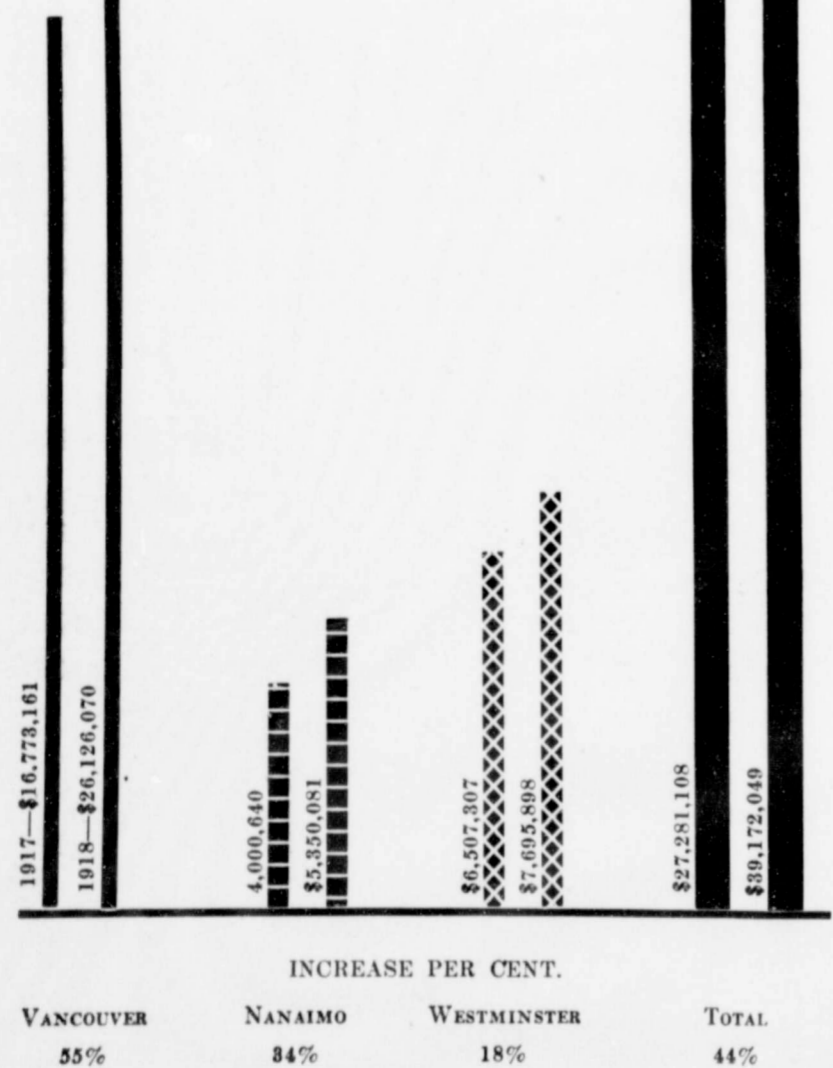
ARTICLES	1917	1918
<b>Oils:</b>		
Fish .....	54,202	82,256
Lubricating .....	32,928	36,657
<b>Vegetable—</b>		
Cottonseed .....	18,958	.....
Olive .....	27,141	.....
Peanut .....	.....	28,864
Other nut .....	.....	17,729
<b>Seeds:</b>		
Alfalfa .....	59,302	9,460
Flax .....	132,795	.....
Millet .....	.....	116,911
Sugar beet .....	900,459	194,555
<b>Silver:</b>		
Bullion .....	234,186	474,623
Concentrates .....	.....	62,852
<b>Tea .....</b>	160,080	322,737
<b>Tin containers .....</b>	49,569	.....
<b>Vegetables:</b>		
Beans .....	459,151	882,746
Onions .....	53,590	.....
Peas .....	13,424	43,837
Potatoes .....	378,294	655
Potatoes, hydrated .....	.....	507,305
<b>Vessels: Submarines, fabricated. ....</b>	.....	286,446
<b>Wood, and manufactures of:</b>		
Lath .....	17,173	9,178
Logs .....	582,938	139,283
Lumber .....	289,879	1,835,449
Paper .....	1,622,933	3,786,441
Piling .....	19,042	101,157
Poles .....	144,378	76,103
Pulp .....	812,349	775,386
Shingles .....	5,182,856	6,154,321
Siding .....	517,735	309,232
Ties .....	1,886	15,404
Other .....	12,687	38,533
<b>Wool .....</b>	311,553	83,341
<b>All other .....</b>	173,274	232,512
<b>Total .....</b>	<b>\$35,900,801</b>	<b>\$37,291,755</b>

**EXPORTS CHART, COMPARING THE TOTAL VALUES OF GOODS EXPORTED FROM VANCOUVER, NANAIMO AND NEW WESTMINSTER**

The chief increases are:—

	Vancouver	
	1917	1918
Silver bullion .....	.....	\$2,304,958
Salmon, canned .....	\$1,317,319	2,346,701
Lumber, planks, etc. ....	382,149	784,735
Cream and milk. (Condensed) .....	56,422	310,927
Wheat .....	123,264	540,670
Flour .....	273,573	361,795
Seeds (New industry) .....	122	88,312
Vegetables (Evaporated) .....	4,084	306,178
Explosives .....	.....	210,514
Leather .....	29,431	196,391
Iron Bars and Rods .....	.....	1,284,201
Other Iron and Steel Manfres. ....	.....	909,284
Paper, printing. ....	2,382,072	2,655,297
Wood Pulp .....	382,245	1,562,571

NOTE—The Imports at Nanaimo, and the Exports at Victoria, are not sufficiently large to register on the foregoing charts.



**STATEMENT SHOWING THE VALUE OF GOODS IMPORTED FOR CONSUMPTION AT THE B. C. PORTS OF VANCOUVER AND VICTORIA**

	Vancouver		Victoria	
	1917	1918	1917	1918
<b>DUTIABLE GOODS</b>				
Oiled Cloths of all kinds, Cork, Matting and Linoleum .....	33,737	58,187	3,872	1,105
Optical, Philosophical, Photographic and Mathematical Instruments .....	18,854	23,136	2,794	3,401
Packages .....	118,775	139,000	41,176	42,033
Paints and Colors .....	29,133	42,920	27,120	36,510
Paintings in oils or water colors and pastels, less than \$20 .....	84	.....	.....	.....
Paper and manufactures of .....	262,604	293,166	39,147	44,417
Pencils, Lead .....	13,952	15,288	794	1,265
Pens, Penholders and Rulers .....	4,134	6,934	202	623
Perfumery, non-alcoholic .....	14,620	19,561	1,256	1,248
Photographic Dry Plates .....	1,510	1,481	113	45
Picture and Photograph Frames .....	5,234	9,289	3,220	2,624
Pickles .....	11,687	11,313	2,179	742
Plants and Trees .....	14,166	15,989	1,651	2,172
Plaster of Paris .....	2,702	3,071	241	49
Plates, engraved on wood or metal .....	945	1,098	75	46
Pocket Books, Purses, etc. ....	15,310	12,814	3,706	2,169
Polish or composition, knife or other .....	17,596	44,497	2,261	700
Pomades .....	.....	.....	.....	.....
Post Office Parcels .....	70,106	61,061	34,946	27,040
Precious Stones, n.o.p. ....	819	512	194	26
<b>Provisions, viz.:</b>				
Butter, Cheese and Lard .....	176,862	108,241	45,352	8,475
Meats, all kinds .....	411,428	387,640	176,586	147,326
Pulleys, Belt, for power .....	16,957	12,513	503	1,118
Regalia and Badges .....	962	370	1,456	346
Ribbons .....	48,720	37,581	11,959	8,400
Sails .....	25	.....	20	.....
Salt (see Free Goods) .....	19,475	24,137	6,001	5,659
Sand, Glass, Emery and Flint Paper .....	3,112	4,588	630	233
Sauces, Catsups and Soy .....	65,121	83,771	15,212	17,577
Sausage Casings, cleaned .....	5,117	11,156	213	532
Seeds, n.o.p. ....	30,465	31,417	10,570	9,548
Ships and Vessels, Repairs on .....	59,825	37,628	2,000	44,050
Signs of any material and letters for signs .....	1,149	1,586	513	255
Silk and manufactures of .....	326,890	425,312	34,220	32,622
Slate .....	887	929	358	633
Soaps .....	45,680	46,294	15,938	11,245
Spices .....	113,096	137,753	2,195	2,203
Spirits .....	266,217	279,109	160,912	117,250
Spirits, Wine, non-sparkling .....	105,271	104,949	20,229	24,295
Spirits, Wine, sparkling .....	3,304	3,891	2,678	2,710
Sponges .....	1,806	2,760	743	297
Starch .....	5,556	2,939	2,418	2,570
Stockinettes for manufacture of rubber boots .....	.....	.....	.....	.....
Stone and manufactures of .....	3,644	4,361	3,399	174
Straw and manufactures of .....	5,868	15,649	966	1,433
Sugars and Syrups .....	4,243,301	4,417,131	19,195	1,431
Sugars, Molasses .....	6,423	9,917	1,429	915
Sugar Candy and Confectionery .....	50,749	26,890	10,405	5,329
Sugar Glucose, Saccharine, Maple Sugar and Syrup .....	11,444	16,772	764	422
Surgical Trusses, Pessaries and Suspensory Bandages .....	2,043	2,614	271	599
Tallow .....	595	18,240	.....	2,044
Tape Lines .....	48	80	11	.....
Tea (see Free Goods) .....	2,747	1,284	94	323
Tin and manufactures of .....	23,456	26,722	5,263	28,243
Tobacco and manufactures of .....	57,626	73,673	3,893	5,726
Tobacco Pipes .....	12,009	13,896	1,228	1,601
Trawls and Trawling Spoons .....	9,625	9,103	1,337	482
Trunks, Valises, Hat Boxes, etc. ....	2,004	2,867	498	221
Twine, manufactures of .....	1,967	6,920	240	201
Umbrellas, Parasols and Sunshades .....	6,690	2,851	2,582	1,671
Unenumerated articles .....	42,776	54,489	13,606	19,538
Varnish, Lacquers, Japans, etc. ....	1,172	2,723	68	100
Vegetables .....	243,030	347,667	60,960	63,392
Vinegar .....	9,662	7,110	1,758	1,023
Waste or Shoddy from cotton, wool, or other material .....	5,778	13,251	4,112	1,605
Watches, Watch Cases, Movements, Glasses, etc. ....	7,250	3,798	5,618	1,643
Wax and manufactures of .....	4,159	4,243	1,631	1,076
Webbing .....	747	744	141	204
Whips, Thongs and Lashes .....	1,133	602	.....	38
Window Cornices and Cornice Poles .....	565	227	22	16
Window Shades and Rollers .....	269	1,512	.....	.....
Wood and manufactures of .....	71,092	85,537	17,089	46,363
Wool and manufactures of .....	736,885	745,624	111,250	101,360
Zinc and manufactures of .....	559	1,339	101	141
Damaged Goods .....	3,219	6,522	.....	.....
Materials for the Construction of Vessels .....	90,014	840,047	46,306	181,631
<b>Total Dutiable Goods .....</b>	<b>19,727,713</b>	<b>26,149,195</b>	<b>2,654,999</b>	<b>3,439,476</b>

**FREE GOODS—Products of the Mine.**

Clay .....	\$ 257	\$ 1,932	\$ 60	.....
Coal, Anthracite .....	160	.....	.....	\$ 263
Minerals .....	1,248	1,243	620	80
Ores .....	127	10	.....	.....
Diamonds .....	176	75	5,484	.....
Salt .....	57,233	79,249	1,651	750
Whiting .....	1,480	2,852	6,998	4,358
Other articles .....	4,217	17,938	18,160	6,725
<b>Total .....</b>	<b>64,898</b>	<b>103,299</b>	<b>32,973</b>	<b>12,176</b>

**FISHERIES.**

Fish of all kinds .....	\$ 38	.....	.....	\$ 8
Fish Oil .....	.....	\$ 350	.....	.....
Other articles .....	10,325	15,883	4,253	9,762
<b>Total .....</b>	<b>10,363</b>	<b>16,233</b>	<b>4,261</b>	<b>9,762</b>

**ANIMALS AND THEIR PRODUCE**

Animals for improvement of stock .....	\$ 3,569	\$ 8,120	\$ 637	\$ 906
Bristles .....	1,216	732	.....	.....
Fur Skins, not dressed .....	8,862	13,605	16,538	1,037
Grease .....	46,486	438,300	22,781	14,643
Hair unmanufactured and Horse Hair .....	540	391	212	206
Hides and Skins, undressed .....	64,150	2,181	.....	193
Silk, raw .....	.....	.....	.....	.....
Wool .....	.....	.....	.....	.....
Other articles .....	9,674	43,264	1,705	236
<b>Total .....</b>	<b>\$ 134,497</b>	<b>\$ 506,593</b>	<b>\$ 41,873</b>	<b>\$ 17,221</b>

**AGRICULTURAL PRODUCTS**

Broom Corn .....	\$ 34,394	\$ 55,204	.....	.....
Cocoa Beans, not roasted, crushed or ground .....	2,167	4,320	.....	.....
Cocoanuts .....	.....	.....	.....	.....
Cotton, Wool or Raw Cotton, not dyed .....	14,659	.....	\$ 336	.....
Fibres, Mexican and Vegetable .....	3,777	2,156	181	155
Fruits, green .....	374,044	451,237	124,863	125,843
Hemp and Manila Grass .....	.....	.....	.....	.....
Indian Corn .....	89,693	95,634	57,764	35,305
Rice, uncleaned .....	884,225	926,035	348,673	371,555
Seeds .....	2,376	2,153	658	994
Tobacco Leaf for Excise purposes .....	40,622	80,466	3,282	3,733
Other articles .....	15,243	190,796	3,726	98,305
<b>Total .....</b>	<b>\$1,461,200</b>	<b>\$1,808,001</b>	<b>\$539,483</b>	<b>\$635,890</b>

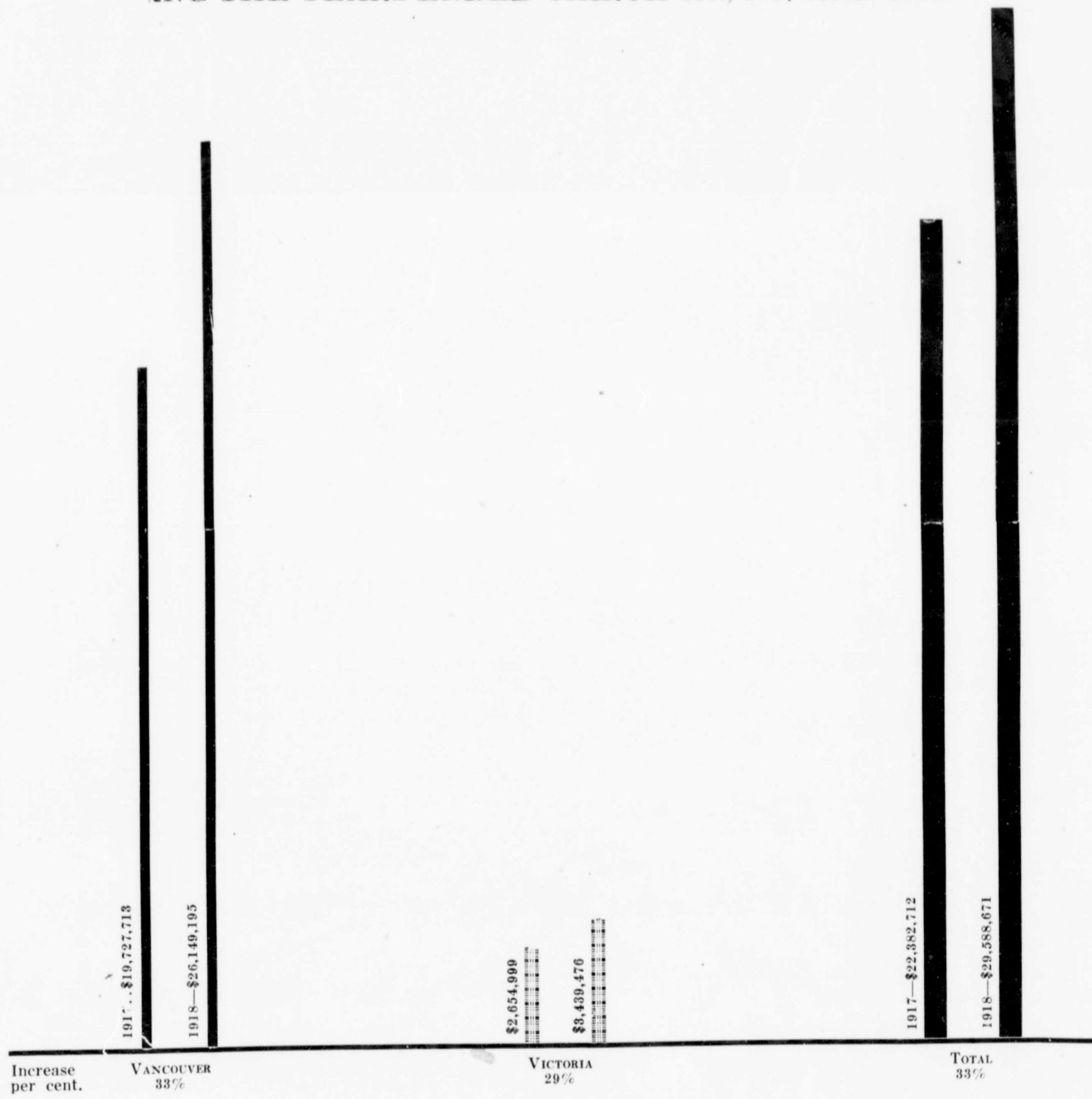
FOREST

	Vancouver		Victoria	
	1917	1918	1917	1918
Corkwood .....				
Logs and round unmanufactured timber .....	\$ 40,539	\$ 7,362	\$ 9,458	\$ 20,440
Lumber and Timber, Planks, etc., sawn, not shaped .....	122,050	135,616	6,864	3,462
Other articles .....	512	3,955	9,794	5,717
<b>Total .....</b>	<b>\$ 163,101</b>	<b>\$ 146,930</b>	<b>\$ 26,116</b>	<b>\$ 29,619</b>

MANUFACTURED AND PARTIALLY MANUFACTURED ARTICLES

Asphalt .....	\$ 1,494	\$ 1,730	\$ 11,561	\$ 1,067
Bells for Churches .....	3	15		
Binder Twine .....	1,073	6,493	223	
Fire Brick .....	459	4,118	553	61
Plaits, Straw, Tuscan and Grass .....	9,043	1,109		177
Pitch and Tar, Pine .....	944	2,591	371	1,467
Coke .....		28,006	4,781	6,261
Duck for belting and hose .....				
Drugs, Dyes and Chemicals .....	244,158	264,217	438,592	964,463
Fish Hooks, Nets, Seines, etc. ....	582,518	814,807	4,974	6,119
Jute Cloth, Yarns, etc. ....	39,176	64,090		
<b>Metals:</b>				
Brass .....	4,751	15,087	1,036	513
Copper .....	15,655	30,767	8,337	4,773
Iron and Steel .....	1,669,631	4,587,870	137,819	198,000
Tin .....	35,052	128,381	56	21
<b>Zinc</b> .....	<b>27,874</b>	<b>31,208</b>	<b>8,709</b>	<b>12,005</b>
Other .....	12,059	3,538	227	454
Oakum .....	16,147	27,066	7,300	11,635
Newspapers and Magazines .....	120,961	131,270	11,552	31,021
Oil Cake Meal and Cotton Seed Cake and Meal .....	7,123	3,608	4,547	5,018
Molasses .....				
Nails .....				
Oil, Coconut and Palm .....	51,240	120,383	7,501	4,498
Gasoline .....	99,784			149
Crude Petroleum .....				
Rags and Waste .....	8,844	11,395	299	382
Resin or Rosin .....	10,634	11,100	7,050	8,095
Rubber, Gutta-percha, Crude, etc. ....	118	75,508		4
Surgical Instruments, etc. ....	14,285	31,301	2,069	4,479
Yarn, Cotton .....	752			
Other articles .....	78,365	116,470	110,049	42,030
<b>Total .....</b>	<b>\$3,052,143</b>	<b>\$6,515,128</b>	<b>\$767,606</b>	<b>\$1,302,692</b>

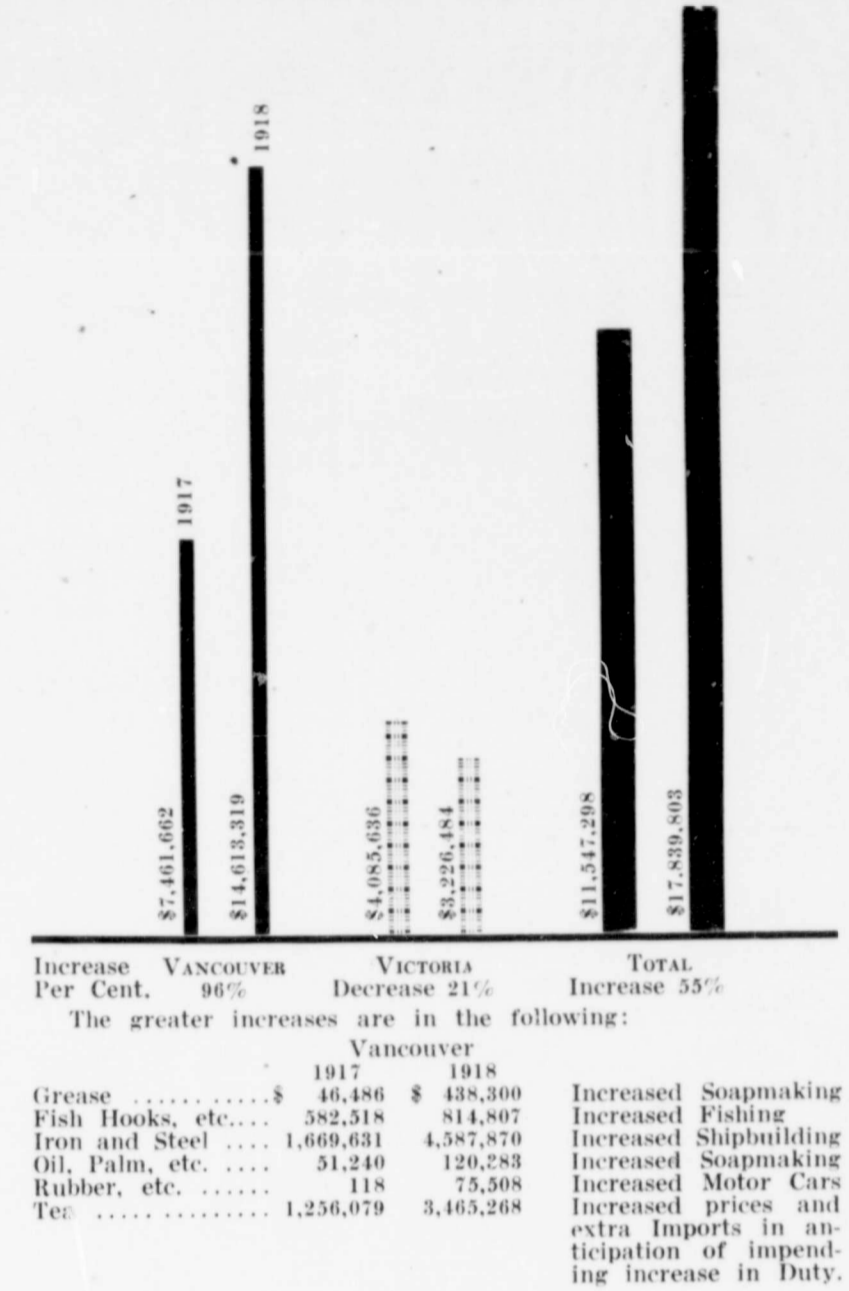
IMPORTS CHART, COMPARING THE VALUE OF DUTIABLE GOODS IMPORTED FOR CONSUMPTION AT THE B. C. PORTS OF VANCOUVER AND VICTORIA, WITH THEIR COMBINED TOTAL, DURING THE YEARS ENDED MARCH 31st, 1917 AND 1918.



The more prominent increases are noted below with brief side notes of explanation:—

	Vancouver		Victoria		NOTES.
	1917	1918	1917	1918	
Books and printed matter.....	\$ 109,159	\$ 184,350	\$ 24,316	\$ 29,145	Ex U.S.A., part Chinese and Japanese.
Brass .....	139,451	209,114	18,028	11,402	For shipbuilding, etc.
Breadstuffs .....	175,110	272,788	17,500	99,532	Rice, etc., replacing wheat sent to Europe.
Grain Flour, etc. ....	477,337	1,103,353	89,491	68,428	Rice flour, etc., replacing wheat sent to Europe.
Carriages, Rly., etc. ....	258,692	604,794	38,730	48,517	For P.G.E. Rly. and other extensions.
Drugs, Chemicals, etc. ....	231,218	300,038	40,143	623,520	For manufacture of explosives, etc.
Earthenware and China .....	98,236	145,825	64,347	81,420	Japanese replacing English during war.
Electric Apparatus .....	104,021	197,844	12,761	38,728	For Shipbuilding, etc.
Glass and its wares .....	124,954	196,841	34,940	35,068	Chinese and Japanese replacing English.
Iron and Steel .....	2,345,808	3,673,706	302,274	303,877	For shipbuilding.
Metals, manufactured .....	137,535	249,581	12,641	20,172	For shipbuilding.
Silk and manufactures .....	326,890	425,312	34,220	32,622	Chinese and Japanese Silk hose, etc.
Vegetables .....	243,030	347,669	60,960	65,392	Higher prices on semi-tropical produce.
Shipbuilding materials .....	90,014	840,047	46,306	181,631	For shipbuilding.

IMPORTS CHART 3, COMPARING THE VALUE OF DUTY FREE GOODS IMPORTED AT VANCOUVER AND VICTORIA, WITH THEIR TOTAL.



IMPORTS CHART 3, COMPARING THE TOTAL VALUES OF GOODS IMPORTED INTO VANCOUVER AND VICTORIA DURING THE YEARS ENDED MARCH 31, 1917 AND 1918.



In 1918 Vancouver operated 86 per cent. of the total, against Victoria's 14 per cent.

# Shipping Trade

PORT OF VANCOUVER, B. C.  
Fiscal Years Ending March 31, 1918 and 1919.

## OCEAN TRADE.

### SEAGOING VESSELS—INWARDS WITH CARGOES.

		No.	Registered tonnage	FREIGHT		Crew
				tons by weight	tons by measurement	
British	1918	96	322,874	128,064	62,115	12,661
	1919	92	188,712	72,885	32,935	6,716
Canadian	1918	513	832,951	99,623	99,460	33,166
	1919	516	773,325	113,149	79,577	31,981
Foreign	1918	545	537,119	665,347	100,613	15,404
	1919	357	577,990	607,482	86,985	14,847
Total	1918	1,043	1,692,944	893,034	262,188	62,231
	1919	965	1,540,027	793,516	199,492	53,544

### SEAGOING VESSELS—INWARDS IN BALLAST.

British	1918	37	65,285			2,830
	1919	27	63,005			2,037
Canadian	1918	193	63,888			2,494
	1919	209	98,692			3,885
Foreign	1918	144	69,256			1,809
	1919	231	57,979			1,842
Total	1918	374	197,929			7,133
	1919	467	219,676			7,764

### SEAGOING VESSELS—OUTWARDS WITH CARGOES.

British	1918	301	441,333	68,044	58,602	24,648
	1919	348	447,374	86,388	86,296	23,855
Canadian	1918	253	465,021	159,810	71,496	20,140
	1919	187	237,678	161,161	57,438	9,085
Foreign	1918	311	306,571	210,729	80,101	15,921
	1919	256	270,217	133,320	78,406	10,340
Total	1918	865	1,212,925	438,583	210,199	60,709
	1919	791	964,269	222,140	222,140	43,280

### SEAGOING VESSELS—OUTWARDS IN BALLAST.

British	1918	56	96,746			2,952
	1919	83	102,737			6,265
Canadian	1918	190	40,148			2,101
	1919	182	21,559			1,520
Foreign	1918	258	293,563			5,447
	1919	321	354,741			6,442
Total	1918	504	430,457			10,500
	1919	586	479,037			14,227

Total number and tonnage of seagoing vessels inwards and outwards, with cargoes and in ballast combined:

British	1918	490	926,238			
	(a) 1919	550	801,828			
Canadian	1918	1,049	1,401,508			
	(b) 1919	1,094	1,131,254			
Foreign	1918	1,147	1,206,509			
	(c) 1919	1,165	1,260,927			
Total	1918	2,686	3,534,255			
	(d) 1919	2,809	3,194,009			

- (a) Larger British ships were on war service.  
(b) Larger Canadian ships were on war service.  
(c) Japanese ships were being more used.  
(d) Smaller ships were used because of submarines sinking part during war.

## Coasting Trade

### COASTING TRADE INWARDS.

Steamers	1918	9,068	2,738,345		159,548
	1919	8,879	2,599,977		157,815
Barges	1918	914	811,652		4,225
	1919	1,001	813,813		4,338
Total	1918	9,993	3,549,997		163,773
	1919	9,880	3,413,790		162,153

### COASTING TRADE OUTWARDS.

Steamers	1918	9,292	3,004,910		160,497
	1919	9,181	3,025,367		160,587
Barges	1918	914	801,586		4,204
	1919	1,018	827,794		4,390
Total	1918	10,206	3,806,496		164,701
	1919	10,199	3,853,161		164,977
Grand Total (including Coasting).	1918	22,985	10,890,748		468,047
	1919	22,888	10,469,960		445,945

### TOTAL COASTING TRADE, INWARDS AND OUTWARDS COMBINED.

Steamers	1918	18,360	5,743,255		
	1919	18,060	5,625,344		
Barges	1918	1,839	1,613,238		
	1919	2,019	1,641,607		
Total	1918		7,356,493		
	1919		7,266,951		

## Canadian Trade Commissioners

### ARGENTINE REPUBLIC

B. S. Webb, Canadian Government Trade Commissioner, Reconquista No. 46, Buenos Ayres. Cable address, Canadian.

### AUSTRALIA

D. H. Ross, Canadian Government Trade Commissioner. Address for folder Box 140 G.P.O., Melbourne; office—Stock Exchange Building, Melbourne. Cable address, Canadian.

### BRITISH WEST INDIES

E. H. S. Flood, Canadian Government Trade Commissioner, Bridgetown, Barbadoes; agent also for the Bermudas and British Guiana. Cable address, Canadian.

### CHINA

J. W. Ross, Canadian Government Trade Commissioner, 13 Nanking Road, Shanghai. Cable address, Cancoma.

### CUBA

AActing Canadian Government Trade Commissioner, 501 and 502 Antigua, Casa de Corres, Teniente Rey 11, Havana. Cable address, Cantracom.

### FRANCE

Philippe Roy, Commissioner General of Canada, 17 and 19 Boulevard des Capucines, Paris. Cable address, Stadacona.

### HOLLAND

Ph. Geleerd, Acting Canadian Government Trade Commissioner, Zuidblaak 26, Rotterdam. Cable address, Watermill.

### ITALY

W. McL. Clarke, Canadian Government Trade Commissioner, via Carlo Cattaneo, 2, Milan. Cable address, Canadian.

### JAPAN

A. E. Bryan, Canadian Government Trade Commissioner, 53 Main Street, Yokohama. Cable address, Canadian.

### NEWFOUNDLAND

W. B. Nicholson, Canadian Government Trade Commissioner, Bank of Montreal Building, Water Street, St. John's. Cable address, Canadian.

### NEW ZEALAND

W. A. Beddoe, Canadian Government Trade Commissioner, Union Buildings, Customs Street, Auckland. Cable address, Canadian.

### SIBERIA

I. D. Wilgress, Canadian Government Trade Commissioner, Suifunskaya Street 10, Vladivostok. Cable address, Canadian.

### SOUTH AFRICA

W. J. Egan, Canadian Government Trade Commissioner, Norwich Union Buildings, Cape Town. Cable address, Cantracom.

### UNITED KINGDOM

Harrison Watson, Canadian Government Trade Commissioner, 73 Basinghall Street, London, E. C. 2, England. Cable address, Sleighing, London.

J. Forsyth Smith, Acting Canadian Government Trade Commissioner, 87 Union Street, Glasgow, Scotland. Cable address, Cantracom.

J. E. Ray, Canadian Government Trade Commissioner, 4 St. Ann's Square, Manchester. Cable address, Cantracom.

J. Forsyth Smith, Canadian Government Trade Commissioner, Century Bldgs., 31 North John Street, Liverpool. Cable address, Cantracom.

N. D. Johnston, Canadian Government Trade Commissioner, Sun Building, Clare Street, Bristol. Cable address, Canadian.

## Canadian Commercial Agents

### AUSTRALIA

B. Millin, Canadian Government Commercial Agent, The Royal Exchange Building, Sydney, N. S. W.

### BRITISH WEST INDIES

Edgar Tripp, Canadian Government Commercial Agent, Port of Spain, Trinidad. Cable address, Canadian.

R. H. Curry, Canadian Government Commercial Agent, Nassau, Bahamas.

### NORWAY AND DENMARK

C. E. Sontum, Canadian Government Commercial Agent, Grubbebd, No. 4, Christiania, Norway. Cable address, Sontums.

# An Analysis of British Columbia's Population

**B**ECAUSE the accurate determination of a possible sales volume is difficult does not of necessity mean that it is impossible or so costly in time and money as to be ruinous, or that the conclusions reached are not reliable.

Offhand it seems a fantasy of a disordered brain to say that the number of red, white and blue neckties, which can be sold in Vancouver is a problem possible of solution. At first glance it does seem idle speculation to state that there is a way to know how many oil heaters can be sold in a year in Prince Rupert.

Manifestly, if such data can be secured and used to underlie selling campaigns and to pre-determine the permissible amount of sales expenditure they have a very definite place in the management of any manufacturing business.

It is believed that there are not a few successful sales and advertising managers who take their maps and determine, district by district, and section by section, the amount of sales they ought to get. Knowledge of actual conditions permits these men to direct their efforts, and all the possibilities for their goods in a given territory are weighed in advance.

So in order to assist the reader the population, age, origin and religion of the people of British Columbia are given.

## Population and Immigration

The population of British Columbia shows a remarkable increase since the year 1901, as a glance at the following figures will reveal: 1910, 178,657; 1911, 392,480; 1919, 494,920 (estimated).

The British Columbia market is an easy one to cater to. While the origin of its people is by a large majority British, there still is a fair number of other nationalities. Most of these where the adult speaks the mother tongue, however, can be reached through the medium of their children. The following figures will serve to give a comprehensive idea of the origin of the population in British Columbia:

Races or Origins (Dominion Census, 1911)		
	1911	1901
British	252,683	106,403
English	133,186	52,863
Irish	40,642	20,658
Scotch	74,493	31,058
Welsh	4,186	1,773
Other	176	41
French	8,907	4,600
German	11,880	5,807
Austro-Hungarian	7,015	1,377
Belgian	938	410
Bulgarian-Rumanian	219	13
Chinese	19,568	14,885
Dutch	1,255	437
Greek	810	96
Hindu	2,292	....
Indian	20,134	28,949
Italian	9,721	1,976
Japanese	8,587	4,597
Jewish	1,265	543
Negro	473	532
Polish	561	....
Russian	4,038	1,142
Scandinavian	15,968	4,880
Swiss	796	249
Unspecified	25,370	1,760

Number of persons 10 years of age and over engaged in gainful occupations in Vancouver, Victoria and total for British Columbia:

	British Columbia		Vancouver		Victoria	
	Male	Female	Male	Female	Male	Female
Agricultural	24,037	405	356	8	253	4
*Building trades	24,078	16	8,906	10	2,562	1
Domestic science	10,911	6,987	3,951	2,720	1,201	521
Civil and municipal government	10,521	181	3,651	39	1,030	26
Fishing and hunting	4,508	72	148	1	67	1
Forestry	11,282	3	8,821	1	60	..
Manufacturing and mechanical industries	31,746	3,255	8,498	904	2,950	255
Mining	15,560	9	470	..	114	..
Professional	6,376	3,236	2,487	1,484	736	421
Trade and merchandising	20,703	2,033	9,959	1,075	2,382	236
Transportation	29,214	430	4,749	210	2,619	40

\*Many men of the building trades during the period of the war just past turned their hands to shipbuilding. As many as 20,000 hands were employed in shipbuilding in the Province of British Columbia. It is also worth considering that the majority of fishermen, and those employed in forestry, mining and transportation make Vancouver or Victoria their headquarters, although on the census records they are not registered that way.

## Density of Population of British Columbia by Districts

Showing area in acres, male, female and total population, 1911, and density per square mile.

	Area in Acres	Male	Female	Total	Per Sq. Mile
British Columbia	1227,747,200	251,619	140,861	392,480	1.09
Comox-Atlin	91,680,886	30,969	11,294	42,263	0.30
Kootenay	17,290,420	33,974	16,798	50,772	1.88
Nanaimo	1,738,880	20,124	11,698	31,822	11.71
New Westminster	3,100,480	35,906	19,773	55,679	11.50
Vancouver City	417,280	74,390	49,512	123,902	190.03
Victoria City	1,894	19,089	12,571	31,660	10,695.95
Yale and Cariboo	111,956,530	37,167	19,215	56,382	0.32

†By map measurement. \*Total land area.

The Dominion census of 1911 gives the conjugal conditions as follows: 160,218 males are single, 83,096 married, 4,079 widowed, 145 divorced, legally separated and 4,011 are not described. Of the females 71,585 are single, 61,359 married, 6,178 widowed, 87 divorced, 69 legally separated and 1,583 state not given.

In 1911 the number of the dwellings in the province was 74,677 and the families number 97,825.



DESCENDANTS OF THE ORIGINAL INHABITANTS OF BRITISH COLUMBIA

Rural and urban population of British Columbia by sexes, 1911.

Rural males	128,242
Rural females	60,554
Urban males	123,377
Urban females	80,307
Number of females per 1,000 males—1901, 565; 1911, 560.	

Rural and urban population in 1901 and 1911 and increase.

	1901	1911	Increase
Rural	88,478	188,796	100,318
Urban	90,179	203,684	113,505

Religions (Dominion Census)			
	1911	1901	1891
Adventists	869	254	109
Anglican	100,852	40,996	23,619
Baptists	17,228	6,506	3,098
Congregationalists	2,827	1,198	775
Eastern Religions	25,808	14,893	8,910
Greek Church	3,574	101	....
Jews	1,384	554	177
Lutherans	19,362	5,335	2,083
Mennonites	189	11	....
Methodists	52,132	25,047	14,298
Mormons	323	125	....
Presbyterians	82,125	34,081	15,284
Protestants	2,357	844	286
Roman Catholic	58,397	33,639	20,843
Salvation Army	1,842	570	298
All others	18,689	9,500	987
Unspecified	4,422	5,003	7,306

The ages of the population in the two leading distributing centres of British Columbia, viz. Vancouver and Victoria, are as follows:

	UNDER 5 YEARS	
	Male	Female
Vancouver	4.19	4.12
Victoria	3.72	3.83
5 TO 14 YEARS		
Vancouver	6.46	6.30
Victoria	6.91	7.07
15 TO 24 YEARS		
Vancouver	11.42	7.96
Victoria	11.79	7.34
25 TO 44 YEARS		
Vancouver	28.72	15.06
Victoria	26.90	13.62
45 TO 64 YEARS		
Vancouver	7.65	5.39
Victoria	8.58	5.91
65 YEARS AND OVER		
Vancouver	.90	.88
Victoria	1.72	1.50
AGE NOT GIVEN		
Vancouver	1.10	.21
Victoria	.49	.44

Births, marriages and deaths, 1911 to 1915.

	Births	Birth Rate per 1,000 Living	Marriages	Marriages per 1,000 Living	Deaths	Death Rate per 1,000 Living	Excess of Births Over Deaths
1911	5,841	14.88	4,509	11.49	3,660	9.32	2,181
1912	8,008	18.85	5,235	12.33	4,313	10.15	3,695
1913	9,199	18.58	5,012	10.12	4,619	9.33	4,580
1914	8,754	17.93	4,296	8.80	3,974	8.14	4,780
1915	8,558	16.22	3,393	6.43	3,832	7.26	4,726



BRITISH COLUMBIA 1919-20

BIRTHPLACE AND CITIZENSHIP OF PEOPLE OF BRITISH COLUMBIA (BY DISTRICTS, 1911 CENSUS)

BIRTHPLACE LIEU DE NAISSANCE	COMOX-ATLIN		KOOTENAY		NANAIMO		NEW WESTMINSTER		VANCOUVER CITY		VICTORIA CITY		YALE & CARIBOO	
	M-H	F	M-H	F	M-H	F	M-H	F	M-H	F	M-H	F	M-H	F
British born—Nés en ter. britannique	17,040	9,308	20,410	12,337	14,229	10,356	24,238	16,379	55,973	40,967	13,949	11,068	25,125	15,819
Canada	11,359	7,786	11,386	7,884	6,296	5,636	14,255	11,637	28,514	24,821	6,570	6,396	15,303	11,579
Alberta	46	102	305	296	77	57	170	188	349	359	69	73	267	246
British Columbia—Colombie-Britannique	7,145	6,723	3,806	3,813	4,417	4,244	6,638	6,533	9,118	9,186	3,996	3,948	7,582	7,341
Manitoba	126	85	400	366	138	156	589	549	1,833	1,834	296	285	664	655
New Brunswick—Nouveau-Brunswick	437	90	510	194	94	66	663	426	1,578	1,157	127	127	469	214
Nova Scotia—Nouvelle-Ecosse	738	133	906	401	286	168	758	395	1,700	1,268	302	237	804	287
Ontario	1,905	473	3,859	2,005	857	602	4,190	2,783	11,003	8,638	1,464	1,405	4,183	2,151
P. E. Island—Ile du Prince-Edouard	200	31	256	120	51	21	240	118	651	434	63	58	183	56
Quebec	587	89	998	338	127	96	790	465	1,433	1,091	174	180	825	303
Saskatchewan	42	27	145	138	63	65	128	120	274	301	61	64	274	291
Yukon	...	1	...	...	...	5	4	2	96	18	3	2	5	3
Northwest Territories—Territoires du Nord Ouest	3	6	180	189	6	8	8	3	15	11	1	2	13	10
Not given—non-donnés	30	6	21	24	180	148	77	55	534	524	14	15	34	22
British Isles—Iles Britanniques	5,108	1,322	8,252	4,294	7,511	4,542	8,586	4,509	24,611	14,972	6,841	4,306	8,909	3,582
England—Angleterre	2,653	778	5,568	2,992	4,936	3,002	5,324	3,018	14,296	9,199	5,937	2,967	5,825	2,541
Ireland—Irlande	627	92	644	229	459	220	879	417	2,006	1,176	401	325	767	220
Scotland—Ecosse	1,660	398	1,773	924	1,826	1,168	2,195	1,001	7,772	4,313	423	990	1,980	728
Wales—Pays de Galles	137	41	226	125	238	125	139	51	385	221	29	...	294	68
Lesser Isles—Autres Iles	31	13	41	24	52	27	49	22	152	63	51	24	43	25
British Possessions—Possessions brit.	449	86	619	127	357	164	1,307	203	1,994	947	397	214	434	137
Australia—Australie	67	27	42	27	47	30	85	54	368	275	108	57	68	27
India—Indes	147	8	408	24	192	37	978	12	892	65	99	20	205	30
Newfoundland—Terreneuve	108	24	84	51	37	35	145	44	392	354	122	88	31	17
New Zealand—Nouvelle-Zelande	45	7	12	5	30	18	39	16	120	85	26	15	46	23
South Africa—Afrique du Sud	20	16	38	9	19	24	17	12	88	85	23	24	31	21
West Indies—Indes Occidentales	6	2	7	7	15	12	13	3	64	40	4	7	25	10
Other—Autres	56	2	28	4	17	8	30	62	70	43	15	3	28	9
British unknown—Britannique inconnu	224	114	153	32	65	14	90	30	854	227	141	152	569	521
Foreign born—Nés en pays étrangers	13,922	1,985	13,555	4,458	5,888	1,337	11,657	3,393	18,404	8,535	5,134	1,498	11,049	3,391
Europe	6,118	627	8,478	2,289	1,788	468	3,671	902	6,348	1,967	762	237	5,354	1,122
Austria-Hungary—Autriche-Hongrie	687	38	2,270	463	220	71	399	72	516	153	17	5	1,194	115
Austria—Autriche	620	32	1,340	215	171	58	352	56	438	125	17	4	919	66
Bohemia—Bohème	17	3	178	114	1	...	10	1	15	9	...	...	24	10
Bukovina—Bukovine	7	1	103	7	20	...	6	...	...	...	...	...	32	3
Galicia—Galicie	26	2	334	25	7	2	19	4	12	4	...	...	144	2
Hungary—Hongrie	17	...	315	102	21	11	12	11	51	15	...	1	75	34
Belgium—Belgique	73	27	76	39	74	55	106	19	106	47	2	3	150	26
Bulgaria and Rumania—Bulgarie et Roumanie	70	6	13	1	4	...	19	6	67	18	7	1	11	1
Denmark—Danemark	156	18	77	13	33	10	71	25	152	73	...	...	108	27
Finland—Finlande	530	124	191	51	186	87	263	91	131	65	17	4	264	99
France	103	31	163	79	62	48	113	40	188	125	32	29	150	83
Germany—Allemagne	367	68	321	158	122	54	256	103	601	300	140	82	349	133
Greece—Grèce	125	...	32	1	13	...	135	...	246	15	53	10	49	4
Holland—Hollande	27	3	56	33	19	5	45	13	69	37	13	5	41	13
Iceland—Islande	20	5	3	3	7	3	14	17	68	67	16	17	4	3
Italy—Italie	918	71	2,218	368	529	56	682	31	1,887	265	167	17	814	84
Norway—Norvège	821	90	469	110	117	13	518	193	584	222	128	23	365	79
Russia—Russie	378	24	1,263	581	44	12	78	25	565	224	22	11	497	252
Sweden—Suède	1,097	109	1,203	355	302	36	835	253	1,050	326	107	24	1,242	179
Other—Autres	746	13	123	34	56	18	137	14	118	30	41	6	116	24
Asia—Asie	4,549	165	1,787	95	3,152	98	4,796	393	5,371	639	3,225	153	2,507	58
China—Chine	2,498	17	1,348	24	2,889	45	2,861	29	3,551	130	3,083	128	2,174	42
East Indies—Indes Orientales	2	...	1	...	...	1	2	...	1	2	...	1	1	...
Japan—Japon	2,012	140	385	43	244	50	1,922	362	1,776	481	140	24	302	13
Syria—Syrie	8	6	34	37	1	...	7	1	23	18	...	...	4	1
Turkey—Turquie	28	1	4	...	16	1	3	1	19	5	2	...	26	1
Other—Autres	1	1	15	1	2	1	1	...	1	3	...	...	...	1
United States—Etats-Unis	3,240	1,189	3,268	2,041	928	757	3,156	2,080	6,576	5,859	1,118	1,090	4,044	2,202
Africa—Afrique	1	...	6	...	5	1	3	...	6	8	2	...	7	1
West Indies—Indes Occidentales	1	1	...	4	1	...	...	1	6	6	...	...	1	1
Other countries—Autre pays	13	3	16	29	14	13	31	17	97	56	27	18	27	7
At sea—En mer	7	1	9	3	7	5	11	1	13	10	6	5	12	5
Total	30,969	11,294	33,974	16,798	20,124	11,698	35,906	19,773	74,390	49,512	19,089	12,571	37,167	19,215

LITERACY OF POPULATION, MALE AND FEMALE, 5 YEARS OF AGE AND OVER (1911 CENSUS)

Provinces and Districts	Population Male—Homme		Per Cent. 5 Years and Over Pour Cent. 5 Ans et Plus					
	Total	5 Years and Over 5 Ans et Plus	Can Read and Write Pouvant Lire et Écrire	Can Read Only Pouvant Lire Seulement	Cannot Read Nor Write Ne Pouvant ni Lire ni Écrire	Can Read and Write Pouvant Lire et Écrire	Can Read Only Pouvant Lire Seulement	Cannot Read Nor Write Ne Pouvant ni Lire ni Écrire
British Males	77,536	76,294	72,507	147	3,550	95.15	.19	4.66
Comox-Atlin	5,788	5,746	5,587	8	151	97.23	.14	2.63
Kootenay	9,033	8,868	8,529	2	337	96.18	.02	3.80
Nanaimo	7,940	7,768	7,484	6	278	96.34	.08	3.58
New Westminster	9,994	9,846	8,982	81	783	91.23	.82	7.95
Vancouver City—Cité	27,472	26,965	25,746	27	1,192	95.48	.10	4.42
Victoria City—Cité	7,385	7,258	7,096	2	160	97.77	.03	2.20
Yale and Cariboo	9,924	9,753	9,083	21	649	93.13	.22	6.65
British Females	40,525	39,167	37,627	42	1,498	96.07	.11	3.82
Comox-Atlin	1,523	1,482	1,447	3	32	97.64	.20	2.16
Kootenay	4,456	4,378	4,175	...	103	97.59	...	2.41
Nanaimo	4,725	4,550	4,420	6	124	97.14	.13	2.73
New Westminster	4,743	4,588	4,387	6	195	95.62	.13	4.25
Vancouver City—Cité	16,156	15,638	15,184	20	434	97.10	.13	2.77
Victoria City—Cité	4,677	4,556	4,461	1	94	97.91	.12	2.07
Yale and Cariboo	4,245	4,075	3,553	6	516	87.19	.15	12.66
Foreign Born Males	80,500	79,256	64,177	400	14,679	80.97	.51	18.52
Comox-Atlin	13,922	13,828	10,744	112	2,972	77.70	.81	21.49
Kootenay	13,555	13,328	11,985	45	1,298	89.92	.34	9.74
Nanaimo	5,888	5,839	4,209	29	1,601	82.02	.50	27.42
New Westminster	11,657	11,448	9,301	76	2,071	81.25	.66	18.09
Vancouver City—Cité	18,404	17,947	15,761	63	2,123	87.82	.35	11.83
Victoria City—Cité	5,134	5,071	2,191	6	2,874	43.21	.12	56.67
Yale and Cariboo	11,940	11,795	9,986	69	1,740	84.66	.59	14.75
Foreign Born Females	24,597	23,408	21,658	64	1,686	92.53	.27	7.20
Comox-Atlin	1,985	1,877	1,713	4	160	91.26	.21	8.53
Kootenay								

# Educational Systems and Facilities

THOUGHTFUL consideration of the educational system of British Columbia is necessary to derive a fair appreciation of the future development of this vast province, because very much depends upon the practical nature of tuition given during the impressive years of school and college life. If sound educational training is then efficiently given to develop the nobility of labor and the higher ideals of British citizenship, the fuller productive development and prosperity will assuredly result, to the credit of the Province, Dominion and Empire.

But if the lower ideals of self-interest and professionalism during that critical formative period of life are given undue incentive through the teaching transactions or living ways of educational authorities in the British Columbia University, education department or school teaching staffs, the inevitable result must be such a surplus aggregation of aspirants for legal, medical and other professional ranks of an unproductive nature, such as real estate agents and other exploiters, whose operations result in dissipating the natural wealth of the province and discourage its workers and manufacturers until both capital and labor's functions become seriously impaired—as experienced during the “boom years” of 1907 to 1914.

It is because we have reason to believe that the reorganization now being made effective in the Department of Education, together with the higher educational work of the British Columbia University, are being directed on a higher and more practical plane than in those pre-war years, that we feel a growing confidence that the future development of British Columbia is being increasingly expedited by the more thorough and practical system of education now being established throughout the province.

As readers will not be interested in the defects which are now being remedied, we need not record those imperfections, as they arose during a period of extraordinary immigration which led to inadequately trained teachers being employed to work under a too-wide curriculum. Those together led too many of the young people on leaving school to believe that they were educated to live more easily by professions, distributive and other unproductive agencies, rather than the more useful and ennobling work of farming, manufacturing, mining and other productive developments needed and for which British Columbia provides such extending opportunities.

Neither do we consider it worth while to record any history of our educational system, beyond noting that from the opening of the first free school by the Hudson's Bay Company in 1855 to the completion of the Canadian Pacific Railway in 1886, the population was so small that only elementary schools in scattered communities were available.

The present educational system was founded upon the Public Schools Act of 1895, under the direction of the Provincial Minister of Education, whose duties from that time until now have been exercised by the successive Provincial Secretaries who have held that office, because no separate Minister of Education has been raised to cabinet rank. It was found more convenient to have the Provincial Secretary administer education as his chief duty in conjunction with the control of health and provincial institutions.

The Provincial Secretary has thus become the supreme controller of all educational affairs, subject to the decisions of the Council of Public Instruction, a committee of the cabinet, of which committee he is the convener and dominant member.

His intimate associate, as chief administrative and executive officer, has extensive powers which he wields under the title of Superintendent of Education, subject to the direction of the Provincial Secretary, who transmits to the Superintendent the directions of the Council of Public Instruction.

To this controlling officer has hitherto been entrusted the enforcement of the provisions of the Schools Act, with all subsequent amendments, and also the enforcement of the decisions of the council.

His duties are many and far-reaching. Beyond the headquarters control of the Education Department, he is required “to examine and in-

quire into, from time to time, the progress of the people in learning, the order and discipline observed, the system of instruction pursued, the mode of keeping school registers, the average attendance of pupils, the character and condition of the buildings and premises,” etc., for submission to the members of the cabinet and legislature, to enable them to allocate the necessary moneys required during the ensuing financial year.

For that purpose the superintendent annually presents, through the Provincial Secretary, an annual report with appendices recording the workings of the department, which together usually cover about 200 quarto pages, from which the more concise educational statistics recorded below have been compiled to register the essential features of British Columbia education.

Assisting the Superintendent of Education are thirteen well-selected inspectors responsible for the due observance of all requirements under the Schools Act by the 2,246 teachers and 67,516 pupils attending the 43 high schools, 100 graded city schools and 598 rural schools ranged throughout the settled parts of the province.

Provision is made for the erection of a school-house and payment of a teacher in any country district where not less than 10 pupils are of school age.

The expenditures to maintain all schools (except 571 of the smaller assisted rural schools) are provided for by local district assessment of school taxes, supplemented by a per capita allowance from the Provincial Government, varying in amount according to the average daily attendance of pupils and number of teachers employed at schools in each district.

Free text books are also provided, their cost for the present year being \$68,556, or \$1.02 per pupil.

The growth of the school system during the recent years may be gauged by the following summary of attendance and cost records graded by five-year periods since 1900:

Year	Average Daily Attendance	Provincial Government's Expenditure on Education
1900	13,438	\$ 284,909
1905	18,859	433,005
1910	28,094	612,053
1915	52,822	1,407,990
1919	about 60,000	1,777,290

Beyond these expenditures are the collectively large amounts raised by local school rates in Vancouver, Victoria and other cities.

Recent developments include the establishment of manual training and domestic science classes, the formation of cadet corps, the regular inspection of scholars by qualified medical officers, the establishment of night schools and provision for efficient technical education in the larger cities.

The appointment of properly qualified candidates for scholastic posts is secured by a system of preliminary examinations, whilst rules laid down for the teachers' guidance, with the supervision that ensures their observance, form an ample guarantee that instruction shall be given on lines approved by the Provincial Government. It would be difficult to imagine regulations more thoughtfully compiled than those drawn up by the Council of Public Instruction.

The teacher is enjoined “to furnish pupils with constant employment in their studies, and to endeavor by judicious and diversified modes to render the exercises of the school pleasant as well as profitable.”

Again, he is prompted “to maintain a regular supervision of the pupils in the playground, and to have a care that games are honorably played.”

Two further rules read: “. . . Nor to detain any pupil in school during the hour's intermission at noon, and, except in extreme cases, to avoid detention after hours”; and “Every teacher shall practise such discipline as may be exercised by a kind and judicious parent in his family, avoiding corporal punishment except when it shall appear to be imperatively necessary, and then a record of the offence and the punishment shall be made in a register used for the purpose, which records shall be open to inspection by the Superintendent of Education, the inspectors and the trustees.”

These four rules, taken from amongst a number of similar precepts, serve to show the careful

and imaginative lines on which instruction is given, and the safeguards contrived to check any abuse of power on the part of an individual teacher. One further extract may well be made from these regulations, since it admirably illustrates the imperial spirit animating those who control the course of public education within the province. To Article 11, which directs that certain days, including Empire Day (May 24th) and the King's Birthday, shall be observed as school holidays, the following note is appended:

“The object of Empire Day is the development of the empire idea. Consequently the lessons, recitations and other exercises of the last teaching day preceding Empire Day (May 24th) should be such as to bear directly upon the history and resources of Canada and the British Empire, and tend to promote a spirit of true patriotism and loyalty. The school flag (British or Canadian, which it is earnestly recommended that the trustees shall provide) should be raised on Empire Day, Dominion Day, the King's Birthday, the anniversaries of great national events, the day of opening or closing school in any term, etc.”

Coming fresh to this, the most important of national problems, British Columbia was able to appropriate much that was best in the methods of other provinces and lands, whilst it was a simple matter, by the easy process of omitting to include them, to avoid all sectarian entanglements. The clause in the Schools Act governing instruction in religion and ethical matters is indeed commendably brief: “All public schools . . . shall be free, and shall be conducted on strictly secular and non-sectarian principles. The highest morality shall be inculcated, but no religion, dogma or creed shall be taught. The Lord's Prayer may be used in opening or closing the school.” It is not to be supposed that an enactment of this nature could altogether avoid criticism. No serious effort, however, has been made to reverse it, and it may be said that the sentiment of the province is distinctly in favor of a system which treats all creeds with equal fairness. Speeches advocating the adoption of a system of unsectarian Bible instruction similar to that obtaining in New Zealand were made at a recent ministerial congress, which, whilst by no means unanimous on the subject, agreed further to discuss the question on subsequent occasions. It is possible, therefore, that definite proposals on these lines may be put forward in the near future.

To secure public school teachers possessed of the necessary professional training, normal schools have been established in Vancouver and Victoria. Persons who are over 18 years of age are admitted, provided that they hold either (a) a junior grade or higher certificate from a high school within the province; (b) a model school certificate of another province; or (c) have taught for one year on a third class teachers' certificate of British Columbia.

The work undertaken is such as to qualify those attending the school to give the most effective instruction to both elementary and advanced classes. No fees are charged for admission, tuition or diploma, and travelling expenses incurred by students in journeying to and from the institution are refunded.

*The whole system of British Columbia education provides for free tuition to all such citizens of the province as are able to afford the time to attend the schools, colleges and university.*

In addition to the free university and schools under the direct control of the Provincial Government, there are a number of highly useful private schools and colleges to which middle class and wealthier families pay private fees for sending their young people from British Columbia cities, the prairie provinces and the British settlements in Eastern Asia.

It is fitting that this brief sketch of the extent and nature of the educational facilities to be found within the province should close with the reminder that but 70 years separate the hundreds of free schools and the university project today from the date on which the first preceptor landed in British Columbia. Great as has been the commercial development of the country, intellectual endeavor is striving to keep pace with it.

# University of British Columbia

IN 1908 the Provincial Government passed the Act to establish the University of British Columbia as an integral part of the public educational system of the province. Its purpose was to provide practically free university education for persons desiring to complete the work begun in the public and high schools.

By prescribing a large number of studies during the first years of undergraduate work, and by leaving a wide choice under a definite system to the student during his final years, the university endeavors to give a wise measure of direction, and at the same time to encourage individual initiative and special development.

In addition to fostering the general educational interests of the province, it is the policy of the university to render service to its constituency through three generally recognized channels, viz., teaching, research and extension. The university undertakes to furnish instruction in the various branches of a liberal education, and in those technical departments which are most directly related to the life and industries of the province. That its teaching may be vitalized, and that it may do its share in contributing to the advancement of knowledge, the university aims to encourage research in all departments. When a sufficiently firm foundation has been laid in these two departments of university activity, extension work will be organized. Through this channel new truths discovered in this or in other institutions of learning will be presented in popular form in many centres throughout the province. By this means those whose circumstances deprive them of the opportunity of attendance at the university may avail themselves of the latest contributions to knowledge, as well as of the most recent lessons of practical experience.

## Instruction

The Act of 1908 (consolidated August 2nd, 1912) provides for: (a) Such instruction in all branches of liberal education as may enable students to become proficient, and qualify for degrees, diplomas and certificates, in science, commerce, arts, literature, law, medicine, and all other branches of knowledge; (b) such instruction especially, whether theoretical, technical, artistic or otherwise, as may be of service to persons engaged in the manufactures, or the mining, engineering, agricultural and industrial pursuits of the province; (c) facilities for the prosecution of original research in science, literature, arts, medicine, law, and especially the application of science; (d) such fellowships, scholarships, exhibitions, prizes, rewards, and pecuniary and other aids as shall facilitate or encourage proficiency in the subjects taught in the university,

and also original research in every branch; (e) such extra-collegiate and extra-university instruction and teaching as may be recommended by the senate.

The following departments are already in full operation with more than 900 students attending, the attendance in 1919 being nearly twice the number of students in 1918:

DEPARTMENT	NUMBER OF PROFESSORS	ASSISTANT PROFESSORS
Agronomy .....	2	1
Animal Husbandry .....	1	1
Bacteriology .....	1	..
Biology .....	1	2
Chemistry .....	1	2
Civil Engineering .....	1	1
Classics .....	1	3
Dairying .....	1	..
Economics, Sociology and Political Science .....	1	1
English .....	1	3
Geology and Mineralogy .....	1	1
History .....	..	2
Horticulture .....	1	1
Mathematics .....	1	2
Mechanical Engineering .....	1	1
Mining and Metallurgy .....	2	1
Modern Languages .....	1	3
Philosophy .....	1	..
Physics .....	1	2
Poultry Husbandry .....	1	..
	21	27

## Degrees

The University Act gives the university full powers to grant such degrees in the several faculties and different branches of knowledge as the senate may from time to time determine. The Act reserves for the university the sole right in this province to confer degrees, except in theology.

For the session 1919-20 the university offers instruction in the first, second, third and final years of the arts course, leading to the degree of Bachelor of Arts, which will be conferred upon those who successfully complete the course: in the first, second, third and fourth years of courses in applied science, leading to the degree of Bachelor of Applied Science; and in the first three years of a course in agriculture.

## The Session

The university year or session is divided into two terms, the first extending to the Christmas vacation and the second from the end of the

Christmas vacation to the end of the sessional examinations in April.

## Buildings

Since there is no accommodation at present on the university site at Point Grey, the work for the coming session, with the exception of laboratory work in agriculture, will be conducted in buildings on the site of the Vancouver General Hospital. These consist of one large, modern, fireproof building, containing classrooms and offices, and several commodious frame buildings. These latter include separate buildings for physics, chemistry, geology and mining, an assembly hall and workshops.

## Equipment

Laboratories and equipment are available for courses in the work undertaken. Facilities for field-work in Physical Geography, Geology and Mining exist in the immediate vicinity of Vancouver. Climatic conditions permit class excursions to be made throughout the session.

## Student Advisers

Upon entrance, each student is assigned to a member of the Faculty, who acts as his adviser in the matter of studies. Each term the student is requested to consult his adviser concerning the choice of studies.

The special advisers for women students will be glad to give counsel and advice on any matters on which they may be consulted.

## Physical Examination

In order to promote as far as possible the physical welfare of the student body, every student, on entering the University, will be required to pass a physical examination, to be conducted by, or under the direction of, a specially qualified medical practitioner.

By such an examination physical defects and weaknesses, amenable to treatment, may be discovered. The student would then be expected to apply to his physician for such remedial measures as his case may require. The appropriate form of exercise or athletic activity will then be recommended.

## Board and Residence

Lists of approved boarding-houses, accessible to the University, the moral and sanitary conditions of which are satisfactory, may be obtained from the Registrar. Requests for these should state whether they are for men or women students. Men and women students are not permitted to lodge in the same house, unless they are members of the same family, or receive special permission from the Senate.

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# Church Activities in British Columbia

ACTIVITIES of the churches literally extend throughout the province, wherever settlements of its people have been made. Scarcely any group of more than a score of settlers can be found without near contact with the elevating influences of churches, Sunday schools and their frequent social gatherings so typical of British Columbian life in city and rural districts.

In districts where a few hundred people are settled, there are generally located more than one church, so that Anglicans, Roman Catholics, Methodists, Presbyterians and other members or attendants usually are able to link themselves up with the church community they prefer.

The remarkable harmony existing between the ministers and adherents of different churches is largely due to the freer intercourse of Western life, largely aided by the cordial co-operation of the clergy and ministers of the respective denominations, who work more cordially together, through meeting regularly in their combined ministerial associations, brotherhoods and church union movements.

The latter is tending rapidly and increasingly to develop the interchange of pulpits used between different church communities, and also the holding of united services. Further, in some places where the building of duplicated churches was not fully warranted by the sparse population, the competing churches have mutually agreed to reciprocate in devoting alternate churches to joint use.

Another important influence advancing that co-operative development in church life is highly significant of future advancement, through the drawing together of the theological colleges under the auspices of the newly established University of British Columbia, at Point Grey, adjoining Vancouver.

This eminently practical step is about to be consummated by the erection of the different church colleges for training future clergy and ministers in adjoining quadrangles, to enable them to co-operate in teaching such subjects as comparative religion, religious psychology and pedagogy, mission work, sociology, the art of speaking, etc.

Official representatives from the Anglican, Presbyterian, Methodist and Baptist conferences have agreed in principle upon that admirable arrangement.

Readers specially interested in joining and furthering the cause of any of the denominations can obtain full listings of the locations of churches and ministers of that sect: therefore, we here record only general information concerning each of the leading church organizations; but before doing so, submit the following condensed summary of the total adherents of the different religions in British Columbia from the last census in 1911:—

	Numbers	Per- centages
Anglicans .....	100,952	26
Presbyterians .....	82,125	21
Roman Catholics .....	58,397	15
Methodists .....	52,132	13
Lutherans .....	19,362	5
Baptists .....	17,228	4
Other 56 Denominations....	62,284	16
Total .....	392,480	100

## Anglican Church

The activities of this, the greater church organization, began with the landing of its first missionary in 1859. Its first Bishop arrived in 1860. Thence its communicants increased till in 1879 it was deemed advisable to divide British Columbia into three dioceses. In 1900 a fourth was added, so that now the following officiate:—

1. The Bishopric of Columbia, located at Victoria, controlling the churches on Vancouver Island and the adjacent islands, with 52 clergy.
2. The Bishopric of Caledonia, located at Prince Rupert, controlling the northern portion of the Mainland, with 26 clergy.
3. The Bishopric of New Westminster, located at Vancouver, controlling the southwestern part of the Mainland, with 62 clergy.
4. The Bishopric of the Kootenay, located at Nelson, controlling the southeastern part of the Mainland, with 31 clergy.

Total: 171 clergy officiating at 147 churches distributed among 100,952 adherents.

Extensive missionary work is carried on among the native Indians; also more difficult work among the Chinese and Japanese. Coast mission boats operate from Vancouver amongst logging, fishing and mining camps, in conjunction with three hospitals, four doctors, six nurses and two missionaries.

## Presbyterian Church

The provincial activities of the Presbyterian Church began in missionary efforts during the rush of gold seekers up the Fraser River in 1861. Their first church was founded at Victoria in 1863. Since that date the influence of the Presbyterians has extended throughout the settled parts of this widespread province. Their active membership is, for church government, divided into four presbyteries, working through 142 ministers in about 180 churches and mission stations combined. Institutes are established at Alberni, Ahousat and Union Bay along the coast, and mission work is there carried on by mission-boats to Queen Charlotte Islands, Prince Rupert and other coast points.

Similar work by boat service is extending along the interior lakes of Okanagan, Arrowhead,

receive their ministrations along the coast, also on the Kootenay and Shuswap lakes.

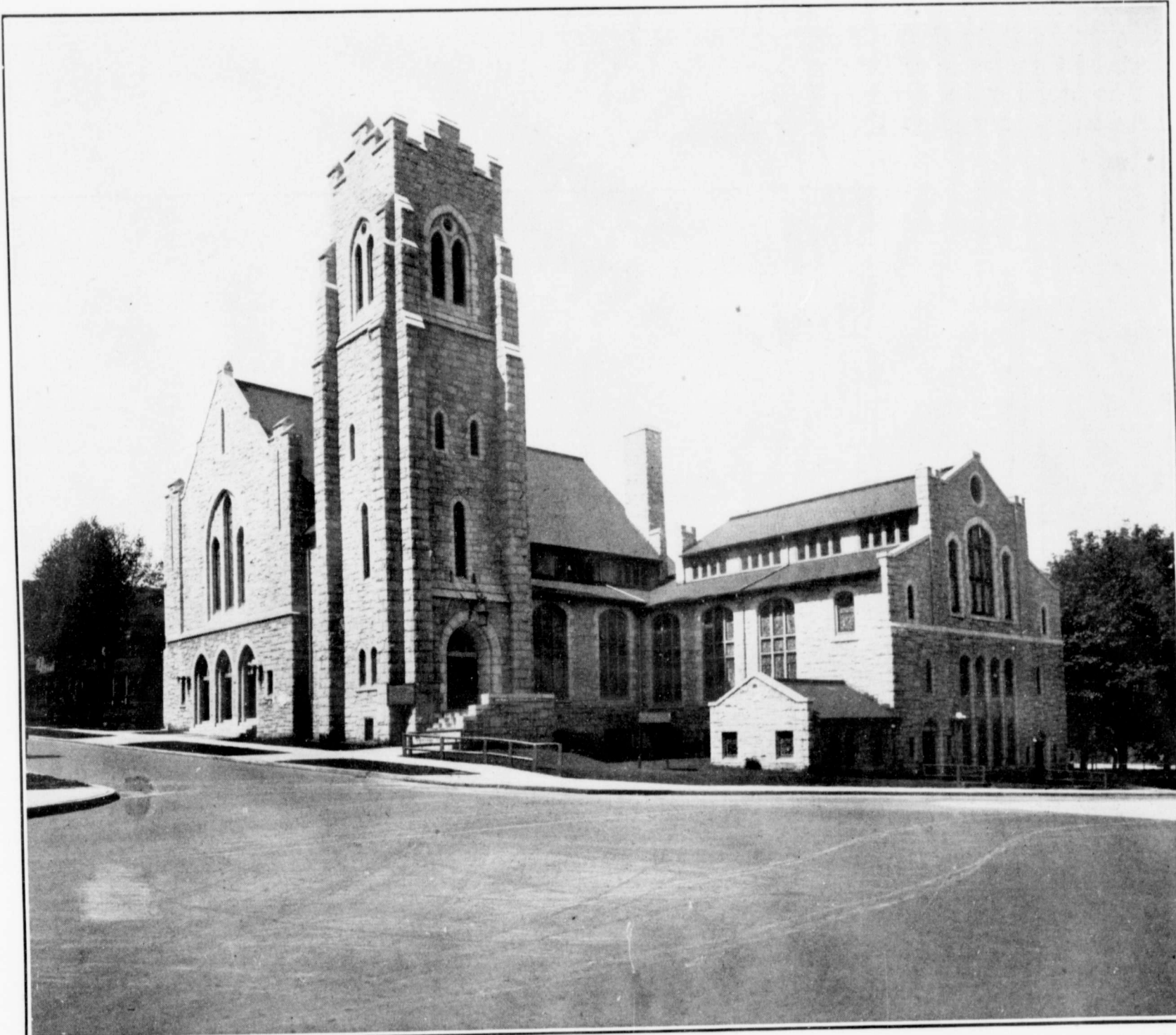
Facilities for the training of future ministers, missionaries, teachers, etc., are provided at Ryerson College in Vancouver and Columbian College in New Westminster.

## Roman Catholic Church

Missionaries of the Roman Catholic Church were the first to enter British Columbia at Vancouver Island in 1846. French-Canadians employed by the Hudson's Bay Company formed the first church at Victoria in 1852. They formed the first R. C. school in 1858. There are now 56 Catholic churches with resident priests, in addition to more than 60 missions with churches attached. These are governed by two Bishoprics located at Vancouver and Victoria respectively, directing the service of 116 clergy.

At Mission, North Vancouver and other places Industrial Schools have been highly useful to the children of the native Indian population, of whom about 600 are in average attendance.

Several colleges and educational institutions are maintained in Vancouver, Victoria and New Westminster; about 900 pupils attend those col-



FIRST BAPTIST CHURCH, VANCOUVER, B. C.

Kootenay, etc., while the upper interior services are maintained by ministers established in churches at Hazelton, Prince George, Tete Jaune Cache, etc.

The Synod maintains a college for the training of future ministers at Westminster Hall in Vancouver.

## Methodist Church

Methodist efforts in the province began during the gold rush of 1859, and spread slowly until the first Methodist Conference was organized in 1887, when the Canadian Pacific Railway opened the way for speedier settlement. From that date the church more rapidly extended its influence till now it has 176 churches and mission stations combined, wherein active work is carried on by 160 ministers and missionaries.

The missionary work of the Methodists among native Indians is furthered by institutes established at Sardis in the Fraser Valley, and at Port Simpson, on the northern coast, near Prince Rupert.

The church also maintains hospitals at Bella Coola and Hazelton; further, the Government Hospital at Port Simpson is staffed by the Woman's Missionary Society.

The "Waterways Mission" of the church is carried on by missionaries who run the Methodist boats, which also carry Chinese and Japanese preachers of the Methodist faith, to enable Orientals at cannery, fishery and logging centres to

lective institutes, and about 100 orphan children find refuge in the church's orphanages. The Roman Catholic Church also maintains five highly successful hospitals to which the Provincial Government gives financial assistance.

## Baptist Church

The activities of the Baptist Church began in 1876, at New Westminster in 1878, and at Vancouver in 1885. Gradually other churches were founded at divisional points along the Canadian Pacific Railway and in the Okanagan Valley, where a successful college for young men and women was established at Summerland. Now there are 44 churches in the province, served by 40 ministers doing very helpful work.

## Other Churches

Among the other 57 denominations now ministering in the province, we note the steady activities of the Lutherans, who now have 20 churches (mostly located in the Coast cities), served by nine ministers, who continuously minister in the scattered churches to residents and settlers who come from Norway, Sweden, Denmark and other northern countries of Europe.

The foregoing brief summaries will serve to convince intending settlers that the spiritual ministrations and social help for young people and families coming to British Columbia are readily within their reach.

# Hospitals and Other Health Institutions

THE work of the Provincial Board of Health extends throughout both municipal and provincial areas. It is rendered more effective through the financial assistance and indirect control exerted by the government disbursement of contributions and subsidies granted to hospitals and other public institutions, together with grants to medical men, who are thereby encouraged to take up practice and health work in the sparsely settled districts.

The Board of Health is administered under the Provincial Secretary through the Provincial Officer of Health, from whom the annual reports or detailed particulars can be freely obtained.

Under the provisions of the Health Act the Officer of Health must always be a qualified medical practitioner, who by personal visits to and correspondence with municipal authorities and other public authorities is constantly kept informed of health conditions in all parts of British Columbia.

Whenever deemed advisable the Board of Health can, and does, make effective use of the large powers entrusted to it, to cope with any disease or epidemic, to enforce remedial action within the area affected.

The scope of its powers is amply wide, as the Act requires it to deal with all matters which affect, or threaten to affect, health and life.

The board makes sanitary investigations, inquires into and prevents diseases and epidemics,

municipal councils, and in the unorganized districts by the Lieutenant-Governor-in-Council, to carry into effect the requirements of the Health Act.

Local health officers are appointed in city municipalities under that Act, which compels the city to provide such an officer, fix his salary and pay him.

Responsibility to ensure healthy qualities of food devolves upon the local board, through its health officer, who also has power to order the destruction of foodstuffs he may find unfit for consumption. This important power includes the supervision of milk supplies within each board's district.

Local boards thus have wide powers of great service when rightly used. To protect local property-owners against possible abuse of such powers, the Act prescribes that where impending destruction or seizure involves considerable financial loss, appeal may be promptly made from the local board's decision to the Supreme Court.

Another useful clause in the Health Act compels any person or corporate body who may contemplate the provision of a public water supply to submit plans of the proposed waterworks, and an analysis of the water, for examination by the Provincial Board.

Qualified provincial inspectors enforce the requirements of the board and provide restraint upon any forms of industrial development inimical

Such include the well-known general hospitals at Vancouver, Victoria and New Westminster, also the smaller ones at Nanaimo, Prince Rupert, Revelstoke, Kamloops, Vernon, Golden, Nelson, Cranbrook, etc.

To supervise the useful application of those grants, the government appoints two members to the management board of such general hospitals.

Mental hospitals are provided entirely at the government's expense, and concentrated at New Westminster, with the nearby extension at Essondale, for which altogether the government provides \$483,445 for the current year.

Neither workhouses nor the old-style infirmaries exist in British Columbia, but small grants are made as required for such needy persons as are found necessary, including about \$33,172 provided for the provincial home for old men at Kamloops.

Medical degrees taken outside of Canada do not entitle holders to practise in British Columbia, where medical men and women from other countries, including the United Kingdom, must undergo the British Columbia examination before practising. The medical register now contains about 600 doctors.

Details of the vital statistics may be obtained from the Provincial Health Officer. The brief summary below may be of interest to the general reader, bearing in mind that the figures for births,



ST. PAUL'S HOSPITAL, VANCOUVER, B. C.

records all vital and medical statistics, compiles the effects of localities and unhealthy employment, ascertains the rate of mortality, etc.

The board supervises measures used by local boards to control and eradicate disease. It further advises the government concerning such legislation as may be needed to conserve the public health.

Such functions as the inspection and sanitary control of logging, lumber, railway, mining and other camps, the licensing of slaughter houses, the construction and cleansing of theatres, barbers' shops, cold storage buildings, public bathing-houses, mental hospitals, asylums, etc., are under the control of the board, which also regulates the ventilation and sanitary conditions of street cars, lodging houses, hotels, etc.

The Board of Health assumes immediate responsibility whenever the public health is endangered, and not only distributes informative literature with instructions to prevent the occurrence and spread of disease, but also issues instructions to municipalities and districts concerned under legal powers which provide that when the board's instructions conflict with local by-laws and regulations the latter are temporarily suspended, while the instructions have the full power of enforcement.

If an outbreak of smallpox or other virulent epidemic develops, the board can, without any prior agreement with the owner, appropriate any land requisite for the erection of a hospital or other health purposes—the owner obtaining compensation from the municipal authority for whose use the land was taken.

## Local Boards

Local boards of health and medical officers of health are established in municipalities by the

to public health. For example, the Vancouver health officer.

Vaccination is not compulsory, exemption being obtainable in cases where parents conscientiously believe that vaccination would be detrimental to the health of their child and make affidavit to that effect. But the board, by circulating free reading matter and the educational influence of its officers and medical authorities ensuring pure lymph, consistently influences parents in favor of vaccination, regarded as a necessary safeguard.

## Hospitals and Other Health Institutions

General hospitals throughout British Columbia are liberally subsidized and supported on the basis of a per capita grant, varying in amount according to the cumulated number of days' treatment given to patients each preceding year.

The Board of Health requires as a condition upon which such grants are given, that before any such institution can be recognized as a general hospital, its sponsors *must undertake to treat all forms of disease without respect to the ability or inability of the patient to afford payment*, and, further, be able to raise the balance of the yearly cost from local taxation, after payment is collected from paying patients.

As an indication of the support given by the government to general hospitals, the following amounts are recorded from the supply votes passed by the Provincial legislature for the year 1919:

Statutory grants to hospitals.....	\$350,000
Special grants to hospitals .....	30,000
Grants to homes, aid societies, etc.	51,050
	<hr/>
	\$431,050

deaths and marriages are based upon last year's statistics:

Estimated population in 1919.....	400,000
Registered births .....	9,880
Registered deaths .....	4,092
Natural increase apart from	
immigration .....	5,788
Being 142 per cent. more than deaths.	

These deaths include those of Orientals and mixed races, mostly congregated in Vancouver, Victoria and Prince Rupert, which constitute the three vulnerable points developed by the termination of three great transcontinental railways interchanging passengers and merchandise with China, Japan and other Asiatic countries.

British Columbia is fortunate in its superior health conditions, developed and permanently assured through its physical ranges of territory. It is a mountainous country endowed with abundant supplies of water, derived from pure snow-clad peaks and forest-clad hills. Being a new province, sparsely populated, we are better able to control the sources of supply and consequently are able to diminish the number of water-borne diseases, because, with few exceptions, where industries are developing along rivers and water-courses the purity of water is maintained.

Our population is composed of people accustomed to outdoor life, and this, linked with the fact that we possess an unrivalled climate which attracts to this province many of the most vigorous younger people from the other provinces of Canada, Great Britain and the other Dominions of the Empire, tends more each succeeding year to preserve the general health of the British Columbia community at a higher level than is the case in other parts of the Empire lacking those climatic and prospective advantages.

# British Columbia as a Vacation Land

WE ought to have a law making it a misdemeanor to work more than eleven months in a year. A man can do more work in eleven months than he can in twelve. We need more vacations, more holidays, more picnic parties, more Saturday afternoons in the woods. All men need a change occasionally; a change of work, change in thought, a change of scene, a change of climate—and this applies to all women. In planning a vacation, there is one person who is too often forgotten—the wife. She, too, needs a vacation.

"You are tired out—physically, mentally, if not morally. Do you know why? Because you disobey all the laws of your nature and live an artificial life. God made the country and man made the city. There is no life in the town. There

valley, great cities on the plain, great inventions, tremendous traffic, sea covered with ships, the air filled with aerial conveyances and mighty empires established. Who can look upon the towering Canadian Rockies or the majesty of the ocean without being transfixed? You can't develop great men in a tub or in any confined area. It takes more than books and colleges and churches and society and work to develop great souls. It requires the fields, the woods, the hills and streams, birds and butterflies and flowers, the boundless prairies, the great rushing, roaring rivers, the grand anthem of the waterfalls, the dense silent forests; the wonderful canyons, the soul inspiring mountains, the north wind, the soft balmy zephyrs of the south, the awful grandeur of the ocean storm—all enter into and help to develop the

Eastern Canada and the Western Prairies, British Columbia is wonderful, and it transforms one so completely that it of all places is surely ideal for summer vacation. It is the land of sunshine, the playground of the Dominion, the roof garden of North America, where the clouds drop down to earth and the mountains kiss the sky.

There is exercise and climate, air and scenery, and something akin to inspiration that makes the aged young. If there are any microbes or impurities in your system, they will disappear if you stay long in the Rockies of British Columbia. If people would save money they spend for drugs and doctors' bills, and come to British Columbia, their increased strength would be the wonder of their life.

A trip to British Columbia from any point in



is death in it. Life is out of doors. There only can you get the renewal of the forces of life. Get out into the open. If only for one hour each day, get out into the free spaces where the touch of primeval things puts a thrill through you. Feel the shine of the sun in its life-giving warmth, the air that is wine, the soil that is electric. Get out of the stifle of the town. Get out of lassitude, self-inflicted. Get out where there is real life. Listen to the lure of the wild."

The ordinary vacation is not long enough. The man who expects to build up a great business or to do things far removed from the ordinary must occasionally have an extraordinary change. A vacation loses two-thirds of its value if taken at home. Take to the lakes, the woods, the mountains, the ocean. At least get away from local scenes.

Come to British Columbia and drink inspiration from your surroundings. Absorb the electricity from the ground. Go up into the mountains and commune with nature. Hunt, fish, climb hills, ride, row and run. Harmonize with the wild. Mix

broad, rugged, generous, spiritual, indestructible character; and after the wonders of our own country have been seen and felt and lived, there is still more to see, more to know, more to feel.

The people who can take occasional trips have better personalities, live more, and comprehend more than those who stay at home. Travel is soul-developing as well as soul-inspiring. If a man were permitted to glimpse at the next world, he could hardly be the same man again; and he who has been blessed by even nature's indescribable wonders cannot be the same again. He has stood upon holy ground. He has stood where the Architect of the ages has demonstrated His power, and he is compelled to stand like a little child without a word to say.

By travel vision is extended, comprehension enlarged, sympathies are broadened, our appreciation of mankind mightily advanced, opportunities are found more frequently, our knowledge of the world and its ways increased to our own advantage—the best things of the world made our own.

Canada doesn't cost much, but if one comes soon enough it will eliminate many other costs that tear down instead of building up. There is something about the altitude, the mountain air, something about the magnificent scenery and the wonderful formations that gives one enthusiasm, new vigor, a new vision, and a new idea of the world. It takes away the wear and tear of your year's work, but leaves you all your experience. It leaves you rested nerves and a clear brain. It leaves you with less faith in heredity, diseases and liver complaint; if you stay long enough, it will leave you with a pretty strong conviction that most complaints are imaginary, that nearly all sickness is a disease of the mind instead of the body. Ideas don't come to a man who is worn out; but spend a couple of months in British Columbia and ideas and opportunities come in abundance. It is the ideas that a man appropriates and uses that determine the extent of his business. Constant thinking and planning causes one to go to seed, but a vacation in British



with the elements, and in a month or six weeks you come back and get a week's work off in a day. You have inspiration and zeal and magnetism and power. As a man absorbs magnetism and strength and stores up latent energy from his contact with nature, so does he store up knowledge and acquire personality, greatness of character and breadth of mind by mingling with the peoples.

Why shouldn't people travel more and see more of British Columbia? If one becomes a part of all he sees, why shouldn't he see more? The very ruggedness of the earth is woven into the fibre of the man who has seen for himself.

Two of the great lacks of humanity are the lack of vision and lack of comprehension. Solomon understood this, for he said "where there is no vision, the people perish." The difference between the Indian and the Canadian is vision. The vision of the Indian could only reach the fish in the stream, the game on the plain; but the vision of the white man could see the harvest in the

If we become a part of all we see, why not see the best—not only the grandest scenery, but the greatest achievement of the race? See and hear the greatest men, read the best books, keep in mind the world's best thoughts, the highest ideals, and you become, in part at least, the incarnation of the genius of the world.

It is natural to judge the natural world by its best. Why not judge the people by their best—their virtues instead of the vices? We judge the scenery of the Dominion by the wonderful Rocky Mountains, our giant trees, waterfalls and the ever changing ocean, etc. Why talk about people unless we have something good to say? Why not see the best in them? Tell them of it; tell others about it. The broader the man and the more he has seen of the world, the more capable is he of tempering his justice with mercy and looking with sympathy and kindness upon those whose lot it has been to live in a smaller sphere.

For the people of Europe, for the people of

Columbia will reopen the fountains of wisdom and bring back the exuberance of youth.

After all, the ideal place for a vacation is out in the wilds, where the noise of the traffic is stilled, where occasionally the four-footed denizens of the mountains and valleys can be seen on the dizzy heights. There you can find communion, inspiration and grandeur unspeakable. It matters little where you go in British Columbia. It's all alike and all different. British Columbia is full of world wonders, and the last one seems sublime.

Decide to come to British Columbia and the delightful anticipations of an extensive trip will produce chemical changes in your body and send a flow of life and energy through your system; and when new scenes and an entire change of climate are experienced, if the scenes are unusual enough, there is a feeling of delight. The secretions of the body at once become active, and instead of languor and listlessness of the semi-invalid, there is a buoyancy of spirit and the whole system takes

on a vigorous, healthy tone. The sick are made well. The best doctors now recommend a change of climate instead of a change in medicine. A certain amount of travel not only gives one better health and another life, but it sweetens the disposition. The man who spends all his time in one place becomes sluggish, mentally and physically.



He becomes more or less dwarfed. By him, everything is done on a small scale. He sours. He becomes narrow, and is hardened and deadened by the monotony of the struggle for existence which is usually the lot of him to lives unto himself.

Then there is the overworked business man with nerves all unstrung. It would be hard to estimate the tragedies which have resulted from exhausted nerve cells. Irritability and loss of sleep are only the first sad symptoms. The man or woman who is suffering from nervous trouble can be cured absolutely by coming to British Columbia, where the air is soft and balmy, where the flowers bloom late in the year and early spring, where the birds sing and all nature rejoices. The cure will be effected more quickly if the seashore becomes part of the new environment. The sea washes the shores of British Columbia, adding another charm. It takes the mind from self and the troubles at home. There is healing in its waters. Its very vastness is awe-inspiring. There is a new field of interest in the animal life in its silent depths, and a wondrous beauty in the marvellous shells washed up by the ever changing tide. There is rest and sleep and medicine in the salt sea breeze. Such an environment as this, with the proper mental attitude, will add years and a charm to life.

Climate changes the entire disposition of a being and this you will realize when you come to British Columbia, for you will be tempted to say when you go back home that "you met all classes, and never heard one unkind criticism, one morsel of bitter sarcasm from anyone, and there is a more universal spirit of good will and helpfulness and amiability existing in the social life of British Columbia than you have encountered elsewhere."

So pack up your kit, your rod and gun and a ticket for Somewhere in British Columbia; we know you'll eventually visit Vancouver; it's the city where everybody calls.

British Columbia is unquestionably a vacation land. Although a country of very recent development, particular attention has been given to making many of the beauty spots easily accessible, and in providing for the comfort and entertainment of the sightseer.

Page Fifty-four

In this work the Canadian Pacific Railway has again been the pioneer, erecting and maintaining commodious resort hotels at such places as Banff, Lake Louise, Glacier and Field (Emerald Lake), in the mountain region of the eastern section of the province. They have also built typical Swiss chalets in the higher altitudes, and

The C. P. R. also operates a first-class hotel at Sicamous, at the northern entrance to the Okanagan valley; the Hotel Incola, at Penticton, on the line of the Kettle Valley Railway; besides the palatial "Vancouver" and "Empress," at Vancouver and Victoria respectively.

A regular service of C. P. R. steamers also ply the Arrow, Okanagan and Kootenay lakes.

The Canadian National, Grand Trunk Pacific and Pacific Great Eastern railways are of too recent construction to permit of any great development in this way, but ample provision has been made for the comfort and convenience of sportsmen and fishermen at the many points where good fishing and hunting are to be obtained.

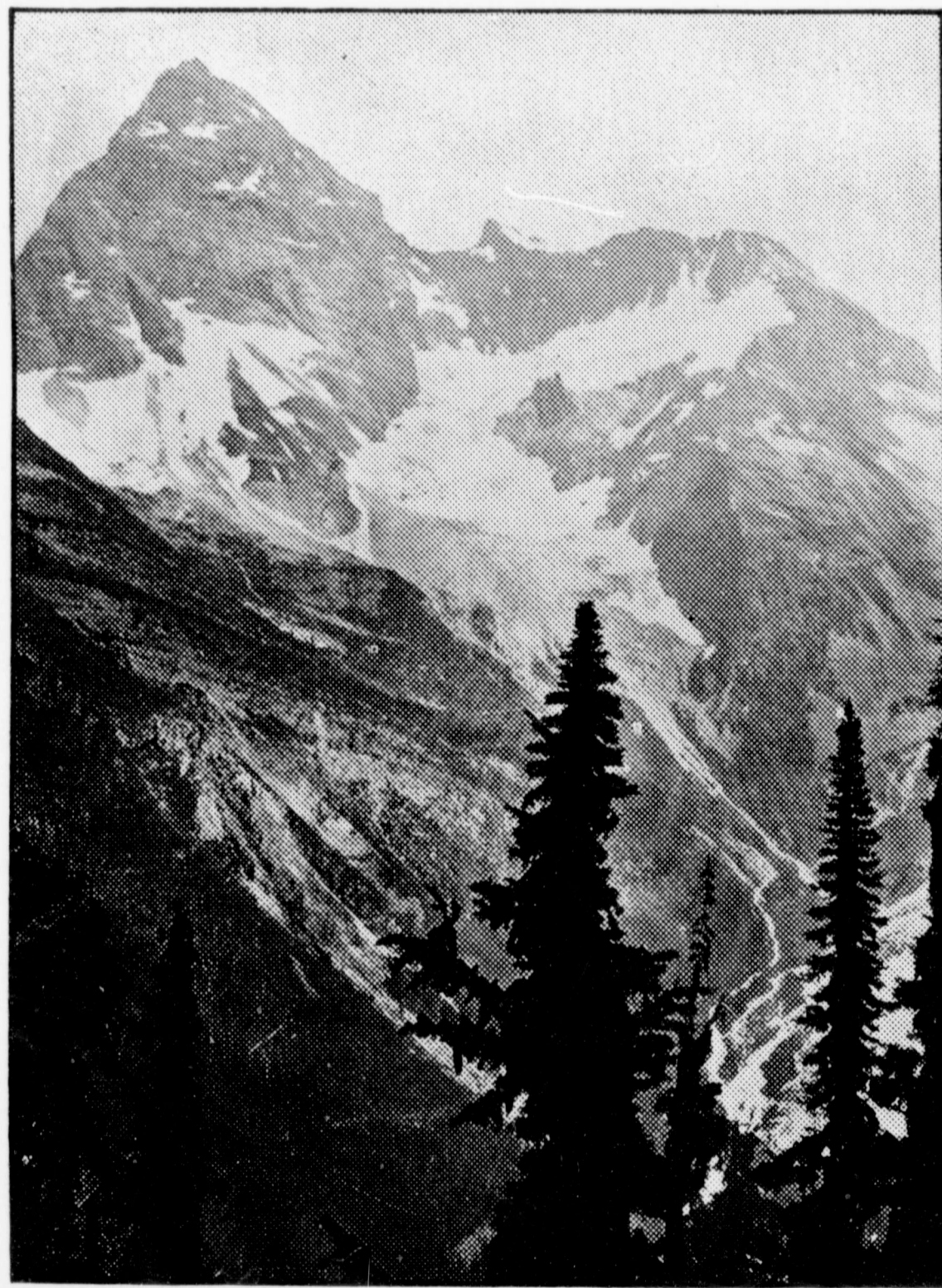
Apart from all other considerations, one would be amply repaid—from a sightseeing standpoint—by a mere trip over any or all of these railways through the province, since world-travellers in great numbers have declared, without hesitation, that the scenic beauties, both by reason of grandeur and variety, are unexcelled in any other single section of the world.

Tourists, in ever increasing numbers, are making the cities of Vancouver and Victoria their objective and headquarters, because of the many interesting and enjoyable features in the immediate vicinity of these cities.

Within a radius of 40 miles of Vancouver are a full score of places sufficiently attractive to arouse the attention of the most jaded globe-trotter, including such points of interest as Capilano Canyon (6 miles), Indian River Park (18 miles), Bowen Island (16 miles), Horseshoe Bay (16 miles), and many others, all of them accessible either by automobile, interurban car or frequent boat service; while within the city limits is Stanley Park, a virgin forest of 1,000 acres, but well provided with roads and trails to all parts.

Victoria city is unique on the North American continent, resembling in many ways towns in the south of England. Here again are many beautiful places within easy reach by boat, street car or automobile, the motor roads on Vancouver Island equalling the best.

These coast cities are not merely summer resorts, but, with the growing knowledge of their mild winter climate, thousands of people from Eastern Canada and the Canadian prairies, as well as from the middle and eastern states, leave to



retained—for the benefit of mountaineers—a number of experienced Swiss guides.

Naturally, in a province such as British Columbia, mountain-climbing can be practised in almost any region, but the majority of the mountains charted and trailed are in the vicinity of the C. P. R. hotels, or close to the larger cities and towns.

make their residence in Vancouver and Victoria when the biting winds and snow storms of early November cause less favored sections of the country to be far from enjoyable.

On another page will be found information of particular interest to the hunter and fisherman, who can be assured of practically perfect sport in any part of the province.

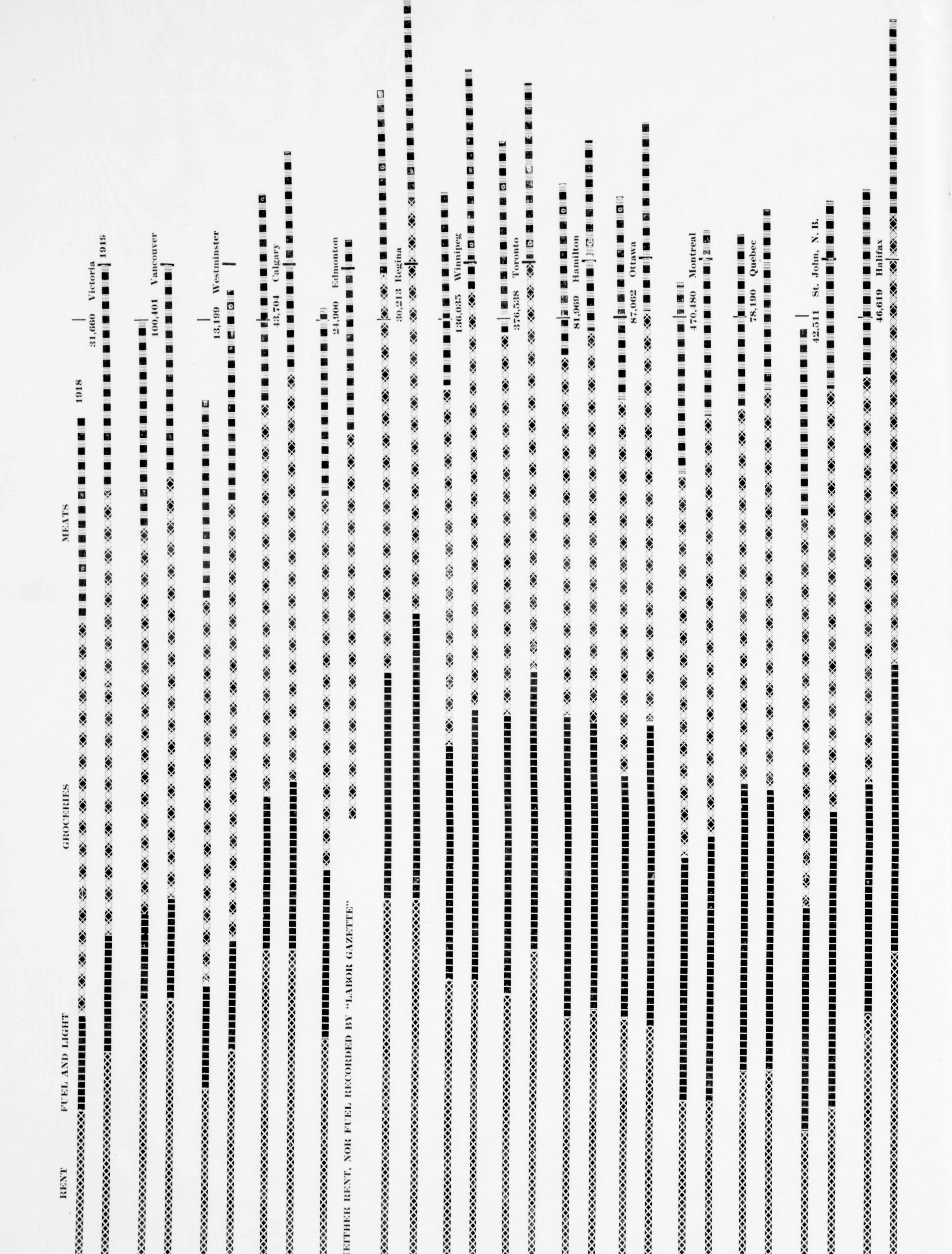




COMPARATIVE CHART OF THE COSTS OF LIVING, PER WEEK, FOR THE TYPICAL FAMILY OF 5 IN THE 14 TYPICAL CITIES OF CANADA—DURING THE MONTHS OF JUNE, 1918 AND 1919.

BASED UPON FIGURES PUBLISHED BY THE "LABOR GAZETTE"—ADJUSTED FOR DIFFERENCE IN FUEL AND CLOTHING USED.

The population in each city is recorded below its name, according to the last (1911) Census.  
 N.B.—The cross-jot-lines measure the Vancouver 1918 and 1919 costs respectively across the columns for other cities.



M	\$ 4.64	\$ 4.84	\$ 4.66	\$ 4.76	\$ 4.48	\$ 4.81	\$ 4.72	\$ 4.96	\$ 4.35	\$ 4.37	\$ 4.38	\$ 4.53	\$ 4.33	\$ 4.86	\$ 4.36	\$ 4.03	\$ 3.90	\$ 4.08	\$ 4.42	\$ 4.28	\$ 4.27	\$ 4.21	\$ 3.92	\$ 3.99	\$ 4.20	\$ 4.30	\$ 4.11	\$ 4.60
G	9.05	10.23	8.82	9.60	8.92	9.91	8.91	9.32	8.28	8.82	9.01	9.43	8.20	9.50	8.65	9.23	8.09	8.90	8.57	9.43	8.63	9.41	8.48	9.04	8.72	9.55	9.05	10.14
F	2.25	2.70	2.03	2.37	2.34	2.52	1.95	2.09	2.02	Not	2.71	3.43	2.75	3.21	3.23	3.28	3.51	3.38	2.81	3.34	2.86	3.06	3.23	3.31	2.60	3.42	2.69	3.38
A	<i>Extra for fuel, etc., in colder cities.</i>																											
R	3.23	4.61	5.77	5.77	3.80	4.62	6.92	6.92	5.08	corded	8.08	8.08	6.35	6.35	6.00	6.92	5.54	5.77	5.54	5.31	3.69	3.69	4.26	4.26	3.00	3.46	5.77	6.92
T	19.17	22.38	21.28	22.50	19.54	21.85	24.05	24.98	21.45	...	26.49	28.55	24.13	26.83	25.24	26.49	24.35	25.26	23.85	25.47	22.01	23.05	23.02	23.69	24.06	28.12	20.88	23.91

The Weekly Totals are summarized thus: Across line M, Meats; G, Groceries; F, Fuel and Light; A indicates extra cost of Fuel and Clothing in colder cities; R shows Rent; and T sums the totals.

## Colombie Britannique 1919-20

**C**ETTE publication contient les renseignements les plus complets concernant la position géographique de la Colombie Britannique et les moyens de transport entre ce pays et la plupart des parties du monde, ainsi que les noms des compagnies de transports maritimes dont les vapeurs font escale ici.

On y trouvera aussi des détails sur les facilités offertes dans nos ports maritimes et sur leurs moyens de communications par chemins de fer, etc., avec les principales villes de l'intérieur dont la position est indiquée.

La Province de la Colombie Britannique occupe une étendue territoriale si importante qu'elle jouit d'une variété de climats qui ont été décrits et marqués sur les cartes géographiques.

Un espace considérable a été consacré à la description des ressources naturelles du pays en forêts, minéraux et pêcheries.

À l'aide cartes, gravures, etc., nous avons essayé de donner une idée de l'étendue de leur exploitation à l'heure actuelle, et des possibilités d'une exploitation beaucoup plus importante dans un avenir rapproché.

La Colombie Britannique possède des facilités extraordinaires pour la production à très bas prix de force motrice hydraulique pour exploitations industrielles et quoique son emploi actuel soit limité, cette brochure en donne les détails ainsi que l'énumération des cours d'eaux qui pourraient être utilisés dans ce but.

Il existe de grandes étendues de sol vierge, extrêmement riche, et favorable à l'agriculture et à l'horticulture, qui n'attendent que la main du cultivateur pour produire des moissons abondantes et variées, y compris les plus beaux fruits.

Cette publication indique la manière de se procurer ces terres et le chapitre traitant de ce sujet est des plus complets.

La liste des industries manufacturières, qui augmentent journellement dans cette province, suggèrera sans doute certaines lacunes, et beaucoup d'occasions pour de nouvelles entreprises.

L'analyse des différentes nationalités qui forment la population de cette province, énumérant la grande variété d'articles dont ils ont besoin et les marchandises constamment importées et exportées intéressera sans doute ceux qui s'occupent de commerce à l'étranger.

Les familles ayant l'intention de venir s'établir ou résider dans ce beau pays trouveront des renseignements sur les organisations civiles et religieuses, sur l'éducation, sur les conditions sanitaires qui prouveront la facilité d'obtenir ici tous les avantages nécessités par la vie moderne.

Les superbes paysages de cette contrée, à la fois montagneuse et maritime, surpassent toutes les beautés imaginables, et attirent de plus en plus chaque année les touristes qui désirent passer des vacances agréables et s'adonner à la pêche, à la chasse, et à l'autres sports, aussi bien que ceux qui profitent de l'excellent climat et de la proximité de l'océan, pour prendre des bains de mer et respirer l'ozone sur les belles plages de sable fin.

Des renseignements encore plus complets pourraient être obtenus en écrivant directement à l'une des sections du gouvernement provincial à Victoria, B.C., mais en cas de besoin l'éditeur de cette publication se chargerait de transmettre toutes communications à qui de droit.

## Columbia Britannica 1919-20

**I**N questa pubblicazione, che riguarda la Columbia Inglese e' detto come arrivare in questa regione dalle diverse parti del mondo con i nomi delle linee di navigazione, che fanno capo ai suoi porti con tutte le informazioni riguardanti le facilità di imbarco e di sbarco, sia per i passeggeri sia per la merce. Si trovano in essa anche indicate le facilità di trasporto dall'interno a mezzo delle ferrovie e le città e paesi che queste allacciano.

La Columbia Inglese ha una grande estensione con condizioni climatiche molto varie, che sono ben descritte nella detta pubblicazione e si levate su di una carta geografica che vi e' unita. Tutte le risorse naturali (foreste, miniere, pesca) vi sono enumerate con la dimostrazione, anche a mezzo di piani speciali e di illustrazioni, di quello che si e' fatto e di quello che si potrebbe fare per mettere in valore tante ricchezze naturali.

La Columbia Inglese e' ricca di acque, che possono sviluppare una immensa energia elettrica, da utilizzarsi a scopo industriale, e minute

in dicazioni sono date sia per la forza già sviluppata, sia per quella da svilupparsi ancora. Vi e' una minuta descrizione delle diverse fasi della agricoltura, già molto avanti; ma grandi estensioni di terra vergine potrebbero essere sfruttate dall'agricoltore, orticoltore e frutticoltore, e che possono essere acquistate da tutti. Anche le industrie in questa provincia sono ben avanti, ma e' ben poca cosa di fronte a quello che resta a fare.

La Columbia Inglese ha una popolazione cosmopolita, e perciò si offre per l'importazione e l'esportazione dei generi usati dalle diverse nazionalità. Inoltre si fa menzione delle organizzazioni religiose, istruttive e della salubrità della provincia, per dimostrare che a quelli che intendono stabilirsi in questa terra nulla mancherà, ed anche per lo sport, e luoghi di villeggiatura la Columbia Inglese può rivaleggiare con le più belle regioni del mondo.

Informazioni di qual siasi genere possono ottenersi dal governo provinciale di Victoria, B.C., direttamente oppure a mezzo dell'editore.

## Colombia Británico 1919-20

**E**N esta publicación se dan noticias completas sobre la posición geográfica de la Colombia Británica o Inglesa, las rutas que se toman para llegar, los nombres de las compañías de vapores, cuyos buques hacen escala en sus puertos, asimismo detalles sobre las facilidades de cargar y descargar en cada puerto.

Se notan las líneas de transporte interior por ferrocarril, junto con la posición y detalles estadísticos de las principales ciudades y poblaciones.

La Colombia Británica es de una extensión tan dilatada y afortunada, que goza de las ventajas de distintos climas, que se representan en detalle verbalmente y por mapa.

Se detallan detenidamente los principales recursos naturales del país, selvas, minerales y pesquerías. Van, también, en carta geográfica, verbalmente, y por grabado, abundantes detalles sobre el desarrollo actual de esos ramos, y las perspectivas brillantes que aún quedan por realizar.

Las fuerzas hidráulicas del país son incalculables, y pueden utilizarse a poco costo y para todas las necesidades industriales. Se apunta la utilización actual de esas fuerzas, y especifica los nombres y sitios de los cursos de agua en el momento no utilizados.

Se ocupa detalladamente de la agricultura y horticultura en todos sus ramos. Hay eriales inmensos que aguardan la mano del agricultor y horticultor, y esta publicación apunta donde están situados y la manera de obtenerlos.

El país se halla hoy vivamente empeñado en desarrollar la industria fabril; pero el que estudie la lista que va impresa verá que

quedan aún por desarrollar muchas oportunidades espléndidas.

Se dan en detalle el comercio de importación y exportación, lo que proporcionará indicaciones valiosas a los comerciantes ocupados en el comercio exterior. A más de esto, con la ayuda de la análisis de la población que va impresa adentro, se podrá ver que el carácter complejo y cosmopolita de la población de la Colombia Británica suministra muchas y variadas oportunidades al desarrollo industrial.

Con las cifras y detalles sobre las condiciones sociales, la organización higiénica, la atención solícita y generosa que se da a la educación pública y la completa libertad en asuntos de la religión, podrá satisfacerse cualquier que tuviere la intención de establecerse en la Colombia Británica, que se ha hecho toda provisión necesaria para el lado espiritual e intelectual de la vida común.

Para los aficionados al "sport," a la pesca o cacería, para los turistas de grande o moderada escala, la Colombia Británica es incomparable y ofrece magníficas oportunidades. Nadie que tuviere tiempo y pudiera gastar lo necesario, debiera omitir la ocasión de informarse sobre las ventajas de paisaje y "sport" que ofrece una grandeza de la naturaleza que casi no se iguala en ningún otro país del mundo.

Para cada cual que quisiera obtener más informes sobre la Colombia Británica, comuníquese directamente con los departamentos del Gobierno Provincial, Victoria, B.C.; y caso que el correspondiente tuviere duda sobre la persona o departamento, al cual debiera dirigirse, sí comunicará con los infrascritos, tendrán gusto en encaminar sus comunicaciones sin demora al debido punto.

Въ этой публикаціи указаны всѣ данные относительно мѣстонахожденія Британской Колумбіи, лучшіе пути достиженія изъ различныхъ міровыхъ портовъ, наименованія пароходныхъ линій и также детальное описаніе своихъ портовъ.

Желѣзнодорожное и транспортное передвиженіе внутри Провинціи, также расположеніе и полное описаніе городовъ, деревень и пр.

Провинція "Британская Колумбія" занимаетъ громаднѣйшую площадь и имѣетъ различные климаты въ зависимости отъ мѣстности: все это полностью описано и указано на картѣ.

Много мѣста отвѣдено естественнымъ богатствамъ /лѣса, минералы, рыба и пр./; ихъ развитію и возможности дальнѣйшаго развитія /см. карты, таблицы, снимки/.

"Британская Колумбія" имѣетъ массу водоподовъ, рѣкъ, которыхъ можно утилизировать для индустриальныхъ цѣлей. Настоящая утилизациа указана, наименованія и мѣстонахожденія водоподовъ, рѣкъ, которыя продолжаютъ свой естественный путь не принося пользы человѣчеству.

Всѣ фазы садоводства и земледѣлія описаны. Громадныя участки невоздѣланой земли ждутъ пахаря и садовника - эта книжка укажетъ Вамъ ихъ мѣстонахожденіе и способъ ихъ пріобрѣтенія.

Фабрично-заводское производство быстро увеличивается и перечисленіе отраслей ДАСТЪ Вамъ возможность примѣнить себя къ существующимъ или явиться піонеромъ въ новой.

Затѣмъ слѣдуетъ подробное наименованіе импорта и экспорта - это явится важнымъ для лицъ занимающихся этой отраслью. Указанъ анализъ отрасли. Указанъ анализъ народонаселенія, ихъ потребности, продукты необходимыя для различныхъ народностей населяющихъ эту Провинцію.

Условія въ которыхъ живетъ современное общество, какъ напримѣръ, народное здравіе, образованіе, религіозныя организации - все это указано въ достаточной степени, дабы ознакомить читателя и что всѣ его духовныя запросы встрѣтятъ поддержку.

Что же касается спорта и естественныхъ красотъ, то Британская Колумбія не имѣетъ соперниковъ по своей природной красотѣ.

Когда Вамъ потребуется больше справокъ - Правительствоныя отдѣлы въ Викторіи дадутъ Вамъ необходимое или же обращайтесь къ издателямъ этой публикаціи, которые въ свою очередь направятъ для Васъ въ требуемый департаментъ.

▲本書にはブリチツシュ、コロンビア州の位置と世界に於ける各方面よりの**聯絡** 富洲への航路を有する

### 各汽船會社及富洲港灣の設備等

▲關し詳細なる報道が記述されてあります。

▲本書には富洲内に於ける重なる都市の**位置**と其

### 情況及鐵道其他内地交通機關

▲關し委細なる記事が掲載されてあります。

▲ブリチツシュ、コロンビア洲は様々な氣候を有する廣大な面積を占めて居ります。本書には之れを地圖と文字とに依りて、明細に表示してあります。富洲に於ける重なる財源たる

### 山林、鑛山及び漁業

に關し其發達の道程と現況及將來の發展に對し、本書は圖解、文字とを以て、充分に叙述いたしました。

▲ブリチツシュ、コロンビア洲は工業上經濟的に使用され得る、驚くべき**水力に富んだ國**であります。現に利用されつゝある水流と、利用されず

其儘になり居るものとの場所及名稱を本書は照會しました。

### 農園業

▲本書は農園業に關し、其微細に亘りて記述しました。廣大なる未墾の沃土は農業者及果樹栽培者を待ちつゝあります。本書には其場所と之れを得ます方法を説いてあります。

### 製造業

▲ブリチツシュ、コロンビア洲に於ける製造業は迅速の進歩と増加をいたしました。然しながら本書に掲載した明細表を熟讀せられたなら、新事業を企つるに**多くの餘地**あることを了解せらるゝであります。

### 海外貿易

▲本書は海外貿易に従事する者の有益なる參考資料として、輸出入に關し明細に記述した。猶其補遺として富洲内に居住する人口の區別及其各人種が需要する様々な貨物に關し詳記してあります。

▲將來有望の移住者が要する總てが、設備されてあることを示す爲め本書は**衛生、教育及宗教**

### 團體

▲ブリチツシュ、コロンビア洲は**遊獵の地**、

### 休暇の樂園

▲金とを有する者は、富洲が提供する此興味を感受することを避けぬでせう。

### 詳細の情報

▲本書が記述した以外、**洲政府**

### 當局

▲宛て直接照會せられたし。けれども其交渉に付き**不案内**なれば、本紙は當該官憲に對して

### 斡旋

加奈陀英領哥倫比亞洲晚香坡市

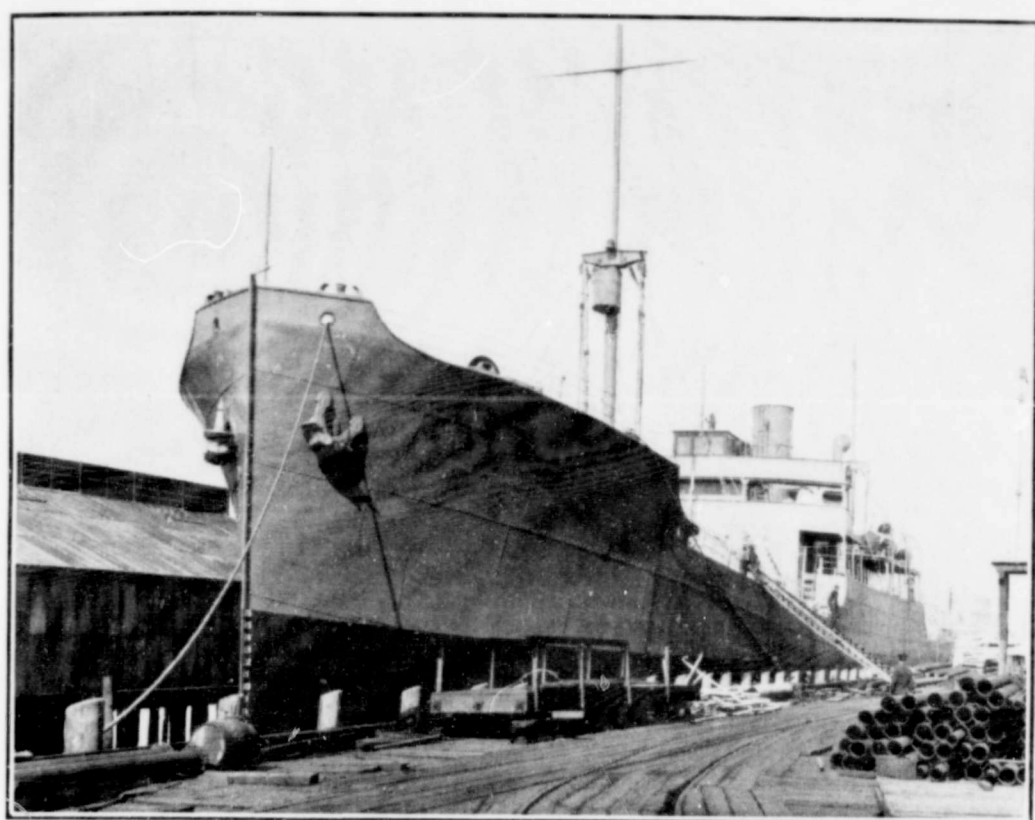
晚香坡デーリー、サン

卑斯乃加拿大九省之一。山環水抱。土地膏腴。尤為加屬之冠。自英國移民以來。各國僑民爭棲於此。其進步之速。無以比擬。非持商務日益興旺也。工藝時加繁多也。教育大為發達也。舉凡製造、建築種植。暨各方面。莫不同時並進。比年以來。樓宇林立。街道蕩平。其繁華之狀況。有弗可以言語形容者。此為近太平洋之省會。世界人士。若無世界之智識。經營之材幹斯已耳。如其有之。靡不注意於此焉。今人多稱世界省會城市。進步之速。興旺非常。每嘖嘖稱道美國之加鱒寬。抑知卑斯省之奮進成績。與前日兩相比較。實有過之無不及焉。其他固無論矣。試以本省每年各國僑民人數考之。殊足令人為之訝異者。然其中猶以世界各大邦之國民為多。倘其地非工藝發榮。物產繁盛。商務暢旺。斯人何必爭棲於此。即此以觀其地之內容。已可不言而喻。予不揣固陋僅就一己之所知者。畧陳一二以貢於世界人士焉。本報於此布告中。凡關於卑斯省所居之位置。與各國如何來往交通。特以細詳告知。閱者如有世界之眼光知識。知於此注意焉。此外各國抵本省各埠。各輪船公司之名目。商港之如何廣大利便。以及內地鐵路。四通八達。省內各埠之位置。及其特色。一並詳叙。

卑斯省具有廣大面積。幅員廣大。氣候溫和。地居加屬之西部。為往來之咽喉。其中如森林礦產海利。乃天然一大富源。當未開發之前。尚隱而不發。今日富源經次第開發。然尚有作用。大可獲利者。不知凡幾。今請用地圖文字圖畫。一一表明之。

卑斯省地居太平洋沿岸。江河四面貫注。工業商務。便於交通。故其發展也愈速。至於耕種藝術更為充分發達。猶有曠大田疇。尚待農家與植果家耕作。今請言此田疇在何處。並若何可得之。本省製造一方面。進步亦極迅速。諸君將目錄留心考察。便知其大有求財之機會。若出入口貨。亦為之表明。俾彼都人士與外國商人居此貿易者。有所把握。(社會狀況)如衛生教育宗教互換智識。亦逐一論及。使居民旅客。於公餘暇日。便於講求。且日用物品。利用不窮。供應無缺(以遊樂言)山色秀明。水痕活潑。有無窮之勝概焉。且各處多設遊玩場所。場中多置珍奇異品。足為遊人擴眼簾。遣興趣。誠為他省所莫及。有志行樂者。前來參觀。可以達其內容。其中尚有各樣事件。域多利政府能直接通告。若不暇向政府請問。詢及本報。亦必一一奉白焉。諸君注意注意。

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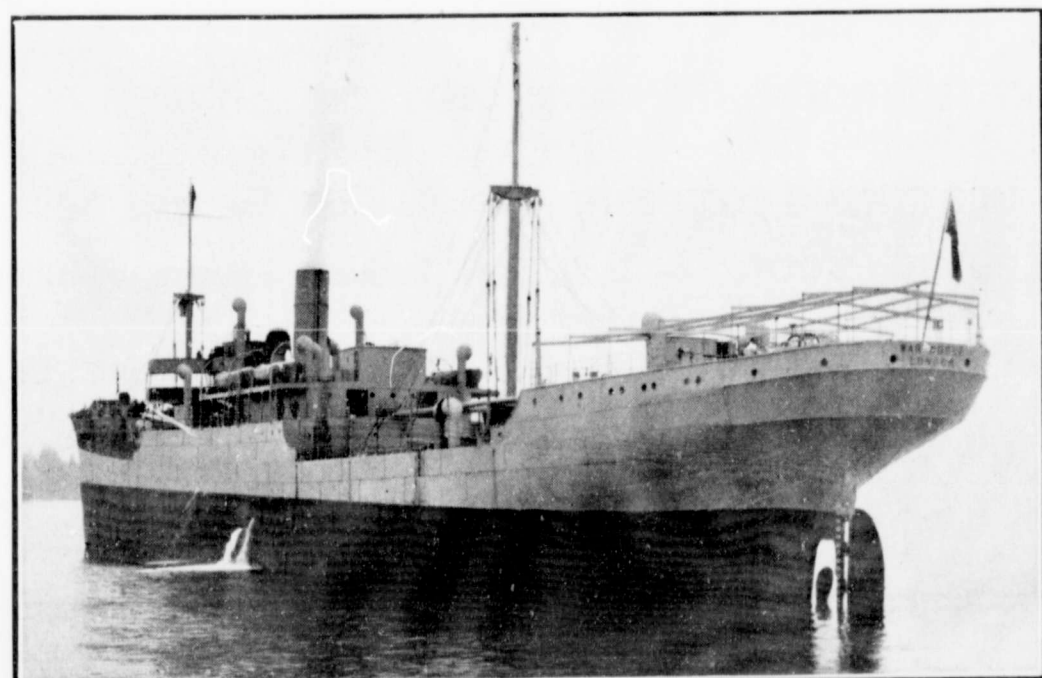
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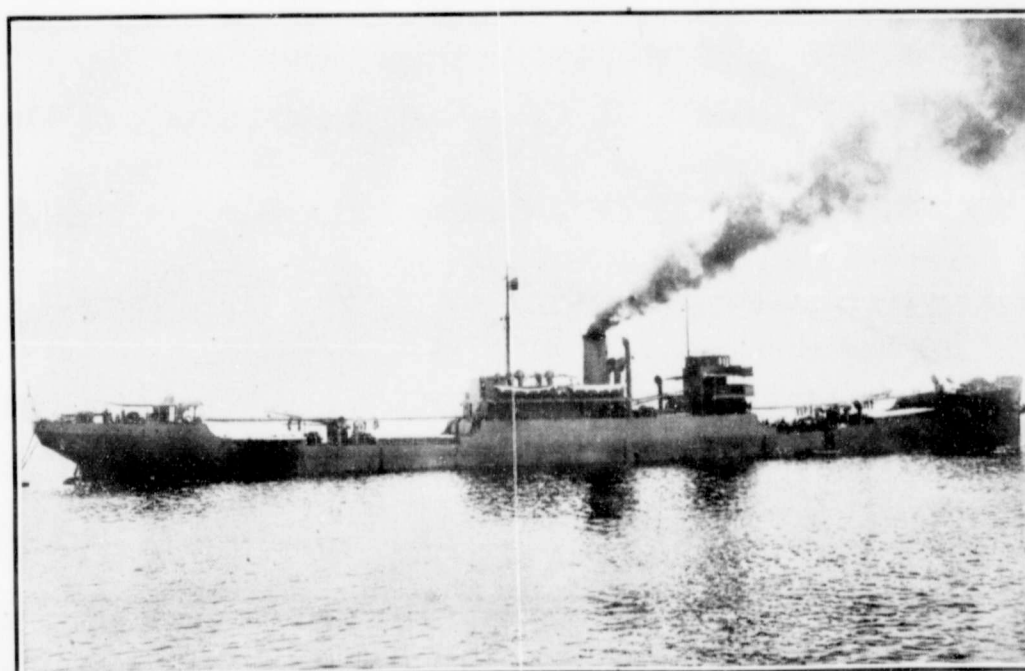
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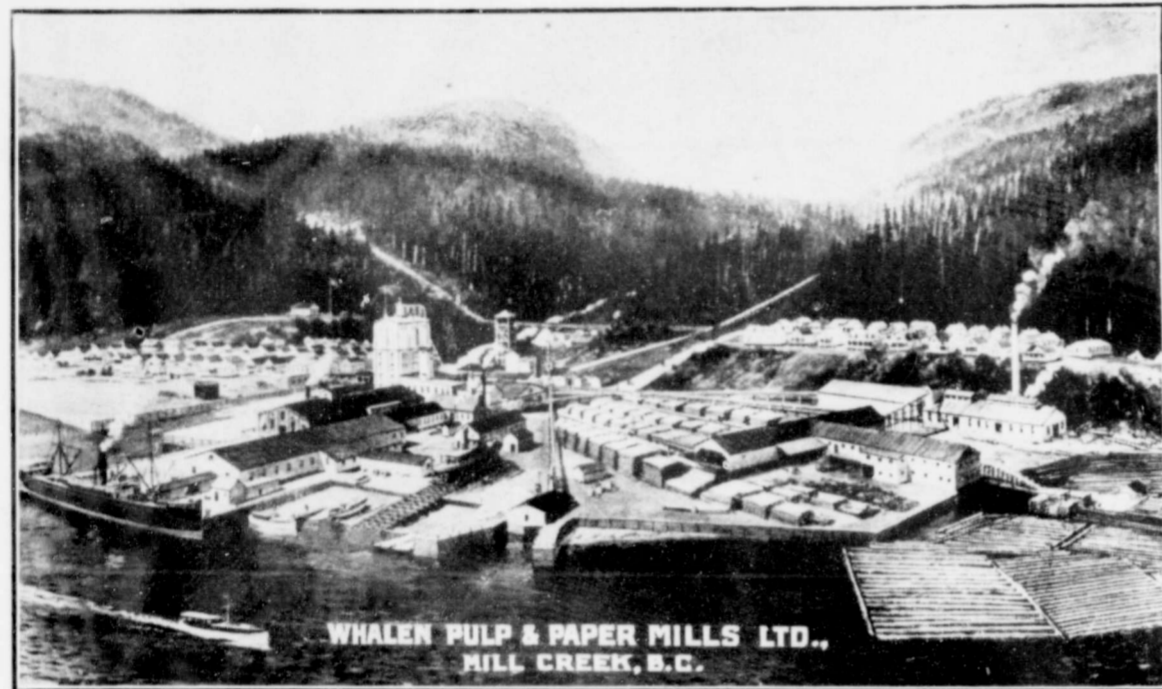
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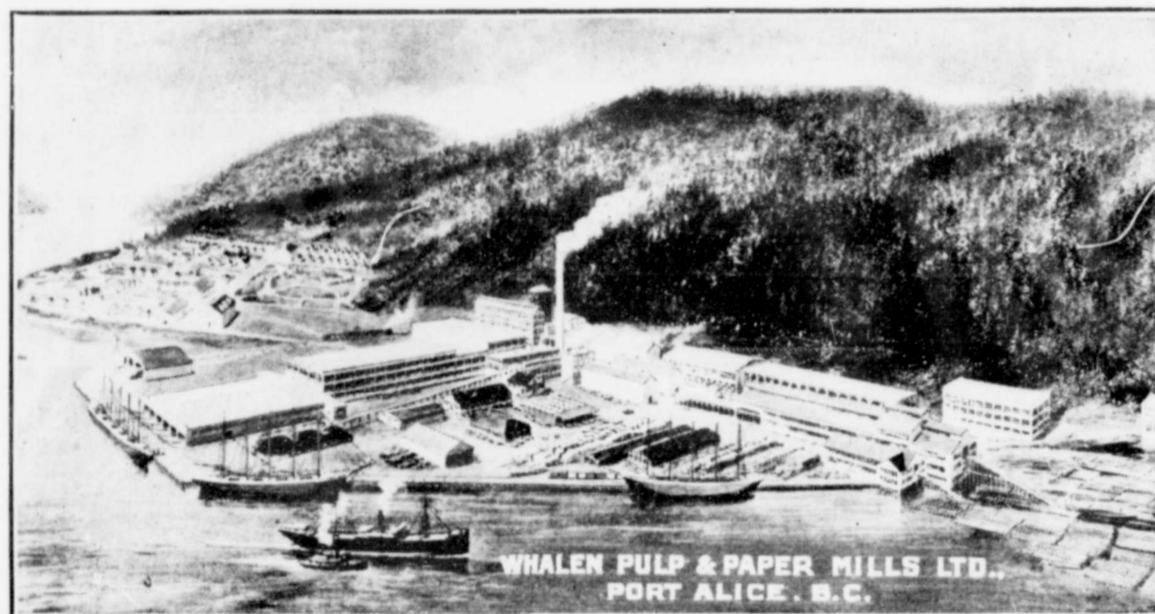


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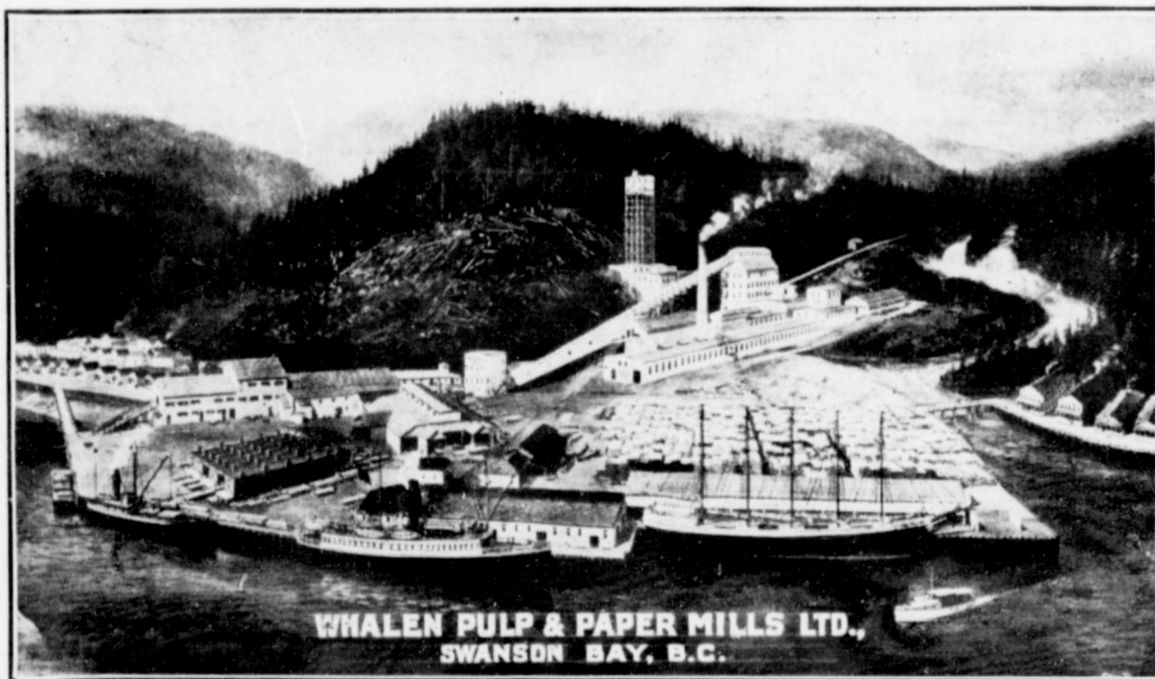
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Swan } Pulpa "del sulfito" fuerte.  
CISNE }

Todas esas marcas se embalan en fardos de 320 libras netas; 100% secos con una medida de aproximadamente 60 piés cúbicos por tonelada.

CAPACIDAD ANUAL

Fabricas de la Pulpa "del sulfito" .....	70,000 toneladas de pulpa
Fabricas de Maderas .....	60,000,000 piés Pinabete y Abeto
Fabricas de Ripia .....	75,000,000 piés de ripia de Cedro Rojo
Fabricas de Cajones .....	35,000,000 piés para cajones de Pinabete y Cicuta.

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