

elements. A closer examination shows this cliff to be a granitoid rock, mineralized with copper pyrites, pyrrhotite and pyrite in varying proportions, some zones showing strong mineralization, while in others it is more sparse. To the west the rock assumes a brecciated structure and has been cemented together by a filling of calcite, with a considerable impregnation of copper carbonates and into this zone a tunnel has been driven a distance of 31 feet. The ascent of the bluff is somewhat dangerous, owing to the rather precarious foothold and the absence of vegetation, the top being reached at an elevation of 1,375 feet above the small lake. From the top of the bluff a snowslide was followed until a further elevation of 500 feet was reached, at which point the ore is uncovered and shows the strongly mineralized granitic mass which is seen to penetrate a nearly horizontal strata

of time and money not justifiable under the circumstances. However, at the foot of the cliff, there is a talus extending the whole length or width of the mineralized zone, made up of material broken away from the whole face of the zone in question. While this talus may to a certain extent have been affected by weathering, it still may be considered a very approximate sample of the inaccessible cliff. Samples were taken from this talus, from which it is judged that approximately the central portion of the mineralized zone will assay from 1/2 to 1 per cent copper, with from 1 1/4 to 2 oz. silver per ton, and a trace of gold.

#### DEVELOPING IRON MINES

The iron property situated on the north side of West arm, comprising 33 claims and is owned by J. A. Moore

and quite a distance back from salt water. The Nel and Stella No. 1, owned by James A. Moore and Ray C. Price, are other promising properties which were located last summer, and from the work done showings are very satisfactory. The ore is bornite.

#### AGRICULTURAL RESOURCES

No portion of Canada affords better inducements to farmers than British Columbia, and no section of the province presents more favorable conditions than Vancouver Island. True, at present the farming land is confined to comparatively small areas and much of it is heavily timbered, but as an offset it is of remarkable fertility, so that a few acres cleared and systematically tilled will yield a comfortable living. The equable climate

from returns at hand indicate that the value of the products of the farm, orchard, dairy and ranch will total about \$7,500,000, an increase of over a million dollars. While this long step forward was being made the imports of agricultural products fell from \$7,008,646 in 1905 to \$5,454,444 in 1906, a difference in favor of the province of \$1,553,702. Victoria and other agricultural districts of Vancouver Island contributed their full share to this general improvement, and held their own with the most favored agricultural sections in the province.

#### FRUIT GROWING

On Vancouver Island there have been very successful attempts at fruit growing on the West Coast from Clayoquot south to Victoria City, and on the East Coast from Victoria north to

Trade at its annual meeting on July 12th last, Hon. R. G. Taitow, minister of finance, said: "I need not repeat to you, Mr. Chairman, the great success which has been achieved in this industry. Our fruit has been exhibited in London, and has won the gold medal and silver medal and many other prizes at the Royal Agricultural Society, which has been a great help in advancing, and bringing about the immigration policy which we hope may be successful in the near future. The result has also been the enlargement of the orchards of the province. This year there have been imported into the province over twice as much stock as there was in the year previous— from an examination of the returns, of the orchards of the province. The value of the trees imported last year was \$19,500; the value of the trees imported during the year just ended, is

of the supply marketed at various points on the continent. For the year 1905 the halibut export was valued at \$445,000; for the last year it was 40,000,000 pounds, valued at five cents a pound, making some \$2,000,000. Experiments with oysters on a comprehensive scale are being made in Esquimalt harbor, and it is confidently believed that a flourishing industry will be built up.

Victoria and Vancouver Island have now a special interest in the Fraser river run of salmon, owing to the operations of the traps in the straits of San Juan de Fuca, and the local canning and mild-curing enterprises which have followed in their wake. One unexpected result of the exploitation of salmon fishing by traps has been the development at Victoria of the industry of mild-curing spring salmon. From the catches previously

to the trap-men by disposing of the fish in this way than could be secured by canning them. For some reason, probably tide and weather conditions, the sockeye run last year failed to strike in close enough to the shore to come well within the reach of the Vancouver Island traps, with the result that the catches made of this fish were extremely light, entailing a sharp loss to the trap operators, and also spoiling the season for the local canneries. As a consequence, and in view of the small sockeye run being expected, there will be fewer traps put in this season, more care being exercised in their selection. Last year was largely by one of experiment, and the best sites having now been proved and selected, better results are looked for. To convey an idea of the importance of the fishery, it is only necessary to state that the value of the fish in this way than could be secured by canning them.

branches of the fish product of the At- ter, long recognized as the economic fa- may be those of Prince Edward Is- New Brunswick, and due to the value of \$4,999,417, but it mind that the At- velopment, while it have been serious one branch—salmon- ferent results when fisheries reach the velopment, for, pr- ible, the only lin- should be the lack- tency not likely. The principal f- North Pacific are- ies, viz.: Sockeye, coho, humpback, cod (several varie- geon, bass, oolach- trout, sardine, oysters, clams, c- prawns. Whales, along the coast, and a whaling in- ganized, with head- Barkley Sound, is- business. Dog fish, shark, which pre- and other fish, an- oil and the manu- several companies large quantities.

#### FEASIBILITY

Corroborating those who urge the building a ferry con- Mainland and Va- temporary expedie- lowing report has- "Proposed Cro- Steamers," by S- White, K.C.B., F.R- Naval Construct- Navy.

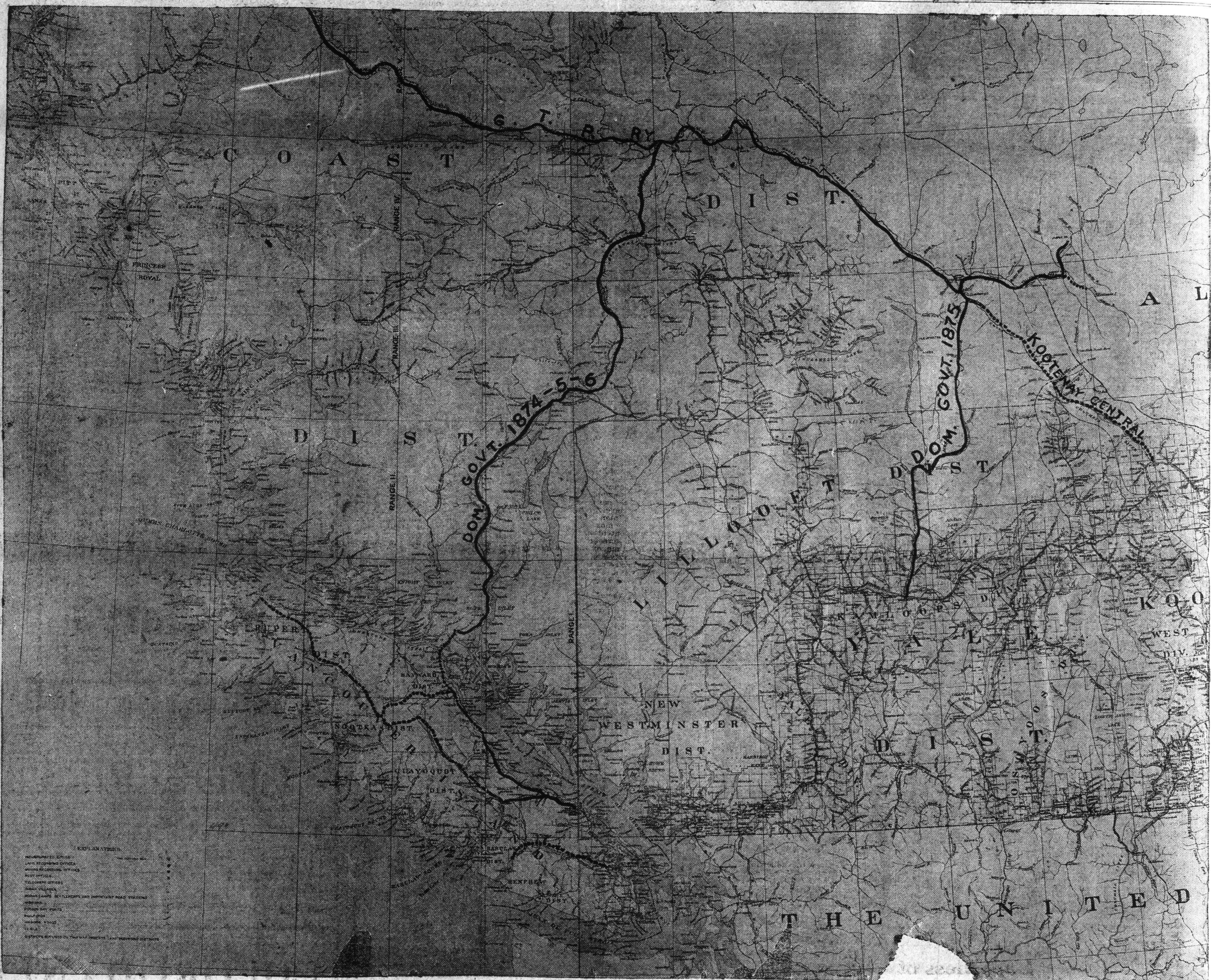
There is undou- ble that the trans- across the sea in- volves considerable and weighty train naturally pr- that both the op- on board ship any- deck when the v- must involve ser- prejudicially affe- behaviour of a s- popular view has- with naval archit- eers. They have- pared to face an- lens involved in- sea of the largest- trains. Changes- in the propelling- tural materials of- during the last 40- ed to make the s- swift and effici- more easy, and- turbine engines in- the task.

A first-class pa- of modern type, p- tion for over 400- less than \$50 to- engine and tende- be carried across- er, and has a to- 650 feet. To ac- train on the de- would be broken- during transit; v- would be a- considerable length- point of view of- is a very simple- the weight name- be distributed ov- than 300 feet and- erate height abo- customary, espec- deal with much- ried in a more- and at much gr- water. For exa- the armored stat- ings and loading- of 12-inch guns, and the armor- them. The weight of over 1- weight would b- length of about- could be carried- 80 feet above w- lowance is made- or dimensions of- ing such an ex- statement of the- how much simp- which has to be- largest and heav- a ferry steamer.

Special preca- of course in con- over-sea transp- Arrangements n- means of which- rigidly attached- any motion of- when the vessel- at sea. This re- been dealt with- existing ferry st- ential that the- shall be constru- ing railway sta- promenades, and- which passenger- desire during se-

In regard to a- ing or disemb- design is also e- exist, no doubt- different localit- readily overcom- draulic or elect- great rapidity- barking and- and gives also- coast of Great- of tide, arrange- which are not- waters, because- of the fixed lan- deck of a ferry- states of the th- readily provide- tions. During- barking or dis- sentation must, c- practically impos- to the piers a- placed in a shel- the, the fulfillin- presently no e- an engineering- choice of the fe- final ports mu- by consider- mentioned.

The feasibility- way-ferry stea- matter for deba- been settled by- various parts o- years past the- cessfully work- and the convey- later years, lar- of through pas- 1903 railway fe- between Gladse- land, the land- about 27 nautic- water of the B- been carried o- cess in all we- ferry steamers- carries an exp- toling a load of



The above map is designed to show the route recommended by Marcus Smith, C. E., for the Canadian Pacific railway; also the route for a railway to the northern end of the island, and in a general way the way by which connection may be made with the Mainland. Incidentally, certain other features are also shown. The distance from Yellow Head Pass, which will be found just north of the letter "Z" in Kootenay Central, to Waddington Harbor, at the head of Bute Inlet, as shown by Mr. Smith's survey, is 546 miles. The estimated cost of the line in 1873 was \$33,000,000, which was considerably less than the cost of any other line across British Columbia, except one coming out to the coast at Dean Inlet. The distance from the head of Bute Inlet to Elk Bay, on Vancouver Island, by water is 64 miles. By using rail to Frederick Arm, the distance would be somewhat less. It is thought probable by persons, who have examined the country, that by leaving the Smith line somewhere in the neighborhood of Waddington Canon, and striking across to Loughborough Inlet, the distance would be further shortened. This is one of the reasons why the Transportation Commission recommended a new survey.

The greatest elevation reached on this route in British Columbia is 3,590 feet, which is a short distance east of the crossing of the Chilcoot river. An almost equal altitude is attained at the divide west of Tatla Lake. This latter ascent is made in approximately 100 miles. The line as drawn follows what Sir Sandford Fleming called "a perfectly feasible route," that is a route which avoided the bridging necessary to get to the island by way of Seymour Narrows. The bridges would be as follows:

Arran Rapids	1,100 feet
Cardero Channel	1,350 feet
Cardero Channel	1,140 feet
Cardero Channel	640 feet
Middle Channel	1,110 feet
Seymour Narrows	1,200 feet
Seymour Narrows	1,550 feet
Total	7,890 feet

The route of the Island railway is that laid down by J. H.

Grey, C. E., to whom the Colonist is indebted for the location of the lines upon this map. Mr. Grey has not traversed the country, between Duncan and Nitinat, or between Alberni and Gold River, but he knows the route from Wellington to Hardy Bay very well, having, in point of fact, surveyed and located the line from Campbell River to Hardy Bay. Speaking from his knowledge of the country traversed by him, he says that the line would not be difficult of construction, and that the country to be developed is one containing great resources. The route from Yellow Head Pass to Fort George would be that followed by the Grand Trunk Pacific railway, unless a more favorable line can be found to the south of it and nearer Barkerville. If such a line is available, the distance from Vancouver Island to Yellow Head Pass would be correspondingly shortened. One survey indicates that a still shorter route can be found by running as near due east as possible from the crossing of the Chilcoot to Yellow Head Pass. This is also one of the reasons why a further survey was recommended. It must be understood that no difficulties are encountered in any part of the route as laid down. It is a perfectly feasible one. The opinion is held, however, that in

view of the much greater knowledge now possessed by engineers than was available in 1873, a shorter and better route than that of Marcus Smith can be found. The line to Kamloops, marked Dom. Govt. 1875, is feasible, though expensive. It will be observed that the Grand Trunk Pacific route has not been prolonged to the coast. Mr. Grey did not feel warranted in doing any more than indicate the probable course which this road will follow through the central part of the province. Kailen Island, which is the site of Prince Rupert, will be found near the upper left-hand corner of the map. The attention of readers is directed to the fact that the water route from Hardy Bay to Prince Rupert is nearly all land-locked. If a railway were built to Hardy Bay, or some other suitable port at the north end of the island, it would afford the best route to all points on the continental coast line and the islands of southeastern Alaska. Examination of the map will show that a railway on the Mainland following the coast would be an impossibility. The only way in which land transportation can be utilized along the coast is by way of Vancouver Island.

of limestone, alternate bands of which continue to the top of the mountain 500 feet still higher. This sharp ridge, with an altitude of 5,700 feet, may be considered as the backbone of Vancouver Island, shedding the water to the south down the Alberni canal, to the Campbell river, down Buttle lake and the north-east down to the west by Bear river into Clayoquot sound. Summary.—The mineralized zone, showing in the face of the cliff to the north of the basin and forming the great mass of low grade mineral on the property, is so large, so inaccessible, and the mineralization so scattered, that it would be impossible to obtain anything approximating an average general sample of the exposure without the expenditure of an amount

and Wm. Piggott, of Seattle, Wash. A considerable amount of work has been done on the different claims during the year consisting of numerous open cuts, pits and shallow shafts. The largest cuts are 425 feet long, 4 1/2 feet wide, 7 feet deep; and 200 feet long, 2 feet wide and 4 feet deep, all in ore. Some of the shafts are sunk 14 feet deep. The results from this year's work are most satisfactory and large bodies of hematite have been opened up. A new discovery of iron was made by Chris. Jacobsen and James W. Jackson and four claims, the Iron Meadow, the Iron Meadow No. 1, 2, and 3, were located. This property is situated about ten miles farther up the arm than that above mentioned

and other residential advantages of the island have become known throughout the continent and many are coming to settle here, leaving on the one hand the hot summers to the south and on the other hand the rigorous winters to the east. The Canadian Pacific Railway company are taking measures to clear and prepare for settlement the lands which they recently acquired on the Island—amounting to nearly three million acres—the area to be first treated covering 150,000 acres. A year ago the statistics of the department of agriculture showed an increase of half a million in the value of agricultural products over the previous year, and the figures for 1906 are still more gratifying. Estimates made

Comox. In the immediate vicinity of the city of Victoria not a few enterprising individuals have made a splendid showing, and the product from their orchards and plantations goes to the market in shape to compete with the finest packed fruit from any part of the world. It is essentially an orchard district and all kinds of northern fruits of the varieties adapted to the locality are grown of excellent quality. All along the line of the Esquimalt and Nanaimo railway fine fruit is grown, and Comox, the town near Union Bay, and which is the centre of the Cumberland district, has a home market in the adjacent coal mines for all it produces. Referring to fruit-growing in an address before the Victoria Board of

over \$40,000—showing that that industry, too, must be going ahead, and that in a few years from now, when the trees come to bearing, we will see the fruit of it. But these facts all prove, as I say, that the agricultural industry is steadily and surely going ahead, although, as I said before, it is very seriously hampered by the want of labor to assist in bringing it to what it ought to be.

#### THE FISHERIES

The waters of Vancouver Island teem with food fish of every variety and of the most valuable kind in inexhaustible quantity. The halibut grounds off the north end of the island are drawn on for the greater portion

made in the Fraser, both as regards quantity and size of fish, it was impossible to surmise that spring salmon in such large numbers and of such large size would be taken by traps. In respect of size, they average fully thirty per cent larger than those that have been caught in the Fraser river, and as regards quantity, some 600 tons were packed in Victoria in this way in 1906. Although fewer traps will be fishing this year, yet as they have been completed earlier and the selections of the locations has been made with the taking of the spring salmon in view, it looks as if last year's total would be considerably exceeded. These mild-cured spring salmon are shipped in Altid storage to Germany, where they are smoked as required; and a better return is made

sary to quote from the report of the Department of Marine and Fisheries. Taking an average year British Columbia produced in sea fish and exclusive of seal and sea otter, a value of \$4,999,417, of which \$3,753,892 was derived from salmon. These figures taken of the fresh water fishes which are found in great abundance in the inland waters. The total yield of Canadian fisheries in 1904, fresh and salt water, was \$23,506,129, so that British Columbia's contribution to the output was about 21 per cent of the whole, and of that 21 per cent, 75 per cent was for salmon. These figures, while proving beyond question the great commercial value of British Columbia's salmon fisheries, suggest the immense possibilities which await the development of the numerous