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THIRTY-SECOND ANNUAL REPORT

OF THE

DEPARTMENT OF MARINE AND FISHERIES

1899

FISHERIES

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OTTAWA
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1900

[No. 11*a*—1900.]

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

MAY IT PLEASE YOUR EXCELLENCY:

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

I have the honour to be,

Your Excellency's most obedient servant,

LOUIS HENRY DAVIES,
Minister of Marine and Fisheries.

DEPARTMENT OF MARINE AND FISHERIES,
OTTAWA, December 30, 1899.

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REPORT

OF THE

DEPUTY MINISTER.

To the Honourable
Sir LOUIS H. DAVIES, K.C.M.G., &c.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit the annual report upon the transactions of the Fisheries branch of the Department of Marine and Fisheries, embracing the fiscal year ending on the 30th of June last. The Fisheries Protection Service, Fisheries Intelligence, Fish Culture and Behring Sea Question reports comprise the whole calendar year 1899, and the statistics, as usual, are those covering the previous year. The preliminary reports of the various inspectors give a general idea of the fishing operations and the state of the fisheries in the different provinces during the year now closed.

Three Special Reports are appended by Professor Prince, Commissioner of Fisheries, treating of:—

1. Water pollution as affecting fisheries.
2. Neglected structural features in young fry.
3. The object of a close time for fish.

Reference was made in last year's report to the judgment of the Lords of the Judicial Committee of the Privy Council in London, and its probable effect upon the methods of fishery regulation in the various provinces. The changes following the legal determination of the respective fishery rights of the Dominion and the individual provinces have up to this time been less marked than might have been anticipated. The province of Ontario, it is true, has taken over the work of leasing and licensing fisheries, and of carrying out a system of protection by means of a staff of local fishery officers appointed by the provincial authorities, leaving to the Department of Marine and Fisheries such a general supervision as is demanded by the legislative jurisdiction still belonging to the Dominion Government. A patrol, upon the Great Lakes, through which the international boundary line passes, and three Dominion Inspectors of Fisheries, have sufficed for this general supervision. The province of Quebec, as was mentioned in the thirty-first annual report, took steps to take over the work entailed upon it by the fisheries' decision, and during the past year has by its Department of Lands, Forests and Fisheries, and the staff of fishery officers employed by that department, issued licenses and enforced the fishery laws, so far as the river and inland fisheries, and the estuarine fisheries proper, are concerned. The important sea-shore fisheries carried on below low-

water mark, falling within the limits of Dominion jurisdiction, and in many cases inseparable from grave international questions, have necessitated the employment of Dominion fishery officers along the north shore of the Gulf of St. Lawrence and elsewhere, in addition to the Fisheries' Protection Service. In the other provinces the course pursued has, by an amicable understanding with the authorities in the several provinces, been simply to continue the administration of the fisheries as in the past, with the exception of the granting of exclusive fishery privileges such as those conveyed in oyster leases for tidal areas, which in future the maritime provincial authorities will issue. Essentially, therefore, the work of fisheries administration and protection has been carried on without interruption in New Brunswick, Nova Scotia, Prince Edward Island and British Columbia—no question, of course, having arisen in the North-west Territories and Manitoba regarding these matters.

In order to set at rest any doubts created by the Privy Council decision with regard to the jurisdiction of the Dominion and Provincial Governments respectively, along the sea-coast below low-water mark, it has been deemed of the highest importance that the opinion of the Judicial Committee should be obtained on the point. Steps, indeed, have already been taken to this end.

LOBSTER COMMISSION.

The Lobster Commission appointed by Order in Council dated September 27, 1898, had completed a large part of its work at the close of that year, but it was not until April, 1899, that the final conclusions of the commissioners had been reached. These were published in the form of a Supplement to the Thirty-first Annual Report and upon them was based a code of regulations designed to come into force towards the close of the year. These new regulations, with certain modifications demanded by urgent local exigencies, became law on December 7, 1899, and they consist of the following eleven clauses.

Lobster Fishery Regulations.

1. No one shall fish for, catch, kill, buy, sell, or have in his possession, lobsters between the last day of May and the fourteenth day of December in each year, both days inclusive, on and along that part of the coast or the waters thereof, of the province of New Brunswick, embraced and included within the county of Charlotte, and also on and along that part of the coasts or the waters thereof, of the province of Nova Scotia, embraced and included within the counties of Yarmouth, Shelburne, Queen's, Lunenburg, and that part of the county of Halifax, west of a line running S.S.E. from St. George's Island, Halifax Harbour, Nova Scotia, and coinciding with the fairway buoys in the entrance of the said harbour; nor shall any person within the above described limits, *at any time*, fish for, catch, kill, buy, sell, or have in his possession, any lobster or lobsters under nine inches in length, measuring from head to tail, exclusive of claws or feelers.

2. No one shall fish for, catch, kill, buy, sell, or have in his possession, lobsters between the last day of June in each year, and the fourteenth day of January then next following, both days inclusive, in any part of the Bay of Fundy, or on any part of the coasts or waters thereof, inside of a line drawn from the division line of the

counties of Charlotte and St. John, near Point Lepreau, running outside of Brier Island, to the boundary line between the counties of Digby and Yarmouth, in the province of Nova Scotia; nor shall any person, within the above described limits, *at any time*, fish for, catch, kill, buy, sell, or have in his possession, any lobster or lobsters under 10½ inches in length, measuring from head to tail, exclusive of claws or feelers.

3. No one shall fish for, catch, kill, buy, sell, or have in his possession, lobsters between the first day of July in each year, and the thirty-first day of March then next following, both days inclusive, on and along that part of the coast of the province of Nova Scotia or the waters thereof, from the aforesaid line, running S.S.E. from St. George's Island, Halifax Harbour, Nova Scotia, and coinciding with the fairway buoys in the entrance of the said harbour, extending easwardly and following the coast line, as far as Red Point, between Martin Point and Point Michaud, in the Island of Cape Breton, and including Chedabucto Bay and St. Peter's Bay, and the coasts and waters of all the islands lying in and adjacent to these bays, and including the coasts and waters of the Gut of Canso, as far as a line passing from Flat Point in Inverness County, to the lighthouse in Antigonish County opposite.

4. No one shall fish for, catch, kill, buy, sell, or have in his possession, lobsters between the first day of August in each year, and the last day of April then next following, both days inclusive, on and along that part of the coast of Cape Breton Island, in the province of Nova Scotia, or the waters thereof, from Red Point, between Martin Point and Point Michaud, in the Island of Cape Breton, and extending to, and around Cape North, as far as and including Cape St. Lawrence; also the coasts and waters of all the islands known as the Magdalen Islands, including Bird Rocks and Bryon Island; also the north shore of the Gulf of St. Lawrence, from the Bay of Blancs Sablons, in the province of Quebec, westward to the head of tide, embracing the coasts and waters of all the islands adjacent to the said shore, and including the Island of Anticosti.

5. No one shall fish for, catch, buy, kill, sell, or have in his possession, lobsters between the eleventh day of August in each year, and the twenty-fourth day of May then next following, both days inclusive, along the coasts and in the waters of Northumberland Straits, between a line, on the north-west, drawn from Chockfish River in New Brunswick, to West Point in Prince Edward Island, and a line on the south-east, drawn from Indian Point, near Cape Tormentine in New Brunswick, to Cape Traverse, in Prince Edward Island.

6. No one shall fish for, catch, kill, buy, sell, or have in his possession, lobsters from the eleventh day of July in each year, to the nineteenth day of April then next following, both days inclusive, in any part of Canada or the coasts or waters thereof, not embraced within the limits described in the foregoing regulations.

7. Excepting as provided by regulations Nos. 1 and 2 as above, in which the size limits are fixed at 9 inches and 10½ inches respectively, no one shall, in any part of Canada, or the coasts or waters thereof, *at any time*, fish for, catch, kill, buy, sell, or have in his possession, any lobster or lobsters under 8 inches in length, measuring from head to tail, exclusive of claws or feelers.

8. No one shall fish for, catch, kill, buy, sell, or have in his possession, for any purpose whatever, any berried lobster or lobsters, or any soft-shell lobster or lobsters. Such lobsters when caught shall be liberated alive.

9. No one shall set or place lobster traps, or other fishing apparatus, for the purpose of taking lobsters in any waters of the depth of two fathoms or under.

10. No one shall set or place lobster traps, or other fishing apparatus, for the purpose of taking lobsters, at a distance of less than one hundred yards from any stationary salmon net, set for the purpose of taking salmon.

11. No one shall for canning purposes offer for sale, sell, barter, supply or purchase any fragments of lobsters, lobsters purposely mutilated or broken up, or any broken lobster meat, and all fragments of lobsters, lobsters purposely mutilated or broken up, or broken lobster meat, so offered for sale, sold, bartered, supplied or purchased, shall be liable to seizure and confiscation, *unless* possessed for the purpose of *domestic consumption* only, and not for canning, the proof whereof shall devolve on the owner or possessor.

The Lobster Commission practically ceased with the concluding sitting in Ottawa on April 25. From April 10 to April 25 the commissioners met daily (Sundays excepted) to discuss the voluminous evidence placed before them and formulate their recommendations. No less than sixty-five sittings were held in the Maritime Provinces, the places visited embracing the following:—Digby, Yarmouth, Lower East Pubnico, Lower Woods Harbour, Barrington Passage, Clark's Harbour, Halifax, Shelburne, Lockeport, Liverpool, Port Mouton, Lunenburg, Jeddore, Tangier, Salmon River, Sherbrooke, Goldborough, (Isaac's Harbour), Canso, Guysborough, Arichat, Lower L'Ardoise, Louisburg, North Sydney, Neil's Harbour, North Ingonish, C. B., Bathurst, N. B., Shippegan, Douglastown, Newport, Percé, Port Daniel, P.Q., Chatham, N.B., Richibucto, Kingston, Buctouche, Shediac, Summerside, P.E.I., Egmont Bay, Tignish, Cape Bald, N.B., Port Elgin, Pictou, Antigonish, River John, Port Hood, Margaree Harbour, Cheticamp, C.B., Pugwash and Wallace, N.S. On the north shore of the Gulf of St. Lawrence and the Magdalen Islands, where the lobster industry is of considerable proportions, sittings were not held, but at some of the sittings a certain amount of evidence in regard to these localities was obtained. Had it been possible, the commissioners felt that they would have been considerably aided by visits to these two localities. It must be admitted, however, that on the whole the sittings were well attended and excited very general interest. In some cases the sittings were crowded, and the fishermen and packers exhibited the utmost willingness in aiding the commission's work, by giving valuable evidence.

The work of the commission was divided into two sections. Three of the commissioners, Messrs. Moses H. Nickerson, of Clark's Harbour, William Whitman, of Guysborough, and Henry C.V. LeVatte, of Louisburg, Cape Breton, with the chairman (Professor Prince), commencing their work early in October and holding the opening sitting on October 6, at Digby, N.S., and proceeding around the coast of western Nova Scotia from Digby to Halifax, and thence eastward to Guysborough and onward to Neil's Harbour in Cape Breton, concluding the first series of sittings at North Ingonish, C.B., on November 5. The remaining members of the commission,

Messrs. Archibald Currie of Souris, P.E.I.; Patrick J. Sweeney, Shediac, New Brunswick; Stephen E. Gallant, Richmond, P.E.I.; Robert Lindsay, Gaspé, P.Q.; Donald Campbell, Margaree Forks, Cape Breton, and the chairman, commencing the second series of sittings at Bathurst, N.B., on November 17, and holding over thirty sittings at various points on the coasts of Nova Scotia, New Brunswick, Quebec and Prince Edward Island, the sittings being held during the months of October, November and December, and the concluding ones in the months of March and April.

The work of the commission was followed with unusual interest not only in Canada, along the shores of the maritime provinces, but also in the neighbouring republic indeed a United States journal, the leading authority upon fishery matters, said:—'We cannot but admire the conscientious work of the commission. Unlike most of the investigators that we have in this part of the world they have not made the work an occasion for pleasure at public expense, but have with diligence and perseverance prosecuted the inquiry with unremitting earnestness.'

REVISED REGULATIONS OF WESTERN PROVINCES.

For some years it has been apparent that the fishery regulations in force upon the Pacific coast and in the interior of British Columbia, as well as those for the North-west Territories and the province of Manitoba, required thorough revision. The conditions under which the fisheries in these western waters are carried on, have been largely transformed, and the system of protective regulation which might have been suitable to the provinces named, ten years ago, or even five years ago, have been shown to be unsuitable to present conditions in many important respects. Since the Fraser River salmon canning industry commenced nearly thirty years ago with the establishment of two small canneries putting up a little over 7,000 cases, the total pack in British Columbia has increased a hundred-fold, the number of cases for the season just closed being 679,600 and realizing in the markets over three million dollars. The fisheries of Manitoba and the North-west Territories have risen in value from $30,590 in 1876, to $745,500 in 1896.

The enormous development of this industry implies changes of the most momentous character, the capital invested, the men employed, the gear used have all increased as the growth of the fisheries has been accomplished. In 1892 a special commission, appointed by Order in Council, made a full investigation of the salmon fisheries of the Fraser River, and the mass of evidence, with the conclusions of the three commissioners was issued as a special report in 1893. The Superintendent of Fish Culture (the late Mr. S. Wilmot) had in 1890 visited the Fraser River and reported upon the salmon fisheries, and a revised code of regulations, based upon the information obtained by officers of the department, and the members of the commission referred to, was issued in 1894. In the same year special British Columbia sturgeon regulations were also framed. The regulations which had been in force prior to these, dated back to 1889, and it was generally admitted that the new regulations were calculated to meet the new conditions which had arisen in the industry.

These conditions, however, continued to change from year to year, and in many details the law appeared to be unsatisfactory; hence in 1895 the Commissioner of Fisheries was instructed to make a complete investigation of the Pacific coast fisheries.

All the principal rivers, and important fishing localities of British Columbia were visited for the first time by a trained specialist. Every cannery on the coast was inspected from the Fraser River on the south, to the Naas River on the north, and the various runs of salmon, their breeding habits, and some of the most important spawning grounds were examined and reported upon. Meetings of fishermen were arranged and conferences with various Boards of Trade were held so that the department became possessed of a very large amount of information of an accurate and reliable nature. As a consequence various modifications in the regulations were adopted, and the president of the New Westminster Board of Trade at its meeting on August 19, 1895, said that 'the relaxation by the Dominion government of late of the salmon fishing regulations, he was glad to say, had made those regulations fairly satisfactory.'

In 1896 Mr. Richard Rathbun and Dr. William Wakeham representing the United States and the British governments respectively, and forming the joint commission to report on the preservation of the fisheries in waters contiguous to Canada and the United States, made a thorough investigation into the salmon fisheries of the Fraser River, of the Columbia River and of the Straits of Georgia and Puget Sound. In their report (dated Dec. 31, 1896,) they stated in detail the further changes that these Pacific salmon fisheries had undergone, and drew attention specially to the use of trap-nets by United States fishermen. A trap-net, it is stated, was erected at Point Roberts, Washington Territory, so early as 1885, but it is only during the last five or six years that this method of fishing has assumed serious proportions. There are now five times as many United States traps as there were in 1895. Respecting them the International Commissioners said:—

'Trap-nets have been found to be the most effective form of apparatus for the 'capture of the sockeye salmon in the clear open waters of the gulf and sound, but 'they are of recent origin in this region, and are still employed in only a few locali-'ties, although the tendency now is to increase their number rapidly. Their use has 'thus far been almost entirely restricted to the zone traversed by the sockeye, and to 'the season when that species is present therein, but at times one or more of the other 'species may be taken in large quantities in conjunction with it.

'The distribution and number of the trap-nets in 1895, was as follows: Point 'Roberts including two in the Canadian waters of Boundary Bay, 15; Village Point, 'Lummi Island, 2; Cattle Point, San Juan Island, 2; Point Demock, Camano Island, '1; Hunot Point, Fidalgo Island, 1; total 21. This is probably the largest number 'that has been fished in any one year. Additional locations have been occupied, but 'have been abandoned after trial, and more or less changes in position have every-'where taken place each season. Outside of Point Roberts the use of these nets does 'not seem to date before 1893, and the majority of those above enumerated were 'established in 1893 or 1894. We were informed that the building of at least seven 'new ones in several different places was contemplated for 1896.

'Trap-net fishing has been carried on chiefly and for the greatest length of time 'in the waters immediately surrounding Point Roberts, where the sockeye salmon 'appear to strike in greater abundance than elsewhere near the shore in United 'States territory. There are about thirty-two trap-net locations, so-called, in this 'region, that is to say, places where such nets have been constructed, but less than one

'half of them were occupied in 1895. Experience has indicated the most favourable 'situations for operating traps, and these have been taken possession of by those in a 'position to control the ground, while others have to be satisfied with inferior sites, 'and some experimenting is still going on in the hope of securing good results in 'other places.'

In 1897, the Commissioner of Fisheries again visited British Columbia, but confined his attention mainly to the Fraser River and the rivers on Vancouver Island. The canners and commercial men took the opportunity of fully discussing with Professor Prince the various aspects of the industry, and the fishermen held several large meetings which were attended by the Commissioner. In order to meet the new order of things it appeared that the regulations required to be thoroughly recast, and in 1898 a provisional code of entirely new and revised regulations was drawn up. Opposing interests in the fishing industry led to the postponement of the consideration of these suggested regulations as a whole, and a new and partial series of clauses (nine in number) was adopted and became law on August 3, 1898. This year it was apparent that certain points regarding the fisheries which had assumed a new phase demanded attention, and advantage was taken of the visit to the province of an officer of the department, Mr. W. W. Stumbles. Mr. Stumbles has supplemented in various ways the mass of information accumulated, and has made reports on the operation of the existing fishery regulations, and on an obstruction at the head waters of the Fraser River, viz., a dam and extensive mining operations on the South Fork of the Quesnelle River, an important resort for the salmon of the Fraser River.

In the Straits of Juan de Fuca and Puget Sound the number of U.S. trap-nets built was greatly in excess of the number erected in 1898, which in turn had a larger number of traps than had been in operation before, indeed Mr. Stumbles in his reports gives the number in 1899 as 120, of which 80 or 90 were operated practically the whole season. The number of boats engaged in the U.S. salmon fishing also greatly increased, and the time has come when the question of licensing Canadian salmon trap nets in the Straits of Juan de Fuca must be seriously regarded. The department has been collecting all available information on the effects and possibilities of salmon trap nets in the straits, and has under careful consideration the propriety of licensing such trap-nets to British Columbia fishermen.

What has been said of the British Columbia fisheries applies in a large degree to the fisheries of Manitoba and the North-west Territories, the increase of the immigrant population, the opening up and transformation of the Yukon District, and the consequent impetus given to the fisheries, has rendered the existing regulations more or less inapplicable to the vast western area comprised within the limits of Manitoba and the North-west. The very fact that one set of regulations, dating back to May 8th, 1894, obtain for the province of Manitoba and for the North-west Territories, is an indication of their inadequacy. Various amendments have, from time to time, been made to render the regulations more appropriate to the actual conditions prevailing, but a thorough revision of these regulations has been in hand, and three separate series have been provisionally drawn up, which will require the most careful consideration before being embodied in law. These three sets of new regulations will apply to the province of Manitoba, the North-west Territories, and the District of Yukon respectively. As was pointed out in last

year's report, the fishery legislation of the Dominion, like that of almost all other countries, has been a slow growth, rather than a defined and compact product of official experience and knowledge, and so long as the rights and prerogatives of the federal government and of the provincial governments awaited final definition, by the highest judicial tribunal in the empire, it was not advisable or even possible to enter upon such a revision of the fishery regulations in all the various provinces, as was generally admitted to be necessary.

BAIT COLD STORAGE.

One of the most important schemes which has occupied the attention of the department has been inaugurated this year, viz., the establishment of bait freezers or refrigerators for the storage of fresh bait by the government in co-operation with associations of fishermen along the coast. This scheme, devised in the interests of the fishing population, aims to meet a need which has been profoundly felt by the fishermen, viz., the ensuring of supplies of bait which will be available when needed. Season after season the complaint arises that bait is scarce precisely when it is most urgently required, yet such bait can, as a rule, be obtained in abundance earlier in the season when the men are not in immediate need of it. The Lobster Commission of 1898 made reference, in their report, to a proposal for providing cold storage for bait, and during the year the matter was prominently brought foward in the Provincial Legislature of Nova Scotia. In no way could our fishing population in the Maritime Provinces be more effectively assisted, and the furtherance of the fishing industries be aided than by enabling the fishermen to acquire the means of securing and preserving supplies of bait in cold storage. A project for building bait freezers was fully considered and the details rapidly completed early in the year. Before the end of April practical measures were on foot, a complete scheme for the formation of local bait associations was formulated, and printed circulars were issued giving full information respecting fishermen's bait associations, the erection of refrigerator buildings and directions for their successful operation. Valuable aid was rendered by Professor J.W.Robertson, Commissioner of Agriculture, in developing the scheme, and in disseminating information amongst fishermen and parties interested. The parliamentary appropriation of $25,000 enabled the department to carry out this valuable and comprehensive movement at once. A special officer was authorized to take the necessary steps, both in regard to the organization of bait associations in various localities and the construction of freezers under the combined auspices of the Dominion Government and the local associations. Mr. J. F. Fraser, C.E., was detailed to prepare plans, and supervise the erection of the buildings which have been authorized. A beginning was thus made, without loss of time and as the scheme extends it must prove an inestimable benefit to the coast fishermen. Amongst the more important features characterising the fisherman's bait associations are: their entirely voluntary nature, the co-operative method of conducting them, the assistance by the Dominion Government to the extent of 50 per cent of the cost of building the freezers, and the payment of a proportion of the cost of operating the freezers, in accordance with specified conditions announced in a departmental bulletin or circular. Each local association is required to receive, freeze and store for every shareholder a quantity of bait up to 400 lbs. for each share held by such shareholder and to furnish it during the fishing season as it is needed. Each fisherman pays a nominal charge for freezing and storage and the association has the option of storing

surplus bait, and of disposing of it on terms agreed upon by the association. Thus while the rules of such associations must conform to the general plan, a certain amount of elasticity is provided for.

The scheme has appealed very strongly to the fishermen, who have realized all along the Atlantic coast of the Dominion the immense benefits and advantages offered by this Government project. Meetings of the fishermen have been held in numerous places in every Maritime Province and in the Magdalen Islands. The initial freezer was commenced in November and has been completed at Ballantyne's Cove near Cape George, Antigonish Co., Nova Scotia, but associations have been formed, and considerable progress in some cases made in the building of freezers at a number of different points along the coast. At Drum Head, Guysborough County, the freezer is complete, at Gabarus, C.B., it is in an advanced condition, while the work under the local bait associations at Whitehead, at Larry's River and at Charlo's Cove is in various stages of progress. Mention must be made of the active work carried on with the department's co operation on Prince Edward Island where freezers are either nearly completed, or schemes for the erection of refrigerators have assumed final shape, at Tignish, Murray Harbour, Souris and Rustico. In Western Nova Scotia there is similar activity, and the movement is rapidly spreading in New Brunswick. It is impossible to foresee how far-reaching the benefits of the bait cold storage system may be and as already pointed out, an important feature in the scheme is the fact that the fishermen themselves must co-operate, and share in the responsibility under government auspices and superintendence.

MARINE BIOLOGICAL STATION.

This important institution, the first of the kind on Dominion shores, was erected during the summer, and temporarily located at St. Andrews, N.B. The parliamentary vote of $5,000 for founding this scientific laboratory, and the sum of $2,000 per annum to be provided for carrying on the institution has made possible the prosecution of fishery and marine researches similar to those promoted with signal success in other countries. Before the station was completely equipped, several eminent scientific workers commenced their labours, and during the summer and fall valuable researches were carried on by Professor Knight, of Queen's University, Kingston; Professor A. B. Macallum, University of Toronto; Dr. R. R. Bensley, Demonstrator in Biology, Toronto University; Dr. J. Stafford, Fellow in Biology, Toronto; Mr. B. A. Bensley, Toronto University, and Mr. F. S. Jackson, Demonstrator in Biology, McGill University, Montreal. Professor L. W. Bailey, of the University of New Brunswick, Fredericton, N.B., came over to St. Andrews for a few days in August, and Professor Prince, Commissioner of Fisheries, also spent some time in July, August and September at the marine station. Amongst other studies taken up were the food of various economic fishes in the adjacent waters, really part of the Bay of Fundy, the nature of the catches in the sardine weirs or brush-traps, and the determination of the so-called sardine, the catches of which range in some years between $100,000 and $200,000 in annual value. The clam fishery, especially the food, habits and life-history of these shell-fish, and the details of the industry in Passamaquoddy Bay, the study of the eggs and young of fishes, also the histology of medusæ, and especially the identification and tabulation of the various species of

marine animals in the locality occupied the workers during the first season. A small launch, row-boat, dredge and other gear are now part of the station's equipment, and in spite of many disadvantages during the initial stages, the work done has on the whole been highly satisfactory, and many able specialists have signified their intention of conducting investigations in the station during next season. The station, being provided with a large scow, can be moved from place to place along the coast as may be determined by the managing board, and the fisheries of the Dominion will ere long receive the benefits of the discoveries made and the information obtained.

Other countries have realized the extreme value of this technical work The United States for many years has carried on splendidly equipped marine stations, such as that at Wood's Holl, and most important information has been obtained by the studies and experiments on sea fish and marine life generally carried on in these laboratories. France was one of the earliest to see the value of such experimental stations, and at various points along her coast has fourteen or fifteen such institutions. Germany has taken the same course, and when the Island of Heligoland was handed over to Germany by the British government the first thing that was done was the building of a marine station for fishery investigations. In Norway, Dr. Nansen was the means of starting similar work, and the Bergen marine station was built. In Britain active steps have been taken during the last fifteen years, and ten marine stations have been built—a large and important one at Plymouth which cost over $100,000, and others like the unique and interesting marine laboratory in the old city of St. Andrews, in Scotland, and the capital little station on the Isle of Man. Even Russia has founded a number of these institutions. But Italy possesses the finest of all, viz., the famous Zoological marine station at Naples, which has been resorted to by scientific and fishery authorities from every part of the globe. Dr. Dohrn, its brilliant director, prophesied twenty years ago that as different countries learned the value of such work as marine laboratories perform, a circle of such buildings would ere long circumscribe the globe. This prophecy has now come true, and the last of these institutions, viz., the Canadian biological station has as great, or even a greater field than almost any other.

The building is a neat structure of wood, and consists of a main workroom with tables, shelving for scientific apparatus, glass and books, and all the appliances necessary. Three small rooms contain tanks for sea water and fresh water (about three hundred gallons in all) and there is a storeroom with accommodation for the director, and a dark room for photographic work. Two small pumps and a one horse engine, with large supply pipes reaching to high water, form part of the fittings, while nets, dredges and a large stock of chemical agents complete the equipment. The suggestion that such a station was desirable is due to Prof. Knight, of Queen's University, Kingston, Ont., and it was also strongly urged by the Dominion Commissioner of Fisheries (Prof. Prince, Ottawa). The Royal Society of Canada, especially through the efforts of Prof. Penhallow, of McGill College, Montreal, took up the question, which was also warmly supported by Prof. Ramsay Wright, of Toronto University. The British Association had also appointed a committee to urge the matter. As the biological station is floated season after season from one suitable location to another along the Atlantic shore, the fishery problems of each district will thus be grappled with and their complete solution, as far as possible, attained.

EXPENDITURE AND REVENUE.

The details of the total expenditure for the different fisheries services during the last fiscal period amounting to $417,601, form the first appendix of this report. This comprises fisheries proper $95,278, fish culture $34,522, fisheries protection service $105,133, miscellaneous expenses $23,207 and the $159,459 distributed as fishing bounties.

The total amount received during the same period as revenue from fishery licenses, fines, &c., is given at $85,502.

This sum includes the $9,062 collected from United States fishing vessels as fees for the *Modus vivendi* licenses granted to their owners.

FISHING BOUNTIES.

For the season 1898, the sum of $159,459 was distributed as fishing bounties to the deep sea fishermen of the Maritime Provinces. Of this amount $63,461 was divided amongst the crews of 784 schooners, and the balance $95,998 was shared by 23,500 boat fishermen. These different amounts entailed the payment of 14,531 claims. For the last year Nova Scotia received about two-thirds of the bounty fund amounting to $103,730, Quebec $31,795, New Brunswick $13,746 and Prince Edward Island $10,188.

Since its inception (1882) the total sum of $2,681,368 has been paid in such fishing bounties to the deep sea fishermen of the above mentioned provinces.

GENERAL STATISTICS OF FISHERIES.

EXTENT OF COAST.

The fisheries of Canada are the most extensive in the world, comprising an immense sea-coast line, besides innumerable lakes and rivers. The eastern sea-coast of the Maritime Provinces from the Bay of Fundy to the Straits of Belle Isle exceeds 5,600 miles, while the western coast of British Columbia is given at 7,180 miles, that is more than double that of Great Britain and Ireland.

While the salt water inshore area, not including minor indentations, cover more than 1,500 square miles, the fresh water area of the part of the great lakes within Canada is reckoned at 72,700 square miles, not including the numerous lakes of Manitoba and the North-west Territories all stocked with excellent species of food fishes.

CAPITAL INVESTED IN THE FISHERIES OF CANADA AND NUMBER OF FISHERMEN.

The following table shows that eighty thousand men were engaged during the season of 1898 in our fishing industry, using boats, nets and other fishing implements aggregating a value of $9,860,000. About 1,150 schooners manned by 8,657 sailors, besides the 72,877 fishermen, using 38,675 boats and 6,228,000 fathoms of nets, all found employment in this vast industry.

The lobster plant alone is valued at $1,334,120. This amount comprises 814 canneries, with their 1,335,640 traps, giving employment to 16,548 persons.

RECAPITULATION

SHOWING the value of Vessels, Boats, Nets, &c., as well as the number of Fishermen in Canada, 1898.

PROVINCE.	FISHERMEN IN		VESSELS.			BOATS.		GILL-NETS AND SEINES.		Value of pound and trap nets, weirs, trawls, etc.	Value of Lobster plant.	Approximate value of freezers, ice and smoke houses, and other fixtures not itemized.	TOTAL VALUE.
	Vessels.	Boats.	Number.	Tonnage.	Value.	Number.	Value.	Fathoms.	Value.				
					$		$		$	$	$	$	$
Nova Scotia	5,434	20,801	537	23,718	837,590	15,358	323,989	2,087,440	563,055	220,786	567,420	459,760	2,972,600
New Brunswick	997	11,276	282	3,674	114,500	6,203	249,833	962,030	540,827	275,753	358,375	450,215	1,989,503
Prince Edward Island	117	4,287	29	658	15,900	3,147	62,346	147,389	33,023	16,785	267,712	24,140	419,906
Quebec	163	12,169	28	1,119	21,250	6,890	172,030	302,263	177,440	169,763	140,613	205,384	886,189
Ontario	430	2,117	†83	2,257	105,100	1,262	82,428	1,846,5 5	220,510	118,270	...	102,470	628,778
British Columbia	*1,419	‡20,695	*178	4,700	497,240	5,182	228,500	670,000	512,100	8,750	.....	‖ 119,650 / 1,340,000	2,706,240
Manitoba and N.W. Territories	97	1,232	†17	1,885	115,600	633	17,808	213,075	28,973	....	...	94,200	256,581
	8,657	72,877											
Totals	.....	81,734	1,154	38,011	1,707,180	38,675	1,136,943	6,228,732	2,075,928	810,107	1,334,120	2,795,819	9,860,097

NOTE.—* This includes sealing fleet and crews.
‡ This includes the cannery hands.
† Mostly tugs.
‖ Value of the sixty-seven salmon canneries.

STATEMENT of the Lobster industry in Canada, 1898.

PROVINCE.	Number of Persons Employed.	PLANT.					CATCH.				
		Number of Canneries.	Value.	Number of Traps.	Value.	Total Value of Plant.	Number of 1 lb. Cans.	Value.	Fresh or Alive.	Value.	Total Value of Catch.
			$		$		Lbs.	$	Cwt.	$	$
Nova Scotia	5,185	231	206,010	645,167	361,410	567,420	5,210,294	1,042,059	326,313	1,631,565	2,673,624
New Brunswick	5,474	199	144,100	243,719	214,275	358,375	2,113,222	422,644	21,776	108,880	531,524
Prince Edward Island	3,120	230	126,829	284,285	140,883	267,712	2,342,020	468,004	74	370	468,374
Quebec	2,769	154	54,074	162,470	86,539	140,613	1,067,058	213,412	201	1,005	214,417
Totals	16,548	814	531,013	1,335,641	803,107	1,334,120	10,732,594	2,146,119	348,364	1,741,820	3,887,939

COMPARATIVE TABLE showing Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries of Canada, together with the Value of Fishing Materials employed, from 1879 to 1898.

YEAR.	VESSELS.			BOATS.		Value of Nets and Seines.	Value of other Fishing Material.	Total of Capital Invested.
	No.	Tonnage.	Value.	No.	Value.			
			$		$	$	$	$
1879	1,183	43,873	1,714,917	25,616	854,289	988,698	456,617	4,014,521
1880	1,181	45,323	1,814,688	25,266	716,352	985,978	419,564	3,936,582
1881	1,120	48,389	1,765,870	26,108	696,710	970,617	679,852	4,113,049
1882	1,140	42,845	1,749,717	26,747	833,137	1,351,193	823,938	4,757,985
1883	1,198	48,106	2,023,045	25,825	783,186	1,243,366	1,070,930	5,120,527
1884	1,182	42,747	1,866,711	24,287	741,727	1,191,579	1,224,646	5,014,663
1885	1,177	48,728	2,021,633	28,472	852,257	1,219,284	2,604,285	6,697,459
1886	1,133	44,605	1,890,411	28,187	850,545	1,263,152	2,720,187	6,814,295
1887	1,168	44,845	1,989,840	28,092	875,316	1,499,328	2,384,356	6,748,840
1888	1,137	33,247	2,017,558	27,384	859,953	1,594,992	2,390,502	6,863,005
1889	1,100	44,936	2,064,918	29,555	965,010	1,591,085	2,149,138	6,770,151
1890	1,069	43,084	2,152,790	29,803	924,346	1,695,358	2,600,147	7,372,641
1891	1,027	39,377	2,125,355	30,438	1,007,815	1,644,892	2,598,124	7,376,186
1892	988	37,205	2,112,875	30,513	1,041,972	1,475,043	3,017,945	7,647,835
1893	1,104	40,096	2,246,373	31,508	955,109	1,637,707	3,174,404	8,681,557
1894	1,178	41,768	2,409,029	34,102	1,009,189	1,921,352	4,099,546	9,439,116
1895	1,221	37,829	2,318,290	34,268	1,014,057	1,713,190	4,208,311	9,253,848
1896	1,217	42,447	2,041,130	35,398	1,110,920	2,146,934	4,527,267	9,826,251
1897	1,184	40,679	1,701,239	37,693	1,128,682	1,955,304	4,585,569	9,370,794
1898	1,154	38,011	1,707,180	38,675	1,136,943	2,075,928	4,940,046	9,860,097

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COMPARATIVE TABLE showing the number of men employed in the Fishing Industry since 1879.

Years.	Number of Persons in Lobster Canneries.	Number of Men in Vessels.	Number of Men in Boats.	Total Number of Fishermen.
1879		8,818	52,577	61,395
1880		8,757	51,900	60,657
1881		8,359	50,679	59,056
1882		8,498	52,785	61,283
1883		9,966	52,259	62,225
1884		9,968	51,854	61,822
1885		9,539	53,282	62,821
1886		8,927	53,073	62,000
1887		8,911	55,247	64,158
1888		9,574	53,109	62,683
1889		9,621	55,382	65,003
1890		8,726	55,000	63,726
1891		8,666	56,909	65,575
1892		8,330	55,348	63,678
1893		8,899	58,854	67,753
1894		9,525	61,194	70,719
1895	13,030	9,804	61,530	71,334
1896	14,175	9,735	65,502	75,237
1897	15,165	8,879	70,080	78,959
1898	16,548	8,657	72,877	81,534

VALUE OF THE FISHERIES.

The total value of the Canadian catch of fish for the year 1898 amounts to $19,667,126, being a decrease of over *three million dollars* as compared with the unprecedented yield of 1897, but which is near the average of the previous eight years. This amount is subdivided by provinces as follows :—

Provinces.	Value.	Increase.	Decrease.
	$	$	$
Nova Scotia	7,226,035		864,312
New Brunswick	3,849,357		84,778
British Columbia	3,713,101		2,425,764
Quebec	1,761,440	24,429	
Ontario	1,433,632	143,810	
Prince Edward Island	1,070,206	115,257	
Manitoba and North west Territories	613,355		25,061

It is easily seen that the large surplus of last year was made up in British Columbia and Nova Scotia, and this year the same provinces furnish deficits exceeding three million dollars. The fluctuations of the other provinces are not so pronounced. Ontario and Prince Edward Island both show an increase of over $100,000, the others yielded about the same as the previous year. These different phases are fully explained in the appendices by the inspectors in their respective provinces. The above figures do not include the enormous quantity of fish consumed by the Indians of British Columbia.

The following table shows the relative values of the principal kinds of commercial fishes (above $100,000) for the year 1898 as compared with those of the previous year :—

Kinds of Fish.	Value.	Increase.	Decrease.
	$	$	$
Lobsters	3,887,939	402,674	
Salmon	3,159,306		2,520,868
Cod	2,996,583		912,511
Herring	1,987,454		111,623
Mackerel	694,591	97,285	
Trout	693,826	158,954	
Haddock	681,557		200,926
Whitefish	622,173		29,256
Sardines	429,022	72,225	
Smelts	420,142		8,027
Hake	391,550	32,472	
Halibut	291,276	71,938	
Pickerel	235,995		80,600
Oysters	217,024	36,536	
Sturgeon	199,160	9,182	
Alewives	159,424		30,236
Pollock	144,708		232,604
Bass	124,845	27,629	
Eels	118,620		15,209
Shad	108,013		3,560
Tom-cod	102,426		4,576

The quantity of fish used as bait is reckoned at $345,388, that of fish oil at $199,787 and the produce of the fur seals skins realized $285,520.

A glance at the above table shows that salmon, which last year had usurped the first place held by the cod, has this year been surpassed by the lobster. The enormous decline of two and a half million dollars in the value of salmon is due entirely to the diminished pack of the Fraser River for that season. The other parts of the western province yielded fairly well.

The surplus of $400,000 in the value of lobsters is not attributed to the packing industry which, on the contrary, has a shortage of over one million cans, but to the rapid growth of the live lobster trade with the United States markets especially in the western counties of Nova Scotia, which have exceeded their previous shipments by over 100,000 cwt. Where such facilities exist to dispose of our large size lobsters in such markets as Boston and New York at remunerative prices, the packing in cans might well be restricted by at least enforcing a large size or length limit, as has been done in the new lobster regulation so far as the greater part of the Bay of Fundy is concerned.

Another most marked fluctuation is the shortage of $900,000 in the value of cod as compared with the take of 1897. This falling off is mostly felt in Nova Scotia. Prices were low and somewhat contributed to limiting the supply. The same remark applies to haddock and pollock which both show a large decline.

It is gratifying to notice the improvement of $100,000 in the value of mackerel which has again resumed the fifth place in the list of principal kinds of fish.

Of the fresh water species, while trout shows a fair increase, whitefish has fallen off.

Owing to the development of sardine canning in Charlotte county, New Brunswick, this industry indicates a considerable improvement over the previous output.

Halibut fishing is steadily improving especially in British Columbia.

From the year 1869 to 1898 inclusive the five principal commercial fishes have shown a total return as follows:—

Cod	$113,768,153
Herring	58,500,866
Lobsters	56,338,075
Salmon	54,569,151
Mackerel	38,881,733

STATEMENT of the production of each Branch of the Fisheries

No.	KINDS OF FISH.	NOVA SCOTIA.		NEW BRUNSWICK.		BRITISH
		Quantity.	Value.	Quantity.	Value.	Quantity.
			$		$	
1	Cod, dried ..... Cwt.	442,946	1,891,784	77,424	309,696	5,225
	" tongues and sounds ..... Brls.	483	4,830	163	1,630	.....
2	Haddock, dried ..... Cwt.	106,348	319,044	9,225	27,675	.....
	" fresh ..... Lbs.	4,399,632	131,988	1,250,000	37,500	.....
	" smoked, (finnan haddies) .... Lbs.	1,360,291	81,616	929,100	56,290	.....
3	Hake, dried ..... Cwt.	108,528	244,187	25,452	57,267	.....
	" sounds ..... Lbs.	73,457	36,728	19,280	9,640	.....
4	Pollock ..... Cwt.	54,552	109,104	17,802	35,604	.....
5	Tom cod or frost fish ..... Lbs.	146,120	7,306	1,733,100	86,655	.....
6	Halibut ..... Lbs.	1,635,325	163,533	111,000	11,100	1,970,000
7	Flounders ..... Lbs.	419,000	20,950	161,700	8,085	.....
8	Salmon, preserved lb ..... Cans.	13,668	2,050	11,600	1,740	23,642,452
	" fresh ..... Lbs.	390,742	78,148	1,175,167	235,033	914,850
	" smoked ..... Lbs.	5,145	1,029	10,000	2,000	201,000
	" pickled ..... Brls.	330	4,950	15	225	18,600
9	Trout ..... Lbs.	91,330	9,133	185,480	18,548	328,800
10	Ouananiche ..... Lbs.	.....	.....	.....	.....	.....
11	Whitefish ..... Lbs.	.....	.....	.....	.....	.....
12	Smelts ..... Lbs.	.....	.....	.....	.....	.....
13	Oulachans B. C ..... Lbs.	303,558	15,178	7,021,000	351,050	78,500
14	Herring, salted ..... Brls.	76,828	307,312	163,854	655,416	919,500
	" fresh ..... Lbs.	4,592,453	45,925	21,013,750	210,138	.....
	" smoked ..... Lbs.	428,100	8,562	8,937,255	178,745	565,000
	" kippered ..... Cans.	.....	.....	265,000	26,500	127,000
15	Sardines, preserved ..... Cans.	.....	.....	1,616,000	80,800	.....
	" " ..... Brls.	.....	.....	171,995	342,943	.....
16	Shad ..... Brls	4,125	41,250	5,805	58,050	.....
17	Alewives ..... Brls	10,946	43,784	27,860	111,440	.....
18	Pike ..... Lbs.	.....	.....	.....	.....	.....
19	Maskinonge ..... Lbs.	.....	.....	.....	.....	.....
20	Eels, salted ..... Brls.	2,333	23,330	2,757	27,570	.....
	" " ..... Lbs.	.....	.....	.....	.....	.....
21	Perch ..... Lbs.	.....	.....	30,000	1,500	.....
22	Pickerel ..... Lbs.	.....	.....	142,000	7,100	.....
23	Bass ..... Lbs.	15,650	1,565	349,900	34,990	.....
24	Mackerel, salted ..... Brls.	15,938	239,070	250	3,750	.....
	" fresh, &c. ..... Lbs.	2,371,042	284,524	276,900	33,228	.....
25	Sturgeon ..... Lbs.	.....	.....	15,000	1,050	750,000
	" caviare ..... Lbs.	.....	.....	910	455	24,778
26	Lobsters, preserved ..... Lbs.	5,210,294	1,042,059	2,113,222	422,644	.....
	" fresh ..... Cwt.	326,313	1,631,565	21,776	108,880	.....
27	Oysters ..... Brls.	2,097	8,388	22,675	90,700	2,400
28	Clams ..... Brls.	1,641	3,282	.....	28,227	.....
29	Squid ..... Brls.	8,467	33,868	39	156	.....
30	Coarse and mixed fish ..... Brls.	64,359	128,249	4,087	8,174	110
	" " ..... Lbs.	.....	.....	41,700	3,685	.....
31	Home consumption (not included above)	.....	.....	.....	.....	.....
32	Fur seal skins, B. C ..... No.	.....	.....	.....	.....	28,552
33	Hair " " ..... No.	302	372	22	49	7,600
34	Sea otter " B. C ..... No.	.....	.....	.....	.....	50
35	Beluga (white whales) ..... No.	.....	.....	.....	.....	.....
36	Fish, oil ..... Galls.	322,277	96,682	60,090	18,027	124,525
37	Fish used a bait ..... Brls.	92,885	139,329	69,350	107,775	.....
38	" " manure ..... Brls.	50,720	25,360	75,255	37,627	.....
39	" guano ..... Tons.	.....	.....	.....	.....	200
	Totals	.....	7,226,035	.....	3,849,357	.....

in the different Provinces of Canada, for the Year 1898.

Columbia.	Quebec.		Ontario.		Prince Ed. Island.		Manitoba and N.-W. Territories.		No.
Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
$		$		$		$		$	
26,125	163,716	657,420	.....	.....	25,372	101,488	.....	.....	1
.....	278	2,780	.....	.....	83	830	.....	.....	
.....	2,563	7,689	.....	.....	6,335	19,005	.....	.....	2
.....	12,000	360	.....	.....	13,000	390	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	214	481	.....	.....	13,205	29,711	.....	.....	3
.....	.....	.....	.....	.....	27,070	13,535	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	4
.....	131,800	6,590	.....	.....	37,500	1,875	.....	.....	5
98,500	171,140	17,114	.....	.....	10,300	1,030	.....	.....	6
.....	30,500	1,525	.....	.....	.....	.....	.....	.....	7
2,364,245	.....	.....	.....	.....	.....	.....	.....	.....	
91,485	836,401	167,280	.....	.....	.....	.....	.....	.....	8
20,100	.....	.....	.....	.....	8,900	1,780	.....	.....	
186,000	216	3,240	.....	.....	.....	.....	.....	.....	
32,880	397,050	39,705	5,972,005	582,431	49,300	4,930	124,000	6,200	9
.....	95,000	5,700	.....	.....	.....	.....	.....	.....	10
.....	72,675	5,814	2,926,035	232,763	.....	.....	7,671,941	383,597	11
3,925	351,292	17,564	.....	.....	648,489	32,424	.....	.....	12
47,200	.....	.....	.....	.....	.....	.....	.....	.....	13
.....	36,755	147,020	1,775	7,100	44,924	179,696	.....	.....	
16,950	4,825,300	48,253	6,309,000	126,180	251,800	2,518	.....	.....	14
12,700	54,000	1,080	668,000	13,360	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	1,760	5,280	.....	.....	.....	.....	.....	.....	15
.....	868	8,683	.....	.....	3	30	.....	.....	16
.....	.....	.....	.....	.....	1,050	4,200	.....	.....	17
.....	261,920	10,477	859,783	34,391	.....	.....	2,532,278	50,646	18
.....	70,930	4,256	774,320	46,459	.....	.....	.....	.....	19
.....	217	2,170	.....	.....	644	40	.....	.....	
.....	857,840	51,470	127,325	7,639	.....	.....	.....	.....	20
.....	211,560	6,347	753,380	22,601	.....	.....	77,591	776	21
.....	336,515	16,826	2,715,340	135,767	.....	.....	2,543,422	76,303	22
.....	133,255	10,660	970,375	77,630	.....	.....	.....	.....	23
.....	6,497	97,455	.....	.....	2,228	33,420	.....	.....	
.....	.....	.....	.....	.....	26,200	3,144	.....	.....	24
37,500	421,370	25,282	1,171,580	70,295	.....	.....	688,510	34,425	
7,433	.....	.....	36,520	18,460	.....	.....	8,520	4,260	25
.....	1,067,058	213,412	.....	.....	2,342,020	468,004	.....	.....	
.....	201	1,005	.....	.....	74	370	.....	.....	26
12,000	.....	.....	.....	.....	26,484	105,936	.....	.....	27
9,080	.....	.....	.....	.....	505	1,010	.....	.....	28
.....	2,765	11,060	.....	.....	510	2,040	.....	.....	29
1,100	860	4,720	.....	.....	1,218	1,272	.....	.....	
51,300	3,559,210	37,729	2,327,760	58,555	.....	.....	4,353,113	47,627	30
350,000	.....	.....	.....	.....	.....	.....	952,100	9,221	31
285,520	.....	.....	.....	.....	.....	.....	.....	.....	32
5,700	10,008	12,510	.....	.....	20	40	.....	.....	33
10,000	.....	.....	.....	.....	.....	.....	.....	.....	34
.....	452	1,808	.....	.....	.....	.....	.....	.....	35
37,358	139,644	41,893	.....	.....	19,425	5,828	.....	.....	36
.....	33,793	50,689	.....	.....	31,730	47,595	.....	.....	37
.....	41,183	21,092	.....	.....	.....	.....	.....	.....	38
6,000	.....	.....	.....	.....	1,665	1,665	.....	.....	39
3,713,101	.....	1,761,440	.....	1,433,632	.....	1,070,206	.....	613,355	

RECAPITULATION

OF the Yield and Value of the Fisheries in the Dominion of Canada for the Year 1898.

	Kinds of Fish.		Quantity.	Value.	Total Value.
				$ cts.	$ cts.
1	Cod, dried	cwt.	714,683	2,986,513 00	
	Cod, Tongues and Sounds	brls.	1,007	10,070 00	2,996,583 00
2	Haddock, dried	cwt.	124,471	373,413 00	
	" fresh	lbs.	5,674,632	170,238 00	
	" smoked (Finnan haddies)	"	2,289,391	137,906 06	681,557 06
3	Hake, dried	cwt.	147,399	331,646 50	
	" sounds	lbs.	119,807	59,903 50	391,550 00
4	Pollock	cwt.	72,354	.....	144,708 00
5	Tom Cod or Frost Fish	lbs.	2,048,520	.....	102,426 00
6	Halibut	"	3,897,765	.....	291,276 50
7	Flounders	"	611,200	.....	30,560 00
8	Salmon, preserved	lb. cans	23,667,720	2,368,035 40	
	" fresh	lbs.	3,317,160	571,946 60	
	" smoked	"	225,045	24,909 00	
	" pickled	brls.	19,161	194,415 00	3,159,306 00
9	Trout	lbs.	7,147,965	.....	693,826 50
10	Ouananiche	"	95,000	.....	5,700 00
11	Whitefish	"	10,670,651	.....	622,173 80
12	Smelts	"	8,403,839	.....	420,141 95
13	Oulachans (B.C)	"	919,500	.....	47,200 00
14	Herring, salted	brls.	224,136	1,296,544 00	
	" fresh	lbs.	37,557,303	449,963 00	
	" smoked	"	10,214,355	214,447 10	
	" kippered	cans.	265,000	26,500 00	1,987,454 10
15	Sardines, preserved	"	1,616,000	80,800 00	
	"	brls.	173,755	348,222 50	429,022 50
17	Shad	"	10,801	.....	108,013 50
16	Alewives	"	39,856	.....	159,424 00
18	Pike	lbs.	3,653,981	.....	95,514 12
19	Maskinonge	"	845,250	.....	50,715 00
20	Eels, salted	brls.	5,951	59,510 00	
	" fresh	lbs.	985,165	59,109 90	118,619 90
21	Perch	"	1,072,531	.....	31,224 20
22	Pickerel	"	5,737,277	.....	235,995 75
23	Bass	"	1,469,180	.....	124,845 40
24	Mackerel, salted	brls.	24,913	373,695 00	
	" fresh	lbs.	2,674,142	320,896 24	694,591 24
25	Sturgeon	"	3,046,460	168,552 00	
	" caviare	"	70,728	30,608 40	199,160 40
26	Lobsters, preserved	"	10,732,594	2,146,118 80	
	" fresh or alive	cwt.	348,364	1,741,820 00	3,887,938 80
27	Oysters	brls.	53,656	.....	217,024 00
28	Clams	"	2,146	.....	41,599 00
29	Squid	"	11,781	.....	47,124 00
30	Coarse and mixed fish	"	70,634	140,515 50	
	" "	lbs.	10,281,783	198,895 80	339,411 30
31	Home consumption (not included above)		.....	.....	359,521 00
32	Fur seal skins, B.C	No.	28,552	.....	285,520 00
33	Hair seal skins	"	17,952	.....	18,671 25
34	Sea-otter skins, B.C	"	50	.....	10,000 00
35	Beluga skins (white whale)	"	452	.....	1,808 00
36	Fish oil	galls.	665,961	.....	199,787 40
37	Fish used as bait	brls.	227,758	.....	345,388 50
38	" " manure	"	167,158	.....	84,079 50
39	Fish guano	tons.	1,865	.....	7,665 00
	Total for 1898		.....	.....	19,667,126 67
	" " 1897		.....	.....	22,783,546 21
	Decrease		.....	.....	3,116,419 54

RECAPITULATION.

SHOWING the Total Value of the Fisheries in the respective Provinces of Canada, from 1870 to 1898, inclusive, as compiled from the Annual Reports of the Department of Fisheries.

Year.	Nova Scotia.	New Brunswick.	Prince Edward Island.	Quebec.	Ontario.	British Columbia.	Manitoba and North-west Territories.	Total for Canada.
	$	$	$	$	$	$	$	$
1870	4,019,425	1,131,433	No data.	1,161,551	264,982	No data.	No data.	6,577,391
1871	5,101,030	1,185,033	"	1,093,612	193,524	"	"	7,573,199
1872	6,016,835	1,965,459	"	1,320,189	267,633	"	"	9,570,116
1873	6,577,087	2,285,662	207,595	1,391,564	293,091	"	"	10,754,997
1874	6,652,302	2,685,794	288,863	1,608,660	446,267	"	"	11,681,886
1875	5,573,851	2,427,654	298,927	1,596,759	453,194	"	"	10,350,385
1876	6,029,050	1,953,389	494,967	2,097,668	437,229	104,697	"	11,117,000
1877	5,527,858	2,133,237	763,036	2,560,147	438,223	583,433	"	12,005,934
1878	6,131,600	2,305,790	840,344	2,664,055	348,122	925,767	"	13,295,678
1879	5,752,937	2,554,722	1,402,301	2,820,395	367,133	631,766	"	13,529,254
1880	6,291,061	2,744,477	1,675,089	2,631,556	444,491	713,335	"	14,499,979
1881	6,214,782	2,930,904	1,955,290	2,751,962	509,903	1,454,321	"	15,817,162
1882	7,131,418	3,192,339	1,855,687	1,976,516	825,457	1,842,675	"	16,824,092
1883	7,689,374	3,185,674	1,272,468	2,138,997	1,027,033	1,644,646	"	16,958,192
1884	8,763,779	3,730,454	1,085,619	1,694,561	1,133,724	1,358,267	"	17,766,404
1885	8,283,922	4,005,431	1,293,430	1,719,460	1,342,692	1,078,038	"	17,722,973
1886	8,415,362	4,180,227	1,141,991	1,741,382	1,435,998	1,577,348	186,980	18,679,288
1887	8,379,782	3,559,507	1,037,426	1,773,567	1,531,850	1,974,887	129,084	18,386,103
1888	7,817,030	2,941,163	876,862	1,860,012	1,839,869	1,902,195	180,677	17,418,510
1889	6,346,722	3,067,039	886,430	1,876,194	1,963,123	3,348,067	167,679	17,655,256
1890	6,636,444	2,699,055	1,041,109	1,615,119	2,009,637	3,481,432	232,104	17,714,902
1891	7,011,300	3,571,050	1,238,733	2,008,678	1,806,389	3,008,755	332,969	18,977,878
1892	6,340,724	3,203,922	1,179,856	2,236,732	2,042,198	2,849,483	1,088,254	18,941,171
1893	6,407.279	3,746,121	1,133,368	2,218,905	1,694,930	4,443,963	1,042,093	20,686,661
1894	6,547,387	4,351,526	1,119,738	2,303,386	1,659,968	3,950,478	787,087	20,719,573
1895	6,213,131	4,403,158	976,836	1,867,920	1,584,473	4,401,354	752,466	20,199,338
1896	6,070,895	4,799,433	976,126	2,025,754	1,605,674	4,183,999	745,543	20,407,425
1897	8,090,346	3,934,135	954,949	1,737,011	1,289,822	6,138,865	638,416	22,783,546
1898	7,226,034	3,849,357	1,070,202	1,761,440	1,433,632	3,713,101	613,355	19,667,121
Totals	193,258,747	88,723,815	27,067,242	56,353,752	30,690,261	55,310,872	6,896,617	458,197,322

FISH CULTURE.

The fish culture report for the year 1899 by Professor E. E. Prince, Commissioner of Fisheries, will be found in Appendix 11 of this publication. It includes a complete description of the various fish breeding operations such as the capture of parent fish, collection of eggs, etc., at the different hatcheries by their respective officers in charge.

During the year no less than 222,000,000 fry were hatched and distributed in Canadian waters, nearly half of which were lobsters, the balance consisting of salmon, great lake trout and whitefish.

For the first time a quantity of Rainbow trout have been procured and hatched in a Dominion establishment, viz., Bedford Hatchery, N.S. This Pacific species is reported to reach a large size, to be of superior edible qualities, and is a fine game fish, so that its introduction into Nova Scotia waters, with the co-operation of the Nova Scotia Game and Fish Society is a matter of unusual interest. The New Brunswick authorities have again placed Brook Trout eggs in the Miramichi Hatchery and the fry have been distributed all over the province. The New Zealand Government also obtained a supply of B.C. salmon eggs, and report that the shipment of whitefish eggs in 1898 proved successful.

Reference is made in the Commissionner's report (Appendix 11) to the lamentable destruction of the famous Restigouche Hatchery, which was regarded by pisciculturists all over the world as a model institution. The hatchery was destroyed by fire in August, without doubt at the hands of an incendiary, but the Department immediately secured another site, admirable in every respect, and a new building has been completed, at Flat lands on the Restigouche, so that the work of salmon hatching on that river suffered no interruption. Plans have been prepared, and sites selected for new hatcheries in Inverness County, Cape Breton, Gaspé, P.Q., New Westminster and the Skeena River B. C. Thus the work of fish culture has not only been carried on during the year with undiminished activity and success, but steps have been taken to extend the operations and to vastly increase the benefits which it is admitted accrues from the Government fish-breeding operations.

OYSTER CULTURE.

A full report of last season's work on the culture of oysters by the Department's Expert, Mr. Ernest Kemp follows the fish culture report of which it forms an annex

Mr. Kemp's time was taken up during most of the summer at Murray Harbour and River in P.E. Island, preparing grounds and planting young oysters. From one thousand loads of oyster mud spread out and dried, the shells were all picked out and laid on the beds previously cleared for the purpose of planting young oysters.

He also examined the conditions of Tracadie, Savage Harbour, Morell and Midgell rivers, also part of Fortune River which are fully explained. In Bedeque Bay an area was laid off for the fishermen and one for mud diggers to work upon without interferring or injuring each other's area.

He recommends the division of the natural fishing areas into sections to be fished alternately; the enforcement of size limit; the leasing of water areas, where oysters do not now exist for their cultivation, and the date of the fishing season now as the proper one.

SESSIONAL PAPER No. 11a

FISHERIES PROTECTION SERVICE.

The report of the operations of the Fisheries Protection Service during the season of 1899 by Commander O.G.V. Spain forms Appendix 12 of this volume. It is pleasing to note that this service has again been carried on without accidents and in a very satisfactory manner.

With the exception of the *Dolphin* which was disposed of, the fleet of cruisers consisted of the same ships as the previous year, viz., the *Acadia*, *La Canadienne*, *Curlew*, *Osprey*, *Kingfisher*, *Constance*, *Aberdeen* and *Petrel*. The latter cruising in the Ontario great lakes and the others on the Gulf St. Lawrence and Atlantic coast. The *Quadra* is also partly employed for the protection of our fisheries on the British Columbia coast.

The number of United States fishing vessels taking advantage of the *modus vivendi* licenses was in excess of any previous year since 1892.

A glance at the long list of foreign fishing schooners calling at our ports shows of what importance these places are to them.

Towards the end of the season, Commander Spain and his officers devoted much of their time to the protection of the lobster industry and many thousand traps found in close season were seized and destroyed. The high prices quoted for this crustacean seemed to have stimulated the efforts of the poachers.

FISHERIES INTELLIGENCE BUREAU.

A full report of this branch of the service by Mr. T. O'Brien, clerk in charge at Halifax forms annex A to the Fisheries Protection Report.

Daily compilations of the reports from the fifty-three stations now dispersed on our extensive sea-board, are telegraphed to the principal fishing localities of the Maritime Provinces.

THE BEHRING SEA QUESTION.

No material change has taken place with regard to this question since the publication of the Departmental Annual Report for last year, from which the following is extracted, which is as applicable as at the time of publication.

* * * * * *

As the Behring Sea question is one of those receiving the consideration of the Joint High Commission, it has passed, for the time being, out of the ordinary channel of correspondence between the different governments, hence the past year has been marked by an absence of proposals and arrangements hitherto obtaining each season in the prosecution of the sealing industry, and the application of the legislation under which it is conducted.

By the terms of the Paris Award, the regulations for the government of the seal fishing in Behring Sea and the North Pacific Ocean, were to be subjected to a new examination every five years, so as to enable both interested Governments to consider whether, in the light of the past experience, there was occasion for any modification thereof.

The representations made to the Canadian Government by those engaged in the sealing industry in British Columbia, were to the effect that no modifications of

these regulations should be agreed to in the nature of further limitations to the business, but that, on the contrary, the successful prosecution of the industry demanded that the existing restrictions should be curtailed alike as to the close season and as to the protective zone around the Pribyloff Islands.

As the United States Government would not entertain any proposals in either of these directions, and it did not seem to the Canadian Government possible for them, having due regard for the interests of those engaged in the sealing industry, to consent to any further limitations upon the operations of the sealers, it was found impossible to agree upon any change in the Paris Award regulations.

* * * * *

No diplomatic correspondence of any importance calculated to change the condition of affairs has occurred during the year. It was announced in April last, by the United States Revenue Department, that the cruisers, *Bear*, *Rush*, *Corwin*, *Grant* and *Perry* had been designated by the President to cruise in the waters of the North Pacific Ocean during the season of 1899, for the enforcement of the Act of Congress of 1897, and the regulations of the Paris Tribunal, decreed in August, 1893, for the preservation of the fur seals.

On the other hand, Her Majesty's Government announced to the Government of Canada, that Her Majesty's ships *Icarus* and *Pheasant* were detailed for patrol duty, under the Paris Award regulations, for the season.

In March, 1899, the United States Treasury Department issued the usual regulations governing the vessels employed in the fur seal fishing during the season. After quoting the Act of Congress approved December 29, 1897, and which came into force during the year 1898, prohibiting pelagic sealing in the North Pacific Ocean, etc., by any citizen of the United States, or persons owing duty or obedience to the laws or treaties of the United States, the instructions gave the text of the Behring Sea Award regulations, which are still in force, as applicable to British vessels. The close season for pelagic sealing was explained, as well as the sixty-mile zone around the Pribyloff Islands, and it was added that it should be the duty of vessels of the revenue cutter service, to patrol the waters in question, to seize any British vessels found violating the Paris regulations, and to send or bring the vessel so offending, with all persons on board, together with the proofs and declarations of the officers making the seizure, to Unalaska, deliver her to the British naval officer present, or to a more convenient port in British Columbia, and there to deliver her to the proper authorities of Great Britain, or to the commanding officer of any British vessel charged with the enforcement of the said regulations.

These regulations called for no comment as they did not seek to extend in any degree the legislation already provided, or the terms of the Paris regulations, nor to increase the powers of United States officers over British ships at sea, beyond those given them by Imperial legislation and regulations.

On the November 30, last, the Department was notified, of the issue of a circular by the Treasury Department to collectors of customs, amending the Act of 1897, with reference to the regulations in force, regarding the importation of fur seal skin garments. The change was one merely for the convenience of the fur trade, and had no significance, so far as Canada is concerned, from a diplomatic or interna-

tional point of view. The circular itself is prefaced by the statement, that representations had been made that the requirements of the report of a Treasury Agent to accompany each invoice of seal skin garments shipped to the United States, seriously embarrassed trade, on account of the delay incident to the procuring of such reports, under the original regulations, and they were thus amended so as to dispense with the reports, and the certificate of a consul was regarded as sufficient.

In July, the United States authorities complying with the requirements of Article 5 of the Behring Sea Award, notified Her Majesty's Government, that but one American vessel was engaged in pelagic sealing, during the season of 1898, namely the *Kate and Anna*, whose arrival was reported by the collector at San Francisco. The collector stated that he was satisfied that the skins taken by this vessel were all secured south of the 35° of north latitude, as shown by her log, and therefore, outside the area in which the United States has prohibited pelagic sealing by their own vessels. This vessel took 336 seals.

The total Behring sea fleet, comprised this year of twenty-six vessels, representing 1,894 tons register, crews,—213 white men and 587 Indians,—68 boats and 285 canoes, the total catch of the vessels being 34,454 skins, augmented by an Indian catch of 892 on the coast, bringing the total Canadian seal catch for the year 1899 up to 35,346, being larger than that of 1898 and 1897, represented respectively by thirty-five and forty-one vessels. Of these twenty-six vessels, twenty operated on the British Columbian and Alaskan coast, while these same twenty and five others operated in Behring sea, and only one on the Asiatic side. The coast catch was 10,471 skins; the Behring sea catch 23,284; the Asiatic catch 699 and the Indian catch 892.

Separating the Indian catch from that of the vessels proper, the following figures show the catches from the year 1889 to 1899 inclusive:—

Year.	Vessels.	Catch.	Average per Vessel.
1889	23	29,570	1,285
1890	29	39,351	1,357
1891	51	50,437	989
1892	65	46,362	713
1893	55	67,797	1,233
1894	59	90,485	1,533
1895	61	66,962	1,097
1896	64	53,324	833
1897	41	29,392	717
1898	35	27,452	784
1899	26	34,454	1,325

It will thus be seen, that from 1892 to 1896, there was an average of over sixty vessels annually engaged in the sealing business, and that in the latter year, sixty-four vessels secured only 53,234 skins, whereas in the year 1891, fifty-one vessels secured 50,437. In 1897 the fleet dropped to forty-one vessels, securing 29,342, and in the present year 1899, twenty-six vessels secured 34,454 skins.

A glance at the above figures will show that in the whole history of the Canadian pelagic sealing business, the average catch per vessel of the present year, has been surpassed only twice, in 1890 and 1894, whereas, it has in no other year been approached very closely. It is also to be borne in mind that the phenomenal catch of the year 1894 was principally taken on the Asiatic side, hence the high average cannot be attributed to what has been called the Pribyleff herd of seals. It would also appear that the Asiatic waters have ceased to be exploited by the sealers, they now confining themselves to the North American waters of the North Pacific Ocean.

It is somewhat significant, after all that has been said on the subject, that so comparatively small a fleet as was engaged in the present year, should have made the largest catch of the past three years, and the largest average catch of any but two years in the history of the Canadian sealing industry.

For the season of 1899, many of the vessels cleared from Victoria earlier than usual, and proceeded southward to the California coast, as considerable success attended some vessels there, during the previous year.

Towards the close of April, the sealers encountered violent gales, which prevailed along the whole western coast, and although the spring catch proved a fairly good one, it would undoubtedly have been much better but for unpropitious weather, which interfered with the work of the hunters.

The sealers are reported to have carefully observed their obligations under the regulations provided by the Paris Award, and the year has been marked by an entire absence of any seizures, or undue interferences by patrolling vessels.

A report that the schooner *Mermaid* had been shooting seals in Behring Sea, upon investigation proved to be without foundation.

The masters of the sealing vessels say that in the neighbourhood of the Fair-weather grounds where the seals congregate prior to entering Behring Sea, through the Aleutian Passes, they are seemingly as numerous as in former years, and it is said that generally speaking their number at sea is undiminished, but they are growing more timid and migratory.

It being reported that the seals were found most numerous to the north-east of the Pribyloff Islands instead of the north-west as formerly, the data available in the department has been examined, and it has been demonstrated that in the earlier years the best sealing grounds in Behring Sea, and, in fact, where the majority of the seals were secured, was principally south of the islands trending westward, very few attempts being made to go north, and comparatively few catches being made there.

A careful examination of the positions at sea, where the vessels have taken seals for the past four years, shows that there has been a decided change in the localities of hunting, and that on the coasts, the vessels have increased their areas

very materially in a southerly direction, while in Behring Sea there is a distinct trend north and east, bringing them principally to the north-east of the Pribyloff Islands.

This has been accounted for by some, as being due to the disturbance of the seals upon the islands, and a consequent incentive to seek other hauling and breeding grounds; while others consider the movement of the food fishes have much more to do with the distribution of the seals. However this may be, it is a fact that some vessels made good catches west of the islands notwithstanding.

Reference has been made to the process of branding seals by the United States authorities on the island, and the expedient has been regarded by some as having an injurious effect upon the herd. From the sealers' standpoint, the effect cannot be very great, unless the branded seals die, inasmuch as out of a total take of 35,346 skins, only 16 branded ones were found, and they were distributed among 11 vessels out of 26, one vessel taking as many as 3, the others, 2 and 1 each.

These facts apparently show that the branding of seals forms no factor in pelagic sealing, and whatever purpose branding may serve for scientific observation or otherwise, it cannot have a salutory effect upon the herd which visits the islands, since it necessarily changes the normal conditions. It might therefore reasonably be expected that the practice is not unlikely to be discontinued.

Altogether, the season has been a very favourable one for the sealers. Added to the large catch, there was a decided increase in the price of the skins, most of them being sold at Victoria for $11 each; but those which were sent to the London sales by the owners, realized a much higher figure.

ARBITRATION OF SEIZURES OF SEALING VESSELS BY RUSSIA IN 1892.

Diplomatic correspondence is still proceeding between Her Majesty's Government and that of Russia in connection with this case, the principal features being a discussion of the terms of reference of the sealers' claims as filed, to the arbitrator. The final text of the note to be exchanged, embodying these terms of reference, has not yet been decided upon, but it is expected that a settlement will be reached, which will enable a reference before long,

The work in connection with the preparation of the claims has been pushed with all possible speed, and counsel to represent Her Majesty's case have been appointed by the Canadian Government.

THE STAFF.

The outside staff of fishery officers connected with the department during the year ending December 31, 1899, aggregate 801 men including the crews of the fisheries protection fleet, which form nearly half of the total number.

These officers were dispersed by provinces as follows:

Ontario	3
Quebec	11
Nova Scotia	60
New Brunswick	29
Prince Edward Island	5
Manitoba	5
North-west Territories	7
British Columbia	9
Fishery guardians employed in 1899	275
Officers and crews of the Fisheries Protection Vessels	397
Total	801

The following are inspectors of fisheries in the different provinces of the Dominion:

Name.	P. O. Address.	Extent of Jurisdiction.
Bertram, A. C	North Sydney, N.S.	District No. 1.—Cape Breton Island.
Hockin, Robt.	Pictou, N.S	District No. 2.—Cumberland, Colchester, Pictou, Antigonish, Guysboro' Halifax and Hants counties.
Ford, L. S.	Milton, N.S.	District No. 3.—Lunenburg, Queen's, Shelburne, Yarmouth, Digby, Annapolis and King's counties.
Pratt, J. H.	St. Andrews, N.B.	District No. 1.—The county of Charlotte.
Chapman, Robt. A	Moncton, N.B.	District No. 2.—Restigouche, Gloucester, Northumberland, Kent, Westmorland and Albert counties.
Miles, H. S	Oromocto, N.B.	District No. 3.—St. John, King's, Queen's, Sunbury, York, Carleton and Victoria counties.
Matheson, J. A	Campbellton, P.E.I.	Prince Edward Island.
Wakeham, Wm., M.D.	Gaspé Basin, Que.	Lower St. Lawrence River and Gulf.
Lavoie, N., M.D.	L'Islet, Q.	That portion of Quebec, south of River St. Lawrence and north and east of and including county of Bellechasse.
Belliveau, A. H.	Ottawa	Province of Quebec, north of River St. Lawrence and west from and including River Saugenay, and the portion south of River St. Lawrence which lies west and south of the county of Bellechasse.
Cunningham, F. H.	Ottawa	That portion of Ontario east of the western boundary line of the counties of Durham, Victoria and Haliburton including Lake Scugog and the eastern boundary of Muskoka and Parry Sound districts.
Sheppard, O. B.	Toronto, Ont.	That part of the province of Ontario, west of the eastern boundaries of the county of Ontario, and the districts of Muskoka and Parry Sound along the Mattawa and Ottawa Rivers and northward along the north eastern boundary line of said province to James Bay.
Duncan, A. G	Marksville, Ont.	That portion of Ontario lying west and north of Lake Nipissing, the Rivers Mattawa and Ottawa and the north-east boundary line of the province to James Bay, embracing Nipissing, Algoma, Thunder Bay and Rainy River districts, Lake Superior and such portions of Lake Huron and Georgian Bay as lie adjacent or opposite to the part of Ontario above described.
Colcleugh, F. W.	Selkirk, Man.	Province of Manitoba.
Miller, E. W.	Qu'Appelle, N.W.T.	All the North-west Territories.
Stewart, Theophilus.	Dawson City	Yukon District, N.W. Territories.
Sword, C. B	N. Westminster, B.C.	Province of British Columbia.

The following are the officers in charge of the Government Fish Hatcheries:

Name.	Rank.	P. O. Address.
Armstrong, Wm.....	Officer in charge of Government Fish Hatchery.....	Newcastle, Ont.
Parker, Wm.....	" "	Sandwich, Ont.
Walker, John.....	" "	Ottawa, Ont.
Finlayson, Alex.....	Asst. officer in charge of Government Fish Hatchery..	Magog, Que.
Catellier, L. N.....	Officer in charge of Government Fish Hatchery.....	Tadoussac, Que.
.....	" "	Gaspé Basin, Que.
Mowat, Alex.....	" "	Campbellton, N.B.
McCluskey, Chas.....	" "	Grand Falls, N.B.
Sheasgreen, Isaac.....	" "	South Esk, Miramichi, N.B.
Ogden, A.....	" "	Bedford Basin, N.S.
"	" Government Lobster Hatchery....	Pictou, N.S.
.....	Asst. officer in charge of Government Fish Hatchery..	Sydney, C.B., N.S.
Sword, C. B.....	Officer in charge of Government Fish Hatchery.....	New Westminster, B.C.
Colcleugh, F. W.....	" "	Selkirk, Man.
Kemp, Ernest.....	" Oyster culture.....	Ottawa, Ont.

NOTE.—The list of the commanders of cruisers will be found in Appendix No. 12, page 267.

PRELIMINARY REPORTS ON THE FISHING SEASON OF 1899.

Since the adoption of the system of publishing the statistics of fisheries for the year previous to the date of publication, our inspectors have been requested to report briefly on the general prospects of the recent fishery operations in their respective districts or provinces. A glance at these concise reports (herewith appended) will give a fair impression of the principal fluctuations of the various species in the different provinces as compared with previous quantities or values. The prospects that the total value of the Canadian fisheries will exceed that of 1898 are encouraging. The substantial increase in the pack of the British Columbia salmon industry alone would justify such expectations. It is therefore safe enough to estimate this total value of our catch for the season just closed at *twenty million dollars.*

NOVA SCOTIA.

CAPE BRETON ISLAND.

Inspector A. C. Bertram, of North Sydney, C.B., states that the fishery statistics for the year 1899 will show a marked increase in the catch of cod, haddock and lobsters, and a decrease in the catch of salmon and mackerel. The statistics in the other branches will vary but little from those of previous years. Not for years in the inshore waters have cod and haddock been found so plentiful. Although scarcity of bait in some localities and the presence of dog-fish militated against a great catch of cod and haddock, still the statistics will show an increase of at least 45 per cent over those of the three previous years. Towards autumn, squid, which is the best known cod and haddock bait, was found plentiful in the inshore waters, which proved of great benefit to the fishermen who were engaged in prosecuting the cod and haddock fishery. The market for this class of dry and pickled fish was good and the prices in advance of last year. The system of cold storage for the preserva-

tion of bait about being inaugurated by your department in the principal fishing districts in the maritime provinces, will be of incalculable advantage to the fishing industry. The system is so good that it appears to me that all that is now necessary is the co-operation of the fishermen themselves. The Government seems to be doing its duty for the promotion of the fishing industry and the fishermen should not be slow in taking advantage of the benefits conferred. I regret having to report a great failure in the mackerel fishery this season. These fish were conspicuous for their absence in our inshore waters throughout the whole year. Whether in their journey to and from the spawning grounds this season, mackerel, for some unexplained cause, proceeded through deep water instead of following the shoal waters of the coast line and visiting the bays as heretofore, or these fish are disappearing as a result of the destructive purse-seine in former years, particularly while en route to the spawning grounds, I am not in a position in this preliminary report to state; one fact is clear, however, namely, mackerel are becoming scarcer every year in our inshore waters. The statistics will show also a marked falling off in the salmon fishery. Strange, but nevertheless true, every alternate year this fishery is good. Last year salmon were plentiful, but this year scarce. Next year the probabilities are there will be a good salmon catch in Cape Breton district. The reason for this is unexplained, but quite noticeable to those engaged in this fishery. There was an increase of one lobster cannery over the previous year. The returns in this branch will show an increased catch, which may be attributed to the extension given on the eastern and northern coast of Cape Breton. The industry is being more vigorously prosecuted year by year and the supply is being fairly well kept up.

This being only a preliminary report I am not in a position to discuss as accurately the fishery "crop" of 1899 as when writing my annual report as I will then have the statistics to aid me in doing so.

DISTRICT NO. 2, N.S.

Inspector Robt. Hockin, of Pictou, reports that the results of the operations of fishermen in this district during the past season, have been more favourable than for some years past. The catch of lobsters has not been equal to that of last year. The shortage will be about 5 per cent, but the increased prices obtained for the fish more than made up the difference. The cod, haddock, hake and pollock fisheries will show a yield from 10 to 20 per cent over that of last year, with much better prices obtained for those caught. The herring fishery has not been equal to last year, probably 25 per cent short, but the increase in the catch of mackerel will more than make up the difference to the net fishermen. Salmon were unusually plentiful in the Bay of Fundy, and on the Atlantic coast more were taken than last year. On the Straits of Northumberland, there is a shortage. Over the whole district, the catch will show a yield of about 10 per cent over that of last year. Shad (taken mostly in the Bay of Fundy) have been more plentiful than for many years, the catch being the largest since 1879. Gaspereaux seems to be becoming scarcer each year, and unless they have free access to the lakes where they spawn, they will gradually become extinct. The yield of the halibut fishery will be about the same as last year. Other fisheries will not show any great variation in the catch from previous years.

NEW BRUNSWICK.

Inspector J. H. Pratt, of St. Andrews, says that the same good fishing of all kinds enjoyed by our fishermen during 1898, was continued during the season of 1899. The statistics will not show as great a catch of sardine herring as in 1898, but better prices prevailed this year. The catch of large herring will also show a decrease. Owing to the two sardine canning syndicates at Eastport, Maine, competing against each other for herring to keep their factories running, our weir owners realized better prices for their sardine herring than they did during the previous season. The catch of cod, pollock, haddock and hake will show a decrease when compared with last season, owing partly to an increase in the schools of dog-fish frequenting the Bay of Fundy, and also to more men working at weir fishing and in the neighbouring sardine canneries. However, the line fish of all kinds brought excellent prices at the markets. The lobster catch will show about the same result as in 1898, with an increased demand from all the markets.

DISTRICT NO. 2.

Inspector R. A. Chapman of Moncton says that the aggregate of fish caught in this district will be a little larger than in 1898. Salmon were more plentiful in the Miramichi districts, but the catch was smaller on the Restigouche River and coasts of the Baie des Chaleurs than during the previous year.

Spring herring were taken for bait, food, &c., in usual immense quantities, but those caught in August and September on the banks between Caraquet and Miscou were not as plentiful as usual.

The catch of codfish was very large and prices higher than for many years which made this a most profitable season for those engaged in this important fishery, and will lead to considerable additions to the number of vessels and boats employed.

Smelts were plentiful but want of frost at the first of the fishing season as in 1898, makes the catch only about an average one, and goes to show that it is impossible to depend upon a fixed date to commence, as while some years fishing could safely begin on or even a little before December 1, in other years (as in past two or three) considerable quantities of fish caught on and after this date are lost for want of cold weather. This is certainly a very important fishery realizing hundreds of thousands of dollars in cash at a time of the year when there is very little other employment for many of those engaged in it.

The quantity of oysters taken will be rather under the average, but several thousand barrels of hard shell clams (quahaugs) have been raked at Buctouche for the American market. The high prices prevailing for lobsters has still further stimulated this fishery, and more traps and gear were put out than ever before, the result was an increased catch in the Straits of Northumberland, but scarcely as many on the other parts of the coast, making the aggregate pack a little above that of last year.

Mackerel were even scarcer than usual, very few of these fish are now taken except off the coasts of Kent county where a large number of boats and several steam tugs are employed fishing and collecting the fish.

The catch of bass will be somewhat smaller than in 1898.

Outside of these several kinds named, which are the principal fish taken, there will be not much change from former years.

PRINCE EDWARD ISLAND.

Inspector J. A. Matheson, of Charlottetown, states that the values of the fisheries of this province will be in excess of last season's. Owing to the high prices of cod and hake, that branch of the industry has been more vigorously prosecuted. The catch of lobsters in Queen's and King's counties has been larger than last year, but in Prince the catch will be below the average. Mackerel still continues scarce, but a few small fish appeared on the coast, which may be an indication of those fish again returning to our waters, which would be a great boon to our fishermen. The oyster catch in Prince county has been larger than last season, and the beds appear to be well stocked. Prices were sustained throughout the season, and those engaged in the business have been well remunerated, but in other parts of the province the catch was below the average. All other kinds of fish were taken in about the usual quantities.

PROVINCE OF QUEBEC.

Comdr. Wakeham, M.D., the officer in charge of the Gulf of St. Lawrence Division, reports an increase in the general return from the fisheries for the season of 1899, over both the previous years. This will be due entirely to the improvement in the cod and herring fishery in Gaspé and Bonaventure. On the Labrador the summer cod fishery failed as in 1898, but in August and September the off shore fishing was good, had it not been for this there would have been considerable distress on the Labrador. The salmon fishery on the north shore of the gulf was about an average, but in Gaspé and Bonaventure, it was much below an average run. As the rivers are reported well stocked with breeding fish, it is the general opinion that the bulk of the fish ran in after the netting season was over. No salmon nets were fished on the Quebec side of the Restigouche, the Restigouche Salmon Club having purchased the net fishing rights from the Quebec Government. On the New Brunswick side of the estuary, the nets were fished as usual. The lobster pack will show a very decided falling off. Mackerel were abundant at the Magdalen Islands in the spring, and a good fall fishing was looked for, but an unusually heavy north-east gale occurring on September 4, the fish seemed to be driven off and never returned. The smelt fishing has been good. Prices paid for fish have been high. The crops have been abundant. The fall has been open and free from heavy storms.

Inspector Nap. Lavoie, M.D., of L'Islet, reports: On that part of the counties of Bonaventure and Gaspé fronting on Bay des Chaleurs, cod fishing was good. Bait was abundant at all times, and very few heavy storms occurred during the fishing season. Prices were almost double. The fish also appear to have returned in numbers to banks which they had forsaken for several years past. Salmon net fishing was comparatively poor, but prices ruled high. Salmon angling was far from being a success. The prevalence of east winds, and the slow disappearance of ice from the shores are instanced as reasons for this ill success. Herring fishing was excellent, and prices were one hundred per cent better. Lobster fishing, about the same as

last year, although the results are far from comparison with those of fifteen or eighteen years ago. The reason lies in the fact that these crustaceans have been overfished, and that some grounds are completely exhausted. There were in operation last year, 31 canneries in Gaspé and 9 in Bonaventure. Some of these did no more than cover men's wages. Trout, halibut and smelt fishing were good.

Most of the above remarks apply to that part of my division which extends from Gaspé to Matane. Cod and herring especially were abundant, and prices most remunerative.

On the south shore of the River St. Lawrence, from Matane to Beaumont, the scanty information which I was able to procure leads me to believe that the total yield of the fisheries is somewhat better than last year; Herring and eels especially turned out well, while mackerel and shad failed in several localities. Salmon and bar fish seemed to be less abundant than in 1898.

Inspector A. H. Belliveau, of Ottawa, who has charge of the western division of the province of Quebec, reports as follows: After the province of Quebec assumed control of its inland fisheries, according to the decision of the Privy Council Judicial Committee, I was one of the three inspectors of fisheries appointed by the Federal Government to replace the large staff of overseers whose services had recently been dispensed with. This district comprises that part of the province lying south-west of the Saguenay River and Bellechasse county, including 56 constituencies.

While the issuing of fishery permits is conceded to the provincial authorities the regulation of the close season, the reservation of certain waters, as well as the particular conformation of fishing implements, etc., is still vested in the federal power, hence the necessity of continuing a few officers in charge. If the protection of fisheries is our mutual object, it becomes most important that friendly feeling should prevail between both authorities. For my part, I may be here permitted to testify that I have been well received everywhere by the provincial officials from the Hon. Commissioner to the humblest of his fish and game keepers. It will be beneficial to the general protection of fish, as well as advantageous to officials, that they should meet occasionally. In a few moments of conversation, the inspector may impart to the new officers more explanations respecting his duties, &c., than could be accomplished by months of correspondence. The inspector, at the same time, acquires practical knowledge *re* habits of certain species, or the make up of different fishing gear, &c. For over twenty years, I had been issuing licenses for fishing implements with which I was not familiar, and I was very much interested in seeing them in operation last summer. No doubt that occasional visits from the inspector also strengthens the hands of the conscientious officer who may feel somewhat reluctant or indifferent in enforcing obnoxious enactments, perhaps against his immediate neighbours. Thus he will inform these fishermen that instructions received must be enforced, as he knows not when the inspector might return and censure him for neglect of duty. This moral suasion will have the double beneficial effect of awakening the apathy of the indifferent overseer, as well as deterring a great many from participating in illegalities which otherwise they would not have refrained from. Overseers, who had been under our regime, expressed regrets that our acquaintance should have been deferred until after our official separation. However, it convinces me all the more of the usefulness

of a personal inspection of subordinates. It is true I had no direct orders to give to the employees of the local government. Although serving different masters, our aim and object should be identical, and I could at least advise most of them, by answering their questions, at the same time judging who were best adapted or fitted to perform the fisheries protective duties entrusted to their charge. Unfortunately a few of these officers with magisterial powers were found quite illiterate not able even to sign their names. It would be difficult for such to institute legal procedings against offenders as well as inspire the respect due to their positions in their respective localities. During my visit I found an overseer living over thirty miles from his division, who would thus have a sixty mile drive to commence the inspection of the insignificant stream under his charge passing by another officer whose salary would perhaps have been curtailed to pay this useless guardian. The Provincial Government should utilize the services of every game keeper as a fish warden, by giving them special instructions respecting the protection of fish life. Some of the local officers receive no other compensation than the occasional fines they might impose upon convicted poachers. I do not believe this system of remuneration conducive to efficiency. Let the emolument be ever so small, but let it be a fixed one, otherwise the official is looked upon as a spy and informer; and as such, is despised by nearly the entire community, instead of receiving the assistance of well disposed citizens to secure convicting evidence. Poorly remunerated officers will render poor services in the protection of either fish or game.

As the season was rather advanced when my appointment was confirmed, I found it impossible to visit every part of the large district confided to my supervision during the first summer. However, I visited many fishing localities on the mighty St. Lawrence from the United States boundary line to the Saguenay River with its principal tributaries, such as the Ottawa, the Richelieu, the Yamaska, &c., which form the main portion of my district. The large lakes of St. François, St. Louis and St. Pierre, merely enlargements of the St. Lawrence, are still considered important fishing centres, especially the latter.

Notwithstanding their apparent insignificant importance to the casual observer even in their somewhat exhausted condition, the yield of the fisheries of this district exceeds annually $150,000. It is useless to attempt denying that, not only fish are becoming scarcer in the old settled localities and are also falling off in size, but that the finer grades are making way to coarser species now frequenting our public waters. A visit to the fish markets of our large cities, especially the Canadian Metropolis will convince any one of the above facts. So small are some kinds of fish, that it seems a regrettable shortsightedness on the part of the fisherman who captures them alive, not to have liberated them; but so long as he is tolerated in his offering for sale such immature fish with impunity, so long will he continue to sacrifice quality to quantity. For instance, it is pitiable to see on the markets sturgeon under twelve incles in length, a fish that grows so rapidly, and which would become so valuable in in a few years, if only allowed to escape the small meshed gear. The same remark applies to pickerel, pike and other species. On several occasions large quantities, mostly from the Sorel district, have been seized and condemned as unfit for food by our officer Mr. Riendeau, who keeps a close watch on the Montreal fish markets as well as on the different boats supplying them from Chateauguay to Yamaska. Sub-

section 9 of section 14 of the Fisheries Act chap. 95, should be so amended as to specify a minimum length or weight of the species it seeks to protect. Once the fishermen are duly notified that certain kinds of fish of a stated length or weight are liable to confiscation on sight, there would be less tendency to decrease the size of mesh in their gear and the market supply would at once improve. On the Bonsecours market, one meets fishermen from Valleyfield to Nicolet, and it is amusing to note how the Chateauguay and Boucherville seiners will complain of and protest against the *verveux* of the Sorel and Grand-Nord divisions, while the owners of the latter complain against the use of the seine. To a certain extent, both contentions are right. The seine is a destructive engine, the use of which if not entirely prohibited should at least be confined to certain localities where no game fish are known to spawn and limited to early spring and late fall fishing when the water is cold and the coarse fish is firm and in good condition. The *verveux* or hoop net is only objectionable in the abuse of its conformation, either in its small mesh, length of wings, leaders, etc., or to its being set so as to bar the passage of fish in narrow streams. In both these fishing engines, the fish are captured alive and there is no excuse for not liberating any immature or game fish which the law choses to protect.

Judging from the number seen around the residences of fishermen as well as those still set in the bays of Lake St. Pierre, I am of opinion that most of the fishermen own eight, ten or twelve of these *verveux* each, and some had even as many as twenty-five, while nobody held license for more than four or five. As they bear no marks of being licensed implements, it is difficult for the officer to discriminate which are illicit or not, but it is quite certain that the licensee of a couple of *verveux* uses four or five perhaps more, while many have no licenses at all. These are set in such a way that the indicating pole is cut under the water, thus nothing appears to the unobservant. It is estimated that there are no less than 3,000 such fishing engines around Lake St. Pierre and it is doubtful whether 300 pay license fees. The shallow bays in the vicinity of Sorel as well as those of Yamaska County, all in Lake St. Pierre, are well adapted to this kind of fishing. Some stringent regulations should be adopted once for all to preserve this mode of fishing to be strictly enforced. I made a special report on this subject when visiting Lake St. Pierre, which is on the proper file of the department.

Special reports were also made after my visits to the Chateauguay division, where, owing to a misunderstanding, more licenses were issued than formerly, as of recent years it was the intention of our department to curtail netting as much as possible in both Lakes St. Francis and St. Louis. The Federal Government kept these waters for angling, trolling and night lines purposes only. Their proximity to the boundary line makes the upper part of Lake St. Francis a fashionable summer resort, so the residents in the vicinity of Dundee were more than surprised to learn of the issue of a license to a privileged individual for twenty-five hoop-nets and four gill-nets, who also claimed exclusive fishing privileges for about twelve miles of the lake coast. One night fourteen of these hoop-nets disappeared, and were either destroyed or perhaps used by the poachers in remote bays or creeks where they could more easily escape detection in their nefarious work. I also reported on the fishing districts of Yamaska, Richelieu and Ottawa rivers suggesting the recommendations I thought best for their preservation.

The different close seasons are now better observed especially in the Montreal districts. No fisherman would dare to bring any protected fish there during its close time. Generally fishermen now better understand that such protection is carried on for their best interest.

Without pretention of being an authority respecting close season for fish, I cannot help alluding to what seems an anomaly in the time fixed for maskinonge in Quebec, commencing on May 25 and ending on July 1, while in Ontario the season begins on April 15. That is, on one side of the Ottawa River, for instance, one can fish for maskinonge during five weeks of the close season on the other side. From what I have heard, these fish are done spawning by the time the close season commences. The Ontario season seems the right one, as these fish are reported spawning the last week of April and the first two in May.

I inspected several saw mills especially in the counties of Montmorency and Levis with regard to the escaping of saw-dust and rubbish in the streams, reporting specially in each case.

I took a hand at the distribution of fry in the lakes of Terrebonne county, and labelled some lobster cases for shipment from Montreal.

As instructed, I also held an investigation in the county of Rimouski respecting the payment of bounty claims for that district. As a result, over twenty-five per cent of the claimants were refused bounty for that year, the principal objections being that these parties were not genuine fishermen fishing for three consecutive months, but held other occupations, although capturing the required quantity.

ONTARIO.

Inspector A. G. Duncan of Marksville, who has been appointed for the Western division of Ontario, reports a falling off in the fisheries of the North Channel of Lake Huron from St. Joseph's Island to Little Current, where whitefish and salmon-trout are steadily declining and sturgeon being almost depleted, while pickerel are becoming the staple fish of the locality. This diminution is ascribed to overfishing with pound-nets of too small a mesh. On the south side of Manitoulin Island in the vicinity of Duck, Squaw, Fitzwilliam and Bustard Islands there will be an increase in the yield of whitefish and trout. Lake Superior will also show an improvement in the catch of its staple fishes. In Lake of the Woods district, the yield will be about equal to the previous one. Sturgeon seem as plentiful there as ever and it is stated that most of the caviare exported from the Dominion, now comes from that district.

Mr. Duncan recommends that a fish hatching establishment be located at Sault Ste. Marie, so well situated to serve both Lakes Superior and Huron. Many poachers took advantage of the unorganized state in which was the license system and enjoyed the best part of the spring fishing unmolested. The most of the illegal fishing in the eastern part of his division was carried on between Little Current and Bad River and in the vicinity of the Bustard Islands, also between Bruce Mines and the west end of St. Joseph's Island. On a single day four seines were seized and many doubtful boats in sight could not be overhauled, he is of opinion that he has somewhat checked the violations perpetrated in this vicinity.

At Rosseau's Point, Port Caldwell and in Jackfish Bay he found different parties with tugs and nets fishing openly. These were genuine fishermen, ready to pay license fees when called upon to do so by the properly authorized officer. He does not believe that the fall close season was well observed as nets of all kinds were used. Two boats and some nets were seized during this time. According to Mr. Duncan no nets of any kind should be allowed to be used during the close season for whitefish.

Inspector F. H. Cunningham, of Ottawa, submits the following report on the fisheries of the Eastern division of the Province of Ontario for the year ended 31st December last.

This division was formulated by order in council and comprises all that part of the province of Ontario east of a line coinciding with the western boundary of the counties of Durham, Victoria, Haliburton (including the waters of Lake Scugog) and the eastern boundary of the district of Muskoka and Parry Sound.

This division, whilst not so important from a commercial point of view, is very important from the angler's standpoint, the waters being frequented by nearly all the varieties of sporting fish of the finest kinds. It is important not only for rod fishermen that these fish should be protected but the community at large benefit very materially from the influx of sportsmen to the various fishery resorts, especially those opened up by the Parry Sound railway. Not only are these waters worthy of the best protection that can be provided, but artificial means should be taken by the department to increase the supply of sporting fish in these inland lakes. The Bay of Quinte affords splendid bass fishing and the neighbourhood affords good facilities for artificial reproduction of this species at a small cost.

The fisheries of the province being handed over to the local government just previous to the spring close season, the difficulties connected with the organization and appointment of an entirely new staff of officers made it impossible to prevent illegal fishing. Consequently all through the eastern division illegal work was done, This was especially the case at Rice Lake, where, owing to the location of the spawning grounds, fish can be very easily secured by poachers unless efficient protection is afforded. Fishing throughout this division has been good during the past season. Glowing reports have been received of the excellent fishing in Charleston Lake. This is attributed to the fact that considerable quantities of fry have been placed in these waters for some years past, and points to the success of artificial fish culture.

Whilst the most important fishing points of this district have been visited during the summer, a considerable portion has yet to be inspected, this refers mostly to inland lakes.

Considerable inconvenience has been caused, and in fact the work of the Dominion inspector has been retarded through the action of the provincial fisheries branch in neglecting to supply this department with a list of their officers, and also a list of the licenses issued. This information would greatly facilitate in the proper performance of the duties of a Dominion inspector.

Numerous objections have been made to the present close season for salmon trout, the claim being made that the first of November is too late, and the close

season should commence on October 15 and end on November 15. This would cover the spawning season for this species in the eastern district. From such proofs as I have been able to procure, I am strongly under the impression that steps towards changing this close season should be taken, and, if approved, I will make further inquiries in this direction during the coming summer, and will take some definite means to ascertain the exact time of spawning next fall.

Inspector O. B. Sheppard, of Toronto, says: The catch of commercial fish this year has been an exceptionally good one. In the Lake Huron and Georgian Bay district, the catch of trout has been considerably above the average, while that of whitefish, pickerel, herring and sturgeon has been fully up to the average. In Lake Erie the catch has been exceptionally good, the catch of sturgeon being considerably above the average, while all other kinds have been fully up to former years. The long open season has made the herring fisheries specially good, the late run being the best for years. Herring season usually closing about the last of November, this year has been prolonged on account of mild weather till the end of December, with very satisfactory results to the fishermen. The prices of all commercial fish have been maintained, and the fishermen in my district have had an excellent financial result. The good fishing this year can no doubt be traced to the excellent protection service of the Dominion government during past years, and I am sorry to say the provincial government has not during the past season taken such active and drastic steps to protect the fisheries as has been done heretofore, and if this is not remedied in the near future, we may speedily look for a diminution of the catch in this district. Of course the provincial government has only recently taken hold of the protection of the fisheries, and had not the experience of the Dominion government in this matter, and will probably, as the requirements become known to them, take more active steps than has been done in the past year.

Rod fishing for black bass, maskinonge and brook trout has not been nearly so good as in former years, due, in my opinion, almost entirely to the want of proper protection. This part of the protective service has been sadly neglected in the inland lakes and Georgian Bay district, and if not looked after more carefully in the very near future, will result in thousands of tourists staying away from our northern inland lakes, and the loss of a great amount of money which they yearly spend for fishermen, guides, boatmen, hotelmen, and other expenses.

NORTH WEST TERRITORIES.

Inspector E. W. Miller, of Qu'Appelle, says:—'The general condition of the fisheries in the North-west Territories is reported on favorably by nearly all the local officers; but there has been a falling off in the amount of fishing done in the more settled districts owing principally to the great demand for labour in other branches of industry. The heavy rainfall of the season cannot fail to have a very beneficial effect on fish life in the smaller rivers and lakes, many of which had become so diminished in volume as to drive all fish from them. The rivers continued in flood for a lengthy period and the usual destruction of spawning fish by traps, &c., was thus almost wholly prevented. The few whitefish lakes in Assiniboia are much in need of restocking with fry, former adverse reasons and persistent fishing having much

depleted them. The large Northern Alberta lakes, particularly lakes Ste. Anne and La Biche, have made most satisfactory progress and promise to soon recover their old time prolificness. The fisheries in the Prince Albert district are in good condition but owing to the cessation of the export trade, considerably less fishing is done than formerly. It was found necessary to close the Cedar Lake sturgeon fishery for the summer, the great demand for caviare tending to encourage more fishing than is consistent with the permanent preservation of this valuable fishery.'

BRITISH COLUMBIA.

C. B. Sword, the recently appointed inspector of fisheries for British Columbia reports as follows:—'The pack of salmon for this year has been considerably (more than 50 per cent) above that of 1898 though not reaching the pack of 1897 by 250,000 cases. There has as in 1898, been a considerable shipment to Japan of dry salted salmon of varieties (the 'dog-salmon' and 'humpback') formerly looked upon as of no commercial value. Some of these have been put up by some of the packers in cases as an experiment with very encouraging results. The business of exporting fresh salmon in cold storage also shows a satisfactory development, there being an increase of about 1,000,000 lbs. over the amount exported in 1898. Of barrelled salt salmon the amount is 850 barrels more than in 1898. The catch of sturgeon has fallen off considerably, being only 278,650 lbs. as against 1,137,000 lbs. in 1897, and 770,000 lbs. in 1898. Only one company is engaged in the business of shipping halibut. They report the result of their year's operations as very satisfactory. Four additional canneries were established on the Fraser River in 1899, and there will probably be several built at different points on the northern coasts during the coming season. The salmon fishing is the only fishery in British Columbia which can be considered as having been prosecuted to anything like its capacity, our deep sea fisheries being still practically untouched.'

PARIS EXHIBITION, 1900.

The Department of Marine and Fisheries is taking its part in preparations for an adequate display of Canada's vast piscine wealth at the Paris Exhibition, 1900. Several shipments of cases containing specimens of fish, aquatic birds, fishing products in great variety, have already been made to France, and the exhibit is not only designed to be illustrative of all the marine and fishery resources of the Dominion, but will be so arranged and displayed as to attract wide attention, and to form, it is anticipated, a notable feature in the representative displays of all nations, thus acting as an educational agency, and a means of disseminating broadcast a knowledge of the products of the Dominion.

I have the honour to be, sir,

Your obedient servant,

F. GOURDEAU,
Deputy Minister of Marine and Fisheries.

SPECIAL

APPENDED REPORTS

BY

PROFESSOR E. E. PRINCE

Dominion Commissioner of Fisheries

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1. WATER POLLUTIONS AS AFFECTING FISHERIES.
2. NEGLECTED STRUCTURAL FEATURES IN YOUNG FRY.
3. THE OBJECT OF A CLOSE TIME FOR FISH.

1899

SPECIAL APPENDED REPORTS

I

WATER-POLLUTIONS AS AFFECTING FISHERIES

BY PROFESSOR PRINCE, COMMISSIONER OF FISHERIES, OTTAWA.

Fishery legislation in different countries bears testimony to the importance universally attached to the evil effects of water-pollution upon fish life. Clauses are, as a rule, found embodied in codes of fishery regulations, with the object of directly or indirectly preventing the poisoning and polluting of waters inhabited by fishes. Yet the true relations of the various polluting agencies to the conditions of fish-life are little understood generally, and the nature of diverse injurious influences, the different modes in which foreign matters affect the finny tribes, that is to say, the comparative harmfulness or harmlessness of what are known as deleterious matters, have never been thoroughly and exhaustively tested and investigated. There can be little doubt that many ideas which are prevalent upon this subject have little basis in fact, and it is unquestionable that many well-meant attempts to cope with the supposed evils of river- and lake-pollution have been made without adequate knowledge. The object, of course, is to prevent the wasteful and wholesale destruction of fish, whether by design, or by negligent poisoning of waters: but the question remains to be decided as to what agencies, usually called pollutions, are really harmful to fishes and harmful in such a degree that serious and extensive destruction results. In England the existing laws are extremely severe upon this matter, but no doubt cases continually occur in which it is difficult, if not impossible, to prove clearly that the fisheries are injured, and, as Sir Frederick Pollock has pointed out, offenders may evade the law, or at any rate escape the penalties, if steps have been taken to render innocuous the alleged deleterious substances which have caused the pollution. As the authority named says:

"Dynamite or other explosives must not be used to catch or destroy fish in a public fishery in any part of the United Kingdom, or in the adjacent seas within a marine league of the coast, nor in a private fishery in England, on pain of fine up to £20 or imprisonment, which may be with hard labour, up to two months. The poisoning of any salmon rivers, as well as of any waters where there is a private right of fishery, with "any lime or other noxious material," in order to destroy fish, is an offence punishable with penal servitude up to seven years. Pollution of salmon rivers "to such an extent as to cause the waters to poison or kill fish" (though not intended to have that effect) is punishable by fine on an increasing scale, ending in £20 a day after a third conviction. But the party may escape these penalties, if his act in sending refuse, or whatever it may be, into the river, is not otherwise unlawful, and he can show that, being thus in the exercise of his right, 'he has used the best practicable means, within a reasonable cost, to render harmless the liquid or solid matter so permitted to flow or to be put into waters.' Probably it is not difficult to satisfy justices of this in a manufacturing district; again, if the stuff poured into the river is so noxious that there are not any practicable means at all of rendering it harmless, it is by no means clear whether any penalty is incurred. The person complained of may also, if a decision against him would cost him more than £100, require an action to be brought in the High Court of

justice to settle the question whether he has used the "best practicable means," and it is not hard to guess what, on such a question, the bias of jurymen in a manufacturing country is likely to be."

Briefly stated, pollutions, so far as rivers, lakes and tidal waters are concerned, may, in their nature and effects, be physically or mechanically deleterious, like sawdust or the mud and gravel resulting from hydraulic mining, or they may be chemically injurious, and in a larger or less degree poisonous, like lime, drugs, waste of dye works, pulp and paper mills, etc., or they may be physiologically deleterious, but not toxic in the gravest sense, inducing unhealthy conditions in the fish, such as appears to result from putrescent matter, sewage, decaying animal and vegetable substances, etc. The Canadian Fisheries Act aims to include all these, and subjects to specified penalties every person who causes or knowingly permits to pass into, or puts or knowingly permits to be put lime, chemical substances or drugs, poisonous matter, dead or decaying fish, or remnants thereof, mill rubbish or sawdust or any other deleterious substance, in any water frequented by any of the kinds of fish mentioned in the Act, Chap. 95, 1886, s. 15, ss. 2, amended by chap. 51, 57-58 Vict., s. 6.

It is not necessary to prove the deadly character of the polluting substances. The provision does not, however, apply if it can be shown that the fish inhabiting polluted waters are of inferior kinds, not mentioned in the Act or regulations under it. Thus, injury to eels or fresh-water ling is not included, but the prohibition applies in waters inhabited by salmon, trout, etc., and it is interesting to note that it embraces the triple division of injurious substances, to which I have alluded, for lime, chemical substances and drugs belong to the essentially toxic or poisonous group, sawdust is really a physically deleterious agent, and the other undesirable substances may be said to include pollutions which affect fish life in ways differing from those directly destructive to life, or physically noxious and morbid in effect.

For many years it was thought that the deadly fungus, commonly called salmon disease (*Saprolegnia*), was due to river pollutions, which were supposed to encourage if not to originate the aquatic saprophyte. Researches have shown that this is not the case, and outbreaks of salmon disease have repeatedly occurred in waters in which there was no special pollution whatever. Not only so, but the detested fungus frequently appears first in the upper waters, and it is indisputable that salmon on entering rivers from the sea are without exception in a healthy condition. Water in which lime is present in appreciable quantities appears very favourable to the growth and development of fish fungus, but the plant cannot originate unless the spores are there either as minute oospores, or as zoospores, which are really a very early stage of the fungus growth. The spore germs multiply and disperse so rapidly that the infection of every fish in a salmon river may be effected in a comparatively short period—healthy fish as well as weakly and injured fish, though the latter are attacked more readily.

But deleterious substances differ not only in themselves, so far as their direct influence upon fish life is concerned, they also vary in their injurious potency according to the circumstances and the places where introduced. Substances may be seriously harmful in a slow-running river, which are comparatively harmless in a swift stream, and I cannot fully agree with the view of certain eminent authorities that it is little or no advantage to keep pure and free from pollution the upper waters if the lower waters and estuaries are allowed to be filled with impurities. Indeed there is force in the contention of Boccius that 'the true cause of the depletion of rivers originated and begun in the destruction of the egg, and not in the fish, when once brought into being.' The experiments of Mr. A. Hansen, on the Norwegian River Soli, in 1872, prove that unfavourable conditions in the lower waters are of far less moment than they are in the shallow headwaters, as Prof. Rasch has pointed out in his paper entitled 'Is sawdust an obstacle to the ascent of fish?' The estuaries of certain rivers on this continent are polluted with saw-mill waste, etc., yet the injury done does not compare with that which would follow the pouring of saw dust, edgings, etc., from the mills into the upper waters. Such waste would cover the spawning areas, where the eggs are deposited and where the fry pass their first days. The Fraser River, B.C., has for twenty years been polluted to a frightful extent with

the refuse and offal from dozens of large salmon canneries. This offal composed of heads, fins, tails, entrails and fragments, which it does not pay to utilize, is dumped into the water near each cannery. At first it sinks, and then it rises to the surface, chiefly on account of the expansion of the gases formed in the swim-bladders and intestines. A prominent New Westminster fisherman, who gave evidence before the British Columbia Fishery Commission, 1892, (printed at Ottawa, 1893), said: 'I think at the mouth of the river its effect is very bad. Down there it floats and lines the banks and gets foul of the nets—heads, guts, etc. It destroys the nets more than the salmon do and makes the water filthy—not fit for use unless cooked.' Many fishermen on the Fraser River hold these views, and claim that it deters the fish from coming in. But it is by no means established that it is detrimental to the incoming schools of fish. The Joint Fisheries Commission, 1896, indeed reported as follows on this question:—'The cannery people everywhere are confident that no harm results from their method of disposing of the offal, unless it be in certain restricted areas where the eddies cause its retention for a time. During the greater part of the canning season the volume of water in the Fraser River is large, its temperature is low and the current strong. The offal in a fresh condition is said to sink at once and to disappear. The inhabitants, generally, along the river oppose the practice on the ground that it is injurious to health, from which standpoint, however, the question is not of international significance. With respect to the open waters of the Sound, we have heard of no complaints regarding this matter, although some of the offal is known to wash ashore in places. No evidence has been obtained which shows that the throwing in of the offal has had a pernicious effect upon the movements or the abundance of the salmon. If such an effect has actually been produced, as may be the case it has not, up to the present time, made itself sufficiently manifest to bring it within the scope of observation. We are led, however, to deprecate the continuance of the practice for local reasons at least, and would urge further experiments looking to the utilization of the offal as an incentive to its retention on land.'

In the cod and mackerel fisheries, as well as in the lobster canning industry, great quantities of offal are as a rule accumulated, which are dumped into the sea close to the places where the fishing or the canning is carried on. So vast was the quantity thrown into the inshore waters along the Labrador coast and the north shore of the Gulf of St. Lawrence that a special prohibition was enacted to prevent the abuse which, it was claimed, was driving the schools of cod away. Along the shore referred to the cod come in very close in immense schools, and are taken to a large extent in fixed traps or pounds. A similar injury was said to have been done to the schools of mackerel off the Atlantic coast of Canada, especially by United States mackerel schooners, which cleaned and split their fish on board and threw over the 'gurry.' The harm done by lobster canneries has no doubt been exaggerated, as the quantity of foul refuse is limited as compared with the 'gurry' from fish curing operations.

Taking up the question of water pollution as produced by agents which are essentially physical or mechanical in their effects, and which do not in any degree, or in a very small degree, act as chemical poisons, or as physiologically harmful, it is doubtful to what precise extent such physical agents, say, suspended particles of sawdust, or gravel, injuriously, affect fishes in the adult condition. It is true a widespread impression prevails that such suspended foreign matters are most harmful. This impression has little accurate or scientific basis, but it has been stated and restated with the utmost confidence. Thus in a report of this department published in 1889, Part II, p. 12, the following emphatic expression of opinion appeared:

The poisonous effects of sawdust, when allowed to pass into rivers and streams, are so manifold and self-evident to the rational or practical observer, that it would appear almost needless, in the present enlightened state of the world, to require any special pleas or arguments to convince even the most sceptical person of its disastrous workings upon all aquatic life, of an animal or vegetable character, found in the tidal, lacustrine or fluvial waters of any country. Wherever mill-dams have been built across streams, and where sawdust, mill rubbish and other deleterious substances have been cast into the water from saw-mills and other manufactories,

fish-life and vegetation of all kinds have been greatly lessened, and in many instances wholly destroyed. This is particularly noticeable amongst the higher order of fishes, especially the salmon family, which are largely of a migratory nature, many of them ascending rivers and other streams for breeding purposes. These waters are usually of the purest, coldest and most limpid description, and therefore best adapted for the propagation of the salmon species. These fish at the time of the first settlements of Canada were found frequenting almost every river and stream emptying into the sea, and the great lakes also. So plentiful were they in many of our waters, before the lumbering industry took such a strong hold in the erection of dams and saw-mills, with the consequent injurious effects from them upon fish-life that fish of all kinds were in great abundance. They were freely used by the inhabitants generally for domestic purposes, and also produced a large amount of traffic and commercial wealth for the country. But as the saw-mills and mill-dams increased in numbers with greater capacity for their work, the mill-dams formed impassable barriers to the ascent of salmon and other fishes to their natural spawning grounds above—and then the hurtful and pernicious effects arising from the sawdust and mill rubbish being constantly cast into the streams poisoned the spawning beds below, and stayed the growth of all vegetation, thus driving away insect life, which is the principal sustenance for fish in their younger stages of existence. As this improvident work of the mills increased in magnitude, so did the yield of all kinds of fish decrease in these waters until it has been found in some cases that, after stripping the neighbourhoods of all lumbering material and destroying all fish-life, these mills have gone into ruin and decay, leaving sorrowful mementos only of their destructive workings in the waters of the country for the inhabitants who follow after. It is, therefore, of the greatest importance that any law which provides 'that sawdust or mill rubbish shall not be drifted or thrown into any streams or other waters frequented by fish, should be maintained and strictly enforced wherever the continuance of fish life is held to be of any benefit to the people. There are yet to be found sufficient numbers of fish, natives of the rivers and other waters, left, from which, by proper protection and good husbandry, an immense supply of fish food and commercial wealth would be readily obtained for the general benefit of the inhabitants of the several sections of the country. Sawdust, as previously stated, is manifold in its range of destruction when allowed to be cast into waters to which fish are indigenous, or where animal or vegetable life is to be sustained. It is an artificial product, alien to and engendering latent diseases of various kinds, with fatal results in all waters where fish life exists.'

That mill-dams and other obstructions seriously damage rivers and waters resorted to by fish cannot be questioned; but this damage would be done even though no sawdust whatever were thrown in them. Further, the contention that sawdust in the streams is offensive to the fish and has caused them to forsake their accustomed haunts, as Dr. Milner some years ago claimed, has never been proved, whereas there is abundant proof that most fishes are not deterred by the floating particles of saw-mill waste. In the New Hampshire Fishery Commissioner's Report for 1885, it is asserted that harm arises from 'the sawdust getting into the gills of the parent-fish'; but there is no case on record of salmon, or shad, or any other healthy adult fish, being found choked with sawdust or in any way fatally injured by the floating particles.

When I accompanied for a time in 1893 the International Commissioners, at the request of the Hon. the Minister of Marine and Fisheries, nothing astonished me more than the extent and serious nature of the sawdust pollution on certains tributaries of the St. John River in New Brunswick. The main river is largely subject to this pollution, but not in any degree to the extent that obtains on some of the tributary rivers. The Aroostook River, which for over 100 miles runs through the State of Maine, and only during the last four miles of its course passes through New Brunswick is a flagrant example. Some of the largest lumber mills in that part of the country occur on its banks, and the lumber industry is of immense extent. Nothing could be worse than the condition of this fine salmon river, and a common opinion prevailed that no salmon could or would ascend it. Yet at the time of the commissioners' visit quite a number of salmon had been noticed a little above Cariboo and a

fish-ladder had been provided to enable them to ascend an impassable dam at that point. Fairly large catches of salmon have been made in recent years, notwithstanding the view common a few years ago that sawdust pollution had driven them all away. This pollution is excessive, and, 'except for the small amount consumed by the steam mills, the river is made the common dumping ground for all the waste of this character," said the Commissioners 'as the most convenient way of disposing of it, no regard being had to the public interests which are thus impaired.' Robust species like the salmon, sea-trout, brook trout, striped bass might not suffer harm, provided, as they are, with capacious mouth and branchial cavities: but it might be different with members of the herring tribe (Clupeidae), the shad, gaspereau, etc., with their small mouth-aperture studded with rows of erect teeth on both jaws, on the palatine bones, the vomer and the tongue, and provided with small rod-like gill-rakers, all combining to form a cage or sifting apparatus for retaining small shrimps and crustacea upon which they so largely subsist, for these fishes might apparently be readily choked by particles of sawdust clogging up their delicate oral structures. I have not been able to find, however, that any shad, gaspereaux or other migratory members of the herring family have been found dead in quantities on account of sawdust suffocation. In other words, so far as our present knowledge goes sawdust pollution if it does not affect the upper waters, the shallow spawning and hatching grounds, appears to do little harm to the adult fish in their passage up from the sea.

This opinion I find on reference to the Report of the United States Fish Commission Part VI, 1878, was expressed by Dr. H. Rasch when treating of the sawdust question in Norway. Professor Rasch is very explicit in the statement of his views, and does not shrink from claiming that 'while it is asserted that the sawdust introduced into the river from the saw-mills causes the salmon coming from the sea either to forsake its foster stream because of meeting the sawdust, to seek another river not polluted, or else, when the fish attempts to pass through the areas quite filled with sawdust, then this, by fixing itself in the gill-openings or between the gills, causes its death, yet later experience seems to entitle us to the assumption that sawdust neither causes the salmon to forsake its native stream nor produces any great mortality among the ascending fishes. The hurtfulness of the sawdust to the reproduction of the salmon is not so direct, but is exceedingly great in this, that it partly limits and partly destroys the spawning-grounds of the river.'

He goes on to give certain details of an experiment upon the effect of sawdust on young salmon transplanted from one river to another which was much polluted with this waste product. He says:—

'That young salmon bred from a race of salmon which has its own river, when they are set free in a strange river and one which is in an unusual degree polluted by sawdust, will not be prevented by this circumstance from returning to this last-named stream after their wandering in the sea, one had a convincing illustration in the great experiment instituted last year by Director A. Hanson. In olden times the salmon-shoal which had its spawning-place in Soli River could ascend to it through the then passable Soli cataract, but when they, for the sake of the increased mill-business, erected above the cataract a dam so high that the salmon could not ascend to their spawning-grounds, this salmon shoal gradually died out entirely.'

The conclusion to be drawn from such statements and experiments is this, that the gravest cause of the decline in most salmon rivers is due less to sawdust pollution which except in the breeding grounds, has principally a merely mechanical or physical effect, than to the mill-dams and other obstructions which prevent the parent fish from ascending and successfully depositing their eggs. If access is free to upper portions of salmon rivers usually less affected by sawdust and mill waste, the parent fish are not readily deterred by the pollution of the lower reaches of such rivers. The ruthless destruction of spawning fish by poachers and reckless netting is largely responsible for the decline of salmon in most cases. The question of decayed sawdust, and the effluvia resulting therefrom, is another matter. Aquatic vegetation and the minute forms of life dependant thereon are seriously injured and indeed killed off. That admits of no doubt, but this is not of great moment in regard to salmon and similar fishes, which cease to take food after entering fresh water. How far sawdust affects the smaller species of fishes is an interesting

question, and the late Frank Buckland, in some notes in which he bitterly opposed the pollution of rivers wrote:

'How very important, then, is it to keep pollutions out of salmon rivers; they may not be actually strong enough to poison or kill the fish, yet it is very likely they will deter many from ascending the river.

I think different fish must have different powers of smell; thus gudgeon, roach, &c., assemble at the mouths of drains—the largest I ever caught was in the drain that carries the abominations of the town of Winchester down into the river. Scavenger fish, therefore, I dare say, would not care much about stinking water, but the lordly salmon will not put in an appearance in localities where his regal nose is likely to be offended by unsavoury smells.'

The presence of small species of fish indicates the presence of microscopic food, and if that kind of food be present there is little doubt that the young salmon, if the upper waters be kept pure and unpolluted will survive their journey down to the sea when one or two years old.

On the whole therefore it cannot be maintained as proven that such pollutions as sawdust are seriously detrimental to the ascent and welfare of adult fishes. In the North-west Territories certain coal mines have begun to pour out dust and coal refuse into tributaries of the Bow River and other trout waters. It remains to be seen what kind of injury, if any, will be done to the various species of trout frequenting the rivers flowing from the Rocky Mountain Range.

Certainly it is hardly possible that any rivers in the world are more densely charged with physical impurities than the Fraser, the Skeena and other Pacific rivers. The muddy character of these great rivers always surprises the visitor, who has heard of their pre-eminence as salmon rivers, and the ideal salmon rivers are sparkling crystal waters. These Pacific rivers are vast streams of dilute yellowish brown mud. No contrast could be greater than that of these western salmon rivers and the bright and clear waters of Eastern Canada, or of Scotland and Ireland. Yet the physical impurities of the Pacific rivers have no apparent effect upon the fish, which blindly push their way up the beclouded current until they reach the purer upper waters. The fish can practically see nothing in their ascent, nor can they be seen by man except in some shallow eddy, where their black backs are visible protruding from the mud-laden water in which they are living. The muddy character of these salmon rivers enables great quantities of floating drift-nets to be used, and the schools of fish in their endeavour to ascend push their noses against successive walls of nets and as the meshes become filled with noosed fish, the rest descend and pass under the net only to mesh in the next net further up, and only those which pass net after net in this way reach the waters above fishing limits and continue their ascent up the descending murky current for hundreds of miles. These rivers are fed by tributaries which pour through channels of gravel, gravel famous for the rich intermixture of gold, so that the waters are yellow and turbid for great distances and it is only in the lakes and small upper tributaries that the water is free from diluvium.

The evil effect of this diluvium and of deposits of sawdust falling upon spawning grounds must be admitted, and the killing off of fish-food is another serious aspect of the matter, though this latter question, as already pointed out, is of minor account in regard to salmon rivers. An illustration of the alleged far-reaching effect of sawdust pollution may be found in the Bay of Fundy. In the vast upper stretches of this bay immense schools of 'fall' shad resorted in August to feed. The food, it was generally thought consisted of annelids or shad-worms. In recent years the shad have fallen off so seriously that the fishery is of little account compared with its former extent and value. Sawdust it is claimed floating out of the mouths of New Brunswick and Nova Scotia rivers, has been deposited by the tides upon the feeding grounds, and the shad-worms or food of the shad has been destroyed. This may or not be the case, though I have seen the surface of the sea in the Bay of Fundy covered for many miles with floating sawdust; but it must also be remembered that overfishing in the rivers in spring, when the shad are ascending to spawn, the stoppage of their ascent by dams, etc., must have had some effect, while the ruthless

slaughter of emaciated and weak specimens in their descent after spawning has no doubt had much to do with their decimation.

Chemical pollutions are so varied and complicated, and their evil effects, though admittedly evil, are so diverse that they cannot be dealt with here as briefly as purely physical impurities. Examples could be cited almost without number of the deadly and disastrous effects of deposits of waste chemical substances in rivers. All the rivers in the great manufacturing districts in England and the United States once abounded with excellent fish, but they were used as mere drains for the reception of foul refuse of every description, and these waters were so loaded with offensive and poisonous matter that all fish life has practically disappeared. Scarcely one river can be named in England which is not at some part of its course chemically poisoned, and the inky black noisome rivers of West Yorkshire, of Lancashire and Cheshire are evidence of the direst extreme of chemical pollution, while the southern part of Scotland (except the extreme south-west) and Clyde basin, and the eastern part of Scotland from Dundee to Aberdeen, embrace portions whose rivers are largely contaminated by distillery refuse, tan, fibre, chemical and sewage pollution. The evidences of chemical pollution where it is disastrous should be readily seen. Schools of fish would of necessity be found floating in a dead or dying condition and in course of time the waters would become clearly uninhabitable and denuded of all fish life. The corporation of Newcastle-on-Tyne some years ago poisoned Byker Burn by using a disinfectant of which caustic soda was a principal component. A flood in July carried some of the poisoned water into the Tyne, and for eleven miles every kind of fish was found floating dead or in what was called a 'fuddled' or intoxicated condition. Caustic soda or soda leys is used in many industries, very largely for the purpose of dissolving resinous matters in grass and wood fibres. The dark-coloured fluid (soda and lime) which results is highly poisonous to fish and settles as a deadly putrescent sediment unless swept away by swift currents. If the fish survive, their quality, flavour and colour appear to be transformed. Indeed Mr. Harvie Brown has pointed out that they become utterly unfit for food. The chloride of lime used in bleaching works gives off a pungent and penetrating odour, and has exceedingly disastrous results upon fish life.

Chemical pollutions, as already stated, cannot be dismissed by any inclusive or general statement, though the noxious character of such impurities largely depends upon circumstances. The amount and the possibilities of dispersion and dilution must be taken into account, and it is certain that in some cases (as in bleaching operations) the waste liquids, if commingled, must tend to neutralize mutually their injurious effects. The alkaline and soapy solutions, and the admixture of calcium chloride and of bleaching powder and certain free acids, furnish precisely the elements necessary for neutralization and purification. The chloride of lime will precipitate the soapy solutions, while the free acids will precipitate the alkaline liquids and decompose the bleaching powder solutions. Advantage has been taken by some enlightened firms of this state of things, and without great expense they have adopted an arrangement for purification by mingling in ponds or tanks these antagonistic and neutralizing waste products. The chemical pollutions resulting from various manufactures are too numerous to refer to with any pretention to detail, but a number of more important examples may be mentioned as of special importance. Thus in paper making soda ash or caustic soda is largely used, resulting in a waste fluid of a dark brown hue charged with soda and lime and a certain amount of fibrous and resinous matter. This heavy fluid is harmful both chemically and physically, for it is poisonous, and of a nature so adherent that it lodges in and clings to the gills of fishes. Chloride of lime is also poured out from paper works, where white papers are made, calcium chloride being the bleaching agent used, while colouring matters are added to the waste in factories where blue and tinted papers are made. In recent years many other substances, china clay and mineral matters are mixed with paper pulp, all of which render still more injurious the waste fluids poured into the rivers.

Any one familiar with Yorkshire, Wiltshire and the west of England is well aware that the refuse from the wool-scouring, fulling, and dyeing works is of a most poisonous and polluting nature. The grease and impurities removed from the wool

as removed from the fleece are of a foul character, but still more so the refuse, a disgusting glutinous fluid, full of solid matter and rich in ammonia, which results from the subsequent process in the scouring mills. The streams into which scouring mills empty their waste becoming murky and filthy in the extreme, a stratum of hair slime and effluvium, which must choke even the strongest species of fish. Almost every stage in the various processes of textile manufacture is marked by some additional danger to fish-life. Thus the use of dyes is so extensive in some of the northern and western counties of England, that the rivers flow like streams of variously coloured ink. Many of the dyes, especially the aniline dyes, are less harmful than others, but the waste products of dye works are composed not only of fluids charged with extract of logwood, of indigo etc., but of chemical compounds used in the fixing process, called 'mordants' which may be bi-chromate and bi-tartrate of potash, muriate of tin, copperas, and these together with woolly fibres, and particles of logwood form a mixture of organic and inorganic impurities rendering even the larger streams densely turbid and deadly to fish-life. The bed of such streams becomes saturated with decomposing organic substances, and bubbles of putrescent gases continually rise giving off most offensive odours. Other textile factories such as calico print-works and bleaching houses produce similar waste products including mineral and vegetable dyes, and in a great many cases arsenic, while hydrochloric acid, sulphuric acid and chlorine occur, all of which are inimical to fish-life. Associated with the woollen and cotton-print industries there are others like the flax industry, carried on especially in the north of Ireland, which includes the process of 'retting'. Retting is really the dissolving either by a wet or dry process of the bark and other outer substances from the firm fibrous inner tissue, which is of value for textile purposes. When the flax or hemp is placed, as is largely done, in streams and ponds weighted with stones and allowed to reach a certain stage of fermentation, a dark colour is imparted to the water, and poisonous gases are given off. Professor Reichardt, referring to the retting process said:—

'Taking finally into consideration the fact that 1,000 cubic centimeters of retting water contained sixty-four cubic centimeters gases, whilst repeated experiments with river water showed that the same contained only 30·32 cubic centimeters, the fatal character of the mixture will become still more apparent in its relation to the breathing and life of fish.

'It cannot be doubted, therefore, that retting water will kill fish by its lack of oxygen, if from no other cause. In this all observations made on a large and small scale will agree. The fish immediately gasp for air until they become tired, and finally suffocate. Even leaving this hurtful mixture of gases out of our calculation, it must be granted that putrefying substances must exercise a hurtful influence, both directly by producing changes which are injurious to life, and indirectly by rapidly absorbing oxygen, and thereby depriving the surrounding objects of this gas which is so essential to all life.

'If only small quantities of retting water are mixed with large quantities of running water there may be no immediate evil consequences, whilst if this proportion is reversed the injurious consequences will make themselves felt very soon; in either case, however, poisonous substances are introduced in the water which had better be kept out of it.

'The introduction of retting water into fishing waters should therefore be strictly prohibited, and has actually been prohibited in many places. The retting water may be employed much more suitably in irrigating meadows, where, owing to the loose soil, it loses its putrid character very soon, and aids in forming good food for plants.'

One observer who paid considerable attention to the features observed in 'retting' flax, noted the direct poisonous effects upon the fishes inhabiting the 'retting' waters. He says:—

'As soon as the retting of the flax commences, the water begins to assume a brownish colour and to emit an offensive odour. This colour and odour increase in intensity from day to day, till the water has the colour of coffee, and the odour becomes so repulsive that I have often gone one-half league out of my way so as not to be obliged to pass near such water, especially in the morning and evening. The drier

and warmer the temperature, the more intense will be the odour and the infection of the water.

'Whenever the water has attained a certain degree of putridity all the fish will strive to reach the bank, gasping for air, and in such a state of torpor that they can easily be caught with the hand. If they do not speedily get fresh, pure water, they die, and remain lying on the bank, where they serve as food for birds, or are caught in the grates of mills, from which they are gathered, only to be thrown away.

'At one station I have known years when fish of all kinds were picked off the mill-grates by the hundred-weight, some dead and some alive.'

Curious cases are on record, happily very few, of the destruction of fish by poisoning or asphyxiation, or in some other way arising from natural causes, specially the impregnation of water with toxic vegetable matters. On the great lakes of Canada there is annually a great devastation of fish, principally a species of *Clupea* commonly called shad or alewife, though the former name is wholly incorrect. The fish are practically identical with the gaspereaux which ascend the St. John River and other rivers on the Atlantic coast. It is stated that the fish were introduced artificially many years ago. To quote from the International Commissioners Report, 1896:—

'The alewife is supposed not to be indigenous to Lake Ontario, and the manner of its introduction is not known, but it now seems to be quite firmly established there, and is exceedingly abundant. It has no market value, although it is used to some extent as bait and fertilizer, and is supposed to furnish a large part of the food supply of the lake trout, wall-eyed pike and other species. It is said to spawn along the shores and to some extent in the creeks during the spring. This species has attracted special attention on account of the remarkable mortality which annually affects the schools. Large quantities of the dead fish become stranded upon the shores to the great annoyance of the inhabitants, and the fishermen believe that the pollution of the water and fouling of the bottom by this cause has had much to do with the depletion of the whitefish.'

Some authorities have thought that an excessive amount of vegetable matter, plant-spores, etc., which so charged the water as to impart to it an opaque green colour for a time in summer, is the cause of this mortality. I have found along the great lakes a similar mortality amongst yellow perch, white and black bass, and many small species, evidently due to a poisonous or noxious condition of the water at particular seasons of the year.

In June, 1895, a Quebec journal *L'Electeur*, published a letter addressed to Sir J. M. Lemoine by Mr. Gustave Ouimet, describing a fatal epidemic which had ravaged the fish in the Richelieu River and neighbouring waters. From the widespread character of the mortality amongst the fishes it would seem justifiable to regard the fatality as due to some temporary noxious condition such as might be expected in sluggish and turbid waters, especially during the hot summer months.

The following extract from Mr. Ouimet's letter shows that the disease or affection was not confined to the skin, upon which large round sores, red and white in colour, appeared; but the viscera and interior of the fish appeared to be destroyed, and there appears little evidence to support his theory that the cartridge and gunpowder factory on the banks of the Richelieu River, Vercheres Co., P. Q. was the primary cause of the malady. If these waters, like the more westerly waters of Ontario are temporarily rendered impure, and unfavourable to fish-life during the warmer months of the year by reason of minute vegetable matter, possibly microscopic spores of algae, and lowly plants, the widespread mortality referred to is explained, and the appearance of whitish or reddish sores upon the exterior of the fish and the decay of the internal organs are to be understood as subsequent and secondary results. The following extract from Mr. Ouimet's letter shows the view taken by that gentleman:—

"Il y a quelques années la cartoucherie de Bélœil faisait des expériences malheureuses dans la rivière Richelieu. Il s'en est suivi que des centaines de poissons de toutes espèces petits et gros ont été détruits. Les rives du Richelieu devinrent bientôt couvertes des cadavres de ces malheureuses victimes et la pêche est devenue de plus en plus rare. Depuis ce temps-là les Campbell avaient fait prendre au filet

des poissons de la rivière pour empoissonner le lac de la Montagne. Aujourd'hui le lac regorge de poissons morts et tous les jours on est employé à enterrer les poissons qui viennent mourir et s'échouer sur ses bords.

Je conclus de là, que les poissons tués jadis par la poudre ont été dévorés par des parasites inconnus et que depuis ce temps-là il s'est déclaré une épidémie sur la gente aquatique de nos parages. Les rares poissons vivants que l'on peut prendre à la ligne sont presque tous atteints du mal que l'on reconnaît à une tache, quelque fois deux, une près de l'épaule et l'autre près de la queue.

Dans ces taches se voient à l'œil nu des myriades de petits rongeurs cancéreux qui certainement sont les principaux auteurs du mal. Tout ce que je trouve de poissons morts sur notre grève je le fais enterrer profondément et couvrir de chaux.

Les parasites ne laissent que la peau—l'intérieur du poisson est complètement mangé. Le résultat de tout ceci est, que nous n'avons plus de pêche, que la chair du poisson de notre rivière est dangereuse à la consommation et que de nos rivages s'exale une odeur putride qui soulève le cœur.

Je regrette de n'être pas assez connaisseur pour apporter un remède au mal, et c'est pour nous un grand malheur d'être privés de la pêche qui était si abondante jadis. J'oubliais de vous dire qu'au lac de la Montagne c'est la barbue qui en souffre le plus, dans la rivière toutes les variétés de poissons sont atteintes: carpes, brochets, dorés, achigans, esturgeons. J'ai vu un cadavre d'esturgeon de près de sept pieds de long et pesant à peu près 80 livres, mort, couché sur le dos et atteint sur le ventre de plusieurs des taches dont je vous parlais plus haut, grandes comme des pièces de dix cents, quelques-unes blanches, les autres blanches et rouges; c'est désolant."

Various investigators have described diseases of the integument of fishes due to extremely small parasites belonging to the myxosporidia. These protozoan parasites, as a rule, cause excrescences in the form of pimples and warts, quite unlike the ulcerated and fungus-covered sores due to vegetable affections or to the special morbid condition of organs due to entozoan parasites. There is ground for regarding the unhealthy state and extensive mortality of fishes in the before-mentioned cases as induced by unfavourable conditions and by an environment not merely morbific but toxic and fatal.

About twenty years ago there was a serious mortality extended over a very wide area amongst the sea fishes in the Atlantic ocean, to the north of the Mexican gulf. This mortality was by many authorities attributed to the poisoning of the water by injurious vegetable matters, though others held that some volcanic or subaqueous disturbance had worked the evil. The captain, who first reported the occurrence, said that on his trip from Cedar Key he encountered a wide streak of poisoned water, covered with all varieties of dead fish, of more than a mile in extent, off Indian Pass, between Clear Water and Egmont Light. A very offensive smell arose from it, and a good many bottom fish, such as eels, were floating dead on the surface. A Tampa journal said:—'We opine that this fact upsets the theory of some as to this poisoned water being fresh water from overflow on the mainland, impregnated with poisoned vegetable matter, as there are no streams of any size flowing into the Gulf near where the fish were found.'

Possibly this event belongs to the same class as that of the destruction of tile-fish on the eastern coast of the United States. In my special report upon 'Fluctuation in Fish,' published last year, I referred to that occurrence in the following terms:—

'The disappearance of the valuable tile-fish which for three years (1879-82) was very abundant on the north-east coasts of the United States, was attributed by some American authorities to volcanic causes. Almost in a single night this fine market fish was completely destroyed and the vessel, authorized by the United States government to investigate this remarkable occurrence, found the sea for over 150 miles in a direct line crowded with the floating bodies of these dead fish. Between six and seven thousand square miles were covered by this wave of destruction, and the schools of tile-fish appear to have been entirely cleaned out of that region, though stray groups of them have been reported occasionally, yet not to be compared with the millions that for the period named abounded in these waters.'

Professor Verrill pointed out that a cataclysm might effect such changes, in what he called the 'warm belt' of water, as to reduce the temperature and fatally affect the fish. A return of the favourable conditions would bring the tile-fish back, and during the months of August and September last between 300 and 400 of these fish were taken on their old ground during the investigation of the Government steamer *Grampus*, thus indicating that the favourable conditions once more existed there.

It is notorious that chemical works affect not merely the waters adjacent to them, but the atmosphere, and often work great harm upon the health of communities. Factories for the manufacture of bi-carbonate of soda (usually known as alkali) and of ammonia, chlorine and bleaching powders, pour into the rivers sulphuret of calcium in quantity, also chloride of maganese, and many other refuse substances. All these are injurious. The manufacture of soap involves the production of glycerine and saline matters, with oily, resinous and fibrous particles in suspension, and the preparation of hides for tanning, also produces as waste discharges, lime, dissolved gelatine and offensive animal compounds, which have the character of a dense slime of a yellowish colour. Indeed every stage in the process of treating the skins as they come from the slaughter house, results in polluting substances, which are as a rule poured into the nearest rivers. The drainage from the scraping and washing operations and the effluvium from the lime-pits and tan-pits in the shape of lime-water and tan-liquor, are a means of serious and widespread pollution.

It cannot be denied that the most extensive and pernicious pollutions from factories of the various kinds, referred to above, occur in great centres of industry, where the rivers are also largely polluted and poisoned from other sources, especially sewage. Chemical and textile works, tan-yards on an extensive scale, and similar industries are rarely situated in what may be termed the 'upper country,' amongst the mountains and hills, where the most noted and productive trout and salmon reaches are found. It is true that Dundee and Aberdeen are on famous salmon rivers, and reference will be made to these special cases on a subsequent page; but rivers like the Aire, the Calder and other tributaries of the Ouse in Yorkshire, the rivers of the black country, and indeed of the manufacturing districts generally where chemicals, metals, and textile fabrics are worked, are in areas densely populated and destitute of the most important conditions favourable to fish-life in the local rivers and streams. There are, however, many industries which are carried on in remoter and less populous regions. Tin and lead mines are located, usually in mountainous regions near watersheds and the sources and upper portions of trout and salmon rivers. Reference has been made to the 'slime' or washings from these mining operations, the effect of which upon the fish, parents and young, and upon the spawning beds, must be inimical in the extreme. 'It is, I believe, generally understood,' reports one authority, 'that if quantities of slime or solid matter from a mine are run into a river, it gets into the gills of the fish and destroys them:' but such slime contains also highly poisonous matters in solution and in suspension. This 'slime', as it is usually styled, washed from the crushed ore after being repeatedly subjected to running water in order to extract every particle of metal except such as is of the nature of impalpable powder, contains barytes and other poisonous mineral matters. The particles of lead are insoluble and not directly poisonous: but the out-pouring of mine water, where lead-ore is being crushed is found to gradually and surely depopulate all the streams adjacent. The fry as well as the parent fish suffer from the contamination. The construction of 'slime-pits' is not difficult or costly where the refuse cannot be conveyed into the sea directly by conduits: and the abuse is capable of ready remedy. Copper mines are even more deadly in their effects than lead mines, as copper is so readily soluble. In one of the Devonshire mines, the waste water from the mine, and the washing floors, passes through a series of pits filled with old iron. One metal precipitates upon the other and the water finally passes out purified from metal pollution. Indeed it is stated in one report in reference to this mine. 'From these pits the water is conveyed to some catch-pits constructed so as to allow such matter from the matrix as may be deleterious to subside, and strange to say the largest

trout found in the neighbourhood are those in the drain which finally discharges the mine water into the River Tamar.'

It may be added that carbonate of lead also occurs in the 'slime' from the dressing floors of lead-mines. Of course the metal occurs in various combinations, sulphides, carbonates, &c., frequently in very small quantities; but, as has been pointed out, the effects of lead poisoning are cumulative, and hence as pernicious if not more so to fish-life than rapid and direct poisoning, the effects of which are apparent immediately.

The mine-water from ironstone mines and from haematite iron mines is to the eye of the ordinary observer offensive and injurious on account of its thick murky character, and the yellow ochreous appearance it presents. The yellow and red tints imparted to the streams is evidence of the amount of foreign matter in suspension which must seriously affect, if not altogether prevent the respiration of fish. The ochre and reddish colour is due of course to oxide of iron, and an exaggerated example is the coloured pollution produced by the decomposition of iron pyrites, which so long as it is unaffected by air or water and not oxidised remains unaltered, but on exposure to either produces ferrous sulphate, which acidifies the water and absorbs oxygen, thus rendering it less supporting to fish-life. Ferruginous mine-water is charged with ochreous matter usually on account of the presence of iron pyrites. Coal mines, again, injure rivers and streams, as already pointed out not only on account of shale and pyrites which in many ways produce polluting effects, but from the fine coal dust carried away into rivers in suspension and acting mechanically in injuring fish-life. Instances might be quoted without number of which the following, from a report of an officer in Wales to H. M. Inspectors of Fisheries, Board of Trade, London. He said: "For a distance of six or seven miles I found the Mawddach seriously discoloured by the matter which was being poured into it from the Gwynfynydd Gold Mine. According to the quantity of stone which was then being crushed the amount of slime poured into the river would not be less than 25,000 tons a year. No attempt whatever was being made to treat the sludge, notwithstanding the representations made to the company by both the Board of Conservators and this Department. The result cannot fail to be of serious importance to the fisheries of the Mawddach, for the slime, whether or not it is in itself actually poisonous to fish, is of a nature to completely smother the spawning beds with a layer of tenacious paste. The tailings of gold mines either hydraulic on gravel-benches, or stamping and crushing mills for treating quartz and other gold-bearing rock, when poured into rivers are harmful mainly where such waste muddy matter is deposited on or near spawning beds. Many of the evils arising from the mining of metal are repeated in a more acute form in the working of metals and their utilisation in factories. Thus the processes of galvanizing and electro-plating involving the use of various acids, muriatic, sulphuric etc., have resulted in the pollution and poisoning of many streams in England. The manufacture of tin-plate, so intensively carried on in South Wales embraces several processes in which sulphuric acid, copperas or green vitriol are used results in waste products highly injurious to fish when poured as has been done almost universally into rivers. Nail factories and allied industries all use various kinds of 'pickle' consisting largely of various poisonous acids.

In recent years the extraction of paraffin from bituminous shale has introduced another source of pollution in the ammoniacal waste, and offensive organic matters. Tarry impurities have worked widespread harm and universal complaints have arisen regarding the injury done. Even the tar used on certain forms of traps or fyke nets called 'verveux' in the Province of Quebec is said to have resulted in a tenacious scum which has destroyed fish or driven them away. The watery waste, however, which results after the distillation of paraffin oil is regarded as most injurious not only because it is charged with organic ingredients; but its odour and taste are pungent and must be offensive to fishes. Indeed some years ago hundreds of salmon, trout, etc., were found dead along several miles of the River Dee in Cheshire poisoned by the refuse from the paraffin and carbolic acid works, this refuse containing pitch or tar, picric and carbolic acids and other injurious matters.

An industry which has attained some proportions in the Dominion, viz.: the production of wood alcohol has, in other countries, been accompanied by the produc-

tion of poisonous waste, by which rivers have been injured. The processes for obtaining pyroligneous acid, acetic acid and wood naphtha, leaves a tarry residue, and certain alkaline and calcareous products which are poured into adjacent streams when not utilized. Similar oily and tarry refuse has been noticed floating down rivers from gas works, and its tenacious and offensive nature must work harm to fish, though the quantity, as a rule, is small compared with similar waste from extensive chemical and paraffin factories. In several cases of pollution from gas works, a careful investigation did not show that dead fish had been found in the neighbouring waters. Of course, when the production of these waste materials (chiefly ammoniacal, oily and tarry in their nature) is extensive, their utilization is a source of profit, such bye-products yielding valuable substances (staining, saccharine, flavouring, &c.) which are in great demand.

As I have already pointed out in regard to the alleged deadly character of chemical and other pollutions, there is a singular lack of actual demonstration or proof. It is not sufficient to say of a particular stream that fish once abounded there and now they are gone, therefore the factories situated along its banks have killed off the fish with their injurious waste matters. There are numerous cases of depletion of lakes and rivers in Canada, where no such thing as factory pollution has occurred, the decline of the fishery being due either to overfishing, to poaching and destruction of spawning fish, or in some cases apparently to deforestation and cultivation of the land, which has wholly altered the character of the waters.

A clear case of destruction of fish by factory pollution is that of the river Doon, where during the latter part of October (as detailed in the 12th Annual Report of the Scottish Fishery Board), 68 salmon and 62 sea trout, besides a quantity of small fish, were taken out of the river in a dead or dying condition. Dead fish had been noticed by a great many parties, and one party stated that above a certain point very few live fish now occurred. Early in December, outside in the estuary of the river, 135 salmon and 294 sea-trout were picked up apparently poisoned, as there were no indications of fungus, nor were the fish marked or injured in any way. It appeared that the Dalmellington Iron Company, which began in 1893 to manufacture tar, pitch, ammonia, &c., had by an accident allowed a quantity of waste products to escape into the river. A settling pond had been provided, but in October the embankment had given way, and the poisonous products had escaped. The settling pond and certain evaporating contrivances in connection with the works, were arranged to render the wasted matter less poisonous.

Breweries where beer is manufactured in quantities produce waste of a grave noxious character, the acids and other deleterious products, which are produced not only in the brewing of the beverage itself, but in the shape of 'sour beer,' cask-washings, etc., especially in cases where factories are on an immense scale, are inimical, it cannot be doubted, to fish life. Indeed Dr. Tolke in a paper published in 1879 included, as he states 'Among these industries sugar refineries, starch factories, distilleries, breweries and malt-houses whose refuse-water is strongly impregnated with organic matter and causes most of the complaints.

The manufacture of beet-sugar, with which I have been familiar for many years, shall form the subject of a special investigation. This important industry, probably the most important of our agricultural industries, has, thanks to a sensible protective tariff and a rational system of taxation, developed from very small beginnings to its present vast extent.

'This important industry certainly deserves to be protected in the interest of the national finances and agriculture; but it cannot be denied that this growing industry is the very one which contributes the largest share to the pollution of our brooks and rivers, particularly as it consumes an enormous amount of water.

'It will be easily understood, therefore, why the complaints from the beet-sugar manufacturing districts are so numerous and well founded, and every impartial witness will have to concede that the brooks and rivers of those districts produce a very disagreeable impression not only on the eyes, but also on the olfactory organs. Such polluted brooks and rivers are, of course, entirely unfit for fish; but, what is worse, their water cannot be used for drinking and for agricultural purposes.'

The manufacture of beet-sugar, though carried on in Canada, has not yet in any way endangered river and inland fisheries.

In such a country as Scotland where distilleries are frequently situated in the high mountainous country, in order amongst other things, to secure a supply of water suitable for the production of whiskey, the danger of pollution at the very head-waters of important streams and the sources of salmon rivers, is vastly increased. The Fisheries Superintendent for the Spey district, who has many times reported in an interesting way upon the condition of the many salmon resorts in that famous angling area, five or six years ago, gave the following facts in regard to the Fiddich—a branch of the Spey:—

'Last season on this stream there was an increase of about 50 per cent,. of sea-trout beds when compared with the previous season; consequently when we deduct the sea-trout beds, which numbered 210, from the grilse and salmon beds, the real grilse and salmon beds for last season will only count 356. The average number of sea-trout beds on Fiddich during previous years would run to about 100 for the season. The best season's spawning that I have seen on this stream was during the season of 1888-89, when the total number of beds was 1045. During the two following seasons—1889-90 and 1890-91—the total number of spawning beds counted on the Fiddich was even behind that of last season, but, on these occasions, the deficiency was easily explained and understood by the fact that the other tributaries were proportionally behind in numbers. There are now 5 distilleries on the banks of Fiddich in the Dufftown district, all of which discharge their spent wash, spent lees, washings, and 'steep water' into said stream, thus polluting the stream from Dufftown down to Spey, a distance of upwards of four miles. Three of these distilleries—Parkmore, Balvenie, and Convalmore—have commenced work within the last 18 months. It is not unreasonable to assume that the deficiency in the salmon spawning on this stream during the last two seasons is attributable wholly to the pollution of the stream by said distilleries. That the refuse thus allowed to run into the stream from the distilleries is of a deleterious nature to fish was clearly demonstrated by experiments I carried out during the month of June last. I took four samples of water from the Fiddich below the distilleries during the time that a discharge of refuse was running, corked and sealed the bottles; then took a sample from Fiddich above distilleries, and corked and sealed that also. I then took all the samples to Fochaber's Salmon Hatchery, and filled four tumblers with the polluted water and one with the clean sample. From the hatchery boxes I took 25 fine healthy salmon fry, putting 5 into each glass. Result—fry in polluted water died in from one to two and a half hours, while the fry in the clean sample seemed as much at home as if in the hatchery boxes.'

This interesting experiment he followed up later and placed fifteen six-week salmon fry in three vessels, five in each. The first vessel he filled with water taken from the Spey three or four yards from the mouth of the Fiddich stream, which is charged with distillery waste; they were poisoned in an hour and fifteen minutes, while in the second vessel he placed water taken thirty yards below the point where the Fiddich pours in; and the fish died in a little less than two hours; but the third vessel was filled with water taken from the Spey thirty yards above the junction of the stream, and the little salmon continued in a healthy and lively condition. The poisonous nature of distillery waste was thus demonstrated, yet it must be admitted that the number of spawning salmon and spawning beds up the Fiddich showed a remarkable increase in the same year and above the distilleries the eggs and fry could suffer no harm, but all below would no doubt perish.

The manufacture of wood-pulp has attained, in recent years, vast proportions in Canada, and is likely to develop to an extent so enormously increased, in the future, that the effect of the waste matters resulting from such manufacture is of vital concern. In the first place the floating of pulp-wood, which consists of short lengths of very small lumber, is stated to be in many respects more injurious than the great 'sticks' or trunks of large trees which have been hitherto mainly conveyed along Canadian water-courses. The friction of the lengths of pulp-wood, it is said, tears off the epidermis, the corky bark and the fibrous bast tissue, leaving an offensive deposit in the beds of rivers. The trees being small, comparatively young, and of

various species containing more sap and slimy matter than older mature wood of larger growth, there may be increased danger to the fisheries from the development of the pulp industry in this aspect of the matter. The towing and floating of large saw-logs down rivers and over famous fishing grounds in the great lakes has long been a source of complaint amongst Canadian fishermen. These logs, some of huge dimensions, often remained for months in the water, and a large amount of organic matter must have been extracted and permeated the adjacent water. In some cases, especially in the case of hemlock, these pollutions are poisonous in the extreme, and certainly the bark and slimy fibrous debris, scraped off the 'sticks' in their voyage on the water, must be regarded as seriously injurious. The International Commissioners referred to this in the Report in 1896, saying:—

'Among the minor causes to which we may attribute the failure in the whitefish and trout is the deposition of bark from the rafts of saw logs which are constantly being towed across the bay and north channel from some of the larger rivers, especially French River and Spanish River, to the milling ports on the Michigan side of Lake Huron. The grinding of the logs against each other in the booms sets free the fine inner bark which settles on the bottom, forming a thick covering. When this happens to occur on the spawning or feeding grounds of the fish there can be no doubt that a serious injury is caused.

Some of the inshore spawning grounds are said to have suffered from the saw-dust and other mill refuse which has been carried down the streams from the mills; but little injury can have been done in this way, as many of the spawning grounds are offshore or remote from the neighbourhood of the mills, and of late years the regulation prohibiting the letting adrift of this refuse has been well observed. The fishermen seem to have been careful about the disposition of refuse fish and fish offal and have generally landed it on the rocks. As the shores of the bay are not extensively settled other pollutions cannot have occurred.'

These observations confirm the views of the fishermen, who had for many years made their complaint to the Dominion Government, and in 1893 stated their case to the Special Commission, which visited the great lakes in that year, and reported upon this abuse, and on other fishery matters in those waters. One of the witnesses said, speaking of Georgian Bay and the North Channel:—'There are eight different streams and each one used for the floating of logs. The French River, I am told, passed even more logs than the Spanish, and my opinion is that the bottom of the whole lake from Georgian Bay to Mississauga is teeming with bark. It is eighteen miles across to the Manitoulin, and rafts pass in three different directions, so that the bark is spread every way. This bark in the course of time rots and forms into a kind of slime and fish will not stay on that ground. There were five skiffs fishing from here four years ago, since then they have left, as fish got so scarce, and in a very short time I believe there will be no fish at all.

'On September 26 of this year I had thirty-six pieces of net utterly destroyed by this bark. Each piece of net was 180 yards long, and was loaded so heavily with bark as to break the web', and, amongst the additional evidence, it was stated by a prominent firm on the northern shore of the Lake Huron waters, that this abuse was the most serious that the fishermen had to contend with, special stress being laid, however, upon the injury done to the nets. It was stated that bark and the soft wood on the logs which has been found to be very plentiful in the water since the exportation of saw-logs has taken place, is injurious. The stuff rubs off by the motion of the logs while being towed across the bay to the United States, or elsewhere, or even from the rivers when brought down to the saw mills. The rafts are very large, and great damage is done to the meshes of the nets. This is very injurious to the fisheries and clings to the meshes of the nets. It is much more injurious to gill-nets than pound-nets. If these logs are allowed to be towed over our waters, this difficulty will increase, and the prospects for any improvement in the fisheries will not be very encouraging to the fishermen. If the present fishing laws had been in the past carried out as fully as they have been in the past two seasons, and the evils spoken of, and the saw log difficulty were overcome, then fishermen it is claimed would become prosperous again, and would increase

After the raw material, used for pulp manufacture, has reached the mills, it is subjected to the various mechanical, thermic and chemical processes, and it is claimed that the liquid waste flowing from the mills during those processes is injurious to fish. Widespread alarm, indeed, was caused upon some of the principal rivers of Eastern Canada—rivers, perhaps, the most productive in the world for salmon fishermen, it being alleged that the acids used, and the floating debris, resulted in a polluting waste-product, poisonous and mechanically harmful to fish-life. The actual tests hitherto applied have not borne out these alarming contentions, and it must not be forgotten that the pulp mills spare no efforts to save every particle of waste pulp matter. They use the most recent and scientific apparatus to prevent loss, either of chemical or paper-pulp materials. One of the best biological workers in the Maritime Provinces—a man thoroughly posted in the fish fauna, and the conditions of fish-life in that part of the Dominion, Dr. Philip Cox, made an experiment with a view to deciding the effect of pulp refuse upon living fishes. The experiment does not profess to be final or scientifically conclusive, as the opportunity did not occur to make a full and accurate analysis of the waste materials, which differ at different stages of the pulp-making process, (and the proportions of the components of the waste no doubt vary), but the experiment suffices to show that delicate fish like *Osmerus mordax* are not seriously affected, and salmon, sea-bass, trout, etc., would be even less liable to injurious effects.

DR. COX'S EXPERIMENT.

Tests made April 14, 1899, with waste discharge from the Fibre Company's factory, Chatham, N.B., to ascertain its effects on fish life in the river.

Three vessels of 620 oz. capacity each were used, and were at the beginning of each test filled with water taken directly from the river, the acidulous waste being added.

First Test.

Vessel A, cap. 620 oz. + 2 oz. waste ..... 10.45 a.m.
" B, " 620 oz. + 4 oz. " ..... 10.48 "
" C, " 620 oz. + no waste ..... 10.48 "

Freshly caught and uninjured smelt (*Osmerus mordax*) were put one in each vessel, at the time mentioned. At 12 noon all were active and apparently unaffected.

Second Test.

Vessel A, cap. 620 oz. + 6 oz. waste 12.00
" B, " 620 oz. + 8 oz. " 12.01
" C, " 620 oz. + 12 oz. " 12.05

At 2 p.m. the fish in C died, but the others were unaffected. I suspected injury to the one that died before it was put in, so in next test I put some quantity of waste in vessel C.

Third Test.

Vessel A, cap. 620 oz. + 12 oz. waste ..... 2.26 p.m.
" B, " 620 oz. + 16 oz. " ..... 2.27 "
" C, " 620 oz. + 24 oz. " ..... 2.28 "

At 3.26 p.m. all active and unaffected. Vessel A was then replenished with fresh water, 48 oz. waste added, and a freshly caught smelt placed therein.

At 4.10 the latter and B and C of the third test were alive and well.

Hence it is seen that a mixture containing 8 or 10 per cent of the waste has no apparently injurious effect.

It is surprising that so little has been done in the way of direct experiment upon living fishes, along the line indicated by Dr. Cox's three tests. I find, however, that some years ago an English chemist confined some small cyprinoids in a vessel of water, polluted by the tarry and acid waste poured into the Dee in Cheshire, by petroleum works and carbolic acid factories. On account of the presence of picric and carbolic acids, the water was yellowish, and it was found that in one gallon of the water there was no less than 7½ oz. of tarry substances. It was found necessary in the experiment to add a quantity (100 per cent) of fresh water, or the fish experimented upon would have died at once. That the water was highly poisonous to fish was proved by its action, even when diluted with an equal volume of tap water. A minnow placed in it made violent efforts to escape, but became still and floated on its side in a few minutes, and in twenty minutes was quite dead. Actual tests and experiments of this kind are urgently needed, in order that prevalent opinions respecting various kinds of pollution may be either confirmed beyond cavil or disproved.

Perhaps the most widespread, and to the general public the most apparent cause of river-pollution is that due to sewage. Cities have from time immemorial regarded rivers as the appropriate channels for conveying away those offensive kinds of waste matters incident to the congregating of large communities. In what precise way sewage affects fish has never been accurately determined: but its injurious effect is a matter of universal opinion. Thus the Canadian fishermen of the Detroit River five or six years ago complained of the amount of sewage poured into that river by the city of Detroit. This sewage and offensive garbage not only polluted the water: but was deposited, when west and south winds prevailed, upon the Ontario shore. 'Since this garbage has been coming ashore' said the fishermen, 'the catch of fish in our nets has been materially diminishing and, if the same continues, the business will be ruined. The presence of the said garbage drives away the fish and renders our fishing privileges useless.' It is not claimed that the fish were actually poisoned and killed: but that they were driven away to other localities. Some authorities who attribute to the sense of smell the action of fishes in forsaking sewage-polluted water, take the above view, and regard sewage as a deterrent more than a direct poisonous agent. This no doubt was the view of Mr. J. A. Harvie-Brown of Dunipace, Scotland, in regard to the Carron when he stated to the Scottish Fishery Board that salmon and migratory trout will not face pollution. The secretary of the Fisheries Improvement Association of Scotland in 1885 said of the Firth of Forth:—

'To recover a stream from a condition of barrenness and resuscitate its fish-bearing powers may be a work of difficulty and of time; but, in the present instance, there is no reason why it sould not be hoped, nay, expected, that the trout and the salmon will (after the improvements proposed are effected) at no distant period begin again to tenant the Water of Leith. The Firth of Forth is frequented by many migratory fish of the salmon kind. Dr. Parnell, in his *Fishes of the Firth of Forth*, mentions not only the salmon and the sea-trout, but some eight varieties of Bull-trout. The sense of smell is believed by scientists to be highly developed in the salmon family, and whilst quick to detect the poisonous effects of pollution, and to be driven away, they are not slow also to detect symptoms of abatement, and to return. It is known that this fish runs gauntlets in the form of filthy waters in a manner truly astonishing. 'Almost every year,' says Dr. Gunther, "salmon and "sea-trout in the grilse state make their appearance at the mouth of the Thames "(where the migratory salmonoids have been extinct for many years) ready to "reascend and restock this river as soon as its poisoned water shall be sufficiently "purified to allow them a passage".'

On the west coast of Scotland a similar state of things has been described on the Clyde and smaller streams such as the Cart, etc. Of the last named river one writer says:—

'In 1819, the Cart was a pure unpolluted stream throughout its whole course, from the upper part of Eaglesham, where it has its source, to its junction, at Blythswood, with the Clyde. It abounded in fish, and was, in its upper parts above Paisley, a fine trouting stream. A century further back the river was famous for fish of the

salmon kind, and so abundant were they that no inconsiderable part of the rent of the Saucer Mill, then belonging to the Stewarts of Blackhall,—an old family now represented by the highly respected Lord-Lieutenant of Renfrewshire, Sir Michael Robert Shaw Stewart, Baronet, of Blackhall and Argowan,—was paid in salmon caught in cruives set below the Linn, then and still forming the dam of the Saucer Mill, and which cruives the miller was taken bound in his lease carefully to maintan and uphold. So recently as the year 1815 we have fished and caught trout in the river near to the Old Bridge of Paisley, while in summer crowds of children were to be seen seeking health and recreation in its clear stream,—wading, bathing, and fishing. Below the town every boy in Paisley given to piscatorial pursuits, had a favourite place of fishing at one or other of the many "yetts" on the towing path along the east side of the river, where he set his lines in the hope of being repaid by a good string of eels and flounders, and occasionally a trout. Now, however, and for many years past, the stream has been a large and greatly polluted common sewer, into which every species of destructive or offensive ingredient, as well as the entire sewage of Paisley and the towns and villages further up, are allowed freely to flow. This most destructive change in the condition of the Cart, when looked at in connection with the present mortality bill of the town, is, beyond doubt, a matter for serious consideration, especially in view of that sanitary regulation and improvement which may possibly be applied in these days when the condition of towns and rivers has forced even the Government to adopt the phrase, *sanitus sanitatis*, as indicative of its policy."

The whole subject of sewage-pollution in its effect on fish-life is a matter requiring thorough investigation. Such investigation might show surprising and unexpected results for at present the views of experts are somewhat contradictory. Thus while on the Thames the pollutions of the lower parts of the river, and the estuary, are said to deter the ascending fish, which linger at the mouth waiting for the coming of a purer current, yet the Tyne, which is even more atrociously polluted, does not deter the salmon and sea-trout, and as Professor Huxley in 1882 said: 'It is difficult to imagine worse pollutions than those which are poured into the 'Tyne at Newcastle, yet the salmon run the gauntlet of the sewage, the chemical 'refuse and other abominations, in sufficient numbers to produce a large annual 'harvest.'

I notice in a report of H. M. Inspector of Fisheries for England and Wales, that sewage-pollution in a case reported upon had, it was claimed, caused the death of fish. The authority mentioned says in his report in 1892:

'Early last year I received particulars of a large "Fordwich trout," said to have weighed 26 lbs., which had been picked up dead in the River Stour, near Canterbury. The Conservators of this District have however, apparently given up as hopeless the task of protecting the river in consequence of the evil effects of the sewage of the city of Canterbury.'

The city of Canterbury has a very small population, and the alleged poisonous effects of sewage, should be even more extensively observed in the Humber, the Tyne and other large rivers which receive the refuse of populous cities like those of the West Riding of Yorkshire, and of the Durham manufacturing and colliery centres. Gottlieb Boccius in his "Fish in Rivers and Streams" published 60 years ago, speaks of the Thames and the Tyne and points out the special features of the latter river as a resort for salmon. He says 'I will make a comparison of the Thames with the Tyne'; no salmon are now caught in the Thames, but though the Tyne has many alkali works on its shores from Newcastle downwards—and alkali is death to every species of fish—yet it abounds in salmon. How is it with these destructive manufactories on its banks, and in despite of the swarms of steam-boats and tugs ever passing up and down the river, it is still a good fishery? Why, simply because Salmon and all other fish, migrating from water to water, never stop on their way, but push forward, and that at a fast rate, till their intended journey, for which Nature prepared them, is completed for, as I have said, Salmon being very swift, soon pass through the water which is offensive, and then run for the pure springs fit for spawning.'

In the report for 1887 of Mr. Fryer, one of Her Majesty's Inspectors of Fisheries in England, to whose able and very comprehensive and detailed reports I am so largely indebted in compiling these notes on pollutions as affecting fishery resources, it is stated that while the Tyne is the most productive of all the salmon rivers of England and Wales and one of the most extensively polluted by sewage, mining refuse and manufacturing waste, liquid and solid, yet its salmon harvest remains wonderfully good. Its productiveness was, however, stated to be on the decline; but whether due to pollutions or to overfishing could not be decided, though it was pointed out that the large body of sea-water pouring up the tideway no doubt did much to counteract the evil results that might otherwise accrue. Certainly the catches of salmon by net and by fly on the Tyne have during the last quarter of a century been wonderfully maintained, and the river has apparently been as well supplied with fish as the most optimistic could expect. Thus in 1886 and in 1887 the takes were 25,696 and 18,835 respectively. Five years later 1891 and 1892 they were 29,298 and 31,080 respectively, and at the end of another five years 1896 and 1897 they were 15,755 and 11,081 respectively. The last published figures 1898 are reported as showing an average catch, the quantity being 11,422. The Tay in spite of the fact that Dundee, Perth and other centres of population occur along its course is by no means denuded of its salmon, though the catches during recent years have been below the average. How far these decreased takes in the river are to be accounted for by the destructive netting and trapping along the estuaries and seashore it is not easy to decide. The Tay like all salmon rivers is subject to remarkable fluctuations and it is interesting to note, as indicating the continued productiveness of the Tay, that its annual rental (that is the amount received by the riparian proprietors for the netting and angling privileges), amounted in 1898 to over $100,000; in the previous year to over $85,000; and in 1894 to $95,000.

What is the conclusion which the intelligent observer must reach, who glances over the series of facts and inferences briefly set forth in the foregoing pages. In the first place it is evident that circumstances modify the effects of all forms of pollution, so that waste matters which would be deadly in one river, will pass away and prove of little harm in another, where the conditions are different. In the second place it shows how varied are the effects of various waste products under the same conditions upon different species of fish. Salmon will survive unharmed where shad and gaspereaux would be killed off.

Further these notes indicate how little is actually known of the effects upon fish-life of these various pollutions from accurate and thoroughly scientific experiment. Common opinion and popular ideas more largely prevail than reliable and demonstrated knowledge. Nor must it be forgotten that, however pure and free from pollution rivers may be made by rigorous enforcement of laws against such offences, it is vain to expect a restoration of the fishery resources, and the repeopling of depopulated waters, if the parent-fish are shut off and obstructed by mill-dams, canal locks, timber refuse, log-jams, booms and fallen trees, or any obstacles by which they are prevented from reaching the spawning beds. If the spawning grounds be kept free from pollution and the deposition and fertilization of the eggs be accomplished; and if morever free and unobstructed access to these grounds be provided for the fish, and, above all, if over-fishing, excessive netting and destruction of the ascending fish be prevented, there need be little fear that our supplies of salmon and valuable migratory species will wholly fail. The assistance of artificial fish-culture will be an effective adjunct.

There may be cases where the erection of mill-dams and pollution by poisonous waste products is of more moment than the destruction of the fisheries in a particular river. The utilitarian motive may be overwhelming, and valuable industries on a large scale may, in some cases, outweigh fishery interests and considerations. Of the serious results to a community from a too rigourous enforcement of fishery laws, a striking example has been recently afforded in King's County, Ireland. In a local journal it was stated that 'the fine mills of Springfield and Belmont, which are owned by Mr. Archibald Coulahan, are to be closed shortly. The owner is taking this course in consequence of the Fishery Conservators compelling him to

do work in the way of putting up gratings, which he considers both unnecessary and impracticable. There is great regret felt in the neighbourhood that those mills—which cost some £50,000—should be closed, as many hands will be put out of employment. It seems a great pity that the rival interests of fishery owners *vs* mill owners should be allowed to clash in this way.

The salmon fisheries of Ireland are no doubt of much importance, but in a county with so very few manufacturing industries it is a fatal mistake to place any obstacles in their way.'

The public interest must of course be paramount, but the highest authorities are agreed that such cases if they exist at all must be rare, and it is of prime importance to remember that there are few factory pollutions which cannot be readily and inexpensively rendered innocuous. Indeed I cannot do better than quote, in a concluding sentence, from the Tenth Annual Report of the Scotch Fishery Board, which puts the matter succinctly, and urges considerations which must have weight with every fair and intelligent mind:—

'Legislation for the prevention and cure of pollution and poisoning in all running waters is most important and urgent. The evil is yearly increasing, and it is time that a remedy was applied. And that such a remedy might be found without injury to manufacturers there seems to but little doubt; as, more than fifteen years ago, the River Pollution Commissioners wrote as follows in their fifth and last report:—"We "have thus already submitted to your Majesty a description of the evils arising from "the discharge into river channels of town sewage, and of the various filthy drain-"age waters from cotton, woollen, silk, flax and jute works, from print and dye-"works, from tanneries, paper mills, and bleach works, from alkali, chemical, and "soap works, from distilleries, starch and sugar works, and from paraffin oil works. "The remedies for the nuisances which these refuse liquids create have been care-"fully examined, and, after prolonged inquiry and research, we have been able to "report that in every case efficient remedies exist and are available; so that the "present use of rivers and running waters for the purpose of carrying off the sewage "of towns and populous places, and the refuse arising from industrial processes and "manufactures, can be prevented without risk to the public health or serious injury "to such processes or manufactures."

'It seems therefore quite evident that the secondary uses of water which the manufacturers enjoy have been too long allowed to usurp the place of the primary uses to which the public are entitled, and that it is high time that stringent measures were taken to check the progress of pollution, which has already converted so many of our streams, once pure and pellucid, into mere fetid sewers. In one way, at least, the public health and the preservation of salmon are immediately connected. The water which will destroy or repel salmon is not fit for human use; and the water fit for human use is attractive and wholesome for salmon.'

The fact cannot be ignored that almost daily such improvements are being made in the methods of treating raw products and of utilizing waste materials that some of the industries referred to in the preceding pages have in recent years undergone total change. To a large extent pollutious which have hitherto been a main source of danger are ceasing. Thus at Ottawa itself where probably over one hundred million feet of waste,* in the shape of sawdust, have for many years been poured into the fine river which flows by the Canadian Capital, a revolution may very soon be effected, and the sawdust hitherto so lightly valued turned to practical use. The utilization of waste products is a hopeful sign, and will do much to rectify the evils arising from industrial pollutions, which have so long afflicted fish and fisheries.

* It is stated that there is one foot of waste to every foot of timber cut in the mills.

NEGLECTED STRUCTURAL FEATURES IN YOUNG FRY.

By Professor E. E. Prince, Dominion Commissioner of Fisheries, Ottawa.

It is a curious circumstance, the explanation of which is not easy to find, that pisciculturists have been almost without exception what are called 'practical' men. By that term is meant men who did not claim to have much professional knowledge or technical training. Many of them, especially the pioneers in artificial fish breeding, did not hide their contempt for theoretical knowledge, and viewed with little favour scientific training, or the opinions and explanations of scientific specialists. Just as the Scottish fishermen frequently claimed that during the sittings of the British Fisheries Commission in 1885, they taught Professor Huxley a good deal about fishes, though that famous biologist was amongst the greatest masters in the science of fish that the world has seen, so the early fish-culturists often congratulated themselves that they adopted courses not fully in accordance with scientific opinion, and proclaimed the sufficiency of 'Practice' without 'Science.' One of the most striking cases of this feeling was that excited when the retention of salmon in tidal ponds was tried. Biologists, on scientific grounds, demurred to the keeping of parent salmon in salt-or brackish water, long after they should have ascended into the pure fresh water of the upper reaches or spawning grounds. Physiology would discourage the retention of parent salmon in the midst of conditions not in accord with the conditions which obtain in nature. The experience of the practical man, however, prevailed, and so far as can be judged, tidal ponds are a success, and the eggs and fry do not apparently differ in health, vitality and successful incubation from those secured from parents which have reached the head-waters far from the sea. Of course the question is one of a somewhat complicated and profound nature when thoroughly analyzed, and the biologist must reserve his opinion as to the ultimate effect, through heredity, of the changed parental conditions upon succeeding generations of fish. So far no specially abnormal or undesirable effects have been noticed, and the parent salmon certainly maintain a more robust vitality, and are freer from fungus and disease than fish taken on the spawning beds at the head waters of salmon rivers.

Experience, of course, is the best of all teachers, but practical experience combined with exact scientific knowledge, is better still; for the pupil is no longer simply taught, he becomes a master and can control and command. Experience gives us the 'how,' but accurate knowledge provides us with the 'why,' and the fish-culturist who handles ripe eggs, who vivifies them by the admixture of the fertilizing milt, who is able to recognize living and dying or dead eggs, and who knows when the eyed stage is reached, and can accurately tell when the period of hatching is approaching and the young fish are about to emerge, such a man will feel increased confidence in the progressive steps of his work, and will avoid some mistakes and surmount many difficulties if he has technical and theoretical knowledge added to his valuable and indispensable practical experience.

The complaint has been frequently made that no results appear to have followed from the planting of artificially hatched fry, and doubt has been thrown upon the success of all fish-culture work. Examples might be readily given, but the well-known case of the Delaware River, Pennsylvania, may be referred to. In 1871 a number of gentlemen in Philadelphia and Easton procured 10,000 salmon eggs from the Canadian hatchery at Newcastle, Ont. Under the superintendence of Messrs. H. A. King and Christie about 2,500, all that survived from the incubation of the 10,000 ova, were planted. In 1872 Mr. Thaddeus Norris hatched 11,000 fry out of 13,000 eggs, and the following year Mr. Norris and Dr. Slach planted a considerable number of young salmon. No adequate results were ever seen, and the three attempts to stock the Delaware were looked upon as failures, and the State Fish Commissioners concluded that 'the waters of Pennsylvania are evidently not suited to this fish, however desirable it would be to have it planted and thriving in them.'

There is reason to believe that the non-success arose less from the unsuitability of the waters than from some defects in the method of handling the fry. Indeed the weak condition of the first batch of fry was noted at the time, and it was attributed to the hot weather. It is undeniable, however, that in spite of sultry conditions and untoward circumstances, fry can be successfully planted if knowledge and experience are available, and proper provision made to guard against all harmful influences.

The present brief notes on some neglected features in the newly hatched fry of fishes do not refer to any new scientific or biological points unfamiliar to the trained specialist. Nor are they intended to essentially modify the handling of eggs during incubation or the treatment of young fish after hatching. They refer to some points, familiar enough to the embryologist, and no doubt known to pisciculturists in general, but apt to be overlooked or neglected when the time comes each season for taking care of the newly hatched fry. These points have reference to peculiarities in the structure of the young fishes at the close of incubation, and upon their entrance into free life after leaving the egg. They are of importance, and by ignoring them the health and vitality of the fry may be impaired, and even loss of fry entailed.

First of all it is to be noted that the fry of fishes usually included in fish-culture operations possess enormous eyes. Lake whitefish, great lake trout, brook trout, pike-perch or wall-eyed pike, and other species, exhibit eyes of extraordinary dimensions, occupying in some cases fully one-third of the lateral surface of the head. No doubt the real significance of these large organs of sight, so disproportionate to the size of the microscopic larva must be explained on principals of development and evolution. They are like two black or densely coloured balls, which are readily seen long before hatching, and while the young fish is being formed inside the egg-capsule. They are so prominent and visible that the term "eyed-egg" stage is in common use amongst fish-culturists. To the practical man the possession of a pair of large sensitive organs of sight is a warning to him that the possessors are easily affected by rays of light. It teaches him that as far as possible reflected light should reach the tanks or vessels containing them. Hence direct rays and an excessive amount of light of any kind is not only unsuitable, but is highly injurious.

Glaring light, such as that produced by modern types of gas-burners which increase the luminosity of the inflammable medium, and incandescent electric-light devices, are to be strictly avoided. The sensitive eyes, with their large receptive pupils, cannot bear light so steady and piercing. Pisciculturists, as a rule, have arranged the windows etc., so as to shut out all excess even of day-light, and have done so mainly, because too much light was known to be favourable to vegetable parasites and algoid growths. Fungus has been generally held to be stimulated by abundant light. But the reason which above all should guide the fish-culturist in regard to light in hatcheries is the anatomical and physiological reason, viz: the perilous results to the fry, which excessive light inevitably brings, on account of the great size and unusually sensitive character of young fishes' eyes. As every one knows, the eyes are protruding and prominent and not shaded by eyebrows, eyelashes, or protected by movable eyelids, hence a glaring light which is painful to the visual organs of higher animals, is not merely disagreeable, but productive of morbid and fatal effects, if allowed to shine upon embryo fishes and fish-larvae.

During incubation a suitable amount of light is very necessary, or the development of the eggs will be delayed; but it must be reflected light of the sun, such as reaches them on the gravelly 'redds' or spawning grounds. Eggs of fishes being, in so many species, deposited in shallow parts of the upper reaches of rivers, where the water usually is swiftly running, and broken up into ripples, each ripple and crystalline wave acts as a refracting prism, breaking the glancing bright rays of the sun into scattered reflections of light. Thus the solar rays even at midday are bent by the uneven surface of the rushing water, and directed into the hollows, the interstices, and shadowy ridges of the gravel and boulders beneath the surface. Many pisciculturists have learned to their bitter cost, that, too much light especially, when accompanied by a high temperature is most unfavourable, hastening unduly the progressive stages of development during the incubation of the eggs, and resulting in weak and sickly fry which are unable to survive through the first few

weeks of larval life. The cylindrical glass jars in which the eggs of many species are hatched, though cleanly and convenient, are wholly unadapted for holding the fry, and the more rapidly the young fish are enabled to pass from the dazzling glare of the crystal vases to the more shady and gloomy surroundings of the large receiving tanks the better for the fish. Assistants in hatching establishments rarely realize the harm that may be done by allowing fry to remain a few hours, or it may be a whole day, exposed to glaring light, and they should be strictly instructed on no account to keep fry longer than can be avoided in the blinding light which beats upon them after they emerge from the eggs in hatching jars. There is not this danger in the case of fry which are hatched out upon trays: but towards the close of the period of egg-incubation, hatchery officers should keep a sharp eye upon the hatching jars in which whitefish, or shad, or pike-perch (doré) are developing to see that the current is adjusted sufficiently to carry the fry off without any delay. Experienced men are frequently puzzled by the apparent weakness and lack of vitality in whole batches of fry, while others are robust and strong. The explanation is not far to seek, for in most cases it will be found that the weakly fish were delayed too long in the glaring environment of the hatching jars.

Again, it must be remembered that larval fishes possess extremely delicate hearing organs. The ears, one on each side of the head, a little in front of the breast fins, are of an oval shape, like an egg-shaped sac or chamber, filled with clear fluid or endolymph, and containing one or two, sometimes three, small limy pellets, the ear stones or otoliths. Several sensitive cushions of nervous matter, studded with hairs or delicate bristles, occur inside the chamber of each ear. These cushions are connected with the auditory nerve, or nerve of hearing. The ear is completely closed up, and receives vibrations or sound waves through the delicate walls and skin covering the head. Shaking the fish rudely, rough handling of any kind, and loud hammering, or other violent noises, cause the ear fluids inside the ear-sacs to vibrate too vigorously. This produces concussion of the otoliths or ear stones, which may even be knocked out of their places, damaging the delicate auditory cushions of nervous matter, and producing serious disorganization.

Damage done to the ears may result in sickness and rapid death. The intelligent fish-culturist will take every means to avoid all perils and risks, and will bear in mind that fishes when newly hatched have hearing organs of special delicacy and sensitiveness.

A further point, which is often overlooked in hatcheries, is the character of the skin in young fishes. It is not provided with scales, as in adult fishes generally, or dense and leathery as in catfish, the leather carp and many mature forms, but in all young embryo fishes it is naked and very thin, and often as transparent as glass. Indeed, as the Michigan State Fish Commissioners remark in their 12th Biennial Report, 'The fry of whitefish are so transparent for several weeks after hatching that, when confined in glass aquaria in a well lighted room, the presence or absence of food in the stomach may be determined almost at a glance. The presence of their natural food is especially noticeable, as it casts a reddish tinged line throughout the food canal.' Many larval fishes, moreover, are provided with external sensory organs arranged in a series along each side of the body. In some the tips of the jaws and the front end of the snout have similar organs of feeling or touch. These organs are usually like small mounds or bunches of nervous cells, surmounted by a group of projecting hairs. I have counted as many as seven to ten pairs of such organs in the body of a young fish. Some fish have more, some less, but in all cases they are so sensitive that they cannot fail to be seriously injured by rough treatment or violent concussion. Hence fish larvae must always be gently manipulated. In emptying large quantities from one vessel to another, they should not be violently poured out, with accompanying splashing and concussion, nor should they be suddenly transferred from a high to a low temperature. The skin and delicate sense organs of fishes are as sensitive as the eyes or the tip of the tongue in ourselves, and all harsh or hurtful influences and trying conditions render the fish less likely to survive, or may even prove immediately fatal.

It is a good provision to test the temperature of the water in which the fry are contained and the temperature of the water into which they are to be emptied. In

the case of lakes and rivers, warm shallows or sheltered eddies can easily be found, if the open water appears to be too cold.

Many other points, known to the scientific specialist, might be mentioned, but in this paper one further point only will be referred to, viz., the presence of a delicate erect fin along the back, and along the under-side of the body as far as the posterior side of the yolk-sac. This transparent fin-membrane is so thin, colourless and clear, in the whitefish, the shad and the alewife, though more dense in the salmon and trout, as to be almost invisible, unless carefully looked for. It is really a broad sheet of extremely thin skin standing up in the middle of the back of the fish, like a delicate crest. It is known to embryologists as the unpaired continuous fin-membrane and is so easily injured that newly-hatched fishes should never be handled. Sharp implements and hard substances rupture it, and most cases of curled, distorted young fishes are found, on examination, to be due to injury of the embryonic fin-membrane. The tail, especially, is liable to curl up on this account, and the fish has a crumpled and whitish appearance. The practical pisciculturist is often puzzled when he sees abnormalities and morbid appearances in his fish and cannot understand why eggs which were so healthy, and hatched so successfully should at times result in disappointing, sickly, and dying embryos. It is often difficult for him to discover the why and the wherefore; but some knowledge of the minute structure of newly-hatched fishes, and some acquaintance with their physiology, will often throw light upon his difficulties and prove in numerous ways most helpful. Indeed some knowledge of the scientific principles of development and embryonic anatomy is necessary for the successful handling and proper treatment of young fishes incubated and hatched under artificial conditions.

THE OBJECT OF A CLOSE TIME FOR FISH.

BY PROFESSOR EDWARD E. PRINCE, COMMISSIONER OF FISHERIES, OTTAWA.

The question is often asked "what is the object of a close time for fish?" and the answer is by no means so simple or easy as is generally imagined. The object of a close time varies greatly according to circumstances, and the criticism often urged against legal enactments which specify certain seasons or periods as times during which the taking of particular species of fish is prohibited, are frequently misdirected and mistaken. Thus it is often said of some fishery regulation, embodying a close time, that it does not cover the whole period of spawning and that many fish are found, before and after the limits of the period, in a ripe or spawning condition. The critics in such case base their remarks upon the supposition that a close time of necessity aims to cover the period during which the fish spawn—the fish that is to say contemplated by the regulation. But such is not at all the sole object of a close time or close season. Again, it is said that in some cases the period of prohibition antedates or precedes the spawning time, while in other cases it protects the fish after spawning. In other words the close time is too early, or it is too late.

Fishery authorities in framing regulations defining close times for various kinds of fishes often have had very different aims in view. Indeed, at least a dozen wholly diverse objects have been aimed at in existing laws upon this subject in the Dominion, and a comparison of the laws in other countries defining close times would increase the number to over a score. It is rarely, however, that a close season is enforced so unjustifiable and futile as that which was passed by a local legislature in the United States, according to whose enactment no whitefish could be captured in Lake Erie during the month of June by any fisherman in that State. The main reason for this law, which it was proposed to rigorously enforce, being that no fisherman could ever catch any lake whitefish in paying quantities at that time of the year. Further reasons were that the weather being hot the few fish, that might be taken, would not keep in good condition for the market, and the fishermen lost money because their nets became foul and rotted away during the height of summer. In the State referred to there was no protective close time in November when the whitefish could be captured crowded together on the spawning grounds in immense schools. The sole object of a close season for whitefish in that case was to meet the desire of the fishing firms and the fishermen for a prohibition to be enforced during a part of the year when they would not feel it. Some years ago a large number of lobster fishermen in the Maritime Provinces urged that a close season for lobsters be enforced all along the coast at the end of June, because they had to go to cod, haddock, and mackerel fishing, and could not go on any longer with lobster trapping. They desired that no other fishermen should be permitted to fish for lobsters, when another more important fishery demanded their own attention. In all such views, on the matter of a prohibited period for fishing operations, the protection of the fish is left entirely out of account.

There can be no doubt that the main object of close seasons in the majority of cases, has been the preservation from destruction of the breeding fish at the most momentous period, viz: when just about to deposit or incubate their eggs. If this object can be accomplished it is the most effective measure possible for the perpetuation of the fish supply. The destruction of the breeding fish, at the very time they are engaged in spawning, is the surest step to the extermination of the future supply. Yet this destruction has in past times been almost universal and those engaged in fishing for a living, those to whom a continued supply is of chief importance, are often the most impatient of restrictive laws, and frequently

complain that the law stops them just when the fish are running or schooling in easily accessible areas, and when therefore the greatest hauls can be made.

The fishery officer is not unfrequently taunted with this remark 'if you kill a female fish six months before spawning, you just destroy as many eggs as if you killed her six days or six hours before depositing her eggs, nay in the act of depositing her eggs.' It does not demand much intelligence to see that this is wholly untrue. An artist painting a picture experiences a far greater loss if his painted canvas be destroyed after he has expended many months labour upon it and when just about finished, than he would if his canvas were destroyed after he had merely put a few touches upon it, on the first day of his work. Out of a thousand fish in June, it may be that not more than 200 survive until November to spawn, hence a spawning fish in November, in such a case, is of the value of five fish in June, from the fishery protection point of view. The value and importance of a breeding fish is vastly increased with the approach of the breeding season. Thus there is necessity for protecting the parent fish of valuable species, with the utmost strictness, at spawning time. As there is always some slight variation in the spawning operation in different individuals, a close season rarely attempts to cover all possible spawning specimens. The lake whitefish which is one of the most regular and rapid spawning fish varies a little in different years, but on the whole the month of November covers the main period in most provinces of the Dominion. This year in the Detroit River the season was at least two weeks later than usual, and in the North-west Territories some whitefish have been found containing ripe spawn in October, and again others in December. The so-called lake-herring or lesser whitefish, usually regarded as spawning in November, has been found carrying ripe eggs in June, a specimen four or five years ago being sent to me from Lake Erie by Mr. Edward Harris, of Port Dover. It is usually most desirable to protect every spawning fish possible, of valuable kinds; but in other cases as in the great lake trout or salmon-trout of the lakes there is much to be said in favour of the present season, viz: November, in Canada. Their main spawning period is late in October, and as the law stands great numbers of ripe spawning fish are taken annually although this year they were later than usual. The great lake trout is a strong, predacious and in some respects, undesirable fish, making war upon whitefish and all other kinds. It does not require the same amount of legal protection as a defenceless weak species, like the toothless whitefish, hence it suffices for the 'fresh-water shark', as the great lake trout has been called, to be partially protected only, so that they may not exterminate equally valuable kinds and over-run the waters. The present close season for the great lake trout is perhaps too short, but it has sufficed in Lake Huron and Georgian Bay at any rate to ensure the maintenance of a fair supply of these fish. It is plain that predacious species call for less protection than more harmless and defenceless species. A similar observation may be applied to the speckled-trout or brook-trout. It spawns over a very long period from November until April, but a close time of six months or more could only be justified on the ground that the species requires the preservation of every spawning specimen, a contention for which convincing evidence would not be easy to adduce.

The conclusion was reached by the Tweed Salmon Commission in 1896 that the supply of salmon can be kept up, if a sufficient proportion of each run of fish is enabled to reach the rivers and ascend to the spawning grounds.

This is the great argument in favour of a weekly close season on salmon rivers; but there is no doubt on some of the great rivers of Canada, as on the Fraser River or Skeena River, that the fish which have passed the lower fishing grounds during Sunday are overtaken on Monday morning by fishermen who hurry to the highest limit up the river allowed by law, and capture the fish after the first few miles of their ascent. This may be so on the Restigouche and other eastern rivers where the nets, some miles up the river, take the fish on Monday which have passed the lower nets in the estuary during the Sunday close time. An annual close time is necessary not only to supplement the partially ineffective weekly close time; but to render illegal the capture and handling of spawning fish by poachers.

In all civilized countries, possessing salmon rivers, a rigidly defined close time covering as far as possible the spawning season, has been enforced and with good

effect. Fish taken illegally during the 30, 40 or 60 hours weekly close time may be legally possessed and sold, on Monday or Tuesday, if the illegal capture be not detected. But it is difficult to keep illegal salmon during a long annual close time, without risk of detection, and if discovered, their condition proves them to be unseasonable and illegal fish. Moreover an annual close season may be enacted (like the ten days close time in September in British Columbia) for several subsidiary reasons as for instance to prevent the capture of very late incoming salmon, like the last stragglers (discoloured, soft and disgusting in appearance) of the Blue-back or, Sockeye run, and to cover simultaneously one of the earliest runs of Cohoe Salmon both of them very desirable objects, the one on economic and health considerations, the other on protective grounds, thus the canning of salmon in bad condition, and the perpetuation of an early run of a valuable species are accomplished by this ten days interregnum. Fishery regulations *per se* have no direct connection with health or sanitary regulations, yet the purposes of the latter regulations are often indirectly aided and accomplished by the former. Fish in an unseasonable, emaciated and degenerate condition cannot be good food. The Pacific Salmon which have mounted many hundreds of miles, are ill-conditioned, semi-putrid and wholly unfit to be eaten, yet they would be largely consumed, and many factories would not hesitate to can them, did not the law (by close time regulations) prevent it. In remote districts, Indians and white men too, are said to use them for food and outbreaks of disease may be often traced to this cause.

Oyster regulations have had a similar object largely in view, and have prohibited the taking and sale of 'sick' or spatting oysters as much on grounds of health, rightly or wrongly, as for protection purposes.

Close seasons as a rule cover periods when fish may not only be taken more numerously (as they are then schooling) but more easily (as the females are more heavy with spawn;) but they are also intended to protect the weakly emaciated spent fish after spawning, as well as the vigorous 'full' fish before spawning. It is well known that shad on descending from their breeding grounds up river, are little more than skin and bone, yet worthless and emaciated though they are, the fishermen strain every nerve to capture them. A Shad close time should cover the descending fish as well as protect the ascending schools. The same reason may be urged for a long close season for salmon. It prevents the capture of black slink salmon and unsightly kelts. It no doubt enables the young fish, the smolts, to descend to the sea undisturbed. There is every reason to prevent a river or lake from being disturbed all through the year by fishing operations, and the fish harassed and driven about by long lines of nets.

The Canadian regulations for salmon, etc., have worked untold benefit in preventing the continuous disturbance of the fishing grounds from January to December. Had it been permitted, the fish would no doubt forsake such waters, never to return. Special close times, covering several years in some cases, have been devised to restore depleted fisheries. Thus in 1892 a close time for three years for striped sea bass was enforced in New Brunswick. The beneficial result was most marked, and the fish which had been almost exterminated increased—more rapidly than either the authorities or the fishermen could have reasonably anticipated. All fisheries are not so readily restored, and a long period of prohibition in the St. John River, in New Brunswick, appears to have been ineffectual to restore the depleted and destroyed sturgeon fishery there. The same difficulty in restoration, by a lengthy close time, has been observed in lobster fisheries, when these have been once depleted.

It has been possible, in the case of some fisheries, to so arrange the annual close time, that the fish about to spawn are protected from capture before the actual spawning period. The smelt, for instance, do not spawn as a rule for some weeks after the present close time begins, but as the netting season draws to its end a vast number of smelts are found to be swollen with eggs that are rapidly approaching the ripe stage. It is no doubt due to this antedated close time that the smelt still abound in vast schools at the mouth of the Miramichi, the Richibucto, the Restigouche and other rivers, although as many as 4,000 or 5,000 tons have been captured during the short netting season of a few weeks. A close season to achieve fully its object should, if possible, protect the first as well as the last spawners. It

should do this in order to keep up the early runs, which in most marketable fish are by far the most valuable. It should also prevent the last spawners from being captured, as the late fish are always in a poor, flabby and unseasonable condition for food. The capture of early runs has in the case of salmon rivers had the effect of wholly destroying them and of rendering such rivers late. Late rivers imply a large proportion of degenerate, unsightly and undesirable fish. Prohibitions again have been enacted to prevent the disturbance of one kind of fish by fishing operations carried on for other kinds of fish. Thus nets for whitefish, pickerel or dore, and for coarse fish such as catfish, pike and suckers were prohibited in the Bay of Quinte for many years, not to protect the fish just mentioned, but on other accounts. Thus in summer such nets would take spawning bass, or, at any rate, would disturb them while spawning, and later would interfere with the bass anglers who desired these fine black bass grounds to be free from nets at the time. The fishermen themselves were not strongly averse to this summer net prohibition for three reasons—(a) they were employed by the anglers as boatmen and in other ways; (b) their nets readily rotted and became useless if used in hot weather; (c) catfish and other coarse kinds are soft and in poor condition in summer and fall, whereas in the cold winter months they are most valuable and in prime condition for market.

Very various, indeed, are the grounds for enacting close seasons and the reasons for enforcing them, but the ultimate object is the promotion and improvement of the fish supply, and conferring thereby substantial benefit on the fishermen and the public.

It is from the fishermen and from the public, therefore, that the authorities ought to look for every aid in the laudable task of fish protection. That such aid is not always to be relied upon is a matter of common knowledge. Indeed, it is too often the case that the parties likely to derive most benefit permanently from a brief protective prohibition do not realise that such benefit must inevitably accrue to them.

The published views of a well known Ohio fisherman may be given as an example. He said:—'Regarding this matter of a close season I have certainly some convictions. The difficulty along our part of the line of Lake Erie, which we have to encounter, is that the time that you can take these fishes best for the market is in the month of November, and in no other month to speak of can you take any whitefish in the head of Lake Erie. It is true that the head of Lake Erie is the natural spawning ground probably for the whitefish, but if you do not take them in the fall with pound-nets and other appliances in the head of Lake Erie, they must then take them with gill-nets. Now there is no use of making a close season to shut out this fishing article of food. You take the fishing of Ohio, and you take the month of November out of the fishing month, and you might just as well hang up your nets entirely on the American side, that is, on the headwaters. The month of November is the only time that it is possible to catch the fish, that is fish for commerce.'

A prominent member of a fishing firm in Michigan said: 'I think a close season to commence the first of September and end the first of January, would be what we ought to have. I think the State ought to take the money that is expended in hatching fish, and pay the fishermen to stop fishing during the close season; that is, pay the fishermen for their time while they are lying still in the fall, during the fall fishing season.'

Such an expression of opinion is proof of the unwillingness of the fishing community to realise the purpose and meaning of close seasons for fish. Public opinion does not appear to have reached the necessary state of enlightenment. The California Fishery Commissioners when they reported regarding salmon protection on the depleted Sacremento River in 1882, said:—

'The Commission has much satisfaction in being able to report that there now appears to exist a more harmonious feeling upon the necesity of preserving the fish in our rivers. During the year last past, from all the information we have, there has been exhibited, on the part of the conductors of the canning business, a fair and earnest desire to enforce the close season, and a commendable realization of the importance of preserving the fish from wasteful destruction, and allowing

them to reach their breeding-grounds in sufficient numbers. But still there has been a great deal of surreptitious violation of the laws by itinerant fishermen, whose depredations can only be prevented by the people in the immediate neighborhood by assisting in enforcing the law; for it may here, we think, be pertinently remarked, that the 'American citizen,' whilst exhibiting the highest order of natural ability for the making of laws, seems to almost entirely overlook the fact that it is also his privilege and duty, individually, to aid in the enforcement of them.'

This lack of support on the part of the public in the enforcement of just and necessary fishery laws is not confined to the United States; but the view, at one time prevalent, that the product of the waters is common property which any one may secure how, when, and where he likes, is slowly giving way to one more enlightened and having more regard to the public interest.

APPENDIX No. 1.

EXPENDITURE AND REVENUE.

The total expenditure for all Fisheries services, except Civil Government, for the fiscal year ending June 30, 1899, including Fishing Bounty, amounted to $417,601.16, being within the appropriation by $1,099,27.

The total fisheries revenue, during the same period, from rents, license fees, fines and sales, including the *modus vivendi* licenses to United States vessels, amounted to $85,502.85.

Service.	Expenditure	Vote.
	$ cts.	$ cts.
Fisheries	95,278 59	95,000 00
Fish-breeding	34,522 57	34,500 00
Fisheries protection service	105,133 27	104,890 00
Fishing bounty	159,459 00	160,000 00
Miscellaneous expenditure	23,207 73	24,310 43
Total	$417,601 16	$418,700 43

The details of the above will be found in the Auditor General's report under the proper headings.

In addition to the above, the following summary shows the salaries and disbursements of fishery officers in the several provinces, together with the expenses for maintenance of the different fish-breeding establishments throughout the Dominion :—

Service.	Expenditure	Vote.
	$ cts.	$ cts.
Fisheries, Ontario	11,784 22	
" Quebec	11,350 27	
" New Brunswick	22,922 50	
" Nova Scotia	25,348 11	
" Prince Edward Island	5,832 35	
" Manitoba	1,883 37	
" North-west Territories	4,065 68	
" British Columbia	8,459 47	
General account	2,632 12	
Total	$ 95,278 59	95,000 00

SALARIES and Disbursements of Fishery Officers.

Service.	Expenditure	Vote.
	$ cts.	$ cts.
Fish-breeding, Ottawa hatchery	1,278 40	
" Newcastle "	3,762 01	
" Sandwich "	4,941 89	
" Tadoussac "	2,190 86	
" Gaspé "	366 63	
" Magog "	340 45	
" Restigouche "	2,802 64	
" Bedford "	1,401 25	
" Bay View "	950 47	
" Sydney "	73 94	
" Miramichi "	2,186 58	
" St John Riv. "	5,328 28	
" Fraser Riv. "	3,736 14	
" Selkirk "	3,967 36	
General account	1,155 67	
Total	34,522 57	34,500 00

This expenditure by provinces is subdivided as follows :—

EXPENDITURE.

Ontario.	$ cts.	$ cts.
Salaries of officers	7,252 42	
Disbursements of officers	4,525 80	
Miscellaneous	6 00	
Total		11,784 22
Quebec.		
Salaries of officers	6,779 79	
Disbursements of officers	4,536 95	
Miscellaneous	33 53	
Total		11,350 27
New Brunswick.		
Salaries of officers	14,674 63	
Disbursements of officers	7,443 19	
Miscellaneous	804 68	
Total		22,922 50
Nova Scotia.		
Salaries of officers	14,299 79	
Disbursements of officers	11,010 66	
Miscellaneous	37 66	
Total		25,348 11
Prince Edward Island.		
Salaries of officers	4,219 84	
Disbursements of officers	2,476 29	
Miscellaneous	136 72	
Total		6,832 85

EXPENDITURE—*Continued.*

	$ cts.	$ cts.
Manitoba.		
Salaries of officers	1,205 00	
Disbursements of officers	678 37	
Total		1,883 37
North-west Territories.		
Salaries of officers	1,984 56	
Disbursements of officers	1,957 69	
Miscellaneous	123 43	
Total		4,065 68
British Columbia.		
Salaries of officers	5,589 07	
Disbursements of officers	1,048 40	
Miscellaneous	1,822 00	
Total		8,459 47
General account		2,632 12
Grand total		95,278 59

FISH-BREEDING.

	$ cts.	$ cts.
Newcastle Hatchery.		
Salaries	594 00	
Miscellaneous expenditure	3,168 01	
Total		3,762 01
Sandwich Hatchery.		
Salaries	900 00	
Miscellaneous expenditure	4,041 89	
Total		4,941 89
Ottawa Hatchery.		
Salaries	700 00	
Miscellaneous expenditure	578 40	
Total		1,278 40
Tadoussac Hatchery.		
Salaries	650 00	
Miscellaneous expenditure	1,540 86	
Total		2,190 86
Gaspé Hatchery.		
Salaries	366 63	
Miscellaneous expenditure		
Total		366 63

FISH-BREEDING—*Continued.*

	$ cts.	$ cts.
Magog Hatchery.		
Salaries	180 00	
Miscellaneous expenditure	160 45	
Total		340 45
Restigouche Hatchery.		
Salaries	700 00	
Miscellaneous expenditure	2,102 64	
Total		2,802 64
Bedford Hatchery.		
Salaries	450 00	
Miscellaneous expenditure	991 25	
Total		1,441 25
Bay View Hatchery.		
Salaries	450 00	
Miscellaneous expenditure	500 00	
Total		950 00
Sydney Hatchery.		
Miscellaneous expenditure	73 94	
Total		73 94
Miramichi Hatchery.		
Salaries	1,000 00	
Miscellaneous expenditure	1,186 58	
Total		2,186 58
St. John River Hatchery.		
Salaries	600 00	
Miscellaneous expenditure	4,728 28	
Total		5,328 28
Selkirk Hatchery.		
Salaries	525 00	
Miscellaneous expenditure	1,442 36	
Total		3,967 36
Fraser River Hatchery.		
Salaries	500 00	
Miscellaneous expenditure	3,236 14	
Total		3,736 14
General Account.		
Miscellaneous expenditure	1,155 67	
Total, Fish-breeding		34,522 57
Total salaries and disbursements of fishery officers		95,278 59

MISCELLANEOUS.

MISCELLANEOUS	$ cts.
Building fishways	876 28
Legal and incidental expenses	861 05
Canadian fisheries exhibit	904 81
Expenditure in connection with the distribution of fishing bounties	5,034 73
Surveys of oyster beds	4,261 33
Issuing licenses to United States fishing vessels	398 71
Fisheries Revenue	509 10
Behring Sea Arbitration	4,552 62
Biological Station	4,709 10
J. S. Hall, Q.C—re Richelieu Eel Weirs	1,100 00
Total	23,207 73

FISHERIES PROTECTION SERVICE—1898-9.

Steamer 'Acadia.'	$ cts.	$ cts.
Wages of officers and men	9,673 39	
Provisions	3,243 73	
Fuel	2,156 69	
Repairs	3,582 35	
Miscellaneous	4,412 22	
Total		23,068 38
Steamer 'La Canadienne.'		
Wages of officers and men	7,883 02	
Provisions	3,303 52	
Fuel	1,888 25	
Repairs	316 28	
Miscellaneous expenditure	7,289 48	
Total		21,680 55
Steamer 'Stanley.'		
Wages of officers and men	3,584 06	
Provisions	1,811 65	
Fuel	1,816 55	
Miscellaneous expenditure	723 76	
Total		7,836 02
Steamer 'Curlew.'		
Wages of officers and men	6,150 80	
Provisions	2,102 66	
Fuel	1,811 93	
Repairs	469 98	
Miscellaneous expenditure	2,807 25	
Total		13,342 62
Steamer 'Petre'		
Wages of officers and men	6,400 15	
Provisions	2,173 13	
Fuel	1,477 71	
Miscellaneous expenditure	2,089 20	
Repairs	95 39	
Total		12,155 58

FISHERIES PROTECTION SERVICE, &c.—*Concluded.*

	$ cts.	$ cts.
Steamer 'Constance.'		
Wages of officers and men	6,768 13	
Provisions	1,942 46	
Fuel	5,748 04	
Repairs	2,753 90	
Miscellaneous expenditure	3,816 31	
Total		21,028 84
Schooner 'Osprey.'		
Wages of officers and men	4,339 95	
Provisions	1,446 95	
Fuel	38 15	
Repairs	488 94	
Miscellaneous expenditure	1,625 76	
Total		7,939 75
Schooner 'Kingfisher.'		
Wages of officers and men	4,655 00	
Provisions	2,442 47	
Fuel	59 63	
Repairs	530 83	
Miscellaneous expenditure	1,513 47	
Total		9,201 40
Steamer 'Dolphin.'		
Wages of officers and men	1,478 63	
Provisions	782 84	
Fuel	500 84	
Repairs	32 16	
Miscellaneous	172 40	
Total		2,966 87
Fisheries Intelligence Bureau		2,936 20
General account		11,841 92
Total		133,998 13
LESS—Amount paid by Customs Dept. for Str. 'Constance'	21,028 84	
do do 'Stanley'	7,836 02	
		28,864 86
Net total		105,133 27

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STATEMENT of Fisheries Revenue paid to the credit of the Receiver General of Canada, for the Fiscal Year ended June 30, 1899.

	$ cts.
Ontario, rents, license fees, fines, &c.	5,830 85
Quebec do	6,287 71
Nova Scotia do	4,668 22
New Brunswick do	10,430 08
P. E. Island do	2,242 24
Manitoba do	1,537 85
N. W. Territories do	150 50
British Columbia do	45,801 75
	76 949 20
LESS—Refunds	509 10
	76,440 10
Licenses to U. S. fishing vessels	9,062 75
Total	85,502 85

COMPARATIVE STATEMENT of Expenditure and Revenue of the

—	1885-86.		1886-87.		1887-88.	
	Expenditure.	Revenue.	Expenditure.	Revenue.	Expenditure.	Revenue.
	$ cts.	$ cts.	$ cts.	$ cts.	$ sts.	$ cts.
Ontario	17,900 74	15,917 62	19,534 01	15,063 57	19,860 52	18,251 25
Quebec	13,938 21	2,963 75	14,966 55	3,804 66	13,463 37	5,394 99
New Brunswick	15,719 36	4,078 10	16,944 87	4,417 52	20,533 20	7,625 64
Nova Scotia	17,852 33	2,166 53	18,092 21	1,585 28	18,308 02	3,905 44
Prince Edward Island	3,187 73	40 00	4,044 49	128 00	3,402 51	.....
Manitoba and North-west Territories	1,920 73	.....	2,468 25	5 00	2,816 64	819 25
British Columbia	1,878 53	922 50	5,860 72	943 50	3,661 83	6,934 55
Fish-breeding and fish-ways	44,038 80	.....	37,864 22	.....	41,082 04	.....
Fisheries Protection Service	37,613 30	.....	134,340 12	.....	77,102 98	.....
Miscellaneous	10,350 43	.....	11,327 77	.....	13,498 56	.....
Totals	164,400 16	26,088 50	265,443 21	25,947 53	213,729 67	42,931 12
Fishing bounties	161,597 39	.....	160,903 59	.....	163,757 92	.....

	1892-93.		1893-94.		1894-95.	
General Account Fisheries	.....	.....	.....	.....	.....	.....
Ontario	20,116 91	30,623 09	22,634 37	28,632 82	21,938 56	33,211 60
Quebec	11,761 34	7,471 70	11,692 82	7,211 82	12,459 34	8,836 18
New Brunswick	15,721 05	7,831 53	18,522 94	8,333 24	21,370 94	11,170 36
Nova Scotia	19,444 22	6,782 02	20,420 81	5,296 27	23,555 38	7,075 07
Prince Edward Island	2,847 60	304 10	3,078 55	980 15	3,796 58	3,312 30
Manitoba, North-west Territories	3,932 96	1,661 68	5,331 29	926 99	6,178 71	2,458 80
British Columbia	5,490 60	40,264 00	5,283 21	25,337 90	6,218 74	23,517 25
Fish-breeding	47,322 49	.....	45,024 67	.....	39,730 93	.....
Fisheries Protection Service	106,805 39	.....	115,147 59	.....	100,207 29	.....
Miscellaneous	100,602 14	.....	34,892 19	.....	24,619 86	.....
Totals	334,044 70	94,938 12	282,028 44	76,719 19	260,076 33	89,581 56
Fishing bounties	159,752 15	.....	158,794 54	.....	160,089 42	.....

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Fisheries Department, from July 1, 1885, to June 30, 1899.

1888-89.		1889-90.		1890-91.		1891-92.	
Expenditure.	Revenue.	Expenditure.	Revenue	Expenditure.	Revenue.	Expenditure.	Revenue.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
19,264 98	24,266 06	14,539 87	23.666 96	15,540 30	26,517 70	15,155 83	25,368 90
12,991 63	3,380 79	9,670 94	5,409 81	10,666 98	3,642 14	10,917 36	4,742 76
20,298 00	8,282 88	14,914 95	8,834 35	16,082 77	7,193 69	15,707 98	6,334 83
20,201 09	2,744 23	17,395 24	5,424 95	17,844 19	5,582 65	18,755 86	3,357 42
3,746 69	140 00	3,113 21	302 88	3,242 25	667 00	1,835 65	166 00
2,848 16	848 00	3,604 70	794 00	3,609 03	1,234 00	3,593 43	1,079 00
4,333 63	6,416 00	3,634 41	11,367 50	4,320 53	12,859 02	6,158 17	8,192 48
41,315 12	352 50	39,126 91	.....	39,496 45	1,286 50	43,957 74	178 00
69,693 82	.....	64,434 66	1,176 38	83,050 16	1,934 49	93,397 40	.....
10,912 18	.....	9,313 92	.....	13,382 28	.....	17,449 06	.....
205,605 30	46,440 46	178,748 81	56,976 83	207,234 94	60,917 19	226,928 48	49,719 39
149,990 63	.....	149,999 85	.....	165,967 22	.....	156,892 25	.....

1895-96.		1896-97.		1897-98.		1898-99.	
.....	.....	2,198 47	.....	2,389 66	.....	2,632 12	.....
24,917 48	35,681 68	21,592 40	32,814 66	19,239 34	30,574 57	11,784 22	5,830 85
11,870 43	8,160 98	12,910 80	7,876 12	11,140 16	7,571 15	11,350 27	6,287 71
20,526 56	10,696 88	21,671 92	10,110 77	17,063 58	5,317 08	22,922 50	10,430 08
23,049 41	6,180 93	23,682 33	5,239 55	21,683 91	11,511 85	25,348 11	6,668 22
3,555 87	2,161 85	3,744 36	2,032 25	6,775 78	2,707 57	6,832 85	2,242 24
6,915 20	2,256 69	1,908 14 2,181 58	1,719 00 344 13	1,206 26 2,324 66	1,515 00 393 87	1,883 37 4,065 68	1,537 85 150 50
6,226 77	26,410 75	8,841 64	39,888 82	8,508 79	47,864 75	8,459 47	45,801 75
38,050 41	....	27,330 73	.....	28,002 32	.....	34,522 57	....
102,021 72	.....	99,357 41	.....	101,807 96	.....	105,133 27	.....
20,203 25	.....	62,777 30	.....	59,919 56	.....	23,207 73	.....
257,237 10	91,549 76	289,197 01	100,025 30	280,061 98	107,455 84	427,599 16	76,949 20
163,567 99	....	154,389 77		157 504 00		159,459 00	

APPENDIX No. 2.

FISHING BOUNTIES.

The payments made for this service are under the authority of Act 54-55 Vic., cap. 42, intituled: 'An Act to encourage the development of the sea fisheries and the building of fishing vessels,' which provides for the payment of the sum of $160,000 annually, under regulations to be made from time to time by the Governor General in Council.

REGULATIONS.

The regulations governing the payment of fishing bounties are as established by the following Order in Council dated the 10th December, 1897.

Order in Council.

AT THE GOVERNMENT HOUSE AT OTTAWA,

FRIDAY, the 10th day of December, 1897.

Present;

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

His Excellency, in virtue of the provisions of 'The Bounty Act, 1891,' 54-55 Victoria, chapter 42, and by and with the advice of the Queen's Privy Council for Canada is pleased to order that the regulations governing the payment of fishing bounties established by Order of the Governor in Council dated the 24th August, 1894, shall be and the same are hereby rescinded, and the following regulations substituted therefor:—

1. Resident Canadian fishermen who have been engaged in deep-sea fishing for fish other than shell-fish, salmon and shad, or fish taken in rivers, or mouths of rivers, for at least three months, and have caught not less than 2,500 pounds of sea-fish, shall be entitled to a bounty; provided always, that no bounty shall be paid to men fishing in boats measuring less than 13 feet keel, and not more than 3 men (the owner included) will be allowed as claimants in boats under 20 feet.

2. No bounty shall be paid upon fish caught in trap-nets, pound-nets and weirs, nor upon the fish caught in gill-nets fished by persons who are pursuing other occupations than fishing, and who devote merely an hour or two daily to fishing these nets but are not, as fishermen, steadily engaged in fishing.

3. Only one claim will be allowed in each season, even though the claimant may have fished in two vessels, or in a vessel and a boat or in two boats.

4. The owners of boats measuring not less than 13 feet keel which have been engaged during a period of not less than three months in deep-sea fishing for fish other than shell-fish, salmon or shad, or fish taken in rivers, or mouths of river, shall be entitled to a bounty on each such boat.

5. Canadian registered vessels, owned and fitted out in Canada, of 10 tons and upwards (up to 80 tons) which have been exclusively engaged during a period of not less than three months in the catch of sea-fish other than shell-fish, salmon or shad, or fish taken in rivers, or mouths of rivers, shall be entitled to a bounty to be calculated on the registered tonnage which shall be paid to the owner or owners.

6. The three months during which a vessel must have been engaged in fishing, to be entitled to bounty, shall commence on the day the vessel sails from port on her fishing voyage and end the day she returns to port from said voyage.

7. Owners or masters of vessels intending to fish and claim bounty on their vessels must, before proceeding on a fishing voyage, procure a license from the nearest Collector of Customs or Fishery Overseer, said license to be attached to the claim when sent in for payment.

8. Dates and localities of fishing must be stated in the claim, as well as the quantity and kinds of sea-fish caught.

9. Ages of men must be given. Boys under 14 years of age are not eligible as claimants.

10. Claims must be sworn to as true and correct in all their particulars.

11. Claims must be filed on or before the 30th November in each year.

12. Officers authorized to receive claims will supply the requisite blanks free of charge, and after certifying the same will transmit them to the Department of Marine and Fisheries.

13. No claim in which an error has been made by the claimant or claimants shall be amended after it has been signed and sworn to as correct.

14. Any person or persons detected making returns that are false or fraudulent in any particular will be debarred from any further participation in the bounty, and be prosecuted according to the utmost rigour of the law.

15. The amount of the bounty to be paid to fishermen and owners of boats and vessels will be fixed from time to time by the Governor in Council.

16. All vessels fishing under bounty license are required to carry a distinguishing flag, which must be shown at all times during the fishing voyage at the main topmast head. The flag must be four feet square in equal parts of red and white, joined diagonally from corner to corner. Any case of neglect to carry out this regulation reported to the Department of Marine and Fisheries will entail the loss of the bounty, unless satisfactory reasons are given for its non-compliance.

JOHN J. McGEE,
Clerk of the Privy Council.

There were received for the year 1898, 14,679 claims, a decrease of 168 compared with the year 1897.

The number of claims paid during the year was 14,531, being a decrease of 189 as compared with the previous year.

There was $63,461 in bounties paid to vessels and their crews, and $95,998.50 to boats and boat fishermen, making the total bounty paid during the year 1898-9, $159,459.

The number of vessels which received bounty during the year was 784, the total tonnage being 25,108 tons, showing a decrease of 6 vessels and 617 tons, as compared with the previous year.

Bounty was paid on 13,747 boats, and to 23,501 boat fishermen during the year, being a decrease of 192 boats and 111 fishermen, as compared with 1897-8.

GENERAL STATEMENT of Fishing Bounty Claims received and paid for the Year 1898.

Province.	County.	Number of Claims received.	Number of Claims rejected.	Number of Claims paid.
Nova Scotia	Annapolis	181	1	180
	Antigonish	157		157
	Cape Breton	537		537
	Colchester			
	Cumberland	10	2	8
	Digby	499	2	497
	Guysborough	1,348	16	1,332
	Halifax	1,359	6	1,353
	Hants	1		1
	Inverness	625		625
	King's	66		66
	Lunenburg	937	2	935
	Pictou	36	3	33
	Queen's	192	1	191
	Richmond	1,089	12	*1,079
	Shelburne	651	2	649
	Victoria	500	24	476
	Yarmouth	258		258
	Totals	8,446	71	8,347
New Brunswick	Charlotte	466	1	465
	Gloucester	346	15	331
	Kent	62		62
	Northumberland	8		8
	Restigouche	1		1
	St. John	51	1	50
	Westmoreland			
	Totals	934	17	917
Prince Edward Island	King's	598	6	592
	Prince	439		*446
	Queen's	106	1	*107
	Totals	1,143	7	1,145
Quebec	Bonaventure	776	11	765
	Gaspé	2,507	22	*2,486
	Rimouski	76	16	60
	Saguenay	797	13	781
	Totals	4,171	65	4,092
	Grand totals	14,679	160	14,531

* NOTE.—The number of claims paid includes several applications for previous years, which explains the difference between claims paid and claims received, after deducting those rejected.

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DETAILED STATEMENT of Fishing Bounties paid to Vessels in each County for the Year 1898.

Province.	County.	Number of Vessels.	Tonnage.	Average Tonnage.	Number of Men.	Amount paid.
						$ cts.
Nova Scotia	Annapolis	11	260	23·7	62	663 00
	Antigonish	1	10	10	3	29 50
	Cape Breton	11	178	16·2	57	548 50
	Cumberland	4	87	21·3	16	191 00
	Digby	50	1,493	29·43	429	4,223 00
	Guysborough	20	506	25·6	103	1,175 50
	Halifax	53	1,308	24 36	305	3,290 50
	Hants	1	17	17	3	36 50
	Inverness	24	407	16·23	122	1,200 00
	King's	4	69	17·1	16	173 00
	Lunenburg	157	11,171	71·24	2386	26,680 00
	Pictou	1	23	23	.....	23 00
	Queen's	9	244	27·1	63	653 50
	Richmond	46	1,358	29·24	297	3,288 50
	Shelburne	60	1,774	29·34	495	4,991 50
	Victoria	5	114	22·4	22	257 00
	Yarmouth	48	1,849	38·25	470	4,904 00
	Totals	505	20,868	41·163	4840	52,328 00
New Brunswick	Charlotte	49	874	17·41	193	2,128 50
	Gloucester	178	2,100	11·142	627	6,175 50
	Kent	.....	.....	.....	.....	.....
	Northumberland	3	39	13	11	110 50
	Restigouche	1	26	26	4	52 00
	St. John	8	116	14·4	24	272 00
	Totals	239	3,155	13·48	859	8,738 50
Prince Edward Island	King's	13	330	25·5	71	791 50
	Prince	6	143	23·5	32	351 00
	Queen's	5	88	17·3	22	228 00
	Totals	24	561	23·9	125	1,370 50
Quebec	Bonaventure	.....	.....	.....	.....	.....
	Gaspé	1	15	15	4	41 00
	Rimouski	.....	.....	.....	.....	.....
	Saguenay	15	509	33·14	73	983 50
	Totals	16	524	32·12	77	1,024 50
	Grand totals	784	25,108	32·20	5901	63,461 50

DETAILED STATEMENT of Fishing Bounties paid to **Boats** in each County for the Year 1898.

Province.	County.	Number of Boats.	Number of Men.	Amount paid.	Total Bounty paid to Vessels and Boats in 1898.
				$ cts.	$ cts.
Nova Sco	Annapolis	169	265	1,096 50	1,759 50
	Antigonish	156	232	968 00	997 50
	Cape Breton	526	996	4,012 00	4,560 50
	Cumberland	4	9	35 50	226 50
	Digby	447	827	3,341 50	7,564 50
	Guysborough	1,312	2,053	8,497 50	9,673 00
	Halifax	1,300	1,836	7,723 00	11,013 50
	Hants				36 50
	Inverness	601	1,321	5,224 50	6,424 50
	King's	62	89	373 50	546 50
	Lunenburg	778	876	3,844 00	30,524 00
	Pictou	32	47	196 50	219 50
	Queen's	182	289	1,193 50	1,847 00
	Richmond	1,033	1,608	6,662 00	9,949 50
	Shelburne	589	941	3,882 50	8,874 00
	Victoria	471	746	3,082 00	3,339 00
	Yarmouth	210	303	1,270 50	6,174 50
	Totals	7,872	12,438	51,403 00	103,730 00
New Brunswick	Charlotte	416	681	2,799 50	4,928 00
	Gloucester	153	381	1,486 50	7,662 00
	Kent	62	98	405 00	405 00
	Northumberland	5	18	68 00	178 50
	Restigouche				52 00
	St. John	42	59	248 50	520 50
	Westmoreland				
	Totals	678	1,237	5,007 50	13,746 00
Prince Edward Island	King's	579	974	3,988 00	4,779 50
	Prince	440	970	3,835 00	4,186 00
	Queen's	102	255	994 50	1,222 50
	Totals	1,121	2,199	8,817 50	10,188 00
Quebec	Bonaventure	765	1,291	5,283 50	5,283 50
	Gaspé	2,485	4,927	19,729 50	19,770 50
	Rimouski	60	92	382 00	382 00
	Saguenay	766	1,317	5,375 50	6,359 00
	Totals	4,076	7,627	30,770 50	31,795 00
	Grand totals	13,747	23,501	95,998 50	159,459 00

GENERAL STATISTICS.

The fishing bounty was first paid in 1882.

The payments were made each year on the following basis :—

1882, vessels $2 per ton, one half to the owner and the other half to the crew. Boats at the rate of $5 per man, one-fifth to the owner and four-fifths to the men.

1883, vessels $2 per ton, and boats $2.50 per man, distributed as in 1882.

1884, vessels $2 per ton, as in 1882 and 1883.

Boats from	14 to 18 feet keel	$1 00
do	18 to 25 do	1 50
do	25 feet keel upwards	2 00

And boat fishermen $3 each.

1885, 1886 and 1887, vessels $2 per ton as in previous years. Boats measuring 13 feet keel having been admitted in 1885, the rates were :—Boats from 13 to 18 feet keel, $1 ; from 18 to 25 feet keel, $1.50 ; from 25 feet keel upwards, $2, and fishermen $3 each.

1888, vessels $1.50 per ton, one-half each to owner and crew. Boats, the same as in 1885, 1886 and 1887.

1889, 1890 and 1891, vessels $1.50 per ton as in 1888. Boats $1 each. Boat fishermen $3.

1892, vessels $3 per ton, one half each to owner and crew. Boats $1 each. Boat fishermen $3.

1893, vessels $2.90 per ton, paid as formerly. Boats $1 each. Boat fishermen $3.

1894, vessels $2.70 per ton, distributed as in previous years. Boats $1 each. Boat fishermen $3.

1895, vessels $2.60 per ton, half each to owner and crew. Boats $1 each. Boat fishermen $3.

1896, vessels $1 per ton, which was paid to the owners, and vessel fishermen $5 each, clause 5 of the regulations having been amended accordingly. Boats $1 each, and boat fishermen $3.50 per man.

1897, vessels $1 per ton, and vessel fishermen $6 each. Boats $1 each, and boat fishermen $3.50 per man.

1898, vessels $1 per ton, and vessel fishermen $6.50 each. Boats $1 each, and boat fishermen $3.50 per man.

Since 1882, 13,854 vessels, totalling a tonnage of 502,849 tons, have received the bounty. The total number of vessel fishermen which received bounty is 105,503, being an average of 8 men per vessel.

The total number of boats to which bounty was paid since 1882 is 238,546, and the number of fishermen 447,215. Average number of men per boat, 2.

The highest bounty paid per head to vessel fishermen was $21.75 in 1893 ; the lowest 83 cents, while the highest to boat fishermen was $4, the lowest $2.

The general average paid per head is $4.85.

COMPARATIVE STATEMENT by Provinces for the Years 1882 to 1898, inclusive, showing:—

(1) Total number of Fishing Bounty Claims received and paid by the Department of Marine and Fisheries.

YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		PRINCE EDWARD ISLAND.		QUEBEC.		TOTAL.	
	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.
1882	6,730	6,613	1,257	1,142	1,169	1,100	3,162	3,117	12,318	11,972
1883	7,171	7,076	1,693	1,579	1,138	1,106	3,602	3,325	13,604	13,086
1884	7,007	6,930	1,252	1,224	923	885	3,470	3,429	12,652	12,468
1885	7,646	7,599	1,609	1,588	1,117	1,025	3,943	3,912	14,315	14,124
1886	7,639	7,702	1,767	1,763	1,131	1,080	4,275	4,355	14,812	14,900
1887	8,262	8,227	1,975	1,958	1,201	1,126	4,138	4,105	15,576	15,416
1888	8,481	8,429	2,065	2,026	1,153	834	4,328	4,310	16,027	15,599
1889	8,816	8,523	2,428	2,392	1,211	1,511	4,664	4,652	17,119	17,078
1890	9,337	9,429	2,522	2,469	1,352	1,257	4,860	4,804	18,071	17,959
1891	10,242	10,063	2,831	2,084	1,482	1,446	5,108	4,913	19,663	18,506
1892	8,272	8,186	1,067	1,001	1,065	1,051	4,425	4,204	14,829	14,442
1893	7,926	7,844	967	881	1,027	1,012	4,059	3,898	13,979	13,635
1894	8,640	8,600	925	911	983	963	3,948	3,876	14,496	14,350
1895	8,835	8,825	979	975	1,009	1,025	3,904	3,955	14,727	14,780
1896	8,597	8,562	1,137	1,064	1,111	1,120	4,366	4,229	15,211	14,975
1897	8,450	8,418	1,042	991	1,175	1,171	4,180	4,149	14,847	14,729
1898	8,446	8,347	934	917	1,143	1,145	4,171	4,092	14,679	14,531
Totals	140,497	139.373	26,450	24,965	19,390	18,857	70,588	69,325	256,925	252,550

(2) Number of vessels, tonnage and number of men which received Bounty in each year.

Year.	Nova Scotia.			New Brunswick.			Prince Edward Island.			Quebec.			Total.		
	No. of Vesseis.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.
1882	588	22,841	5,343	120	2,171	531	15	389	74	63	2,210	538	786	27,611	6,486
1883	700	29,788	6,238	126	2,102	496	16	450	66	62	2,236	443	904	34,576	7,243
1884	700	29,828	6,327	139	2,289	560	16	582	92	56	1,965	382	911	34,664	7,361
1885	629	27,709	5,897	128	2,120	496	19	597	113	55	1,791	317	831	32,217	6,823
1886	562	25,375	5,022	145	2,628	520	32	1,071	215	52	1,730	320	791	30,804	6,077
1887	566	24,520	4,900	154	2,889	563	38	1,677	338	54	1,883	334	812	30,969	6,135
1888	589	26,008	5,450	150	2,545	544	37	1,245	246	51	1,842	388	827	31,640	6,631
1889	597	27,123	5,684	153	2,590	565	35	1,274	239	48	1,729	330	833	32,716	6,818
1890	540	23,955	4,935	133	2,129	447	32	1,002	203	34	1,182	220	739	28,268	5,805
1891	527	22,780	4,618	124	2,051	411	27	778	155	27	924	168	705	26,533	5,352
1892	507	22,279	4,611	108	1,683	343	30	983	139	23	803	159	668	25,748	5,252
1893	536	23,195	4,780	210	2,922	634	27	910	151	32	952	179	805	27,979	5,744
1894	602	24,735	5,077	238	3,189	721	21	594	114	38	1,066	178	899	29,584	6,090
1895	603	25,018	5,184	238	3,107	764	27	769	129	39	1,262	173	907	30,156	6,250
1896	553	23,415	4,607	250	3,337	800	23	656	114	36	1,143	144	862	28,551	5,665
1897	507	21,323	4,829	239	3,079	816	20	490	109	24	833	116	790	25,725	5,870
1898	508	20,868	4,840	239	3,155	859	24	561	125	16	524	77	784	25,108	5,901
Totals	9,814	420,760	88,342	2,894	43,986	10,070	439	14,028	2,625	710	24,075	4,466	13,854	502,849	105,503

(3) NUMBER of Boats and boat fishermen which received Bounty in each year.

YEAR.	NOVA SCOTIA		NEW BRUNSWICK.		P. E. ISLAND.		QUEBEC.		TOTAL.	
	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.
1882.....	6,043	12,130	1,024	2,530	1,087	3,070	3,071	5,716	11,225	23,446
1883.....	6,458	13,553	1,453	3,309	1,098	3,106	3,266	6,188	12,275	26,156
1884.....	6,257	12,669	1,086	2,505	869	2,346	3,344	6,416	11,556	23,936
1885.....	6,970	13,396	1,460	3,254	1,006	2,606	3,857	7,485	13,293	26,741
1886.....	7,140	13,351	1,618	3,567	1,048	2,547	4,303	7,981	14,109	27,446
1887.....	7,662	13,997	1,804	3,994	1,089	2,711	4,051	7,550	14,605	28,252
1888.....	7,840	14,115	1,876	4,148	797	2,141	4,259	7,852	14,772	28,256
1889.....	7,926	14,118	2,237	5,032	1,475	3,568	4,602	8,807	16,240	31,525
1890.....	8,886	15,738	2,324	5,242	1,192	3,024	4,766	9,241	17,168	33,245
1891.....	9,525	16,552	1,928	4,126	1,383	3,427	4,865	9,402	17,701	33,507
1892.....	7,679	12,307	893	1,765	1,021	2,047	4,181	7,693	13,774	23,812
1893.....	7,308	11,748	671	1,314	985	1,962	3,866	7,245	12,830	22,269
1894 ...	7,956	12,899	661	1,281	913	1,813	3,821	7,139	13,351	23,132
1895.....	8,222	13,106	737	1,434	998	2,141	3,916	7,877	13,873	24,558
1896	8,008	12,454	814	1,553	1,095	2,126	4,189	7,688	14,106	23,821
1897.....	7,911	12,542	752	1,351	1,151	2,147	4,125	7,572	13,939	23,612
1898.....	7,872	12,438	678	1,237	1,121	2,199	4,076	7,627	13,747	23,501
Totals...	129,663	227,113	22,016	47,642	18,327	42,981	68,558	129,479	238,564	447,215

(4) TOTAL Number of men receiving Bounty in each year.

YEAR.	NOVA SCOTIA.	NEWBRUNSWICK.	P. E. ISLAND.	QUEBEC.	TOTAL.
	No. of Men.	No. of Men.	No. of Men.	No. of Men.	
1882	17,473	3,061	3,144	6,254	29,932
1883	19,791	3,805	3,172	6,631	33,399
1884	18,996	3,065	2,438	6,798	31,297
1885	19,293	3,750	2,719	7,802	33,564
1886	18,373	4,087	2,762	8,301	33,523
1887	18,897	4,557	3,049	7,884	34,387
1888	19,565	4,692	2,390	8,240	34,887
1889	19,802	5,597	3,807	9,137	38,343
1890	20,673	5,689	3,227	9,461	39,050
1891	21,170	4,537	3,582	9,570	38.859
1892	16,918	2,108	2,186	7,852	29,064
1893	16,528	1,948	2 113	7,424	28,013
1894	17,976	2,002	1,927	7,317	29,222
1895	18,290	2,198	2,270	8,050	30,808
1896	17,061	2,353	2,240	7,832	29,486
1897	17,371	2,167	2,256	7,688	29,482
1898	17,278	2,096	2,324	7,704	29,402
Totals.....	315,455	57,712	45,606	133,945	552,718

(5) TOTAL annual payments of Fishing Bounty.

Year.	Nova Scotia.	New Brunswick	P. E. Island.	Quebec.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1882	106,098 72	16,997 00	16,137 00	33,052 75	172,285 47
1883	89,432 50	12,395 20	8,577 14	19,940 01	130,344 85
1884	104,934 09	13,576 00	9,203 96	28,004 93	155,718 98
1885	103,999 73	15,908 25	10,166 65	31,464 76	161,539 39
1886	98,789 54	17,894 57	10,935 87	33,283 61	160,903 59
1887	99,622 03	19,699 65	12,528 51	31,907 73	163,757 92
1888	89,778 90	18,454 92	9,092 96	32,858 75	150,185 53
1889	90,142 51	21,026 79	13,994 53	33,362 71	158,526 54
1890	91,235 64	21,108 33	11,686 32	34,210 72	158,241 01
1891	92,377 42	17,235 96	12,771 30	34,507 17	156,891 85
1892	109,410 39	10,864 61	9,782 79	29,694 35	159,752 14
1893	108,060 67	12,524 09	9,328 62	28,320 72	158,234 10
1894	111,460 03	12,690 80	7,875 79	28,040 18	160,066 80
1895	110,765 27	12,919 32	9,285 13	30,598 27	163,567 99
1896	98,048 95	13,602 88	9,745 50	32,992 44	154,389 77
1897	102,083 50	13,454 50	9,809 00	32,157 00	157,504 00
1898	103,730 00	13,746 00	10,188 00	31,795 00	159,459 00
Totals	1,709,969 89	264,098 87	181,109 07	526,191 10	2,681,368 93

LIST of Vessels which received Fishing Bounty for the Year 1898.

PROVINCE OF NOVA SCOTIA.

ANNAPOLIS COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
80093	Anna K	St. John	14	George Gibson	Margaretville	1	20 50
72978	Annie Coggins	Digby	21	David Hayden	Thorne's Cove	7	66 50
88270	Alice May	St. John	10	Ambrose Sabean, sr.	Port Lorne	5	42 50
94700	Franklin S. Schenck	Digby	44	John L. Apt	Thorne's Cove	13	128 50
94706	George J. Tarr	do	61	John S. Hayden	Victoria Beach	13	145 50
85503	G. P. Taylor	Annapolis	13	Stephen Haynes	do	4	39 00
42089	Lily	St. Andrews	10	James Aldred	Margaretville	3	29 50
100020	May Flower	Annapolis	12	John Burrell	Clementsport	2	25 00
94732	Only Son	Windsor	13	John Gordon	Margaretville	3	32 50
83253	Rescue	Annapolis	17	Josiah Burrell	Clementsport	5	49 50
37172	Richard Simonds	St. John	45	Norman Ray	Margaretville	6	84 00

ANTIGONISH COUNTY.

90642	Komaroff	Yarmouth	10	J.Brown & P.Decoste	Harb'r au Bouche	3	29 50

CUMBERLAND COUMTY.

88396	Brant	Windsor	12	Abner Neves	Apple River	2	25 00
83261	Economist	Digby	14	James E. Ogilvie	Parrsboro'	2	27 00
103023	Minnie H	Parrsboro'	12	Wm. E. Hayes	do	3	31 50
100515	Packet	do	49	Burpee Tupper	Spencer's Island	9	107 50

CAPE BRETON COUNTY.

100389	Annie F	Sydney	13	John Farrell	Main-à-Dieu	4	39 00
100372	Betsy Jane	do	11	Samuel Moore	Little Bras d'Or	4	37 00
92566	Cassie M	Halifax	12	John Pope	Main-à-Dieu	5	44 50
85381	Champion	Sydney	19	John Williams	Louisburg	4	45 00
75571	Fanny	Liverpool	16	Aaron Anesty	North Sydney	5	48 50
88513	Ida	Sydney	11	Elias Leblanc	Little Bras d'Or	3	30 50
100381	Katie B	do	24	John H. Burke	Little Lorraine	7	69 50
80974	Mary Ann	do	19	Thomas Hart, sr	Main-à-Dieu	6	58 00
88431	Mayflower	Halifax	21	John P. Bates	Bateston	6	60 00
92600	Merit	Sydney	13	Alexander Leblanc	Little Bras d'Or	6	52 00
100566	Rob. S	Halifax	19	Ambrose Forward	Lingan	7	64 50

DIGBY COUNTY.

83431	Acadian	Weymouth	32	George H. Stevens	Freeport	11	103 50
83258	Alfred	Digby	29	Edwin Hains	do	9	87 50
90660	Alice May	do	18	Edgar McDormand	Westport	8	70 00
88598	Alph. B. Parker	St. John	39	Holland Outhouse	Tiverton	12	117 0
94696	Annie M. Sproul	Digby	70	John W Sproul	Digby	16	174 00
100547	B & C	do	14	Loren Percy	Westport	2	27 00
94698	Carrie H	do	20	Augustus Haycock	do	7	65 50
94704	Charles Haskell	do	67	Howard Anderson	Digby	16	171 00
74331	Condor	Yarmouth	11	Howard Titus	Westport	5	43 50

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LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

DIGBY COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
103181	Curlew	Shelburne	63	John Sims	Digby	16	167 00
90662	Edward A. Horton	Digby	67	Joseph E. Snow	do	14	158 00
77740	Elmer	do	15	James Gower	Westport	7	60 50
94707	Ernest F. Norwood	do	79	Joseph E. Snow	Digby	5	111 50
75757	Etta	do	17	Clarence Webber	Westport	5	49 50
85558	Fair Play	Yarmouth	11	John A. Powell	do	2	24 00
74329	Fairy Queen	do	13	Wallace Coggins	do	5	45 50
100891	Fleur de Lis	Weymouth	17	Geo. A. Mallett	Plymouth	5	49 50
77963	Freeman Colgate	Digby	26	Chas. Hicks & Sons	Westport	10	91 00
80798	Freddie G	do	18	George Gower	do	7	63 50
83260	Gazelle	do	20	D. & O. Sproul	Digby	7	65 50
90436	Genesta	Barrington	32	George Denton	Westport	12	110 00
94835	Georgie Linwood	Digby	25	Herbert Johnston	Digby	5	57 50
100544	Helen Maud	do	26	Chas. McDormand	Westport	8	78 00
77786	Hesperus	Halifax	17	George Buckman	do	3	36 50
61789	I. H. Goudey	Shelburne	27	Casimir R. Comeau	Meteghan River	5	59 50
100064	Isma	St. John	31	Chas. Hicks & Sons	Westport	10	96 00
94693	John H. Kennedy	Digby	54	John W. Snow	Digby	6	93 00
83461	Josie L. Day	do	16	Edward Keans	do	9	74 50
59388	Letitia	St. Andrews	10	Peter H. Belliveau	Belliveau's Cove	3	29 50
85690	Lora T	Digby	15	Joseph Thurber	Freeport	7	60 50
85534	Lloyd	Yarmouth	24	W. H. Anderson	Digby	9	82 50
85687	Mabel	Digby	38	William M Denton	Westport	14	129 00
100487	Mabel B	do	57	M. G. Crocker	Freeport	12	135 00
85539	Maggie Jane	Yarmouth	12	Thomas Saulnier	Meteghan	4	38 00
85682	Maiapert	Digby	23	Edward C. Bowers	Westport	10	88 00
92640	Minerva	Lunenburg	80	Edward C. Bowers	do	18	197 00
85533	Minnie C	Yarmouth	12	Chipman Thurber	Freeport	5	44 50
80794	Minnie C	Digby	18	Chas. H. Bailey	Westport	8	70 00
100895	New Home	Weymouth	31	Moïse Thibodeau	Church Point	10	96 00
94825	On Time	Digby	19	Charles Glavin	Westport	9	77 50
100539	Rowena	do	10	Warren Snow	Smith's Cove	2	23 00
85558	S. A. Crowell	Yarmouth	23	Wallace Gower	Westport	8	75 00
100609	Swan	Shelburne	56	Milton Hains	Freeport	14	147 00
75726	Thrush	Yarmouth	13	Frank Lent	do	5	45 50
94694	Utah and Eunice	Digby	33	Milton Hains	do	9	91 50
103711	Venete	Yarmouth	16	Stephen Doucette	Cape Cove	8	68 00
100548	Violetta	Digby	11	Arthur W Longmire	Digby	5	43 50
88264	Walter J. Clarke	do	20	Wilbur P. Hamilton	do	6	59 00
64049	Weenona	do	19	Thomas Brooks	Freeport	7	64 50
100543	W. Parnell O'Hara	do	79	Edgar Post	Digby	20	209 00

GUYSBORO COUNTY.

103453	Anna Maud	Arichat	10	Thurlow Munroe	White Head	3	29 50
103322	Bonnie Briar Bush	Pt Hawkesb'ry	38	Henry O'Neill	Auld's Cove	8	90 00
100445	Carrie O	Canso	12	Samuel Grant	White Head	3	31 50
103321	Christie Campbell	Pt Hawkesb'ry	55	Thomas H. Peeples	Pirate Harbour	10	120 00
38418	Dolphin	Arichat	36	William S. Peart	Guysboro	3	55 50
83180	Friend	Halifax	17	Luke Mannette, sr	Larry's River	4	43 00
61622	Gentile	Guysboro	34	Edward Gilley	New Harbour	6	73 00
94963	Golden Seal	Halifax	32	Edward B. Pelrine	Larry's River	7	77 50
100161	Hilda Maud	Pt Hawkesb'ry	46	John G. Murray	Port Richmond	11	117 50
57715	John Lawrence	Halifax	23	Henry A. Richard	Charlo,s Cove	5	55 50
69964	Lizzie A	Pt Hawkesb'ry	20	Edward Purcell	Mulgrave	3	39 50
75577	Mary Ann Bell	Lunenburg	33	Joseph O'Neill	Auld's Cove	5	65 50
103859	Mary May	Halifax	23	Benjamin David	Port Félix	9	81 50
100446	Minnie May	Canso	12	William L. Dort	Sandy Cove	3	31 50

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

GUYSBORO COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
80970	Orion	Halifax	24	Hubert Richard	Charlo's Cove	6	63 00
100231	Pearl	do	16	Martin Magher	Canso	3	35 50
75892	Peter Mitchell.	Pt Hawkesb'ry	26	Michael Power	Mulgrave	4	52 00
92575	Robinetta	Halifax	14	Reuben Mu roe	White Head	3	33 50
100444	Stella May	Canso	12	James Meagher	Canso	5	44 50
59495	Three Brothers	Halifax	23	Leander Tanner	Cole Harbour	2	36 00

HALIFAX COUNTY

90495	Annie L	Halifax	34	Joseph Scott	East Dover	6	73 00
100221	Baleka	do	31	Gray Bros	Sambro	7	76 50
94662	Bessie Florence	do	12	Chas. W. Twohig	Pennant	4	38 00
103858	B & B. Holland	do	26	Richard Holland	Portuguese Cove	7	71 50
90496	Black Prince	do	18	J. W. Slaunwhite	Terence Bay	5	50 50
103537	Bonacord	do	12	James W. Smith	Sambro	2	25 00
90721	Brilliant Star	do	56	Peter Hartlin	East Jeddore	10	121 00
96799	Catherine A. C.	do	17	Hezekiah Cleveland	West Dover	5	49 50
103852	Dawn	do	13	James & Thos. Parker	Owl's Head	2	26 00
59484	Day Spring	Halifax	36	George L. Baker	West Jeddore	8	88 00
90481	Ella D.	do	32	Archibald Darrah	Herring Cove	10	97 00
90726	Ellen Maud	do	16	Samuel Wilson	Halifax	6	55 00
103749	Emerald	Lunenburg	29	Fader & Co	do	7	74 50
85738	Emma F	Halifax	13	Amos Graves	East Dover	3	32 50
96785	Eva M. B.	do	45	Daniel Bonang	W. Chezzetcook	6	84 00
100247	Fairy Queen	do	11	Geo. H. Nickerson	Pennant	2	24 00
85644	Flora	do	42	Patrick Scallion	Herring Cove	10	107 00
100259	Florence G	do	15	Caleb Gray	Sambro	3	34 50
100228	Golden Dawn	do	46	George Conrod	E. Chezzetcook	13	130 50
103544	Grace D	do	10	James Marryatt	Pennant	3	29 50
882 :0	Grandee	do	14	John P. Slaunwhite	Terence Bay	3	33 50
90489	Green Leaf	do	44	Martin Julien	W. Chezzetcook	8	96 00
83306	I. O. N. A	do	26	Andrew Sullivan	Herring Cove	8	78 00
100216	Katie M	do	11	Charles Nelson	Halifax	*	11 00
69105	Lady of the Lake	do	20	Richard Christian	Prospect	6	59 00
94665	Louis Luby	do	41	William Lapierre	W. Chezzetcook	11	112 50
100380	Maggie E. C.	do	20	David Covey	Haggets Cove	7	65 50
96805	Maggie May	do	62	Jeremiah Fillis	W. Chezzetcook	18	179 00
85664	Mary E	do	14	Andrew Twohig	Pennant	3	33 50
100227	May	do	10	Thos. E. Little	Terence Bay	3	29 50
103182	Meta	Shelburne	18	James Reno	Herring Cove	5	50 50
100254	Myrtle M. Gray	Halifax	19	James Gray	Pennant	6	58 00
85665	Nellie D	do	12	Daniel Smith	Sambro	4	38 00
94667	Nettie M. G.	do	32	Mathew Lynch	Ferguson's Cove	7	77 50
103539	Neva	do	11	Ephraim Marryatt	Pennant	2	24 00
100245	Oracle	do	18	W. McC. Boak	Halifax	4	44 00
85562	Oresa	do	14	Lawson B. Corkum	East Jeddore	5	46 50
100241	Pansy	do	32	George Schnair	Pennant	7	77 50
92571	Primrose	do	14	Angus Gray	Sambro	4	40 00
100474	K. Beatrice	do	19	James Morash	West Dover	5	51 50
75575	Rising Dawn	do	18	Frederick Boutilier	Indian Harbour	5	50 50
96806	Rising Sun	do	28	George Julien	W. Chezzetcook	4	54 00
69082	Saint Agnes	do	30	Ebenezer Homans	Clam Harbour	4	56 00
64869	Sarah L. Oxner	do	34	Edward Hayes	Herring Cove	10	99 00
100255	Sea Flea	do	12	James Stevens	Owl's Head	3	31 50
103538	Staletta	do	25	W. Charles Henley	Spry Bay	4	51 00
103193	Startle.	Liverpool	11	Charles F. Martin	Halifax	5	43 50
77836	T. W. Smith	Halifax	35	Charles Beaver	Spry Bay	5	67 50

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

HALIFAX COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
96781	Venture	Halifax	43	Edward Dempsey	Herring Cove	12	121 00
61904	Water Lily	do	14	Isaac Morash	West Dover	3	33 50
92578	Willeta	do	12	Joseph Gray	Sambro	3	31 50
100226	Willie H. Crosby	do	65	James Julien	W. Chezzetcook	7	110 50
85378	Zephyr	do	16	Robert Slaunwhite, (pro. P.)	Terence Bay	5	48 50

HANTS COUNTY.

75614	Fawn	Digby	17	Henry E. Ogilvie	Summerville	3	36 50

INVERNESS COUNTY.

71302	Alice	Charlottetown	10	Pepin P. Chiasson	Belle Côte	6	49 00
103320	Ben Hur	P. Hawkesbury	61	W. H. Paint	Pt. Hawkesbury	11	132 50
103452	Charlotte	Arichat	73	David Walker	do	12	151 00
103313	Catherine	P. Hawkesbury	10	Severin Chiasson	Eastern Harbour	4	36 00
96778	Campania	do	11	Charles Robin, Collas & Co. (Ltd.)	do	4	37 00
83244	Claribel	Charlottetown	19	Charles Doucet	do	6	58 00
96768	Elizabeth Ann	P. Hawkesbury	11	Magloire Poirier	Cheticamp Point	4	37 00
96774	Florence	do	11	Simeon Belfountain	Eastern Harbour	4	37 00
103317	Flying Star	do	11	Paul Desveaux	do	4	37 00
103312	Laura	do	13	Mederick Aucoin	Margaree Harbor	6	52 00
103316	Laura	do	10	Ubald Bourgeois	Eastern Harbour	4	36 00
103315	Lillie	do	12	Fidèle Chiasson	do	5	44 50
103318	Little Heir	do	19	Eusèbe Chiasson	Eastern Harbour	5	51 50
96775	Louise	do	11	Simeon Belfountain	do	5	43 50
96779	Majestic	do	12	Chas. Robin, Collas & Co. (Ltd.)	do	4	38 00
96771	Marie	do	10	John Roach	do	4	36 00
96777	Marie Joseph	do	11	Victor Roach	do	4	37 00
103314	Mary	do	10	Paul Aucoin	do	4	36 00
96769	Mary Lambert	do	11	Chas. Chiasson	Little River	5	43 50
69125	May Flower	Halifax	20	Hyacinthe Chiasson	Eastern Harbour	6	59 00
96770	O. L. B.	P. Hawkesb'ry	12	Didace Boudrot	do	5	44 50
96962	Sunrise	Yarmouth	18	John J. McDonald	Seaside	2	31 00
96773	Virgin	P. Hawkesb'ry	10	Michael Ramard	Eastern Harbour	4	36 00
96776	Willie B	do	11	Emilien Roach	do	4	37 00

KING'S COUNTY.

74326	Dreadnaught	St. John	19	Joseph N. Chute	Harbourville	6	58 00
77732	Heather Bell	Digby	13	Joseph Parker	Hall's Harbour	3	32 50
94756	Sarah E. Ells	St. John	19	Leonard Houghton	do	3	38 50
100744	Sea Queen	Windsor	18	L. D Curry	Harbourville	4	44 00

*Crew not entitled to bounty.

List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

LUNENBURG COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid
							$ cts.
94790	Abana	Lunenburg	80	James Romkey	Lower La Have	14	171 00
100839	Acalia	do	34	Nathan Silver	Lunenburg	5	66 50
94783	Alaska	do	80	Hilbert Smith	Lower La Have	17	190 50
100489	Algoma	do	56	Jeffrey Publicover	Getson Cove	15	153 50
100846	Albatross	do	26	Abraham Ernst	Mahone Bay	5	58 50
103507	Annie	do	16	C U. Mader	do	3	35 50
100472	Arcana	do	80	Alex. Knickle	Lunenburg	17	190 50
94778	Argosy	do	80	Charles Smith	do	15	177 50
103495	Athlon	do	80	Freeman Conrad	Upper La Have	17	190 50
100170	Atlanta	do	80	Freeman Anderson	Lunenburg	17	190 50
103745	Aris	do	80	Albert V. Conrad	Parks Creek	17	190 50
103501	Barcelona	do	80	William Smith	a Have	17	190 50
103755	Basil M. Gilbert	do	80	John B. Young	Lunenburg	19	203 50
94651	Bessie A	do	80	W. N. Reinhardt	La Have	17	190 50
103430	Beluga	do	80	Albert V. Conrad	do	15	177 50
103503	B. G. Anderson	do	80	Thomas Hamm	Lunenburg	17	190 50
100838	Blanche A. Colp	do	80	C U. Mader	Mahone Bay	17	190 50
103421	Blenheim	do	80	Charles Smith	Lunenburg	17	190 50
94782	Bona Fides	do	80	J. Joseph Rudolf	do	17	190 50
96828	Bonanza	do	80	Charles Silver	do	17	190 50
100571	Britannia	do	80	Charles Smith	do	17	190 50
100848	Britannia	do	59	Daniel Lohnes	Middle La Have	14	150 00
94645	C. A. Chisholm	do	80	Abraham Ernst	Mahone Bay	*	80 00
94658	C. A. Ernst	do	57	do	do	13	141 50
97084	Calla Lily	do	62	Edmund Hirtle	Middle La Have	13	146 50
103427	Cambrian	do	60	Dean Fralick	Pleasantville	16	164 00
103502	Carlraine	do	80	Alvin Himmelman	Ritcey's Cove	17	190 50
100823	Carrie	do	60	Adnah Burns	Dayspring	14	151 00
97081	Carrie	do	80	Elisha Wentzel	Ritcey's Cove	18	197 00
107115	Cayuga	do	80	Edmund Hirtle	Middle La Have	18	197 00
100579	Citizen	do	80	M. MacGregor	Ritcey's Cove	17	190 50
90869	Clara E. Mason	do	80	David Smith	Lunenburg	15	177 50
103415	Clarence Smith	do	80	G. A Smith	do	17	190 50
103759	Columbia	do	80	J. Alex Silver	do	18	197 00
100834	Comrade	do	80	W. N. Reinhardt	La Have	17	190 50
103419	Cordova	do	80	Charles Smith	Lunenburg	15	177 50
103756	Crescent	do	80	Joseph Rudolf	do	17	190 50
100159	C. U. Mader	do	80	C. U. Mader	Mahone Bay	17	190 50
100483	Curfew	do	49	J. D. Sperry	Petite Rivière	10	114 00
107112	Daisy Linden	do	80	Abraham Ernst	Mahone Bay	17	190 50
88355	D. A. Mader	do	80	C. U. Mader	do	16	184 00
90834	Diego	Port Medway	27	Harris Conrad	Vogler's Cove	10	92 00
97089	Dictator	Lunenburg	80	S. Watson Oxner	Lunenburg	17	190 50
100841	Dora	do	80	William Acker	do	17	190 50
103506	Ebro	do	75	J. William Young	do	15	172 50
103424	Elva M	do	80	C. U. Mader	Mahone Bay	17	190 50
100827	Elnora	do	52	Henry Gerhardt	Kingsburg	10	117 00
103492	Emily L	do	10	Wesley H. Stevens	Tancook Island	2	23 00
83308	Ella	Liverpool	10	Jennis C. Hanson	Oakland	1	16 50
88356	Energy	Lunenburg	80	C. U. Mader	Mahone Bay	17	190 50
94659	Enterprise	do	80	William Cleversy	Pleasantville	17	190 50
100151	Erminie	do	80	Thomas Hamm	Lunenburg	17	190 50
94960	Eureka	do	80	John S. Smith	Lower La Have	17	190 50
103198	F. B. Wade	do	80	L. B. Currie	West Dublin	17	190 50
103429	Fern	do	70	Edmen Walters	Middle La Have	17	180 50
103743	Flo. F. Mader	do	80	C. U. Mader	Mahone Bay	18	197 00
100480	Gallant	do	57	Elias Richard, sr	Getson Cove	14	148 00
94773	Galatea	do	80	John B. Young	Lunenburg	17	190 50

* Crew not entitled to bounty.

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LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

LUNENBURG COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	Number of Crew paid.	Amount of Bounty paid.
							$ cts.
97083	Garland	do	51	J. D. Sperry	Petite Rivière	*	51 00
90582	G. A. Smith	do	80	John M. Ritcey	Ritcey's Cove	16	184 00
100411	Genevieve	do	80	Abraham Ernst	Mahone Bay	17	190 50
100825	Georgina	do	34	James Bell	Bell's Cove	10	99 00
100576	Glad Tidings	do	80	W. C. Smith	Lunenburg	20	210 00
103753	Glady's B. Smith	do	80	Benjamin Smith	do	19	203 50
103505	Gladys May	do	80	Adam Selig	Vogler's Cove	20	210 00
97088	Glendale	do	38	Charles Bell	Dublin Shore	*	38 00
96836	Gleaner	do	80	W. C. Acker	Lunenburg	17	190 50
103752	Glyndon	do	80	Artemus Zink	Ritcey's Cove	19	203 50
100850	Grace	do	80	Daniel Getson	Getson's Cove	17	190 50
90862	Grenada	do	80	S. Watson Oxner	Lunenburg	18	197 00
100488	Gurnet	do	56	Alvin Creaser	Ritcey's Cove	12	134 00
103744	Harry Smith	do	80	J. Henry Wilson	Lunenburg	17	190 50
100569	Howard Young	do	80	James Young	do	18	197 00
100490	Irene M. B.	do	66	Eli Ernst	Mahone Bay	16	170 00
107116	Ivy	do	12	Joshua Ernst	Pleasantville	4	38 00
96830	J. A. Silver	do	80	Charles Silver	Lunenburg	17	190 50
94785	J. C. Schwartz	do	80	Charles Hewett	do	17	190 50
103414	Jeanie Myrtle	do	80	John M. Ritcey	Ritcey's Cove	17	190 50
103491	Jennie May	do	80	Martin Westhaver	Lunenburg	16	184 00
100164	J. H. Ernot	do	80	S. Watson Oxner	do	17	190 50
100837	J. M. Young	do	80	William Young	do	17	190 50
94789	Joseph McGill	do	80	Henry Ritcey	Ritcey's Cove	18	197 00
107114	Klondyke	do	80	Thos. A. Wilson	Bridgewater	18	197 00
94788	Laura C. Zwicker	do	80	Abraham Ernst	Mahone Bay	15	177 50
96838	La France	do	80	S. Watson Oxner	Lunenburg	17	190 50
96832	Laura M. Knock	do	80	Allan R. Morash	do	17	190 50
94780	Lawrence	do	80	Abraham Ernst	Mahone Bay	17	190 50
103202	L. B. Currie	do	80	L. B. Currie	West Dublin	17	190 50
103418	Leader	do	80	Alex. Knickle	Lunenburg	17	190 50
96833	L. E. Young	do	80	Benjamin Anderson	do	17	190 50
96827	Leopold	do	80	Ammon Ritcey	Ritcey's Cove	17	190 50
103760	Lillian	do	80	Elias Richard, sr	Getson's Cove	18	197 00
107113	L. Morton	do	60	Adam Selig	Vogler's Cove	13	144 50
103496	Lorena Maud	do	80	Isaac Zinck	Ritcey's Cove	17	190 50
100830	Lorraine C.	do	64	Leander Corkum	Middle La Have	16	168 00
83316	Lottie	Port Medway	80	Samuel E. Teel	Vogler's Cove	15	177 50
103420	Luetta	Lunenburg	80	David Smith	Lunenburg	18	197 00
103509	Maggie E. Z.	do	70	Henry D. Moser	do	17	180 50
97100	Maggie M. W.	do	80	J. Henry Wilson	do	17	190 50
100162	Magic	do	45	J. D. Sperry	Petite Rivière	10	110 00
103425	Majestic	do	80	Reuben Ritcey	Ritcey's Cove	17	190 50
94775	Malabar	do	80	R. H. Griffith's	Lunenburg	17	190 50
103413	Martello	de	65	Abraham Ernst	Mahone Bay	13	149 50
96840	May Flower	do	60	Albert V. Conrad	La Have	11	131 50
100849	Merl M. Parks	do	80	James Wamback	Parks Creek	18	197 00
193426	Melbourne	do	61	Eber Gerhardt	Middle La Have	15	158 50
100574	Melrose	do	71	Allan R. Morash	Lunenburg	15	168 50
74319	Merino	do	46	David Shupe	Martin's Point	7	91 50
103510	M. J. Crosby	do	76	Charles Rafuse	La Have	15	173 50
57728	Micmac	do	34	Allan Westhaver	Lunenburg	5	66 50
90823	Miletus	do	80	John Shankle	East La Have	15	177 50
100153	Mila	do	80	J. William Young	Lunenburg	17	190 50
107111	Millie Mace	do	80	M. MacGregor	Ritcey's Cove	19	203 50
103757	Minnie J. Heckman	do	80	Anthony Heckman	do	22	223 00
103416	Minnie J. Smith	do	80	William Smith	Lunenburg	17	190 50
97052	Minnie Maud	Liverpool	80	Theophilus Creaser	Ritcey's Cove	17	190 50

*Crew not entitled to bounty.

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

LUNENBURG COUNTY—*Conclud.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
103422	Mischief	Lunenburg	80	Thos. A. Wilson	Bridgewater	16	184 00
94772	Molega	do	80	Benj. Anderson	Lunenburg	18	197 00
92632	Monarch	do	80	Allan R. Morash	do	16	184 00
103758	Muriel	do	80	E. Fenwick Zwicker	do	19	203 00
94966	Nicanor	do	79	Davis Westhaver	do	16	183 00
100185	Nightingale	do	52	William Bailey	West Dublin	10	117 00
92636	Nonpareil	do	80	John Zink	Lunenburg	17	190 50
88342	Nova Zembla	do	79	C. U. Mader	Mahone Bay	17	189 50
94786	Ontario	do	80	W. C. Smith	Lunenburg	17	190 50
94779	O. P. Silver	do	80	Charles Silver	do	17	190 50
94641	Ovando	do	80	Jeffrey Publicover	Getson's Cove	16	184 00
100836	Panama	do	80	Henry Adams	Lunenburg	17	190 50
100486	Pandora	do	53	Abram Cook	do	15	150 50
100483	Puma	do	58	Simon Pentz	Pentz Settlement	16	162 00
94774	Puritan	do	80	Theophilus Creaser	Ritcey's Cove	17	190 50
100473	Rapture	do	57	Alfred Corkum	Middle South	15	154 50
96834	Robert F. Mason	do	80	Martin Mason	Lunenburg	17	190 50
100572	Rowena	do	51	William Schmeisser	La Have	15	148 50
90868	Sadie	do	79	G. N. C. Hawkins	Lunenburg	16	183 00
94787	Samoa	do	80	James W. Gerhardt	do	17	190 50
100218	Sarah M. W	Halifax	14	Hezekiah Wambolt	St. Marg'et's Bay	4	40 00
88349	Senovar	Lunenburg	80	Nathan Hiltz	Martin's River	16	184 00
100471	Secret	do	80	John B. Young	Lunenburg	17	190 50
100165	Snow Queen	do	67	Leander Meisner	Martin's Point	15	164 50
107117	St. Clair	do	80	Charles Smith	Lunenburg	18	197 00
103500	St. Helena	do	80	Howard Wynacht	do	17	190 50
100829	Stranger	do	11	Garret Richard	Pleasantville	3	30 50
103754	Talmouth	do	80	Freeman Messenger	Petite Rivière	20	210 00
92623	Torridon	da	80	Isaac Heckman	Ritcey's Cove	18	197 00
94657	T. W. Langille	do	71	Francis Conrad	Middle South	16	175 00
100575	Tyler	do	54	W. A. Zwicker	Lunenburg	16	158 00
103742	Unique	do	80	Abram Ernst	Mahone Bay	17	190 50
97098	Urania	do	80	David Heisler	Lunenburg	17	190 50
103417	Uruguay	do	80	David Lohnes	Ritcey's Cove	17	190 50
100821	Venus	do	76	Jacob Hiltz	Indian Point	15	173 50
103504	Viking	do	80	Amiel Corkum	Middle La Have	17	190 50
94776	Volunteer	do	80	M. MacGregor	Ritcey's Cove	17	190 50
61921	W. E. Weir	Halifax	41	Freeman Young	Tancook Island	8	93 00
100152	Werra	Lunenburg	80	David Smith	Lunenburg	17	190 50
96829	Westeria	do	80	Freeman Anderson	do	17	190 50
100833	Yucatan	do	80	J. Joseph Rudolf	do	17	190 50
				PICTOU COUNTY.			
38510	Lily	Pictou	23	George Rivers	Pictou	*	23 00
				QUEEN'S COUNTY.			
103205	Aroostook	Liverpool	67	Andrew McNutt	Liverpool	14	158 00
103174	Iona	Shelburne	15	Eldred, Leslie	Port Mouton	5	47 50
83134	Infant	Lunenburg	15	Johnson Rhynard	Brooklyn	5	47 50
103191	Jennie B.	Liverpool	13	William H. Vogler	Port Jolley	4	39 00
94833	Newsboy	do	16	Alexander, Thankle	Port Mouton	4	42 00
61916	Only Son	do	16	William A Conrad	Liverpool	4	42 00
103194	Oressa	do	10	Joseph Hogan	Hunt's Point	4	36 00
103199	Trilby	do	12	Wm Wigglesworth	Liverpool	3	31 50
83495	Utopia	do	80	James C. Inness	do	20	210 00

* Crew not entitled to bounty.

SESSIONAL PAPER No. 11a

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

RICHMOND COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner. or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
36474	Alexander Fraser	Lunenburg	32	Anselm Thompson	River Bourgeois.	9	90 50
88456	Alice May	Arichat.	39	Wm I. Levesconte	do	10	104 00
69143	Arequippa	do	36	Philip, Gruchy	D'Escousse	7	81 50
41771	Atalia	Guysborough	34	Jesse M. Huntson	St. Peters	4	60 00
94680	Bonnie Glen	Halifax	17	Xavier Marchand	Petit de Grat	6	56 00
75561	Boreas	Lunenburg	41	John Colford	Port Richmond	8	93 00
54156	British Lady	Halifax	19	Albert Joyce	RiverInhabitants	4	45 00
38501	B. Weir & Co	Arichat	25	John Shannon	East Basin	2	38 00
74100	Candid	do	23	Désiré Burke	River Bourgeois	7	68 50
88459	Caroline	do	12	John B. Girroir	W. Arichat	2	25 00
72061	C. P. M	do	22	Alexander Burke	River Bourgeois	6	61 00
72058	Daisy	do	34	P. Richard	Arichat	4	60 00
83395	Elerie	Halifax	29	Lewis Murray	Port Richmond	5	61 50
83083	Emma Proctor	P't Hawksb'ry	41	Edward Proctor	RiverInhabitants	9	99 50
80944	Espérance	Guysboro	10	Joseph Petitpas	Arichat	3	29 50
103454	Ethel B	Arichat	10	Rémi Boudrot	Petit de Grat	3	29 50
88462	Fannie S	do	28	Docithé Fougère	Rv Bourgeois	9	86 50
88599	Guide	Halifax	38	Edward Poirier,	LowerD'Escouss	12	116 00
38468	Hector	Arichat.	35	George Walker	Basin	4	61 00
96764	Ida C. Spoffard	P't Hawksb'ry	54	Robert Murray	Port Richmond	6	93 00
85560	Jacques	Yarmouth	58	Frederic Poirier	D'Escousse	13	142 50
83135	J. M. B	Halifax	20	Sam. P. Burke	St. Peters	7	65 50
80972	John Vincin	Sydney	17	Simon Delorey	Janovin Island	5	49 50
88467	Katie	Arichat	11	Frank Sampson	Poulamond	3	30 50
103458	R. McKenzie	do	17	James Barron	Lardoise	6	56 00
38516	Lady of the Lake	do	26	Peter Landry	St. Peters	8	78 00
96763	Lilia Linwood	do	67	Wm I. Levisconte	River Bourgeois	15	164 50
88455	Laura Victoria	do	39	Henry McDonald	D'Escousse	11	110 50
72071	Lumen Diei	do	20	Urbain Sampson	River Bourgeois	6	59 00
88463	Maria	do	14	Andrew Boudrot	Petit de Grat	4	40 00
85388	Mary Alice	Halifax	21	Edward Malcom	Port Malcom	5	53 50
38522	Mary	Arichat	23	Isaïe Boudreau	River Bourgeois	7	68 50
100380	Mary D	Sydney	27	Leon Sampson	St. Peters	8	79 00
72048	Neptune	Arichat	26	Henry Sampson	River Bourgeois	7	71 50
74365	Nova Stella	do	53	Léon Poirier	D'Escousse	15	150 50
54139	Ocean Belle	Halifax	20	Isidore Fougère	Poulamond	9	78 50
61630	Olive J	do	57	John Malcom	Port Malcom	10	122 00
38462	Partners	Arichat	25	Thomas Sampson	River Bourgeois	2	38 00
72067	Philomène D	do	22	John Pelham	Janovin Island	4	48 00
46485	Quicksteps	P't Hawksb'ry	52	John Murray, jr	Port Richmond	4	78 00
88439	Ripple	Halifax	20	Isidore Boudrot	Petit de Grat	2	33 00
64033	Ripple	P't Hawksb'ry	34	Geo. Cruickshank	Port Richmond	4	60 00
92599	Thistle	Sydney	11	Robt. Monbourquette	L'Ardoise West	4	37 00
71034	Vanguard	Arichat	51	Dominique Boudrot	Petit de Grat	5	83 50
57662	Village Bride	Halifax	24	Peter Malcolm	Port Malcolm	6	63 00
38523	Victoria	Arichat	24	Henry Burke	St. Peter's	7	69 50

SHELBURNE COUNTY.

94632	A. C. Greenwood	Shelburne	15	Hugh M. Perry	Black Point	5	47 50
97034	A. D'E	Yarmouth	15	David H. Blades	Upper Wood's Harbour	3	34 50
90655	Annina	do	12	George Pike	Coffin's Croft	5	44 50
100620	Alina,	Shelburne	80	Churchill Locke	Lockeport	21	216 50
100617	Altona	do	28	Austin Swansburg	Little Harbour	7	73 50
100612	Ardella	do	10	Eleazer Crowe	Sandy Point	2	23 00

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

SHELBURNE COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
100813	Blanche	Barrington	24	Jethro C. Swim	Clark's Harbour	9	82 50
88551	B. M. Thorbourne	Shelburne	80	John M Thorbourn	Jordan Bay	20	210 00
103186	Brittania	do	11	Ross Enslow	West Green Harbour	5	43 50
96970	Charlie Richardson	do	26	John B. Harding	Rockland	8	78 00
100605	Dawn	Barrington	49	A. N. Smith	Barrington	13	133 50
83492	Dessie	Liverpool	11	E. A. Capstick	Lockeport	4	37 00
96976	Edith	Shelburne	40	Enos Churchill	do	10	105 00
77603	Eldon C	Barrington	27	Josiah S. Thomas	Cape Negro	8	79 00
103789	Effie B. Nickerson	Shelburne	22	Amasa Nickerson	Central Wood's Harbour	7	67 50
85731	Eva L. H	do	62	Bradf'd P. Thorburn	Sandy Point	15	159 50
83255	Floyd	Annapolis	20	Eldridge Nickerson	Shag Harbour	6	59 00
90645	Fly	Yarmouth	16	Charles M. Wickens	Lower Shag Har.	6	55 00
103065	Garnet	do	27	Thomas W. Crowell	Baccaro	6	66 00
100815	Happy Home	Barrington	10	Wm. E. Smith	Up. Port La Tour	4	36 00
80799	Hattie E	Digby	16	Isaac A. Nickerson	Shag Harbour	5	48 50
90647	Hattie Emeline	Yarmouth	11	Charles A. Reynolds	Up. Port La Tour	4	37 00
100607	Icelda	Shelburne	19	Arthur Hardy	Rockland	6	58 00
88554	Jersey Lily	do	80	Enos Churchill	Lockeport	20	210 00
107052	J. J. Clark	Barrington	67	Prince W. Stoddard	Lower Wood's Harbour	15	164 50
85566	J. Lyons	do	17	David Slate	Cape Negro	7	62 50
54132	John Franklin	Halifax	18	Leander McKenzie	East Jordan	3	37 50
61572	John Halifax	Shelburne	63	John M. Harding	Osborne	8	115 00
94941	John Purney	do	80	George H. King	Sandy Point	22	223 00
73967	Katie	Liverpool	14	Churchill Locke	Lockeport	5	46 50
90438	Lark	Barrington	13	John C. Ross	Up. Port La Tour	5	45 50
80624	Lima	Yarmouth	12	William Halliday	Bear Point	6	51 00
94661	L. C. Tough	Halifax	12	Thomas Swain	Black Point	4	38 00
103173	Mabel	Shelburne	21	John Matthews	Rockland	7	66 50
103712	Marguerite	Yarmouth	10	Jared Brannen	Lower Wood's Harbour	5	42 50
83493	Mary C	Liverpool	80	Wm. McMillan	Lockeport	20	210 00
103057	May Flower	Yarmouth	12	Harry Greenwood	Shag Harbour	4	38 00
103184	May Flower	Shelburne	26	Mark A. Vernon	Sandy Point	7	71 50
103177	May Flower	do	12	Adam B. Hamilton	Carleton Village	2	25 00
100614	May Flower	do	11	Benjamin Hardy	Allendale	3	30 50
83434	Mary May	do	20	Adam J. Firth	Shelburne	7	65 50
92568	Mary Kate	do	13	Charles G. Acker	Church Over	5	45 50
90439	Oscar F	do	18	William D. Penney	South Side	9	76 50
103782	Oasis	do	80	John A. McGowan	Shelburne	24	236 00
103788	Plover	do	80	George A. Cox	do	24	236 00
75595	Ripple	Yarmouth	19	Vincent Brannen	Wood's Harbour	4	45 00
100319	Rob Roy	do	12	James E. Nickerson	do	3	31 50
53551	Roving Bird	Halifax	24	King Perry	North East Har.	7	69 50
100616	Sea Slipper	Shelburne	11	James Enslow, jr	West Green Har.	4	37 00
77956	Speed	Yarmouth	13	Robert Nickerson	Up. Wood's Har.	3	32 50
103783	Springwood	Shelburne	80	William McMillan	Lockeport	22	223 00
90433	St. Ann	Barrington	11	Chas. H. Dickson	Wood's Harbour	4	37 00
90648	Stranger	do	15	Ira P. Brown	Stoney Island	4	41 00
96961	Tivoli	Shelburne	24	Wm. J. Doane	Red Head	6	63 00
103179	Trilby	do	31	Wm. McMillan	Lockeport	8	83 00
100608	Vesper	do	14	Churchill Locke	do	5	46 50
77744	Whip-poor-will	do	17	J. P. Littlewood	Ingomar	5	49 50
90430	Will Carleton	Barrington	80	Joseph A. Smith	Port La Tour	17	190 50
103183	Wren	Shelburne	18	William McCarthey	Shelburne	6	57 00
75722	Yuba	Yarmouth	15	Charles E. Crowell	Port La Tour	6	54 00

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LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Continued.*

VICTORIA COUNTY.

Official Number.	Name of Vessl.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
100383	Florence L.	Sydney	10	William Young	Sugar Soaf	2	23 00
74039	James Henry	do	18	John Dunphy	South Ingonish	5	50 50
100840	Maritime	Lunenburg	59	R. E. Burke	Ingonish	9	117 50
97042	Sea Bird	Halifax	17	Peter McDonald	McKinnon's Harbour	3	36 50
107351	Wilfrid Laurier	Sydney	10	Daniel McLeod	South Ingonish	3	29 50

YARMOUTH COUNTY.

80647	Annie M. Bell	Yarmouth	64	Leander Amiro	L. E. Pubnico	16	168 00
94980	Aurore	do	80	Leon D'Eon	West Pubnico	18	197 00
88267	Bessie May	St. John	23	Nathaniel Pierce	Charlesville	9	81 50
103051	Carrie May	Yarmouth	25	James Gardner	Argyle Sound	8	77 00
85536	Circassian	do	80	A. F. Stoneman & Co	Yarmouth	18	197 00
94977	Civilian	do	80	Charles D'Entremont	West Pubnico	20	210 00
100819	David James	Barrington	27	James Lennox	Pubnico Head	10	92 00
88403	David Sprague	Yarmouth	31	W. A. Killam	Yarmouth	*	31 00
103053	Eddie C	do	10	James F. Harding	L. E. Pubnico	3	29 50
103066	Eddie J	do	23	Anthony M. D'Entremont	West Pubnico	8	75 00
85683	Edith L	Digby	16	W. A. Killam	Yarmouth	*	16 00
85151	Ethel	Yarmouth	80	J. H. Porter & Co	Tusket Wedge	16	184 00
97036	Eva	do	10	Addison Morton	Lower Argyle	2	23 00
100535	Fairplay	do	11	Josiah B. Lewis	Yarmouth	2	24 00
90654	Flora	do	64	David D Entremont	West Pubnico	20	194 00
94972	Florence	do	11	Josué Boudreau	Tusket Wedge	5	43 50
90885	Georgiana	do	80	Henry Lewis	Yarmouth	22	223 00
80643	Hazel Dell	do	80	James Amiro	West Pubnico	15	177 50
100327	Hattie	do	10	Robert Ellenwood	Yarmouth	3	29 50
100326	Helena	do	14	William McNair	Argyle Sound	2	27 00
103717	Henry L	do	10	Archangel D'Entremont	West Pubnico	2	23 00
88587	Jessie May	do	14	Alexander Hemlow	Yarmouth	4	40 00
103059	Lady Bourque	do	11	Anselme Bourque	Bourque's Cove	2	24 00
88261	Little Joe	do	18	Thomas A. Crosby	Yarmouth	3	37 50
103709	Lizzie E	do	14	E. Juston Ellis	Port Maitland	5	46 50
80614	Louise	do	80	J. H. Porter & Co	Tusket Wedge	18	197 00
103718	Lucy	do	10	Amb. D'Entremont	West Pubnico	4	36 00
80632	Lumen	do	30	J. H. Porter & Co	Tusket Wedge	9	88 50
88596	M. A. Louis	do	64	A. F. Stoneman & Co	Yarmouth	19	187 50
88583	Mary O'Dell	do	14	Levi Robicheau	do	2	27 00
90659	N. A. Laura	do	59	Remi D'Entremont	West Pubnico	16	161 00
103705	Nebula	do	24	Ferdinand Amiro	do	10	89 00
90892	Nellie	do	59	J. H. Porter & Co	Tusket Wedge	16	163 00
90873	Primrose	do	34	Henry T. D'Entremont	L. E. Pubnico	9	92 50
103706	Regine	do	10	Wm. D'Entremont	West Pubnico	3	29 50
88589	Sanford	do	20	W. A. Killam	Yarmouth	*	20 00
83254	Sea Foam	Annapolis	28	Joseph L'Amiro	L. E. Pubnico	6	67 00
75724	Sea Foam	Yarmouth	75	J. H Porter & Co	Tusket Wedge	18	192 00
100323	Senora	do	80	Marc A Surette	West Pubnico	21	216 50
100313	Souvenir	do	71	Sylvain D'Entremont	do	20	201 00
103716	Valkyrie	do	11	Peter Amiro	do	5	43 50
100811	Vesta Pearl	do	40	W. A. Killam	Yarmouth	6	79 00
90896	Wapiti	do	80	A. F. Stoneman & Co	do	18	197 00
103704	Whisper	do	31	Peter Amiro	West Pubnico	8	83 00
85541	Willie M	do	24	Sylvain Amiro	L. E. Pubnico	6	63 00
85559	Willie F	do	12	Riley W. Haskell	Port Maitland	5	44 50
90882	Will O' the Wisp	do	51	A. F. Stoneman & Co	Yarmouth	19	174 50
90897	Wrasse	do	56	do	do	19	179 50

* Crew not entitled to bounty.

LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*

PROVINCE OF NEW BRUNSWICK.

CHARLOTTE COUNTY

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
103124	Addie B	St. Andrews	12	Arthur Ramsdell	Whitehead	4	38 00
103995	Annie	do	16	Joseph Hatt	Woodward's Cove	3	35 50
94727	Aurelia	St John	22	James Scoville	North Head	5	44 50
103996	Au revoir	St. Andrews	15	Frederick Russell	Seal Cove	3	34 50
103127	Avis C. Tobey	do	13	Hamilton Bancroft	Woodward's Cove	5	45 50
64011	Bee	do	18	Sherman Lawson	Flagg's Cove	5	50 50
100111	Bess	Parrsboro	24	Francis Cassidy, sen.	Lepreaux	3	43 50
103128	Britannia	St. Andrews	22	Charles Sinclair	Castalia	4	48 00
88409	Carrie	Digby	12	Thomas A. Cook	Le Tête	3	31 50
103118	Della F. Tarr	St. Andrews	34	Chas H. Greenwood	Wilson's Beach	3	53 50
92505	Edith B	do	47	Winslaw Richardson	Leonardville	5	79 50
103114	Edward Morse	do	32	Alexander Calder, jr.	Welchpool	5	64 50
80803	Exenia	Windsor, N.S.	18	Wm. F. Parker	Beaver Harbour	5	50 50
80882	Ella Mabel	St. Andrews	14	Walter Calder, jr.	Welchpool	4	40 00
83202	Enchantress	do	10	Peter Dixon	Flagg's Cove	1	16 50
88276	Falcon	do	12	John F. Cronk	do	5	44 50
75601	Flash	Digby	10	Albert E. Coggins	Westport N. S.	3	29 50
92511	Fleetwing	St. Andrews	11	Aldin McFarland	Flagg's Cove	3	30 50
97146	Free Trade	do	10	Lorenzo C. Watt	do	3	29 50
94834	Flora Woster	do	22	Andrew McGee	Back Bay	4	48 00
97150	Gleaner	do	13	Frank Newman	Wilson's Beach	3	32 50
9250	Grey Eagle	do	13	Bismark Dick	Back Bay	5	45 50
83463	Havelock	do	33	William James	Wilson's Beach	4	59 00
94839	Harrie	do	14	Wm. J. Tucker	Le Tête	3	33 50
103119	Hortense	do	15	W. J. Morse	White Head	5	47 50
103121	Island Girl	do	17	Frank Ingersoll & Son	Flagg's Cove	4	43 00
80604	Jennie C	Yarmouth	16	Daniel Thompson	Black's Harbour	3	35 50
103997	Jessie James	St. Andrews	11	Lewis Frankland	Whitehead	3	30 50
51965	John E. Dennis	do	18	Alfred Stanley	North Head	3	37 50
77766	Laconic	Shelburne	15	John Dixon, sr.	Flagg's Cove	3	34 50
88273	Lillian E	St. Andrews	13	Andrew McGee	Back Bay	3	32 50
88407	Linnet	do	15	James Scovil	Flagg's Cove	4	41 00
59342	Lizzie S. McGee	do	14	Andrew McGee	Back Bay	5	46 50
83426	Louisa	St. John	16	Bristol Hargrove	Beaver Harbour	5	48 50
92514	Maggie Jane	St. Andrews	10	John Thomas	Flagg's Cove	3	29 50
103117	Margaret	do	49	Bernard Eldridge	Beaver Harbour	9	107 50
85442	Mystery	do	14	Charles Dixon	North Head	4	40 00
94837	Olga	do	11	Thomas Richardson	Lords Cove	3	30 50
95518	Peril	do	18	George Dixon	Beaver Harbour	5	50 50
75591	Rise and Go	do	16	Wm. Sirles	Wilson's Beach	6	55 00
75864	Roving Lizzie	Weymouth	11	Benjamin Carter	Seeley's Cove	2	24 00
88272	Simeon H. Bell	St. Andrews	14	Charles Dixon	North Head	3	33 50
59387	Telephone	do	19	James Brown, jr	Wilson's Beach	5	51 50
88414	Trumpet	St. John	20	George U. Wright	Beaver Harbour	4	46 00
103998	Try Again	St. Andrews	15	A. W. Ingersoll	Woodward's Cove	3	34 50
103129	Uncle Sam	do	11	John G. Fraser	do	4	37 00
94832	Venus	do	42	Simon Brown	Wilson's Beach	6	81 00
103125	Virgin Queen	do	16	Nelson Morse	Whitehead Isl'd	4	42 00
77969	Wave Queen	do	11	Hiram Foster	Flagg's Cove	3	30 50

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LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—*Continued.*

GLOUCESTER COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
							$ cts.
72099	Adelina	Chatham	12	Clement Lanteigne	Lameque	4	38 00
100984	Alice	do	11	Chas. Robin, Collas & Co.	Caraquet	4	37 00
103279	Alice Maud	do	10	do	do	4	36 00
92419	Anna	do	12	Dosithé Chiasson	Lameque	4	38 00
96739	Angeline	do	14	Joseph C. Doiron	Caraquet	6	53 00
103071	Anglesea	do	12	Hya H. LeBouthillier	do	4	38 00
100987	Arabi	do	12	Philip Rive	do	3	31 50
103085	Argentina	do	12	Chas. Robin, Collas & Co.	do	3	31 50
103009	Adeline Gladys	do	12	Richard Young	Shippegan	4	38 00
97194	Alika	do	12	Lange Paulin, jr.	Lameque	3	31 50
103081	Albatross	do	13	Thomas Ahier	Shippegan	3	32 50
100960	Annie M.	do	11	W. S. Loggie & Co.	Chatham	3	30 50
103763	Alouette	do	10	Thomas Ahier	Shippegan	3	29 50
103780	Britannia	do	13	Wm. Fruing & Co.	Caraquet	3	32 50
100780	Britannia	do	12	C. Hubbard	do	4	38 00
100983	Bee	do	11	Chas. Robin, Collas & Co.	do	4	37 00
100975	Big Bear	do	10	Robert Young	do	3	29 50
100299	Blanchard	do	11	Chas. Robin, Collas & Co.	do	3	31 50
100909	Blue Nose	do	11	Joseph Sewell	do	3	30 50
103589	Blenheim	do	13	Chas. Robin, Collas & Co.	do	4	39 00
72079	Betsy	do	13	Sebastien Noel	Lameque	3	32 50
103072	Ben Hur	do	11	Richard Young	Shippegan	3	30 50
61431	Bee	do	11	Paul Noel	Lameque	4	37 00
100988	Caesar	do	10	Philip Rive	Caraquet	5	42 50
100774	Calliope	do	12	do	do	3	31 50
103585	Cedric	do	14	do	do	4	40 00
103271	Celia	do	11	Dominique Gallien	do	3	30 50
100784	Charlotte	do	13	R. Young	do	3	32 50
100789	Chazalic	do	11	do	do	3	30 50
96730	Christina	do	11	Chas. Robin, Collas & Co.	do	4	37 00
100916	Cygnet	do	12	do	do	4	38 00
100971	Cyprian	do	10	Elie Sivret	do	3	29 50
101000	Condor	do	10	Thomas Ahier	Shippegan	5	42 50
103083	Corsair	do	10	do	do	4	36 00
100915	Dawn	do	12	Chas. Robin, Collas & Co.	Caraquet	5	44 50
100917	Dora	do	11	do	do	3	30 50
100913	Daffodil	do	10	Thomas Ahier	Shippegan	4	36 00
92412	Dollie Dutton	do	13	Richard Young	do	4	39 00
103076	Dipper	do	12	W. S. Loggie & Co.	Chatham	3	31 50
100999	Dove	do	11	Thomas Ahier	Shippegan	4	37 00
103590	Eliza	do	13	Chas. Robin, Collas & Co.	Caraquet	4	39 00
100293	Eliza	do	15	Robert Young	do	4	41 00
96737	Elmina	do	11	Jacques Noel	Lameque	4	37 00
100986	Empress	do	12	Robert Young	Caraquet	3	31 50
103776	Esk	do	14	do	do	3	33 50
100772	Estelle	do	13	Philip Rive	do	3	32 50
100787	Ethel	do	11	R. Young	do	3	30 50
100905	Evangeline	do	10	Philip Rive	do	4	36 00
100998	Eagle	do	10	Thomas Ahier	Shippegan	4	36 00
100911	Emperor	do	10	do	do	4	36 00
100298	Fisher	do	12	Joseph H. Chiasson	Little Lemeque	4	38 00
103077	Fame	do	10	W. S. Loggie & Co.	Chatham	4	36 00

LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*

GLOUCESTER COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
61445	Flavie	Chatham	13	Théophile Duguay	Lameque	4	39 00
96736	Fly	do	14	Richard Young	Shippegan	3	33 50
100977	Fly	do	12	Chas. Robin, Collas & Co	Caraquet	3	31 50
61405	Fly	do	11	Alexander McLaughlin	Tracadie	4	37 00
83399	Fannie R. C	Halifax	21	Benj. Windsor	Miscou Harbour	4	47 00
100782	Flying Foam	Chatham	12	Robert Young	Caraquet	3	31 50
100912	Foam	do	10	Thomas Ahier	Shippegan	4	36 00
103001	Falcon	do	10	do	do	4	36 00
100778	Gambetta	do	13	C. Hubbard	Caraquet	3	32 50
100993	Garfield	do	10	Philip Rive	do	3	29 50
103954	Gazelle	do	10	C. Hubbard	do	3	29 50
100919	Gazelle	do	12	Chas. Robin, Collas & Co	do	3	31 50
100968	Gem	do	11	Chas. Robin, Collas & Co	do	4	37 00
103282	Gilknockie	do	11	Robert Young	do	3	30 50
1009 4	Gladstone	do	10	Philip Rive	do	3	29 50
100910	Gleaner	do	13	Luc Lanteigne	do	3	32 50
100992	Great Mogul	do	11	Philip Rive	do	2	24 00
92418	Grip	do	12	James Davidson	Tracadie	4	38 00
100790	Guiding Star	do	11	R. Young	Caraquet	3	30 50
96733	Gem	do	12	Richard Young	Shippegan	4	38 00
103086	Gipsey	do	20	W. S. Loggie & Co	Chatham	5	52 50
103766	Genesta	do	12	Thomas Ahier	Shippegan	3	31 50
100989	Gladiator	do	11	Philip Luce	Little Shippegan	3	30 50
100994	Hercules	do	10	Philip Rive	Caraquet	4	36 00
61425	Hope	New Carlisle	13	Chas. Robin, Collas & Co	do	3	32 50
100903	Hope	Chatham	12	R. Young	do	3	31 50
103939	Hope	do	11	Michael Bisho	Inkerman	2	24 00
100906	Hotspur	do	10	Philip Rive	Caraquet	3	29 50
100956	Harold N	do	12	W. S. Loggie & Co	Chatham	3	31 50
103765	Hirondelie	do	11	Thomas Ahier	Shippegan	4	37 00
103931	Irene	do	12	Wm. Fruing & Co	Caraquet	3	31 50
100997	Ivanhoe	do	10	Thomas Ahier	Shippegan	3	29 50
103779	Ibis	do	11	Wm. Fruing & Co	do	4	37 00
96724	Isabel	do	11	do	do	5	43 50
103281	Japan	do	11	R. Young	Caraquet	3	30 50
100965	Josephine	do	11	Philip Rive	do	3	30 50
100958	John B	do	11	W. S. Loggie & Co	Chatham	5	43 50
103289	Jersey Lily	do	12	Thomas Ahier	Shippegan	3	31 50
100981	Kite	do	11	Chas. Robin, Collas & Co	Caraquet	3	30 50
103283	Koh-i-noor	do	13	Philip Rive	do	5	45 50
103288	Kite	do	10	Thomas Ahier	Shippegan	3	29 50
103089	Lady Maud	do	11	Philip Rive	Caraquet	4	37 00
100951	Leo	do	13	Hyacinthe Lanteigne	do	4	39 00
103280	Lily	do	11	Chas. Robin, Collas & Co	do	4	37 00
100972	Lizzie D	do	11	Robert Young	do	3	30 50
103003	Lark	do	10	Thomas Ahier	Shippegan	3	29 50
92403	Marie	do	26	Ubalde Landry	Grand Anse	3	45 50
72100	Marie	do	11	Onésime Chiasson	Lameque	4	37 00
103278	Marie Celia	do	13	Wm. Fruing & Co	Caraquet	4	39 00
100292	Marie Joseph	do	12	Lazare Gauvin	Lameque	4	38 00
100781	Mary Louise	do	11	C. Hubbard	Caraquet	3	30 50
100295	Marie Louise	do	18	Joseph A Poulin	do	4	44 00
61447	Merida	do	13	Andrew D. Aché	Lameque	4	39 00

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LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—*Continued.*

GLOUCESTER COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
100779	Mermaid	Chatham	11	C. Hubbard	Caraquet	3	30 50
103088	Max	do	10	Maxime Cormier	do	5	42 50
100955	Majestic	do	10	C. Hubbard	do	3	29 50
103084	Mary Emma	do	11	Onésime Paulin	do	3	30 50
103768	May Flower	do	13	Chas. Robin, Collas & Co	do	3	32 50
100785	Midnight	do	12	R. Young	do	3	31 50
100300	Mikado	do	13	Chas. Robin, Collas & Co	do	4	39 00
88669	Morning Star	do	12	Gustave Gionet	Pokemouche	2	25 00
100957	Mary R	do	12	W. S. Loggie & Co	Chatham	3	31 50
100970	Nellie	do	11	Dominique Gallien	Caraquet	3	30 50
103284	Normandy	do	11	Philip Rive	Caraquet	3	30 50
103004	Oriole	do	11	Thomas Ahier	Shippegan	3	30 50
103005	Osprey	do	10	do	do	4	36 00
100297	Palma	do	14	Olivier Duguay	Lamèque	4	40 00
100776	Patrick	do	11	Philip Rive	Caraquet	5	43 50
96740	Providence	do	13	Prospère Albert	do	4	39 00
100904	P. T. S	do	11	Thomas Sivret	do	4	37 00
96732	Providence	do	11	Joseph L. Robichaud	Shippegan Island	4	37 00
72076	Providence	do	12	Thomas Ahier	Shippegan	4	38 00
103080	Ptarmigan	do	11	do	do	3	30 50
103764	Petrel	do	12	do	do	4	38 00
103777	Penguin	do	13	Wm. Fruing & Co	do	2	26 00
103778	Pelican	do	13	do	do	4	39 00
100979	Ranger	do	10	Chas. Robin, Collas & Co	Caraquet	4	36 00
100775	Red Gauntlet	do	11	Philip Rive	do	3	30 50
100952	Replevin	do	10	Chas. Robin, Collas & Co	do	4	36 00
97191	Rita	do	12	Chas. Robin, Collas & Co	do	3	31 50
100908	Rosalie	do	10	Edward O. LeBouthillier	do	3	29 50
100773	Rupert	do	12	Philip Rive	do	3	31 50
96727	Ryse	do	11	Sinaïe Aché	Lamèque	3	30 50
103078	Reward	do	11	James DeGrace	Shippegan	4	39 00
103272	Red Weasel	do	11	Richard Young	do	4	37 00
103273	Russel	do	10	John M. Ward	Miscou	4	36 00
103587	Romulus	do	19	W. S. Loggie, Co	Chatham	4	45 00
103287	Raven	do	11	Thomas Ahier	Shippegan	4	37 00
100907	Sarah	do	10	Robert Young	Caraquet	4	36 00
74401	Sarah	do	11	Nazaire Noel	Lamèque	3	30 50
103010	Sarah B	do	10	Joseph Lanteigne(E)	Caraquet	3	29 50
92408	Sarah A. W	do	15	Robert J. Wilson	Wilson's Point	3	34 50
103584	Saxon	do	13	Philip Rive	Caraquet	3	32 50
100914	Sea Flower	do	11	Chas. Robin, Collas & Co	do	3	30 50
100901	Sea Flower	do	12	Robert Young	do	4	38 00
100961	Silver Moon	do	14	Onésime Gallien	do	3	33 50
100788	Sir Charles	do	11	R. Young	do	3	30 50
100974	Sivret	do	10	do	do	4	36 00
103087	Stanley	do	10	Marcel Caron	do	4	36 00
100963	Stanley	do	10	Philip Rive	do	3	29 50
103767	Stella Marie	do	19	Luc Friolet	do	4	45 00
103008	St. Joseph	do	12	Adolphe Aché	Lamèque	4	38 00
103772	Surprise	do	10	Thomas Blanchard	Caraquet	3	29 50
100986	Swift	do	11	Augustin Lanteigne	Little Shippegan	3	30 50
96731	Sea Star	do	13	Joseph Savoy	Shippegan Island	4	39 00
100959	Sea Bird	do	10	W. S. Loggie & Co	Chatham	4	36 00

LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*

GLOUCESTER COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid
							$ cts.
103006	Swallow	Chatham	11	Thomas Ahier	Shippegan	4	37 00
103762	Swan	do	14	do	do	3	33 50
103761	Swing	do	11	Agapit A. Albert	Caraquet	3	30 50
100779	Teutonic	do	11	C. Hubbard	do	4	37 00
100918	Tickler	do	12	Chas. Robin, Collas & Co.	do	3	31 50
103583	Two Brothers	do	11	Mathew Wilson	Little Shippegan	2	24 00
96738	Three Brothers	do	12	Richard Young	Shippegan	4	38 00
103082	Thrush	do	10	Thomas Ahier	do	4	36 00
103285	Valkyrie	do	12	Philip Rive	Caraquet	3	31 50
100995	Voltaire	do	10	do	do	3	29 50
100966	Von Moltke	do	11	do	do	3	30 50
103274	Vesuvius	do	10	George D. Maillet	Shippegan	4	36 00
103775	Victoria	do	16	W. S. Loggie & Co	Chatham	4	42 00
103588	Vulture	do	13	do	do	4	39 00
100985	Wasp	do	12	Chas. Robin, Collas & Co.	Caraquet	4	38 00
100953	White Wings	do	10	R. Young	do	3	29 50
100973	World's Fair	do	11	do	do	3	30 50
96735	White Fish	do	12	Joseph L. Savoy	Lamèque	4	38 00
103079	Wren	do	11	Thomas Ahier	Shippegan	4	37 00
100920	Zephyr	do	12	C. Robin, Collas & Co	Caraquet	3	31 50

NORTHUMBERLAND COUNTY

100969	John Bull	Chatham	10	James Anderson	Church Point	4	36 00
92420	Mary Louise	do	13	Donald Loggie	do	3	32 50
83096	St. Patrick	do	16	John White	Upper Neguac	4	42 00

RESTIGOUCHE COUNTY.

94959	Winnie G. S	Lunenburg	26	Donald McGregor	Dalhousie	4	52 00

ST. JOHN COUNTY.

88253	E. B. Colwell	St. John	19	Addison Thompson	Dipper Harbour	5	51 50
59373	E M. Oliver	St. Andrews	14	Charles Harkins	do	3	33 50
104000	Little Gracie	do	11	Francis Campbell	do	2	24 00
77783	Lost Heir	St. John	15	Henry Alston	Pisarinco	3	34 50
52159	Mary E.	do	21	Frederick Buchanan	St. John	3	40 50
92509	Mary Jane	St. Andrews	13	Mark Shannon	do	3	32 50
80630	Vanity	Yarmouth	11	Patrick Murray	Dipper Harbour	3	30 50
97149	Winnie	St. Andrews	12	Robert McLellan	do	2	25 00

List of Vessels which received Fishing Bounty, &c.—*Con.*

PROVINCE OF PRINCE EDWARD ISLAND.

KING'S COUNTY.

Official Number.	Nome of Vessel.	Report of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							$ cts.
69132	Belle of the Bay	Gusborough	20	John Gosbee	Murray River	4	46 00
92675	Can't Help It	Pictou	40	John Herring	Murray Har. S.	9	98 50
38335	Elizabeth	Arichat	17	William Hemphill	Georgetown	3	36 50
38477	Elizabeth	do	18	Amos Landry	Montague Bridge	6	57 00
83196	Ethel Blanche	Pictou	17	William Reynolds	Murray Harb. S.	7	62 50
100691	Francis E. Willard	do	23	Benjamin H. Herring	do	6	62 00
75552	Hannah Elridge	Charlottetown	57	Henry Dicks	Georgetown	7	102 50
75566	Julia A.	do	15	Reuben Penny	Murray Harb. S.	4	41 00
69109	Marcella Butler	Halifax	38	John Hemphill	Georgetown	4	64 00
90639	Morell	Georgetown	16	Edward Delorey	do	3	35 50
100696	Marion Emerson	Pictou	30	Reuben Cahoon	Murray Harb. S.	8	82 00
74160	Sea Bird	Charlottetown	20	Joseph White	do	6	59 00
90488	Wave	do	19	James Delorey	Brudenell	4	45 00

PRINCE COUNTY.

71310	Black Watch	Charlottetown	23	Benjamin Perry	Alberton	5	55 50
103771	J. Anny	Chatham	12	John Poirier	Tignish	5	44 50
92473	Lucy Louise	Charlottetown	19	James Roach	Malpeque	5	51 50
94992	Sarah P. Ayer	do	64	John Champion	Alberton	9	122 50
96926	Sea Foam	do	15	Donald McIntyre	Lot 14	4	41 00
88518	W. F. Elizabeth	Sydney	10	Roderick McDougall	Port Hill	4	36 00

QUEEN'S COUNTY.

92466	G. H. Gardner	Charlottetown	17	E. Marshall	North Rustico	7	62 50
96936	Katie and Ella	do	20	Lauchlin H. McLaine	Charlottetown	3	39 50
90206	Minnie Mac *	do	15	John W. Clow	Trac. road lot 34	5	45 00
92663	Prince Edward *	do	18	Lauchlin H. McLaine	Charlottetown	1	24 00
103592	Rosamond	do	18	Thomas Doyle	North Rustico	6	57 00

*For 1897.

List of Vessels which received Fishing Bounty, &c.—*Con*

PROVINCE OF QUEBEC.

GASPÉ COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty paid.
							$ cts.
94675	Success	Halifax	15	R. J. Leslie	Amherst, M. I.	4	41 00

SAGUENAY COUNTY.

74270	Amarilda	Quebec	24	Cléophas Vézina	St. Michael	3	43 50
85756	Aristile	do	19	Philéas Vézina	do	2	32 00
61966	D. Cronan	Halifax	40	Pierre Le Marquand.	Esquimaux Point	7	85 50
103533	Dolphin	do	21	James Fequet	Old Fort Island.	3	40 50
88469	George Clarke, jr.	Arichat	64	Luke Cormier	Esquimaux Point	8	116 00
69382	Marie du Sacré Cœur	Gaspé	46	Paul Landry	do	10	111 00
100365	Marie Louise	Quebec	13	François Germain	Ottawa	2	26 00
103358	Romeo	do	22	Louis Pineau	Bic	2	35 00
107231	Ste. Anne	do	13	Magloire Chouinard.	Manicouagan	4	39 00
92334	Ste. Marie	do	53	Pierre Ouellette	Quebec	6	92 00
80753	Stella Maris	do	51	Louis Cummings	Esquimaux Point	8	103 00
75680	Sea Star	do	52	William Leblanc	do	6	91 00
69591	Ste. Marie	do	37	Alex Scherrer	do	6	76 00
64873	Willie	do	36	Louis Gagnon	Pentecost	3	55 50
66727	Willow	do	18	August Boulet	St. Thomas Mgny	3	37 50

APPENDIX No 3.

NOVA SCOTIA.

District No. 1.—Comprising the four counties of the Island of Cape Breton.
Inspector A. C. Bertram, North Sydney, C. B.

District No. 2.—Comprising the counties of Cumberland, Colchester, Pictou, Antigonish, Guysborough, Halifax and Hants.
Inspector Robert Hockin, Pictou.

District No. 3.—Comprising the counties of King's, Annapolis, Digby, Yarmouth, Shelburne, Queen's and Lunenburg.
Inspector L. S. Ford, Milton.

DISTRICT No. 1.

ANNUAL REPORT ON THE FISHERIES OF CAPE BRETON ISLAND, 1898.

NORTH SYDNEY, C. B., January 2, 1899.

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

SIR,—I have the honour to submit my annual report on the fisheries for 1898 of District No. 1, Nova Scotia, comprising the counties of Cape Breton, Inverness, Richmond and Victoria, together with tabulated statements giving the products of the fishery for the year in kinds, quantities and values.

The total product for 1898 amounts in value to $1,061,235.39 compared with $1,056,115.83 for the previous year, showing an increase for the present year of $5,119.56 over that of 1897. This increase is confined to the counties of Cape Breton and Inverness. The former gives a value increase of $27,706.47, while the increase in the latter county is $77,315.50. It will be observed therefore that Richmond and Victoria counties show a considerable decrease: the former $37,838.30 and the latter $62.064.11.

The classes of fish which make up the increase in Cape Breton county are salmon, herring, cod and haddock, and in Inverness county, salmon, pickled herring, mackerel, cod and halibut; while a short catch in salmon, mackerel, lobsters, cod, hake and halibut make up the decrease in Victoria county, and lobsters, cod, haddock, pollock and squid account for the decrease in Richmond county.

The following statement will show in what classes of fish have the increase and decrease occurred in the whole Island fishery :—

Kind of fish.		Increase.	Decrease.
Salmon, fresh	lbs.	51,116	
" canned	lbs.	7,620	
" pickled	brls.	46	
Herring, pickled	brls.	1,882	
" fresh	lbs.		266,690
" smoked	lbs.		11,000
Mackerel, fresh	lbs.	23,173	
" pickled	brls.	3,580	
Lobsters, canned	cans.		198,626
" fresh in shell	lbs.	442,100	
Cod dried	cwt.		13,670
Haddock, fresh	lbs.	15,865	
" dried	cwt.		995
Hake dried	cwt.		953
Pollock	cwt.		1,521
Halibut	lbs.		55,952
Trout	lbs.	6,165	
Shad	brls.		11
Smelts	lbs.		27,662
Alewives	brls.		132
Eels	brls.		467
Oysters	brls.		798
Squid	brls.		42

LOBSTERS.

The greatest falling off in any branch of the fishing industry has occurred in canned lobsters amounting to 198,626 pounds. This decrease is not confined to one county but is distributed among the four counties. Yet there were three more canneries in operation in 1898 than in the previous year. The cause of this marked falling off in the lobster fishery is owing to scarcity of lobsters and not to any other cause, as the industry was as vigorously prosecuted during the present season as in any previous year. Of course there were 442,100 pounds of live lobsters exported this summer against 13,100 pounds the previous year. I fear that some form of restriction is necessary to preserve the lobster industry. The high price realized by both packers and fishermen for these crustacians now causes vigorous prosecution of the industry, and while some packers and fishermen desire the preservation of this important fishery, there are others whose sole object is to get the fish. The danger to this important branch is not in taking undersized fish as much as in destroying the mother before spawning. Packers know that the fishermen when out at their traps remove the 'berries' from female lobsters, yet they will tell the officers they are powerless to prevent this practice. In some districts the spawn fish are taken from the traps outside and carried to the inside waters near a factory and liberated, but this is only done in rare cases. In Richmond county a Mr. Levisconte has given instructions to his fishermen to take the female lobsters to a pond near his factory where they are liberated. A gate made of wire prevents the fish from getting out and at the same time allows the sea water to get in. Mr. Levisconte as well as other well-informed packers are of the opinion that only once in two years does a female lobster deposit eggs. It is only in rare instances that packers take the trouble of preserving even the female lobster found with spawn on the outside. The packers can preserve this industry if they so desire. They have the remedy in their own hands. When they know that the female lobster is taken and the spawn rubbed off, it is their duty to give the officers such information as will lead to the punishment

of the guilty fishermen. Then again, why should not the packers form themselves into an association for mutual protection from dishonest fishermen who destroy in the above mentioned manner the egg bearing mother? If some such system of protecting the spawning grounds had been formulated there would not be such a great falling off in the lobster fishery as is noticeable in this report. Where so much indifference in the preservation of the grounds is exhibited by both packers and fishermen, the Government should hesitate before acquiescing in their appeals for extension of the fishing season. The industry is too valuable to the country to be thus jeopardized.

It would not surprise me if Cape Breton in the near future was a strong competitor with western Nova Scotia in the supply of live lobsters for the American market. With two Boston boats calling weekly at Port Hawkesbury there is no reason why thousands of cases of lobsters could not be shipped in these steamers from Cape Breton. The live lobster industry from this Island is bound to develop, and possibly next season it will assume large proportions, particularly from the 'Bras d'Or Lakes' and the southern coast of Cape Breton and Richmond counties.

COD.

I find by the returns that the codfish catch did not come within 13,670 cwt. of the quantity taken the previous year. Yet there were over six hundred more men employed in the prosecution of the fishing industry this year than in the past season. The cod fishery being one of the leading branches, there must be some noticeable reason for such a falling off in the catch compared with the previous year, particularly as there was such a marked increase in the number of fishermen. There is no doubt that these fish are migratory. Invariably when fish are reported plentiful, say for instance in Newfoundland waters they are scarce in our waters. That they move about from bank to bank is now fairly well understood by fishermen. Next season our shore waters may be teeming with cod, while on the Newfoundland coast they may be reported scarce. The statements frequently made that the waters are yearly becoming depleted of the cod family are not borne out by facts. The cod, the most ravenous of fish, move about over a large sea area and wherever food is plentiful cod are found in abundance. As the cod family spawn in deep water and as the ova floats and develops in the waters of the Atlantic, the female cod is not so much exposed to the destructive agencies adopted by man as in the case of fish which seek the inland waters to spawn. Scarcity of these fish in the inshore waters in the early part of the season and scarcity of bait are the causes of the falling off in this season's catch. The bait question is the chief cause. In our coastal waters cod are plentiful in autumn. These fish appear to move inshore and feed on the numerous banks which surround this island. I do not mean to say they are not found plentiful on some inshore banks in the early part of the season, but in the autumn cod can be found on all the inshore banks. The want of codfish bait is a yearly recurring circumstance in most fishing districts and causes annual loss to this valuable industry. It is to be regretted that our fishermen, as a rule, do not avail themselves of that invaluable adjunct to their business—an ice house—which, in this country, can be inexpensively constructed and easily filled at a season when they are otherwise idle. With a small, but well filled ice house, every fisherman could lay up bait which almost invariably appears during some point of the season, and always in advance of the larger fish. Every fisherman could thus provide against frequent losses resulting from want of bait. Some means that would be instrumental in directing their efforts to this end, would prove of incalculable value.

MACKEREL.

There is an increase of 23,173 pounds of fresh and 3,580 barrels of pickled mackerel over the catch of 1897, which was a poor one. For the past two years the fall catches were failures; the early summer fishery in each year largely making up the catch given in the statistics. Unless mackerel are allowed to reach the spawning grounds

unmolested by the destructive purse-seines, I fear that this important fishery will become a thing of the past. The natural spawning grounds for these fish are in the North Bay and the waters of the Magdalen Islands. Sometimes the ova in the female is so matured when they make their appearance in Cape Breton waters that they spawn in our bays. Aspy Bay and Bay St. Lawrence are their spawning grounds in our waters. While on their way to the spawning grounds during the last of May and first of June they are pursued by purse-seining vessels, and tens of thousands of barrels of the mother fish are taken. How can the supply be kept up under these circumstances? Year after year mackerel appear to be becoming scarcer and unless purse-seining is prohibited until after spawning season is over, failure will be the word used when writing reports of this fishery.

HERRING.

The pickled herring statistics show an increase of 1,882 barrels over last year, but there is a decrease of 266,690 pounds of fresh and 11,000 pounds of smoked herring. This decrease has again occurred in the upper waters of the Bras d'Or Lakes, spring herring being taken there for bait purposes. The demand for this bait fish has fallen off during the past two years owing to the fact that considerable quantities of bait or frozen herring have been imported from Newfoundland, purchased by lobster fishermen and used by them to bait their traps. While the spring run of herring keeps up, the mid-summer fat herring, the best herring taken in Canadian waters, do not strike into our bays and harbours as formerly. Some fishermen attribute the absence of these excellent commercial fish to the increase of lobster traps in our inshore waters, others to July gales, which force the fish back into deep water. It is not likely that either the presence of traps or July gales is the cause of the absence of the mid-summer herring, as they have been known to strike in large schools when traps on the Eastern coast were as numerous as they are now. The gale theory does not hold good either for the reason that in seasons when gales did not occur these fish did not appear in as large number as formerly. They must seek some other haunts, possibly in some of the bays of Newfoundland, where herring have appeared in immense shoals during recent years.

SALMON.

The salmon fishery has been good. In fresh salmon, largely for export, there is an increase of 51,116 pounds, in canned 7,620 pounds and in pickled 46 barrels. The increase has largely been made up in Inverness county, particularly in that stretch of coast from Broad Cove, north to Pleasant Bay. Salmon are purchased from the fishermen by a Mr. Abbot, an American gentleman, who has a freezer at Margaree Harbour, and also by the Messrs. Loggie, who employ a small steamer to carry the fish from the net fishermen to their freezers at Mulgrave. Besides the large quantities which are taken into the freezers referred to, a considerable amount of fresh salmon is shipped in ice to the cities of Canada during the fishing season. Margaree and Little River, Cheticamp are the best spawning rivers in Inverness county. The former has been stocked with salmon fry from the hatchery in this county, but no fry has ever been placed in the Cheticamp River, owing to the difficulty of reaching it. In August last, accompanied by a guide, I proceeded to the upper waters of Little River. After a walk of about three and a half miles we reached the first pool, a very large deep pool between high mountains. I observed no fish in this pool. We proceeded until two more miles were covered. At this point we came to another large pool. I noticed a school of salmon in the river below. They soon made for the pool, which I discovered to my amazement was literally alive with salmon. This pool is about 200 feet in length, sixty in width and very deep. I remained for some twenty minutes watching the fish schooling about. The head of the pool was cut off by a large rock, but I knew from the roaring noise that there was a high fall at the upper end. I heard the guide from the cliff above call me to come up, which I did and witnessed for the first time salmon attempting to reach the upper waters by leaping the falls. The fall from the top to the

pool below was about fourteen feet and a heavy volume of water leaped over it, causing a great white foam and shower of spray. While I remained there I counted 123 salmon which tried to jump the falls and not one succeeded. They would leap out of the white foam below and sometimes strike the rock on the side of the fall and drop back into the pool below. Others would be thrown back by the force of the water, there being no 'rest' above after gaining the top. It was a grand sight. I do not believe salmon ever reached beyond this fall, although I was informed that two salmon were seen in pools above by prospectors. The upper are much better for spawning than the lower waters and in order to enable these fish to reach the spawning grounds above I have reported the matter to the department and asked for an expenditure to have a portion of the fall removed. With access to the spawning grounds above, I believe the supply of salmon in a few years would be greatly increased.

HALIBUT.

There is a decrease of 55,952 pounds in halibut. The only county in my district showing an increase catch of halibut is Inverness. There is no market near at hand for fresh halibut, which accounts for the decrease. American vessels report abundance of these fish on the outside banks.

OTHER BRANCHES.

The other classes of fish are much about the same as in previous years, excepting smelts which show a decreased catch of 27,662 pounds. An open season in December and first part of January is the main cause of the decrease in smelts. Frost is required for the export of these fish. The supply is well kept up.

The various rivers and streams were well protected this year from poachers. The angling for salmon and trout was good in the month of July and each year the number of anglers are on the increase. Since communication has been directly opened up by steamer with Newfoundland, many anglers first whip the Cape Breton streams and afterwards proceed to Newfoundland where the angling season opens later. The money spent by the Government in the protection of our rivers and streams is money well spent, not only from a commercial standpoint, but in protecting valuable rivers for anglers who come from abroad and spend money in our country.

I have the honour to be, sir,
Your obedient servant,

A. C. BERTRAM,
Inspector of Fisheries.

SYNOPSIS OF FISHERY OVERSEERS' REPORTS FOR THE ISLAND OF CAPE BRETON, 1898.

CAPE BRETON COUNTY.

Overseer Joseph McPherson, of North Sydney, reports a decrease in the catch of herring and lobsters in his district over the previous year. The decrease in the herring fishery he attributes to the large number of steamers which frequent North Sydney Harbour during the herring season and frighten this fish away. The late date for the commencement of the season's operations and stormy weather he gives as the cause of the scarcity of lobsters. The other branches of the fishery in his district were pretty much the same as last season. The close seasons were well observed.

Overseer Michael R. McInnes, of Amaguades Pond, reports a more vigorous prosecution of the cod fishing industry in his district during this season than in previous

years, owing to the fishermen procuring better prices for this fish in the local markets. On account of scarcity of bait, however, the catch was not as large as might be. The lobster fishery was carried on by only a few fishermen, but the result proved so satisfactory that he is of the opinion that this industry will be prosecuted on a much larger scale next season. About per cent of the 50 total catch of all branches of the fishery in his district was sold in Canada, the balance being used for home consumption. No illegal fishing came to his notice during the season.

Overseer Timothy Sullivan, of Little Bras d'Or, reports a decrease in the catch of cod this season. He attributes this to a less vigorous prosecution of this industry than in former years. A larger number of fishermen were engaged in the lobster fishery in his district this season than previously. He reports the July or mid-summer run of herring scarce. The close seasons were well observed.

Overseer John McLean, of Gabarous Lake, reports an increase in cod and a decrease in mackerel, herring and salmon. He also reports a great scarcity of bait. No abuses existed in his district and the several close seasons were well observed.

Overseer Henry Le Vatte, of Louisburg, reports an increase in cod and haddock in his district this season. The fishermen made large catches of these fish, and were it not for scarcity of bait during the spring and the presence of dog-fish on the coast during the summer a much larger catch would have been taken. He remarks that many of the fishermen in his district engage in the lobster fishery so much so that this industry is being overdone. He attributes the cause of this too vigorous prosecution of the lobster fishery to the fact that fishermen are unable to prosecute the other branches of the industry owing to want of bait. He hopes that some remedy to assist the fishermen by cold storage facilities or otherwise will be undertaken by the Government.

Overseer Joseph McDonald, of Little Lorraine, reports an increase in all branches of the industry this season excepting mackerel. The prices for fish ruled higher than in previous years and this caused a more vigorous prosecution of the industry. About 95 per cent of the total catch was sold in Canadian markets, the balance being used for home consumption. No abuses existed in his district.

Overseer John McCuish, of Scattarie Island, reports an increase in cod and herring. The mackerel fishery was almost a total failure. The lobster fishery was fairly good, but the season was short owing to the presence of ice on the coast during the spring months. The close seasons were well observed. About 90 per cent of the fish taken in his district was sold in Canadian markets, the balance being used for home consumption.

Overseer C. E. Rees, of Port Morien, reports a fair increase in the herring and a slight increase in cod over last year. The increase in cod he attributes to the favourable weather enjoyed for fall fishing. There was a decrease in mackerel and halibut, owing doubtless to scarcity of these fish. The close seasons were well observed. Almost the total catch of fish was sold in Canada, only a very small portion (about 3 per cent) being used for home consumption.

INVERNESS COUNTY.

Overseer D. F. McLean, of Port Hood, reports an increase in salmon and mackerel and a decrease in all other branches. The increase in mackerel he attributes to a more vigorous prosecution of the industry by vessel fishermen than formerly. Many causes are attributed for the decreases in the other branches of the industry, such as frequent storms, scarcity of bait, presence of dog-fish on the coast, etc. He is of the opinion, however, that if those interested in the prosecution of the fishing industry had contented themselves during the past thirty years with the use of hand lines for fishing mackerel and cod-fish instead of the scientific use of seines and trawls, such a great scarcity of fish would not now be so noticeable in the officers' reports each year.

About 20 per cent of the fish taken in his district was used for home consumption, and the remainder in about equal proportions is sold in Canada and exported to foreign countries. The close seasons were strictly observed, special guardians rendering efficient service. The Sawdust Act was complied with by the millowners. No fishways exist in his district. One trap-net under license from the Department of Fisheries was operated; the total value of fish caught therein being $242.50.

Overseer Lewis McKeen, of Mabou, reports a fairly good catch of cod during the latter part of July and through the month of August, but during the early part of September dog-fish made their appearance and proved very destructive to this fishery, not only by frightening the fish away but also by destroying trawls and nets. Mackerel were scarce, the few that were taken being used for bait. He is unable to attribute a cause for the scarcity of these fish. The catch of spring herring was good, but the mid-summer run was a failure. It is believed that large schools of fall herring came around the coast but were frightened away by dog-fish. The salmon catch was below that of last year. Lobster fishing was fairly good during the first part of the season but did not continue so, and the return shows considerable decrease as compared with the catch of 1897. Close seasons were fairly well observed, as was also the Sawdust Act. There are no fishways in his district.

Overseer Archibald A. Chisholm, of Margaree Forks, reports a slight increase in the total catch of the fisheries in his district this season over the past year. Dog-fish interfered somewhat with the fall fishing by destroying fishing gear. A larger number of men were engaged in the industry this season than previously, which doubtless accounts for the increase referred to.

Overseer Albert Ingraham, of North-east Margaree, reports a large falling off in cod and lobsters in his district and a slight increase in salmon and mackerel. The close seasons were well observed. About 80 per cent of the fish taken in his district is sold in Canada and the balance used for home consumption.

Overseer William Aucoin, of Eastern Harbour, Cheticamp, reports the herring fishery is fairly good. Cod were plentiful in the early part of the season but gradually diminished towards the close, and the returns show a decrease in this branch of the industry. Haddock, hake and halibut were scarce. Owing to the scarcity of bait mackerel were not as plentiful as was expected. Lobsters were about the same as last year. About 60 per cent of the fish caught was exported to foreign countries, 30 per cent was sold in Canada and the remainder used for home consumption. Close seasons were strictly observed.

Overseer Angus McIntosh, of Pleasant Bay, reports an increase in the catch of lobsters, mackerel and salmon owing to a more vigorous prosecution of these branches than in previous years. The codfish catch was about the same as last year. No abuses exist in his district, and the close seasons were observed.

RICHMOND COUNTY.

Overseer D. R. Boyle, of West Arichat, reports a large decrease in the catch of cod, haddock, hake, halibut and squid, and a slight increase in herring, mackerel and salmon. The large falling off in the cod fishery is severely felt by the fishermen, it being the most important branch of the industry in his district This decrease is principally owing to boisterous weather which prevailed during the fall months, also to the fact that fewer vessels were engaged in prosecuting the industry than formerly. The lobster catch is about the same as last year, the decrease in canned lobsters being more than counterbalanced by the increased quantity exported in shell this season. Fairly good prices for this season's yield of the different branches were realized by the fishermen, and were it not for this fact their loss owing to the large falling off in several branches of the industry, would be most severely felt. The close seasons were strictly observed and no serious infraction of the regulations came under his notice. About 90 per cent of the total catch of fish in his district was shipped to Halifax and P. E. Island markets, the balance being used for home consumption.

Overseer Archibald Morrison, of Cannes, reports a decrease in the catch of cod, herring, mackerel and lobsters. The codfish catch although small proved remunerative as the fishermen secured very fair prices for their catch. The lobster fishery is gradually diminishing owing to the grounds being overfished. He is of the opinion that the only means of preserving this important industry from extinction is by prohibiting lobster fishing altogether for a period of several years. About 95 per cent of the fish taken was sold in Canada, and the balance used for home consumption.

Overseer Arthur Brymer, of Lower L'Ardoise, reports an increase in mackerel, hake and pollock, and an average catch of cod and haddock. The cause of the increase in the above branches he attributes to a more vigorous prosecution of the industry than formerly. The close seasons were well observed.

VICTORIA COUNTY.

Overseer W. R. Moffatt, of Cape North, reports a decrease in all branches of the fisheries in his district over the year 1897, owing to stormy weather and scarcity of fish. The total catch of mackerel was shipped to the United States. Of the other branches 75 per cent was sold in Canada and the balance used for home consumption. The close seasons were well observed.

Overseer John D. Morrison, of Wreck Cove, also reports a great scarcity of all kinds of fish in his district, consequently the returns show a considerable falling off compared with last year. No illegal fishing was carried on and no abuses exist in his district. About 70 per cent of the total catch was sold in Canada, the balance being used for home consumption.

Overseer Charles McRae, of Middle River, reports a slight increase in salmon and cod over last year's catch. The different branches of the fisheries in his district appear to have been more vigorously prosecuted this year than previously. About 70 per cent of the catch of fish taken in his district was sold in Canada and the balance used for home consumption. There are no fishways in his district. The regulations were well observed.

Overseer Duncan Gillis, of Baddeck, reports an average catch in the various branches of the fisheries in his district this season. No abuses existed and the several close seasons were well observed. About 70 per cent of the total catch of fish was sold in the Canadian markets, the balance being used for home consumption.

I have the honour to be, sir,
Your obedient servant,

A. C. BERTRAM,
Inspector of Fisheries

N.B.—The overseers in Victoria county being all new officers and appointed within the present year they are not in a position to make accurate report on the fisheries of their respective districts as the overseers in the other counties who have had longer experience.

A. C. B.

DISTRICT No. 2.

ANNUAL REPORT OF THE FISHERIES OF DISTRICT No. 2, NOVA SCOTIA, COMPRISING THE COUNTIES OF ANTIGONISH, COLCHESTER, CUMBERLAND, GUYSBOROUGH, HALIFAX, HANTS AND PICTOU.

PICTOU, January 2, 1899.

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

SIR,—I have the honour to submit my tenth annual report of the fisheries in District No 2, Province of Nova Scotia, together with tabulated returns, showing the quantities of each kind of fish caught as well as comparative tables showing the increase or decrease of the catch of each kind of fish.

The estimated value of the total catch for the past season is $1,456,271, as compared with the estimated value of the catch for the year 1897, $1,464,974, showing a decrease in value of $8,703 or less than one per cent.

Since the year 1890 the value of the several years catch has been as follows :—

1890	$1,453,015
1891	1,640,912
1892	1,357,208
1893	1,427,605
1894	1,510,900
1895	1,429,782
1896	1,245,463
1897	1,461,327
1898	1,456,271

These figures speak for themselves showing that the results of the year's operations are about an average of that of the past nine years.

Of the anadromous fishes last year, the reported catch of—

Salmon shows a decrease of	3	per cent.
Shad shows an increase of	100	"
Smelts show an increase of	10	"
Alewives show an increase of	12	"

Of the deep-sea fish the catch of

Halibut shows an increase of over	100	"
Cod shows an increase of about	10	"
Haddock shows a decrease of about	7	"
Hake shows an increase of about	30	"
Pollock shows an increase of about	20	"

Comparing the aggregate catch of the whole cod family with that of last season there is an increase of about 6 per cent.

SALMON.

There was a decrease in the quantity caught on the Atlantic shores of the district of 12 per cent, viz., in Guysboro county, a decrease of 15 per cent, and in Halifax county a

decrease of 7 per cent. In the Bay of Fundy portion of the district there was a decrease of 20 per cent, while on the Straits of Northumberland there was an increase of 23 per cent.

SHAD.

The product of the shad fishery is remarkable, showing an increase of about 100 per cent over last season.

This fishery is of little or no importance upon any other part of the district excepting the counties bordering on the Bay of Fundy.

Since the year 1889 the yield has been as follows :—

	Barrels.
1889	535
1890	750
1891	1,178
1892	1,811
1893	746
1894	981
1895	1,185
1896	1,079
1897	1,382
1898	2,777

Just what has been the cause of this increase is difficult to determine. The only known factor which appears likely to change the results being the better system of river protection adopted five or six years ago, whereby the close season from Friday evening until Monday morning is better enforced during the spawing season while the fish are in the rivers.

ALEWIVES.

Last season I had to report a decrease in the catch of alewives of about 42 per cent from the catch of the previous year. This season the returns show an increase of 12 per cent over the catch of last year.

It is remarkable, however, that on the Atlantic coast not only there was no increase but a very considerable decrease of about 40 per cent from last year's catch, while from the Bay of Fundy counties the reports show an increase of 175 per cent over the catch of last season.

Assuming that these fish ascend the coast as the temperature of the water rises it may be that prevailing easterly winds may turn their course up the Bay of Fundy, and that this accounts for the larger catch in that portion of the district. At any rate, it appears to be evidence that gaspereaux are not so likely to return to their native waters as fish of the salmon family.

The faculty of discerning whether the waters of a river are from streams with lakes and still waters on them or from those of a more rapid character seems to be quite keen, for with two branches on a river, one with lakes, the other without, these fish seem to have the instinct to discern the lake waters: they will ascend that branch and are not found in the other, nor will they ascend rivers that have no lakes or still waters on them. They spawn in the still waters.

SMELTS.

The product of the year's operations shows an increase of about 9 per cent over the yield of last season.

Upon the Straits of Northumberland these fish spawn in the month of May, and the close season under the regulations is from April 1 to July 1. I was surprised to find evidence of recent spawning in rivers flowing into the Atlantic in the county of Guys-

boro as late as July 10, in a brook at Port Hilford. The bottom of the brook was covered with spawn and there was quite a number of smelts in the brook at the time.

From inquiry it appeared to be quite unusual for these fish to be seen in that brook so late in the season and it may have been owing to some abnormal cause; however, it will be the subject of investigation during the ensuing season, so that there may be reliable data regarding the spawning time of these fish on the Atlantic coast.

It may be that because of a lower degree of temperature that they do not spawn so early as in the Straits of Northumberland.

HERRING.

The catch this year is only two-thirds of that of last: and the smallest reported catch since the district was set off. The following list shows the quantity in barrels caught each season since 1889. I have assumed that 200 lbs. of fresh fish are equal to a barrel.

1889	38,019
1890	40,424
1891	30,952
1892	43,435
1893	30,981
1894	41,607
1895	70,370
1896	28,018
1897	38,671
1898	25,570

MACKEREL.

The reports are not satisfactory inasmuch as they show a catch 40 per cent less than that of last season and the smallest but one since 1889, as the following figures will show.

	Brls. salted.	Lbs. fresh or preserved.
1889	19,751	38,538
1890	23,139	32,928
1891	27,124	6,000
1892	14,322	2,000
1893	10,851	751,850
1894	10,175	669,300
1895	5,907	575,350
1896	8,594	1,318,917
1897	3,558	1,606,091
1898	2,092	1,547,178

As there has been a great change in the mode of marketing these fish, the refrigerators lately built having led to a large trade in fresh fish, it is somewhat difficult to arrive at a satisfactory conclusion from the foregoing figures as to the increase or decrease of the fishery, but assuming that 200 lbs. of fresh fish are equal to one barrel of salted, thus the figures in barrels would be as follows:

1889	19,964
1890	23,304
1891	27,514
1892	14,332
1893	14,610
1894	13,522
1895	8,344
1896	15,189
1897	11,591
1898	9,828

LOBSTERS.

On the Atlantic coast of this district the catch was slightly better than that of last year; owing to the fact that during the fishing season the weather was more favourable than it was during the fishing season of last year.

In the waters of the Straits of Northumberland the fishing was not so good as last year, in the counties of Antigonish and Pictou, but in Cumberland county the catch was better.

Over the whole district the catch was about equal to that of last season, in the Straits of Northumberland, and I have noticed that when herring are abandoned there is a good catch of lobsters, and *vice versa*, and this season's results gives evidence in the same direction, for in Cumberland county herring were plentiful, and lobsters also, while in Pictou and Antigonish there was a shortage in both.

I have supposed that the herring being in abundance spawn in the spring months and as their spawn sinks to the bottom and attaches to rocks, weeds, &c., it is fed upon by the lobsters attracted by this bait and thus it leads to a larger catch.

The close season regulations were rigidly enforced during the season, a patrol steamer being employed and traps confiscated wherever found, and in this district there were about 940 found set in violation of law. Convictions were obtained where possible.

It was quite noticeable that whereas formerly the fishery officers found all of the fishermen in favour of fall fishing and against the enforcement of the season regulations that during the past season the disposition to violate the law was confined to a very small percentage and many of the fishermen were willing to assist the officers with information as to the location of illegal apparatus.

The future of this fishery will largely depend upon a strict observance of the season regulations, for the enforcement of any other restrictions is likely to involve too great an expenditure to be practicable. If, however the eggs of the female can be hatched in incubators at a reasonable outlay, I am of opinion that it should be done under the supervision of the department but the cost made a charge upon the industry.

Of course if the female can be kept in the water until the berries are hatched, such an expedient would be unnecessary, but when it is remembered that the eggs can be removed from a female, that this can be done in the boat where no one can inspect it, that the ten cents of to-day will in ninety-five cases out of a hundred be grasped by the fisherman rather than the chance that he or his neighbour may make a dollar in a year or two, then it would appear to be a wise course to purchase the eggs at a price that would ensure their coming into the control of the department, hatch them in incubators at or near the factories and restore them to the sea to take their chance of life. The cost of this incubator could be met by an increase in the license fee.

It seems to me that undue importance seems to be attached to the preservation of the fish to which the eggs are attached; as a matter of fact this female is not so important as an unberried female, because as the spawning process has recently occurred, it will be a longer time before she would arrive at that stage again than is likely to be the case with the unberried female.

During the past season nineteen summons have issued, and conviction obtained in twelve cases for violation of the Fisheries Act. Twelve nets were confiscated, being set in violation of law.

SYNOPSIS OF OVERSEERS' REPORTS.

Overseer A. R. McAdam, Antigonish County, says that in the early part of the season the catch of lobsters was large and promising but as the season advanced it dropped.

There was a good catch of hake especially in the western part of his division. Six nets which were set for trout were confiscated being in violation of law. The salmon fishery was better than it had been the previous year by about 10 per cent. A number of fishways are required in his division. The guardians are for the most part faithful to their trust and many of them take much interest in the work.

Overseer Davison, Colchester County.—There was an increase in the catch of shad over any of the previous years for some time past. He thinks this increase partly due to the fine weather during the fishing season, which caused the fish to come to the surface and to the flats where they were taken in weirs. The fishermen who fished on the deeper waters did not do so well as they had done the previous season.

Although the catch was larger than for some years it is only about one quarter as much as those of fifteen or twenty years ago, and this is because there is no protection to the mother shad when in the rivers for the purpose of spawning. If they were protected there the fishery would be restored. He recommends a close season for shad from March 20 to June 20 in each year.

Overseer G. O. Smith, Cumberland County, says a number of nets were confiscated in his division, being set in violation of law, the names of the owners or persons who set them could not be discovered. Fish were more plentiful than last year, 90 per cent of the gaspereaux caught in the River Philip is by residents of Halifax County who came there in schooners. There are three fishways in his division which are considered in good order.

Overseer Angevine, Cumberland County, says the close season for salmon has been strictly observed, no cases of violation of law came to his knowledge.

Overseer Davis, Guysboro County, says that the results of the salmon fishery in his division shows an increase of about 10 per cent. The catch of codfish was 20 per cent larger than last year. There was an increase of about 65 per cent in the quantity of hake taken, while the haddock fishery returns show a decrease of about 35 per cent. There was a decrease in the herring fishery of about 50 per cent, and in that of mackerel of about 60 per cent. The yield of the lobster fishery was better than that of the previous year, about 7 per cent, attributable to finer weather during the fishing months. Owing to scarcity of bait in the fall months the cod and haddock fishing off Canso and in the Chedabucto Bay were not prosecuted as vigorously as would have been done had the bait been plentiful. Owing to the low prices which prevailed in the early part of the season the year has not been a prosperous one with the fishermen.

Overseer Alex. W. Reid, of Guysboro County, says that salmon were more plentiful in the St. Mary's River than last year, but in other waters of his division the catch was about the same. Summer herring did not appear west of Isaacs Harbour, but there were good catches of fall herring in some localities, these brought fair prices; about 25 per cent of this catch was salted for lobster bait. Cod were about as plentiful as lastyear, but owing to rough weather late in the fall the catch did not come up to that of last season. Lobster were more plentiful in some localities, from April 20 to May 31 the catch exceeded that of last year, but in the month of June very few were taken owing to their scarcity. The close season has been very well observed, only a very few cases of illegal fishing came to his notice but sufficient evidence to convict the parties could not be procured.

Good service was rendered by the patrol boat *Active.* Two salmon nets were seized by Guardian John A. Kirk, being set in violation of law, also a gaspereaux net at Stillwater, St. Marys. Several fishways are badly needed in his division.

Overseer Robert Gaston, of Halifax County, says there was a slight increase in the salmon fishery, also in lobsters, codfish, halibut and mackerel. A decrease in all other kinds. Sixteen cases of violation of the Fisheries Act were brought to his notice and summons issued against the parties. Eleven convictions were obtained. Three fishways in his division are in need of repair—the names of the owners of the dams being the subject of a special report.

Overseer Rowlings, of Musquodoboit, Halifax, reports that every vessel owned in his division which went to the North Bay returned with a full load of cod and haddock; and this accounts for the larger catch of these fish reported by him. The shore fishery was worse than last year. At West Chezzetcook, the largest fishing village in his division, nearly one-half of the boat fishermen were short of the quantity required to entitle them to a bounty although they fished for three or four months. Not nearly half the quantity of herring were caught as there was the previous year. Most of those reported in his statistical return were caught by vessels off Prince Edward Island. Mackerel were very

scarce. Lobsters more plentiful than last year, the shipments of live lobsters to Boston being nearly double that of any previous year. The law regarding the season for catching lobsters has been better observed than in any previous year; only in two places in his division did they try to pack; one of these, he thinks has been broken up entirely. The alewife fishery was a total failure; none were taken, neither at Chezzetcook nor at Lake Porter, where there are no sawdust and no dams, nor on rivers where there are such.

Overseer Pritchard, of Pictou, says that the run of salmon during the spawning season was about an average. The freshets were late, so that the fish did not enter the rivers as early as usual and poachers had limited time for operations. In accordance with instructions he had visited saw-mills in his division and warned the owners against allowing sawdust to drift into the streams. For a while they obeyed his instructions but later he found they were violating the law. He finds great difficulty in enforcing the size and sex limit in the lobsters regulations. With regard to Pictou Island, nothing but a resident fishery officer can prevent small lobsters being packed. He instituted proceedings against a packer for packing without a license, but he has left the country.

Overseer A. J. McDonald, of Pictou, says there was an increase in the catch of salmon. About three-fourths of the salmon taken in his division are exported to the United States. The mill-owners did not observe the law as regards dumping sawdust and mill refuse in the streams. Owing to heavy rains the rivers were kept full during the spawning season. Some persons were noticed fishing for salmon in October, but they escaped arrest and identification. One salmon net was seized for violence of the Fisheries Act.

Overseer Nathaniel Forbes, Pictou County, says neither the herring, mackerel or salmon fishery yielded an average catch. The cod fishery was better than former years, while the product of the lobster fishery was about the same as last year. Hearing that torches were seen in Sutherlands River he drove down frequently to see that the law was observed. One case of illegal fishing came to his knowledge, and upon the party confessing, he convicted him and fined him ten dollars, which was paid. No fishing apparatus was consficated. He visited all the mill-owners in his division, and found the law with respect to mill refuse duly observed. There is only one fishway in his division, which he found to be in good repair and kept clear of rubbish.

I have the honour to be, sir,
Your obedient servant,

ROBERT HOCKIN,
Inspector of Fisheries.

DISTRICT No. 3.

ANNUAL REPORT ON THE FISHERIES OF DISTRICT No. 3, BY INSPECTOR L. S. FORD.

MILTON, QUEEN'S Co., N.S., January 2, 1899.

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

SIR,—I have the honour to submit my annual report for 1898, of the fisheries of *District No. 3, Nova Scotia, comprising the counties of Lunenburg, Queen's, Shelburne, Yarmouth, Digby, Annapolis and King's.* Tabulated returns showing kinds, quantities and values of fish caught, estimated values of material employed in the fisheries during the year are also inclosed.

The value of the catch shows a decrease as compared with the year 1897 of $749,508.30.

Total for 1897	$5,453,957.85
" 1898	4,704,449.55

This decrease is more apparent than real. The excessive reports from Digby, last year, were almost equal to the deficit of this season. More care has been taken with the present returns, and I have no doubt that they show a fair yield of the fishing industry for this year. Despite the fact that the figures show a decreased catch, I am of opinion that it has been, both as regards prices and catch, an average yield for the fishermen.

The several close seasons have been fairly observed, owing to the special care of the officers and special guardians.

COD.

The cod family is to the front as usual, haddock are being prepared into finnan haddies in large quantities, and shipped to the upper provinces as far as British Columbia. The county of Digby takes the lead in this business; but other counties are falling into line, and the prospects for a constantly increasing demand for finnan haddies is extremely good. One of the firms in Digby engaged in this business informed me they were obliged to import haddock from Gloucester, U.S., to fill all their orders.

MACKEREL.

There was a fair catch of this valuable fish this year in some counties, notably Yarmouth, but many of our harbours seem to be entirely deserted by them. Different reasons for this disappearance are extant, but I have no doubt that the wholesale destruction of the mackerel with large traps in the spring, while the fish are full of spawn and seeking their spawning grounds, is about the best theory. I think in the near future the growing scarcity of this valuable fish will force the attention of your department to devise some means of protection.

LOBSTERS.

This business proved quite as profitable as usual this season. It must be noted that the average catch is kept up by the increased number of traps, and the larger number of fishermen engaged in this industry.

It is both troublesome and expensive to protect these fish. There seems to be a determination on the part of many of the fishermen to violate the law as regards size limit and berried lobsters, and it requires the constant attention of our officers to prevent the wholesale destruction of this most valuable fishery.

As the commission appointed by the Government has gone so largely into this matter there seems no need for us to offer any suggestions in this report. We may hope for better regulations next season.

SALMON.

The catch of salmon depends so largely on atmospheric influences that it is difficult to tell from year to year the cause of its fluctuation. Even heavy rains in the spring will influence the extent of the catch, both of the salmon and the alewives or gaspereaux.

If the department is to retain control of the streams in this district, it will need to make an entire change in the regulations to suit many of them. They—the regulations—are obsolete and unworkable. I would be pleased to note the changes needed on each river and submit them to the department for their opinion or approval if I am required to do so.

We have fair fish-passes in most of the dams on the rivers and the fish ascend, when allowed to do so to their spawning grounds, but the mill-owners claim the water the most of the time, and there is considerable friction in consequence, but there is really no need of dispute, a judicious arrangement for a pass cared for as it may be, will reconcile both interests. I have had but little trouble in this direction the past year, and anticipate less for the future if the regulations can be arranged to meet the requirements of each case.

TROUT.

It is doubtful if the overseers ever get a fair estimate of the trout caught. Sportsmen at all times and seasons frequent the lakes and rivers, and it is impossible to arrive at their catch. As they are almost entirely used for home consumption, any accurate statement does not appear possible. There seems to be plenty of these fish in most of the rivers they frequent, and any regulations affecting salmon and alewives will protect this valuable fish as well.

HERRING.

This fish, like the mackerel, seems to have deserted some of the harbours where they were once plentiful. They are a valuable fish, both for home consumption and export, and enter largely into the revenues of most every fisherman. The cause of this falling off is difficult to determine. Storms are apt to keep them off shore, but there were storms at sea when herring were plentiful in those harbours. Scarcity of herring also means scarcity of bait for cod, and consequently the shore fishery fails to some extent.

Cold storage for bait, will meet a want long felt by fishermen. The scarcity of fresh bait is a factor that more affects the catch of fish, particularly the shore fishery, than any other. To be able to secure within a reasonable distance at all times fresh bait, will, without doubt, be of great assistance It only remains to devise some means to make the immense schools of dog-fish that infest our coast, of some commercial value, to greatly improve the fisherman's condition.

The overseers generally report a good year's fishing in all its branches, and that in most all localities the law has been well observed.

I am, sir, your obedient servant,

L. S. FORD,
Inspector of Fisheries, District No. 3.

STATISTICS OF FISHERIES FOR NOVA SCOTIA

1898

NOVA SCOTIA—District No. 1.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, and the Quantity and Value of all Fishing Materials, Number of Men and the Kinds and Quantities of Fish and Fish Products in the Island and District of Cape Breton, Province of Nova Scotia, for the Year 1898.

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.					Kinds of Fish.											
		Vessels.				Boats.			Gill Nets.			Trawls.													
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon, salted, brls.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Number.
	Cape Breton County.			$			$				$		$												
1	Sydney Forks and South Bar					23	430	45	101	2020	1000	20	130	1200			200	5000						1
2	Low Point and Lingan	1	18	500	7	67	1020	95	185	3700	1850	65	385				550	5000				35712		2
3	Glace Bay and Schooner Pond					22	335	40	75	1500	750	20	125				330	5000						3
4	North Sydney to Ball's Creek					30	275	50	70	2000	475	2	10	200			350				10			4
5	George's River to Beavers Cove					24	225	40	20	530	150	4	40				59							5
6	Grand Narrows and Christmas Island					37	400	70	37	620	230	20	100				175							6
7	East Bay, Eskasoni and Middle Cape					35	466	54	43	603	294	25	83				145							7
8	Little Bras d'Or	4	45	850	20	22	398	43	110	2650	800	48	320				110	4000	1000			70416		8
9	Big and Little Pond and Sydney Mines					14	172	16	35	849	145	1	9	1000			75	1300						9
10	*Gabarus and Grand Mira					48	1725	240	243	5775	2430			1060			400				80	94080		10
11	Louisburg and Kennington Cove	1	19	200	4	22	550	44	150	3750	1050						100				90	44064	4000	11
12	Big Lorraine					35	900	70	350	8750	2450			2000		150	250				150			12
13	Main-à-Dieu	3	49	800	17	55	925	136	300	7550	3550			1287		7	305				65	38060		13
14	Little Lorraine	1	24	700	7	17	450	43	115	3945	2870			4550		11	204				24			14
15	Baulieu and Mira River	1	21	225	6	28	400	62	205	4625	3500			7325		16	254				29	18576		15
16	Catalone					4	45	8	95	1885	685			350		2	55				5			16
17	Scattarie Island	1	21	250	6	45	1400	120	300	6600	2500	10	100	2700	200		580	20000			32	12240		17
18	Port Morien and Round Island					39	1100	55	85	1780	595	45	225	1240			379			57	45	73632		18
19	Wadden's Cove and Black Brook					45	992	74	152	3040	1270	87	435				734			145	27	26528		19
	Totals	12	197	3525	67	612	12208	1305	2671	62172	26594	347	1962	22852	200	186	5255	40300	1000	202	557	413308	4000	

* NOTE—In No. 10 include 1 seine (330 fathoms) valued at $750.

RETURN showing the Quantity and Value of Fish, &c.—**Nova Scotia**—*Continued.*

Number.	Districts.	Kinds of Fish.															Fish Products.				Total Value of all Fish.	Number.
		Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives or gaspereau, brls.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.		
	Cape Breton County.																					$ cts.	
1	Sydney Forks and South Bar	220	3	500	4	....	....	500	400	....	500	20	63	....	....	10	2000	100	50	20	..	7,007 00	1
2	Low Point and Lingan	525	11	1000	20	....	....	8500	....	....	....	....	10	....	....	35	5500	350	160	25	..	24,139 90	2
3	Glace Bay and Schooner Pond	270	4	600	8	....	....	5500	....	....	....	....	20	....	....	20	5000	200	100	....	..	13,572 00	3
4	North Sydney to Ball's Creek	375	....	....	30	....	....	2000	....	....	....	....	10	....	....	....	....	70	75	....	..	3,613 50	4
5	George's River to Beavers Cove	275	....	....	25	....	....	....	....	....	....	....	8	....	....	....	....	40	60	....	..	1,593 00	5
6	Grand Narrows and Christmas Island	300	....	....	....	....	....	....	300	....	....	....	....	....	....	....	....	75	85	....	..	2,080 00	6
7	East Bay, Eskasoni and Middle Cape	288	....	....	....	....	....	....	....	....	2000	....	52	....	....	....	....	....	53	....	..	2,431 50	7
8	Little Bras d'Or	920	...	2600	150	20	35	3400	..	....	....	....	16	....	400	22	45	500	200	....	..	20,054 20	8
9	Big and Little Pond and Sydney Mines	....	....	....	....	....	....	....	....	....	....	....	10	500	....	....	....	30	100	....	..	797 00	9
10	Gabarus and Grand Mira	1700	....	....	300	....	....	....	....	....	10500	37	....	....	....	10	....	850	13	....	..	30,503 50	10
11	Louisburg and Kennington Cove	900	....	....	200	....	....	....	....	....	....	....	....	....	....	....	....	800	50	....	..	35,077 80	11
12	Big Lorraine	1500	....	....	500	....	....	....	....	....	....	....	....	....	....	....	....	1500	300	....	..	14,300 00	12
13	Main-à-Dieu	950	....	130	115	2	12	400	....	....	....	3	....	....	....	5	....	600	14	....	..	14,619 80	13
14	Little Lorraine	600	....	100	100	1	11	200	....	....	....	2	....	....	....	7	....	350	8	....	..	5,151 25	14
15	Baulieu and Mira River	565	...	520	50	1	10	370	....	....	....	16	....	....	....	3	....	430	9	....	..	9,574 55	15
16	Catalone	248	....	150	10	....	4	120	....	....	..	1	....	....	....	....	....	120	3	....	..	1,486 00	16
17	Scatterie Island	2300	....	....	100	17	9	12000	....	....	....	2	....	2000	....	2	50	1000	450	..	40	18,015 25	17
18	Port Morien and Round Island	660	...	5000	115	....	....	6085	....	3	....	....	....	....	....	10	15	535	2	....	..	21,179 24	18
19	Wadden's Cove and Black Brook	508	....	80	60	....	....	11000	....	....	....	15	....	....	....	....	8	656	13	....	..	12,270 70	19
	Totals	13104	18	10680	1787	41	81	50075	700	3	13000	96	189	2500	400	124	12618	8206	1745	45	40	237,466 19	

RETURN showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of all Fishing Materials, &c.—
Nova Scotia—*Continued.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.					Kinds of Fish.											Number.
		Vessels.				Boats.			Gill Nets.			Trawls.														
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon, salted, brls.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs	Cod, dried, cwt.	Cod tongues and sounds, brls.		
	Inverness County.			$			$				$		$												
*1	Port Hood	1	18	500	5	73	1600	150	380	10000	3600	200	1400				300	6000	400	40	44136	1800			1
2	Little Mabou					20	200	37	40	1200	360	25	120				90	2500	100	4		300			2
3	Seaside					13	180	26	72	2200	750	30	150				150	3000	80	4	19200	100			3
4	Little Judique					32	380	64	90	2800	900	50	250	200			260	50000	200	8		75			4
5	Judique					20	200	40	50	1600	400	20	80				125	5000	140	8	22968	150			5
6	Long Point					30	400	52	90	2700	700	35	140	1500			450	8000	180	10	19248	175			6
7	Creignish					20	240	40	60	1800	500	20	100	2000			450	3000	80	6		100			7
8	Low Point					25	250	50	80	2500	800	60	300				350	5000	200	10		125			8
9	Port Hastings	2	116	3100	17	26	380	36	60	1800	500	30	180				400	2500	280	20		130			9
*10	Port Hawkesbury	3	183	3500	33	12	200	12	150	4500	1500	25	100	1300			300	800	400	5200		100			10
11	West Bay and Malagawatch					73	850	93	291	5820	3000	20	50				190	650000				130			11
12	North and South Basin River Dennis					44	520	58	180	3600	2000	12	30				60	180000				35			12
13	Mabou Har. Coal Mines & Beinn Virrach					22	410	46	26	650	276	5	60	400	100		25			2	20856	260			13
14	Broad Cove					11	200	22	12	300	128	2	25				8			1	2160	60			14
15	Whycocomagh					8	112	16	10	250	110	8	95	400			10					105			15
16	Scottsville and East Lake Ainslie					4	32	8	6	150	60														16
17	Margaree Harbour and River	2	23	210	11	84	1381	260	148	4160	2230	9	368	48418	200	20	180		400	80	4752	2100	5	17	
18	Whale Cove and Chimney Corner					16	248	39	50	2500	2960	3	100	5900			85			96	4176	218	1	18	
19	Margaree Island					19	285	65	56	3365	3000	8	400				80			70	7968	510			19
20	Broad Cove Marsh and Port Ban					30	394	115	67	3850	2800	7	300				175			134	8352	775			20
21	Mabou Harbour, North Side					15	300	39	37	3210	1500	3	135				71			21		327	3	21	
22	Grand Etang					30	930	80	80	1600	550			1000			400			150	21456	900			22
23	Friar's Head					20	700	50	50	1000	350			600			300			75		550			23
24	Doucett's Cove					20	650	50	60	1200	400			3000			400			50		600			24
25	Meat Cove and Fishing Cove					32	480	64	10	200	115				591	5				51	22824	40			25
26	Pleasant Bay and Pollett's Cove					29	422	80	9	200	125			9262	1270					475	16184	60			26
27	Eastern Harbour	19	221	2500	82	60	6000	225	37	895	235	10	50	4500	500		2000		1500	500	22368	6000	15	27	
28	Cheticamp Point and Lake	1	10	125	4	52	2200	216	53	1350	470	4	40	4500			320		850	280	15792	2560	10	28	
29	Cape Rouge					25	250	80	10	380	100			300			100		300	300	6816	600	5	29	
	Totals	28	571	9935	152	865	20394	2113	2264	65830	30419	586	4473	83280	2661	25	7279	915800	5110	7595	259256	18885	39		

*NOTE.—In No. 10 include 3 seines valued $600. In No. 1, one trap-net valued $600.

RETURN showing the Kinds and Quantities of Fish and Fish Products in the Province of **Nova Scotia**, &c.—*Continued.*

Number.	Districts.	Kinds of Fish.													Fish Products.			Total Value of all Fish.	Number.
		Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereaux, brls.	Bass, lbs.	Eels, brls.	Oysters, brls.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	
	Inverness County.																	$ cts.	
1	Port Hood	1000	500	2200	400	200	300	300	20	..	2	....	....	100	....	600	150	30	25,600 20	1
2	Little Mabou	300	40	100	40	....	80	200	5	....	..	....	....	5	....	20	20	10	2,130 00	2
3	Seaside	500	50	300	12	..	100	300	10	....	5	....	....	10	....	40	60	20	6,052 60	3
4	Little Judique	500	20	80	....	....	100	500	8	....	5	....	....	30	....	20	30	20	2,577 00	4
5	Judique	200	25	25	....	....	1000	400	4	....	10	....	....	15	....	40	60	25	6,428 15	5
6	Long Point	300	20	10	....	....	1500	600	10	....	....	....	....	5	....	48	75	15	7,367 10	6
7	Creignish	250	15	....	....	....	1000	140	20	....	....	....	....	8	....	20	60	10	3,102 10	7
8	Low Point	200	25	....	....	....	200	200	30	....	....	....	....	7	....	40	50	10	2,475 00	8
9	Port Hastings	150	20	....	....	....	250	4000	25	....	30	....	....	5	....	40	40	15	3,267 60	9
10	Port Hawkesbury	200	10	....	....	....	1200	160	30	....	5	....	....	25	..	1060	30	10	80,700 00	10
11	West Bay and Malagawatch	....	....	....	....	....	....	....	....	....	18	....	....	....	....	65	32	....	8,027 50	11
12	North and South Basin River Dennis	....	....	....	....	....	....	....	12	....	23	175	400	....	....	20	11	....	3,200 50	12
13	Mabou Harbour, Coal Mines and Beinn Virrach	....	55	60	80	150	400	3500	5	150	10	....	....	12	....	180	100	....	6,393 20	13
14	Broad Cove	....	13	6	....	25	200	5000	....	....	....	....	....	2	....	35	30	....	1,107 50	14
15	Whycocomagh	....	....	....	....	....	1000	2000	....	....	10	12	....	....	....	50	15	....	925 50	15
16	Scottsville and East Lake Ainslie	....	....	....	....	....	11000	10000	25	....	30	....	....	....	....	....	..	....	2,000 00	16
17	Margaree Harbour and River	....	450	100	50	750	650	300	245	....	27	....	....	70	100	500	120	20	25,207 00	17
18	Whale Cove and Chimney Corner	....	58	40	....	438	....	....	5	....	....	....	....	44	29	80	84	19	5,398 50	18
19	Margaree Island	....	48	28	93	500	....	....	10	....	....	....	....	31	65	120	80	....	5,757 10	19
20	Broad Cove Marsh and Port Ban	....	73	34	110	810	....	18	....	....	1	....	....	62	71	195	151	48	8,621 80	20
21	Mabou Harbour, North Side	....	19	41	59	300	95	180	5	....	3	....	....	30	23	75	80	10	2,527 75	21
22	Grand Etang	....	150	50	....	..	....	..	10	....	....	....	....	500	....	1500	600	....	15,893 70	22
23	Friar's Head	....	90	40	....	....	....	....	....	....	....	....	....	300	....	1000	400	....	7,105 00	23
24	Doucett's Cove	....	60	50	....	....	....	....	....	....	....	....	....	450	....	1300	450	....	8,507 50	24
25	Meat Bay and Fishing Cove	....	....	....	....	....	....	....	....	....	....	....	....	....	....	25	600	....	6,560 95	25
26	Pleasant Bay and Pollett's Cove	....	....	....	....	....	....	....	....	....	....	....	....	....	....	37	700	....	13,705 80	26
27	Eastern Harbour	....	500	200	....	2000	1000	500	....	....	30	....	....	1200	700	3000	4000	....	60,953 60	27
28	Cheticamp Point and Lake	....	150	75	....	800	200	500	....	....	80	....	....	350	400	1200	1200	....	25,884 15	28
29	Cape Rouge	....	25	12	....	1000	....	....	....	....	5	....	....	30	100	300	530	....	10,266 20	29
	Totals	3600	2416	3451	844	6973	20275	28798	479	150	294	187	400	3291	1488	11550	9758	262	357,743 00	

RETURN showing the Number, Tonnage and Value of Vessels and Boats and the Quantity of Fish, &c.—**Nova Scotia**—*Con.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.					Kinds of Fish.										
		Vessels.				Boats.			Gill Nets.			Trawls.		Salmon, fresh, lbs.	Salmon, salted, brls.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Number.
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.										
	Richmond County.			$			$				$		$										
1	Arichat and Petit de Grat	7	153	1400	27	174	1392	242	1224	24480	4896	250	760	180	..	2134	.....	.....	332	45792	298	1958	1
2	Cape Auguet, West Arichat, Port Royal and Janvrin's Island	3	51	650	11	219	1740	305	1744	34808	8720	374	780	75	..	2893	.....	.....	74	41208	188	1788	2
3	Rocky Bay and Cape Le Rond	..	..	.....	....	58	766	91	456	9120	2280	30	151	60	..	666	.....	.....	71	13632	48	397	3
4	Descousse, Poulamond and Martinique	7	255	3200	62	88	504	144	864	17280	2456	72	200	25	..	1112	.....	.....	448	.....	18	2832	4
5	St. Peter's	4	95	1800	30	10	140	12	130	2800	690	....	....	.....	..	95	.....	.....	.....	.....	....	1000	5
6	River Bourgeoise	10	299	4200	80	36	380	46	150	3050	750	....	....	.....	..	340	.....	.....	.....	33982	....	4000	6
7	Grandique Ferry and Port St. Louis	..	....	.....	....	30	300	41	150	3000	750	8	24	.....	..	257	.....	.....	.....	.....	....	500	7
8	River Inhabitants and Basin	5	124	2900	21	140	1380	200	1400	20400	10000	....	....	.....	..	2000	....	.....	64	.....	....	500	8
9	Port Malcolm and Gut of Canso	8	312	2400	49	90	900	155	900	18000	7000	....	....	.....	..	1200	.....	.....	391	.....	....	400	9
10	West Bay	..	....	.....	....	80	800	160	240	5800	1200	15	45	.....	..	385	.....	.....	.....	.....	....	500	10
11	Fourchu, Framboise and St Esprit	..	....	.....	....	53	1800	147	270	6875	1850	7	70	.....	..	480	3000	275	415	89532	....	3200	11
12	L'Archevêque, Grand River and Point Michaud	..	....	.....	....	83	1605	184	667	17500	4410	7	70	2000	..	520	1100	.....	360	64752	....	550	12
13	Lower L'Ardoise, L'Ardoise and Rochdale	2	30	700	10	308	9100	616	3680	93500	21400	25	250	1500	10	2000	14000	24000	1900	47856	....	3650	13
14	Grand Greve, Indian Reserve and St. Peter's East	1	37	200	6	53	1350	130	355	8875	3050	4	40	.....	..	1150	7000	1615	210	31776	....	900	14
	Totals	47	1356	17450	296	1422	22157	2473	12230	265488	69452	792	2480	3840	10	16132	25100	25890	4265	368530	552	22175	

RETURN showing the Quantity and Value of Fish, &c.—**Nova Scotia**—*Con.*

Number.	Districts.	Kinds of Fish.																			Total Value of all Fish.	Number.
		Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked finnan haddies, lbs.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereaux, brls.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Seal skins, No.		
	Richmond County.																				$ cts.	
1	Arichat and Petit de Grat	5	.....	2073	9311	202	50	326	670	....	....	15	72	3100	.....	75	242	2000	180	2	42,650 06	1
2	Cape Auguet, West Arichat, Port Royal and Janvrin's Island	6	.....	1980	....	39	75	145	1060	....	....	133	15	7500	.....	10	275	2893	232	6	38,422 25	2
3	Rocky Bay and Cape Le Rond	3	.....	263	....	4	5	102	.....	....	....	24	10	17100	.....	5	154	420	175	..	11,097 40	3
4	Descousse, Poulamond and Martinique	2	.....	46	....	46	112	41	26300	....	....	187	75	73100	.....	25	200	3600	200	8	32,663 50	4
5	St. Peter's	....	.....	100	....	....	....	....	.....	....	....	....	15	.....	.....	....	....	300	40	..	4,980 00	5
6	River Bourgeoise	....	.....	200	....	....	....	....	.....	....	....	7	....	.....	.....	....	....	2700	100	..	25,744 40	6
7	Grandique Ferry and Port St. Louis	....	.....	200	....	....	....	....	.....	....	4200	120	30	.....	.....	....	....	100	20	..	4,678 00	7
8	River Inhabitants and Basin	....	.....	200	....	....	....	....	.....	....	3500	534	24	.....	.....	....	....	200	20	..	17,801 00	8
9	Port Malcolm and Gut of Canso	....	.....	100	....	....	....	....	.....	....	....	863	....	.....	.....	....	....	175	20	..	16,099 50	9
10	West Bay	....	.....	....	....	....	....	....	.....	....	....	....	15	.....	.....	....	....	....	20	..	3,720 00	10
11	Fourchu, Framboise and St. Esprit	17	3400	155	....	120	290	115	6750	800	....	60	23	18000	7000	313	100	1320	142	..	44,832 40	11
12	L'Archevêque, Grand River and Point Michaud	17	1900	98	....	20	30	35	2450	400	....	32	15	8000	2150	34	45	310	67	..	25,182 40	12
13	Lower L'Ardoise, L'Ardoise and Rockdale	15	4100	1550	....	55	35	900	8000	850	....	700	14	5800	3580	230	170	3000	260	.	77,849 45	13
14	Grand Greve, Indian Reserve and St. Peter's East	....	1500	565	....	38	22	90	5000	2100	1200	43	28	3100	3300	31	99	875	120	..	22,292 00	14
	Totals	65	10900	7530	9311	524	619	1754	50230	4150	8900	2718	336	135700	16030	723	1285	17893	1596	16	368,012 36	

RETURN showing the Number, Tonnage and Value of Vessels and Boats and the Quantity of Fish, &c.—**Nova Scotia**—*Con.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.							Kinds of Fish.						
		Vessels.				Boats.			Gill Nets.			Trap Nets.		Trawls.								
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Fathoms.	Value.	No.	Value.	No.	Value.	Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon, salted, brls.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, salted, brls.	Number.
	Victoria County.			$			$				$		$		$							
1	Dingwall, White Point and Sugar Loaf	1	12	200	3	56	1495	157	148	5920	1850	..	....	....	....	....	3650	19	114	....	285	1
2	Money Point and Sparling's Brook	....	....	....	....	33	314	85	34	1360	204	..	....	....	....	....	1293	....	5	....	245	2
3	Bay St. Lawrence and Wreck Cove	....	....	....	....	42	676	96	58	2320	940	..	....	....	....	....	2600	9	62	....	130	3
4	New Haven and Neil's Harbour	....	....	....	....	90	3600	107	180	3780	1440	..	....	6	72	....	144	....	600	....	35	4
5	South Point and Green Cove	....	....	....	....	9	180	17	14	294	112	..	....	....	....	....	....	3	27	....	8	5
6	North Ingonish	1	59	2000	12	52	2080	104	114	2508	912	..	....	62	1012	....	....	19	65	....	37	6
7	South Bay	....	....	....	....	39	1755	78	78	1716	624	..	....	39	624	....	....	36	44	....	22	7
8	Englishtown	....	....	....	....	18	123	25	22	208	161	2	400	24	120	....	....	14	394	....	10	8
9	Big Bras d'Or	....	....	....	....	33	304	47	140	3243	744	..	....	7	35	....	....	....	182	....	3	9
10	Eel Cove and Barachois	....	....	....	....	19	200	40	49	1078	490	..	....	....	....	....	....	....	41	....	8	10
11	Indian Brook, Little River and Breton Cove	....	....	....	....	14	150	38	50	1120	450	..	....	....	....	....	....	....	65	....	9	11
12	French River, Wreck Cove and Path End	....	....	....	....	23	220	60	86	2030	750	..	....	....	....	....	500	9	85	....	20	12
13	South Side Little Narrows to Iona	1	18	100	3	63	631	87	106	2120	850	..	....	49	197	1450	....	....	187	31900	....	13
14	Baddeck and Baddeck Bay	....	....	....	....	15	165	15	33	650	300	..	....	4	16	3800	....	....	9	10350	....	14
15	Big Harbour, Boularderie and Red Head	....	..	....	....	24	288	27	47	950	450	..	....	8	37	....	....	....	31	2500	....	15
16	North Side, Little Narrows	..	...	...	....	15	124	15	30	520	250	..	....	7	30	1050	....	....	22	....	....	16
	Totals	3	89	2300	18	545	12305	998	1189	29817	10527	2	400	206	2143	6300	8187	109	1933	44750	812	

RETURN showing the Quantity and Value of Fish, &c.—**Nova Scotia**—*Con.*

Number.	Districts.	Kinds of Fish.																		Total Value of all Fish.	Number.
		Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereaux, brls.	Eels, brls.	Oysters, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Seal skins, No.		
	Victoria County.																			$ cts:	
1	Dingwall, White Point and Sugar Loaf	7104	708	55	40	20	4500	....	.....	.....	.....	.....	.....	.....	.....	.....	250	300	....	11,086 30	1
2	Money Point and Sparling's Brook	17184	62	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	200	....	7,878 25	2
3	Bay St. Lawrence and Wreck Cove	7292	224	21	14	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	125	300	....	5,703 40	3
4	New Haven and Neil's Harbour	22704	2225	175	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2050	245	225	18,536 15	4
5	South Point and Green Cove	3792	175	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	90	.....	240	150	....	2,105 40	5
6	North Ingonish	10800	1882	508	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	.....	1432	450	....	13,416 60	6
7	South Bay	19680	1080	300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	800	425	....	11,079 50	7
8	Englishtown	.....	400	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40	50	....	4,313 00	8
9	Big Bras d'Or	9744	106	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	160	.....	25	75	....	3,265 80	9
10	Eel Cove and Barachois	.....	135	55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	23	10	....	1,030 90	10
11	Indian Brook, Little River and Breton Cove	22944	160	43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	77	13	....	5,817 40	11
12	French River, Wreck Cove and Path End	13272	325	140	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24	125	21	...	5,357 40	12
13	South Side Little Narrows to Iona	.....	863	.....	.....	.....	.....	.....	700	7	22	65	200	1600	4	38	280	53	....	5,681 50	13
14	Baddeck and Baddeck Bay	.....	20	.....	.....	.....	.....	.....	1200	10	10	.....	.....	.....	.....	9	6	4	....	1,205 30	14
15	Big Harbour, Boularderie and Red Head	.....	27	.....	.....	.....	.....	.....	.....	5	5	.....	.....	400	...	15	.....	5	....	384 50	15
16	North Side Little Narrows	.....	60	.....	.....	.....	.....	600	.....	26	20	60	...	.....	.....	.....	.....	7	....	1,152 50	16
	Totals	134516	8452	1322	54	52	4500	600	1900	48	57	125	200	2000	262	107	5488	2308	225	98,013 90	

RECAPITULATION

Of the Yield and Value of the Fisheries for the Island of Cape Breton, for the Year 1898.

Kinds of Fish.		Quantity.	Rate.	Value.
			$ cts.	$ cts.
Salmon, fresh	Lbs.	116,272	0 20	23,254 40
do preserved	Cans.	11,048	0 15	1,657 20
do pickled	Brls.	330	15 00	4,950 00
Herring, pickled	do	30,599	4 00	122,396 00
do fresh or frozen	Lbs.	1,025,950	0 01	10,259 50
do smoked	do	1,000	0 02	20 00
Mackerel, fresh	do	31,202	0 12	3,744 24
do pickled	Brls.	13,229	15 00	198,435 00
Lobsters, preserved	Lbs.	1,175,610	0 20	235,122 00
do fresh in sheil	Cwt.	4,552	5 00	22,760 00
Cod, dried	do	62,616	4 00	250,464 00
do tongues and sounds	Brls.	122	10 00	1,220 00
Haddock, fresh	Lbs.	25,180	0 03	755 40
do dried	Cwt.	13,055	3 00	39,165 00
do smoked finnan haddies	Lbs.	9,311	0 06	558 66
Hake, dried	Cwt.	4,070	2 25	9,157 50
do sounds	Lbs.	1,463	0 50	731 50
Pollock	Cwt.	1,887	2 00	3,774 00
Halibut	Lbs.	111,778	0 10	11,177 80
Trout	do	25,725	0 10	2,572 50
Shad	Brls.	3	10 00	30 00
Smelts	Lbs.	52,598	0 05	2,629 90
Alewives	Brls.	3,341	4 00	13,364 00
Bass	Lbs.	150	0 10	15 00
Eels	Brls.	876	10 00	8,760 00
Oysters	do	312	4 00	1,248 00
Flounders	Lbs.	138,400	0 05	6,920 00
Tom cods or frost fish	do	18,830	0 05	941 50
Squid	Brls.	4,400	4 00	17,600 00
Coarse and mixed fish	do	15,498	2 00	30,996 00
Fish oil	Galls.	43,137	0 30	12,941 10
Fish as bait	Brls.	15,407	1 50	23,110 50
Fish as manure	do	307	0 50	153 50
Seal skins	No.	281	1 25	351 25
Total for 1898				1,061,235 45
do 1897				1,056,115 83
Increase				5,119 62

RECAPITULATION

SHOWING the Number and Value of Fishing Vessels, Boats, Nets, &c., in the **District No. 1 of Nova Scotia,** for the Year 1898.

	Value.	Total.
	$ cts.	$ cts.
90 vessels, 2,213 tons	33,210 00	
3,444 boats	67,064 00	
18,354 gill-nets, 423,307 fathoms	136,992 00	
4 seines, 830 fathoms	1,350 00	
3 trap-nets	1,000 00	
1,931 trawls	11,058 00	
43 smelt-nets	395 00	
15,510 hand lines	7,749 00	
		258,818 00
71 Lobster canneries	53,975 00	
156,545 lobster traps	83,882 00	
		137,857 00
33 freezers and ice houses	2,912 00	
818 smoke and fish houses	24,267 00	
281 piers and wharfs	49,902 00	
47 tugs, steamers and smacks	4,300 00	
		81,321 00
Total value		477,996 00

NOVA SCOTIA—District No. 2.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., and the Quantities of Fish caught in District No. 2, Province of Nova Scotia, for the Year 1898.

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.					Kinds of Fish.					
		Vessels.				Boats.			Gills Net.			Trawls.							
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Number.
	Antigonish County.						$				$		$						
1	Harbour Bouché, Linwood, Cape Jack and Little Tracadie	1	11	200	3	75	721	110	302	6959	1272	40	713	500	903	....	1750	106	1
2	Big Tracadie, Bayfield, Monks Head and South Side Harbour	....	....	....	....	59	693	70	128	5568	3531	14	53	13906	349	6800	5151	2	2
3	North Side Harbour, Lakeville, Ballantyne's Cove, and South Side Cape George	....	....	....	....	37	655	58	95	3105	1109	37	169	6000	264	....	1300	21	3
4	North Side Cape George and Georgeville	....	....	....	....	20	287	33	64	1480	454	22	110	800	135	....	700	16	4
5	Malignant Cove, Doctors Brook, Arisaig, Moidart and Knoidart	....	....	....	....	30	381	47	89	2780	1066	20	99	9200	188	....	1600	52	5
	Totals	1	11	200	3	221	2737	318	678	19892	7432	133	544	30406	1839	6800	10501	197	
	Values	....	....	....	....	....	....	....	....	....	....	....	....	6081	7356	68	1260	2955	

Number.	Districts.	Kinds of Fish.															Total Value of all Fish.	Number.
		Lobsters preserved in cans, lbs.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs	Trout, lbs	Smelts, lbs.	Alewives or Gaspra. brls	Bass, lbs.	Eels, brls.	Oysters, brls	Squid, brls.	Coarse&mixed fish, brls.	Fish oil, gals.	Fish as bait, brls.	Fish as manure, brls.		
	Antigonish County.																$	
1	Harbour Bouché, Linwood, Cape Jack and Little Tracadie	52032	123	9	159	42	400	400	....	200	8	....	3	20	70	1000	510	18,774	1
2	Big Tracadie, Bayfield, Monks Head and South Side Harbour	14736	31	....	....	....	400	2000	21	....	82	28	....	....	....	344	154	9,713	2
3	North Side Harbour, Lakeville, Ballantyne's Cove and South Side Cape George	56112	257	33	363	208	1000	1000	49	....	10	....	5	....	126	175	400	16,963	3
4	North Side Cape George and Georgeville	13680	39	7	351	779	....	....	3	....	....	....	8	....	249	50	140	5,379	4
5	Malignant Cove, Doctors Brook, Moidart and Knoidart	27696	34	41	1426	4763	....	....	....	1600	....	....	7	....	496	102	280	15,583	5
	Totals	164256	484	90	2299	5792	1800	3400	73	1800	100	28	23	20	941	1671	1484	.....	
	Values	32851	1936	270	5152	2896	180	170	292	180	1000	112	92	30	282	2507	782	66,412	

RETURN showing the Number and Value of Vessels, Boats, Nets, &c., and the Quantity of Fish, &c.—**Nova Scotia.**—*Con.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.					Kinds of Fish.					Number.
		Vessels.				Boats.			Gill Nets.			Weirs.							
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Fathoms.	Value.	No.	Value.	Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Lobsters, preserved in cans, lbs.	
	Colchester County.						$				$		$						
1	Sterling					14	210	18	20	600	150							14400	1
2	Stewiacke					105	1050	190	220	6300	1880			9000					2
3	Five Islands					8	220	16				3	400	2100					3
4	Economy					8	260	16	16	4800	960	11	3800	2800	50	4000	3500		4
5	Little Bass River to Highland Village					19	475	38	19	6175	1330	5	1600	12000					5
6	Great Village to Queen's Village					22	723	44	22	7500	1500			13200					6
	Totals					176	2938	322	297	25375	5820	19	5800	39100	50	4000	3500	14400	
	Values													7820	200	40	70	2880	

Number.	Districts.	Kinds of Fish.																Total value of all fish.	Number.
		Cod, dried, cwt.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives or gaspereau, brls.	Bass, lbs.	Eels, brls.	Oysters, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
	Colchester County.																	$	
1	Sterling							300		13000	30		5	280		15	140	4,943	1
2	Stewiacke							1300	550		450	1000						9,330	2
3	Five Islands	120	1800	20	10	5	1000	1000	19						100	10		1,481	3
4	Economy	10	200	5				3000	408									5,311	4
5	Little Bass River to Highland Village	5						1000	487			400						7,430	5
6	Great Village to Queen's Village							800	193									4,650	6
	Totals	135	2000	25	10	5	1000	7400	1657	13000	480	1400	5	280	100	25	140		
	Values	540	60	75	22	10	100	740	16570	650	1920	140	50	1120	30	38	70	3,3145	

RETURN showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of Fish, &c.—Nova Scotia—*Con.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Materials.							Kinds of Fish.							
		Vessels.				Boats.			Gill Nets.			Trawls.		Weirs.									
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Lobsters, preserved in cans, lbs.	Number.
	Cumberland County.			$			$				$		$		$								
1	Pugwash, Port Philip and Gulf Shore	....	....	....	....	229	6703	176	371	7515	2128	....	....	....	....	....	....	....	26000	700	1800	500524	1
2	Wallace	....	....	....	....	25	200	45	24	700	290	....	....	....	....	1316	....	....	.....	....	.....	.....	2
3	River Philip	....	....	....	....	9	45	40	26	310	200	....	....	....	....	1300	....	....	.....	....	.....	.....	3
4	La Planche, Maccan and Nappan	....	....	....	....	4	100	8	3	80	45	....	....	....	....	200	....	....	.....	....	.....	.....	4
5	Minudie to Apple River	1	12	120	2	13	240	26	18	750	425	....	....	....	....	4200	....	100	.....	....	.....	.....	5
6	Advocate	....	....	....	....	8	140	16	8	120	100	1	75	....	....	500	....	20	.....	....	.....	.....	6
7	Spencer's Island and Port Greville	....	....	....	....	12	600	30	17	608	450	....	....	1	40	....	....	160	400	....	....	.....	7
8	Parrsboro'	2	21	275	6	7	180	16	6	180	175	1	60	2	80	1000	400	40	.....	100	....	.....	8
	Totals	3	33	395	8	307	8208	357	473	10263	3813	2	135	3	120	8516	400	320	26400	800	1800	500524	
	Value $	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1703	80	1280	264	16	216	100105	

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2616
590 0

Return showing the Quantity and Value of Fish, &c.—Nova Scotia—*Con.*

Number.	Districts.	Kinds of Fish.																			Total Value of All Fish.	Number.
		Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives and gaspereau, brls.	Bass, lbs.	Eels, brls.	Clams, brls.	Oysters, brls.	Fish as bait, brls.	Fish as manure, brls.		
	Cumberland County.																				$ cts.	
1	Pugwash, Port Philip and Gulf Shore	14	....	....	..	....	....	....	....	....	....	....	59400	....	....	....	50	646	3485	2500	112,797 00	1
2	Wallace	....	....	....	....	....	....	....	....	....	600	....	20500	458	160	24	....	721	658	....	7,307 00	2
3	River Philip	....	....	....	....	....	....	....	....	....	1000	3	....	200	250	25	....	....	....	....	1,465 00	3
4	La Planche, Nappan and Maccan	....	....	....	....	....	....	....	....	....	....	30	6000	100	....	....	....	....	....	....	1,040 00	4
5	Minudie to Apple River	....	....	....	500	20	26	....	50	500	....	500	....	15	....	10	30	....	20	....	6,700 00	5
6	Advocate	10	175	....	200	30	....	....	100	750	....	....	....	....	....	....	....	....	15	....	1,324 00	6
7	Spencer's Island and Port Greville	....	275	5	400	135	50	40	90	1600	....	....	....	....	....	10	....	....	20	....	2,873 00	7
8	Parrsboro'	....	500	....	....	320	....	....	200	900	....	....	....	....	....	....	....	....	....	....	3,907 00	8
	Totals	24	950	5	1100	505	70	40	440	3750	1600	533	85900	773	410	69	80	1367	4208	2500	.....	
	Value $	120	3800	50	33	1515	157	20	880	375	160	5330	4295	3092	41	690	160	5468	6312	1250	137,413 00	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, and the

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.				
		Vessels.				Boats.			Gill Nets.			Weirs.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.
	Hants County.			$			$				$		$
1	Maitland to Shubenacadie	..	....	. .	....	20	300	20	20	1400	350	.....	.....
2	Shubenacadie to Grand Lake	..	....	. .	....	21	68	21	....	440	110	.....	.....
3	Walton to Maitland	..	....	....	....	4	80	8	4	800	160	5	1200
4	West Hants	2	31	500	5	21	800	24	24	4427	800	3	250
	Totals	2	31	500	5	66	1248	73	48	7067	1420	8	1450
	Values $	..	....	.....	....	....	.....	....	....	.	.....	..	.....

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.				
		Vessels.				Boats.			Gill Nets.			Trawls.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.
	Pictou County.			$			$				$		$
1	West Pictou	..	....	.....	....	144	3600	180	80	2400	450	.....	.....
2	Pictou Island	..	....	....	....	61	1400	120	40	850	220	.....	.....
3	Central Division	1	30	400	3	10	250	12	20	400	100	.....	.....
4	Southern Division	..	....	.....	....	40	500	48	77	2370	1091	21	44
5	Merigomish Island	..	....	....	....	13	270	13	24	1076	596	...	...
6	North Beach	..	....	.....	....	8	127	8	15	1028	789	3	40
7	Ponds	..	....	.....	....	16	395	19	36	2218	1743	3	35
8	Lismore	..	....	....	....	5	60	6	7	630	650	. ...	.. ...
	Totals	1	30	400	3	297	6602	406	299	10972	5639	27	119
	Values $	..	....	.....	....	....	.....	....	....	.....	.....	.....	.....

Quantity and Value of all Kinds of Fish, &c.—**Nova Scotia**—*Continued.*

Kinds of Fish.													Total Value of all Fish.	Number.
Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Trout, lbs.	Shad, brls.	Alewives or Gaspereau, brls.	Bass, lbs.	Clams, brls.	$ cts.	
4000	.....	.....	.....	.....	.....	.....	.....	500	10	400	5000	.....	3,050 00	1
1000	.....	.....	.....	.....	.....	.....	.....	900	2	15	100	.....	380 00	2
5000	.....	.....	.....	.....	.....	.....	.....	500	170	20	4000	.....	3,230 00	3
1115	66	27800	4000	118	9	15	80	5000	405	66	1900	200	6,942 00	4
11115	66	27800	4000	118	9	15	80	6900	587	501	11000	200	.....	
2223	264	278	80	472	27	34	160	690	5870	2004	1100	400	13,602 00	

Kinds of Fish.																				Total Value of all Fish.	Number.
Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Bass, lbs.	Eels, brls.	Clams, brls.	Oysters, brls.	Fish oil, galls.	Fish as bait, brls.	Fish, as manure, brls.		$ cts.	
.....	..	21800	500	224304	18	..	.....	....	200	5000	....	....	7	20	10	..	350	1100		46,706 00	1
.....	..	1500	....	132740	...	..	600	....	....	.....	....	....	...	..	...	..	250	670		28,623 00	2
.....	..	91400	4900	.....	299	30	190	....	6000	10000	200	....	125	..	100	..	.....	....		6,766 00	3
9000	7	36200	1400	17664	82	..	.....	....	300	3000	5	...	26	..	....	..	170	90		6,979 00	4
4100	..	3000	300	14592	....	..	.....	....	...	.....	...	....	...	..	....	..	50	75		3,917 00	5
6800	..	5400	....	.....	.....	..	25	....	400	10600	....	150	30	..	....	..	.....	....		2,355 00	6
17100	12	14200	1100	27936	5	..	108	100	400	.....	.....	.....	.....	..	....	60	40	140		9,830 00	7
3500	..	1000	....	.....	....	..	10	....	100	.....	....	.....	.....	..	....	..	.....	....		743 00	8
40500	19	174500	8200	417236	404	30	933	100	7400	28600	205	150	188	20	110	60	860	2075		.....	
8100	76	1745	984	83447	1616	90	2100	50	740	1430	820	15	1880	40	440	18	1290	1038		105,919 00	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.—**Nova Scotia**—*Con.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.								Kinds of Fish.										
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.													
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon, salted or smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Number.
	Guysborough County.			$			$				$			$		$											
1	Ecum Secum	..	....	.....	...	70	130	96	40	800	160	2	140	75	..	.....	620	....	....	64	.....	..	1	8832	....	1
2	Marie Joseph	..	....	....	....	50	1140	76	60	1200	240	..	....	....	..	.....	125	....	....	20	....	.....	3	27312	....	2
3	Liscomb, Spanish, Ship Bay and Gegoggin	..	...	.....	....	90	1800	150	95	1900	380	1	120	50	..	.....	930	...	150	132	.....	.....	4	51984	....	3
4	St. Mary's Bay and River	..	....	.....	....	40	800	70	90	1800	575	..	....	....	..	.....	6200	100	675	194	.....	....	.....	43200	....	4
5	Wine Harbour	..	....	.....	....	21	300	30	60	1200	300	1	60	25	..	.....	750	....	....	250	.....	.....	.....	.....	....	5
6	Indian Harbour and Lake	..	....	.....	....	53	820	68	100	2000	500	..	....	..	..	.	420	..	....	432	.....	.....	3	.....	....	6
7	Holland's Harbour and Indian River	..	....	.....	....	16	320	18	35	700	175	..	....	....	..	....	300	....	....	210	.....	.....	.....	.....	....	7
8	Port Beckerton	..	....	.....	....	57	1775	50	170	3400	680	..	....	....	..	....	.....	....	....	710	.....	.....	5	72432	....	8
9	Fisherman's Harbour	..	....	.....	....	34	750	40	90	1800	360	..	...	....	..	.. ...	.....	....	....	360	.....	.....	10	17564	....	9
10	Country Harbour, Isaac's Harbour and River	..	....	.. .	....	42	950	55	170	3400	680	..	....	..	..	....	1250	100	...	135	.....	1000	.....	.....	....	10
11	Isaac's Harbour to Whitehead	10	211	3200	50	690	16207	863	4353	87100	17412	3	290	240	3	975	1750	120	....	5297	38000	18000	752	334368	797	11
12	Whitehead to Canso	3	46	1000	14	220	10925	320	1160	23200	4640	6	900	970	12	4900	2400	2100	1200	355	180000	29424	50	245497	11	12
13	Canso to Salmon River	2	59	1050	7	300	4320	320	4115	82300	16400	9	1125	1200	38	8000	7900	200	....	1100	20000	49900	40	77952	3	13
14	Salmon River to Antigouish, County Line including Cook's Cove, Guysboro, North Shore and Canso Strait	6	207	4800	33	510	10800	686	6000	149000	29800	7	790	800	..	.....	15000	....	....	3102	465200	310203	10	36816	....	14
	Totals	21	523	10050	104	2193	51037	2842	16538	359800	72302	29	3425	3360	53	13875	37645	2620	2025	12361	703200	408527	878	915956	811	
	Values	..	....	....	....	....	....	....	.....	.....	.....	..	.....	.....	..	.....	7529	393	405	49444	7032	49023	13170	183191	4055	

87645
46645
42290

RETURN showing the Quantity and Value of all Kinds of Fish, &c.—Nova Scotia—*Con.*

Number.	DISTRICTS.	KINDS OF FISH.																			TOTAL VALUE OF ALL FISH.	Number.
		Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked finnan haddies, lbs.	Hake, dried, cwt,	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Eels, brls.	Clams, brls.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
	Guysborough County.																					$ cts.	
1	Ecum Secum	285	....	.....	40	.....	....	....	3	950	650	450	8	12	10	1000	.....	40	280	520	50	4,781 00	1
2	Marie Joseph	426	....	.....	65	.....	....	....	5	1950	150	300	12	14	10	950	....	50	400	400	140	8,866 00	2
3	Liscombe, Spanish Ship Bay and Gegoggin	615	...	.....	64	.....	....	....	16	4350	1000	1400	50	20	60	1500	.....	65	600	720	260	16,573 00	3
4	St. Mary's Bay and River.	100	....	.....	13	.....	....	....	....	450	2500	840	120	10	20	1200	.....	45	100	350	210	12,989 00	4
5	Wine Harbour	35	....	.....	5	.....	....	....	....	225	320	420	4	4	..	820	.....	20	30	190	....	1,801 00	5
6	Indian Harbour and Lake.	78	....	.....	10	.....	....	....	5	1070	400	2200	18	8	....	640	.....	28	70	380	....	3,283 00	6
7	Holland Harbour and Indian River	20	....	.....	3	.....	....	....	....	250	800	.....	5	4	10	680	.....	13	18	210	....	1,548 00	7
8	Port Beckerton	272	....	.....	52	....	....	....	15	940	....	.....	10	9	10	1200	6	20	240	420	360	19,916 00	8
9	Fisherman's Harbour	190	....	.....	34	.....	....	....	8	450	....	.....	5	10	10	750	8	16	170	340	80	6,861 00	9
10	Country Harbour, Isaac's Harbour and River	100	....	.....	15	5280	....	....	20	3000	500	450	10	4	40	1000	4	25	100	280	....	2,811 00	10
11	Isaac's Harbour to Whitehead	6890	....	5000	4150	.....	164	....	740	22000	1200	8000	255	150	100	18000	80	180	6000	3320	1700	162,804 00	11
12	Whitehead to Canso	8920	5	1477300	650	150000	1465	200	2545	312400	760	.....	..	70	...	... .	1700	100	20500	8565	1200	215,739 00	12
13	Canso to Salmon River	2068	4	212699	355	.....	217	90	77	300	150	500	60	14	....	.....	1400	....	2000	3270	400	56,602 00	13
14	Salmon River to Antigouish, County Line including Cook's Cove, Guysboro, North Shore and Canso Strait	1700	3	62433	961	.....	304	107	52	.....	....	10000	370	40	20	.....	.....	....	1900	... ..	200	80,315 00	14
	Totals	21699	12	1757432	6417	155280	2150	397	3486	348335	8430	24560	927	369	290	27740	3198	602	32408	18965	4600	.....	
	Values.....$	86796	120	52722	19251	9316	4837	199	6972	34833	843	1228	3708	3690	580	1387	12792	903	9722	28448	2300	594,889 00	

RETURN showing the Number and Value of Vessels and Boats, Nets, &c.—**Nova Scotia**—*Con.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.								Kinds of Fish.							
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.										
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	
	Halifax County.			$			$				$			$		$								
1	North Shore	..	..	..	..	124	1040	365	600	12000	2200	62	6200	12000	..	..	2000	150	100	.....	480000	80	.....	1
2	East St. Margaret's	..	..	..	..	130	1250	210	550	11000	2150	23	2300	14100	12	2000	2500	300	250	.....	300000	30	.....	2
3	Indian Harbour	4	70	1200	20	490	4500	500	4000	80000	830	22	2200	1900	16	600	5500	200	900	9000	200000	40	.....	3
4	Peggy's Cove	2	21	600	11	80	750	90	325	6500	1900	8	800	1200	..	..	2300	150	300	1500	5000	30	.....	4
5	Dover	5	85	1500	30	230	2500	150	700	68520	7000	38	3800	9300	..	..	4000	300	900	10000	115000	275	.....	5
6	Prospect	1	20	400	5	153	2500	200	450	15000	2500	40	4000	8000	..	..	12000	..	500	.....	.....	150	.....	6
7	Terrence Bay	4	57	900	16	161	2000	275	275	8000	1900	25	2800	4800	..	..	75	..	500	.....	.....	75	16520	7
8	Pennant	7	108	2500	30	12	200	25	100	3000	650	10	800	2300	..	..	225	..	125	.....	.....	10	.....	8
9	Sambro	7	110	2500	33	44	800	90	280	7000	2000	9	750	1400	..	..	350	..	25	.....	.....	8	64456	9
10	Ketch Harbour	..	..	..	..	56	700	120	300	7500	2100	16	1600	3200	..	..	800	..	75	.....	200	3	.....	10
11	Portuguese Cove	1	26	800	5	40	800	75	350	10000	2500	18	1800	3500	..	..	300	..	25	300	500	15	.....	11
12	Herring Cove	5	195	2500	35	52	700	60	75	2400	600	25	2500	2000	..	..	275	..	10	600	15500	8	.....	12
13	Ferguson's Cove	1	31	400	10	30	600	50	60	1700	500	40	3200	3200	..	..	200	..	100	2000	1000	15	.....	13
14	Bedford and Halifax	5	166	10000	50	25	500	37	10	250	75	10	1000	2500	..	..	400	..	12	1000	.....	.....	.....	14
15	Eastern Passage and Devil's Island	2	55	1300	11	76	1230	54	240	14400	900	..	.....	.....	..	..	330	..	35	6300	900	2	.....	15
16	Cow Bay and Lawrencetown	..	..	..	..	17	162	12	100	5600	375	..	.....	.....	..	..	287	..	10	300	50	.....	..	16
17	Seaforth and Three Fathom Harbour	..	..	..	..	19	200	17	140	7500	520	..	.....	.....	..	..	260	..	11	.....	.....	1	.....	17
18	West Chezzetcook	6	306	6350	80	128	1200	70	400	24000	1600	..	.....	.....	..	..	.....	..	560	.....	.....	4	.....	18
19	East Chezzetcook	1	47	1500	13	47	520	30	97	5820	340	..	.....	.....	..	..	.....	..	58	.....	.....	.....	.....	19
20	Petpeswick Harbour	..	..	..	..	50	865	44	94	5600	330	..	.....	.....	..	..	.....	..	5	.....	.....	1	36000	20
21	Musquodoboit Harbour	..	..	..	..	60	1169	51	125	7500	500	..	.....	.....	..	..	1050	..	30	.....	.....	3	.....	21
22	Jeddore	3	86	1900	23	95	1600	73	211	12660	800	1	175	50	..	..	160	..	130	.....	.....	14	29184	22

23	Clam Harbour and Owl's Head	4	75	1500	19	70	1150	54	209	12540	800	2	265	425	1	135	120	....	301	.....	.....	56	20496	23
24	West Ship Harbour.....	..	....	.....	....	11	220	14	47	2820	188	....	.....	.....	..	...	.....	....	45	.....	.....	12	13728	24
25	East Ship Harbour.....	..	....	.....	....	21	345	21	77	1520	235	....	.....	.....	..	....	.....	....	121	.....	.....	8	.....	25
26	Pleasant Harbour.....	..	....	.....	....	5	130	7	10	200	36	....	.....	.....	..	....	.....	....	8	.....	.....	.....	23376	26
27	Tangier.....	..	...	.....	....	11	267	10	42	860	130	....	.....	.....	1	150	250	....	32	.....	.....	1	.....	27
28	Pope's Harbour and Gerrard's Island.....	..	....	.....	....	24	640	26	82	1640	267	...	.....	...	1	400	.....	....	100	...	.....	26	35280	28
29	Spry Bay, Taylor's Head and Mushaboon.....	2	58	1000	9	61	1121	66	335	6700	1005	....	.....	.....	..	....	.....	....	576	.....	.....	147	91776	29
30	Sheet Harbour and Sober Island	..	....	.....	....	47	834	47	145	2900	435	....	.....	.....	..	....	400	600	118	.....	.....	3	42144	30
31	Beaver Harbour and Salmon River.....	..	....	.....	...	9	110	8	9	180	34	....	.....	...	..	....	.....	....	60	.....	.....	.....	54288	31
32	Quoddy and Harrigan Cove...	..	....	.....	....	4	90	5	8	160	36	....	.....	.....	..	....	.....	....	2	.....	.....	.....	88656	32
33	Moser River and Smith's Cove	..	....	.....	....	8	106	5	1	20	3	....	..	.....	..	....	.....	....	.....	.....	.....	..	.....	33
34	Mitchell's Bay and Ecum Secum	..	....	.....	....	18	283	35	26	520	109	4	318	390	..	....	.....	....	23	.....	.....	.....	74448	34
	Totals.....	60	1516	36850	400	2408	31082	2896	10273	346010	35548	353	34508	60265	29	3285	33782	1700	6047	31000	1118150	1017	590352	
	Values..... $	..	....	.....	....	....	.....	....	.....	.....	... ..	....	.....	.....	..	....	6756	340	24188	310	134178	15255	118070	

35782
1700
35482

RETURN showing the Quantity and Value of Fish, &c.—Nova Scotia—*Con.*

Number.	Districts.	Kinds of Fish.																			Total Value of all Fish.	Number.
		Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked finnan haddies, lbs.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Eels, brls.	Clams, brls	Tom cod or rost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.		
	Halifax County.																							$	
1	North Shore	1800	120	....	....	30	....	112	30	60	.....	200	.....	20	3	....	1500	15	120	190	150	...	1	70,315	1
2	East St. Margaret's	1300	450	2	....	80	....	175	45	90	.....	600	.....	25	2	280	10000	40	60	250	110	....	2	48,899	2
3	Indian Harbour	3000	900	2	....	325	....	400	800	100	2500	150	.....	30	1	....	6000	15	40	1200	180	....	..	51,970	3
4	Peggy's Cove	1300	500	1	....	40	....	160	25	40	500	....	....	6	....	60	600	8	20	400	86	....	..	12,382	4
5	Dover	2000	1200	5	....	450	....	700	1200	100	2500	50	....	25	2	100	8000	14	75	1600	160	26	..	42,917	5
6	Prospect	300	600	....	300	50	....	75	50	100	300	100	1000	2	12	150	2000	....	....	325	56	....	..	11,982	6
7	Terrence Bay	400	1000	....	200	75	....	145	120	100	250	50	1500	50	16	....	2000	....	....	375	46	84	..	14,009	7
8	Pennant	100	900	....	....	45	....	70	60	45	300	100	500	5	2	....	450	....	....	275	44	....	..	5,484	8
9	Sambro	150	500	....	....	25	....	5	5	100	300	....	....	....	....	....	250	....	....	100	15	300	..	16,506	9
10	Ketch Harbour	50	150	..	800	....	....	12	15	45	400	....	....	5	....	....	200	....	....	....	4	....	..	1,603	10
11	Portuguese Cove	25	50	....	4000	....	....	10	25	35	400	....	....	....	....	....	....	....	....	40	....	....	..	1,030	11
12	Herring Cove	15	500	....	20000	....	....	200	200	50	12000	....	....	....	....	....	....	....	....	150	10	....	..	6,666	12
13	Ferguson's Cove	20	400	....	17600	....	....	....	....	10	4000	....	....	....	....	....	....	....	....	50	....	....	..	3,450	13
14	Bedford and Halifax	150	650	....	15000	...	5000	100	....	50	5000	300	....	....	....	....	....	....	....	200	....	....	..	5,203	14
15	Eastern Passage and Devil's Island	1850	482	1	22000	65	....	....	....	47	8350	....	....	11	4	15	....	....	....	327	56	....	..	13,675	15
16	Cow Bay and Lawrencetown	1000	40	....	....	9	....	....	....	18	400	360	4700	7	3	16	....	....	....	40	20	....	..	5,772	16
17	Seaforth and Three Fathom Harbour	700	65	....	....	7	....	....	....	13	615	200	6000	7	3	20	....	....	....	....	38	....	..	4,455	17
18	West Chezzetcook	500	3912	2	....	127	....	....	....	44	3280	80	3500	3	5	200	....	....	....	2816	260	....	..	23,144	18
19	East Chezzetcook	.....	733	1	....	41	....	....	....	22	1340	200	1500	7	7	40	....	....	....	410	128	....	..	4,063	19
20	Petpeswick Harbour	.....	355	....	....	51	....	....	....	172	400	300	450	2	5	30	....	....	....	277	68	180	..	9,637	20
21	Musquodoboit Harbour	.....	662	..	....	60	....	....	....	91	1490	900	5500	2	10	30	....	....	....	397	76	....	..	4,300	21
22	Jeddore	.....	1900	1	....	85	....	80	208	110	3223	65	1000	1	11	40	....	....	....	1010	158	150	..	16,156	22

23	Clam Harbour and Owl's Head	.....	634	....	.....	40	....	5	10	5	1620	600	1000	2	2	40	.....	....	....	400	78	104	..	9,518	23
24	West Ship Harbour	.....	45	....	.....	14	....	....	....	4	290	150	400	18	3	....	.....	....	....	30	12	....	..	3,529	24
25	East Ship Harbour	.....	145	....	.....	11	....	....	....	4	775	....	.....	....	....	10	.....	....	....	134	10	120	..	1,438	25
26	Pleasant Harbour	.....	75	....	.....	3	....	....	....	2	170	....	.....	....	1	10	.....	....	....	45	....	120	..	5,141	26
27	Tangier	...	156	....	.....	5	....	....	....	6	340	600	850	4	1	....	....	....	....	80	4	....	..	1,037	27
28	Pope's Harbour and Gerrard's Island	16	250	....	.....	10	....	....	....	5	1006	....	.....	....	....	....	.....	....	....	191	....	180	..	9,213	28
29	Spry Bay, Taylor Head and Mushaboon	640	620	....	.....	28	....	216	110	25	1080	200	.....	....	....	....	.....	....	....	490	10	400	..	29,709	29
30	Sheet Harbour and Sober Island	801	380	....	.....	24	....	....	....	29	3887	400	.....	....	....	10	....	....	....	241	12	220	..	15,449	30
31	Beaver Harbour and Salmon River	870	80	....	....	2	....	....	....	1	480	....	.....	....	....	....	.....	....	....	70	....	270	18	15,997	31
32	Quoddy and Harrigan Cove	846	60	....	.....	2	....	....	....	5	.....	200	.....	....	4	....	.....	....	....	60	....	450	..	22,528	32
33	Moser River and Smith's Cove	....	57	....	.....	1	....	....	....	....	40	150	.....	....	10	....	.....	....	....	35	....	.....	..	360	33
34	Mitchell's Bay and Ecum Secum	230	215	....	.....	23	....	....	....	8	708	....	.....	4	....	....	.....	....	....	139	10	370	..	17,406	34
	Totals	18063	18786	13	79300	1728	5000	2465	2903	1526	57944	5955	27900	256	108	1051	31000	92	315	12347	1802	2974	21	.....	
	Values ..... $	90315	75144	130	2379	5184	300	5546	1452	3052	5794	596	1395	1024	1080	2102	1550	368	472	3704	2703	1487	21	504,895	

RECAPITULATION.

OF the Yield and Value of the Fisheries in District No. 2, **Nova Scotia**, with Comparative Statement or the Increase of Decrease for the Years 1897 and 1898.

Kinds.		Quantity in 1898.	Rate.	Totals.	Quantities.	
					Increase.	Decrease.
			$ cts.	$		
Salmon, fresh	Lbs.	201,059	0 20	40,212	.....	9,122
" preserved in cans	"	2,620	0 15	393	1,465	.....
" smoked	"	4,125	0 20	825	633	.....
Herring, salted	Brls.	20,702	4 00	82,808	.....	14,218
" fresh	Lbs.	973,703	0 01	9,737	223,481	.....
" smoked	"	8,300	0 02	166	.....	23,600
Mackerel, fresh	"	1,547,178	0 12	185,661	.....	59,513
" salted	Brls.	2,092	15 00	31,380	.....	1,466
Lobsters, preserved in cans	Lbs.	2,602,724	0 20	520,544	.....	83,722
" fresh in shell	Cwt.	18,898	5 00	94,490	5,396	.....
Cod dried	"	42,576	4 00	170,304	3,335	.....
Cod tongues and sounds	Brls.	30	10 00	300	11	.....
Haddock, fresh	Lbs.	1,839,832	0 03	55,194	.....	75,318
" dried	Cwt.	8,804	3 00	26,412	.....	3,614
" smoked finnan haddies	Lbs.	160,280	0 06	9,616	160,280	.....
Hake, dried	Cwt.	7,933	2 25	17,848	1,944	.....
" sounds	Lbs.	9,234	0 50	4,617	1,530	.....
Pollock	Cwt.	5,537	2 00	11,074	1,018	.....
Halibut	Lbs.	411,029	0 10	41,102	277,793	.....
Trout	"	39,485	0 10	3,948	6,255	.....
Shad	Brls.	2,777	10 00	27,770	1,395	.....
Smelts	Lbs.	183,360	0 05	9,168	14,700	.....
Alewives or gaspereaux	Brls.	3,215	4 00	12,860	332	.....
Bass	Lbs.	14,760	0 10	1,476	2,520	.....
Eels	Brls.	839	10 00	8,390	.....	400
Clams in shell	Brls.	1,641	2 00	3,282	.....	.....
Oysters	Brls.	1,785	4 00	7,140	.....	523
Tom cod or frost fish	Lbs.	58,740	0 05	2,937	17,610	.....
Squid	Brls.	3,313	4 00	13,252	85	.....
Coarse and mixed fish	"	937	1 50	1,405	534	.....
Fish oil	Galls.	45,856	0 30	13,756	8,299	.....
Fish as bait	Brls.	27,531	1 50	41,299	.....	1,483
Fish as manure	"	13,773	0 50	6,887	8,256	.....
Seal skins	No.	21	1 00	21	.....	29
Total for 1898		.....	.....	1,456,274		
Total for 1897		.....	.....	1,464,976	.....	8,702

RECAPITULATION

Showing the Number and Value of Fishing Vessels, Boats, &c., in the District No. 2, Province of **Nova Scotia**, for the Year 1898.

Material.	Value.	Total.
	$	$
88 vessels (2,144 tons)	48,395	
5,668 boats	103,852	
28,606 gill-nets (779,379 fathoms)	131,974	
382 seines (37,933 fathoms)	63,625	
82 trap-nets	17,160	
2,041 trawls	10,159	
30 weirs	7,370	
118 smelt nets	2,003	
8,251 hand-lines	11,705	
		396,243
116 lobster canneries (1,931 hands)	117,885	
291 lobster, 525 traps	152,324	
		270,169
45 freezers and ice-houses	13,532	
1,544 smoke and fish-houses	80,334	
892 piers and wharves	40,154	
54 tugs steamers and smacks	39,580	
		173,600
Total value		840,012

COMPARATIVE STATEMENT of the Value of the Fisheries in each County of District No. 2, **Nova Scotia**, for the Years 1897 and 1898.

County.	Value in 1897.	Value in 1898.	Increase.	Decrease.
	$	$		
Antigonish	74,060	66,412		7,648
Colchester	27,203	33,145	5,942	
Cumberland	120,820	137,413	16,593	
Guysborough	713,527	594,887		118,640
Halifax	403,037	504,893	101,856	
Hants	9,148	13,602	4,454	
Pictou	117,179	105,919		11,260
	1,464,974	1,456,271	128,845	137,548
	1,456,271			128,845
	8,703			8,703

NOVA S OTIA—

RETURN showing the Number, Tonnage and Value of Vessels and Province of **Nova Scotia,**

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.								Salmon, fresh, lbs.	Herring, salted, brls.
		Vessels.				Boats.			Gill Nets.			Trawls.		Weirs				
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Fathoms.	Number.	Value.	Number.	Value.			
	Annapolis County.			$			$			$								
1	Margaretville	4	80	1000	18	10	200	20	20	1000	500	12	100	2	400		1000	400
2	Port George	..	....	....	....	12	300	20	20	1000	500	12	100	2	400		2000	300
3	Port Lorne	1	10	100	5	20	400	35	30	2500	1000	....	....	.	....		....	500
4	Hampton	..	....	....	....	20	400	40	28	1500	600	16	150	.	....		....	600
5	Phinny and Young's Cove	..	....	....	....	23	450	35	50	2000	800	20	200	..	....		....	500
6	Parker's Cove	..	....	....	....	25	500	40	50	2000	800	20	200	..	....		....	350
7	Hilsburn and Lichfield	1	40	600	8	20	400	30	50	2100	1000	30	300	..	....		....	400
8	Victoria Beach	3	150	2000	40	30	600	50	55	3000	1500	100	600	..	....		....	78
9	Thorn's Cove	3	150	1500	30	10	200	16	20	1000	500	50	300	2	400		....	.....
10	Clementsport	2	26	700	8	13	300	26	12	500	225	50	300	4	800		....	30
11	Annapolis	..	....	....	....	....	....	....	50	500	300			3	200		300	.....
12	Lequille River	..	....	....	....	....	....	....	....	.....	....			1	50		200	.....
13	Round Hill	..	....	....	....	....	....	....	....	.....	....	....	....	..	....		100	.....
14	Inland Lakes	..	....	....	....	....	....	....	....	.....	....	....	....	..	....		....	....
	Totals	14	456	5900	109	183	3750	312	385	17100	7725	310	2250	14	2250		3600	3158
	Values ..... $	..	....	....	....	....	....	....	....	.....	...	....	....	..	....		720	12632

District No. 3.

Boats, Nets, &c., and Quantities of Fish caught in **District No. 3.** for the Year, 1893.

Kinds of Fish.																				Total Value of all Fish.	Number.
Herring, smoked, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues & s'ds, brls	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt.	Trout, lbs.	Smelts, lbs.	Bass, lbs.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Coarse and mixed fish, brls.	Fish, oil, galls.	Fish as bait, brls.	Fish as manure, brls.		$ cts.	
....	...	600	2	2000	110	125	100	100	....	....	...	..	...	....	....	200	30	100		5,296 25	1
....	125	300	1	2000	150	200	300	50	....	....	...	..	...	....	....	200	35	100		4,807 50	2
....	250	600	4	3000	225	275	350	80	....	....	...	..	...	....	....	300	45	75		7,603 75	3
....	225	550	3	1500	600	600	300	150	....	....	...	..	...	....	....	200	50	30		9,550 00	4
...	240	500	3	1000	900	1000	500	200	....	....	...	..	...	....	....	300	60	30		11,055 00	5
....	300	375	2	1200	1000	1200	550	275	....	....	...	..	...	....	....	350	30	35		11,148 50	6
....	225	475	4	900	1200	1600	700	400	....	....	...	..	...	....	....	450	50	...		13,252 00	7
.. .	150	2500	8	3000	3000	5000	10000	2500	....	....	...	..	...	....	....	1200	1500	20		44,102 00	8
....	20	.....	...	100	.....	500	100	100	....	....	...	..	...	....	....	....	25	25		1,528 00	9
2000	....	300	1	800	300	400	100	100	....	....	...	..	...	....	....	200	150	75		3,766 50	10
..	....	.....	...	.....	.....	.....	.....	....	200	....	...	1	...	....	....	.. .	....	...		90 00	11
....	....	.....	...	....	.....	.....	.....	....	400	1000	500	.	600	1000	2000	....	....	...		4,260 00	12
....	....	.....	...	....	.....	.....	.....	....	300	100	100	2	...	....	....	.....	...	...		85 00	13
....	....	.....	...	....	.....	.....	.....	....	800	....	...	..	...	....	....	....	....	...		80 00	14
....	....	.....	...	....	.....	.....	.....	....													
2000	1535	6200	28	15500	7485	10900	13000	3955	1700	1100	600	3	600	1000	2000	3400	1975	490		.....	
40	7675	24800	280	465	22455	24525	6500	7910	170	55	60	30	30	50	4000	1020	2962	245		116,624 50	

RETURN showing the Number, Tonnage and Value of Vessels and Boats,

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.							
		Vessels.				Boats.			Gill Nets.			Seines.			Weirs.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.
	King's County.			$			$				$			$		$
1	Starr's Flats	....	....	....	....	....	....	....	....	....	....	....	....	....	3	450
2	Kingsport	....	....	....	....	....	....	....	....	....	....	....	....	....	1	100
3	Porter's Point	....	....	....	....	....	....	....	....	....	....	....	....	....	1	75
4	Blomidon	....	....	....	....	....	....	....	....	....	....	....	....	....	2	250
5	Baxter's Harbour	....	....	....	....	15	300	30	18	600	300	....	....	....	8	1200
6	Hall's Harbour	....	....	....	....	20	300	40	20	600	300	....	....	....	9	1350
7	Hunting Point	....	....	....	....	2	40	4	2	60	30	....	....	....	1	150
8	Chipman's Brook	....	....	....	....	4	80	4	4	120	60	....	....	....	2	200
9	Black Rock	1	19	500	3	8	160	16	8	240	120	....	....	....	2	250
10	Harbourville	2	32	1200	9	7	140	14	4	120	60	....	....	....	4	500
11	Morden	....	....	....	....	5	200	10	5	125	60	....	....	....	4	400
12	Scot's Bay	....	....	....	....	9	450	18	....	....	....	....	....	....	3	600
13	Avonport	....	....	....	....	15	225	15	....	1750	725	....	....	....	....	....
14	Gaspereaux River	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15	Bout Island	....	....	....	....	....	....	....	....	....	....	1	750	450	....	....
16	Little Island	....	....	....	....	....	....	....	....	....	....	1	300	200	....	....
17	Long Island	....	....	....	....	....	....	....	....	....	....	1	500	300	....	....
18	Kentville River	....	....	....	....	....	....	....	....	....	....	3	1550	950	....	....
	Totals	3	51	1700	12	85	1895	151	61	3615	1655	6	3100	1900	40	5525
	Value $	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

SESSIONAL PAPER No. 11a

Nets, &c., and Quantity and Value of Fish, &c.—**Nova Scotia**—*Con.*

KINDS OF FISH.																			
Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Alewives or gaspereaux, brls.	Fish as bait, brls.	Fish as manure, brls.	TOTAL VALUE OF ALL FISH.	Number.
																$ cts.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	135	.....	.....	30	1,365 00	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	450	.....	75	.....	.....	.....	795 00	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35	.....	.....	.....	350 00	3
200	50	1000	4000	.....	.....	.....	.....	.....	.....	250	.....	.....	.....	.....	60	385 00	4
2000	600	.....	.....	.....	.....	140	120	60	150	900	.....	.....	.....	250	100	4,670 00	5
8000	500	.....	.....	.....	.....	200	900	100	75	500	.....	.....	.....	200	90	7,870 00	6
1200	150	.....	.....	.....	.....	125	75	40	25	.....	.....	.....	.....	20	.....	1,735 00	7
1500	90	.....	.....	.....	.....	100	60	30	20	600	.....	.....	.....	50	45	1,505 00	8
3200	300	.....	50000	.....	.....	150	20	10	150	100	.....	.....	.....	100	50	4,007 50	9
4000	150	.....	60000	.....	.....	140	75	15	100	.....	.....	.....	.....	75	40	3,751 25	11
5000	60	.....	.....	.....	.....	90	40	.....	25	.....	.....	.....	.....	50	25	1,857 50	10
500	543	.....	250000	2000	187	175	60	40	50	750	.....	543	.....	150	200	15,347 00	12
80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	500	.....	.....	2,016 00	13
800	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1000	.....	200	.....	.....	1,060 00	14
.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	140	.....	.....	.....	1,440 00	15
100	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	30	.....	.....	.....	316 00	16
.....	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	.....	35	.....	.....	.....	378 00	17
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	700	.....	.....	.....	.....	70 00	18
26580	2443	1000	364000	2000	187	1141	1350	295	595	3550	1700	993	700	895	640	.....	
5316	9772	10	7280	240	935	4564	4050	663	1190	355	170	9930	2800	1342	320	48,938 25	

7,500 lobsters sent alive to Boston.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.,—**Nova Scotia**—*Continued.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.								Kinds of Fish.								Number.
		Vessels.				Boats.			Gill Nets.			Seines.			Weirs.		Salmon, fresh, lbs	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh lbs.	Lobsters preserv. in cans. lbs.	Lobsters fresh in shell, cwt.	Cod, dried, cwt.	
		Number.	Tonnage.	Value.	Men.	Number	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.									
	Digby County.						$				$			$		$									
1	Digby	13	594	15500	172	14	560	28	48	960	240	4	760	1600	3	300	300	100	250000	1800	600	.....	3250	5200	1
2	Bay View	..	....	....	....	16	640	32	24	480	120	2	120	300	1	100	....	2	8700	....	.....	.....	220	170	2
3	Broad Cove	....	....	....	....	10	400	20	15	300	75	....	....	....	....	....	....	....	18000	.....	.....	.....	150	120	3
4	Roseway	....	....	....	....	21	840	42	30	600	150	1	90	250	2	200	....	20	7000	....	1000	.....	50	100	4
5	Gulliver's Cove	....	....	....	....	4	160	8	8	160	40	....	....	....	1	100	450	..	15000	.. ..	1000	.....	210000	390	5
6	Waterford	....	....	....	....	5	200	10	8	160	40	1	60	100	1	300	100	50	120000	.....	400	.....	140	50	6
7	Centerville	....	....	....	....	22	1300	44	35	700	175	....	....	....	....	....	202	....	800000	.....	.....	8160	2100	500	7
8	Sandy Cove	....	....	....	....	7	350	14	12	240	60	2	180	300	2	200	100	....	.....	.....	.....	.....	105	50	8
9	Mink Cove	....	....	....	....	8	320	16	14	280	70	2	210	250	....	.....	....	250	20000	24000	462	4464	168	160	9
10	White Cove	....	....	....	....	3	120	6	6	120	30	....	....	....	....	.....	....	....	900	.....	.....	.....	40	20	10
11	Little River	....	....	....	....	25	1500	50	50	1000	250	3	250	275	....	.....	....	....	40000	....	.....	.....	910	780	11
12	Long Beach	....	....	....	....	3	120	6	6	120	30	1	100	75	....	.....	....	....	25000	.....	.....	.....	140	120	12
13	Whale Cove	....	....	....	....	9	540	18	15	300	75	....	....	....	....	.....	....	....	30000	.....	.....	.....	315	360	13
14	East Ferry	....	....	....	....	11	440	22	22	440	115	....	....	....	....	.....	....	....	40000	.. ..	.....	.....	308	245	14
15	Tiverton	1	39	1200	14	49	4320	98	90	1800	540	3	250	700	....	.....	....	....	100000	.....	.....	.....	1372	2180	15
16	Central Grove	....	....	....	....	10	600	20	15	300	75	....	....	....	....	.....	....	....	10000	....	.....	.....	280	200	16
17	Freeport	9	268	8200	108	49	2940	100	100	2000	500	5	300	1000	....	.....	....	....	70000	.....	.....	....	1200	8300	17
18	Westport	22	530	15400	190	44	2200	80	65	1300	325	11	600	2500	....	.....	....	....	10000	.....	.....	.....	1232	9500	18
19	Smith's Cove	2	33	800	7	4	120	8	6	120	30	....	....	....	7	700	....	100	20000	25000	700	.....	13	110	19
20	Brighton	..	....	....	....	6	120	12	12	500	250	....	....	....	5	500	....	100	10000	300	1000	.....	6	. . .	20
21	Plympton	....	....	....	....	4	80	8	5	400	200	....	....	....	1	75	....	30	5000	.....	200	....	8	.....	21
22	Doty's Landing	....	....	....	....	3	60	6	3	60	15	....	....	....	....	.....	....	....	8000	.....	.....	.....	7	.....	22
23	Weymouth	....	....	....	....	4	80	8	7	300	56	....	....	....	2	400	....	30	1000	.....	.....	.....	20	.....	23
24	New Edinburg	....	....	....	....	20	455	22	18	360	90	....	....	....	....	.....	....	..	6000	.....	.....	.....	157	20	24
25	Belliveau Cove	....	....	....	....	2	50	....	....	....	....	....	....	....	....	.....	....	....	...	.....	.....	.....	49	.....	25
26	Church Point	1	31	1350	10	5	125	....	6	180	42	....	....	....	....	.....	....	40	.....	.....	.....	.....	98	220	26
27	Meteghan and River	..	....	....	....	30	750	....	....	....	....	....	....	....	....	.....	....	....	.....	.....	.....	16800	449	...	27
28	Bear Cove	2	20	405	10	7	175	....	7	210	49	....	....	....	....	.....	....	25	....	.....	.....	.....	122	190	28
29	Cape St. Mary's	1	16	630	8	7	175	....	28	840	196	....	....	....	....	.....	....	150	....	.....	.....	.....	137	154	29
30	Salmon River and vicinity	....	....	....	....	10	250	6	....	....	....	....	....	....	....	.....	....	....	.....	.....	.....	.....	176	.....	30
31	Oth'r places not mention'd	....	....	....	....	98	2450	193	....	....	....	....	....	....	....	.....	....	63	.....	.....	.....	.....	.....	88	31
	Totals	51	1531	43485	519	510	22440	877	655	14230	3838	35	2990	7352	25	2875	1150	960	1614600	51100	5362	29424	223222	29227	
	Values $	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	230	3840	16146	1022	643	5885	1116110	116908	

RETURN showing the Kinds, Quantities and Value of Fish, &c.—Nova Scotia—*Continued.*

Number.	District.	Kinds of Fish.																			Total Value of all Fish.	Number.
		Cod tongues and sounds, brls.	Haddock, fresh lbs.	Haddock, dried, cwt.	Haddock, smoked finnan haddies, lbs.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives, brls.	Bass, lbs.	Eels, brls.	Flounders, lbs.	Coarse & mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
	Digby County.																				$ cts.	
1	Digby	10	30000	12000	855000	15000	16700	1061	545000	....	....	900	....	140	..	1000	10000	6000	2300	7000	256099 00	1
2	Bay View	3	15000	80	.....	311	1000	60	700	....	....	.....	....	....	..	5000	100	350	500	300	5214 75	2
3	Broad Cove	3	5000	260	.....	415	1000	90	800	....	....	.....	....	....	..	70	500	400	100	250	5462 25	3
4	Roseway	8	300	200	.....	350	500	40	800	....	5	....	....	....	10	.....	100	150	30	300	3396 50	4
5	Gulliver's Cove	4	8000	650	10000	1550	1200	140	2500	200	10	.....	....	....	..	300	500	600	150	450	1061132 50	5
6	Waterford	1	2000	200	.....	350	350	20	500	....	2	.....	....	....	..	300	100	400	40	500	4755 50	6
7	Centerville	5	500000	700	250000	2500	3000	140	2000	....	10	....	....	....	..	500	700	8000	250	3000	67727 00	7
8	Sandy Cove	.....	1200	35	300	200	200	25	440	....	....	600	....	....	..	2000	75	160	30	100	1971 00	8
9	Mink Cove	2	100000	150	4500	700	1000	100	1000	10	..	..	....	....	..	1200	1000	600	200	1000	13264 30	9
10	White Cove	½	30000	120	.....	200	300	50	400	....	....	.....	....	....	..	200	35	500	40	60	2614 00	10
11	Little River	6	200000	1950	30000	2600	5000	440	1050	50	....	.....	....	....	..	1800	2000	3900	1200	5000	40680 00	11
12	Long Beach	.....	9000	400	.....	450	300	200	550	20	....	.....	....	....	..	800	40	400	45	65	4859 50	12
13	Whale Cove	4	100000	900	.....	1000	3000	6000	1300	15	....	.....	....	....	..	900	500	1500	220	3000	28261 50	13
14	East Ferry	2	40000	825	.....	1100	700	110	1100	..	....	.....	....	....	..	500	200	1550	220	200	11090 00	14
15	Tiverton	7	240000	4900	.....	9800	9000	588	20000	25	....	.....	....	....	..	1000	10000	5000	3000	3000	95828 50	15
16	Central Grove	6	10000	500	.....	600	800	100	500	....	....	.....	....	....	..	100	200	1000	150	300	7240 00	16
17	Freeport	12	142000	13000	.....	35200	3000	800	50000	....	....	.....	....	....	..	500	3000	10900	3640	3000	186835 00	17
18	Westport	15	100000	7525	.....	10500	2100	4575	100000	....	....	.....	....	....	..	500	3000	17000	4350	5000	133960 00	18
19	Smith's Cove	½	12000	100	10000	70	200	50	600	....	4	.....	20	....	..	500	200	300	1000	500	5756 50	19
20	Brighton	.....	1000	.....	.....	.....	.....	10	....	....	100	2000	50	...	30	1000	100	100	300	300	3186 00	20
21	Plympton	.....	3000	.....	.....	.....	.....	.....	.....	....	50	6000	10	...	20	500	10	50	75	100	1586 50	21
22	Doty's Landing	.....	8000	.....	.....	.....	.....	.....	.....	....	10	.....	....	....	5	100	10	100	200	300	1010 00	22
23	Weymouth	.....	1000	.....	.....	.....	.....	.....	.....	500	5	15000	....	....	5	200	10	100	50	50	1320 00	23
24	New Edinburg	4	40000	3500	.....	.....	.....	15000	.....	500	6	1000	....	....	5	800	20	400	40	200	43135 00	24
25	Belliveau Cove	.....	.....	.....	.....	.....	.....	.....	.....	....	....	.....	....	....	..	.....	.....	.....	..	.....	245 00	25
26	Church Point	.....	4000	.....	.....	20	.....	440	.....	....	....	.....	....	....	..	.....	.....	.....	.....	.....	2575 00	26
27	Meteghan and River	.....	.....	.....	.....	.....	.....	.....	.....	....	....	.....	....	....	..	.....	.....	.....	.....	.....	5605 00	27
28	Bear Cove	....	13000	.....	.....	10	.....	38	1200	....	....	.....	....	....	..	.....	.....	.....	.....	.....	2078 50	28
29	Cape St. Mary's	.....	2100	.....	.....	.....	.....	13	8448	....	....	.....	....	....	..	.....	.....	.....	.....	.....	2834 80	29
30	Salmon River and vicinity	..	.....	.....	.....	.....	.....	.....	.....	....	....	.....	....	....	..	.....	.....	.....	.....	.....	880 00	30
31	Other places not mentioned	.....	637370	.....	.....	19	.....	1107	4980	....	....	.....	....	....	..	.....	.....	.....	.....	.....	22479 85	31
	Totals	93	2253970	47995	1159800	82945	49350	31197	743868	1320	202	25500	80	140	75	15270	32400	59460	18130	33975	.....	
	Values $	930	67619	143985	69588	186626	24675	62394	74387	132	2020	1275	320	14	750	763	64800	17838	27195	16987	2023083 45	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.—**Nova Scotia**—*Continued.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.										Kinds of Fish.						
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.		Trawls.		Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Number.
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.							
	Lunenburg County.			$			$				$			$		$		$							
1	Lunenburg, Upper and Lower South Rose Bay, Kingsburg, Black and Blue Rocks, Back Harbour to Cross Island...	68	5778	260010	1095	545	12900	120	2025	40500	20250	15	1500	3750	20	1798	816	24480	27	....	286	2400	250	55	1
2	LaHave, East side, Ritcey's Cove, Ironbound Island, LaHave Middle, West, to New Dublin.....	56	4532	203940	878	556	12530	140	2400	48000	24000	5	500	1250	18	4500	501	15030	3247	270	262	3000	350	62	2
3	Petite Rivière, Broad and Vogler's Cove to county line.	8	585	26325	113	172	5740	90	1000	20000	10000	4	400	1000	7	1750	48	1440	810	....	195	1200	100	3	3
4	Chester	....	....	....	....	140	3100	145	....	18000	4500	20	1600	2500	25	6500	....	.....	5000	400	300	500	3000	30	4
5	Mahone Bay and Martin's Riv	22	1681	58500	311	210	3800	100	....	15000	4000	8	800	1000	3	900	....	.....	3000	....	60	1600	.....	8	5
6	Fox Point	....	.....	.....	...	105	2500	75	....	6000	12000	26	2600	10000	9	1800	....	.....	200	....	25	.....	25000	150	6
7	Mill Cove..	....	.....	..	....	100	1500	125	..	10000	2000	22	2500	2200	..	.....	....	.....	150	....	15	.....	24000	90	7
8	The Lodge..... ..	....	.....	....	....	31	450	31	....	2000	200	9	900	900	..	...	....	.....	100	....	45	.....	.....	20	8
9	North-west Cove.....	....	...	.....	....	39	400	35	....	1500	150	9	900	900	..	.....	....	.....	80	....	4	.....	.....	50	9
10	Aspotogan.....	....	.....	...	...	30	250	30	....	3000	450	10	1000	1200	..	.....	....	.....	100	....	....	...	8400	9	10
11	Sandy Beach to Bayswater...	....	.....	....	....	40	400	40	....	4000	800	8	800	1200	..	.....	....	.....	200	....	.....	...	.....	11	11
12	Blandford	....	.....	...	....	120	3000	180	....	50000	10000	34	2720	4250	..	...	....	.....	50	....	75	..	.....	50	12
13	Little Tancook.....	....	.....	.....	....	55	1375	55	....	25000	5000	11	1100	1650	2	350	....	.....	200	....	200	4500	.....	3	13
14	Big Tancook	3	67	975	13	230	17000	250	....	75000	15000	25	3000	4300	4	1000	....	.....	300	....	1500	120000	200	12	14
15	Deep Cove..	....	.. ..	.....	....	20	300	20	....	2000	200	6	660	750	..	.....	....	.....	100	....	8	...	.....	10	15
	Totals	157	12643	549750	2410	2393	65245	1436	5425	320000	97750	212	20980	36850	88	18593	1365	40950	13564	670	2975	133200	61300	563	
	Values	...	.....	.....	....	....	.....	....	...	.....	.....	....	.....	.....	..	.....	....	.....	2712	134	11900	1332	7356	8445	

RETURN showing the Kinds, Quantities and Value of Fish, &c.—**Nova Scotia**—*Continued.*

Number.	Districts.	Kinds of Fish.																					Total Value of all Fish.	Number.
		Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives or gaspereaux, brls.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
	Lunenburg County.																						$ cts.	
1	Lunenburg, Upper and Lower South Rose Bay, Kingsburg, Black and Blue Rocks, Back Harbour to Cross Island	26400	200	86112	40	....	3413	309	....	248	96000	....	....	500	....	25	300	280	....	....	63084	12	....	393,433 85	1
2	LaHave, East side, Ritcey's Cove, Ironbound Island, LaHave, Middle, West, to New Dublin	7104	340	72463	35	....	1413	100	....	166	48100	....	150	7500	2	25	400	800	....	....	51900	14	....	323,466 20	2
3	Petite Rivière, Broad and Vogler's Cove to county line	....	400	8208	2	....	134	....	....	4	500	....	....	100	7	5	30	300	....	....	6150	8	....	38,279 50	3
4	Chester	55008	10	1000	8	3000	40	60	....	....	1000	1200	..	5000	100	30	50000	1400	50	250	350	300	50	23,631 60	4
5	Mahone Bay and Martin's River	....	12	45000	85	20000	1600	350	150	75	35000	200	...	2500	18	20	7000	600	30	90	11200	1000	....	197,755 50	5
6	Fox Point	....	10	450	....	....	80	100	50	100	200	....	....	....	....	10	70000	170	250	1500	300	400	50	16,278 50	6
7	Mill Cove	....	15	420	..	....	150	370	60	70	....	....	..	....	....	8	65000	....	100	1300	150	300	150	14,427 50	7
8	The Lodge	....	6	75	..	....	25	40	....	10	....	....	....	....	6	....	2000	....	5	50	35	50	10	1,349 50	8
9	North-west Cove	....	5	35	....	....	15	50	....	12	....	....	....	....	7	4	2500	...	5	50	25	50	....	1,524 00	9
10	Aspotogan	59616	10	15	....	....	5	12	....	50	....	....	....	....	....	4	1000	....	....	60	10	60	....	13,601 20	10
11	Sandy Beach to Bayswater	....	5	15	....	....	4	....	....	..	....	....	..	....	....	3	1500	....	....	50	10	45	....	577 50	11
12	Blandford	....	20	200	....	....	200	....	..	50	....	....	..	....	....	10	30000	200	25	200	400	200	50	5,215 00	12
13	Little Tancook	....	5	300	....	....	150	50	....	20	500	....	....	....	..	....	3000	...	....	50	200	50	....	3,192 50	13
14	Big Tancook	....	10	1000	5	60000	300	75	150	60	1000	....	....	....	..	....	30000	...	25	700	500	500	200	18,727 75	14
15	Deep Cove	....	5	10	1	....	5	8	...	5	....	....	..	....	....	16	2000	...	10	20	10	15	....	685 50	15
	Totals	148128	1053	215303	176	83000	7534	1524	410	870	182300	1400	150	15600	140	160	264730	3750	500	4320	134324	3004	510	....	
	Values	29625	5265	861212	1760	2490	22602	3429	205	1740	18230	140	1500	780	560	1600	13236	187	2000	8640	40297	4506	255	1,052,140 60	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.—**Nova Scotia**—*Con*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.								Number.
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	
	Queen's County.			$			$				$			$		$	
1	Liverpool, Brooklyn and Gulls Island	4	141	5100	31	65	1150	75	300	5403	2100	3	320	650	....	....	1
2	Western Head, Moose Harbour and Black Point	....	....	....	....	50	850	58	296	5330	2072	2	250	560	.....	.....	2
3	White Point, Hunt's Point and Summerville	1	10	500	4	47	757	50	176	3178	1232	.....	.....	.....	.....	.....	3
4	Port Joli and Port Hébert	1	13	500	4	45	950	42	75	1342	600	.....	.....	.....	.....	....	4
5	Port Mouton	1	17	600	5	105	1850	92	265	4770	1855	.....	.....	.....	.....	.....	5
6	Eagle Head and Beach Meadows	.....	.....	.....	...	30	626	34	73	1317	511	.....	.....	.....	.....	.....	6
7	West and East Berlin	.....	.....	.....	.....	38	615	38	125	2254	875	.....	.....	.....	.....	.....	7
8	Port Medway	1	93	2500	17	50	980	46	150	2700	1050	.....	.....	.....	1	400	8
9	Milton	.....	.....	.....	.....	10	140	12	8	96	48	.....	.....	.....	.....	.....	9
10	Mill Village	.....	.....	.....	.....	20	240	20	38	426	230	.....	.....	.....	.....	.....	10
11	Greenfield	.....	.....	.....	.....	6	90	20	.....	.....	.....	.....	.....	.....	.....	.....	11
	Totals	8	274	9200	61	466	8248	487	1506	26816	10573	5	570	1210	1	400	

RETURN showing the Kinds, Quantities and Value of Fish, &c.—**Nova Scotia.**—*Con.*

Number.	Districts.	Kinds of Fish.												Fish Products.		Total value of all Fish	Number.
		Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Alewives or gaspereaux, brls.	Fish oil, galls.	Fish as bait, brls.		
	Queen's County.																
1	Liverpool, Brooklyn and Gulls Island	2800	.....	200	.....	.....	2800	90	30	20	3000	2000	10	800	50	13,792 50	1
2	Western Head, Moose Harbour and Black Pt	.....	.....	200	.....	.....	440	50	.....	20	800	.....	.....	250	10	2,920 00	2
3	White Point, Hunt's Point and Summerville	.....	.....	500	25920	.....	520	80	.....	15	1000	.....	.....	150	10	9,694 00	3
4	Port Joli and Port Hébert	.....	.....	150	4752	....	260	10	.....	.....	.....	.....	.....	80	10	2,659 40	4
5	Port Mouton	.....	.....	1250	59280	2946	850	60	...	.....	1500	.....	.....	240	20	35,418 00	5
6	Eagle Head and Beach Meadows	.....	.....	35	51312	670	120	...	.....	.....	.....	...	.....	.....	.....	14,232 40	6
7	West and East Berlin	.....	.....	15	19200	.....	50	.....	.....	.....	.....	.....	.....	.....	.....	4,100 00	7
8	Port Medway	3500	100	20	....	.....	500	.....	.....	.....	.....	.....	110	200	10	3,315 00	8
9	Milton	5000	.....	.....	.....	.....	.....	.....	.....	.....	.....	1000	25	.....	.....	1,200 00	9
10	Mill Village	3900	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	100	.....	.....	1,200 00	10
11	Greenfield	1350	150	....	.....	.....	.....	.....	.....	.....	.....	1000	180	.....	.....	1,060 00	11
	Totals	16250	350	2370	160464	3616	5540	290	30	55	6300	4000	425	1720	110	....	
	Values	3250	70	9480	32093	18080	22160	870	67	110	630	400	1700	516	165	89,591 30	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.—**Nova Scotia**—*Continued.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.								Kinds of Fish.					Number.
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.								
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Salmon, fresh, lbs.	Herring, salted, brls.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	
	Shelburne County.			$			$				$			$		$						
1	Barrington	3	85	4000	25	60	1700	66	....	14000	1300	..	..	....	..	....	300	160	....	....	....	1
2	Wood's Harbour	6	135	4300	50	150	4000	150	..	19000	1850	1	1600	500	1	2000	....	700	15000	....	7176(	2
3	Shag Harbour	3	52	1350	26	85	2000	56	....	17000	1400	..	....	....	....	.....	..	500	1000	....	....	3
4	Bear Point	1	20	500	6	25	700	30	....	1000	950	..	....	....	....	.....	....	100	....	....	9600	4
5	Cape Island	24	500	27000	256	500	12000	700	....	70000	8000	..	....	....	6	11000	....	2000	50000	....	229584	5
6	Port La Tour and Baccaro	2	100	3000	20	290	5000	150	..	53000	7000	..	....	....	..	.....	....	1000	.....	....	....	6
7	Upper La Tour	3	50	1200	18	45	500	40	....	15500	600	..	....	....	....	.....	....	100	....	....	....	7
8	Cape Negro and Blanche	2	40	1000	15	85	1100	80	....	13000	1000	..	....	....	....	.....	....	100	500	....	33600	8
9	Cape Negro Island	..	..	.....	.	65	1400	62	....	16600	1150	..	.....	...	1	1500	....	75	500	..	.....	9
10	Port Clyde	..	..	.....	..	6	60	6	....	600	30	..	.....	..	....	.....	3000	.....	.....	...	29664	10
11	North-east Harbour	1	24	375	7	20	1200	35	200	6000	1000	..	.....	.....	....	.....	600	71	....	2	....	11
12	Black Point, Red Head and Round Bay	4	80	2400	22	55	3175	125	....	20000	3200	..	.....	.....	....	.....	....	130	.....	25	.....	12
13	Roseway and McNutt's Island	1	12	175	4	55	3500	120	....	16000	2600	..	.....	....	....	.....	....	90	.....	10	.....	13
14	Gunning Cove, Churchover and Birchtown	1	13	300	6	50	1800	120	....	8300	1385	..	.....	....	....	.....	200	100	.....	2	.....	14
15	Shelburne and Sand Point	8	474	19000	102	55	1450	110	...	19500	3300	..	.....	....	....	.....	500	50	.....	5	1680	15
16	Jordan	1	95	300	20	48	1480	70	....	12500	2100	..	.....	....	....	.....	1000	20	300	....	..	16
17	Lockeport	19	738	30000	185	170	2550	340	700	24000	4320	2	1000	250	....	.....	200	335	400	10	64080	17
	Totals	79	2418	94900	762	1759	43615	2240	900	326000	41185	3	2600	750	8	14500	5800	5471	67700	54	43996	
	Value $	..	....	.....	...	...	.....	...	....	.....	.....	..	.....	.....	....	.....	1160	21884	8124	810	87993	

RETURN showing the Kinds, Quantities and Value of Fish, &c.—**Nova Scotia**—*Continued.*

Number.	Districts.	Kinds of Fish.															Total Value of all Fish.	Number.
		Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Haddock, smoked finnan haddies, lbs.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereaux, brls.	Eels, brls.	Tom cod or frost fish, lbs.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.		
	Shelburne County.																	$ cts.	
1	Barrington	1750	3000	....	1200	....	....	125	400	600	.....	600	25	300	...	400	2000	30,945 00	1
2	Wood's Harbour	12000	700	....	200	..	...	75	600	.....	.....	.....	.....	.....	...	200	6000	91,622 00	2
3	Shag Harbour	1700	900	....	450	....	....	200	1000	350	.....	30	.....	.....	...	300	600	17,215 00	3
4	Bear Point	750	200	....	100	....	...	60	600	.. ...	.....	.....	.....	.....	...	50	500	8,115 00	4
5	Cape Island	16000	8000	....	3000	....	....	300	100000	.....	.....	.....	.....	.....	...	3000	8500	205,166 80	5
6	Port La Tour and Baccaro	4000	1500	....	900	....	....	2000	1000	.. ....	.....	150	40	.....	....	2000	1200	40,200 00	6
7	Upper La Tour	1250	400	...	200	...	....	300	800	....	.....	.....	.....	.....	....	200	400	10,190 00	7
8	Cape Negro and Blanche	6000	200	....	550	....	....	150	700	....	.....	.....	.....	.....	...	150	400	40,645 00	8
9	Cape Negro Island	4400	300	....	300	....	...	200	2000	.....	.....	.....	.....	.....	....	900	860	26,530 00	9
10	Port Clyde	.....	10	....	.....	....	....	.....	...	750	.....	200	....	.....	....	.....	500	8,197 80	10
11	North-east Harbour	1200	600	....	125	....	...	35	.....	.....	.....	15	3	200	....	150	30	9,469 00	11
12	Black Point, Red Head and Round Bay	800	1500	..	250	....	....	30	1000	300	500	75	5	400	....	600	100	12,560 00	12
13	Roseway and McNutt's Island	600	700	....	500	...	6	400	300	100	....	30	10	600	....	300	100	9,153 50	13
14	Gunning Cove, Churchover and Birchton	600	600	....	375	....	....	20	...	200	100	25	5	500	....	250	60	7,400 00	14
15	Shelburne and Sand Point	300	15675	8	510	300	....	300	300	6000	800	100	8	600	....	4000	435	70,171 50	15
16	Jordan	300	4300	3	60	200	....	5	....	1500	4000	15	7	600	....	1300	110	20,318 00	16
17	Lockeport	3500	32000	10	1475	400	30	620	5000	1200	.....	5	8	500	4	12330	1353	*175,352 00	17
	Totals	55150	70585	21	10195	900	36	4820	113700	11000	5400	1245	111	3700	4	26130	23088	... ...	
	Value	$ 275750	282340	210	30585	54	81	9640	11370	1100	270	4980	1110	185	8	7839	34632	783,245 60	

* 26,000 cans of cod valued at $3,120.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.—**Nova Scotia**—*Continued.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.							Kinds of Fish.								
		Vessels.				Boats.			Gill Nets.			Trap Nets.		Weirs.											
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	
	Yarmouth County.			$			$				$		$		$									
1	Yarmouth	21	928	23600	240	90	1800	180	400	10000	2500	2	4000	..	....	850	250	300000	....	64000	71000	1100	17378	1
2	Port Maitland	2	26	550	10	40	2100	80	40	1000	800	2	4500	..	....	712	150	300000	1700	155000	....	500	1000	2
3	Sandford	..	....	....	....	20	400	40	200	5000	2000	3	8000	..	....	3300	2000	.....	....	324000	....	600	200	3
4	Arcadia	..	....	....	..	30	150	60	38	950	228	..	.....	1	500	....	1000	.....	....	1300		700	800	4
5	West Pubnico	14	634	16800	160	40	300	95	140	3500	700	1	2500	..	...	....	2400	244000	....	47000	172368	1800	12000	5
6	East Pubnico	3	36	1200	10	15	150	30	64	1600	300	..	..	..	....	....	800	.....	....	..	187200	3900	600	6
7	Tusket Wedge	7	364	9500	85	45	500	90	180	3690	900	1	1500	..	.	100	1550	.....	....	65000	223408	9500	7000	7
8	Tusket	..	....	....	....	500	2000	500	1800	76000	10000	..	...	3	240	1000	...	.....	....	.....	...	.	.....	8
9	Eel Brook	..	....	.....	....	50	350	100	150	3750	500	..	.....	..	....	500	.....	...	....	.....	.....	..	.....	9
10	Salmon River	..	....	....	....	20	120	20	100	2500	400	..	.	..	....	....	...	.....	....	....	.....	....	....	10
	Totals	47	1988	51050	505	850	7880	1195	3112	107990	18328	9	20500	4	740	6462	8150	844000	1700	656300	653976	18100	38978	
	Values. $	..	....	....	....	....	....	....	....	....	....	..	.....	..	....	1292	32600	8440	34	78756	130795	90500	155912	

RETURN showing the Kinds, Quantities and Value of Fish, &c.—**Nova Scotia**—*Continued.*

Number.	Districts.	Kinds of Fish.																	Total Value of all Fish.	Number.
		Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked finnan haddies, lbs.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gas. pereaux, brls.	Eels, brls.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
	Yarmouth County.																		$ cts.	
1	Yarmouth	...	50000	1400	20000	640	1600	45000	....	18000	...	..	.....	30	.....	3650	1125	250	121,029 50	1
2	Port Maitland	5	130000	.....	10000	50	1800	10000	....	...	....	2	.....	14	1200	1500	....	500	41,314 90	2
3	Sandford	...	2150	...	...	....	160	3000	....	.....	....	...	.....	....	...	100	....	275	52,192 00	3
4	Arcadia	....	.....	200	.....	....	6	.....	....	2000	..	60	.....	....	.....	....	150	....	12,393 00	4
5	West Pubnico	2	.....	2000	.....	....	1200	4000	....	...	....	....	.....	140	....	1800	550	....	119,898 60	5
6	East Pubnico	1	.....	40	.....	....	400	800	...	.....	....	....	.....	..	.....	200	20	...	63,640 00	6
7	Tusket Wedge	5	.....	6000	.....	105	470	.....	....	.....	....	....	100	70	8000	1000	300	....	170,462 85	7
8	Tusket	....	.....	.....	.. ..	..	.....	.....	5000	....	1200	37	60000	....	.....	....	500	....	9,620 00	8
9	Salmon River	....	....	...	.....	....	.....	.....	....	.....	400	20	....	....	...	....	100	....	2,050 00	9
10	Eel Brook	....	.....	....	.....	....	.....	.....	....	.....	200	150	.....	....	.....	....	.....	....	2,300 00	10
	Totals	13	182150	9640	30000	795	5636	62800	5000	20000	1800	269	60100	254	9200	8250	2745	1025	.....	
	Values ..... $	130	5464	28920	1800	1789	11272	6280	500	1000	7200	2690	3005	1016	18400	2475	4117	512	594,900 85	

RECAPITULATION

Of the Yield and Value of the Fisheries in **District No 3**, Province of **Nova Scotia**, for the Year 1898.

Kinds of Fish.		Quantities.	Rate.	Value.	Total.
			$ cts.	$ cts.	$ cts.
Salmon, fresh	Lbs.	73,406	0 20	14,681 20	
" smoked	"	1,020	0 20	204 00	
					14,885 20
Herring, salted	Brls.	25,527	4 00	102,108 00	
" fresh	Lbs.	2,592,800	0 01	25,928 00	
" smoked	"	418,800	0 02	8,376 00	
					136,412 00
Mackerel, fresh	"	792,662	0 12	95,119 50	
" salted	Brls.	617	15 00	9,255 00	
					104,374 50
Lobsters, canned	Lbs.	1,431,960	0 20	286,392 00	
" fresh	Cwt.	302,863	5 00	1,514,315 00	
					1,800,707 00
Cod, dried	"	366,974	4 00	1,467,896 00	
" preserved	Cans.	26,000	0 12	3,120 00	
" tongues and sounds	Brls.	331	10 00	3,310 00	
					1,474,326 00
Haddock, fresh	Lbs.	2,534,620	0 03	76,038 60	
" dried	Cwt.	84,489	3 00	253,467 00	
" finnan haddies	Lbs.	1,190,700	0 06	71,442 00	
					400,947 60
Hake, dried	Cwt.	96,525	2 25	217,181 25	
" sounds	Lbs.	62,760	0 50	31,380 00	
					248,561 25
Pollock	Cwt.	47,128	2 00	.....	94,256 00
Halibut	Lbs.	1,112,518	0 10	.....	111,251 80
Trout	"	26,120	0 10	.....	2,612 00
Shad	Brls.	1,345	10 00	.....	13,450 00
Smelts	Lbs.	67,600	0 05	.....	3,380 00
Alewives	Brls.	4,390	4 00	.....	17,560 00
Bass	Lbs.	740	0 10	.....	74 00
Eels	Brls.	618	10 00	.....	6,180 00
Flounders	Lbs.	280,600	0 05	.....	14,030 00
Tom cod	"	68,550	0 05	.....	3,427 50
Squid	Brls.	754	4 00	.....	3,016 00
Coarse or mixed fish	"	47,924	2 00	.....	95,848 00
Fish oil	Galls.	233,284	0 30	.....	69,985 20
Fish as bait	Brls.	49,947	1 50	.....	74,920 50
Fish as manure	"	36,640	0 50	.....	18,320 00
Total					4,708,524 55

RECAPITULATION

Of the Value of Fishing Vessels, Boats, Nets, &c., used in **District N° 3, Nova Scotia,** for the Year 1898.

Material.	Value.	Total.
	$	$
3 59 vessels (19,361 tons)	755,985	
6,246 fishing boats	153,073	
12,044 gill-nets (815,751 fathoms)	181,054	
261 seines (30,240 fathoms)	48,060	
142 trap-nets	55,193	
188 weirs	11,495	
4,578 trawls	69,738	
10,117 hand lines	14,668	
46 bag nets	1,093	
		1,290,359
44 lobster canneries	34,190	
197,097 lobster traps	125,204	
		159,394
115 freezers and ice-houses	11,857	
1,327 smoke or fish houses	75,799	
462 piers or fishing wharfs	96,658	
42 fishing tugs or smacks	20,525	
		204,839
Total		1,654,592

Number of Fishermen employed in the same District.

Men in fishing vessels	4,378
" boats	6,698
Persons in lobster canneries	1,767
Total	12,843

RECAPITULATION

SHOWING the Number, Tonnage and Value of Vessels and Boats, and the quantity and value of all Fishing Materials in the whole Province of **Nova Scotia**, for the year 1898.

Number.	Counties.	Fishing Vessels and Boats.							Fishing Gear or Materials.												Number.
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.		Trawls.		Weirs.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
				$			$				$			$		$		$		$	
1	Cape Breton	12	197	3,525	67	612	12,208	1,305	2,671	62,172	26,594	1	330	750	...	.....	347	1,962	....	.....	1
2	Inverness	28	571	9,935	152	865	20,394	2,113	2,264	65,830	30,419	3	500	600	1	600	586	4,473	....	.....	2
3	Richmond	47	1,356	17,450	296	1,422	22,157	2,473	12,230	265,488	69,452	...	.....	.....	...	.....	792	2,480	....	.....	3
4	Victoria	3	89	2,300	18	545	12,305	998	1,189	29,817	10,527	...	.....	.....	2	400	206	2,143	....	.....	4
5	Antigonish	1	11	200	3	221	2,737	318	678	19,892	7,432	....	.....	.....	...	.....	133	544	....	.....	5
6	Colchester	....	.....	.....	.....	176	2,938	322	279	25,375	5,820	....	.....	.....	...	.....	.....	.....	19	5,800	6
7	Cumberland	3	33	395	8	307	8,208	357	473	10,263	3,813	...	.....	.....	...	.....	2	135	3	120	7
8	Guysborough	21	523	10,050	104	2,193	51,037	2,842	16,538	359,800	72,302	29	3,425	3,360	53	13,875	1,225	6,744	...	.....	8
9	Halifax	60	1,516	36,850	400	2,408	31,082	2,896	10,273	346,010	35,548	353	34,508	60,265	29	3,285	654	2,617	....	.....	9
10	Hants	2	31	500	5	66	1,248	73	48	7,067	1,420	....	.....	.....	...	.....	.....	.....	8	1,450	10
11	Pictou	1	30	400	3	297	6,602	406	299	10,972	5,639	....	.....	.....	...	.....	27	119	....	.....	11
12	Annapolis	14	456	5,900	109	183	3,750	312	385	17,100	7,725	....	.....	.....	...	.....	310	2,250	14	2,250	12
13	Digby	51	1,531	43,485	519	510	22,440	877	655	14,230	3,838	35	2,990	7,350	1	1,000	717	14,265	25	2,875	13
14	King's	3	51	1,700	12	85	1,895	151	61	3,615	1,655	6	3,100	1,900	35	200	58	285	40	5,525	14
15	Lunenburg	157	12,643	549,750	2,410	2,393	65,245	1,436	5,425	320,000	97,750	212	20,980	36,850	88	18,593	1,365	40,950	....	.....	15
16	Queen's	8	274	9,200	61	466	8,248	487	1,506	26,816	10,573	5	570	1,210	1	400	55	292	105	105	16
17	Shelburne	79	2,418	94,900	762	1,759	43,615	2,240	900	326,000	41,185	3	2,600	750	8	14,500	1,827	10,546	....	.....	17
18	Yarmouth	47	1,988	51,050	505	850	7,880	1,195	3,112	107,990	18,328	....	.....	.....	9	20,500	246	1,150	4	740	18
	Totals	537	23,718	837,590	5,434	15,358	323,989	20,801	59,004	2,018,437	450,020	647	69,003	113,035	227	73,353	8,550	90,955	218	18,865	

RECAPITULATION—*Continued.*

SHOWING the Number, Tonnage and Value of Vessels and Boats and the quantity and value of all Fishing Materials, &c.—*Continued.*

Number.	Counties.	Fishing Materials.				Lobster Plant.					Other Fixtures used in Fisheries.								Number.
		Smelt Nets.		Hand Lines.		Canneries.		Traps.		No. of hands employed.	Freezers and Ice Houses.		Smoke and Fish Houses.		Piers and Wharfs.		Tugs, Steamers and Smacks.		
		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
			$		$		$		$			$		$		$		$	
1	Cape Breton	.....	.....	2,380	1,049	14	19,100	43,700	23,599	507	2	80	280	3,402	172	3,752	1	50	1
2	Inverness	23	105	4,895	3,099	24	16,750	54,000	28,635	415	17	2,355	251	10,300	75	36,200	15	985	2
3	Richmond	19	285	5,965	2,016	15	9,300	40,670	21,310	369	2	350	247	7,415	21	3,475	30	3,195	3
4	Victoria	1	5	2,270	1,585	18	8,825	18,175	10,367	196	12	127	40	3,090	13	6,475	1	70	4
5	Antigonish	.....	.....	214	84	6	6,800	22,150	11,500	168	1	10	102	821	..	.....	....	.....	5
6	Colchester	12	250	.....	.....	1	700	1,200	1,000	9	.....	.....	47	1,830	...	.....	....	.....	6
7	Cumberland	70	1,233	42	42	28	22,105	39,450	19,693	323	.....	.....	3	30	..	.....	....	.....	7
8	Guysborough	19	210	4,437	9,975	34	40,240	118,100	64,825	642	19	12,860	515	37,127	274	25,675	36	31,325	8
9	Halifax	2	40	3,500	1,579	22	18,700	64,210	28,116	346	11	400	876	40,501	618	14,479	18	8,255	9
10	Hants	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
11	Pictou	15	270	58	25	25	29,300	46,415	27,190	493	14	262	1	25	....	.....	.....	.....	11
12	Annapolis	.....	....	490	490	.....	.....	6,500	4,900	.....	11	800	143	4,550	....	.....	.....	.....	12
13	Digby	..	.....	1,037	3,063	7	2,910	31,110	22,138	1,018	55	3,772	120	5,760	55	33,950	11	6,350	13
14	King's	.....	.....	150	86	...	.....	.....	.....	.....	24	1,135	66	3,225	.....	.....	.....	.....	14
15	Lunenburg	.....	.....	850	5,100	7	1,970	14,850	10,700	375	2	600	346	22,780	195	21,010	11	900	15
16	Queen's	.....	.....	580	492	10	1,760	12,767	5,102	72	.....	.....	190	3,804	27	516	4	750	16
17	Shelburne	4	300	5,680	4,472	11	14,800	101,620	59,602	182	17	3,000	382	21,770	165	22,932	4	5,575	17
18	Yarmouth	1	100	1,930	965	9	12,750	30,250	22,762	120	6	2,550	80	13,910	20	18,250	12	6,950	18
	Totals	166	2,798	33,878	34,122	231	206,010	645,167	361,410	5,185	193	28,301	3,689	180,340	1,635	186,714	143	64,405	

RECAPITULATION—*Continued.*

RETURN showing the Kinds and Quantities of Fish and Fish Products in the whole Province of **Nova Scotia**, &c.—*Con.*

Number.	Counties.	Kinds of Fish																	Number.
		Salmon.			Herring.			Mackerel.		Lobsters.		Cod.		Haddock.			Hake.		
		Fresh.	Preserved in cans.	Salted.	Salted.	Fresh.	Smoked.	Fresh.	Salted.	Preserved in cans.	Fresh in shell.	Dried.	Tongues and sounds.	Fresh.	Dried.	Smoked finnan haddies.	Dried.	Sounds.	
		Lbs.	Lbs.	Brls.	Brls.	Lbs.	Lbs.	Lbs.	Brls.	Lbs.	Cwt.	Cwt.	Brls	Lbs.	Cwt.	Lbs.	Cwt.	Lbs.	
1	Cape Breton	22,852	200	*186	5,255	40,300	1,000	202	557	413,308	4,000	13,104	18	10,680	1,787	.....	41	.....	1
2	Inverness	83,280	2,661	*25	7,299	915,800	.....	5,110	7,595	259,256	.....	18,885	39	3,600	2,416	.....	3,451	844	2
3	Richmond	3,840	.....	*10	16,132	25,100	.....	25,890	4,265	368,530	552	22,175	65	10,900	7,530	9,311	524	619	3
4	Victoria	6,300	8,187	*109	1,933	44,700	.....	.....	812	134,516	.....	8,452	....	.....	1,322	.....	54	.....	4
5	Antigonish	30,406	.....	.....	1,839	6,800	.....	10,501	197	164,256	.....	484	....	.....	90	.....	2,290	5,794	5
6	Colchester	39,100	.....	.....	50	4,000	3,500	.....	.....	14,400	.....	135	....	2,000	25	.....	10	.....	6
7	Cumberland	8,516	.....	†400	320	26,400	800	1,800	.....	500,524	24	950	5	1,100	505	.....	70	40	7
8	Guysborough	37,645	2,620	†2,025	12,361	703,200	.....	408,527	878	915,956	811	21,699	12	1,757,432	6,417	155,280	2,150	397	8
9	Halifax	33,782	.....	†1,700	6,047	31,000	.....	1,118,150	1,017	590,352	18,063	18,786	13	79,300	1,728	5,000	2,465	2,903	9
10	Hants	11,115	.....	.....	66	27,800	4,000	.....	.....	.....	.....	118	....	.....	9	.....	15	.....	10
11	Pictou	40,500	.....	.....	19	174,500	.....	8,200	.....	417,236	1,505	404	....	.....	30	.....	933	100	11
12	Annapolis	3,690	.....	.....	3,158	.....	2,000	.....	.....	.....	1,535	6,200	28	15,500	7,485	.....	10,900	13,000	12
13	Digby	1,150	.....	....	960	1,614,600	51,100	5,362	.....	29,424	223,222	29,227	93	2,253,970	47,995	1,159,800	82,945	49,350	13
14	King's	26,580	.....	.....	2,443	1,000	364,000	2,000	.....	.....	187	1,141	....	.....	1,350	.....	295	.....	14
15	Lunenburg	13,564	.....	†670	2,975	133,200	.....	61,300	563	148,128	1,653	215,303	176	83,000	7,534	.....	1,524	410	15
16	Queen's	16,250	....	†350	2,370	.....	.....	.....	.....	160,464	3,616	5,540	....	.....	290	.....	30	.....	16
17	Shelburne	5,800	.....	.....	5,471	.....	.....	67,700	54	439,968	55,150	70,585	21	.....	10,195	900	36	.....	17
18	Yarmouth	6,462	....	.....	8,150	844,000	1,700	656,300	.....	653,976	18,100	38,978	13	182,150	9,640	30,000	795	.....	18
	Totals	390,742	13,668	‡	76,828	4,592,453	428,100	2,371,042	15,938	5,210,294	326,313	442,166	483	4,399,632	106,348	1,360,291	108,528	73,457	

*Salted. †Smoked. ‡Totals, salted, 330 brls.; smoked, 5,145 lbs.

RECAPITULATION—*Concluded.*

RETURN showing the Kinds and Quantities of Fish and Fish Products in the whole Province of **Nova Scotia**, &c.—*Concluded.*

Number.	Counties.	Kinds of Fish—*Con.*																	Total Value of all Fish.	Number.
		Pollock.	Halibut.	Trout.	Shad.	Smelts.	Alewives or gaspereau.	Bass.	Eels.	Clams in shell.	Oysters.	Flounders.	Tom cod or frost fish.	Squid.	Coarse and mixed fish.	Fish oil.	Fish as bait.	Fish as manure.	Seal skins.		
		Cwt.	Lbs.	Lbs.	Brls.	Lbs.	Brls.	Lbs	Brls.	Brls.	Brls.	Lbs.	Lbs.	Brls.	Brls.	Galls.	Brls.	Brls.	No.	$ cts.	
1	Cape Breton	81	50,075	700	3	13,000	96	.....	189	.....	.....	2,500	400	124	12,618	8,206	1,745	45	40	237,466 19	1
2	Inverness	.....	6,973	20,275	.....	28,798	479	150	294	.....	187	.....	400	3,291	1,488	11,550	9,758	262	.....	357,743 00	2
3	Richmond	1,754	50,230	4,150	.....	8,900	2,718	.....	336	..	.....	135,700	16,030	723	1,285	17,893	1,596	.....	16	368,012 36	3
4	Victoria	52	4,500	600	.....	1,900	48	.....	57	.....	125	200	2,000	262	107	5,488	2,308	.....	225	98,013 90	4
5	Antigonish	.....	.....	1,800	.....	3,400	73	1,800	100	.....	28	.....	...	23	20	941	1,671	1,484	...	66,412 00	5
6	Colchester	5	1,000	7,400	1,657	13,000	480	1,400	5	.....	280	.....	.....	.....	.....	100	25	140	....	33,145 00	6
7	Cumberland	440	3,750	1,600	533	85,900	773	410	69	80	1,367	.....	.....	.....	.....	.....	4,208	2,500	..	137,413 00	7
8	Guysborough	3,486	348,335	8,430	.....	24,560	927	.....	369	290	.....	.....	27,740	3,198	602	32,408	18,965	4,600	...	594,889 00	8
9	Halifax	1,526	57,944	5,955	.....	27,900	256	.....	108	1,051	.....	.....	31,000	92	315	12,347	1,802	2,974	21	504,895 00	9
10	Hants	80	.....	6,900	587	.....	501	11,000	.....	200	.....	.....	.....	.....	.....	.....	.....	.....	....	13,602 00	10
11	Pictou	.....	.....	7,400	.....	28,600	205	150	188	20	110	.....	.....	.....	.....	60	860	2,075	....	105,919 00	11
12	Annapolis	3,955	.....	1,700	.....	1,100	.....	600	3	.....	.....	600	1,000	.....	2,000	3,400	1,975	490	....	116,624 50	12
13	Digby	31,197	743,868	1,320	202	25,500	80	140	75	.....	.....	15,270	.....	.....	32,400	59,460	18,130	33,975	....	2,023,083 45	13
14	King's	595	3,550	1,700	993	.....	700	.....	.....	.....	.....	.....	.....	.....	.....	.....	895	640	....	48,938 25	14
15	Lunenburg	870	182,300	1,400	150	15,600	140	.....	160	.....	...	204,730	3,750	500	4,320	134,324	3,004	510	....	1 052,140 60	15
16	Queen's	55	6,300	4,000	.....	.....	425	.....	.....	.....	.....	.....	.....	.....	.....	1,720	110	.....	....	89,591 30	16
17	Shelburne	4,820	113,700	11,000	.....	5,400	1,245	....	111	.....	.....	.....	3,700	.....	4	26,130	23,088	.....	....	783,245 60	17
18	Yarmouth	5,636	62,800	5,000	.....	20,000	1,800	.....	269	.....	...	.....	60,100	254	9,200	8,250	2,745	1,025	...	594,900 85	18
	Totals	54,552	1,635,325	91,330	4,125	303,558	10,946	15,650	2,333	1,641	2,097	419,000	146,120	8,467	64,359	322,277	92,885	50,720	302	7,226,035 00	

RECAPITULATION

OF the Yield and Value of the Fisheries of the **whole** Province of **Nova Scotia**, for the Year 1898.

Kinds of Fish.		Quantity.	Rate.	Value.	Total Value.
			$ cts.	$ cts.	$ cts.
Salmon, pickled	Brls.	330	15 00	4,950 00	
" fresh	Lbs.	390,742	0 20	78,148 00	
" preserved in cans	"	13,668	0 15	2,050 20	
" smoked	"	5,145	0 20	1,029 00	
					86,177 20
Herring, pickled	Brls.	76,828	4 00	307,312 00	
" fresh	Lbs.	4,592,453	0 01	45,924 50	
" smoked	"	428,100	0 02	8,562 00	
					361,798 50
Mackerel, salted	Brls.	15,938	15 00	239,070 00	
" fresh	Lbs.	2,371,042	0 12	284,524 24	
					523,594 24
Lobsters, canned	"	5,210,294	0 20	1,042,058 80	
" fresh in shell	Cwt.	326,313	5 00	1,631,565 00	
					2,673,623 80
Cod, dried	"	442,946	4 00	1,891,784 00	
" tongues and sounds	Brls.	483	10 00	4,830 00	
					1,896,614 00
Tommy cod or frost fish	Lbs.	146,120	0 05		7,306 00
Haddock, dried	Cwt.	106,348	3 00	319,044 00	
" fresh	Lbs.	4,399,632	0 03	131,988 00	
" smoked finnan haddies	"	1,360,291	0 06	81,616 06	
					532,648 06
Hake, dried	Cwt.	108,528	2 25	244,186 75	
" sounds	Lbs.	73,457	0 50	36,728 50	
					280,915 25
Pollock	Cwt.	54,552	2 00		109,104 00
Halibut	Lbs.	1,635,325	0 10		163,532 50
Trout	"	91,330	0 10		9,133 00
Smelts	"	303,558	0 05		15,177 90
Bass	"	15,650	0 10		1,565 00
Shad	Brls.	4,125	10 00		41,250 00
Alewives	"	10,946	4 00		43,784 00
Eels	"	2,333	10 00		23,330 00
Squid	"	8,467	4 00		33,868 00
Flounders	Lbs.	419,000	0 05		20,950 00
Oysters	Brls.	2,097	4 00		8,388 00
Clams in shell	"	1,641	2 00		3,282 00
Coarse fish	"	64,359			128,249 00
Fish oil	Galls.	322,277	0 30		96,682 20
Fish as bait	Brls.	92,885	1 50		139,329 00
" as manure	"	50,720	0 50		25,360 50
Seal skins	No.	302			372 25
Total for 1898					7,226,034 40
" 1897					8,090,346 78
Decrease					864,312 38

RECAPITULATION

Of the Values and Kinds of Fishing Materials in the whole Province of Nova Scotia, for the Year 1898.

Articles.	Value.	Total.
	$	$
537 fishing vessels (23,718 tons)	837,590	
15,358 " boats	323,989	
59,004 gill-nets (2,018,437 fathoms)	450,020	
647 seines (69,003 fathoms)	113,035	
227 trap-nets	73,353	
218 weirs	18,865	
8,550 trawls	90,955	
33,878 hand lines	34,122	
166 smelt nets	2,798	
41 bag-nets	693	
		1,945,420
231 lobster canneries	206,010	
645,167 " traps	361,410	
		567,420
193 freezers and ice houses	28,301	
3,689 smoke and fish houses	180,340	
1,635 piers and wharfs, (fishing)	186,714	
143 tugs and smacks	64,405	
		459,760
Total value of fishing capital		2,972,600

Number of men employed in the Fisheries of Nova Scotia, 1898.

Men on fishing vessels	5,434
" boats	20,801
Persons employed in canneries	5,185
Total	31,420

APPENDIX No. 4.

NEW BRUNSWICK.

District No. 1, comprising the county of Charlotte.—*Inspector J. H. Pratt, St. Andrews.*

District No. 2, comprising the counties of Restigouche, Gloucester, Northumberland, Kent, Westmorland and Albert.—*Inspector R. A. Chapman, Moncton.*

District No. 3, comprising the counties of St. John, King's, Queen's, Sunbury, York, Carleton and Victoria.—*Inspector H. S. Miles, Oromocto.*

DISTRICT No. 1.

REPORT ON THE FISHERIES OF DISTRICT No. 1, NEW BRUNSWICK, COMPRISING THE COUNTY OF CHARLOTTE FOR THE YEAR 1898 BY INSPECTOR JOHN H. PRATT.

ST. ANDREWS, N.B., December 31, 1898.

The Hon. Sir L. H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith my tenth annual report on the fisheries of *District No. 1. N.B., comprising the County of Charlotte*, which I may state includes the islands at the mouth of the Bay of Fundy on the New Brunswick shore, and also the fisheries of the Chiputneticook Lakes. A synopsis of the reports of the several fishery officers is also appended, with the requisite statements showing the product and values by sub-districts. I also include a statement showing the amount of capital invested in the numerous fisheries of the district. I am pleased to report an increase for the past year in the fishery products and values over that of 1897 by $275.074. This is mainly due to the large increase in the catch of herring and also to a slight surplus in several kinds of line fish. The prices throughout the season were of a satisfactory nature.

It might be of interest to give here the gross annual values of the products of this district's fisheries for the past ten years, during which they have been under my control as inspector.

For 1889	$1,373,589.26
1890	1,062,756.10
1891	1,279,977.19
1892	863,465.90
1893	771,182.35
1894	1,118,477,29
1895	968,203.50
1896	1,108,701.76
1897	870,287.30
1898	1,145,361.77

The slight fluctuations noticed in the statistics for the years given are not sufficient to cause any serious alarm as to the early extinction of the various fisheries of the Bay of Fundy. During my numerous cruises in the *Curlew* towards Cape Breton and Prince Edward Island, I have been enabled to observe nearly all the fishing grounds possessed by the other maritime provinces, and it is quite plain to the most casual observer that the Bay of Fundy fishermen possess advantages for gaining a livelihood far superior to any other fishermen by the sea. On my annual eastern cruises I meet numerous fishermen who are unable, from various causes principally by the failure of cod and herring to strike inshore, to make an income sufficient to support their families during the coming year, and are really in straightened circumstances. One would have to search very narrowly indeed to discover among the hardy fishermen of the Bay of Fundy any one in very poor circumstances. There are some exceptions of course, but only among those who have neglected the numerous opportunities that a kind Providence has provided for them to draw their harvest from the sea almost at their very doors. For a considerable portion of the past season I was employed in cruising on the coasts of Nova Scotia and Cape Breton, with a run to Prince Edward Island. In consequence I did not have the opportunity of visiting the various fishing grounds in the remote parts of this district that is deemed essential for their efficient protection. However, by considerable correspondence, I was enabled to look after those fisheries in a manner that I trust was satisfactory to your department.

The number of registered vessels owned in the district and employed in the several branches of the fishing industry is forty-eight, aggregating 875 tons, besides 1,059 fishing boats, which include a great number of large sloops, used for carrying sardine herring, and for other trading purposes, but which are under ten tons register.

When you take into consideration the fact of such a large number of herring weirs being licensed in my district, and the innumerable disputes necessarily arising therefrom, together with the fact of my services being required so much in Nova Scotia and Cape Breton, it will explain the large amount of correspondence necessary to maintain the proper control of the district during my absence.

HERRING.

This fishery is the most important of any in the Bay of Fundy. About two-thirds of the population direct their energies towards its prosecution, and derive their living therefrom. Like the lobster, it is each year assuming a more prominent position in the eyes of the more intelligent fishermen. There is more rivalry in the search for better weir locations, the outlay is heavier, better facilities are being afforded for the transport of the catch to the several markets, and now the numerous sardine canneries are awakening from their lethargy, and several syndicates are competing in their offers to our fishermen for their catch of herring during the coming season of 1899. We are much pleased to see this rivalry existing among the buyers of our sardine-herring, as it will surely have a tendency to increase the prices of the future catch in our waters. There is no doubt that before many months have passed there will be formed in the state of Maine a substantial syndicate owning all or nearly all of the sardine canneries in that state. I may add that at this present time, there are in operation sixty-two sardine factories in Maine and during the past season those factories canned 1,178,694 cases of sardines, valued at $2,727,781 which is an increase of nearly half a million cases over the pack of the previous year. Fully sixty per cent of the fish used in these canneries came from Canadian waters.

However, it is a pleasure to report that the schools of herring are as plentiful as ever, and the catches of the several sizes are quite satisfactory. The net herring were very plentiful at Grand Harbour, Grand Manan, during the fall months, and a great number of schooners loaded cargoes there. Large schools of herring suitable for sardine purposes played inshore at L'Etang Harbour during the latter part of the season, the weirs there reaping a rich harvest, selling their catch to the numerous trading boats from Eastport. Owing to this unusual catch at L'Etang and vicinity the catch of sardine herring shows the satisfactory increase over that of 1897 by 16,502 barrels.

Sutton Clark, Esq., of St. George, during this year has erected a large factory at L'Etang Harbour, where he has begun the canning of sardine herring, putting up an article that cannot be excelled by his competitors in the adjoining state of Maine. With the two sardine factories at Beaver Harbour and two others at St. Andrews and Deer Island, all increasing their annual output, it will give you a good idea of the importance this canning industry is assuming in this district. With reference to the all-important question as to whether herring are increasing or decreasing in the Bay of Fundy, I can assure your department that this question was the subject of many heated discussions this year as in past years, and as usual, it still remains unsolved. With reference to this question I might be pardoned for quoting from a recent report of Mr. H. F. Moore, Ph.D., a member of the United States Fish Commission, who spent considerable time in these waters during the years 1893-4 and 5. After dealing very intelligently with the strife always existing between weir fishermen and net fishermen, Mr. Moore says: 'On the other hand, it is claimed that the continued catching of immense numbers of young fish for the sardine industry must produce a decrease in the herring, and that it is only a question of time when this decrease will make itself manifest, if it has not already done so. At first sight it would seem that this might be reasonable and the only reason that such a decrease has not taken place is no doubt because the number of herring killed by man is insignificant when compared with the total number of this species in the seas, and the number which yearly fall victims to the various natural dangers which beset them.

'When all the factors in the case are reviewed, I think it has been shown that not only has there been no decrease in the sardine herring in the region under discussion, but that there are at present no practices connected with the fishery, which are liable to seriously affect their future abundance.'

From the foregoing you will be able to observe that the herring question is one that will stand unlimited discussion, there being such a surprising number of theories advanced by those interested.

SALMON.

There being but one river in this district frequented by this fish, the catch is, therefore, small, but still greatly in excess of the previous season. Overseer Todd in his annual report shows that the salmon are visibly increasing, which is no doubt to be attributed to the viligant oversight of himself and the three guardians under his control. Numerous attempts were made by poachers to take salmon on the St. Croix River, but I am pleased to say their attempts were frustrated. Numerous sportsmen met with good success, fly-fishing in the pool above St. Stephen, and many fine salmon were successfully landed.

Several salmon were seen above the fishways on the Magaguadavic River, and it is to be hoped that they will be able in the near future to ascend this beautiful river, a river that cannot be excelled anywhere in Canada as a salmon river. Guardian Hall is exerting every effort to keep the fishways in efficient condition, and believes that a number of salmon have ascended the river during the past season.

HALIBUT.

A considerable decrease is noticed in the catch of halibut which is due to a less vigorous prosecution of this fishery, and not to any scarcity of this large fish. A number of vessels that were engaged formerly in this fishery fitted out this season for hake, or went weir fishing. Prices remained good during the season.

COD.

There is a slight decrease in the returns for the cod-fish catch, due to many of the fishermen formerly engaged in hand lining directing their attention to the weir fisheries. The good prices prevailing for sardine herring warranted them in this venture

although many of them were sadly disappointed at the end of the season, there being many weirs that hardly paid the cost of construction.

HAKE.

Quite a number of schooners fit out expressly for this fishery and the rebeing several good grounds for hake in the Bay of Fundy, satisfactory returns are generally the result. An increase of 1,000 quintals over the previous season is noticed in the several officers' returns which brought the fishermen very satisfactory prices during the entire season.

HADDOCK.

Quite a large increase will be noticed in this catch up to date. Good prices were realized by the fishermen in selling them fresh from the water to the numerous buyers, and even at the present time two cents per pound is being received by the fishermen. More energy was displayed in this fishery than heretofore on account of the good prices prevailing, and it is to be hoped that the financial results will be equally as good in the future. An increased quantity of haddock, smoked as finnan haddies, commanded a ready market. The demand for haddies is increasing and I hope to be able to report in the future that our fishermen are conducting this fishery with a view of placing more smoked haddock on the market. At Beaver Harbour and St. Andrews finnan haddies are cured by two energetic dealers and they find a ready market for their output. A new departure is being tried at Beaver Harbour in the canning of haddies and a good demand is being created.

MACKEREL.

Excepting for the few very small ones found mixed with the sardine herring in the weirs, no mackerel were caught during the past season. However, mackerel were not by any means abundant at any of their usual haunts. Our fishermen speak in glowing terms of periods in the years gone by, when big hauls were made by them in this district, and good prices realized. They look forward hopefully to making equally good catches and it is to be hoped they will not be disappointed in the near future.

FISHWAYS.

I have given an unusual amount of time to the keeping in efficient condition of the numerous fishways in this district and they have served well their intended purpose during the year. Overseer Todd on the St. Croix, and Guardian Hall at St. George, have taken special pains with the fishways each have under their control. Fish of various kinds have passed through them, and with some little repairs in the spring they will be in good order for the coming season.

CAMPOBELLO FISH FAIR.

I was unable this year to attend the meeting of this fishery association which was held during October at Welshpool, as I was attending to the United States fleet at Cape Breton. However, a very large number of persons attended including the Premier of New Brunswick and several members of both Provincial and Dominion parliaments. The exhibits of fish surpassed that of previous years, exciting much admiration among the numerous visitors. The committee have expressed a strong desire for your department to be represented at their next annual fair by one of your fishery experts; in order that greater good may be derived by a lecture on our fisheries, the best method of preserving them, and other matters of interest to fishermen. Much good would no doubt result from this visit of one of your departmental experts to Campobello, one of the most important fishing islands in Canada.

SYNOPSIS OF FISHERY OFFICERS' REPORTS.

Overseer Fraser of Grand Manan reports: Having only been appointed a few months ago, he does not profess to be thoroughly posted in regard to the fisheries of his district. His figures for the different kinds of fish are very much at variance with those of last year, and his total results are very much less, thus showing a decrease in the present year. This he cannot account for. The various fisheries were prosecuted this year as vigorously as those of 1897, 90 per cent of the catch of the island of Grand Manan is exported to foreign countries, that to a large extent via the United States in bond. Part is exported to the United States fresh, and there manufactured in different ways for that market. Ten per cent only would be used for home consumption. A few cases of violations of the Fsheries Act were reported to him, but he was unable to secure sufficient evidence to convict, however, he had very little trouble in making the fishermen comply with orders. On several occasions he managed to get among suspected parties and they regretted his presence. To properly enforce the regulations in the waters of this island a patrol boat should be allowed to the overseer, and power given him to hire two men. This boat wants to be kept going through four months of the year, from August 1 to November 30, this being the period when the *Curlew* is generally absent, leaving the grounds practically in the hands of the fishermen to do as they wish for the time being. I would also suggest that net fishing be put under license like weir fishermen, for the season that the netters in the habit of throwing overboard on the netting grounds all small fish taken in their nets, which, being considerable, poisons the ground by rotting. This simply transfers the fishing ground into a gurry ground driving the fish off shore, and damaging both weir and net fishing. He would also suggest that net fishermen be compelled to have their nets out of the water from sunrise to sunset, so that the fish can get inshore. At present nets are set deep and under run each day, and left so set for months. The fish coming shore meet the nets and sheer off, and thus the fishermen are destroying their own business. If they were under license like weirs the overseer could regulate them according to the fishery laws, but now, practicably, nothing can be done. Another matter that requires action by the authorities, is the exporting to Eastport and other United States ports of such large quantities of herring from the weirs of this island, the American trading vessels buying the fish here at a very small price, and taking them into their own markets free of duty. A Grand Manan boat taking them in would be subject to duty, the United States people and their vessels receive all the labour, freight, etc., on the fish while our boats and fish are practically shut out from their market by a prohibition duty. If possible something should be done to help our fishermen in this matter, and also prevent the destruction of such immense quantities of small herring which accounts for the small catches of large herring on our coasts. Many old fishermen believe that eventually the herring fisheries will be destroyed by this slaughter of the small ones.

Overseer Todd of St. Stephen in his annual report states, that salmon were very abundant this season in the Ste. Croix River, thus emphasizing the fact that the employment of a number of guardians on the river during the season is the most effective and economical method in the end. The catch of other fish was about the same as past years. black bass are increasing in the river. The fish-ways have been kept in good condition and kept open during the entire season.

Overseer Brown of Campobello reports a decrease in the amount of herring smoked. Owing to the high prices received for sardines here the fishermen sold them for that purpose. Most of the smoked herring put up on this island were brought from Grand Manan in the fall, when the fish were cheap, and the weirs in this district did not fish. An increased number of salt herring were put up by the fishermen of this district, although they did not catch them here, but in Grand Manan waters. The catch of herring for sardine purposes was about one-third less than that of last year, but the prices received were unusually large. The catch of hake did not equal that of the previous year, and he has the same to say with regard to pollock, which did not seem inclined to take the hook. They schooled however very freely, evidently playing after shrimps. He only reports one half the catch of cod as most of the vessels fitted out for the haddock and hake fisheries which paid them better. Haddock sold for a good price

during the year in a fresh state, very few have been salted. Lobsters show a small increase in the catch. This, we cannot account for as lobsters seem to be getting scarce but the high price paid for ten and a half inch lobster induced the fishermen to make an effort. There was a decrease in the catch of most all kinds of fish, but on account of the good prices realized, the fishermen fared better than other years. The close seasons have been very well observed except in a few instances.

Overseer Campbell of St. Andrews reports that the season has not been a very profitable one, as the price of sardine herring part of the season was very low. There were more weirs fished than in 1897, but the catch was very little larger than that year, not from a scarcity of herring however, but from a want of buyers. There were so many sardine herring in other places nearer Eastport, that at times for days or weeks there would be no sardine buyers in the inner bay. The Digdeguash weirs, with one or two exceptions, did very little, and the main catch in this district was in Chamcook and St. Andrews. The quantity of herring in the bay through most of the season was very large, but much mixed with britt and a few large herring. There were quite a number of small mackerel at one time during the season, but they were so mixed with the sardine herring that they could not be separated, and went in with the sardine catch. The catch of lobsters was small and not so many traps were fished as in 1897, but the prices were good. Line fishing in the bay was not quite so good as the previous year. The usual number of Nova Scotia vessels dug the flats, for clams this season, and our fishermen complain of them being allowed to do so. The beds are becoming depleted of the large clams. These beds would soon fill up again were the digging stopped for a few years. About twenty years ago when Hartt and Balkam were canning clams they had the beaches ploughed up and for a few years the clams were quite small but renewed themselves. There has been but little trouble with fishery violations this year, except for some torching for herring during three or four nights, mainly carried on by the weir owners themselves. Messrs Robertson & Co. have done a large business, manufacturing 5,000 cases smoked haddies and 600 cases of bloaters, which are entered as smoked herring. He makes no special recommendations as the season on the whole has been a quiet but profitable one.

Guardian Dick, the officer in charge of the fisheries from L'Etang and St. George, in his report says: There has been a decrease in the catch of hake, haddock and lobsters, but on the other hand there has been a considerable increase in the catch of cod, pollock and sardine herring. The fishermen of this district gave more attention to weir fishing this season than any of the other fisheries, which is attributable to the large schools which struck inshore in my district, and the good prices received for the herring. Some idea may be gathered of this increased catch of herring when I state that it amounted to 29,985 barrels more than last season.

Guardian Cross of Beaver Harbour who controls the fisheries from L'Etang River to Point Lepreaux states in his annual report that: taking the whole fishing industry altogether there has been a gain in the catch and value over that of last year. There were very few large herring taken and for several years past this fishery has been declining for which he cannot give any reason. There has not been as many sardine herring shipped from this district as last year, but there has been more canned in the two factories here. The catch was about the same as previous year. Lobsters show about the same catch as last year but more of them were canned in the factories here and in Blacks Harbour. They brought good prices all the season, especially those that were shipped to the United States. Line fish of all kinds show an increase in the prices received and also the catch, although not so many men were engaged in the line fisheries. About fifty per cent of the district's catch was sold in the Dominion, while the remainder went to the United States market. This fishing season was more prosperous than the previous one.

Guardian Hall, in charge at St. George, reports: The fishways here are in first-class condition and many salmon have passed through them during the past season. Quite a number have been seen about here in the rivers, as well as in the mill-pond and in the basin. There has been no fly fishing for them and consequently none have yet been captured. The trout fishing in the several lakes has been up to the average, and numerous fishing parties during the season have had good sport, and fine catches.

Guardian Lord, in charge at West Isles, reports a decrease in the herring catch this past season. Early in the summer the catch was fair and prices moderately high, but later on the catch was small. Our annual fall catch, which we always count as the best of the season, was a total failure, but whether the schools are less, or that they have forsaken their usual haunts, is a question on which opinions differ very much. Some think they are scarcer, others that they are more plentiful all round the coast than ever before, but he is of opinion that they are getting scarcer. Our smoking herring business was a failure, none at all being taken, the silver hake of which there were a few, may have driven these herrings from this island. We cannot say it was the squid for these fish were very scarce. For about a week a number of the weirs took a few tinker mackerel which were sold with the herring to the packers. The line fish seem to be as plentiful as usual, but a large number of fishermen who formerly engaged in this industry procured employment in the sardine factories at Eastport and Lubec, where they believed they were better off from a financial standpoint. The pollock were plentiful for a time, a larger number being caught in weirs, and perhaps they account in a measure for the scarcity of herring. Haddock remain the same, although a less number of vessels were employed this year trawling. Cod were as plentiful as ever, and he noticed some of them had a small under fin cut off, which is said to be the Gloucester hatchery work. Lobsters are becoming scarcer every year. He finds it very hard to prevent illegal lobster fishing during the close season, as the fishermen risk the penalties for the few dollars made. They set their traps without buoys and during the night haul their traps by dragging for the lines, therefore it is almost impossible to catch them.

Guardian Conrad at Ste. Croix who has charge of the fisheries on the border lakes, from Vanceboro northward, reports that he has by constant vigilance been able to prevent any poaching in the waters of his district. Several reports of persons having violated the law were brought to him, but on investigation they were without foundation. The fishing of various kinds was very good, and the waters were visited by numerous parties of sportsmens who were well pleased with their success.

I have the honour to be, sir,
Your obedient servant,

JOHN H. PRATT,
Inspector of Fisheries.

DISTRICT No. 2.

REPORT ON THE FISHERIES OF DISTRICT No. 2, COMPRISING THE COUNTIES OF RESTIGOUCHE, GLOUCESTER, NORTHUMBERLAND, KENT, WESTMORLAND AND ALBERT, FOR THE YEAR 1898, BY INSPECTOR R. A. CHAPMAN.

MONCTON, January 2, 1899.

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

SIR,—I have the honour to submit my report on the fisheries of District No. 2 New Brunswick, for 1898, with tabulated statements giving the product and value by districts and counties, together with a return of the capital employed in the prosecution of these fisheries.

The returns show a considerable falling off from the previous year's aggregate, which is almost entirely confined to one county (Gloucester) and which is largely caused by the very low prices prevailing for codfish, and during two or three years ending with 1897, where fishing did not pay causing many of the dealers to lose heavily, and consequently in some of the smaller districts where agricultural pursuits have paid better fishing has been almost abandoned, but the high prices realized in 1898 for fish will have an inspiring effect, and no doubt stimulate the business so as to restore it to the old figures or propably increase them, especially as there appears to be no scarcity of cod, smelts, herring etc., though lobsters are being overfished as more fully explained hereafter, the reduction of the number of districts in this (Gloucester) county from two to four making it more difficult in such largely increased areas for the officers to get correct figures may also have something to do with smaller returns, though I have assisted them with aid of bounty claims, statistics, &c., to make them up. I will now report in detail upon the principal kinds of fish caught with remarks thereupon, &c.

SALMON.

The catch of this fish was not up to the average past year, except on the Restigouche and coasts leading to this river, though fly fishing on the principal streams was good especially on the Miramichi when the guardians were in good time and the first run of fish got up safely, into the pools and on the head waters of the different tributaries of this river. There is not a doubt that the supply of salmon depends not only upon the fish getting up and being protected, but also upon favourable conditions for depositing their eggs, hatching, &c., as on the natural hatcheries or spawning beds of the rivers frequented by these fish. If everything is favourable fall and spring large results will follow and then in four or five years there will be plenty of mature fish, but if on the contrary with unfavourable conditions in the fall, heavy runs of ice in the spring tears up and destroys the beds containing the eggs thereon, then as a natural result in due course of time fish must be scarce. Another matter upon which there is much difference of opinion, is, whether the summer run of salmon are produced from the same fish as those that come in during the fall; many maintain they are not and therefore that the Miramichi Hatchery, being supplied with eggs taken from the fall fish, is of less beneficial effect than if this hatchery were supplied with eggs of fish pooled from the summer catch. In the latter case it would cause those now taken in the fall to deposit more spawn in the natural hatcheries, and would ensure better results, though undoubtedly great advantage accrues if there are more eggs brought to maturity in this hatchery than in the natural beds of the rivers.

HERRING.

These fish are very abundant in the spring, but are of poor quality; large numbers are taken not only for food but bait, &c., and if the weather is rough usually large quantity of spawn is driven ashore and carted on the land for manure. The banks between Miscou and Caraquet are frequented by a much better quality of fish latter part of August and during September when many are taken by boats and schooners from all parts of the coast.

MACKEREL

Were scarce past season where they did strike in they only remained a short time consequently less were taken than usual, though great preparations were made on some parts of the coast for their catch; their movements appear to be very erratic.

LOBSTERS.

Though in Westmorland County more lobsters were taken last year without an extension than during 1897 with ten days more time, yet the whole catch in this district in 1898 to July 15 was slightly under that of the previous year with said ten days included, but a much larger number of traps was used, and with the prevailing high prices giving such inducements to continue increasing factories and gear, it does appear that something must be done to prevent the extermination of this valuable fishery. If fall fishing was adopted in place of spring, as nearly all the spawn is dropped before the 15th July, I believe the supply would not be exhausted, while now the berries are washed off the fish in an immature state by the fishermen or when officers are not on guard female fish are boiled berries and all; fall fishing would also do away with illegal fishing and thus save quite a large sum, but the large packers everywhere appear to be opposed to this as it would be doubtless difficult to get hands to run their factories after those that they engage in the spring got away or had procured other employment; but such a change would certainly be better that all the hatcheries and preventitive laws that can be provided. I do hope that the commission now making inquiries may be able in their report to recommend something that will hereafter prevent this important fishery from being destroyed, which would certainly be in the interest of every canner and fisherman on the coasts.

COD.

The catch of this staple fish has not been up to the average of the past two years, not on account of any scarcity, but the low prices prevailing caused the work especially in small boats to be almost abandoned, in places where other employment could be had; but the advance in values during 1898 will certainly again give an impetus to this fishery which will doubtless within the next year or two put it up to or ahead of what it ever has been heretofore, there being room for almost unlimited expansion.

SMELTS

Show again a large catch notwithstanding that during the past two seasons heavy rains causing freshets have carried these fish out of the smaller streams just about the time this fishing commenced, and when this is the case they never appear to return the same season in large numbers, but they are certainly not becoming any scarcer but appear to be increasing from year to year, and as they are food for so many other kinds of fish the quantities taken for sale are a very small percentage of wheat are thus consumed. The benefits of this fishery cannot be overestimated, hundreds of thousands of dollars yearly being distributed thereby amongst the working people in the winter season when other employment is so hard to procure, thus enabling the traders to largely increase their business besides giving traffic to the different lines of local railways as well as the Intercolonial.

BASS.

There is a small increase in the quantity of bass taken over the previous year, as we have not yet lost the benefit of the prohibition of some years ago, which enabled them to breed undisturbed in large numbers, and since that time the run of these fish as a whole has been longer from year to year, they appear to be a slow growing fish, and to take a good many years to attain a large size; whether with present rate of fishing the supply will be kept up or not is yet difficult to foretell, though it appears now as if it would with proper care that the small fish are not caught and destroyed by the smelt nets on the Miramichi, &c.

SHAD.

These fish come into St. John harbour on their way up St. John River to spawn in the latter part of May and first two weeks in June, and what are not taken by nets in the said harbour and river after they have deposited their eggs, return to salt water and come up to their feeding grounds at the head of the Bay of Fundy where by the 1st of September they become very fat. Fifty years ago some 200 boats were profitably employed in this fishery, which large fleet is now reduced to some twenty or thirty boats, there is not a doubt if a close time was made up to the 20th of June in each year, to enable there fish to spawn that in a few years the waters would be teeming with them again, to realize their present destruction any person has only to visit the markets of this province early in June and see these fish opened to be satisfied of the dreadful destruction that is taking place every year; surely this matter is worth some attention.

ALEWIVES

Are usually plentiful in a number of rivers and streams in the spring, and might be caught in much larger quantities, but not much attention appears to be given to this fishery except in one or two places.

OYSTERS.

While there is a slight falling off in the catch of these fish from the valuable beds in Buctouche and Cocagne, and a very considerable one from the Caraquet beds, there is a large increase in the take of an inferior fish in Northumberland County, as while some years ago very few were had outside of limited areas in Bay du Vin, now they are plentiful for miles up the Miramichi River, and men in boats and small vessels from the adjacent counties in the fall flock to these beds and load up their craft. The Caraquet beds, land-locked at the mouth of the Caraquet River, where there is very little current or sea, are becoming swamped out and covered by sediment and mud; it is proposed that this could be remedied by a small dredge scraping out the mud from amongst these beds and making the bottom suitable for receiving the spat, which is now very largely lost. This place would certainly be worth our examination as these oysters, though of small size are nicely flavoured, and in former years produced largely.

Referring to officers' reports very few of the overseers sent in any report with their returns at all, and the few received contain no notes or recommendations of importance.

I have the honour to be, sir,
Your obedient servant,

R. A. CHAPMAN,
Inspector of Fisheries.

DISTRICT No. 3.

REPORT OF THE FISHERIES OF DISTRICT No. 3 OF NEW BRUNSWICK, COMPRISING THE COUNTIES OF VICTORIA, CARLETON, YORK, SUNBURY, QUEEN'S, KING'S AND ST. JOHN, FOR THE YEAR 1898, BY INSPECTOR H. S. MILES.

OROMOCTO, N.B., January 2, 1899.

The Honourable Sir L. H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit my annual report of the fisheries of this district, also statistical returns showing the value and quantities of fish taken, which, when compared with that of last year, shows a decrease of $35,614.45.

SYNOPSIS OF FISHERY OFFICERS' REPORTS.

Overseer O'Brien, of St. John County, reports a falling off in the catch of salmon this year, resulting partly from the easterly winds which prevailed in the months of June and July and also to the extreme foggy weather rendering fishing in the harbour dangerous during the greater parts of salmon, shad and alewive fishing season. Lobsters show a decided increase in catch, because nearly all the fishermen devote their time and attention to this business in winter when all other fish go off shore.

Overseer Isaac I. Hetherington, of Jenkins, Queen's County, reports an abundance of alewives, while shad were less than an average run; other kinds of fish about as usual. He captured two nets for illegal fishing.

Overseer Cecil F. McLean, of Burton, Sunbury County, reports that the run of alewives was a little better than last year but the catch was not so heavy as there were not so many engaged in fishing as in former years. The catch of shad was greater than last year, salmon not so good owing to a raise of water that came about the middle of the fishing season. Pickerel are on the increase and are fast becoming an important part of the fisheries and should be protected by a regulation size of mesh and a close season, the mesh to be $2\frac{7}{8}$ or 3″ mesh extension measure, and the close season to extend from October 1 to March 1. The alewives went up the Oromocto River in large quantities but at the Smith dam they are headed, a Hockin fishway is in that dam but no fish have ever been known to enter it.

Overseer Robert Orr, of Fredericton, York County, says that 'during the fishing season I devoted all my time on the St. John and S. W. Miramichi rivers. Drifting on the St. John River above tidal waters was carried on quite extensively and without more assistance it will be impossible to prevent it in the future. As regards the S. W. Miramichi River I have to say that a great deal of spearing was done before the guardians were placed on the river. A special guardian should be on the river by June 1. The Government through the representation of Mr. Edgar Hanson who takes great interest in the preservation of the fisheries, also Inspector Miles, put four men on the river between Boiestown and the forks, a distance of fifty miles. This stretch of river cannot be properly protected by four men, not less than seven are required to prevent spearing and netting. During the month of September quite a large number of salmon reached their spawning grounds and owing to the high water escaped the ravages of spearers. All fish taken in this district was used for home consumption. The abuses by netting on the St. John River still exist to a very great extent and can only be prevented by more

guardians. Close season on the St. John River fairly observed. I am of the opinion that the sawdust in my district is not injurious. No fishways in this district.' In conclusion he suggests that the head of tidal waters on the St. John River be established at the iron railway bridge at Fredericton.

Guardian Charles McEwen, of Beaufort, Carleton County, particularly reports a fine run of large salmon and trout in the north branch of the Miramichi River from July 18 until autumn, during which time the river was visited by many sportsmen. No illegal fishing.

Guardian D. E. Brooks, of Bristol, Carleton County, reports a large run of salmon of which few were taken in the early season owing to the water having been so high but later on a fair number were caught, speared, &c. All were used for home consumption.

Overseer Leonard Wilson, Victoria County, says that illegal fishing is seldom indulged in. Owing to the artificial culture of salmon, they are becoming numerous. No fishways in his district. More guardians are required, and their services should extend over a greater period of time than last year.

I have the honour to be, sir,
Your obedient servant,

H. S. MILES,
Inspector.

NEW BRUNSWICK—District No. 1.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, and the Quantity and Value of all Fishing Materials, with the Kinds and Quantities of Fish caught, in District No. 1, Province of **New Brunswick**, for the Year 1898.

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.										Number.
		Vessels.				Boats.			Gill Nets.			Seines.			Trawls.		Weirs.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	
	Charlotte County.			$			$				$			$		$		$	
1	Campobello	12	277	6300	68	119	3776	148	50	3238	900	37	1110	1850	114	1150	37	11480	1
2	Grand Manan	18	270	5300	77	288	65680	518	410	10450	3800	35	3280	6600	111	2225	42	41100	2
3	West Isles	2	59	800	8	180	9500	220	50	1500	450	75	2250	4500	75	750	86	34400	3
4	Lepreaux to L'Etang	7	158	2700	38	126	2560	163	139	4160	1870	37	1110	2220	330	1900	35	8300	4
5	L'Etang to Latete	7	92	1760	29	258	8737	203	21	641	222	64	1806	2000	80	794	67	17250	5
6	Latete to Oak Bay	2	19	450	4	88	1780	95	.....	.....	....	41	1230	1230	62	372	48	14400	6
	Totals	48	875	17250	224	1059	92033	1347	670	19989	7242	289	10786	18400	772	7191	315	126930	

RETURN showing the Kinds and Quantities of Fish, &c.—**New Brunswick**—*Continued.*

Number.	Districts.	Kinds of Fish.																		Number.
		Salmon, fresh, lbs.	Scallops, preserved in cans.	Scallops, fresh, lbs.	Herring, salted, brls.	Kippered herring in cans, lbs.	Kippered herring, lbs.	Herring, fresh or frozen, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, preserved, cans.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Clams, preserved, cans.	Clams, shelled, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked finnan haddies, lbs.	Haddock, canned, lbs.	
	Charlotte County.																			
1	Lepreaux to L'Etang	3600	16000	4300	200	240000	.....	.....	.....	....	3400	40992	6525	245	43000	450	4000	925	.....	4000	1
2	L'Etang to St. George	....	.....	19400	432	.....	.....	.....	.....	....	...	.....	897	1324	.....	101	.....	1209	.....	.....	2
3	St. George to St. Stephen	....	.....	.....	....	.....	.....	.....	24000	....	...	.....	174	500	....	1755	206000	900	150000	9600	3
4	St. George and vicinity	....	.....	2000	....	.....	.....	8750	.....	900	....	.....	20	....	.....	10	40000	....	.....	.....	4
5	St. Stephen and vicinity	750	.....	.....	....	.....	.....	.....	.....	....	...	.....	...	....	...	....	.....	....	.....	.....	5
6	Grand Manan	....	.....	.....	4090	.. ..	50000	20318000	8705000	....	....	40680	4470	2866	.....	....	.....	581	15000	.....	6
7	Campobello	....	.....	..	1487	.....	.....	.....	74255	....	....	26400	340	500	.....	....	600000	850	.....	.....	7
8	West Isles	....	.....	.....	25	.....	.....	.....	.....	....	...	...	340	100	.....	....	400000	....	500	.....	8
	Totals	4350	16000	25700	6234	240000	50000	20326750	8803255	900	3400	108072	12766	5535	43000	2261	1250000	4465	165500	13600	

RETURN showing the Kinds and Quantities of Fish, &c.—**New Brunswick**—*Concluded.*

Number.	Districts.	Kinds of Fish.															Total Value of all Fish.	Number.
		Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereaux, brls.	Pickerel, lbs.	Sardines, preserved cans.	Sardines, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brl.		
	Charlotte County.																	$ cts.	
1	Lepreaux to L'Etang	4250	4250	380	10000					900000	21600	5200		52	5500	1700	2450	*188,613 90	1
2	L'Etang to St. George	1899	1400	3079	5000					150000	89100	39000			5700	1275	5940	†222,757 25	2
3	St. George to St. Stephen	1200		450	1000	2500	3000			150000	25705	3800				245	3600	99,157 50	3
4	St. George and vicinity					6000		10				700	500				125	2,428 00	4
5	St. Stephen and vicinity					5500	8000	250	3000				600	25				2,330 00	5
6	Grand Manan	5740	4000	9983	40000										22300		850	486,729 00	6
7	Campobello	3708	4530	3060	10000						16525				5000	480		89,961 10	7
8	West Isles	200	250	450	1000					50000	16970				800	600		53,385 00	8
	Totals	16997	14430	17402	67000	14000	11000	260	3000	1250000	169900	48700	1100	77	39300	4300	12355	1,145,361 75	

* In No. 1 add 5 barrels of shad and 9 seals, $86. † In No. 2 add 19 barrels of squid, $76.

SESSIONAL PAPER No. 11a

RECAPITULATION

OF the Yield and Value of the Fisheries of District No. 1, **New Brunswick**, for the Year 1898.

Kinds of Fish.		Quantity.	Price.	Value.
			$ cts.	$ cts.
Salmon, fresh	Lbs.	4,350	0 20	870 00
Scallops, canned	Cans.	16,000	0 15	2,400 00
" fresh	Lbs.	25,700	0 05	1,285 00
Herring, pickled	Brls.	6,234	4 00	24,936 00
" kippered	Cans.	240,000	0 10	24,000 00
" "	Lbs.	50,000	0 05	2,500 00
" fresh or frozen	"	20,326,750	0 01	203,267 50
" smoked	"	8,803,256	0 02	176,065 12
Mackerel, fresh	"	900	0 12	108 00
" canned	Cans.	3,400	0 12	408 00
Lobsters, canned	"	108,072	0 20	21,614 40
" fresh	Cwt.	12,766	5 00	63,830 00
Cod, dried	"	5,535	4 00	22,140 00
Clams, canned	Cans.	43,000	0 10	4,300 00
" shelled	Brls.	2,261	7 00	15,827 00
Haddock, fresh	Lbs.	1,250,000	0 03	37,500 00
" dried	Cwt.	4,465	3 00	13,395 00
Finnan haddies, smoked	Lbs.	165,500	0 06	9,930 00
" " canned	Cans	13,600	0 10	1,360 00
Hake, dried	Cwt.	16,997	2 25	38,243 25
" sounds	Lbs.	14,430	0 50	7,215 00
Pollock, dried	Cwt.	17,482	2 00	34,804 00
Halibut, fresh	Lbs.	67,000	0 10	6,700 00
Trout, fresh	"	14,000	0 10	1,400 00
Shad, pickled	Brls.	5	10 00	50 00
Smelts, fresh	Lbs.	11,000	0 05	550 00
Alewives, pickled	Brls.	260	4 00	1,040 00
Pickerel, fresh	Lbs.	3,000	0 05	150 00
Sardines, canned	Cans.	1,250,000	0 05	62,500 00
" fresh	Brls.	169,900	2 00	339,800 00
Flounders, fresh	Lbs.	48,700	0 05	2,435 00
Tom cod or frost fish	"	1,100	0 05	55 00
Squid	Brls.	19	4 00	76 00
Coarse and mixed fish	"	77	2 00	154 00
Fish oil	Galls.	39,300	0 30	11,790 00
" used as bait	Brls.	4,300	1 50	6,450 00
" " manure	"	12,355	0 50	6,177 50
Seal skins	No.	9	4 00	36 00
Total value of catch for 1898				1,145,361 77
" " 1897				870,287 30
Increase during 1898				275,074 47

NUMBER and Value of Vessels, Boats, Nets, Weirs, &c., engaged in the Fisheries of District No. 1, **New Brunswick**, for the Year 1898.

Material.	Value.
	$ cts
48 vessels (tonnage 875)	17,250 00
1,059 boats	92,033 00
670 gill-nets (19,989 fathoms)	7,242 00
289 weir seines (10,796)	18,400 00
772 trawls	7,191 00
315 weirs	126,930 00
7 smelt nets	70 00
1,406 hand lines	777 00
8 lobster canneries	18,200 00
23,059 lobster traps	19,015 00
8 freezers and ice-houses	19,000 00
797 smoke and fish houses	136,565 00
278 piers and wharfs	46,125 00
11 tugs, steamers and smacks	4,875 00
2 sardine factories	3,000 00
1 fish-curing factory	3,500 00
1 guano factory	5,000 00
80 weir scows	4,000 00
50 pile-drivers	500 00
30 fish-presses	3,000 00
Total value of material	532,673 00

NEW BRUNSWICK—District No. 2.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., in the District No. 2, Province of New Brunswick, for the Year 1898.

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.					Number.
		Vessels.				Boats.			Gill Nets.			Smelt Nets.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	
	Restigouche County.			$			$				$		$	
1	Above Dalhousie	....	....	.....	....	36	600	65	50	8000	6000	200	10000	1
2	Below Dalhousie	1	28	500	5	190	4000	350	85	18000	20000	25	1300	2
	Totals	1	28	500	5	226	4600	415	135	26000	26000	225	11300	
	Gloucester County.													
1	Beresford, &c	....	.....	.....	.....	410	8500	820	460	40000	23500	....	.....	1
2	Bathurst, Caraquet, &c	117	1234	42000	370	520	15600	720	690	40000	17500	44	2000	2
3	Tracadie, Inkerman, &c	21	246	8000	65	350	10000	650	640	128000	35000	197	5700	3
4	Miscou and Shippegan Island	70	810	35000	232	300	14500	800	500	62000	20000	55	1700	4
	Totals	208	2290	85000	667	1580	48600	2990	2290	270000	96000	296	9400	
	Northumberland County.													
1	Neguac, &c	3	39	1660	11	190	3800	270	1250	26000	20000	196	10000	1
2	Bay du Vin, &c	2	30	800	7	200	10000	550	800	80000	65000	180	8000	2
3	Chatham, &c	4	94	2800	18	150	4000	150	800	25000	20000	354	21000	3
4	South-west and North-west Miramichi Rivers	.....	.....	.....	.. .	130	2600	130	120	9400	7000	.....	.....	4
	Totals	9	163	5260	36	670	20100	1100	2970	140400	112000	730	39000	

	Kent County.													
1	Carleton, Richibucto, &c	2	36	950	6	306	11000	560	2580	51600	12900	465	18500	1
2	Buctouche, &c	.....	.....	.....	.....	490	12000	1000	600	15000	5000	265	12000	2
3	Cocagne, &c	.....	.....	.....	.....	200	6000	400	460	10000	3000	65	3000	3
	Totals	2	36	950	6	906	29000	1960	3580	76600	20900	795	33500	
	Westmorland County.													
1	Shediac, &c	.....	....	....	...	300	9000	600	600	26000	11000	250	10000	1
2	Botsford, Sackville, &c	.....	.....	.....	.....	380	9000	700	500	16000	3000	100	3000	2
3	Dorchester	.....	...	.....	.....	32	1600	64	35	8600	3500	.....	.....	3
	Totals	.....	.....	.....	....	712	19600	1364	1135	50600	17500	350	13000	
1	*Albert County*	.....	.....	.....	....	4	200	8	10	800	600	.....	.....	1
	Grand totals	220	2517	91710	714	4098	122400	7837	10120	564400	273000	2396	106200	

RETURN showing the Quantity and Value of Fish, &c.—New Brunswick—*Continued.*

Number.	Districts.	Kinds of Fish.	Kinds of Fish.																	Number.
		Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Halibut, lbs.	Trout, lbs.	Shad, brls.	
	Restigouche County.																			
1	Above Dalhousie	75000	.....	....	100	2000	.....	.....	....	.....	100	.....	....	....	....	....	.....	12000	....	1
2	Below Dalhousie	150000	....	.....	2000	26000	.....	100	....	22550	390	100	....	....	....	....	...	2500	...	2
	Totals	225000	.....	.....	2100	28000	.....	100	...	22550	490	100	....	....	....	....	.....	14500	...	
	Gloucester County.																			
1	Beresford, &c	130000	2000	.....	14550	50000	....	2000	50	42000	40	2500	....	....	200	....	500	5000	....	1
2	Bathurst, Caraquet, &c	220000	.....	...	32000	20000	20000	22000	10	195000	200	38000	50	500	600	1000	20000	10000	....	2
3	Tracadie, Inkerman, &c	69500	.....	.....	16100	60000	.....	11000	50	184000	200	7000	30	100	100	200	7000	6500	....	3
4	Miscou and Shippegan Island	.....	9000	..	10500	.....	.....	10000	40	481000	60	18500	50	...	200	400	10000	1000	....	4
	Totals	419500	11000	.....	73100	130000	20000	45000	150	902000	500	66000	130	600	1100	1600	37500	22500	....	
	Northumberland County.																			
1	Neguac, &c	65000	500	.....	4000	30000	20000	20000	....	48000	50	1800	....	....	100	150	1000	2500	50	1
2	Bay du Vin, &c	92650	.....	.....	2000	.. ..	10000	25000	20	70000	80	200	....	....	200	300	1000	1000	100	2
3	Chatham, &c	80000	.....	.....	100	10000	.....	1500	....	.....	....	150	....	...	....	....	.....	3000	500	3
4	South-west and North-west Miramichi Rivers	35000	.....	10000	.....	.....	.....	.....	....	.....	....	.....	....	....	....	....	.....	16000	950	4
	Totals	272650	500	10000	6100	40000	30000	46500	20	118000	130	2150	...	....	300	450	2000	22500	1600	

	Kent County.																			
1	Carleton, Richibucto, &c	28000	100	.....	15200	28000	...	176000	50	250000	150	2600	.	....	1300	2000	4000	11980	65	1
2	Buctouche, &c	.....	.....	.....	10000	9000	..	1000	20	140600	50	180	30	....	200	800	500	2300	....	2
3	Cocagne, &c	.....	.....	.....	4000	10000	.....	500	10	72000	50	100	....	....	100	....	.....	1200	....	3
	Totals	28000	100	.....	29200	47000	.....	177500	80	462600	250	2880	30	....	1600	2800	4500	15480	65	
	Westmorland County.																			
1	Shediac, &c	4000	..	...	35000	400000	35000	1500	....	250000	250	50	....	50	...	....	.. ...	5000	10	1
2	Botsford, Sackville, &c	.....	.....	.. ..	10000	40000	15000	2000	....	250000	1000	50	....	....	....	..	.....	4500	400	2
3	Dorchester	2500	.....	.....	50	.....	.....	....	....	.....	....	.....	...	....	....	....	.....	3000	1600	3
	Totals	6500	.....	.....	45050	440000	50000	3500	...	500000	1250	100	....	50	....	....	... .	12500	2010	
	Albert County	3000	.....	.....	250	2000	.....	.....	...	.....	...	60	....	....	40	....	....	7000	200	1
1	Grand totals	954650	11600	10000	155800	687000	100000	272600	250	2005150	2620	71290	160	650	3040	4850	44000	94480	3875	

RETURN showing the Quantity and Value of Fish, &c.—**New Brunswick**—*Continued.*

Number.	Districts.	Kinds of Fish.															Total Value of all Fish.	Number.
		Smelts, lbs.	Alewives or gaspereau, brls.	Bass, lbs.	Clams, brls.	Eels, brls.	Sardines.	Oysters, brls.	Flounders, lbs.	Tod cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.		
	Restigouche County.																$	
1	Above Dalhousie	485000	.....	.....	....	40	.....	.....	.....	20000	..	100	.....	.....	....	..	42870	1
2	Below Dalhousie	35000	.....	.....	....	100	.....	.....	4000	3000	..	....	20	800	800	..	50188	2
	Totals	520000	.....	.....	....	140	.....	.....	4000	23000	..	100	20	800	800	..	93058	3 4
	Gloucester County.																	
1	Beresford, &c	6000	.....	2000	...	50	.....	.....	8000	2000	..	...	300	1700	6000	..	112530	1
2	Bathurst, Caraquet, &c	460000	.....	20000	1000	300	.....	1200	20000	100000	..	....	12000	8000	20000	..	440640	2
3	Tracadie, Inkerman, &c	356000	1500	5000	200	450	.....	100	6000	6000	..	200	1200	5500	5000	..	190755	3
4	Miscou and Shippegan Island	250000	.....	5000	100	100	.....	..	2000	5000	..	500	5000	4500	6000	..	244700	4
	Totals	1072000	1500	32000	1300	900	....	1300	36000	113000	..	700	18500	19700	37000	..	988625	
	Northumberland County.																	
1	Neguac, &c	680000	100	50000	100	20	.....	3000	10000	20000	..	800	350	2000	500	4	108634	1
2	Bay du Vin, &c	610000	170	25000	50	20	.....	6000	5000	50000	..	200	.....	4000	5000	..	116660	2
3	Chatham, &c	1400000	1500	35000	50	30	366000	7000	30000	1200000	..	....	.....	50	2000	..	211355	3
4	South-west and North-west Miramichi Rivers	.....	1250	175000	..	200	....	.....	....	.....	..	....	.....	.....	...	..	44600	4
	Totals	2690000	3020	285000	200	270	366000	16000	45000	1270000	..	1000	350	6050	7500	4	481249	

Kent County.																	
1 Carleton, Richibucto, &c	960000	2800	22500	100	650	.....	500	28000	148000	20	360	1400	3500	2600	8	242616	1
2 Buctouche, &c	580000	1000	1600	1500	200	....	3500	.....	100000	..	700	60	3000	2500	1	135299	2
3 Cocagne, &c	145000	500	500	500	100	.....	1000	.....	20000	..	....	.	2000	1500	.	51755	3
Totals	1685000	4300	24000	2100	950	....	5000	28000	268000	20	1060	1460	8500	6600	9	429670	
Westmorland County.																	
1 Shediac, &c	800000	1200	1500	300	125	.....	150	.....	8000	..	500	100	15000	10000	..	274210	1
2 Botsford, Sackville, &c	240000	500	4000	150	100	.....	225	.....	10000	.	....	20	12000	1000	..	136196	2
3 Dorchester	.....	....	.....	..	20	.....	.....	....	10000	..	....	60	.....	.....	..	17718	3
Totals	1040000	1700	5500	450	245	..	375	...	28000	—	500	180	27000	11000	..	428124	
1 *Albert County*	3000	.....	400	...	24	.. ..	.....	. ....	30000	..	50	30	.....	..	.	6689	1
Grand totals	7010000	10520	346900	4050	2529	366000	22675	113000	1732000	20	3410	20540	62050	62900	13	2427415	

RECAPITULATION

OF the Yield and Value of the Fisheries in District No. 2, **New Brunswick**, for the Year 1898.

Kinds of Fish.		Quantity.	Price.	Value.
			$ cts.	$ cts.
Salmon, fresh	Lbs.	954,650	0 20	190,930 00
" in cans	"	11,600	0 15	1,740 00
" smoked	"	10,000	0 20	2,000 00
Herring	Brls.	155,800	4 00	623,200 00
" fresh	Lbs.	687,000	0 01	6,870 00
" smoked	"	100,000	0 02	2,000 00
Mackerel	Brls.	250	15 00	3,750 00
" fresh	Lbs.	272,600	0 12	32,712 00
Lobsters	Cans.	2,005,150	0 20	401,030 00
"	Cwt.	2,620	5 00	13,100 00
Cod	"	71,290	4 00	285,160 00
" tongues and sounds	Brls.	160	10 00	1,600 00
Hake	Cwt.	3,040	2 25	6,840 00
" sounds	Lbs.	4,850	0 50	2,425 00
Haddock	Cwt.	650	3 00	1,950 00
Trout	Lbs.	94,480	0 10	9,448 00
Halibut	"	44,000	0 10	4,400 00
Smelts	"	7,010,000	0 05	350,500 00
Bass	"	346,900	0 10	34,690 00
Alewives	Brls.	10,520	4 00	42,080 00
Oysters	"	22,675	4 00	90,700 00
Clams	"	4,050	2 00	8,100 00
Eels	"	2,529	10 00	25,290 00
Shad	"	3,875	10 00	38,750 00
Squid	"	20	4 00	80 00
Sardines	Cans.	366,000	0 05	18,300 00
Flounders	Lbs.	113,000	0 05	5,650 00
Frost fish	"	1,732,000	0 05	86,600 00
Coarse fish	Brls.	3,410	2 00	6,820 00
Fish oil	Galls.	20,540	0 30	6,162 00
Fish as bait	Brls.	62,050	1 50	93,075 00
" manure	"	62,900	0 50	31,450 00
Seal skins	No.	13	1 00	13 00
Total				2,427,415 00

SESSIONAL PAPER No. 11a

NUMBER and Value of Vessels, Boats, Nets, Traps, &c., engaged in the Fisheries in District No. 2, **New Brunswick**, in the Year 1898.

Material.	Value.	Total.
	$ cts.	$ cts.
220 vessels (aggregate tonnage, 2,517)	91,710 00	
4,098 boats	122,400 00	
564,400 fathoms of nets	273,000 00	
2,396 smelt nets	106,200 00	
400 bass scoop-nets	2,000 00	
3 mackerel trap-nets	3,000 00	
67 trawls	1,370 00	
2,650 hand lines	1,825 00	
		601,505 00
201 lobster factories	125,900 00	
209,960 " traps	184,560 00	
		310,460 00
156 freezers and ice-houses	61,300 00	
407 fish and smoke-houses	27,180 00	
49 piers and wharfs	9,520 00	
172 steamers and smacks	20,700 00	
800 smelt shanties	12,400 00	
		131,100 00
Total		1,043,065 00

NEW BRUNSWICK—District No. 3.

RETURN showing the Number of Vessels and Boats, Nets, &c., and the Quantity and Value of Fish caught in District No. 3, Province of New Brunswick, for the Year of 1898.

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.							Kinds of Fish.							
		Vessels.				Boats.			Gill Nets.		Seines.			Weirs.										
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Salmon, fresh, lbs.	Salmon, smoked, brls.	Herring, salted, brls.	Herring, smoked, lbs.	White perch, fresh, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Number.
	St. John County.			$			$			$			$		$								
1	St. John Harbour	3	52	1040	15	210	8400	420	66000	66000	8	400	600	28	11200	45867	. .	450	25000	. .	540	100	1
2	Dipper Harbour	7	140	2800	28	60	3600	120	24000	24000	....	....	....	..	....	15600	.....	200	....	.....	2500	160	2
3	Pisarinco	2	30	600	10	60	6000	120	60000	60000	5	375	400	..	....	76000	....	250	.....	.....	1600	130	3
4	Musquash	....	....	....	....	38	3040	76	38000	38000	12	480	960	5	2000	5000	.....	.. ..	.. ..	....	600	129	4
5	St. Martin's	....	....	....	....	35	1750	70	14600	14600	....	....	....	..	....	1200	.....	320	.....	.....	1150	80	5
	Totals	12	222	4440	53	403	22790	806	202600	202600	25	1255	1960	33	13200	143667	.....	1220	25000	.....	6390	599	
	Other Counties.																						
6	King's	....	....	....	....	150	6000	300	20000	15000	....	....	....	..	.....	30000	....	600	..	.....	.....	...	6
7	Queen's	1	20	300	2	200	2400	400	25000	12500	....	....	....	..	.....	4500	.....	...	.....	.....	.....	.....	7
8	Sunbury	1	40	800	4	58	1160	116	10000	5000	....	....	....	..	....	3000	.....	.....	9000	.....	.....	.....	8
9	York	....	....	....	....	110	2200	220	6000	4000	....	....	....	..	.....	25000	.. .	.....	.....	30000	.....	.....	9
10	Carleton	....	....	....	....	35	350	70	500	375	....	....	....	..	....	6000	.....	.....	.....	. .	.....	.....	10
11	Victoria	....	....	....	....	90	500	180	1500	750	....	....	....	..	....	4000	15	.....	.....	.....	.....	.....	11
	Totals	2	60	1100	6	643	12610	1286	63000	37625	....	....	....	..	.....	72500	15	600	9000	30000	.....	.....	
	Grand totals	14	282	5540	59	1046	35400	2092	265600	240225	25	1255	1960	33	13200	216167	15	1820	34000	30000	6390	599	

RETURN showing the Kinds, Quantity and Value of Fish, &c.—**New Brunswick**—*Concluded.*

Number.	Districts.	Kinds of Fish.																Total Value of all Fish.	Number.
		Cod tongues and sounds, brls.	Haddock, dried, cwt.	Haddock, (smoked finnan haddies), lbs.	Hake, dried, cwt.	Pollock, cwt.	Trout, lbs.	Shad, brls.	Fresh shad, lbs.	Alewives or gaspereau, brls.	Bass, lbs.	Pickerel, lbs.	Eels, brls.	Sardines, brls.	Smoked alewives, lbs.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.		
	St. John County.																	$ cts.	
1	St. John Harbour	....	575	750000	450	....	.....	700	8000	12000	....	.....	100	95	300000	.....	....	2500	132,753 40	1
2	Dipper Harbour	3	2525	.....	3000	175	.....	....	....	....	....	.....	....	....	.....	.....	....	....	31,765 00	2
3	Pisarinco	....	370	.....	415	...	.....	30	....	375	....	.....	....	....	....	.....	....	....	28,563 75	3
4	Musquash	....	290	.....	250	25	.....	....	....	...	...	.....	....	2000	.....	.....	....	....	8,998 50	4
5	St. Martin's	...	350	.....	800	200	.....	....	....	.....	....	.....	....	....	.. ..	.....	....	500	11,590 00	5
	Totals	3	4110	750000	4915	400	.....	730	8000	12375	...	.....	100	2095	300000	.....	....	3000	213,670 65	
	Other Counties.																			
6	King's	....	....	.....	500	....	16000	....	....	400	3000	30000	50	....	.....	230	250	...	*17,065 00	6
7	Queen's	....	....	.....	...	....	7000	700	....	1400	....	40000	40	....	.... .	45	....	....	16,690 00	7
8	Sunbury	....	....	.....	....	....	1000	60	....	1000	....	30000	18	....	.....	35	....	....	7,230 00	8
9	York	....	....	.....	....	....	18000	300	....	400	....	20000	...	....	1000	110	....	....	14,140 00	9
10	Carleton	....	....	.....	....	....	15000	25	....	.....	...	15000	20	....	.....	30	....	....	3,960 00	10
11	Victoria	....	....	.....	....	....	20000	30	....	..	...	4000	....	....	.....	150	....	....	3,825 00	11
	Totals	....	....	.....	500	....	77000	1115	....	3200	3000	139000	128	....	1000	600	250	....	62,910 00	
	Grand totals	3	4110	750000	5415	400	77000	1845	8000	15575	3000	139000	228	2095	301000	600	250	3000	276,580 65	

* NOTE.—In No. 6, add 15,000 lbs. sturgeon and 13 kegs of caviare.

RECAPITULATION

OF the catch of Fish in District No 3, **New Brunswick**, for the Year 1898.

Kinds of Fish.		Quantity.	Price.	Value.
			$ cts.	$ cts.
Salmon, salted	Brls.	15	15 00	225 00
" fresh	Lbs.	216,167	0 20	43,233 40
Herring, salted	Brls.	1,820	4 00	7,280 00
" smoked	Lbs.	34,000	0 02	680 00
White perch	"	30,000	0 05	1,500 00
Lobster fresh	Cwt.	6,390	5 00	31,950 00
Cod	"	599	4 00	2,396 00
" tongues and sounds	Brls.	3	10 00	30 00
Haddock	Cwt.	4,110	3 00	12,330 00
" finnan haddies	Lbs.	750,000	0 06	45,000 00
Hake	Cwt.	5,415	2 25	12,183 75
Pollock	"	400	2 00	800 00
Trout	Lbs.	77,000	0 10	7,700 00
Shad	Brls.	1,845	10 00	18,450 00
" fresh	Each.	8,000	0 10	800 00
Alewives	Brls.	15,575	4 00	62,300 00
" smoked	Lbs.	301,000	0 02	6,020 00
Bass	"	3,000	0 10	300 00
Pickerel	"	139,000	0 05	6,950 00
Eels	Brls.	228	10 00	2,280 00
Sardines	"	2,095	1 50	3,142 50
Sturgeon	Lbs.	15,000	0 07	1,050 00
Caviare	Kegs.	13	35 00	455 00
Fish for bait	Brls.	2,500	3 00	7,500 00
Coarse and mixed fish	"	600	2 00	1,200 00
Fish oil	Galls.	250	0 30	75 00
Fish for bait	Brls.	500	1 50	750 00
Total				276,580 65

RECAPITULATION

OF the Fishing Material in District No. 3, **New Brunswick**, for the Year 1898

Material.	Total value.
	$ cts.
14 vessels (282 tons)	5,540 00
1,046 boats	35,400 00
265,600 fathoms nets	240,225 00
25 seines (1,255 fathoms)	1,960 00
260 trawls	13,000 00
33 weirs	13,200 00
190 hand lines	190 00
85 canoes	850 00
10,700 traps	10,700 00
59 ice-houses	8,700 00
109 smoke and fish-houses	42,800 00
70 wharfs and piers	38,200 00
6 steamers and smacks	3,000 00
Total	413,765 00

RECAPITULATION showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of all Fishing Materials, & used in the Fishing Industry in the whole Province of New Brunswick, for the Year 1898.

Number.	Counties.	Fishing Vessels and Boats.							Fishing Gear or Materials.													Number.
		Vessels.				Boats.			Gill Nets.			Seines.			Trawls.		Weirs.		Smelt Nets			
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.		
				$			$				$			$		$		$		$		
1	Restigouche	1	28	500	5	226	4600	415	135	2[illegible]000	26000	....	.....	.....	...	.....	....	.....	225	11300		1
2	Gloucester*	208	2290	85000	667	1580	48600	2990	2290	270000	96000	....	.....	.....	45	500	....	.....	296	9400		2
3	Northumberland‡	9	163	5260	36	670	20400	1100	2970	140400	112000	....	.....	.....	10	150	....	.....	730	39000		3
4	Kent*	2	36	950	6	900	29000	1960	3580	76600	20400	....	.....	.....	12	720	....	.....	795	33500		4
5	Westmorland	....	....	.....	....	712	19600	1364	1135	50600	17500	....	.....	.....	....	.....	....	.....	350	13000		5
6	Albert	....	....	.....	....	4	200	8	10	800	600	....	.....	.....	....	.....	....	.....	....	.....		6
7	St. John	12	222	4440	53	403	22790	806	4050	202600	202600	25	1255	1960	260	13000	33	13200	....	.....		7
8	King's	....	....	.....	....	150	6000	300	400	20000	15000	....	.....	.....	....	.....	....	.....	....	.....		8
9	Queen's	1	20	300	2	200	2400	400	500	25000	12500	....	.....	.....	....	.....	....	.....	....	.....		9
10	Sunbury	1	40	800	4	58	1160	116	200	10000	5000	....	.....	.....	....	.....	....	.....	....	.....		10
11	York	....	....	.....	....	110	2200	220	120	6000	4000	....	.....	.....	....	.....	....	.....	....	.....		11
12	Carleton	....	....	.....	....	35	350	70	10	500	375	....	.....	.....	....	.....	....	.....	....	.....		12
13	Victoria	....	....	.....	....	90	500	180	30	1500	750	....	.....	.....	....	.....	....	.....	....	.....		13
14	Charlotte	48	875	17250	224	1059	92033	1347	670	19989	7242	289	10786	18400	773	7191	315	126930	7	70		14
	Totals	282	3674	114500	997	6203	249833	11276	16100	849989	520467	314	12041	20360	1100	21561	348	140130	2403	106270		

*NOTE,—In No. 2, add 2 trap-nets, $2,000. In No. 4, add 1 trap-net, $1,000. ‡In No. 3, add 400 scoop bass-nets, $2,000.

RECAPITULATION showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of Fish, &c.—

New Brunswick—*Continued.*

Number.	COUNTIES.	LOBSTER PLANT.					OTHER FIXTURES USED IN FISHERIES.								KINDS OF FISH.				
		Canneries.		Traps.		Number of hands employed.	Freezers and Ice Houses.		Smoke and Fish Houses.		Piers and Wharfs.		Tugs, Steamers and Smacks.		Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Number.
		Number.	Value.	Number.	Value.		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.					
			$		$			$		$		$		$					
1	Restigouche	2	1300	3260	3060	76	15	12100	2	300	1	200	4	1700	225000	.....	.....	2100	1
2	Gloucester	60	43700	80700	74000	1510	54	14200	130	11700	23	7700	154	6000	419500	11000	.....	73100	2
3	Northumberland	12	16400	13000	11000	320	71	27500	130	11800	.....	.....	11	5000	272650	500	10000	6100	3
4	Kent	56	21500	55000	49500	1200	11	5500	24	1650	21	820	3	8000	28000	100	.....	29200	4
5	Westmoreland	61	43000	58000	47000	1650	5	2000	120	1700	4	800	.....	.....	6500	.....	.....	45050	5
6	Albert	.....	.....	.....	.....	.....	.....	.....	1	30	.....	.....	.....	.....	3000	.....	.....	250	6
7	St. John	.....	.....	10700	10700	400	30	6000	63	40000	70	38200	6	3000	143667	.....	.....	1220	7
8	King's	.....	.....	.....	.....	.....	9	1200	15	750	.....	.....	.....	.....	30000	.....	.....	600	8
9	Queen's	.....	.....	.....	.....	.....	10	500	20	1000	.....	.....	.....	.....	4500	.....	.....	.....	9
10	Sunbury	.....	.....	.....	.....	.....	5	250	6	300	.....	.....	.....	.....	3000	.....	.....	.....	10
11	York	.....	.....	.....	.....	.....	5	750	5	750	.....	.....	.....	.....	25000	.....	.....	.....	11
12	Carleton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6000	.....	.....	.....	12
13	Victoria	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4000	.....	*15	.....	13
14	Charlotte	8	18200	23059	19015	318	8	19000	797	136565	278	46125	11	4875	4350	10000	.....	6234	14
	Totals	199	144100	243719	214275	5474	223	89000	1313	206545	397	93845	189	28575	1175167	11600	{10000 lbs. 15 brls}	163854	

* NOTE—Salted barrels.

misprint

RECAPITULATION showing the Quantity and Value of Fish, &c.—New Brunswick—*Continued.*

Number.	Counties.	Kinds of Fish.																	Number.
		Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Smoked finnan haddies, lbs.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	
1	Restigouche	28000	.....	100	....	22550	490	100	....	.....	.....	.....	.....	.....	.....	.....	14500	....	1
2	Gloucester	130000	20000	45000	150	902000	500	66000	130	.....	600	.....	1100	1600	.....	37500	22500	....	2
3	Northumberland	40000	30000	46500	20	118000	130	2150	....	.....	.....	.....	300	450	.....	2000	22500	1600	3
4	Kent	47000	.....	177500	80	462600	250	2880	30	.....	.....	.....	1600	2800	....	4500	15480	65	4
5	Westmoreland	440000	50000	3500	....	500000	1250	100	....	.....	50	.....	.....	.....	.....	.....	12500	2010	5
6	Albert	2000	.....	.....	....	.....	.....	60	....	.....	.....	.....	40	.....	.....	.....	7000	200	6
7	St. John	.....	25000	.....	....	.....	6390	599	3	.....	4110	750000	4915	.....	400	.....	.....	810	7
8	King's	.....	.....	.....	....	.....	.....	.....	....	.....	.....	.....	500	.....	.....	.....	16000	....	8
9	Queen's	.....	.....	.....	....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	7000	700	9
10	Sunbury	.....	9000	.....	....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	1000	60	10
11	York	.....	.....	.....	....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	18000	300	11
12	Carleton	.....	.....	.....	....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	15000	25	12
13	Victoria	.....	.....	.....	....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	20000	30	13
14	Charlotte	20326750	8803255	4300	....	108072	12766	5535	....	1250000	4465	165500	16997	14430	17402	67000	14000	5	14
	Totals	21013750	8937255	276900	250	2113222	21776	77424	163	1250000	9225	915500	25452	19280	17802	111000	185480	5805	

Recapitulation showing the Quantity and Value of Fish, &c.—New Brunswick—*Concluded.*

Number.	Counties.	Kinds of Fish.															Total Value of all Fish.	Number.
		Smelts, lbs.	Alewives or gaspereau, brls.	Bass, lbs.	Pickerel, lbs.	Eels, brls.	Sardines, cans.	Oysters, brls.	Clams, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.		
																	$ cts.	
1	Restigouche	520000	.....	.....	.....	140	.....	.....	.....	4000	23000	100	20	800	800	.....	93,058 00	1
2	Gloucester	1072000	1500	32000	.....	900	.....	1300	1300	36000	113000	700	18500	19700	37000	.....	988,625 00	2
3	Northumberland	2690000	3020	285000	.....	270	366000	16000	200	45000	1270000	1000	350	6050	7500	4	481.249 00	3
4	Kent	1685000	4300	24000	.....	950	.....	5000	2100	28000	268000	1060	1460	8500	6600	9	429,670 00	4
5	Westmoreland	1040000	1700	5500	.....	245	.....	375	450	.....	28000	500	180	27000	11000	.....	428,124 00	5
6	Albert	3000	.....	400	.....	24	.....	.....	.....	.....	30000	50	30	.....	.....	.....	6,689 00	6
7	St. John	.....	†12375	.....	.....	100	2095 brls.	.....	.....	.....	.....	.....	.....	†3000	.....	.....	213,670 65	7
8	King's	.....	400	3000	30000	50	.....	.....	.....	.....	.....	230	250	.....	.....	.....	17,065 00	8
9	Queen's	.....	1400	.....	40000	40	.....	.....	.....	.....	.....	45	.....	.....	.....	.....	16,690 00	9
10	Sunbury	.....	1000	.....	30000	18	.....	.....	.....	.....	.....	35	.....	.....	.....	.....	§ 7,230 00	10
11	York	.....	400	.....	20000	.....	.....	.....	.....	.....	.....	110	.....	.....	.....	.....	14,140 00	11
12	Carleton	.....	.....	.....	15000	20	.....	.....	.....	.....	.....	30	.....	.....	.....	.....	3,960 00	12
13	Victoria	.....	.....	.....	4000	.....	.....	.....	.....	.....	.....	150	.....	.....	.....	.....	3,825 00	13
14	Charlotte	11000	260	.....	3000	.....	1250000 / 169909 brls.	.....	2261	48700	1100	77	29399	4300	12355	9	*1,145,361 75	14
	Totals	7021000	26355	349900	142000	2757	1616000 / 171995 brls.	22675	6311	161700	1733100	4087	60090	69350	75255	22	3,849,357 40	

† Note.—In No. 7, some of this bait is rated at $3 per barrel. Add also 300,000 lbs. smoked alewives.
‡ In No. 8, add 15,000 lbs. sturgeon and 13 kegs of caviare.
§ In No. 10, add 30,000 perch. No. 11, add 1,000 lbs. smoked alewives.
* In No. 14, several items are included not in the columns, see p.

RECAPITULATION

OF the Yield and Value of the Fisheries of the whole Province of **New Brunswick**, for the Year 1898.

Kinds of Fish.	Quantity.	Price.	Value.	Total Value.
		$ cts.	$ cts.	$ cts.
Salmon, fresh ... Lbs.	1,175,167	0 20	235,033 40	
" preserved in cans ... "	11,600	0 15	1,740 00	
" smoked ... "	10,000	0 20	2,000 00	
" salted ... Brls.	15	15 00	225 00	
				238,998 40
Herring, salted ... "	163,854	4 00	655,416 00	
" fresh or frozen ... Lbs.	21,013,750	0 01	210,137 50	
" smoked ... "	8,937,255	0 02	178,745 10	
" kippered ... Cans.	265,000	0 10	26,500 00	
				1,070,798 60
Mackerel, salted ... Brls.	250	15 00	3,750 00	
" fresh ... Lbs.	276,900	0 12	33,228 00	
				36,978 00
Cod, dried ... Cwt.	77,424	4 00	309,696 00	
" tongues and sounds ... Brls.	163	10 00	1,630 00	
				311,326 00
Haddock, dried ... Cwt.	9,225	3 00	27,675 00	
" fresh ... Lbs.	1,250,000	0 03	37,500 00	
" smoked (finnan haddies) ... "	929,100	0 06	56,290 00	
				121,465 00
Hake, dried ... Cwt.	25,452	2 25	57,267 00	
" sounds ... Lbs.	19,280	0 50	9,640 00	
				66,907 00
Pollock ... Cwt.	17,802	2 00	.....	35,604 00
Tom cod or frost fish ... Lbs.	1,733,100	0 05	.....	86,655 00
Halibut ... "	111,000	0 10	.....	11,100 00
Trout ... "	185,480	0 10	.....	18,548 00
Smelts ... "	7,021,000	0 05	.....	351,050 00
Bass ... "	349,900	0 10	.....	34,990 00
Alewives ... Brls.	27,860	4 00	.....	111,440 00
Shad ... "	5,805	10 00	.....	58,050 00
Eels ... "	2,757	10 00	.....	27,570 00
Sardines ... "	171,995	.....	342,942 50	
" preserved ... Cans.	1,616,000	0 05	80,800 00	
				423,742 50
Squid ... Brls.	39	4 00	.....	156 00
Pickerel ... Lbs.	142,000	0 05	.....	7,100 00
Perch ... "	30,000	0 05	.....	1,500 00
Flounders ... "	161,700	0 05	.....	8,085 00
Sturgeon ... "	15,000	0 07	1,050 00	
" caviare ... Kegs.	13	35 00	455 00	
				1,505 00
Oysters ... Brls.	22,675	4 00	.....	90,700 00
Clams ... "	6,311	.....	23,927 00	
" preserved ... Cans.	43,300	0 10	4,300 00	
				28,227 00
Scallops ... Lbs.	41,700	.....	.....	3,685 00
Lobsters, preserved in cans ... "	2,113,222	0 20	422,644 40	
" in shell ... Cwt.	21,776	5 00	108,880 00	
				531,524 40
Coarse and mixed fish ... Brls.	4,087	2 00	.....	8,174 00
Seal skins ... No.	22	.....	.....	49 00
Fish oil ... Galls.	60,090	0 30	.....	18,027 00
" bait ... Brls.	69,350	1 50	.....	107,775 00
" manure ... "	75,255	0 50	.....	37,627 50
Total for 1898 ...	.....	.....	.....	3,849,357 40
" 1897 ...	.....	.....	.....	3,934,135 40
Decrease ...	.....	.....	.....	84,778 00

RECAPITULATION

OF the Vessels, Boats, Nets, and all Fishing Material used in the Fisheries of the whole Province of **New Brunswick**, in the Year 1898.

Articles.	Value.	Total.
	$ cts.	$ cts.
282 fishing vessels (3,674 tons)	114,500 00	
6,203 " boats	249,833 00	
16,100 gill-nets (849,989 fathoms)	520,467 00	
314 seines (12,041 fathoms)	20,360 00	
3 trap-nets	3,000 00	
348 weirs	140,130 00	
2,403 smelt nets (bag-nets)	106,270 00	
400 bass nets	2,000 00	
1,099 trawls	21,561 00	
4,246 hand-lines	2,792 00	
		1,180,913 00
199 lobster canneries	144,100 00	
243,719 " traps	214,275 00	
		358,375 00
223 freezers and ice-houses	89,000 00	
1,313 smoke-houses, &c	206,545 00	
800 smelt shanties	12,400 00	
2 sardine canneries	3,000 00	
1 fish curing factory	3,500 00	
1 guano factory	5,000 00	
30 fish presses	3,000 00	
189 tugs or smacks	28,575 00	
80 weir scows and 50 pile-drivers ($500)	4,500 00	
85 canoes (for fishing purposes)	850 00	
397 piers or fishing wharfs	93,845 00	
		450,215 00
Total		1,989,503 00

Number of Men employed in the Fisheries of **New Brunswick**, 1898.

Men in fishing vessels	997
" boats	11,276
Persons in lobster canneries	5,474
Total	17,747

APPENDIX No. 5.

PRINCE EDWARD ISLAND.

REPORT ON THE FISHERIES OF PRINCE EDWARD ISLAND FOR 1898, BY INSPECTOR OF FISHERIES J. A. MATHESON.

CHARLOTTETOWN, P.E.I., January 2, 1899.

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

SIR,—I have the honour to submit my report of the fisheries of the province of Prince Edward Island for the season 1898, together with a tabulated statement of the yield and value in the different counties. The value of the catch for the island was as follows:—Yield in 1897, $954,949 45. Yield in 1898, $1,070,206 70. An increase of $115,257 25.

MACKEREL.

This branch of the fisheries shows about the same quantity and value as last season, although far short of an average catch, net fishing this season being even worse than last. Our fishermen almost despair of the mackerel again returning to our waters. Were it not for the high price obtained, this fishing would be almost abandoned, thus occasioning a great loss to the province.

OYSTERS.

Notwithstanding the great number of men and boats employed in previous years in this fishery, I find the output for the year 1898 has increased 5,969 barrels, principally due to the large Queen's county catch. The law in reference to small oysters was fairly well observed, but in order to have this regulation work with more beneficial results it will be necessary to place a good man at each of the principal landings to examine the oysters before being barrelled and see that all undersized fish are returned to the beds. This is all the more necessary as the present limit of two inches in diameter is almost too small for the protection of this fishery, and if the size limit cannot be enforced no doubt the results will be disastrous. In Richmond Bay during the summer and fall months, drags have been used by the large boats and although a good many convictions have been obtained against offenders, it is almost impossible to entirely prohibit this means of fishing, the bay being so large that the officers cannot recognize the offenders to secure convictions. It will be hard to compel the discontinuance of the use of drags unless we can have a small tug or boat continuously on the bay. Some new oyster beds have been discovered this season, two small beds at Tracadie, one at Savage Harbour and one at Rustico; these I expect to have examined during the coming summer by Mr. Kemp, the oyster expert.

SMELTS.

This fishery has slightly increased, entirely owing to the extra number of men and boats engaged in this branch of the industry. An extension of ten days was granted, but on account of the irregular crossing of the steamer *Stanley*, by which the fish were transported, the fishermen received no benefit from this privilege.

TROUT.

Tourists as well as our local sportmen have enjoyed good trout fishing this season. The regulations in regard to the dumping of sawdust in our streams and the use of netting, have been well observed and will no doubt improve this branch.

HERRING.

Large quantities of herring appeared on our coast as soon as the ice left our shores and enough were taken for home consumption and for lobster and mackerel bait, these being their principal use.

Fall herring although of excellent quality, were not as plentiful as usual and were not sought after with the usual vigour.

LOBSTERS.

This fishery did not commence as early as usual owing to the ice remaining on the coast until about the tenth of May, and I regret to say that, although over 30 per cent more traps were used in this industry, the value of the catch has decreased $14,702.25. This was caused partly by the lateness of the season which prevented the fishermen from getting out their traps as early as usual and principally by the scarcity and small size of the fish. A very small proportion of spawn or berried fish appeared this season owing, no doubt, to the lobsters not being old enough to carry the spawn. Only a few of the larger fish which keep in deep water supply spawn; and I look forward to seeing this industry become, in a very short time, so unprofitable that many will have to abandon it entirely. A large number of the canneries on the west and north sides of the island were closed about the first week in June owing to the scarcity of fish. It takes more traps each succeeding year to catch the average quantity of fish, and I believe that more strenuous efforts must be adopted to retain the present commercial value of this product.

COD.

I am pleased to report an increase of over twenty thousand dollars in this branch of the fisheries. Codfish struck in about the first week in June and continued plentiful throughout the season. The demand being good, prices were well sustained and the fishermen well remunerated for their season's work. Owing to the scarcity of mackerel on this coast, cod fishing will be prosecuted with greater vigour than in the past.

HAKE.

Fishing was much better than for the past two seasons and our fishermen are looking forward with brighter hopes for the future.

Overseer Nolan, of King's County, reports:—The herring fishing showed an increase of two thousand barrels over last year. He believes that the fish were as plentiful last year but were not as much sought after. Mackerel fishing was about the same as last year but far below an average catch. He noticed at East Point and at East and North Lakes, where the American fishing fleet generally fish and where most mackerel are taken by boat fishermen, that there was nearly twice the quantity caught this season as has been for the last three seasons. In his opinion, this fact is due chiefly to the prohibiting of seining. Should the practice of baiting fish around schooners and then catching them with seines be stopped, in the course of a short time, the fishing would again improve. Lobsters are not decreasing much in numbers but greatly in size. If every packer would object to taking lobsters carrying spawn they would eventually reap a decided benefit for themselves and fishermen. Codfish were both larger and more plentiful. All other kinds of fish appeared about as usual.

Overseer Davison, of Prince County, reports:—There was a slight increase in the quantity of oysters but he found great difficulty in preventing the use of drags and the landing of small oysters. The catch of lobsters in Egmont Bay has increased this season owing to the extension of time and to the greater number of men and traps. A large number of traps was destroyed and a number of convictions obtained for violation of the Fisheries Act. Other kinds of fish were about an average catch. A new industry has been started in the shipping of quahaugs to the United States, which has been quite satisfactory to shippers. Through time the export of quahaugs will likely be largely carried on.

Respectfully submitted,

J. A. MATHESON,
Inspector of Fisheries.

PRINCE EDWARD ISLAND.

RETURN showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of all Fishing Materials, and the Kinds and Quantities of Fish caught in the Province of **Prince Edward Island**, for the Year 1898.

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.							FISHING GEAR OR MATERIALS.							KINDS OF FISH.					Number.
		Vessels.				Boats.			Gill Nets.			Trap Nets for Perch.		Trawls.							
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	
	King's County.			$			$				$		$		$						
1	Souris and Red Point	2	35	500	8	100	2000	140	300	6000	1800	110	250	200	3000	.....	2000	40000	45	50400	1
2	Bay Fortune	....	....	..	...	60	1250	80	180	3600	1200	30	60	30	300	...	1800	30000	20	28656	2
3	Annandale	....	....	...	....	140	3250	360	400	8000	2700	50	100	50	500	...	4000	..	20	126548	3
4	Georgetown	1	30	650	4	35	1000	70	100	2000	700	....	....	25	250	...	4500	15000	25	44048	4
5	Murray Harbour, North	4	180	3000	16	75	3500	160	225	4500	1200	....	....	70	700	...	1500	20000	30	112128	5
6	do South	12	200	7000	40	125	1800	190	290	6000	1600	....	....	100	1000	.....	2300	....	25	63168	6
7	Morell and St. Peter's	1	30	650	5	110	3500	300	700	14000	4800	....	....	45	450	8000	4000	.....	150	91776	7
8	Naufrage	....	....	..	....	65	650	130	200	4000	1500	....	....	25	250	.....	1200	.....	290	63436	8
9	North Lake	....	....	..	....	70	1000	165	240	4800	1600	....	....	25	280	.....	1300	.. ...	450	28656	9
10	East Lake	...	..	..	....	30	450	55	150	3000	850	...	....	20	250	.....	1000	.....	125	34128	10
	Totals	20	475	11800	73	810	18400	1650	2785	55900	17950	190	410	590	6980	8000	23600	105000	1180	642944	
	Value $	....	....	..	....	....	.....	...	.....	...	.. .	....	...	....	....	1600	94400	1050	17700	128588	

RETURN showing the Kinds and Quantities of Fish and Fish Products, &c.—**Prince Edward Island**—*Continued.*

Number.	Districts.	Kinds of Fish.																	Total Value of all Fish.	Number.
		Cod, dried, cwt	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Eels, brls.	Clams, brls.	Oysters, brls.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	
	King's County.																			$ cts.	
1	Souris and Red Point	3500	25	150	2500	5000	2200	2000	500	....	10	50	....	4000	80	70	3000	1500	100	46,535 00	1
2	Bay Fortune	1000	10	50	1000	2000	500	4000	6000	....	5	10	3	2000	50	15	1000	550	30	23,308 20	2
3	Annandale	750	10	25	550	1100	....	5000	5000	....	5	....	....	3000	120	35	600	2000	225	51,513 10	3
4	Georgetown	500	6	....	400	800	....	1000	.....	....	....	....	....	5000	25	....	500	750	60	32,679 60	4
5	Murray Harbour, North	600	....	....	600	1200	....	1200	.....	....	8	....	....	6000	30	...	700	1600	100	36,555 60	5
6	do South	1700	10	...	4550	9100	...	..	.....	....	....	....	....	5000	....	....	3000	2000	100	48,146 10	6
7	Morell and St. Peter's	1400	20	300	250	700	....	10000	15000	....	80	10	2	4000	....	....	1000	2000	100	51,995 70	7
8	Naufrage	2000	....	250	150	300	....	6000	....	....	6	....	....	4000	15	....	1200	1000	70	33,928 70	8
9	North Lake	1000	....	100	150	300	2500	5000	1500	159	18	....	....	3000	20	10	700	500	40	25,323 70	9
10	East Lake	550	....	100	100	.....	....	5000	1000	20	25	20	....	1000	...	10	400	600	50	17,485 60	10
	Totals	13000	81	975	10250	20500	5200	39200	29000	170	157	90	5	37000	340	140	12100	12500	875	.....	
	Value $	52000	810	2925	23062	10250	520	3920	1450	680	1570	180	20	1850	1360	280	3630	18750	875	367,471 30	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, &c.—**Prince Edward Island**—*Continued.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.								Kinds of Fish.						
		Vessels.				Boats.			Gill Nets.			Seines.			Trawls.		Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.							
	Queen's County.			$			$				$			$		$							
1	Tracadie					70	2100	140	348	6960	2088				30	300	1200	20000	10000	150	67588	20	1
2	New London					60	2000	120	110	3700	1000	2	750	700	14	250	1500	50000		200	84500		2
3	Crapaud					26	780	58	15	125	100										45408	4	3
4	Point Prim					1000	1480	140	20	400	100				20	100	110		2000		105648	5	4
5	Rustico					90	2250	200	90	2500	680	2	270	250	6	60	3500		3000	300	107856	10	5
6	Charlottetown	4	75	800	21	20	250	40															6
7	Wheatley River					3	150	9	10	50	20						50						7
8	Lot 65					90	1550	120									110				105584		8
9	Pownal					34	272	60													30192		9
10	Bays and Rivers					40	400	80									1000						10
	Totals	4	75	800	21	1433	11232	967	593	13735	3988	4	1020	950	70	710	7470	70000	15000	650	546776	39	
	Value																29880	700	1800	9750	10935520	195	

RETURN showing the Kinds and Quantities of Fish and Fish Products, &c.—**Prince Edward Island**—*Continued.*

Number.	Districts.	Kinds of Fish.																Total Value of all Fish.	Number.
		Cod, dried, cwt.	Haddock, fresh, lbs.	Haddock, dried, lbs.	Hake, dried, cwt.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Clams, brls.	Eels, brls.	Oysters, brls.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.	
	Queen's County.																	$ cts.	
1	Tracadie	1800	12000	5000	....	500	20000	500	40	325	1500	..	....	....	....	....	60	....	57,067 60	1
2	New London	1500	.....	200	100	500	5000	100	15	10	100	.....	.....	.....	1000	250	100	....	35,230 00	2
3	Crapaud	....	....	....	....	....	6000	....	....	....	....	....	....	....	....	420	50	....	10,266 60	3
4	Point Prim	500	1000	10	300	2000	20000	10	10	5	2100	500	20	20	1000	150	100	20	35,129 60	4
5	Rustico	2000	....	....	....	1000	12000	40	100	40	.....	....	50	.....	800	700	130	..	51,336 20	5
6	Charlottetown	....	....	....	....	1500	10000	....	....	....	....	....	....	....	....	..	....	....	650 00	6
7	Wheatley River	1000	.....	....	.....	100	5000	.....	50	30	....	....	.....	.....	80	.....	....	....	4,884 00	7
8	Lot 65	.....	.....	.....	.....	....	.....	.....	....	5	3000	.....	.....	.....	.....	.....	120	...	33,726 80	8
9	Pownal	.....	.....	....	.....	....	....	....	....	....	....	....	....	....	....	....	30	....	6,068 40	9
10	Bays and Rivers	.....	....	.....	.....	4000	300000	200	200	.. ..	5000	.....	100	.....	.....	.. ..	....	....	41,000 00	10
	Totals	6800	13000	5210	400	9600	378000	850	415	415	11700	500	170	20	2880	1520	590	20	.....	
	Value	27200	390	15630	900	960	18900	3400	830	4150	46800	25	680	40	864	2280	590	40	275,359 20	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, &c.—Prince Edward Island—*Continued.*

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.								Kinds of Fish.					Number.
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.		Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.						
	Prince County.			$			$				$			$		$						
1	Tignish					140	4520	183	160	3330	1260				1	1000		4180			100	1
2	Nail Pond					62	3510	134	71	1651	970	3	52500	1100				1600	500		54	2
3	Frog Pond					46	915	71	48	960	240											3
4	Miminigash					51	2277	127	148	2990	665									10000	28	4
5	Alberton	2	72	2100	13	34	1939	73	94	2700	829	2	800	1000							60	5
6	Narrows and Lot 11					32	795	46	17	340	85							2000				6
7	Ellerslie Lot 12					20	1500	60	130	2700	350							2700			5	7
8	Grand River	1	12	500	3	12	436	26	13	530	210							360	60000			8
9	Malpeque	1	12	400	4	86	2910	172	200	800	1600	1	120	300				500				9
10	Richmond Bay	1	12	300	3	100	2000	150										875	16300	200	8	10
11	Roxbury Lot 6					6	327	9	14	168	58						900	464				11
12	Fifteen Point					102	4945	214	127	1995	276							500				12
13	Brae					13	650	16										1200		1000	5	13
14	West Point					46	1740	96	235	2840	620							75			138	14
15	Travellers' Rest					85	1700	170	7	100	50							400				15
16	Summerside					8	120	16														16
17	Carleton					22	990	39	104	1160	168											17
18	Tryon					41	1395	68	60	1050	354											18
	Totals	5	168	3300	23	906	32714	1670	1428	23314	7735	6	53420	2400	1	1000	900	13854	76800	11200	398	
	Value $																180	55416	768	1344	5970	

RETURN showing the Kinds and Quantities of Fish and Fish Products, &c.—**Prince Edward Island**—*Continued.*

Number.	Districts.	Kinds of Fish.																		Total Value of all Fish.	Number.
		Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Tongues & sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives or gaspereau, brls.	Eels, brls.	Quahangs, bushels.	Oysters, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
	Prince County.																			$ cts.	
1	Tignish	148896		1800		50	500	4500	5000		3						2500			60,004 20	1
2	Nail Pont	80496		1200			580	500									400			29,789 20	2
3	Frog Pond	75128		844			840	41									100	1250		22,226 10	3
4	Miminigash	35712		400			500	1529		500		12000					847	1609		15,569 50	4
5	Alberton	110448		100		100						86000						2500		31,739 60	5
6	Narrows and Lot 11	50276										8400						950		19,900 20	6
7	Ellerslie Lot 12	60000		120			45					18000			2800	1050	200	1500		27,706 25	7
8	Grand River	16272		148								24200			375	2875	38	640		19,680 30	8
9	Malpeque	25920		600			90					4000		4		1800	250	200		17,601 50	9
10	Richmond Bay	960	5	200	2				100			200		4		5000	60	800	50	26,172 00	10
11	Roxbury Lot 6			100								20689		54		104	50			4,441 45	11
12	Fifteen Point	314496																3000		69,399 20	12
13	Brae	23320		20								10000	30	8		250		600		12,339 00	13
14	West Point	28368																250	150	11,943 60	14
15	Travellers' Rest		10	40								10000		2		3400				15,930 00	15
16	Summerside		20									20000				160				1,740 00	16
17	Carleton	54472										20000				140		1065		14,051 90	17
18	Tryon	125536										8000						1090		27,142 20	18
	Totals	1150300	35	5572	2	150	2555	6570	5100	500	3	241489	30	72	3175	14779	4445	17710	200		
	Value $	230060	175	22288	20	450	5748	3285	510	50	30	12074	120	720	952	59116	1334	26565	200	427,376 20	

RECAPITULATION by Counties showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of all Fishing Materials and other fixtures used in the Fishing Industry in the Province of **Prince Edward Island**, for the Year 1898.

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.												Number.
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.		Trawls.		Dip Nets.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
				$			$				$			$		$		$		$	
1	King's County	20	475	11800	73	810	18400	1650	2785	55900	17950	..	.....	.....	190	410	590	6980	150	260	1
5	Queen's County	4	75	800	21	1433	11232	967	593	13735	3988	4	1020	950	15	450	70	710	....	.....	2
3	Prince County	5	108	3300	23	906	32714	1670	1428	23314	7735	6	53420	2400	1	1000	9	248	.....	....	3
	Total	29	658	15900	117	3147	62346	4287	4806	92949	29673	10	54440	3350	206	1860	669	7938	150	260	

Number.	Districts.	Fishing Gear or Material.				Lobster Plant.					Other Fixtures used in Fisheries.								Whole Fishing Gear.	Number.
		Smelt Nets.		Hand Lines.		Canneries.		Traps.		Number of hands employed.	Freezers and Ice Houses.		Smoke and Fish Houses.		Piers and Wharfs.		Tugs, Steamers & Smacks.		Value.	
		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.		Number	Value.	Number.	Value.	Number.	Value.	Number.	Value.		
			$		$ cts.		$		$			$		$		$		$	$	
1	King's County	7	170	1640	1640 00	52	44330	96500	54900	839	....	..	..	..	4	1950	1	1000	159,810 00	1
2	Queen's County	73	1825	120	100 00	60	29200	59290	28175	875	2	100	....	....	4	400	1	500	78,430 00	2
3	Prince County	104	2558	1021	434 50	118	53279	128495	57808	1406	1	100	36	5560	10	14530	....	.....	181,666 50	3
	Total	184	4553	2781	2174 50	230	126829	284285	140883	3120	3	200	36	5560	18	16880	2	1500	419,906 50	

RECAPITULATION by Counties showing the Kinds and Quantities of Fish and Fish Products, in the Province of **Prince Edward Island,** for the Year 1898.

Number.	Districts.	Kinds of Fish.																
		Salmon, smoked, lbs.	Herring, salted, brls	Herring, fresh, lbs.	Mackerel, fresh, lbs	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	*Cod tongues and sounds*, brls.	Haddock, fresh, lbs	Haddock, dried, cwt.	Hake, dried. cwt.	Hake sounds, lbs.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Number.
1	King's County	8000	23600	105000	.....	1180	642944	.....	13000	81	.....	975	10250	20500	5200	39200	..	
2	Queen's County	.....	7474	70000	15000	650	546776	39	6800	....	13000	5210	400	.....	.....	9600	..	
3	Prince County	900	13854	76800	11200	398	1150300	35	5572	2	....	150	2555	6570	5100	500	3	
	Totals	8900	44924	251800	26200	2228	2340020	74	25372	83	13000	6335	13200	27070	10300	49300	3	

Number.	Districts.	Kinds of Fish.									Fish Products.				Total Value of all Fish.	Number.
		Smelts, lbs.	Alewives or gaspereau, brls.	Clams, brls.	Quahangs, bush.	Eels, brls.	Oysters, brls.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls,	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls	Seal skins, No.		
															$ cts.	
1	King's County	29000	170	90	.....	157	5	37000	340	140	12100	12500	875	.....	367,471 30	1
2	Queen's County	378000	850	415	.....	415	11700	500	170	20	2880	1520	590	20	275,359 20	1
3	Prince County	241489	30	.....	3175	72	14779	.....	.....	.....	4445	17710	200	....	427,376 20	3
	Totals	648489	1050	505	3175	644	26484	37500	510	160	19425	31730	1665	20	1,070,206 70	

RECAPITULATION

SHOWING Yield and Value of the different Fisheries in the Province of **Prince Edward Island** during the Year 1898.

Kinds of Fish.		Quantity.	Price.	Value.
			$ cts.	$ cts.
Salmon, smoked	Lbs.	8,900	0 20	1,780 00
Herring, salted	Brls.	44,924	4 00	179,696 00
" fresh	Lbs.	251,800	0 01	2,518 00
Mackerel, salted	Brls.	2,228	15 00	33,420 00
" fresh	Lbs.	26,200	0 12	3,144 00
Lobsters, preserved in cans	"	2,342,020	0 20	468,004 00
" fresh	Cwt.	74	5 00	370 00
Cod dried	"	25,372	4 00	101,488 00
Tongues and sounds	Brls.	83	10 00	830 00
Haddock, fresh	Lbs.	13,000	0 03	390 00
" dried	Cwt.	6,335	3 00	19,005 00
Hake, dried	"	13,205	2 25	29,711 25
" sounds	Lbs.	27,070	0 50	13,535 00
Halibut	"	10,300	0 10	1,030 00
Trout	"	49,300	0 10	4,930 00
Shad	Brls.	3	10 00	30 00
Smelts	Lbs.	648,489	0 05	32,424 45
Alewives	Brls.	1,050	4 00	4,200 00
Clams	"	505	2 00	1,010 00
Eels	"	644	10 00	6,440 00
Quahaugs	Bush.	3,175	0 30	952 50
Oysters	Brls.	26,484	4 00	105,936 00
Tom cod or frost fish	Lbs.	37,500	0 05	1,875 00
Squid	Brls.	510	4 00	2,040 00
Coarse and mixed fish	"	160	2 00	320 00
Fish oil	Gals.	19,425	0 30	5 827 50
Fish as bait	Brls.	31,730	1 50	47,595 00
" guano	Tons.	1,665	1 00	1,665 00
Seal skins	No.	20	2 00	40 00
Total for 1898				1,070,206 70
Total for 1897				954,949 45
Increase				115,257 25

RECAPITULATION

SHOWING the Number and Value of Vessels, Boats, Nets, Lobster Canneries, Traps, &c., used in the Fisheries of the Province of **Prince Edward Island**, Season of 1898.

Number.	Articles.	Value.	Total Value.
		$ cts.	$ cts.
29	Vessels, 658 tons	15,900 00	
3,147	Boats	62,346 00	
4,806	Gill nets, 92,949 fathoms	29,673 00	
1	Trap-net	1,000 00	
205	" for perch	860 00	
10	Seines, 54,440 fathoms	3,350 00	
669	Trawls	7,938 00	
150	Dip nets	260 00	
184	Smelt nets	4,553 00	
2,781	Hand lines	2,174 50	
			128,054 50
230	Lobster canneries	126,829 00	
284,235	" traps	140,883 00	
			267,712 00
3	Freezers and ice-houses	200 00	
36	Smoke and fish-houses	5,560 00	
18	Piers and wharfs	16,880 00	
			22,640 00
2	Steamers and smacks	1,500 00	
			1,500 00
	Total value		419,906 50

SESSIONAL PAPER No. 11a

APPENDIX No. 6.

QUEBEC.

REPORT ON THE GULF OF ST. LAWRENCE FISHERIES FOR THE SEASON OF 1898, BY FISHERY OFFICER WM. WAKEHAM, M.D., WITH SYNOPSIS OF OVERSEERS' REPORTS.

The Hon. Sir L. H. DAVIES, K.C.M.G.
Minister of Marine and Fisheries.

SIR,—I have the honour to present herewith the annual report and statistics of the fisheries of the Gulf division for the season of 1898. In preparing an advance statement to accompany the report for 1897, I had estimated that there would be found a very considerable falling off in the total yield of the season of 1898 as compared with 1897. The result of the tabulated statements, however, shows that the difference was slight, the total value in 1897 being $1,393,126.40, and in 1898, $1,381,226.10, or a decrease for the last season of only $11,900.30. The fishing season opened early, and at first it was thought that we were going to have an abundant return from all the leading branches of the fishery, but as the season advanced complaints were heard in almost all directions that the returns were falling a long way behind an average.

COD.

Cod struck in early in May and though the returns show a slight increase in quantity over the catch of 1897 yet the season was not up to the average. On the north coast the capelin or summer school failed completely. This fishery, which is made along the coast from Natashquan to Blancs Sablons during the months of June and July, is dependent altogether on the movements of the capelin. When the capelin trims along shore and lingers for a few weeks among the bays and islands we are safe to have an abundant codfishing, made altogether inshore and in shoal water, the cod being taken mostly with cod traps or seines When from whatever cause, the capelin keep off shore, and passes from west to east, and through the straits of Belle Isle, then the summer codfishery, on what is known as the Canadian Labrador, fails. This failure to strike inshore on the part of the capelin occurs every now and then, and generally for two or three years in succession. We have had on the Labrador, for the five or six seasons preceding 1898, fairly good codfishing. It has failed in 1898, and the previous history of this fishery would lead us to expect two or three bad years in succession. Over the rest of the coast the fishery was about as usual, good when winds were favourable, and bait abundant. On the Labrador during the capelin school the cod are taken at the surface, where they school just like mackerel, elsewhere they are taken at the bottom, and this bottom fishery is almost more constant than the surface one.

SALMON.

The salmon net fishery was a fairly good one along the shores af Gaspé and Bonaventure, and on the upper part of the county of Saguenay; below Natashquan, like the cod fishery, it was a failure, due no doubt largely to the same cause, the keeping off shore of the capelin. Whenever the capelin are abundant inshore in the bays and estuaries and among the islands where the salmon nets are fished fishermen are assured of a good salmon net fishing. The salmon do not take to the rivers, but remain playing

about, and feeding on the capelin, which seem to hang by preference about the nets, swimming all through them; as a natural result of this large catches of salmon are made. Instinctively I suppose the salmon feeling that he has a long fast ahead of him, in fresh water, seeks to be well filled before entering his river; thus he follows the capelin off shore, and there remains, until late in the season when he proceeds directly up the river, escaping the coast nets, in fact frequently the main salmon run under such conditions as we had on the Labrador in 1898 only takes place late in July or in August when the nets are up. The salmon catch, in any one, or even a couple of seasons, whether with net or rod, is not a certain evidence of the extent of the salmon run.

HERRING.

Spring herring were everywhere abundant. These fish are mostly taken for bait, especially for the lobster fishery, though at the Magdalen Islands a considerable quantity is frequently carried in vessels to Lubec and other ports on the coast of Maine slightly salted in bulk and afterwards smoked. At one time during the existence of the Reciprocity Treaty with the United States many thousands of barrels of this lean herring were exported from the county of Bonaventure to Boston. This trade was effectually killed by the duty on pickled fish. Summer herring were not as plenty as usual, and the fall fishing for fat herring was a failure over most of the coast. On that part of the coast of Gaspé bordering on the southern shore of the Gulf west of Fame Point fat herring were very abundant for several weeks, and many fishermen devoted all their time to the capture and curing of herring, giving up the cod fishery; unfortunately much of this herring was carelessly cured, and put up in inferior barrels, so that the benefits which should have resulted to the coast were lost. The Labrador herring fishery was a failure.

MACKEREL.

The mackerel fishery, which is now confined entirely to the Magdalen Islands, there being no mackerel seen of recent years anywhere else in the Gulf division, was a fairly good one, the take being almost double that of the previous season. The spring mackerel fishery at the Magdalen Islands is greatly hampered by the practice of setting immense fleets of nets right across the mouth of Pleasant Bay: these nets are set by vessels from Nova Scotia and the United States. The local officer, Mr. Chevrier thinks (*vide* his report) that in the interest of the local fishermen this practice should be stopped, and that a cutter should be stationed at the islands to prevent it. We could of course control it within the three-mile limit, but outside of this, without some international arrangement, I do not see that we could stop it. This being the case, and as much of the fishing is now really done fully three miles off shore, from the Headlands, I do not see that we would gain very much by stopping gill-net fishing in the waters under our control. Our fishermen are on the spot. They should be first on the grounds, and do as others from a distance are doing. The injury to our mackerel fishery in the gulf is not done by any gill net fishing, but by the immense destruction of the large ripe mackerel made by the purse-seine fleet from Gloucester off the Nova Scotia coast in May and the early days of June. Prohibit the use of the purse-seine north off Cape Sable until after June 15, and the mackerel fishery in the gulf will soon improve. The large mackerel which constitute the first run of these fish into the gulf never touch the United States shores, either coming or going, and they first make the land along the coast of Nova Scotia, passing into the gulf round Cape North, in a ripe condition, about the end of May. The Gulf of St. Lawrence mackerel fishery has steadily failed since the introduction of this spring purse seine fishery off the Nova Scotia coast. Previous to this we had of course bad seasons, but never such a decided and continuous failure as we are now suffering from. The Southern spring mackerel fishery, made in March and April, is one the evil of which does not so seriously affect us, though it does to some extent as the second and third runs of mackerel along our coast are fish which come up along the United States shores, and are the remnant that have escaped. These are also spawning

fish. But the first run of extra large fish, those that are taken in the purse-seine in May, along the coast of Nova Scotia, are distinctly our own—they can be traced from the northern edge of the Gulf Stream over and outside of the Georges, and they first make the land between Cape Sable and the Gut of Canso, thence following closely along shore round Cape North into the gulf. These mackerel are the first to enter the gulf in the spring and the last to leave in the fall, leaving the shores of Nova Scotia, between Halifax and Cape Sable, during November or the early days of December, and passing south by way of the Georges to their supposed wintering grounds along the northern edge of the Gulf Stream. I think we have as much right to insist that these fish be not wastefully destroyed on the way to their spawning grounds in our waters, as our neighbours have to complain about the injury done to their interests by the practice of pelagic seal hunting. In the case of the mackerel they are equally interested with ourselves in the matter, the bulk of the mackerel fishing in the gulf will be done by their own fishermen, and on some of our best grounds, as at the Magdalen Islands, they enjoy the same inshore fishing rights that we do ourselves. I believe that a majority of the United States mackerel fishermen are quite in sympathy with our own men in this matter.

LOBSTERS.

The lobster pack shows a slight increase, 30,856 pounds. This is not due to any improvement whatever in the fishery, but to the fact that 85,775 more traps were fished in the Gulf division. In 1894, 1,168,998 pounds of lobsters were packed in ninety-six canneries fishing with 76,775 lobster traps, employing altogether 1.360 hands. In 1898 the pack amounted to 1,067,058 pounds; to put this up it required 154 canneries, 162,470 traps, and 2,769 hands. Many of these new canneries are small affairs. They are run by men who having learned the art of soldering, at once begin to pack on their own account. As a rule the meat put up in such canneries is not up to the standard. The lobster close season is everywhere absolutely observed in the Gulf division, save at the Grand Entry Lagoon, where considerable illegal packing has been done in the past; this season, thanks to the employment of an active local guardian, but very little illegal packing was done.

In connection with the decrease in the total earnings of the fisheries in the gulf it is well to note that the returns from the Island of Anticosti have greatly fallen off since the purchase of the island by Mr. Menier. Previous to this the island was really looked upon as common property, and hosts of fishermen from all parts of the gulf, used to land on the island, especially along the north side, and prosecute the cod and herring fishery during the summer and fall. These men lived on shore in rough buildings. They cut all the firewood they required on the spot, and did considerable fur hunting, which was mostly done out of season. None of these resided permanently on the island. Now, however, all this has changed. M. Menier will, very naturally, not permit non-residents to carry on fishing from the island; any one complying with M. Menier's regulations may obtain a location, if he becomes a permanent resident, and can then fish if he so pleases. At English Bay and Strawberry Cove where the fishermen have always been residents, and where no changes have taken place under the new ownership, very little fishing is now done, as all hands have found more profitable employment on shore. At English Bay, now rechristened Baie Ste. Claire, where a few years ago only a few rough and straggling cottages were found along the beach, we now find quite a town, built around a large public square, roads have been made, land drained, large farms established with modern equipment and outbuildings, a system of waterworks, hotel, church, shops of all descriptions, a school-house which would serve as a model to many of our towns, and an hospital with a resident surgeon who is also a naturalist. This hospital is fitted with all the modern appliances for antiseptic surgical work, hot and cold baths, and is divided and subdivided so as to furnish wards for all classes and conditions of patients. There is also constantly at work an extensive steam saw-mill fitted with planing, grooving and tonguing machines, and a turning-lathe, from which all the lumber required in the many extensive works now going on is supplied. The logs are cut within sight of the mill. Elaborate

private residences finished in the natural woods, have been built for the governor, surgeon, clergymen and other chief officers. An extensive forge, to which is adjoined machine, paint, plumbing and tinsmith shops, was in course of construction at the time of my visit. All these buildings and many more, such as shops and storehouses, have been built to correspond, and are finished and painted in harmony with the general plan. A good carriage road has been constructed to Ellis Bay, some ten miles away on the southern shore of the island, where is the grave of the reputed pirate of the gulf—Gamache—who was buried on his feet so as to get the start of some of us at the last call. Here at Ellis Bay M. Menier intends to erect a chateau for himself; the stone is now being quarried at various parts of the island. He has also under construction here an immense breakwater, inside of which shelter can be had for a large number of deep draught vessels. Ellis Bay already affords good shelter from any weather, but with a southerly sea outside a heavy swell rolls in, vessels ride safely and without any strain, but with the discomfort of a heavy roll. This will be done away with when the breakwater, several hundred feet of which has already been built, is completely finished. It is M. Menier's intention to begin work at several other points on the island, notably at Fox Bay, where there is already a fair harbour for small vessels, as soon as the present dispute about the rights of squatters is settled definitely. All these extensive building operations, making of roads, lumbering, &c., have been carried out and performed by local labour, either directly from the island or by men imported from Quebec and the neighbouring parishes, and all the material and supplies required for these many extensive works, and for the maintenance of the residents and men employed have been either furnished directly from the island or imported from Quebec and brought to the island in M. Menier's steamer the *Savoy* a vessel of British register, which has been running steadily for several years between the island and Quebec. This steamer being much of the time at the island, and thus being on the spot, has already been of material assistance in several cases of wreck. All the labour employed, whether skilled or ordinary, is Canadian, only four or five of the heads, men in the confidence of M. Menier, being Frenchmen from old France and several of these are in a fair way of becoming naturalized as they are taking to themselves Canadian wives. Thus we see that though the fishing returns of the island have fallen off, the amount of capital and labour employed in developing its other resources have been greatly increased.

I beg to append synopses of the reports of most of the local overseers showing in detail the condition of the fisheries in each of their subdivisions.

SYNOPSES OF THE REPORTS OF THE LOCAL FISHERY OFFICERS.

Restigouche Subdivision extending from Tide Head to the Point of Maguasha. Mr Charles Brown reports an average salmon catch. The total yield was not up to that of last season, but this is more than accounted for by the fact that three of the upper stations having been leased to the Restigouche Salmon Club, were not fished. Salmon ran in early in May, before many of the nets were set. The main river and its tributaries are all well stocked with breeding fish.

The smelt fishery was a good one, the yield amounting to 266,642 pounds, being a considerable increase over catch of the last season. This fishery is being prosecuted with increased vigour each year. So far there are no signs of any diminution in the runs of the fish. There are no fishways in the subdivision, and none are needed.

Carleton Subdivision, extending from Maguasha to the Grand Cascapedia River. Mr. James Green reports that the salmon fishing was below the average. He attributes this to the stormy weather in June by which many of the nets were washed ashore during the best of the run. Spring herring were abundant, and the catch of fat fall herring was considerably above an average. Cod were plenty, and all those who engaged in this fishery did well. There is at present only one small lobster cannery in operation in this subdivision, engaging a couple of hands. These made fair fishing at the start, but the lobsters gave out early.

Bonaventure Subdivision extending from the Grand Cascapedia River to Paspebiac. Overseer George Forest reports a considerable increase in the general yield of

the fishing in his district. The number of salmon net stations was increased by the licensing of two new berths. Spring herring were very abundant, but fall herring were scarce. Cod were very plenty, and owing to the fine weather in the fall fishermen were able to continue fishing late into November. The returns show a slight increase in the lobster pack, but this was due to the establishment of an extra cannery and not to any increase or improvement in the lobstery fishery, which continues steadily to fail.

Port Daniel Subdivision extending from Paspebiac to Point Macquereau. Overseer F. X. Chapados reports a slight falling off in the catch of salmon, but an increase in the lobster pack. This latter was entirely due to the use of a larger number of traps. Summer codfishing was poor, but in October and November the fish struck in abundantly, and the fishermen did well. Herring were not as abundant as usual.

Grand River Subdivision, extending from Point Macquereau to the Barachois of Mal Bay. Overseer John Keays reports an increase in the salmon catch of about one-fourth more than last season. The codfishery was not quite up to that of 1897. This was due to a scarcity of bait, herring and squid not being at all constant. The smelt fishery opened well in October, but fell off greatly in November so that the catch is not up to the average. The returns show a slight increase in the lobster pack.

Gaspé Subdivision, extending from the Barachois of Mal Bay to Cape Rosier. Overseer Walter Langlois reports an increase of 46,810 pounds in the yield of the salmon net fishery as compared with 1897. Herring were abundant. Cod fishing began on the 22nd May, and continued fair up to the 15th August, between this date and the early part of September the fishing was slack, towards the middle of September the fishery improved and continued good until the 16th October, when a heavy north-east gale struck the coast, after this very few fish were taken. During this gale twenty fishing boats and ten flats were totally lost at Point St. Peters. Mr. Langlois was requested by the fishermen of Point St. Peters to call attention to the necessity for a breakwater at this place for the protection of fishing boats. This is a large fishing station, and it is not the first time that serious loss has occurred here by the destruction of boats on the moorings. The lobster catch shows an increase of 13,470 pounds; this is altogether due to the opening of four new canneries, otherwise the pack would be below the average. The smelt fishery shows a slight falling off; this was due to the prevalence of strong northerly winds during the open season. These winds kept the smelt off the usual seining grounds.

Fox River Subdivision, Cape Rosier to Fame Point. Overseer Moïse Aspireau reports that the cod fishery was fairly good through what is known on the coast as the summer fishing, that is from the opening of the season up to the 15th August; during the fall, however, the fishery failed. Herring were abundant in summer and spring, but scarce in the fall. The lobster pack shows a falling off of nearly two-thirds though the number of traps fished was in excess of last season. Capelin were scarce, these fish have now almost disappeared from this part of the coast.

Mont Louis Subdivision, Fame Point to Marsouis. Overseer Louis Letourneau reports that the return from the lobster fishery was small, one of the two canneries operating in the subdivision had to close down early in June owing to scarcity of fish. The salmon fishing was a good one and the prices obtained by the fishermen were higher than usual. Herring were abundant in the western part of the district, but scarce in the eastern end. Cod struck in May, and the fishery began well, but it slacked off as the season advanced, and on the whole was below the average. Salmon fly fishing was good in the Magdalen, and now that the Mont Louis River is being protected, salmon are rapidly increasing in it.

St. Anne's Subdivision, Marsouis to Cape Chatte. Overseer Didace Bouchard reports the salmon net fishery as having been good. Salmon were abundant in the St. Anne's River, over four hundred having been taken with the fly. The cod fishery was also a success, it lasted late into the fall, fish having been taken up to November 25. Herring were abundant, but as usual these last years they were frequently driven off by the white whales. Mackerel and capelin seem to have completely disappeared from this part of the coast.

Godbout Subdivision, Manicouagan to Jambons. Overseer N. A. Comeau reports an increase in the catch of salmon of over ten thousand pounds; the fly fishing was also

good. The return from the cod fishery was considerably below the average. The herring fishery gives a return of over 900 barrels, which for this subdivision is considerably above an average. The winter and spring seal hunt was not quite as profitable as that of 1897. One small lobster cannery was operated at Cawees; here the pack was slightly better than for either of the two preceding years.

Moisie Subdivision, Jambons to Pigou. Overseer Théotime Migneault reports that the first salmon was taken in the Moisie nets on May 17, the fishing continued good up to the end of June, the nets were taken up on the 8th July. One hundred and ninety-nine salmon, weighing 3,980 pounds, were taken by five rods during a short season on the river. The return from the codfishery is considerably below the usual yield, fewer boats and vessels were engaged in the fishery and stormy weather in August kept the boats in harbour during fully half the time. Mackerel missed entirely. The spring herring fishery was good, but in the fall this fishing failed.

Mingan Subdivision, Pigou to Watsheeshoo. Overseer George DuBerger reports an increase of 2,460 cwt. in the returns from the codfishing, the increase was entirely at the western end of the district, at Esquimaux Point in the eastern end the catch was poor. The salmon net fishing was good, upwards of 40,000 pounds having been taken in the estuary of the St. John's River; this was considerably more than an average catch. The spring seal hunt on the ice in April was better than in 1897, but this fishery is being gradually abandoned as the vessels which formerly engaged in it are lost, or become no longer seaworthy, they are not replaced. Bait was not so abundant as usual, and a great deal of time was lost during the season owing to the difficulty of procuring the bait which is absolutely necessary to the cod fisherman.

Natashquan Subdivision, Watsheeshoo to English Point. Overseer John W. Scott reports the seal fishery as showing a small increase over that of 1897. The salmon net fishing was not as good as usual. The codfishing shows a falling off of 65 per cent, due entirely to the fact that the capelin did not strike inshore shore in June and July as usual. The herring missed entirely, not one barrel being taken, whereas in 1897, the catch amounted to 700 barrels. The lobster pack shows a small increase owing to the fact that several new canneries were in operation.

MAGDALEN ISLANDS.

Southern subdivision—Entry, Amherst and Grindstone Islands.

Overseer J. A. Chevrier reports: That the spring seal fishery was a complete failure; owing to the low price of oil this industry is being gradually abandoned. Spring herring struck in Pleasant Bay in great abundance, and as the weather was fine, and a large fleet of vessels from the Maritime Provinces and the United States visited the islands in search of bait the local fishermen did well. Spring mackerel were abundant and the catch was better than in 1897, but there is no doubt that the local fishermen would have done much better had it not been for the immense number of gills set from foreign and other fishing schooners off the mouth of the bay. These nets completely block the entrance of the bay. The practice of dressing the fish, taken in these nets, on the fishing ground must also be detrimental. Mr. Chevrier advises that a cutter be stationed at the Magdalen Islands from the beginning of the herring fishery until the close of the spring mackerel fishing to prevent all this. Cod fishing was good, but it is not now very generally engaged in at the islands. The fat or fall mackerel fishery was good. This was due largely to the fact that during the season of this fishery the weather was fine.

The lobster fishery, which is one of the principal industries of the islands shows a decrease, and this in spite of the fact that many new canneries are being established. No illegal lobster fishing took place in the southern division of the islands.

Northern subdivision—Allright Half, Bryon and Grosse Islands.

Overseer Procul Chevrier reports: The spring seal hunt a failure at all the islands, except Bryon, where the ice having been jammed on shore, a fairly good hunt was made

by fishermen from the shore. Spring herring were abundant at all the islands and during the spawning season which lasts for a couple of weeks in May, there was no end to the quantity that could have been taken. Spring mackerel were plentiful but not many were taken in this subdivision. Cod were also abundant, but very few men engaged in this fishery. The fall mackerel catch was good, fish were plentiful and the weather was fine. The lobster pack continues to show a falling off in spite of the fact that more traps are being fished each season.

The whole humbly submitted.

W. WAKEHAM,
Officer in charge of the Gulf Division Fisheries.

SYNOPSIS OF FISHERY OFFICERS REPORTS IN THE INLAND DISTRICTS OF QUEBEC—(EXCLUSIVE OF GULF DIVISION.)

SOUTH SHORE, RIVER ST. LAWRENCE, FROM CAPE CHAT TO POINT LÉVIS.

Overseer F. Marin, of Ste. Felicité, reports a considerable increase in the general valu · of the fisheries of his district, chiefly noticed at Capucins, Ste. Félicité and Sandy Bay. Of recent years, cod has been quite plentiful off the coast of Rimouski county as far up as Rivière Blanche. This season's catch was even better than the previous one, but towards the end of the summer the belugas (white whales) seemed to scare them away. Herring was very plentiful and good catches were reported along the coast, especially at Sandy Bay, where the want of curing implements alone prevented a larger supply being secured. Although salmon seemed as plentiful as ever in Matane River, they did not take the fly and the anglers captured but few. The other fisheries produced an average result. He has no direct violations of the fishery regulations to report. The fish at this district is mostly used in the county, but some shipments were made to the Saguenay districts and elsewhere. The value of the total yield is given at over $34,000, an increase of 50 per cent over the previous one.

Overseer Zéphirin Lavoie, who has charge of the upper end of Rimouski county, states that the yield of the fisheries in general is constantly declining and that shad and mackerel are a thing of the past. The regulations were fairly observed. The staple fish of this district is evidently herring, of which nearly over 800 barrels are reported salted, besides four million pounds fresh, not including the 800 barrels of sardine herring. The total value of catch is estimated at $46,000.

Overseer Alphée Côté, who had charge of the county of Temiscouata, after having visited his whole division, reports that fish are generally becoming scarcer and scarcer. In the spring a large quantity of herring is caught as well as some coarse and mixed fish which is hardly used for anything but for fertilizing purposes. Salt herring and most all other fish caught here are used in Canada, excepting sardines, which are exported to United States. Quite an industry is carried on by fishing for smelts through the ice with hooks, especially on Isle Verte River. This is about the only kind of fish which does not show signs of depletion. At Cacouna a fisherman caught $30 worth of seals in his fishery. He observed how voracious these animals were, attacking and destroying other fishes—even salmon were killed by them. He could only secure the small ones as the large ones would break through his fishery and escape. Next season he has a scheme by which he hopes to capture all that will enter his fishery. He also visited Lake Temiscouata which is within his district. Where formerly 400 barrels of whitefish were caught, only fourteen are reported this year. This falling off is ascribed to the high dam built about ten years ago on the Madawaska River, the outlet of Lake Temiscouata, at Edmundston, N.B. Since the construction of the said dam, old fishermen have noticed a steady decline of the fish supply as it is still unprovided with a fish-pass. He also noticed considerable sawdust in that stream, sufficiently to injure fish life. He was

informed of illegal netting in these inland lakes, but was neither able to catch any in the act of fishing nor secure evidence leading to a conviction. Reliable local guardians should be located at or in the vicinity of Temiscouata Lake to check this alleged poaching.

The whole value of the fisheries is made up at $28,000, a decrease of over 25 per cent as compared with last years's product.

Overseer George Sirois, who had charge of Kamouraska county, also reports a general diminution in the fisheries of his locality, which he attributes to the scarcity of fish. This was particularly noticeable and regrettable in the case of the sardine cannery at St. André, which was compelled to cease operations, owing to the want of the fish supply. The different fishery regulations are reported well observed.

Overseer Ephrem Gagnon, whose division extends to Point Levis, states that he visited all his fishermen and endeavoured to secure a correct statement of the true yield of the 155 fisheries under his charge. Of these, 40 were *pêche anglaise* or wire netting pound, under license, but the remainder were eel weirs, and paid no fees. Eels, which are the staple fish of this division, (over 375,000 pounds being caught) were as plentiful as last year, but the yield might have been larger had the weirs not been destroyed and brought ashore by a terrific gale in the fall. Fishermen then thought it was too late to reset them again. Very few salmon are now seen in this district, hardly 500 pounds being returned as the whole season's catch. Smelts were also very scarce. The whole yield, valued at about $27,000, is used for local consumption and for the Quebec market. The fishery regulations were well observed. A single infraction of illegal netting without license came to his notice, the net was confiscated and sold. There were a few complaints respecting the throwing of sawdust in the streams of his district.

NORTH SHORE, RIVER ST. LAWRENCE FROM QUEBEC TO BERSIMIS.

Overseer Joseph Pouliot, who has charge of the county of Montmorency including the Island of Orleans, states that the fisheries in that locality are gradually declining. The salmon and shad fisheries were complete failures, only 300 pounds of each being reported, while a few years ago it was no rare occurrence to see a single fishery capture five and six hundred shad in one tide. Pickerel, whitefish and barfish are also disappearing, and their catch is annually lessened. Eels are about the only kind still yielding an average catch. Mr. Pouliot visited all the fisheries of his district (over 100). Some of them are built with brushes, laths or wire netting, while others are partly brush and partly wire. Some were paying licenses and others were not. As salmon are no more taken in paying quantities, these *pêches* are set later in the season, mostly for eels during the fall. The total yield of this division is valued at $10,500, a falling off of one-third from last year's catch.

Overseer U. Bhereur, of Charlevoix county, also reports a falling off in the yield of their fisheries. A considerable quantity of speckled trout is caught in the lakes of that county. Six belugas or white whales were captured yielding over 300 gallons of oil.

Overseer L. N. Catellier, of Tadoussac, reports the catch of salmon in his district to exceed 100,000 pounds, mostly caught by the net fishermen, as anglers fared badly this season. The salmon arrived nearly three weeks earlier than usual, the water being high, the fish had reached the upper waters before the arrival of the sportsmen. The net fisherman holding license for his station considers it as a part of his estate and is a careful observer of the regulations. All the salmon caught by the netters in this division is shipped to Montreal and Quebec, while the produce of the brush weirs is more used for domestic or local consumption. There was not so much illegal fishing in the Saguenay River as during the previous year, but there was some still. Mr. Catellier reports the capture of nearly 200 belugas (white whales); the total value of which catch is given at $31,000, an increase of 80 per cent over hat of 1897.

INLAND DISTRICTS.

Megantic and Sherbrooke divisions.

Overseer Allan McLeod, who had charge of Lake Megantic district, reports a very prosperous fishing season. Fish are still as plentiful there as ten years ago. These waters, being admirably situated and of easy access, draw a large number of tourists and sportsmen from the vicinity as well as from the neighbouring Republic. These strangers are of considerable benefit to the settlers, whom they employ as guides and helps in their fishing and hunting trips, besides supplying the former with food. Mr. McLeod is of opinion that the close time for lunge, the principal fish of Lake Megantic, should commence earlier, as by September 20th they are congregating on their spawning beds and it is too bad to disturb them after that date. Lake Megantic shores are now mostly inhabited, thus rendering poaching an easy matter but difficult of detection, as settlers will not inform on one another. He visited the dams on the different streams in the vicinity of this large lake. Several new mills were erected during the season. He seized thirteen gill-nets and destroyed them, but was unable to prosecute the owners for want of direct evidence.

Overseer John McCaw, who had charge of the Sherbrooke district, reports less poaching and illegal fishing than during the previous years. He complains that inadequate protection is given to the beautiful waters of the Eastern Townships now so attractive to sportsmen.

Magog and Brome.

Overseer Hugill Ball, who has charge of the western side of Lake Memphremagog, states that more lunge were caught than during the previous season, although the yield was not up to that of former years. Fish were abundant on the spawning beds, appearing there as early as October 10. With the assistance of a reliable guardian, the close seasons were strictly maintained. One boat was confiscated and two offenders fined.

Overseer C. G. Boyenton, who has charge of the other side of Lake Memphemagog, reports considerable illegal fishing with nets during the open season, but he did his best to check it with the little assistance he had at his disposal. He is of opinion that net or seine fishing might be allowed for whitefish in some parts of the lake and at certain times of the year. As these whitefish do not take the hook, it might prove beneficial to grant such permission to the settlers who otherwise might become poachers, and the fishery laws might therefore be better respected. Such privileges are granted to United States citizens at the southern end of this lake, which is Vermont State, where whitefish seem more plentiful than lunge.

Missisquoi Bay.

Overseer P. E. Luke, who has charge of Missisquoi Bay, states that the large catch of pickerel would have been even larger had not the ice moved so early in the spring. For some unknown reason whitefish did not put in an appearance as usual, thus rendering fall fishing very unprofitable. The whole catch is shipped to New York and Boston. The close seasons are reported well observed. This officer seized a schooner for illegal fishing in June, and in the fall he confiscated a gill-net on the east side of the bay.

Richelieu River.

Pierre Levesque, who has charge of the upper part of Richelieu River, states that the general yields of fish has considerably fallen off owing to the restrictive measures recently adopted limiting and curtailing the fishing implements. For instance, only forty-six hoop-nets were used against 130 during the previous season. Eels are the staple fish of this district and large quantities were taken. Mr. Huot, owner of the two large eel fisheries in this stream, captured 65,000 pounds alone. Should these restrictions be continued in force angling would soon improve, and the majority of the people would welcome any such beneficial changes. The fact that he seized thirty-one hoops-nets and four seines is adequate proof that considerable illegal fishing was attempted, but these seizures

with the five fines imposed had a salutary effect. Fortunately the waters of the Richelieu remained high in the spring, thus allowing the fish facility to ascend the small tributaries for the purpose of spawning. Nearly five-sixths of the catch is exported to the United States.

Overseer J. O. Dion, of Chambly, reports an increased yield of the fisheries below the Chambly dam on the Richelieu River. This result he ascribes to the very dam itself, as the fish cannot now ascend above it. The big eel fishery in the vicinity of Chambly canton was a complete failure and the licensee did not realize sufficiently to pay the fee; however, the small eel fisheries captured as many as usual.

Coarse fish, especially carp, comprises the largest part of the catch; however, he reports 7,000 lbs. of bass and pickerel. Some of the licensed fishermen of the Sorel district came down the river as far as St. Ours; infringing on his limits. He hopes it will not be repeated another season. Having heard that spearing was practised in some parts of his district, Mr. Dion went and had this illegal practice stopped. He notified all interested parties that no seining would be allowed next spring. The total value of the fisheries of both the above divisions only amounts to $7,300.

Beauharnois and Chateauguay Divisions.

Overseer W. H. Dewitt reports an increased catch of bass, pickerel, perch and eels, but a falling off in that of sturgeon. About 85 per cent of the yield is shipped to Montreal markets and the remainder used in the locality. He would approve of restricting the use of seines in that part of Lake St. Louis. The close seasons were well observed. Millowners also complied with the regulations. Carp are getting so plentiful that it is recommended seining should be allowed in the small streams, where they no doubt ascend to spawn.

Overseer J. D. McMillan, who has charge of the south side of Lake St. Francis, also reports an improvement in pickerel, maskinongé and perch and a shortage in sturgeon. The former is ascribed to the prohibition of seines and hoop-nets in those waters, and the latter to the high winds in the autumn when sturgeon lines were set. The existing fishways are in good order but where most needed there are none, especially at Dewittville. Millowners do not now allow their sawdust to drift in the streams. The proximity of these waters to the United States make them quite a summer resort and a great many tourists visit them every season.

Montreal Division.

Overseer John Morris states that the catch of fish was fair in the early part of the season but that it did not last long. The quality of the soft fish was not up to the average. The different regulations were fairly well observed; very few infringements came to his notice. The total value of the yield does not reach $4,000.

Verchères Division.

Overseer Chas. Robitaille reports a surplus over the preceding catch. There was considerable poaching in the vicinity of Contrecœur Islands and at Bout-de-l'Ile; at each visit there, he always seized and destroyed several hoop-nets and gill-nets, but he does not seem to have detected their owners. He did his best to prevent the capture of small or young fish. Seining should not be permitted between June 15 to September 1, according to this officer, as it is difficult during the hot weather to preserve fish, especially soft fish, in good condition. This step would prove beneficial to every one concerned, the fishermen as well as the consumer.

Nicolet Division.

Overseer Geo. Boisvert states that most of the fishermen seek to underestimate their catch, thinking thereby to secure the abolition of the license system, but by taking notes at different times, it enables him to obtain a fair estimate of the yield. He noticed that not only were fish actively sought after, but that they seemed of a larger size, especially sturgeon and shad. Most of the catch is shipped to Montreal, Sherbrooke and Three Rivers. He watched closely during the prohibited times but detected no poaching. There is a saw-mill at Becancour which should be provided with a fish-ladder, as it completely bars this stream. In fact, there are no fishways at all in his division. He

recommends the special marking of all licensed implements, to facilitate the detection of illegal ones by the officers. The principal abuse complained of is the use of small mesh seines in isolated spots destroying immatured fish. The total catch is valued at over $6,000.

Maskinongé and Berthier Divisions.

Overseer Gabriel Caron reports a larger catch than the preceding one, but the fish were of a smaller size. This increase is openly ascribed to excessive and illegal fishing. The fact that this overseer detroyed 162 unlicensed hoop-nets is evident proof of the amount of poaching carried on in this part of Lake St. Pierre. Some fishermen take license for one or two *verveux* and use from six to ten.

He also urges that all licensed implements be distinctly so marked. The undersized fish is not shipped to Montreal, where the markets are closely supervised by Officer Riendeau, but they are sent to neighbouring markets towards Quebec. He ends his report by saying that he considers seining the most destructive of all modes of fishing, as the seines when drawn in small bays, where fish have deposited their eggs, must disturb and destroy them.

Ottawa River Division.

Overseer Dosithé Chenier, of Hull, states that although the number of licensed fishermen was less than in 1897, still the season's yield surpasses the previous one. This is particularly noticed in Lake Deschenes where large quantities of pickerel, sturgeon and catfish were captured. The fish of that lake are of a larger size and their abundance is ascribed to the protection it has received and to the absence of sawdust and rubbish from its clear waters, contrasting with the nuisance experienced in the lower Ottawa where fishermen spend half their time in cleaning their nets by removing the accumulated rubbish. The Buckingham Mills also throw every débris in the water, and every time he passed the Lièvre River he noticed it full of mill refuse as well as the neigbouring bay where it is allowed to accumulate to the detriment and against the protestations of the regular fishermen who are loudly complaining. Considerable illegal fishing was done in the spring by unlicensed fishermen when the water was high. These poachers sell their catch in small villages, fearing detection if they come to town.

St. Lawrence River.

Overseer Joseph Riendeau, of Montreal, supervises that part of the St. Lawrence River extending from Lake St. François to Lake St. Pierre. He says it is almost impossible to even make an approximate of the quantity of fish caught as so much of the yield is disposed of in the interior of the province and not accounted for by the overseer. In his frequent visits to the different fishing districts he seeks not only the protection of the fisheries, but also that of the fishermen themselves. In many instances, well-to-do farmers and even merchants succeed in obtaining licenses, to compete with the poor fisherman whose only means of a livelihood is fishing. Sometimes these rich applicants do not even pay fees. The overseer of a district should be able to discriminate who are the deserving and real fishermen to whom this calling is of material benefit, and to those alone should licenses be granted. He finds that the respective districts under the charge of one overseer are generally too large for one person to protect alone unless his whole time was devoted to it, otherwise there is always more or less poaching carried on. On one of his visits to Isle Perrot he caught and arrested four individuals seining without licenses. Thinking a sufficient lesson had been given, they were subsequently released as they were too poor to pay fines. The most illegalities are perpetrated in Lake St. Peter and within a few weeks he seized and destroyed no less than 300 hoop-nets with small meshes or long wings, and then he believes there were over one thousand hoop-nets then fishing in the lake. These wings are very injurious for small fish and should be prohibited, or at least limited. Mr. Riendeau is of opinion that the tar applied to these *verveux* is very harmful, as he claims that fish caught in such nets are partly poisoned and soon become unfit for food although placed on our best markets.

Mr. Riendeau remarks that game fish are openly sold on the Quebec City markets during their close season without apparent hindrance. Some one should be deputed to supervise the markets of such a city under the very shade of the Provincial buildings.

PROVINCE OF QUEBEC—Gulf of St. Lawrence District.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, and the Quantity and Value of all Fishing Materials and other Fixtures used in the Fishing Industry in the **County of Bonaventure**, Province of Quebec, for the Year 1898.

RESTIGOUCHE SUBDIVISION (Tide Head on the Restigouche to Maguasha).

Number.	Districts.	Fishing Boats.			Fishing Gear or Materials.										Kinds of Fish.					
					Gill Nets.			Seines.			Trawls.		Hand Lines.							
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Number.
	Bonaventure County.		$				$			$		$		$						
1	Restigouche	53	795	100	30	6000	4000	....	.....	.. ...	...	.....	..	.....	41900	50	8000	.....	....	
	CARLETON SUBDIVISION (Maguasha to Maria).																			
1	Nouvelle	72	1020	144	100	2400	1700	3	120	60	.. .	.....	40	30	8500	220	1000	1000	....	1
2	Carleton	125	1660	210	250	5000	2500	20	600	200	...	....	35	26	17500	400	6000	7000	1	2
3	Maria	155	2060	360	350	6000	2700	15	450	150	...	.....	75	55	27200	340	3000	8000	1	3
	Totals	352	4740	714	700	13400	6900	38	1170	410	...	.....	150	111	53200	960	10000	16000	2	
	BONAVENTURE SUBDIVISION (New Richmond to Paspebiac Point).																			
1	New Richmond	16	160	24	50	800	300	....	.....	....	....	.....	10	3	....	110	1500	3000	....	1
2	Capelin and Black Capes	164	1760	194	365	7800	4150	10	300	200	6	30	15	5	14539	990	7000	6000	....	2
3	Bonaventure	250	3460	375	500	10000	5000	54	1400	1080	30	150	675	202	6900	1000	15000	20000	....	3
4	New Carlisle	40	450	60	90	1650	900	20	600	400	10	50	90	27	835	150	5000	2000	...	4
5	Paspebiac	170	2750	300	340	6120	3400	30	900	900	80	400	450	135	... .	500	6000	6000	...	5
	Totals	640	8580	953	1345	26370	13750	114	3200	2580	126	630	1240	372	22274	2750	34500	37000	....	

RETURN showing the Quantity and Value of Fish, &c.—**County of Bonaventure**—*Continued.*

RESTIGOUCHE SUBDIVISION (Tide Head on the Restigouche to Maguasha).

Number.	Districts.	Kinds of Fish.																		Total Value of all Fish.	Number.
		Lobsters, preserved in cans, lbs	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Trout, lbs.	Smelts, lbs.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.		
	Bonaventure County.																			cts.	
1	Restigouche		100						6000	266642	50		50000		200			500	4	26,747 10	1

CARLETON SUBDIVISION (Maguasha to Maria).

1	Nouvelle			100		500	5		500	15700	2	1500	500		100	40	30	1500		5,002 00	1
2	Carleton	7800	1	90		700	7				4	25000	600		300	25	100	4000		11,359 50	2
3	Maria		5	400		800	9		400		20	4000	700		200	155	120	5000		12,282 50	3
	Totals	7800	6	590		2000	21		900	15700	26	30500	1800		600	220	250	10500		28,644 00	

BONAVENTURE SUBDIVISION (New Richmond to Paspebiac Point).

1	New Richmond			55		600			800		4					14	12	400		1,095 20	1
2	Capelin and Black Capes	5760	4	1195	4	3400			700							298	280	8600		18,031 20	2
3	Bonaventure	6624	4	2250	8	2000	16		2500		6					560	546	12000		23,741 80	3
4	New Carlisle		2	185	1	1000	4									47	40	2000		2,733 10	4
5	Paspebiac			4300	12	3000	50									1075	900	3000		22,912 50	5
	Totals	12384	10	7985	25	10000	64		4000		10					1994	1778	26000		68,513 80	

RETURN showing the Number and Value of Vessels, Boats and Fishing Materials, &c.—**County of Bonaventure**—*Continued.*

PORT DANIEL SUBDIVISION (Paspebiac Point to Point Maquereau).

Number.	Districts.	Fishing Boats.			Fishing Gear or Materials.										Kinds of Fish.					
					Gill Nets.			Seines.			Trawls.		Hand Lines.							
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Number.
	Bonaventure County—Concluded.		$				$			$		$		$						
1	Paspebiac	38	1500	63	40	780	776	7	165	132	35	400	130	80	3000	190	.....	.....	...	1
2	Nouvelle	40	1250	119	65	1150	1105	9	240	192	20	200	120	70	2200	250	.....	.....	....	2
3	Shegawake	53	1280	80	80	1450	1380	6	180	144	...	...	160	90	.....	300	.....	.....	....	3
4	Port Daniel	166	4980	240	180	3400	3950	18	460	368	60	450	480	240	23594	500	.....	1000	...	4
5	Anse à Gascon	145	4500	216	200	3900	3870	20	480	384	100	950	432	220	6518	550	.....	.....	....	5
	Totals	442	13510	718	565	10680	11081	60	1525	1220	215	2000	1322	700	35312	1790	.....	1000	....	
	Grand total	1487	27625	2485	2640	56450	35731	212	5895	4210	341	2630	2712	1183	152686	5550	52500	54000	2	

RETURN showing the Number and Value of Vessels, Boats and Fishing Materials, &c.—**County of Bonaventure**—*Continued.*

PORT DANIEL SUBDIVISION (Paspebiac Point to Point Maquereau).

Number.	Districts.	Kinds of Fish.																		Total Value of all Fish.	Number.
		Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Trout, lbs.	Smelts, lbs.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.		
	Bonaventure County.																			$ cts.	
1	Paspebiac	24864	....	600	5	.....	50	12	....	.....	....	....	.....	12	....	450	200	300	....	9,592 80	1
2	Nouvelle	.....	....	480	4	.....	15	10	.....	.....	....	.....	.....	15	....	350	150	280	....	3,997 50	2
3	Shegawake	9408	....	670	....	....	8	...	.....	.....	...	.....	....	8	...	525	200	300	....	6,425 10	3
4	Port Daniel	30888	....	2400	8	.....	150	40	.....	14000	....	.....	.....	120	....	1670	750	450	....	26,167 40	4
5	Anse à Gascon	4176	...	3400	83	...	160	60	.....	.....	....	.....	.....	200	....	2800	850	500	..	22,548 80	5
	Totals	69336	....	7550	100	.....	383	122	.....	14000	....	.....	.....	355	....	5795	2150	1830	....	68,731 60	
	Grand total	89520	116	16125	125	12000	468	122	10900	296342	86	30590	51800	355	800	8009	4178	38830	4	192,636 50	

RETURN showing the Number and Value of Vessels, Boats and

County

GRAND RIVER SUBDIVISION

Number.	Districts.	Fishing Boats.			Fishing Gear or Materials.									
		Boats.			Gill Nets.			Seines.			Trawls.		Hand Lines.	
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.
	Gaspé County.		$				$			$		$		$
1	Newport	130	3800	290	245	4750	1950	7	220	200	83	950	820	535
2	Pabos	52	910	112	91	1390	758	4	110	90	16	180	261	211
3	Grand River	154	6500	390	390	8945	3600	4	150	60	130	1450	700	370
4	Cape Cove	179	5090	426	366	7490	2610	8	230	135	131	1440	1364	2840
5	Percé	98	4500	196	210	4560	1840	3	120	75	....	....	1400	1050
6	Bonaventure Island	33	1000	60	70	2560	650	..	....	....	....	....	200	120
7	Corner of Beach	28	1100	50	80	2890	1160	9	225	180	....	....	125	88
	Totals	664	22810	1524	1452	32485	12568	35	1055	740	360	4020	4870	5214

GASPÉ SUBDIVISION

1	Malbaie	213	8650	243	86	2000	2200	14	484	480	....	...	500	250
2	Point St. Peter and Chien Blanc	138	3460	176	112	3600	2560	7	187	225	...	...	352	176
3	Seal Cove and Douglastown	168	4900	204	83	2750	1770	8	240	128	....	....	408	204
4	Sandy Beach	28	675	35	70	2000	2000	..	...	...	...	...	70	35
5	Gaspé North and South	43	475	48	100	3500	2650	24	960	960	....	....	50	25
6	Peninsula	18	350	29	65	1960	1650	..	....	....	....	....	60	30
7	Cape Ozo and Little Gaspé	57	700	65	70	2094	1720	2	40	15	....	...	130	65
8	Grand Grève and Ship Head and Cape Rosiers	140	3000	166	81	2920	1600	10	240	245	....	....	332	166
	Totals	805	22210	966	667	21724	16150	65	2151	2053	....	...	1902	951

FOX RIVER SUBDIVISION

1	Anse à Louise and Jersey Cove	117	936	234	954	4680	1170	..	....	....	....	....	200	400
2	Anse à Grisfonds	50	400	100	100	2000	500	..	....	....	....	....	260	320
3	Fox River	125	1000	250	250	5000	1250	..	....	....	....	....	500	1000
4	Little Cape	25	200	50	50	1000	250	..	....	....	....	....	100	200
5	Echourie and Big Cove	24	98	30	30	600	150	..	....	....	....	....	60	120
6	Point Jaune and Anse à Valeau	69	535	134	134	2140	670	..	....	....	....	....	268	528
	Totals	410	3169	798	1518	15420	3990	..	...	....	..	..	1388	2568

SESSIONAL PAPER No. 11a

Fishing Materials, &c.—**Province of Quebec**—*Continued.*

of Gaspé.

(Point Maquereau to Corner of Beach).

Kinds of Fish.														Total Value of all Fish.	Number.
Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.	Halibut, lbs.	Smelts, lbs.	Squid, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
															$ cts.	
7400	195	.....	23104	....	7190	....	25	20	.....	3000	220	5500	350	600	39,265 80	1
25600	40	....	16704	....	2500	....	5	5	.....	1000	86	980	260	....	19,725 05	2
5000	160	....	22560	....	8900	....	40	40	.....	2000	180	5700	1200	....	46,292 00	3
.....	420	.....	28800	....	15800	....	19	13	.....	.....	323	7100	1100	...	75,798 25	4
1500	70	.....	9100	....	8500	....	17	12	.....	.....	400	7050	700	....	41,243 00	5
...	25	...	.....	....	4500	....	2	2	.....	.....	30	2500	150	...	19,205 50	6
16000	25	.....	11328	....	1250	....	....	....	.....	...	25	1000	125	....	11,153 10	7
55500	935	.....	111596	....	48640	...	108	92	.....	6000	1264	29830	3885	600	252,682 70	

(Malbaie to Cape Gaspé).

6000	325	.....	17270	....	10200	....	....	...	.....	3000	250	5500	1400	...	51,654 00	1
660	350	.....	5664	....	5200	....	....	....	.....	.....	100	1700	2600	....	28,272 80	2
6500	250	.....	9264	....	2400	....	....	....	.....	.....	50	1275	800	....	15,535 30	3
22000	20	.....	.....	....	40	....	....	....	.....	.....	....	35	10	....	4,665 50	4
42000	8	....	.....	..	.....	...	....	....	.....	42950	....	.....	.....	....	10,579 50	5
21640	30	.....	.....	....	30	....	....	....	.....	.....	....	24	10	....	4,590 20	6
10420	90	.....	3936	....	640	....	....	....	....	.....	75	220	170	....	6,412 20	7
7320	600	.....	29200	...	3000	....	....	....	.....	.....	100	1400	800	....	23,724 00	8
116530	1673	.....	65334	....	21510	....	....	....	.....	45950	575	10154	5790	....	145,433 50	

(Cape Rosier to Fame Point).

.....	450	14000	1720	20	4100	9	50	....	11000	.....	100	2050	400	..	21,739 00	1
.....	200	15000	4800	40	1800	4	20	....	6000	.....	50	900	200	....	10,780 00	2
.....	475	20000	1920	10	6950	10	30	...	16000	.....	130	3470	750	....	34,810 00	3
.....	75	5500	.....	....	250	2	10	....	6000	.....	30	125	100	....	2,312 50	4
.....	60	1000	.....	....	260	2	4	....	5000	.....	30	130	100	....	2,131 00	5
.....	200	8000	3840	15	500	4	8	....	9000	....	60	250	300	....	5,452 00	6
.....	1460	63500	12280	85	13860	31	122	....	53000	.....	400	6925	1850	....	77,224 50	

63 VICTORIA, A. 1900

RETURN showing the Number, Tonnage and Value of Vessels, Boats

County of

MAGDALEN RIVER SUBDIVISION

Number.	Districts.	Fishing Vessels and Boats.							Fishing Gear or Materials.									
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.		Hand Lines.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.
	Gaspé County—Con.			$			$				$			$		$		$
1	Grande Etang and Point Sèche	..	....	....	..	108	2160	180	200	5000	2000	2	80	50	..	....	360	720
2	Big and Little Chlorydorme																	
3	Petite and Frigate Point																	
4	Grand and Little Vallée																	
5	Magdalen River																	
6	Manche d'Epée and Gros Mâle	..	....	....	..	84	1640	125	130	3250	1300	1	30	40	..	....	250	400
7	Anse Pleureuse and Mont Louis																	
8	Rivière à Pierre	..	....	....	..	83	1340	124	130	3250	1300	2	60	40	..	....	248	280
	Totals	..	....	....	..	275	5140	429	460	11500	4600	5	170	130	..	....	858	1400

STE. ANNE DES MONTS SUBDIVISION

1	Claude River to Martin River	..	....	....	..	30	450	54	30	750	360	..	....	....	..	....	108	108
2	Ste. Anne	..	....	....	..	114	1710	168	100	2500	1200	..	....	....	..	....	228	228
3	Cape Chatte	..	....	....	..	37	555	55	38	950	300	..	....	....	..	....	110	110
	Totals	..	....	....	..	181	2715	277	168	4200	1860	..	....	....	..	....	446	446

MAGDALEN ISLANDS

1	Entry Island	..	....	....	..	20	800	45	75	1875	450	..	....	....	..	....	30	9
2	Amherst Island	1	15	300	4	150	6000	340	1629	40625	9774	7	980	2000	..	....	680	175
3	Grindstone Island	..	....	....	..	211	10550	592	175	4375	1050	5	575	1800	2	750	1100	275
4	Allright Island	6	240	5000	30	109	2725	289	352	10560	2112	..	....	....	1	200	400	100
5	Grand Entry	..	....	....	..	47	1600	68	20	500	120	..	....	....	3	475	130	31
6	Grosse Isle	..	....	....	..	45	1550	42	4	32	30	..	....	....	..	....	84	11
7	Bryon Island	..	....	....	..	50	1750	59	10	250	60	..	....	....	..	....	20	10
	Totals	7	255	5300	34	632	24975	1435	2265	58217	13596	12	1555	3800	6	1425	2444	611

SESSIONAL PAPER No. 11a

and Fishing Materials, &c.—**Province of Quebec**—*Continued.*

Gaspé—*Continued.*

(Fame Point to Claude River).

Kinds of Fish.																Total Value of all Fish.	Number.
Salmon, fresh, lbs.	Salmon, salted, brls.	Herring, salted, brls.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Halibut, lbs.	Trout, lbs.	Eels, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.			
																$ cts.	
1950	..	850	.....	9120	4980	....	....	15800	1200	....	4000	1000	.....	.....		29,934 00	1
4800	5	250	.....	1872	1940	....	....	300	1000	....	1500	800	.....	.....		11,949 40	2
9450	....	1250	.....	.....	1325	....	....	3500	....	....	1000	450	100	.....		13,565 00	3
16200	5	2350	.....	10992	8245	...	....	19600	2200	....	6500	2250	100	.....		55,448 40	

(Claude River to Cape Chatte).

800	....	202	.....	.....	396	....	....	1900	....	....	250	150	300	.....	3,192 00	1
3000	....	1933	.....	.....	1094	....	....	4400	....	....	700	350	700	.....	14,233 00	2
1700	....	416	.....	.....	300	....	....	4500	....	....	200	120	400	.....	4,103 00	3
5500	....	2551	.....	.....	1790	....	....	10890	....	....	1150	620	1400	.....	21,528 00	

SUBDIVISION.

.....	....	75	110	14256	25	....	....	.....	....	....	10	50	.....	.....	4,979 20	1
....	....	3000	1825	90147	3500	10	250	.....	....	100	1200	725	300	250	75,164 40	2
.....	....	2500	2090	139712	2532	15	175	.....	...	25	800	1850	500	1200	85,110 40	3
.. ..	....	1804	2043	79536	480	....	30	.....	....	6	125	1160	150	250	58,003 20	4
.....	....	437	203	175152	246	....	....	.....	.....	....	80	500	.....	170	41,793 90	5
.....	....	150	134	35295	30	.. .	...	. ...	....	....	10	200	.....	300	10,467 00	6
.....	....	.....	40	78192	....	....	..	.. .	....	....	.....	75	.....	1045	17,657 15	7
.....	....	7966	6445	612290	6813	25	455	..	....	131	2225	4560	950	3215	293,175 25	

63 VICTORIA, A. 1900

RETURN showing the Number, Tonnage and Value of Vessels, Boats

County of

GODBOUT SUBDIVISION

Number.	Districts.	Vessels and Boats.							Fishing Gear or Materials.									
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.		Hand Lines.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.
	Saguenay County.			$			$				$			$		$		$
1	Manicouagan to Jambons..	3	47	650	8	210	4200	176	310	7500	3750	5	250	250	..	....	352	141
	MOISIE SUBDIVISION																	
1	Jambons & Ste. Marguerite	..	...	....	..	4	250	8	5	1300	1200	1	40	50	..	....	....	....
2	Seven Islands	2	63	1400	10	20	2200	40	17	2730	2525	3	155	233	..	....	....	....
3	Moisie and Pigou	1	13	400	4	24	2050	47	35	5850	5540	3	110	150	..	....	....	....
	Totals	3	76	1800	14	48	4500	95	57	9880	9265	7	305	433	..	....	....	....
	MINGAN SUBDIVISION																	
1	River aux Graines and Chaloupe	..	....	....	..	20	1000	50	5	500	250	4	126	220	.	....	104	52
2	Sheldrake	..	....	....	..	24	1200	60	4	400	300	2	70	300	2	1000	120	60
3	Thunder River	..	....	....	..	42	1500	99	8	750	500	2	190	100	2	700	200	100
4	Dock, Ridge Point and Jupitagan	..	....	....	..	12	690	28	3	300	300	5	170	245	..	....	56	33
5	Magpie	..	....	....	..	55	1000	95	10	900	400	7	250	180	..	....	190	100
6	St. Johns River	..	....	....	..	59	2950	130	20	2000	1500	3	200	300	..	....	280	140
7	Long Point, Mingan and Romaine	..	....	....	..	25	1000	65	10	750	500	2	125	200	.	....	120	60
8	Esquimaux Point	6	285	3600	45	90	8000	170	5	450	100	15	525	1200	3	600	530	265
9	La Corneille	..	....	....	..	5	200	4	3	200	100	..	....	....	..	....	8	4
	Totals	6	285	3600	45	332	17540	701	68	6250	3950	40	1656	2745	7	2300	1608	814
	NATASHQUAN SUBDIVISION																	
1	Piashter Bay	..	....	....	..	5	270	12	12	240	120	1	50	50	..	....	50	12
2	Pashasheeboo to Agwanus	..	....	....	..	13	900	35	26	260	260	3	110	150	..	. .	210	63
3	Natashquan	4	106	2000	35	26	1400	75	70	1400	700	7	380	350	..	....	468	140
	Totals	4	106	2000	35	44	2570	122	108	1900	1080	11	540	550	..	....	728	215
	WASHEECOOTAI SUBDIVISION																	
1	Kegashka	..	....	....	..	5	500	10	5	500	100	2	80	50	..	....	20	20
2	Washeecootai and Romaine	1	20	400	3	27	1550	46	15	1500	700	2	80	50	3	600	106	75
3	Coacoachoo and Meagher's Creek	..	....	....	..	15	300	40	5	500	250	3	120	100	1	400	20	10
	Totals	1	20	400	3	47	2350	96	25	2500	1050	7	280	200	4	1000	146	105

and Fishing Materials, &c.—Province of Quebec—*Continued.*

Saguenay.

(Manicouagan to Mai Islands).

Kinds of Fish.																				Total Value of all Fish.	Number.
Salmon, fresh, lbs.	Salmon, salted, brls.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.	$ cts.	
82000	..	7	183000	50	2976	310	11	....	7500	2700	3000	20	....	3768	170	53	547	24,298 85	1

(Jambons to Pigou).

2800	..	4	.....	..	...	180	2	....	800	500	....	....	....	120	10	..	4	1,502 00	1
22500	..	65	...	..	.....	633	11	....	12800	....	...	....	....	521	100	..	57	9,050 55	2
128000	..	....	.....	..	.....	474	6	...	5200	1300	....	....	....	541	75	..	70	28,568 30	3
153300	..	69	.....	..	.....	1287	19	....	18800	1800	....	..	....	1182	185	..	131	39,129 85	

(Pigou to Watsheeshoo).

.....	..	....	.....	..	.....	840	....	....	3000	....	....	14	....	650	250	..	....	4,286 00	1
} 2800	..	...	.. ..	..	....	5000	10	....	5000	....	....	50	....	4000	1250	..	8	24,445 00	2
1200	..	....	....	..	.....	860	4	....	2000	....	....	15	....	650	300	..	10	4,637 50	3
9200	..	130	.....	..	.....	4500	15	400	4000	....	....	12	....	3100	1500	..	15	25,356 75	4
42000	..	....	.. ..	..	....	5500	20	600	5000	2000	...	....	....	3800	1600	..	20	36,665 00	5
7255	..	....	....	..	.....	1800	8	10	4000	500	....	10	....	1800	300	..	330	10,653 50	6
.....	..	164	.....	..	.....	270	....	400	2000	...	....	50	....	6000	1000	..	1100	17,431 00	7
1200	..	....	.. ..	..	.....	.....	....	....	.....	750	....	....	...	250	....	..	75	483 75	8
63655	..	294	.....	..	.....	21200	57	1410	25000	3250	...	151	....	19250	6200	..	1558	123,958 50	9

(Watsheeshoo to Natashquan Point).

.....	..	.. .	.....	..	10080	75	....	..	150	....	....	....	15	75	50	..	....	2,458 50	1
.....	28	....	.....	..	11328	400	....	....	200	...	....	....	15	400	200	..	....	4,755 60	2
18000	24	....	.....	..	2400	1100	....	....	400	....	....	....	30	5000	600	..	1393	13,082 25	3
18000	52	....	.....	..	23808	1575	....	....	750	....	...	....	60	5475	850	..	1393	20,295 35	

(Mont Joli to Wolf Bay).

.....	8	17	....	..	.....	212	....	....	1000	700	....	....	....	200	100	..	17	1,437 25	1
.....	13	112	.....	..	2160	183	....	...	900	1400	....	....	....	200	75	..	30	2,247 00	2
.....	2	....	.....	..	31920	350	....	....	...	1000	....	....	....	410	50	..	38	8,159 50	3
.....	23	129	.....	..	34080	745	....	....	1900	3100	....	....	...	810	225	..	85	11,843 75	

RETURN showing the Number, Tonnage and Value of Vessels, Boats

County of

ST. AUGUSTIN SUBDIVISION

Number.	Districts,	Fishing Vessels and Boats.							Fishing Materials.					
		Vessels.				Boats.			Gill Nets.			Seines.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.
	Saguenay County.—Con.			$			$				$			$
1	Wolf Bay and Netagomin	....	....	....	....	8	250	9	10	750	400	1	50	30
2	St. Mary's Island and Harrington	....	....	....	....	61	1220	97	20	1400	650	8	160	100
3	Little Meccatina and Whale Head	....	....	....	....	50	1000	35	14	700	500	5	250	125
4	Mutton Bay	....	....	....	..	50	1000	60	20	1400	650	8	400	250
5	La Tabatière and neighbourhood	....	....	....	....	40	800	30	15	750	500	5	250	125
6	St. Augustin	....	....	....	....	15	300	12	15	750	500	3	150	75
7	Sandy Island to Chicatica	....	....	....	..	13	260	10	10	500	250	2	100	50
	Totals	....	....	....	....	237	4830	253	104	6250	3450	32	1460	755
	BONNE ESPÉRANCE SUBDIVISION													
1	Nabitippi to Old Fort	1	30	500	4	46	1840	92	25	1800	1800	12	600	750
2	Bonne Espérance	2	250	6000	14	40	2750	80	10	800	650	8	700	1600
3	Pigeon Island, Stick Point, Salmon Bay	1	50	1000	6	60	3000	130	16	1600	1500	8	600	1200
4	Little Fishery to Belles Amours	....	..	....	....	20	600	38	10	800	600	6	500	500
5	Bras d'Or to Blancs Sablons	....	....	....	....	75	1500	150	6	600	600	6	500	1000
	Totals	4	330	7500	24	241	9690	490	67	5600	5150	40	2900	5050
	ANTICOSTI													
1	Fox Bay	....	....	....	....	12	1000	12	24	1200	400	2	90	100
2	Salmon River	....	....	....	....	2	50	2	3	250	150	1	30	30
3	English Bay	....	....	....	....	10	500	20	20	600	300	2	100	100
4	Strawberry Cove	....	....	....	....	20	800	40	30	1200	400	4	200	200
5	Chaloupe Creek	....	....	....	....	2	50	2	2	300	200	...	....	....
	Totals	....	....	....	..	46	4200	76	80	3550	1450	9	420	430

SESSIONAL PAPER No. 11a

and Fishing Materials, &c.—**Province of Quebec**—*Continued.*

Saguenay—*Continued.*

(Wolf Bay to Chicatica).

Trap Nets.		Hand Lines.		Kinds of Fish.											Total Value of all Fish.	
Number.	Value.	Number.	Value.	Salmon, salted, brls.	Herring, salted, brls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Halibut, lbs.	Trout, lbs.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.		Number.
	$		$												$ cts.	
....	.....	20	5	10	25	32800	200	....	.....	1000	400	100	....	100	8,105 00	1
7	2000	384	96	3	250	.....	650	....	.....	.....	861	210	....	187	4,452 05	2
10	3000	140	35	5	27	950	1000	....	.....	.....	2180	250	....	460	5,977 00	3
10	3000	240	60	8	130	.....	1440	....	.....	.....	1500	300	....	180	7,525 00	4
7	2100	120	30	10	150	34432	820	....	.....	.....	4340	150	....	1280	14,043 40	5
2	600	25	7	6	25	.....	100	....	.....	2000	390	400	....	110	1,644 50	6
2	600	40	10	8	10	.....	100	..	.....	.....	200	500	....	50	1,432 50	7
38	11300	969	243	50	617	68182	4310	....	.....	3000	9871	1910	....	2367	43,179 45	

(Chicatica to Blancs Sablons).

12	3600	100	30	21	....	2400	1200	....	.....	1000	750	100	....	50	6,132 50	1
8	3200	150	80	30	100	.....	4000	....	.....	800	2000	200	....	30	17,867 50	2
12	3600	250	100	10	20	.....	3000	....	.....	1200	1800	150	....	48	13,175 00	3
7	1750	90	25	10	500	.....	1200	....	.....	750	750	60	....	30	7,377 50	4
18	5400	300	100	3	30	.....	4000	....	.....	.....	3000	200	....	360	17,815 00	5
57	17550	890	335	74	650	2400	13400	....	.....	3750	8300	710	....	518	62,367 50	

ISLAND.

....	.....	20	20	....	500	33600	200	....	1000	.....	400	150	....	50	10,027 50	1
....	.....	4	4	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
....	....	20	20	....	200	.....	150	....	500	.....	250	60	100	30	1,702 50	3
....	.....	50	45	....	200	.....	1000	10	4000	.....	1000	200	150	30	6,012 50	4
....	.....	.....	.....	12	....	.....	.....	....	.....	.....	130	....	....	50	281 50	5
....	.....	94	89	12	900	33600	1350	10	5500	.....	1780	410	250	160	18,024 00	

RECAPITULATION

SHOWING the Number of Vessels and Boats, Nets and all Fishing Materials, &c., in the Gulf District, Province of Quebec, for the year of 1898.

COUNTY OF BONAVENTURE.

Number.	Divisions.	Fishing Vessels and Boats.							Fishing Gear or Materials.										Number.
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.		Trawls.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	
				$			$				$			$		$		$	
1	Restigouche	...	...	...	...	53	795	100	30	6000	4000	...	...	...	...	...	...	...	1
2	Carleton	...	...	...	...	352	4740	714	700	13400	6900	38	1170	410	...	...	...	...	2
3	Bonaventure	...	...	...	...	640	8580	953	1345	26370	13750	114	3200	2580	...	...	126	630	3
4	Port Daniel	...	...	...	...	442	13510	718	565	10680	11081	60	1525	1220	...	...	215	2000	4
	Total	...	...	...	...	1487	27625	2485	2640	56450	35731	212	5895	4210	...	...	341	2630	

COUNTY OF GASPÉ.

1	Grand River Subdivison	...	...	...	...	664	22810	1524	1452	32485	12568	35	1055	740	...	...	360	9020	1
2	Gaspé "	...	...	...	...	805	22210	966	667	21724	16150	65	2151	2053	...	...	...	...	2
3	Fox River "	...	...	...	...	410	3169	798	1518	15420	3990	...	...	...	...	...	...	...	3
4	Mont Louis "	...	...	...	...	275	5140	429	460	11500	4600	5	170	130	...	...	...	...	4
5	Ste. Anne "	...	...	...	...	181	2715	277	168	4200	1860	...	...	...	...	...	...	...	5
6	Magdalen Islands "	7	225	5300	34	632	24975	1435	2265	58217	13596	12	1555	3800	6	1435	...	...	6
	Total	7	225	5300	34	2967	81019	5429	6530	143546	52764	117	4931	6723	6	1435	360	9020	

COUNTY OF SAGUENAY (North Shore).

1	Godbout Subdivision	3	47	650	8	210	4200	176	310	7500	3750	5	250	250	...	...	4	100	1
2	Moisie "	3	76	1800	14	48	4500	95	57	9880	9265	7	305	433	...	...	...	...	2
3	Mingan "	6	285	3600	45	332	17540	701	68	6250	3950	40	1656	2745	7	2300	...	...	3
4	Natashquan "	4	106	2000	35	44	2570	122	108	1900	1080	11	540	550	...	...	...	...	4
5	Washeecootai "	1	20	400	3	47	2350	96	25	2500	1050	7	280	200	4	1000	...	...	5
6	St. Augustin "	...	...	...	...	237	4830	253	104	6250	3450	32	1460	775	38	11300	...	...	6
7	Bonne Espérance "	4	330	7500	24	241	9690	490	67	5600	5150	40	2900	5050	57	17550	...	...	7
8	Anticosti "	...	...	...	...	46	2400	76	80	3550	1450	9	420	430	...	...	4	50	8
	Total	21	864	15950	129	1205	48080	2009	819	43430	29144	151	7811	10413	96	32150	8	150	
	Grand total for the Gulf District	28	1119	21250	163	5659	156724	9923	9989	243426	117640	480	18637	21346	102	33585	709	11800	

RECAPITULATION

SHOWING the Number of Vessels and Boats, Nets and all Fishing Materials, &c.—**Gulf District, Province of Quebec**—*Continued.*

COUNTY OF BONAVENTURE—*Continued.*

Number.	Divisions.	Fishing Gear or Materials.						Lobster Plant.					Other Fixtures used in Fisheries.								Number.
		Weirs.		Smelt Nets		Hand Lines.		Canneries.		Traps.		No. of hands employed.	Freezers and Ice Houses.		Smoke & Fish Houses.		Piers and Wharfs.		Tugs, Strs. & Smacks.		
		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
1	Restigouche	....	....	65	3000	.....	.....	...	.....	45	45	3	4	200	40	1000	...	.....	....	.. ..	1
2	Carleton	13	110	24	480	150	111	1	500	650	350	11	11	390	12	120	....	.....	....	.....	2
3	Bonaventure	..	...	....	.. ..	1240	372	3	850	3250	1800	66	13	290	68	40485	2	3000	..	.....	3
4	Port Daniel	....	.....	....	.....	1322	700	5	2050	10450	5730	254	7	400	9	250	....	.....	....	.....	4
	Total	13	110	89	3480	2712	1183	9	3400	14395	7925	334	35	1280	129	41855	2	3000	....	.. ...	

COUNTY OF GASPÉ—*Continued.*

1	Grand River Subdivision	....	.....	....	.....	4870	5214	12	3550	15880	7875	286	12	740	130	39750	7	1800	....	.....	1
2	Gaspé "	....	.....	....	..	1902	951	10	4160	10550	6710	174	....	... .	70	26000	14	3800	..	.....	2
3	Fox River "	...	.....	..	....	1388	2568	5	500	6800	2650	44	1	500	30	21734	5	200	...	...	3
4	Mont Louis "	...	.....	...	.....	858	1400	2	1000	2000	1050	15	....	.....	18	5000	2	1000	....	. ..	4
5	Ste. Anne "	....	... ..	....	.....	446	446	....	.....	.....	.....	.....	....	.....	....	.....	....	.....	....	.....	5
6	Magdalen Islands "	..	.....	....	.....	2444	611	88	37784	99385	52494	1690	....	.....	124	12100	29	5075	5	800	6
	Total	....	.....	....	....	11908	11190	117	46994	134615	70779	2209	13	1240	372	95584	57	11875	5	800	

COUNTY OF SAGUENAY (North Shore)—*Continued.*

1	Godbout Subdivision	....	.....	1	55	352	141	1	400	150	75	5	17	170	2	30	1	200	....	.....	1
2	Moisie "	....	....	....	....	.....	.....	....	.....	.....	.....	.....	1	800	4	1500	2	100	....	...	2
3	Mingan "	....	...	.. .	....	1608	814	....	.....	.....	.....	.....	1	600	84	24100	11	2400	....	.....	3
4	Natashquan "	....	.....	....	.....	728	215	5	480	1660	1660	35	....	.....	20	3000	2	400	....	.. .	4
5	Washeecootai "	....	..	1	50	146	105	3	850	1750	875	44	....	.....	....	.....	....	.....	....	.....	5
6	St. Augustin "	...	.....	....	.....	969	243	8	1420	4250	2125	92	....	.....	....	.....	....	.....	....	.....	6
7	Bonne Espérance "	....	.....	....	.....	890	335	7	330	1650	1100	30	....	.....	90	9750	44	2250	....	....	7
8	Anticosti "	....	.....	....	.....	94	89	4	200	4000	2000	20	....	.....	19	400	1	500	....	.....	8
	Total	....	.....	2	105	4787	1942	28	3680	13460	7835	226	19	1570	219	38780	61	5850	...	.....	
	Grd. total for the Gulf District.	13	110	91	3585	19407	14315	154	54074	162470	86539	2769	67	4090	720	176219	120	20725	5	800	

RECAPITULATION

SHOWING the Kinds, Quantities and Value of Fish caught in the **County of Bonaventure,** for the Year 1898—*Continued.*

Number.	Divisions.	Kinds of Fish. Salmon, fresh, lbs.	Salmon, salted brls.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Number.
1	Restigouche	1900	....	50	8000	....	....	....	100	....	....	....	....	....	1
1	Carleton	53200	....	960	10000	16000	2	7800	6	590	....	2000	21	....	2
3	Bonaventure	22274	....	2750	34500	37000	....	12384	10	7985	25	10000	64	....	3
4	Port Daniel	35312	....	1790	....	1000	....	69336	....	7550	100	....	383	122	4
	Total	152686	....	5550	52500	54000	2	89520	116	16125	125	12000	468	122	
	COUNTY OF GASPE—*Continued.*														
1	Grand River Subdivision	55500	....	935	....	....	....	111596	....	48640	....	....	108	92	1
2	Gaspé "	116530	....	1673	....	....	....	65334	....	21510	....	....	....	....	2
8	Fox River "	....	....	1460	63500	....	....	12280	85	13860	31	....	122	....	3
4	Mont Louis "	16200	5	2350	....	....	....	10992	....	8245	....	....	....	....	4
5	Ste. Anne "	5500	....	2551	....	....	....	....	....	1790	....	....	....	....	5
6	Magdalen Islands "	....	....	7966	....	....	6445	612290	....	6813	25	....	455	....	6
	Total	193730	5	16925	63500	....	6445	812492	85	100858	56	....	685	92	
	COUNTY OF SAGUENAY (North Shore)—*Continued.*														
1	Godbout Subdivision	82000	....	7	183000	....	50	2976	....	310	11	....	....	....	1
2	Moisie "	153300	....	69	....	....	....	....	....	1287	19	....	....	....	2
3	Mingan "	63655	....	294	....	....	....	....	....	21200	57	....	1410	....	3
4	Natashquan "	18000	52	....	....	....	....	23808	....	1575	....	....	....	....	4
5	Washeecootai "	....	23	129	....	....	....	34080	....	745	....	....	....	....	5
6	St. Augustin "	....	50	617	....	....	....	68182	....	4310	....	....	....	....	6
7	Bonne Espérance "	....	74	650	....	....	....	2400	....	13400	....	....	....	....	7
8	Anticosti "	....	12	900	....	....	....	33600	....	1350	10	....	....	....	8
	Totrl	316955	211	2666	183000	....	50	165046	....	44177	97	....	1410	....	
	Grand total for the Gulf District	663371	216	25151	299000	54000	6497	1067058	201	161160	278	12000	2563	214	

RECAPITULATION

SHOWING the Kinds, Quantities and Values of Fish caught in the **County of Bonaventure,** for the Year 1898—*Continued.*

Number.	Divisions.	Kinds of Fish. Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.	Total Value of all Fish.	Number.
														$ cts.	
1	Restigouche		6000	266642	50		50000		200			500	4	26,747 10	1
2	Carleton		900	15700	26	30500	1800		600	220	250	10500		28,644 00	2
3	Bonaventure		4000		10					1994	1778	26000		68,513 80	3
4	Port Daniel			14000				355		5795	2150	1830		68,731 60	4
	Total		10900	296342	86	30500	51800	355	800	8009	4178	38830	4	192,636 50	
	COUNTY OF GASPÉ—*Continued.*														
1	Grand River Subdivision			6000				1264		29830	3885	600		252,682 70	1
2	Gaspé "			45950				575		10154	5790			145,433 50	2
3	Fox River "	53000						400		6925	1850			77,224 50	3
4	Mont Louis "	19600	2200							6500	2250	100		55,448 40	4
5	Ste. Annes "	10890								1150	620	1400		21,528 00	5
6	Magdalen Islands "				131					2225	4560	950	3215	293,175 25	6
	Total	83490	2200	51950	131			2239		56784	18955	3050	3215	845,492 35	
	COUNTY OF SAGUENAY (North Shore).—*Continued.*														
1	Godbout Subdivisio	7500	2700	3000				20		3768	170	53	547	24,298 85	1
2	Moisi "	18800	1800							1182	185		131	39,129 85	2
3	Mingan "	25000	3250					151		19250	6200		1558	123,958 50	3
4	Natashquan "	750							60	5475	850		1393	20,295 35	4
5	Washeecootai "	1900	3100							810	225		85	11,843 75	5
6	St. Augustin "		3000							9871	1910		2367	43,179 45	6
7	Bonne Espérance "		3750							8300	710		518	62,367 50	7
8	Anticosti "	5500								1780	410	250	160	18,024 00	8
	Total	59450	17600	3000				171	60	50436	10660	303	6759	343,097 25	
	Grand total for the Gulf District	142940	30700	351292	217	30500	51800	2765	860	115229	33793	41183	9978	1,381,226 10	

RECAPITULATION.

STATEMENT showing Yield and Value of the Fisheries of the **Gulf Division, P. Q.**, for the Season of 1898.

Description.		Quantity.	Price.	Value.
			$ cts.	$ cts.
Salmon, fresh in ice	Lbs.	663,371	0 20	132,674 20
" salted	Brls.	216	15 00	3,240 00
Herring "	"	25,151	4 00	100,604 00
" fresh	Lbs.	299,000	0 01	2,990 00
" smoked	"	54,000	0 02	1,080 00
Mackerel, salted	Brls.	6,497	15 00	97,455 00
Lobsters, canned	Lbs.	1,067,058	0 20	213,411 60
" fresh, whole	Cwt	201	5 00	1,005 00
Cod, salted	"	161,160	4 00	644,640 00
" tongues and sounds, salted	Brls.	278	10 00	2,780 00
Haddock, fresh	Lbs.	12,000	0 03	360 00
" salted	Cwt.	2,563	3 00	7,689 00
Hake, salted	"	214	2 25	481 50
Halibut, fresh	Lbs.	142,940	0 10	14,294 00
Trout "	"	30,700	0 10	3,070 00
Smelt "	"	351,292	0 05	17,564 60
Eels, salted	Brls.	217	10 00	2,170 00
Flounders	Lbs.	30,500	0 05	1,525 00
Tommy cod, fresh	"	51,800	0 05	2,590 00
Squid, fresh	Brls.	2,765	4 00	11,060 00
Coarse and mixed fish	"	860	2 00	1,720 00
Fish oil	Galls.	115,229	0 30	34,568 70
Fish as bait	Brls.	33,793	1 50	50,689 50
Fish as manure	"	41,183	0 50	21,091 50
Seal skins	Pieces.	9,978	1 25	12,472 50
Total value for 1898				1,381,226 10
" 1897				1,393,126 40
Decrease for 1898				11,900 30

RECAPITULATION.

RETURN showing Number of Men, Vessels and Boats, &c., and Value of Material employed in **Gulf Division** Fisheries, Season of 1898.

Description.	Value.
	$ cts.
28 vessels of 1,119 tons manned by 163 men	21,250 00
5,659 boats fished by 9,923 men	156,724 00
243,426 fathoms of gill-net	117,640 00
480 seines of 18,637 fathoms	21,346 00
120 trap-nets	33,585 00
709 trawls	11,800 00
13 weirs	110 00
91 smelt nets	3,585 00
19,407 hand fishing lines	14,315 00
154 lobster canneries employing 2,769 hands	54,074 00
162,470 lobster traps, with lines, &c.	86,539 00
67 freezers and ice-houses	4,090 00
720 smoke and fish-houses	176,219 00
120 piers and wharfs (private)	20,725 00
5 smacks and steamers	800 00
Total value	722,802 00

PROVINCE OF QUEBEC—

RETURN of the Number of Fishermen, the Number of Boats, Nets, &c., the Quantity

Cape Chat to Point Lévis,

Number.	Districts.	Fishing Materials.								Salmon, lbs.	Shad, lbs.	Herring, salted, brls.
		Boats.			Gill Nets.			Brush or Eel Weirs				
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.			
			$				$		$			
1	Capucins	16	128	19	18	450	216	....	.....	.....	.....	252
2	Mechins	47	376	60	60	1500	288	....	.....	1320	.....	578
3	Ruisseau à Sem	10	80	13	12	300	144	....	....	.....	.....	155
4	Grosses Roches	18	328	27	17	425	204	....	....	.....	.....	175
5	Ste. Félicité	54	432	59	67	1675	804	5	100	.....	.....	1104
6	Matane	30	260	35	28	700	336	11	220	1470	....	205
7	Rivière Blanche	24	376	26	36	900	432	....	....	.....	.....	486
8	Sandy Bay	60	500	67	93	2325	1100	....	.....	.....	.....	1120
9	Métis	....	....	5	5	300	300	...	.....	15000	.....	....
10	Ste. Flavie	12	600	12	12	600	600	..	.....	18000	.....	....
11	Ste. Luce	9	280	9	2	120	120	9	450	20000	.....	300
12	Rimouski	7	150	7	....	.....	.....	17	850	1050	20000	5000
13	Isle à Canuel	4	125	8	....	....	.....	4	200	200	....	300
14	Notre Dame du Sacré Cœur	8	160	16	....	....	.....	8	250	150	.....	150
15	Rivière Hatée	2	40	4	....	.....	....	2	50	75	.....	100
16	Cap à L'Orignal and Bic	2	40	4	....	.....	.....	4	100	175	.....	125
17	St. Fabien	2	40	4	....	....	.....	3	75	130	.....	100
18	St. Simon	1	20	2	1	50	40	101	7040	1150	.....	100
19	Temiscouata Co., including Ile Verte	1	75	95	....	..	....	....	.....	2950	35930	1135
20	St. André	..	....	27	....	.....	.. ..	27	1240	10	50	12
21	Kamouraska	....	....	17	....	....	.. .	13	620	40	1300	.....
22	St. Denis	....	...	14	....	.....	... ..	14	1065	500	100	.....
23	Rivière Ouelle	....	...	55	....	.....	.....	45	2130	.....	.....	32
24	Ste. Anne de la Pocatière	....	....	23	....	.....	.....	31	1025	.....	.....	....
25	St. Roch	....	....	12	....	.....	.....	12	1500	.....	.....	.....
26	St. Jean Port Joli	....	....	23	1	50	100	22	2950	.....	.....	.....
27	L'Islet	7	90	21	1	75	450	12	1500	.....	.....	.....
28	Cap St. Ignace	....	....	10	....	.....	.....	10	2400	.....	.....	.....
29	St. Thomas	4	32	14	5	370	1800	6	700	75	1600	.....
30	Berthier	8	96	38	11	585	3500	28	2500	40	970	.....
31	St. Valier	6	154	11	4	650	4160	3	400	200	4850	.....
32	St. Michel	8	123	8	5	370	5150	1	100	45	4125	.....
33	Beaumont	12	125	13	5	650	3400	1	100	60	6800	.....
34	Lévis	9	70	12	5	300	2800	...	.....	80	4800	.....
35	St. David and St. Nicholas	3	35	5	2	210	2000	....	.....	10	300	.....
36	Ile aux Grues, aux Oies & other Isl'ds	4	70	5	1	50	200	20	3950	.....	.....	.....
	Totals	368	4805	780	391	12655	28144	409	31515	62730	80825	11429
	Values	....	....	....	....	.....	.....	...	.....	12546	4849	45716

* In No. 19, include 12 beluga or white whale skins, $48, and 30 seals $37.

† In No. 23, include 239 beluga skins, $956, (white whale).

SESSIONAL PAPER No. 11a

INLAND DISTRICTS.

and Value of all Fish caught on the South Shore of St. Lawrence River from **Province of Quebec**, for the Year 1898.

Kinds of Fish.											Total Value.	
Herring, fresh, lbs.	Whitefish, lbs.	Bass, lbs.	Pickerel, lbs.	Sturgeon, lbs.	Eels, lbs.	Sardines, brls.	Mixed and coarse fish, lbs.	Cod, fresh, lbs.	Halibut, lbs.	Fish oil, galls.	$ cts.	Number.
7000	.....	.....	.....	.....	.....	.....	.....	35300	1100	130	2,992 00	1
8000	.....	.....	..	.....	.....	.....	.....	99350	4500	335	8,174 00	2
7000	.....	.....	.....	.....	.....	.....	.....	27700	1500	75	2,247 50	3
11000	.....	.....	.	.....	.....	.....	.....	48500	5000	90	3,762 00	4
15500	.....	.....	....	.....	.....	.....	15000	38650	4900	380	7,257 50	5
7500	.....	.	.....	.....	.....	.....	44000	1100	4500	85	2,159 50	6
7000	.....	.....	.. ..	.....	.....	.....	.....	3300	700	180	2,303 00	7
18000	.....	.....	.....	.....	.....	.....	.....	1700	6000	400	5,465 00	8
40000	.....	.....	. ...	.....	.....	.....	.....	.....	.....	.....	3,400 00	9
.. 40000	.....	.....	.....	3000	.....	.....	.....	.....	.....	.....	3,780 00	10
40000	.....	...	.....	14000	.....	200	.....	.....	.....	.....	7,040 00	11
100000	.....	.....	.....	.....	6500	100	1200	.....	.....	.....	23,112 00	12
2400000	.....	.. ..	... ..	.....	.....	500	25300	.. ..	.. ...	.....	26,993 00	13
1500000	.....	....	.....	.....	.....	100	20000	.....	.....	.....	16,130 00	14
10000	.....	.....	.....	.....	.....	75	5000	.. .	...	.....	790 00	15
12000	.....	.....	.....	.....	.....	100	8000	.....	.....	.....	1,035 00	16
11000	.....	....	.....	. ....	.....	50	10000	.....	.....	.....	786 00	17
1000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	640 00	18
296100	.....	.. ..	.....	2800	4900	490	1586200	.....	.....	690	*28.333 30	19
800	.....	....	... .	1685	2140	15	25700	.....	.....	.....	592 50	20
600	.....	.....	.....	2000	930	30	81400	....	.....	.....	1,171 80	21
3800	....	.....	.....	1070	6000	25	12200	.....	.....	.....	765 00	22
30000	.....	.....	.....	1440	41800	5	6200	.....	.....	12000	†7,655 40	23
.....	.....	.....	.....	.....	34000	.....	4000	....	.....	.....	2,080 00	24
.....	.....	.....	.....	.. ..	7800	.....	.....	.....	.....	.....	468 00	25
.....	.....	.....	.....	.....	17750	....	... .	.....	.....	.....	1,065 00	26
.....	.....	.....	.....	600	8060	.....	1500	.....	.....	.....	534 60	27
.....	.....	.....	.....	.....	26080	.....	.....	.....	.....	.....	1,564 80	28
.....	3220	1740	2350	11300	10800	.....	7100	... ..	.....	.....	2,022 30	29
.....	2950	375	325	1600	31100	.....	1585	....	.....	.....	2,326 30	30
.....	4115	1335	825	7640	43080	.....	9350	.....	.....	....	3,944 95	31
.....	1230	1280	710	1625	71000	.....	1000	.....	.....	.....	4,860 30	32
.....	1360	750	1390	3100	46400	.....	2550	.....	....	.....	3,653 80	33
.....	1135	260	770	850	79200	.....	1725	.....	.. ..	.....	5,274 35	34
.....	625	40	250	150	11200	.....	2500	.....	....	.....	791 70	35
.....	175	25	25	50	25000	.....	150	.....	.....	.....	1,521 75	36
4526300	14810	5805	6645	52910	473740	1690	1871660	255600	28200	14365	.....	
45263	1184	464	332	3175	28424	5070	18717	12780	2820	4309	186,692 55	

QUEBEC

RETURN of the Number of Fishermen, Value of Boats, Nets, &c., and the Quantity to Bersimis, Province of

Number.	Districts.	Fishing Materials.							
		Boats.			Gill Nets.			Brush or Eel Weirs.	
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.
			$				$		$
1	Island of Orleans	.....	.....	80	13	4500	2700	90	16400
2	County of Montmorency	.....	.....	35	.....	.....	.....	18	3400
3	County of Charlevoix	.....	.....	25	23	2900	280	140	1600
	Saguenay Division.								
4	St. Firmin	6	260	7	.....	.....	.....	5	100
5	Tadoussac	6	220	8	4	500	300	1	25
6	Bergeronnes	4	80	4	4	400	250	.....	.....
7	Bon Désir	1	20	1	1	75	50	.....	.....
8	Escoumains	7	120	7	5	400	350	2	50
9	Sault au Mouton	2	20	2	.....	.....	.....	2	50
10	Mille Vaches	6	90	6	1	100	75	5	125
11	Portneuf	6	100	6	4	350	300	2	50
12	Sault au Cochon	2	20	2	1	100	60	1	20
13	Islets Jérémie	6	90	6	6	400	350	.....	.....
14	Bersimis	2	20	2	1	80	50	1	20
15	Inland Waters	.....	.....	.....	.....	.....	.....	.....	.....
16	*Lake St. John District	.....	.....	100	.....	.....	.....	.....	.....
	Totals	48	1040	291	63	9805	4765	267	21840
	Values $	.....	.....	.....	.....	.....	.....	.....	....

* No. 16, estimated, include also 95,000 lbs. ouananiche and 8,000 lbs. pike.

SESSIONAL PAPER No. 11a

—*Continued.*

and Kinds of Fish on the North Shore of the St. Lawrence, from Quebec City Quebec, for the Year 1898.

Kinds of Fish.													Total Value.	Number.
Salmon, lbs.	Shad, lbs.	Herring, salted, brls.	Whitefish, lbs.	Trout, lbs.	Sea bass, lbs.	Pickerel, lbs.	Sturgeon, lbs.	Eels, lbs.	Sardines, brls.	Mixed and coarse fish, lbs.	Beluga (white whales) No.	Beluga oil, galls.		
													$ cts.	
300	300	.....	4500	.....	4350	2800	10160	116500	.....	1000	.....	....	8,535 60	1
.....	.....	.....	2500	.....	2300	1100	1840	23500	.....	4200	.....	.....	2,001 40	2
1600	.....	25	.....	50000	.....	.....	.....	7000	25	15300	6	300	6,182 00	3
1500	.....	20	.....	2000	.....	.....	.....	.....	5	60000	100	5000	3,095 00	4
23000	.....	.....	.....	3000	.....	.....	.....	.....	.....	20000	75	3750	6,525 00	5
19000	.....	.....	.....	1000	.....	.....	.....	.....	.....	.....	.....	.....	3,900 00	6
2000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	400 00	7
12500	.....	20	.....	1000	.....	.....	.....	.....	10	40000	20	1000	3,490 00	8
.....	.....	25	.....	500	.....	.....	.....	.....	8	10000	.....	.....	274 00	9
4000	.....	50	.....	2000	.....	.....	.....	.....	15	50000	.....	.....	1,745 00	10
13000	.....	20	.....	2000	.....	.....	.....	.....	5	20000	.....	.....	3,095 00	11
3000	.....	5	.....	200	.....	.....	.....	.....	.....	.....	.....	.....	640 00	12
18000	.....	.....	.....	300	.....	.....	.....	.....	.....	.....	.....	.....	3,630 00	13
2400	.....	10	.....	1000	.....	.....	.....	.....	2	6000	.....	.....	686 00	14
10000	.....	.....	.....	20000	.....	.....	.....	.....	.....	.....	.....	.....	4,000 00	15
.....	.....	.....	14500	15000	.....	40000	.....	.....	.....	50000	.....	.....	11,180 00	16
110300	300	175	21500	98000	6650	43900	12000	147000	70	276500	201	10050	.....	
22060	18	700	1720	9800	532	2195	720	8820	210	2765	804	3015	59,379 00	

RETURN of the Number of Fishermen, Value of Boats, Nets, &c., the Quantity and **Ottawa,** in the **Province of**

Number.	Districts.	Fishing Materials.										
		Boats.			Gill Nets.			Seines.			Hoop Nets.	
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.
			$				$			$		$
1	Megantic to Sherbrooke and vicinity	(Angling, trolling and night lines.)										
2	Magog and Brome				do		do		do			
3	Missisquoi Bay	12	147	45	....	....	....	15	1230	700	....	....
4	†Richelieu River	72	1083	84	....	....	....	23	460	450	48	400
5	Huntingdon, Beauharnois and Chateauguay	88	1350	156	6	120	20	12	400	300	....	....
6	Laprairie and Montreal	54	540	92	1	20	5	23	690	460	10	50
7	Chambly and Verchères	90	900	96	....	....	....	20	520	520	6	50
8	County Richelieu and St. Francis River	90	560	138	40	480	120	38	400	540	125	520
9	County Yamaska and River	60	640	135	1	20	10	40	360	180	200	1120
10	County Nicolet	50	525	50	8	140	22	20	770	400	5	100
11	*Portneuf, Champlain and St. Maurice	20	400	40	....	....	....	7	70	50	....	....
12	Maskinonge and Berthier	60	500	62	3	70	10	16	320	130	29	75
13	Montcalm and Terrebonne and Laval	23	125	52	9	165	25	7	140	28	8	40
14	County Soulanges and Isle Perrot	6	60	18	22	220	60	....	....	....	....	....
15	Lake Two Mountains and Vaudreuil	45	490	52	28	485	75	....	....	....	....	....
16	County Argenteuil	15	200	25	45	400	300	....	....	....	....	....
17	Ottawa River, Carillon to Pontiac	130	1950	130	320	9500	950	....	....	....	....	....
18	Gatineau Lakes	(Angling and trolling.)										
	Totals	815	9470	1175	483	11620	1597	221	5360	3758	431	2355
	Value $	....	....	....	....	....	....	....	....	....	....	....

*Estimated. This also includes 100,000 pounds tom-cods, valued at $5,000, caught in vicinity of Three Rivers.

† In No. 4 include 8 eel weirs valued at $49,600.

SESSIONAL PAPER No. 11a

Value of Fish, &c., within the District extending from **Quebec City** to **Upper Quebec**, for the Year 1898.

Kinds of Fish.												Total Value.	
Shad, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickerel, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	$ cts.	Number.
2000	17700	100300	4800	29800	30300	1450	500	2000	5900	.....	42900	15,495 00	1
.....	500	9300	7700	19700	....	.....	...	1000	6000	2000	5000	2,901 00	2
.....	660	.....	.....	48720	....	.....	500	.....	....	.....	54000	3,058 80	3
.....	...	...	4900	5650	19270	...	3600	74370	14320	250	74700	7,305 10	4
.....	...	.....	9000	13400	17600	4800	209100	32500	50800	24900	196000	20,860 00	5
5000	.....	.....	6000	8000	12000	5000	12000	15000	4000	.....	23000	3,930 00	6
1950	....	.....	2500	9600	9300	1250	2350	13500	11350	500	63500	3,180 50	7
7150	500	.....	4200	32300	37350	1650	15000	15500	35750	1000	158750	8,523 00	8
.....	800	.....	8500	27200	42000	16000	7000	20500	400	85000	160000	9,706 00	9
27400	1105	.....	6900	2900	3000	1630	6910	23330	7540	10250	120500	6,097 80	10
15000	3400	12000	1100	6200	2000	500	8000	6200	2000	.....	20000	*7,992 00	11
.....	....	.....	..	5000	9000	1400	18000	8000	20000	8500	130000	4,324 00	12
4500	.....	50000	450	2950	3100	600	500	1000	4500	1400	23100	6,097 50	13
.. ...	.....	.....	1400	3200	1600	3100	3000	2000	3000	.....	8500	997 00	14
200	.....	....	2000	1850	6150	5600	2550	3200	....	24000	26600	1,937 50	15
400	2500	800	1000	2000	3000	1300	4000	1000	4000	.....	... .	1,102 00	16
.....	.....	650	46250	54750	58250	26650	63450	18000	42000	55850	82850	18,524 00	17
.....	9200	95300	14100	12750	.. ...	.. ..	....	.....	.....	.....	8000	12,111 50	18
63600	36365	268350	120800	285970	253920	70930	356460	237100	211560	213650	1197400	....	
3816	2909	26835	9664	14298	10156	4255	21387	14226	6346	4273	11974	134,142 70	

* In No. 11 add 80,000 pounds of tom-cods valued at $4,000.

RECAPITULATION

OF the Yield and Value of the Inland Fisheries of the **Province** of **Quebec**, (exclusive of **Gulf Division**) for 1898.

Kinds of Fish.	Price.	Quantity.	Value.
	$ cts.		$ cts.
Salmon ..... Lbs.	0 20	173,030	34,606 00
Shad ..... "	0 06	144,725	8,683 50
Herring, salted ..... Brls.	4 00	11,604	46,416 00
" fresh ..... Lbs.	0 01	4,526,300	45,263 00
Whitefish ..... "	0 08	72,675	5,814 00
Trout ..... "	0 10	366,350	36,635 00
Bass ..... "	0 08	133,255	10,660 40
Pickerel ..... "	0 05	336,515	16,825 75
Pike ..... "	0 04	261,920	10,476 80
Maskinonge ..... "	0 06	70,930	4,255 80
Sturgeon ..... "	0 06	421,370	25,282 20
Eels ..... "	0 06	857,840	51,470 40
Perch ..... "	0 03	211,560	6,346 80
Sardines ..... Brls.	3 00	1,760	5,280 00
Catfish ..... Lbs.	0 02	213,650	4,273 00
Mixed and coarse fish ..... "	0 01	3,345,560	33,455 60
Cod ..... "	0 05	255,600	12,780 00
Tom cods ..... "	0 05	80,000	4,000 00
Halibut ..... "	0 10	28,200	2,820 00
Beluga skins ..... No.	4 00	452	1,808 00
Seal skins ..... "	1 25	30	37 50
Ouananiche ..... Lbs.	0 06	95,000	5,700 00
Fish oils ..... Galls.	0 30	24,415	7,324 50
Total for 1898			380,214 25
" 1897			343,884 85
Increase			36,329 40

STATEMENT

OF Fishing Materials in the **Province of Quebec** during the Year 1898, (**Gulf Division** excluded).

Articles.	Value.	Total Value.
	$ cts.	$ cts.
1,231 fishing boats (2,246 men)	15,315 00	
942 gill-nets (34,080 fathoms)	34,506 00	
259 seines (6,120 fathoms)	3,948 00	
		53,769 00
431 hoop-nets	2,355 00	
64,900 hooks on night lines	1,058 00	
684 brush or eel weirs	102,955 00	
		106,368 00
59 freezers and ice-houses		3,550 00
Total value		163,687 00

RECAPITULATION

OF the Yield and Value of the Fisheries in the **whole Province of Quebec**, for the Year 1898.

Kinds of Fish.		Quantity.	Price.	Value.	Total Value.
			$ cts.	$ cts.	$ cts.
Salmon, fresh in ice	Lbs.	836,401	0 20	167,280 20	
" salted	Brls.	216	15 00	3,240 00	
					170,520 20
Herring, salted	"	36,755	4 00	147,020 00	
" fresh	Lbs.	4,825,3 0	0 01	48,253 00	
" smoked	"	54,000	0 02	1,080 00	
					196,353 00
Mackerel, salted	Brls.	6,497	15 00		97,455 00
Lobsters, canned	Lbs.	1,067,058	0 20	213,411 60	
" fresh	Cwt.	201	5 00	1,005 00	
					214,416 60
Cod, dried	"	161,160	4 00	644,640 00	
" green	Lbs.	255,600	0 05	12,780 00	
" tongues and sounds	Brls.	278	10 00	2,780 00	
					660,200 00
Haddock, fresh	Lbs.	12,600	0 03	360 00	
" dried	Cwt.	2,563	3 00	7,689 00	
					8,049 00
Hake	"	214	2 25		481 50
Halibut	Lbs.	171,140	0 10		17,114 00
Trout	"	397,050	0 10		39,705 00
Smelts	"	351,292	0 05		17,564 60
Whitefish	"	72,675	0 08		5,814 00
Ouaniniche	"	95,000	0 06		5,700 00
Pickerel	"	336,515	0 05		16,825 75
Bass, (Achigan)	"	133,255	0 08		10,660 40
Shad	"	144,725	0 06		8,683 50
Eels, fresh	"	857,840	0 06	51,470 40	
" salted	Brls.	217	10 00	2,170 00	
					53,640 40
Sturgeon	Lbs.	421,370	0 06		25,282 20
Maskinonge	"	70,930	0 06		4,255 80
Pike	"	261,920	0 04		10,476 80
Flounders	"	30,500	0 05		1,525 00
Tom cod	"	131,800	0 05		6,590 00
Perch	"	211,560	0 03		6,346 80
Catfish	"	213,650	0 02		4,273 00
Sardines	Brls.	1,760	3 00		5,280 00
Squid	"	2,765	4 00		11,060 00
Fish, coarse and mixed	"	860	2 00	1,720 00	
" " "	Lbs.	3,345,560	0 01	33,455 60	
					35,175 60
Seal skins	No.	10,008	1 25		12,510 00
Beluga skins, (white whales)	No.	452	4 00		1,808 00
Fish oil	Galls.	139,644	0 30		41,893 20
" as bait	Brls.	33,793	1 50		50,689 50
" as manure	"	41,183	0 50		21,091 50
Total for 1898					1,761,440 35
" 1897					1,737,011 25
Increase					24,429 10

RECAPITULATION

Of all Fishing Vessels, Boats, Nets, &c., employed in the whole **Province of Quebec**, 1898.

Articles.	Value.	Total.
	$ cts.	$ cts.
28 fishing vessels (1,119 tons; 163 men)	21,250 00	
6,890 fishing boats (12,169 men)	172,039 00	
10,931 gill-nets (277,506 fathoms)	152,146 00	
739 seines (24,757 fathoms)	25,294 00	
120 trap-nets	33,585 00	
697 weirs (brush or eels)	103,065 00	
431 hoop-nets	2,355 00	
91 smelt nets	3,585 00	
hand lines and night lines	15,373 00	
709 trawls	11,800 00	
		540,492 00
154 lobster canneries (2,769 hands)	54,074 00	
162,470 lobster traps, lines, &c.	86,539 00	
		140,613 00
126 freezers and ice-houses	7,640 00	
720 smoke and fish-houses	176,219 00	
120 piers and wharfs (fishing)	20,725 00	
5 smacks and steamers	800 00	
		205,384 00
Total value		886,489 00

APPENDIX No. 7.

MANITOBA.

REPORT ON THE FISHERIES OF MANITOBA FOR THE YEAR 1898, BY INSPECTOR F. W. COLCLEUGH.

SELKIRK, January 15, 1899.

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

SIR,—I have the honour to submit herewith returns showing the number of fishermen, tugs, tonnage, &c., in my district in 1898, also the yield of the fisheries for the same period. These are not complete, inasmuch as they do not include the catch of some important firms, nor particulars of their plant, although I sent them blanks last December requesting the same. The overseer at Berens River also failed to give me any particulars.

You will observe a very decided increase in the catch of all kinds of fish excepting whitefish and pickerel.

I would suggest, that in future all returns made by Fish Companies should be sworn to, as I find most of them attach very little importance to such matters and are not at all times accurate in their figures.

I know that the United States Government requires all such returns attested to before a magistrate.

I would also suggest that no fishing of any kind be allowed during the close season for whitefish, as any one holding license for catching other kinds always claim to have caught the whitefish whilst they were fishing for pickerel or other sorts, and as the whitefish come to shallow water to spawn, many of them are caught in this way, and if a whitefish has remained in the meshes of a gill-net overnight it is much better taken out than returned to the waters.

I have the honour to be, sir,
Your obedient servant,

F. W. COLCLEUGH,
Inspector of Fisheries.

STATEMENT of the Number of Fishermen, Tugs, Boats, Nets, &c., and the Quantity

Number.	Districts.	Fishing Materials.												Other used in	
		Tugs.				Boats.			Gill Nets.		Seines.			Freezers and Ice-houses.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.
				$			$			$			$		$
1	Lake Winnipegosis, Dauphin and Waterhen River	1	15	2000	3	4	1350	12	30000	3000	1	33	85	3	1000
2	Lake Manitoba, Ebb and Flow Lake and tributaries	..	....	.....	..	117	3160	187	22490	2200	..	...	....	4	5700
3	Lake Winnipeg, Red River and tributaries	1	14	1800	4	249	2793	325	68580	7166	4	132	340	8	2000
	Commercial fishing in Lake Winnipeg—														
4	Ewing & Fryer	1	14	2000	7	4	300	9	10000	2000	..	....	....	10	4900
5	Selkirk Fish Company	2	259	12500	12	5	1500	15	10000	2000	..	....	....	6	6000
6	Manitoba Fish Company	5	586	35100	31	8	2400	24	10000	2000	..	....	....	14	29800
7	William Robinson	5	681	33000	25	5	1500	15	10000	2000	..	....	....	16	37500
8	Reid & Tait Fish Company	2	316	29200	15	5	1325	15	10000	1500	..	....	....	4	2400
9	Dominion Fish Company	..	....	.....	..	....	.....	....	.....	....	..	....	....	....	.....
	Totals	17	1885	115600	97	397	14328	602	171070	21866	5	165	425	65	89300
	Values $	..	....	.....	..	....	.....	....	.....	.....	..	....	....	...	.....

SESSIONAL PAPER No. 11a

TOBA.

and Value of all Fish caught in the **Province of Manitoba**, for the Year 1898.

Fixtures Fishing.		Kinds of Fish.											Total Value.	
Piers and Wharfs.														
Number.	Value.	Whitefish, lbs.	Trout, lbs.	Pickerel, lbs.	Pike, lbs.	Sturgeon, lbs.	Perch, lbs.	Tullibee, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	Home consumption, lbs.	Caviare, lbs.		Number.
	$												$ cts.	
2	200	565000	10000	270000	100000	. .	10000	1000	. . . .	1450000	250000	. . . .	53,200 00	1
8	1300	259100	.....	142000	142300	.. ..	.....	81200	.....	102200	147000	....	28,169 00	2
.....	.....	90020	.. ..	465700	223050	135900	50150	219600	101000	412200	555100	1230	38,087 00	3
2	100	72299	.....	349704	122878	214079	15640	1820	26411	730	.. ..	5430	37,424 52	4
1	350	461952	.....	7418	.....	.....	.....	.....	.....	.....	.....	.....	23,320 14	5
2	550	628443	.....	7840	2275	35040	.....	.....	18476	.....	.....	930	33,349 01	6
4	1900	628443	.....	7840	2275	35040	... .	.....	18476	.....	.....	930	33,349 01	7
4	460	587682	.....	7989	500	8800	....	.....	.....	.....	.....	....	30,912 10	8
.....	.....	68202	.....	98931	.....	18651	.. ...	.....	....	.....	.....	....	7,616 22	9
23	4900	3361141	10000	1357422	593278	447510	75790	303620	164363	1965130	952100	8520	.....	
.....	.....	168057	500	40723	11866	22375	758	6072	1644	19651	9521	4260	285,427 00	

APPENDIX No. 8.

NORTH-WEST TERRITORIES

REPORT ON THE FISHERIES OF THE NORTH-WEST TERRITORIES FOR THE YEAR 1898, BY INSPECTOR E. W. MILLER.

QU'APPELLE, N.W.T., January 2, 1899.

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

SIR,—I have the honour to submit the following report on the fisheries of the North-west Territories for the year 1898.

In the waters more immediately under the supervision of officers of your department, the supply of fish shows in most instances no signs of shrinkage. From some of the lakes in the more settled districts a smaller catch is reported, but this would appear to be due more to a less amount of fishing having been done than to a scarcity of fish.

At Lac la Biche and Lac Ste. Anne, where, a few years ago, the exhaustion of the lakes threatened starvation almost to the resident half-breeds, the recovery noted last year has been well maintained, and the fishermen are now convinced of the good results following the observance of a close season. Only a few of the smaller lakes in the Territories are so situated as to permit of fish being marketed in the summer season; those that are offered meet with a ready sale at good prices. A number of fishermen worked at the lakes north of Prince Albert in the early part of this year, their fish being bought and exported to the United States. From various causes the undertaking did not prove remunerative to the buyer, and there is no probability of a similar industry being carried on this winter. Under more favourable circumstances and with better and cheaper modes of transport there appears no good reason why a successful attempt should not be made to supply the towns in Assiniboia with fish from these lakes.

In the main, however, the lakes north of the Saskatchewan River must be regarded more as sources of food to the resident half-breeds and Indians than fitting objects for mercantile exploitation, and it would be inadvisable to imperil the permanence of the fishery by permitting too great a strain to be placed on it, even if it were of temporary advantage to the native residents. The opening up of an export business in sturgeon and its products, which has been attempted on a small scale on the Lower Saskatchewan River and Cedar Lake this year, must be looked at from this view, particularly in face of the rapid disappearance of the sturgeon in other places where it was formerly plentiful. Until such times that the dependence of the native population in this district on fish for their main supply of food becomes very much less than it is at present, it would be inexpedient to encourage fishing for export.

The rapid multiplication of irrigation ditches in Southern Alberta has called renewed attention to the danger of the extinction of the trout in the mountain streams from which their waters are principally drawn. A more rigid enforcement of the clause of the Fishery Act in regard to the screening of ditches has been recommended, as in spite of the objections raised by some irrigators to the use of screens, I consider they can be used in most instances without serious detriment to the ditch and must certainly prevent a great destruction of fish.

Objections have been raised in some districts to the length of the close season for whitefish, but while the spawning time of this fish unquestionably varies considerably in different lakes, the season as now fixed is not longer than is needed for the effectual maintenance of a full supply of this valuable fish. The ease with which they may be netted on their shallow spawning grounds is the real ground on which the request for an earlier opening of the fishery is based.

In some of the smaller fish lakes, the enforcement of a close season for pike and mullet would seem to have led to an undue multiplication of the coarser fish at the expense of the more valuable species. It may therefor become advisable in the near future to suspend the close season for pike, &c., in certain waters, more especially those which are favourably situated for being restocked with whitefish fry. The encroachment of the pike has also been much marked in the trout streams of the western part of the Territories. The coarser fish here are but little fished for, and I am of opinion that no restriction should be placed on their capture in any of the Albertan tributaries of the South Saskatchewan River.

A change in the close season established for the protection of speckled trout has recently been recommended. At present the most esteemed variety found in the Territories, the Rainbow Trout (*Salmo mykis*) is sacrificed to some extent in favour of the Bull Trout (*Salvalinus malma*). The proposed alteration, while giving an equal period of protection, favours the more valued fish and prolongs the open season at a time when the streams are in the best shape for fishing.

It was not found possible to place fry in any North-west lakes during the past year, there being no available source of supply. Much disappointment has subsequently been felt in some districts, the condition of the water, &c., having been very favourable. In Assiniboia in particular many lakes which had become so lowered by the series of dry seasons as to almost lose their power to sustain fish life, promise to soon recover their former levels, and it is very desirable that they should be stocked with fry so as to accelerate the coming of the time when they will again produce a fair supply of fish for the benefit of the surrounding settlers. The establishment of a fish hatchery in the Territories, if only on a small scale, is therefore a matter calling for early consideration.

During the past year the regulations are reported to have been well observed in all districts over which overseers and guardians have been appointed, No complaints have been received against any licensed fishermen though a number of nets have been seized, the property of undiscoverable owners, being either of illegal mesh or set in close season.

From the commissioner, officers and men of the North-west Mounted Police much valuable assistance has been received, both in bringing to my notice infractions of the regulations and the extension of travelling facilities where possible.

SYNOPSIS OF THE REPORTS OF THE OVERSEERS AND GUARDIANS IN THE DISTRICTS SPECIFIED.

PRINCE ALBERT.

The fisheries in this district are reported by *Overseer Robertson* as being in good condition in general. The fishing for export carried on at Candle Lake last winter proved unsuccessful from a variety of causes. The catch was not very good and the difficulties of transport were greater than usual owing to the heavy snowfall. In consequence of this failure there will probably be no buyers for export on Prince Albert market this winter and the fishery will be confined to purely local requirements. The overseer states that much more fishing for sale would be carried on if the close season terminated early enough to permit fishing to begin before the ice gets thick. At Beaver River and Green Lake where guardian Anderson is stationed during the whitefish close season, the catch was rather smaller than usual. This was due to some of the Indians having placed nets right across the former stream early in the fall, thus preventing the fish reaching their usual spawning ground. Steps will be taken to prevent this hurtful practice being repeated next year. Forty-eight

ordinary licenses were issued and fifty-five free permits to treaty Indians. One net of illegal mesh was seized at Crooked Lake but in general the regulations were well carried out.

CALGARY AND MCLEOD DISTRICT.

The building of the Crow's Nest Railway caused an increased amount of fishing to be done in the Waterton and Crow's Nest lakes, eight licensed fishermen being at work with nets, who were able to dispose of their catch of whitefish and lake trout at good prices. Abont 2000 lbs., of lake trout were taken from Lake Minniwankan, or Devil's Lake, near Banff. These fish were caught by hook and line in deep water. One fish weighed 29 lbs., but the average is about 6 lbs. Mountain whitefish locally called grayling, are also taken, but in limited numbers as no netting is done. The Sprey Lakes are situated about eighteen miles from Canmore on the C.P.R. main line and a pack trail has been made to them by the enterprise of the miners of that town, many of whom are enthusiastic fishermen. These lakes are also much resorted to by the Stony Indians. Lake and bull trout form the main catch. The other fishing in this district is confined almost entirely to the angling for speckled trout in the many beautiful streams descending from the Rockies. The protection of this fishery from the devastating effects of the irrigation ditches, of which so many are now being constructed, is earnestly desired by the fishermen of the district, and a detailed report on this important question, in which the strictest enforcement of the fishery regulation requiring screens to be placed at the head gates of all ditches, is strongly recommended.

Guardian Millar of Sheep Creek reports that there was more water in the rivers than for some years past and that the catches with rod and line were good. He states that a great destruction of fish is caused by the unscreened ditches, the law in this respect being but meagerly observed. The alteration of the close season fixed for speckled trout would be welcomed by nearly all those interested in this fishing, the Cutthroat or Rainbow trout which is the most numerous and most esteemed variety both for sport and food, being in prime condition in September and October while the close season at present begins on September 15.

EDMONTON DISTRICT.

In this district *Overseer Young* states that the efforts of the department to maintain a good supply of fish are becoming better appreciated both by the general public and the fishermen more directly affected. This year it was found possible to materially reduce the catch of fish allowed to be taken under special permit during the close season, it being confined to the pressing daily needs of the actually resident half breeds and Indians. The results of the enforcement of a close season at Lac Ste. Anne and Lac la Biche for the last three or four years was shown very satisfactorily by the great improvement in the fisheries at those points. At the latter lake 2,000 fish were taken in three nights with 150 fathoms of net. The summer fishing was also very good. White Whale Lake which was formerly neglected by the fishermen on account of the poor quality of the whitefish there, has done well this year, there being a marked improvement in the fish.

Fifty-eight licensed fishermen were at work on Pigeon Lake where fishing is carried on both summer and winter, the towns on the Calgary and Edmonton Railway being mostly supplied from this source. A resident guardian is employed here who reports that the regulations are very willingly obeyed and that there is no falling off in either the quality or quantity of the fish taken in the open season.

From Saddle Lake, Floating Stone and Good Fish lakes, reports are not so favourable. These lakes are near Indian reserves, the close seasons are not properly observed and fish are consequently becoming scarce. It will be necessary to put these lakes under more direct supervision than hitherto.

The water level in the lakes of this district is stated to be lower than at any time since 1870, and this has had disastrous effect on some of the shallower lakes. In

Beaver Lake, for example where pike and pickerel were formerly extremely abundant the fish have almost disappeared. There is but little river fishing done in this district.

BATTLEFORD DISTRICT.

The population around the fishing lakes of this district appear to be even more nomadic than the bulk of their kinsmen and there have been but a comparatively small number of resident families living near them this year. Jackfish Lake, about thirty miles from Battleford, swarms with the fish of that name which are of great size and of superior quality. The whitefish found here are held in poor estimation and the catch is small. At Turtle Lake, thirty miles further north, the whitefish are extremely good and it is here that the bulk of the fish supply of the district is taken. Guardian Gagné reports, however, that the catch this year for some unknown reason was very disappointing.

The Battle River formerly yielded a good supply of sturgeon and goldeyes; this fishery has, however, very much fallen off, partly owing to successive seasons of low water, but also to the blocking of the river by basket traps. It is hoped that the recent appointment of a guardian here will prevent this in future.

LONG LAKE DISTRICT.

Overseer Foster, of Silton, reports that in consequence of the good crops in this district, the fishery was not so largely resorted to as in the previous year. The regular fishermen had a good catch of exceptionally fine whitefish in the winter season. Little fishing is done in the hot weather, though it would seem that with a proper supply of ice, a profitable trade could be carried on. This fall the whitefish were observed in great numbers on their old spawning grounds at the south end of the lake, which had been deserted for some time. Owing to the heavy rainfall the lake which has long been steadily shrinking, regained the level marked five years since, and there was a great abundance of fish food. One net was seized here for infringement of the regulations.

QU'APPELLE LAKES.

Guardian Leader reports a large falling off in the catch of true whitefish in these lakes, attributable in his opinion to the change of ground by the fish and the failure of the fishermen to locate them. Continuous rough weather much impeded the summer fishery in the deeper water.

The supply of tullibee, a fish which here is considered but little inferior to the whitefish, is well maintained while pike, pickerel and suckers seem to be becoming superabundant. The upper lakes are a great resort of wild duck in the fall and they undoubtedly destroy a great quantity of whitefish spawn. Bluebills have been killed so gorged that the spawn would run from their mouth when help up.

Great numbers of coarse fish run up the small creeks entering the lakes as soon as they begin to run in the spring. It is considered advisable to permit these fish to be taken directly the streams begin to fall, as they are otherwise left stranded to rot.

A very severe storm in June caused the flank of the Katepwe dam to be again turned and the level of the lakes was considerably lowered. The ample rainfall has however maintained the lake water in first-class condition, and very few dead fish were noted this year. This dam has now been rebuilt by the North-west Government on such a scale that it might be expected to withstand all reasonable pressure, while its height renders the further maintenance of a second dam at Fort Qu'Appelle unnecessary.

CROOKED AND ROUND LAKES.

These lakes though in first-class shape as regards water, remain in a very unsatisfactory state in regard to supply of fish. Whitefish are practically extinct though once very plentiful here. The lakes require restocking with fry in the worst way, and I believe the Indians on the adjoining reserves are now sufficiently convinced of the evils of their former overfishing to willingly keep a proper close season in future.

Guardian Fitzgerald removed a great number of fish traps from the Qu'Appelle River during the summer, but it is comparatively an easy matter for the constructors to escape detection. It is probable that a large quantity of fish is taken from the stream by this means.

EAGLE QUILL LAKE.

Guardian Goodwin reports that there has been a good average catch of whitefish at this lake, which shows no sign of exhaustion. New dams have been built on the Swift Current Creek at Swift Current and Waldeck which are provided with good fishways. Considerable angling is done along the South Saskatchewan River in this district, the Buffalo fish, weighing from three to six pounds, being very plentiful and much esteemed for eating. The regulations are reported as well observed.

MOOSE MOUNTAIN LAKES.

These lakes are situated in the south-east of Assiniboia and are well stocked with pike, pickerel, &c., but contain no whitefish. Three licenses for nets were issued but the greater part of the fishing is done by hook and line. A great number of people resort to these lakes in the summer, and as several complaints have been made in regard to illegal netting, &c., it will probably be necessary to appoint a guardian next summer.

CUMBERLAND DISTRICT.

No resident overseer or guardian has as yet been appointed in this district but it is becoming apparent that such an officer will soon be urgently required. Fishing in the past has been confined to the food requirements of the resident population, and it is doubtful whether any catch in excess of this amount could long be sustained by the fisheries without threatening an early depletion. This year a large quantity of sturgeon has been exported via Grand Rapids, and there has also been a small manufacture of caviare. In both cases without a proper supply of ice considerable waste of fish is likely. The progress of this business will require to be closely watched so that the best interests of the whole body of residents in the district may be conserved.

The usual statements giving statistics of yield and value of the fisheries in the North-west Territories are hereto appended.

I have the honour to be, sir,
Your obedient servant,

E. W. MILLER,
Inspector of Fisheries, N.W.T.

SESSIONAL PAPER No. 11a

NORTH-WEST TERRITORIES.

RETURN of the Number and Value of Boats, the Quantity and Value of Fishing Materials, &c., in the District of **Qu'Appelle**, North-west Territories, for the Year 1898.

Number.	Districts.	Fishing Materials.							
		Boats.		Gill Nets.			Seines.		
		Number.	Value.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.
			$			$			$
1	Long Lake	6	60	60	1500	360	..	.....	.....
2	Qu'Appelle Lakes	11	315	36	900	225	1	50	50
3	Crooked and Round Lakes	4	40	20	500	120	....	.....	.....
4	Moose Mountain Lakes	4	60	10	300	72	...	.....	.....
5	Eagle Quill Lakes	3	30	12	250	75	....	.....	.....
		28	505	138	3450	852	1	50	50

RETURN of the Kinds and Quantity of Fish in the District of **Qu'Appelle**, North-west Territories, for the Year 1898.

Number.	Districts.	Kinds of Fish.					Total Value.
		Whitefish, lbs.	Pickerel, lbs.	Pike, lbs.	Tullibee, lbs.	Mixed and coarse fish, lbs	
							$ cts.
1	Long Lake	22000	6000	10000	.....	8000	1,560 00
2	Qu'Appelle Lakes	3000	12000	20000	15000	15000	1,360 00
3	Crooked and Round Lakes	300	7000	10000	3000	12000	605 00
4	Moose Mountain Lakes	.....	6000	10000	.....	6000	440 00
5	Eagle Quill Lakes	6500	1000	3000	.....	5000	465 00
6	Fishing Lakes (N.)	.....	8000	12000	.....	20000	680 00
7	Qu'Appelle River	.....	16000	20000	.....	40000	1,280 00
	Totals	31800	56000	85000	18000	106000	.....
	Values	1590	1680	1700	360	1060	6,390 00

RETURN of the Number and Value of Boats, the Quantity and Value of Fishing Materials, &c., in the District of Edmonton, North-west Territories, for the Year 1898.

Number.	Districts	Fishing Materials.				
		Boats.		Gill Nets.		
		Number.	Value.	Number.	Fathoms.	Value.
			$			
1	Lac la Biche	45	675	190	5700	760
2	Baptiste Lake	....	....	40	1200	160
3	Lac la Nonne	....	....	30	900	120
4	Heart Lake	....	....	40	1200	160
5	Beaver Lake	....	....	40	1200	160
6	Lac Ste. Anne	30	450	150	4500	600
7	Pigeon Lake	20	300	180	5400	720
	Total	95	1425	670	20100	2680

RETURN showing the Kinds and Quantity of Fish in the District of Edmonton, North-west Territories, for the Year 1898.

Number.	Districts.	Kinds of Fish.						Total Value.
		Whitefish, lbs.	Pickerel, lbs.	Pike, lbs.	Perch, lbs.	Tullibee, lbs.	Mixed and coarse fish, lbs.	
								$ cts.
1	Lac la Biche	100000	30000	40000	.....	5000	10000	6,900 00
2	Beaver Lake	21000	.....	.....	.....	.....	5000	1,100 00
3	Island Lake	3000	.....	.....	.....	.....	.....	150 00
4	Stony Lake	5000	.....	.....	.....	.....	.....	250 00
5	Whitefish Lake	30000	.....	.....	.....	.....	5000	1,550 00
6	Long Lake	.....	.....	.....	1000	5000	.....	110 00
7	Pigeon Lake	50000	.....	.....	.....	.....	1000	2,510 00
8	White Whale Lake	50000	.....	.....	.....	.....	.....	2,500 00
9	Lac Ste. Anne	35000	2000	5000	.....	.....	2000	1,930 00
10	Baptiste Lake	.....	.....	.....	.....	8000	.....	160 00
11	Lac la Nonne	2000	.....	.....	.....	.....	2000	120 00
12	Little Whitefish Lake	1000	.....	.....	.....	.....	.....	50 00
	Totals	297000	32000	45000	1000	18000	25000	.....
	Values	$ 14850	960	900	10	360	250	17,330 00

SESSIONAL PAPER No. 11a

RETURN of the Number and Value of Boats, the Quantity and Value of Fishing Materials, &c., in the District of **Prince Albert**, North-west Territories, for the Year 1898.

Number.	Districts.	Fishing Materials.				
		Boats.		Gill Nets.		
		Number.	Value.	Number.	Fathoms.	Value.
			$			$
1	Green Lake	20	300	100	2500	500
2	Assiniboine Lake	15	250	200	5000	800
3	Deer, Trout, Montreal and Candle Lakes	30	400	350	8750	1400
4	Saskatchewan River	40	400	100	1500	350
	Totals	105	1350	750	17750	3050

RETURN showing the Kinds and Quantity of Fish in the District of **Prince Albert**, North-west Territories, for the Year 1898.

Number.	Districts.	Kinds on Fish.								Total Value.
		Whitefish, lbs.	Trout, lbs.	Pickerel, lbs.	Pike, lbs.	Sturgeon, lbs.	Perch, lbs.	Tullibee, lbs.	Mixed and coarse fish, lbs.	
										$ cts.
1	Beaver River	120000	.....	.....	.....	.....	.....	.....	.....	6,000 00
2	Green Lake	100000	.....	25000	120000	.....	.....	10000	25000	8,600 00
3	Assiniboine Lake	25000	.....	35000	.....	.....	.....	.....	5000	2,350 00
4	Devil's Lake	10000	.....	.....	4000	.....	.....	.....	4000	620 00
5	Pelican Lake	8000	.....	.....	12000	.....	.....	.....	5000	690 00
6	Doré and Dog Lakes	40000	.....	.....	60000	.....	.....	.....	25000	3,450 00
7	Montreal and Bittern Lakes	25000	.....	.....	40000	.....	.....	.....	10000	2,150 00
8	Sturgeon Lake	3000	.....	.....	6000	.....	.....	.....	4000	310 00
9	Candle, Deer and Trout Lakes	20000	10000	5000	.....	.....	.....	.....	.....	1,650 00
10	" " *	80000	40000	5000	15000	.....	.....	.....	.....	6,450 00
11	Lakes south of Saskatchewan River	.....	.....	4000	3000	.....	800	.....	5000	238 00
12	Saskatchewan River	3000	.....	4000	4000	40000	.....	.....	15000	2,500 00
	Totals	434000	50000	78000	264000	40000	800	10000	98000	.....
	Values $	21700	2500	2340	5280	2000	8	200	980	35,008 00

* Exported (dressed).

RECAPITULATION.

RETURN of the Number of Boats, Nets, &., and the Quantity and Value of all Fish caught in the North-west Territories, for the Year 1898.

Number.	Districts.	Fishing Materials.					
		Boats.			Gill Nets.		
		Number.	Value.	Men.	Number.	Fathoms.	Value.
			$				$
1	Qu'Appelle	28	505	.....	138	3450	852
2	Macleod	10	200	.....	18	540	180
3	Edmonton	95	1425	.....	750	20100	2680
4	Battleford	.....	.....	.....	.....	.....	.....
5	Prince Albert	105	1350	.....	670	17750	3050
6	Cumberland and other districts	.....	.....	.....	.....	.....	.....
	Totals	238	3480	630	1576	41840	6682

Number.	Districts.	Kinds of Fish.								Total Value.
		Whitefish, lbs.	Trout, lbs.	Pickerel, lbs.	Pike, lbs.	Sturgeon, lbs.	Perch, lbs.	Tullibee, lbs.	Mixed and coarse fish, lbs.	
										$ cts.
1	Qu'Appelle	31800	.....	56000	85000	.....	....	18000	106000	6,390 00
2	Macleod	8000	40000	.....	15000	.....	.....	.....	10000	2,800 00
3	Edmonton	297000	.....	32000	45000	.....	1000	18000	25000	17,330 00
4	Battleford	40000	4000	20000	30000	1000	....	10000	75000	4,400 00
5	Prince Albert	434000	50000	78000	264000	40000	800	10000	98000	35,008 00
6	Cumberland & other districts	3500000	20000	1000000	1500000	200000	....	50000	1500000	262,000 00
	Totals	4310800	114000	1186000	1939000	241000	1800	106000	1814000	.....
	Value	215540	5700	35580	38780	12050	18	2120	18140	327,928 00

RECAPITULATION

Of the Yield and Value of the Fisheries of Manitoba and the North-west Territories, for the Year 1898.

Kinds of Fish.	Quantity.	Value.
	Lbs.	$
Whitefish	7,671,941	383,597
Pickerel	2,543,422	76,303
Pike	2,532,278	50,646
Perch	77,591	776
Sturgeon	688,510	34,425
" caviare	8,520	4,260
Trout	124,000	6,200
Tullibee	409,620	8,192
Catfish	164,363	1,644
Coarse fish	3,779,130	37,791
Home consumption	952,100	9,521
Total for 1898		613,355
do 1897		638,415
Decrease		25,060

RECAPITULATION

Of the Number of Tugs, Boats, Nets, &c., used in Manitoba and North-west Territories.

Articles.	Value.
	$
17 fishing tugs (1,885 tons; 97 men)	115,600
633 fishing boats (1,232 men)	17,808
212,910 fathoms gill-nets	28,548
165 fathoms seines	425
65 freezers	89,300
23 fishing piers	4,900
Total	256,581

APPENDIX No. 9.

BRITISH COLUMBIA.

REPORT ON THE FISHERIES OF BRITISH COLUMBIA FOR THE YEAR 1898, BY INSPECTOR JOHN McNAB.

NEW WESTMINSTER, B.C., January 14, 1899.

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

SIR,—I have the honour to submit my annual report of the fisheries of British Columbia, for the year 1898, with statistical statement of yield and value of products, and of capital invested in the several branches of the fishing industry, appended.

A comparison with the returns of the last three years shows a large falling off in value of products, which is altogether owing to the small pack of salmon put up on the Fraser River, amounting to but 264,2 5 cases, as compared with 432,920 cases in 1895, 375,344 cases in 1896, and 879,116 cases in 1897.

The total value of products for 1898 amounts to $3,713,101.16; in 1897 the amount was $6,138,864.96.

Large fluctuations from year to year, in the catch of all varieties of fish, have always been common, and are not to be considered ominous of permanent failure, or depletion of the varieties affected; except the conditions affecting the life and propagation of the species have been changed, or subject to unfavourable conditions. Unfortunately, such has become the case with regard to the salmon of the Fraser River. It is the opinion of every one who, from observation and study of the subject is in a position to form an opinion thereon, that the Fraser River is the breeding place and nursery of practically all the sockeye salmon that enter the Gulf of Georgia by way of the Straits of Juan de Fuca. Mr. A. C. Little, Fish Commissioner for the State of Washington, a gentleman who is well qualified to form an opinion, has stated that 'his investigation has led him to feel certain that from 75 to 90 per cent of all sockeye salmon caught in the Sound, are Fraser River salmon.' Mr. Little's estimate is none too large. In my opinion practically all the sockeyes, which frequent the waters mentioned, are Fraser River fish. Now, when it is considered that the Juan de Fuca Straits and all the waters between its entrance and the mouth of the Fraser River, are practically an estuary of the Fraser, the obstructing of every available place and channel, with gear, and appliances, so devised as to kill, or lead to the destruction of salmon of all sizes, which, of necessity, must come into contact therewith, when, in accordance with the law of their nature, they are seeking to enter their native rivers, in order to propagate their species,—it is apparent that, unless some protective measures are enforced to restrain the cupidity of the fishermen, the future of the salmon fishing industry of the Fraser River and State of Washington as well, is menaced.

Another source of danger to the salmon of the Fraser River consists in the overflow of sand and clay, from the large hydraulic mining enterprises, on the upper waters of the Fraser, and its affluents, which affect some very important spawning grounds, by the debris, or tailings, overflowing or covering the gravel beds, and also by dams built across rivers, notably a dam across the south fork of the Quesnelle

River, formerly an important spawning place for salmon, but from which they are now excluded.

The catch of sturgeon in the Fraser River and lakes has also fallen off; in order to prevent their depletion an annual close time of four months, from the 15th of May to the 15th of September, is recommended.

All the halibut caught for exportation, are handled and shipped to eastern market by the New England Fish Company, operating from Vancouver. Their exports for 1898 amounted to 1,200,000 pounds. Halibut of fine quality are found in immense quantities in the vicinity of the northern coast and islands. The fish are brought to Vancouver from the fishing grounds in steamers owned by the company, and averaged from 80,000 to 100,000 pounds each trip, which are caught in a few days when the weather is favourable. Large quantities of halibut are also caught in the northern waters of British Columbia by United States fishermen.

A new feature in the fishing industry this season was the salting for shipment to Japan of 4,000,000 pounds of dog salmon (*O. Keta*) by Japanese fishermen. The fish were mossly caught by fishermen when fishing for cohoes for the canners, and bought by the Japs. Formerly this class of fish when caught were allowed to go to waste.

All other varieties of salt water fish, varied and abundant as they are, are caught in sufficient quantities only to supply the local demand, with the exception of herring, which are being smoked or kippered in considerable quantities and find a ready market in all sections of the interior as well as in the cities; this is a growing industry.

The large increase of population in the interior of the province, consequent upon the development of the mining industry, has created a demand for a large quantity of fish, which is supplied partly from the state of Washington via Spokane, and partly from the lakes in the interior, from which considerable quantities of trout, char, lake herring, &c., are taken, but it is impossible to obtain anything like correct returns of quantities.

The larger lakes in the northern parts of the province are known to abound with trout and whitefish of fine quality, and several commercial fisheries are likely to be established there during 1899.

A company having good prospects of permanent success entered upon the manufacture of oil and fish guano from offal supplied by the canners on the Fraser River. Their output of oil was 12,000 gallons and about 200 tons of guano.

Of the lobsters planted in British Columbia waters, nothing is known, but it does not follow that they may not be doing well.

The oysters planted in one locality, in Oyster Harbour, where there was an opportunity to protect them from their natural enemies—starfish—are apparently doing well, but it is not yet apparent that they are propagating.

Whitefish have been reported by several reliable men as having been seen by them in Coquitlam and Harrison Lakes. In October next I will endeavour to secure some by netting, for the purpose of ascertaining their size and quality.

My guardians, from the districts of Rivers Inlet, Skeena and Naas, report a prosperous season's fishing, which the returns verify, and that the regulations were well observed, and enforced without friction. In the Fraser River district the want of a suitable steamer to patrol the waters outside the Fraser River, in Howe Sound, and the Gulf of Georgia, was seriously felt; without a suitable boat, unlicensed fishermen, with illegal gear, can follow their calling with impunity, they being beyond my reach and that of my officers.

All of which is respectfully submitted.

I have the honour to be, sir,
Your obedient servant,

JOHN McNAB,
Inspector of Fisheries for British Columbia.

License No.	Vessels.	Masters.	Tons.	Crews.		Boats.		British Columbia Coast.	
				Whites.	Indians.	Boats.	Canoes.	Males.	Females.
38	Abbie M. Deering	M. White	96	22	....	6	....	.....	.....
12	Ada	J. F. Noël	97	9	20	2	10	54	131
9	Ainoko	G. Heater	75	6	18	2	9	80	343
14	Allie J. Alger	R. A. Cavender	75	23	.....	7	.....	402	304
10	Arietes	F. Cole & W. D. Byers	86	8	30	2	15	170	159
* 8	Beatrice	W. Heater	66	5	16	1	8	167	163
23	Carrie C. W	M. Foley,	92	6	26	2	13	105	83
15	C. D. Rand	H. Blakstad	51	8	22	2	11	151	91
* 11	City of San Diego	M. Keefe	49	6	20	1	10	97	240
36	Diana	J. G. Searle	50	.....	....	.....	.....	.....	.....
17	Director	F. W. Gilbert	87	23	...	6	.....	16	14
22	Dora Sieward	H. F. Sieward	93	10	34	2	17	89	220
3	Doris	D. McPhee	60	6	20	2	10	84	257
21	Enterprise	J. W. Todd	69	6	28	2	13	89	220
25	Favourite	L. McLean	80	6	31	2	15	179	152
1	Geneva	Wm. O'Leary	93	24	...	8	.....	390	502
24	Halzie	J. Daley	72	7	24	2	12	179	85
28	Ida Ella	H. V. Hughes	69	6	25	2	12	117	90
2	Libbie	F. Hackett	93	8 29	14	2 7	7	204	57
5	Mary Ellen	J. G. Searle	63	8	22	2	11	129	147
4	Mary Taylor	A. Nelson	43	6	16	2	8	200	338
19	Mermaid	J. W. Anderson	76	10	22	3	11	52	165
26	Minnie	Victor Jackobsen	46	6	19	2	10	123	148
31	Ocean Bell	A. McDougall	83	7	22	2	11	66	61
29	Ocean Rover	O. Buckholz	55	6	16	2	8	79	69
13	Otto	J. F. Gosse	86	8	28	2	14	217	242
7	Penelope	D. G. Macaulay	70	6	24	2	12	102	430
35	Pioneer	.....	.....	.....	..	.....	.....	.....	.....
16	Saucy Lass	W. D. McDougall	38	6	14	2	7	85	77
6	Teresa	G. Meyer	63	8	23	1	13	42	256
20	Umbria	J. W. Pippett & C. Campbell	99	8	30	2	15	117	169
18	Victoria	J. Haan	63	7	20	2	10	169	168
37	Viva	D. McPhee	92	7	21	2	10	.....	.....
32	Walter L. Rich	J. Anderson	84	6	26	2	13	144	86
30	Zillah May	S. Balcam	66	7	22	2	11	95	86
....	Catch of Indians in canoes	.....	...	.....	....	.....	....	.. ..	.....
	Total	.....	.....	.....	.....	.....	....	.....	... .

SESSIONAL PAPER No. 11a

Sealing Report, 1898.

Particulars of Catch.						Totals.	Number of Skins Branded.	Remarks.
Japan Coast.		Vicinity Copper Islands.		Behring Sea.				
Males.	Females.	Males.	Females.	Males.	Females.			
				59	319	378	....	
						185	....	
				274	420	1,117	....	
						706	....	
				203	211	643	....	
				126	125	581	....	
				302	167	657	....	
						242	....	
				186	438	961	1	Boarded Sept. 8 by Lt. H. G. Smith, H.M.S. "Pheasant."
				126	201	327	....	Boarded Aug. 12 by officers from H.M.S. "Pheasant."
201	159	20	30			440	....	
				444	361	1,114	....	Boarded Sept. 26 by Lt. R. D. Scott, H.M.S. "Pheasant."
						341	....	
				275	317	901	....	Boarded Aug. 12 by E. K. A., H.M.S. "Pheasant."
				250	188	769	....	Boarded Aug. 13 by R. D. Scott, H.M.S. "Pheasant."
						892	....	
				338	422	1,024	2	
				236	198	641	....	Boarded Aug. 13 by E. K. A., H.M.S. "Pheasant."
				116	114	491	....	
						276	...	
				251	468	1,257	....	
				396	860	1,473	....	
				233	160	664	....	
				304	271	702	...	
				193	144	485	1	
				376	414	1,249	1	Boarded Aug. 26 by R. D. Scott, H.M.S. "Pheasant."
				210	295	1,037	....	Boarded Aug. 13 by R. D. Scott, H.M.S. "Pheasant."
						453	....	These skins were reported on board at Alaska, vessel missing.
				109	145	416	....	
				155	173	626	....	Boarded Sept. 13 by Lt. E. K. A., H.M.S. "Pheasant."
				654	1,028	1,968	....	Boarded Aug. 17 by officers from H.M.S. "Icarus"; Aug. 24 by officers from H.M.S. "Pheasant."
				1,004	764	2,105	1	
				191	459	650	....	
				143	263	636	....	
				441	423	1,045	....	
						1,100	....	
						28,552	....	

B.—Return showing Vessels and Materials used, and Kinds, Quantities and Values of Fish, and Fish Products in British Columbia, 1898.

Number.	Districts.	Vessels and Boats.						Fishing Materials.					Kinds of Fish.						Number.
		Vessels.			Boats.			Gill Nets.		Seines.		Lines.							
		Number.	Value.	Men.	Number.	Value.	Men.	Fathoms.	Value.	Fathoms.	Value.	Value.	Salmon, in brls.	Salmon, fresh, lbs.	Salmon, smoked, lbs.	Salmon, in cans, lbs.	Salmon, dry salted, lbs.	Sturgeon, lbs.	
			$			$			$		$	$							
1	Fraser River	51	196965	158	3725	149000	14900	396450	301025	1200	1800	3000	250	501000	75000	12682780	4000000	750000	1
2	Rivers Inlet	12	44480	36	600	25500	2500	105000	78750	200	300	100	250	20000	2000	4340424	.....	.....	2
3	Skeena River	10	31100	30	450	22500	2250	120000	90000	1000	1500	150	400	71350	10000	5057376	.....	.....	3
4	Naas River	1	2500	3	100	4000	415	19500	14625	.....	.....	50	200	10000	10000	960000	.....	.....	4
5	East Coast, Queen Charlotte Island	.....	.....	.....	25	3500	75	2500	2500	250	375	750	150	2500	5000	.....	.....	.....	5
6	West Coast, Queen Charlotte Island	.....	.....	.....	25	3750	110	2950	1950	300	450	250	.....	.....	.....	.....	.....	.....	6
7	Cape Scott to Comox	.....	.....	.....	30	3000	80	2875	1875	500	750	250	100	30000	6000	393072	.....	.....	7
8	Comox to Victoria	60	12000	180	80	4800	165	5750	3900	4000	6000	2000	250	250000	75000	.....	.....	.....	8
9	Victoria to Cape Beale	6	1800	20	25	1250	120	3250	2275	1000	1500	2000	250	25000	8000	.....	.....	.....	9
10	Cape Beale to Cape Scott	3	750	12	20	1000	80	2500	1875	400	600	200	750	5000	10000	208800	.....	.....	10
	Totals	143	289595	439	5080	218300	20695	660775	498825	8850	13275	8750	2600	914850	201000	23642452	4000000	750000	

B.—Return showing Vessels and Materials used, and Fish and Fish Products in British Columbia—*Concluded.*

Number.	Districts.	Kinds of Fish.															Total Value.	Number.
		Halibut, lbs.	Herring, lbs.	Herring, smoked, lbs.	Oolachans, salted, brls.	Oolachans, fresh, lbs.	Oolachans, smoked, lbs.	Trout, lbs.	Assorted and mixed fish, lbs.	Smelts, lbs.	Codfish, fresh, lbs.	Skil, brls.	Hair-seal, skins.	Fish oil, galls.	Fish, guano, tons.	Caviare, lbs.	$ cts.	
1	Fraser River	1500000	200000	90000	250	250000	2500	150000	150000	37500	150000	....	500	19500	200	24778	1,682,661 40	1
2	Rivers Inlet	25000	20000	....	275	10000	.....	300	1500	.....	..	....	800	9200	....	.....	447,307 40	2
3	Skeena River	5000	....	.....	500	50000	.....	2500	1500	.....	.....	....	250	5750	....	.....	527,860 10	3
4	Naas River	10000	5000	.....	750	50000	20000	1000	.....	.....	.....	....	750	9200	....	.....	116,072 50	4
5	East Coast, Queen Charlotte Island	25000	20000	2500	....	.....	.....	.....	12000	.....	2500	35	2000	28750	....	.....	15,550 00	5
6	West Coast, Queen Charlotte Island	25000	25000	2500	....	.....	.....	.....	25000	.....	10000	60	2000	11500	....	.....	9,550 00	6
7	Cape Scott to Comox	10000	15000	1000	350	.....	.....	10000	10000	6000	2000	15	500	6125	....	.....	52,719 70	7
8	Comox to Victoria	350000	250000	25000	50	100000	2000	150000	250000	35000	350000	....	300	17250	....	.....	120,350 00	8
9	Victoria to Cape Beale	5000	10000	2000	....	.....	.....	5000	8000	.....	8000	....	250	5750	....	.....	9,762 50	9
10	Cape Beale to Cape Scott	15000	20000	4000	....	.....	.....	10000	8000	.....	.....	....	250	11500	....	.....	36,667 50	10
	Totals	1970000	565000	127000	2175	460000	24500	328800	466000	78500	522500	110	7600	124525	200	24778	3,018,501 10	
	Oysters																12,000 00	
	Isinglass																500 00	
	Clams and mussels																9,080 00	
	Crabs and abelonies																22,500 00	
	Shrimps and prawns																5,000 00	
	Fur-seals																285,520 00	
	Sea otter, 50 @ $200																10,000 00	
	Estimate of fish not included in above																350,000 00	
	Grand total																3,713,101 10	

C—SCHEDULE of Salmon Canneries operated in British Columbia, Season of 1898.

Owners or Agents.	Name of Cannery.	No. of licenses.	Packed in 1-lb Cans.	District.	Locality.
Cleeve Canning Co	Cleeve	20	393,600	Fraser River	New Westminster.
Brennan Bros	Ontario	20	73,920	"	"
F. Boutilier & Co	Boutilier	20	129,920	"	"
Sinclair Canning Co	Sinclair	20	184,800	"	"
Western Fisheries Co	Western	20	216,000	"	"
Westminster Packing Co	Westminster	20	182,832	"	"
A. B. C. Packing Co	Phenix	20	609,120	"	Lulu Island.
"	Brittania	20			
"	British American	20	571,536	"	Canoe Pass.
"	Canoe Pass	20			
"	British Columbia	20	282,096	"	New Westminster.
"	Wadham's	20	215,808	"	Ladner's.
Victoria Canning Co	Delta	20	1,349,224	"	"
"	Harlock	20			Port Guichon.
"	Wellington	20			Canoe Pass.
Ewen & Co	Lion Island	20	480,000	"	Lion Island.
Fraser River Industrial Society	Industrial	20	168,000	"	New West
B. C. Canning Co	Dea's Island	20	216,624	"	Dea's Island.
Turner, Beeton & Co	Fisherman's	20	216,000	"	Port Guichon.
"	London	20	230,400	"	Steveston.
"	Terra Nova	20	266,640	"	North Arm.
J. H. Todd & Sons	Beaver	20	351,696	"	Lulu Island.
"	Richmond	20	205,872	"	North Arm.
Brunswick Canning Co	Brunswick	20	386,400	"	Steveston.
"	" No. 2	20	249,600	"	Canoe Pass.
Currie & McWilliams	Currie's	20	224,640	"	Westham Island.
Canadian Pacific Canning Co	Canadian Pacific	20	361,488	"	Lulu Island.
Pacific Coast Packing Co	Pacific Coast	20	268,800	"	"
J. H. Hume & Co	Hume's	20	325,584	"	Steveston.
R. Ward & Co. (agents)	Imperial	20	442,080	"	"
W. Morris & Co	Lighthouse	20	192,000	"	"
M. Costello & Co. (agents)	Star	20	211,200	"	"
"	Colonial	20	134,400	"	"
"	Atlas	20	148,800	"	"
Malcolm & Windsor	Gulf of Georgia	20	727,184	"	"
McDonald Bros	Westham Island	20	108,100	"	Canoe Pass.
Crowder & Penzar	Anglo-American	20	138,056	"	"
Welch Bros	Keltic	20	145,440	"	North Arm.
Provincial Canning Co	Provincial	20	134,400	"	"
Dinsmore Island Canning Co	Dinsmore Island	20	194,400	"	"
D. Munn & Co	Sea Island	20	556,944	"	"
W. Hickey & Co	Vancouver	20	537,600	"	"
Fraser River Canning Co	Fraser River	20	263,540	"	"
Alliance Canning Co	Alliance	20	196,800	"	"
M. Robinson	Labrador	5	16,800	"	"
English Bay Canning Co	English Bay	20	379,536	"	English Bay.
R. Cunningham & Co	Skeena	20	581,664	Skeena River	
Carlyle Packing Co	Carlyle	20	480,000	"	
B. C. Canning Co	Windsor	20	484,680	"	
Victoria Canning Co	Standard	20	690,576	"	
"	Claxton	20			
Turner, Beeton & Co	Inverness	20	696,000	"	
"	Balmoral	20			
A. B. C. Packing Co	North Pacific	20	912,000	"	
"	British American	20			
Victoria Canning Co	Wannuck	20	648,000	Rivers Inlet	
B. C. Canning Co	Victoria	20	590,832	"	
"	Rivers Inlet	20	744,000	"	
Wadham & Co	Wadham's		840,000	"	
A. B. C. Packing Co	Good Hope	20	986,544	"	
Brunswick Canning Co	Brunswick	20	840,000	"	
Vancouver Canning Co	Vancouver's	20	408,000	"	
Lowe Inlet	Cunningham&Rhude	20	495,504	Skeena River	
Alert Bay Canning Co	Alert Bay	20	393,072		
Clayoquot Fish Co	Clayoquot	20	208,800		
W. Morris & Co	Mill Bay	20	480,000	Naas River	
"	Naas Harbour	20	480,000	"	
			23,642,452		

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D.—RECAPITULATION

Of the Yield and Value of the Fisheries of British Columbia, for the Year 1898.

Kinds of Fish.		Quantity.	Price.	Value.
			$ cts.	$ cts.
Salmon, in one pound cans	Lbs.	23,642,452	0 10	2,364,245 20
" fresh	"	914,850	0 10	91,485 00
" salted, in barrels	Brls.	2,600	10 00	26,000 00
" smoked	Lbs.	201,000	0 10	20,100 00
" dry salted	"	4,000,000	0 04	160,000 00
Sturgeon, fresh, dressed	"	750,000	0 05	37,500 00
Halibut, fresh	"	1,970,000	0 05	98,500 00
Herring	"	565,000	0 03	16,950 00
" smoked	"	127,000	0 10	12,700 00
Oolachans, salted	Brls.	2,175	10 00	21,750 00
" fresh	Lbs.	460,000	0 05	23,000 00
" smoked	"	24,500	0 10	2,450 00
Trout	"	328,800	0 10	32,880 00
Assorted and mixed fish	"	466,000	0 05	23,300 00
Smelt	"	78,500	0 05	3,925 00
Codfish, fresh	"	522,500	0 05	26,125 00
Skill	Brls.	110	10 00	1,100 00
Hair-seals	Skins	7,600	0 75	5,700 00
Fish oil	Galls.	124,525	0 30	37,357 50
Fish guano	Tons.	200	0 30	6,000 00
Caviare	Lbs.	24,778	0 30	7,433 40
Oysters, $12,000; clams, mussels, $9,080; crabs, abelonies, $22,500; Shrimps and prawns, $5,000; and isinglass, $500.		.....	.....	49,080 00
Estimate of fish not included in above.	Lbs.	.....	.....	350,000 00
Fur-seals	Skins.	28,552	10 00	285,520 00
Sea otter	"	.....	.....	10,000 00
Grand total		.....	.....	3,713,101 10

E.—CAPITAL invested in the Fisheries of British Columbia, including Fur Sealing industry, 1898.

Plant and Material.	Number.	Value.	Total Values.
		$	$ cts.
Salmon canneries	67	20,000	1,340,000 00
Oil factories	12	.....	48,000 00
Freezers and cold storage	4	.....	30,000 00
Vessels	143	.....	289,595 00
Boats	5,080	.....	218,300 00
Gill-nets, fathoms	660,775	.....	498,825 00
Seines	.....	.....	13,275 00
Lines	.....	.....	8,750 00
Scows and flat boats	.....	.....	33,500 00
			2,480,245 00
Vessels employed in fur sealing	35	207,645	
Boats " "	102	10,200	
Canoes " "	326	8,150	
			225,995 00
Grand total	.....	.....	2,706,240 00

Hands employed in fishing, curing and canning salmon	20,695
" vessels	439
Sailors and hunters in sealing fleet (white)	324
" " (Indians)	656
Total	22,114

APPENDIX No. 10.

ONTARIO.

SYNOPSES OF FISHERY OVERSEERS' REPORTS IN ONTARIO FOR THE YEAR 1898.

LAKE OF THE WOODS DIVISION.

Overseer M. Kyle states that while only about one-half the pound-nets of 1897 were actually in use, the financial result proves nearly 50 per cent better. Good prices prevailed during the whole season, even in winter fish were greatly in demand. Pickerel, maskinonge, sturgeon and bullheads show large increases while trout and whitefish have fallen off. Of course hardly half the number of whitefish nets were used this summer. The excessive capture of sturgeon under similar circumstances is ascribed to the low water which prevailed during the last season while the water had kept very high during the two previous years. The close seasons were well observed and no serious violations of the regulations came to his notice, excepting some parties found fishing in Lake Manitou without licenses. The only fishway in his district on the Winnipeg River is now in good working order, the water having been raised to the requisite level. The value of the Lake of the Woods fisheries is reckoned at $69,000 for the season 1898.

LAKE SUPERIOR.

Overseer W. J. Cross, who has charge of the upper part of Lake Superior, returns an average catch of fish, consisting chiefly of trout and whitefish. While the returns of Nepigon and Rossport districts show a surplus value of over $12,000, those of Port Caldwell have fallen off by nearly $9,000. He makes no remarks about his division.

Overseer T. H. Elliott, who has charge of the lower portion of this lake from Otter Head, reports a shortage in the catch of whitefish of nearly forty tons as compared with the previous one, and an improvement of about the same amount in the yield of salmon-trout. There is no doubt that whitefish is steadily declining in these waters. Both divisions of Lake Superior seem well divided as to the respective value of their fisheries, each yielding about $100,000.

LAKE HURON.

North Channel, including Manitoulin Island.

Overseer Elliott, who has also charge of this district, reports a serious shortage in the three staple fish of the Manitoulin district, whitefish, trout and pickerel aggregating 173 tons, but it is more than made up in other parts of the division. This falling off is ascribed to overfishing in the past. About twenty small trap-nets for pickerel were seized and destroyed during the summer. If these traps could be properly controlled, Mr. Elliott believes they should be licensed to catch coarse fish. Nearly the entire catch is shipped to Buffalo, Detroit and Chicago. One of the principal abuses is the capturing of immature fish in pound-nets, especially young sturgeon. If the mesh of the pound-net pots were at least four inches, most of these small

fish would escape. The protection of the *Dolphin* greatly contributed to check illegal seining in this district, A heavy gale at the end of October destroyed many nets in the vicinity of the Duck Islands. Fish being very scarce in their own waters, the fishermen from across the border made frequent visits to our waters and needed close watching, in some cases setting their nets at night and lifting them in the morning. A powerful syndicate has been formed amongst the fish firms of the Great Lakes, the two-thirds of which is controlled by the A. Booth Packing Company. While the dealers claim that the markets will not now be glutted and that more uniform prices will be obtained, the fishermen already complain of the prices being lowered below living rates, claiming that the object of this combine is to drive them out of the business and substitute their own gear, boats and tugs, &c. This officer adds that he always contended that *bona fide* fishermen alone should be licensed, but under present circumstances, it cannot be denied that the fisheries of this division are controlled by foreign capital. The total value of the fisheries of this part of Lake Huron is reckoned at $249,000, being a considerable surplus over that of the previous year.

Georgian Bay.

Overseer F. J. Smith states that trout fishing was good during October, but the gales of November somewhat curtailed the herring fishing. The close seasons were fairly observed but illegal fishing was carried on without licenses. Fourteen trap-nets, five seines, and seven hoop-nets were confiscated for illegal use. The result of the fishing season's operations for this part of Georgian Bay is valued at nearly $80,000.

Overseer R. Edmonstone also reports salmon trout as plentiful during the month of October and large captures were made, but December was so stormy that very little fishing was done in any part of his division. Six tugs and forty-four fishing boats were licensed to fish in this part of Georgian Bay. The cruising of the *Dolphin* was of material help to the protection of the fisheries there. During the season, he had eight convictions for illegal fishing some of which were tried before the captain of the above mentioned cruiser.

Overseer Isaac Lennox reports an increased catch of salmon trout and a falling off in whitefish. The latter he ascribes to the scarcity of fish, while the former is due to a better observance of the close seasons of recent years. He has no infractions of the fishery regulations to report. Most of catch of the whole Georgian Bay, valued at $180,000, is shipped to foreign parts.

Cape Hurd to Point Edward.

Overseer Chas. Briggs reports a better catch of salmon trout and whitefish than last year's. Owing to the heavy gales experienced during November, the herring fishery suffered much loss and the catch is therefore short. About seventy per cent of the yield is exported. No violation of the fishery regulations came to his notice. A new fishway has been placed in the Dennis Mill dam on the Saugeen River, which, it is hoped, will prove efficient. This officer believes in licensing the small trap-nets for the purpose of catching coarse fish which are now increasing rapidly to the detriment of the higher grades of fish. He does not consider them as destructive an engine as pound-nets. The whole catch of this division consisting chiefly of trout (nearly 700,000 lbs.) and whitefish (200,000 lbs.) is valued at $90,000, being an increase of twenty per cent over the preceding year.

Overseer H. W. Ball states that owing to the early migration of the fish southward, and to the fact that the Goderich fishermen are only licensed to fish north of that part, they could not follow them, consequently boats and tugs were laid up in August making the shortest fishing season on record. Under such circumstances a falling off in the catch must be expected. About sixty per cent of the yield, valued at $35,000, is exported to Buffalo. Mill-owners now comply faithfully to the requirements of the law.

Overseer H. B. Quarry says that less pound-nets were used than in 1897, and that owing to the heavy gales of October the catch of trout and whitefish is considerably decreased. This shortage is not ascribed to any marked scarcity of fish. The fact that no fishing was carried on through the ice last winter also tends to diminish the yield. Nearly the whole catch was sold to a Canadian dealer of Sarnia. This home market proved very beneficial to our fishermen. Only one complaint of illegal fishing was dealt with by him.

Overseer J. C. Pollock reports a larger catch of all kinds of fish excepting trout and whitefish. The decline of these two species is attributed to excessive gill netting in the above district. Fishermen are alleged to continue using their large meshed gill-nets during November under the pretence of fishing for herring. Mr. Pollock is of opinion that no gill-nets of any size should be permitted during the months of close season. One of these fishermen off Kittle Point is reported to have lifted 320 trout at one haul.

LAKE AND RIVER ST. CLAIR.

Overseer Jos. Boismier reports whitefish as plentiful as formerly. Fishermen are commencing to believe that they owe this improvement to the fry from the hatcheries. The capture of sturgeon was as large as the previous one but the fish are of a smaller size. Some of them when dressed only weighed four or five pounds. Something should be done to protect this valuable branch of the fisheries. Bass are getting scarce and should never be netted.

Overseer C. W. Raymond, who has charge of Mitchell's Bay, states that no seines should be allowed in that locality as it is a natural spawning ground for bass. Angling was fairly good in the channels. He issued fifty-five anglers permits to foreigners for bass. Besides these, over two hundred others fished under the section which allows those domiciled in Canada employing Canadian boatsmen, &c. He attributes the scarcity of bass to the rapid increase of carp which destroy the spawn of the finer grades of fish. Unless this carp problem is solved in the near future, there will soon be no bass to protect.

Thames River.

Overseer T. McQueen says there are twenty-two fishery stations from the mouth of the river to Louisville, representing employment for ninety men. The principal kinds of fish here are pickerel, catfish, perch and pike. Compared with last year the catch would show a deficit owing to the blocking of the river by drifting ice which delayed the fishing operations for nearly six weeks. Nearly the whole catch is shipped to the United States. He has also charge of that part of Lake St. Clair off Dover West, where there are seven fishing station employing twenty-four hands, and a fair catch of fish is also reported from that locality.

There is no friction now between the fishermen of his district, who seem to understand that the protective regulations are for their immediate benefit. The mill rubbish is now burnt.

Overseer Peter McCann, of the upper waters of the Thames also reports that people now understand that strictly enforced regulations will contribute to the preservation of the fisheries. Rod and line fishing was more extensively followed than in previous years. He visited the dams often, especially in the spring when many seek the capture of fish. During the summer and fall a large quantity of bass and pickerel were caught by anglers. Carp are increasing fast and are found everywhere, unfortunately for the better class of fish. All fishways in this division were in excellent order, and the directions given by him to mill-owners were faithfully obeyed.

LAKE ERIE.

Overseer Peter Lamarche reports that the spring catch was the best for years, particularly that of whitefish. Fishermen were elated over the prospects, but unfortunately the fall fishing destroyed their chances of a good season.

With the exception of pickerel, which shows a slight increase, all other kinds have greatly diminished. As compared with the previous yield, the shortage would nearly reach a half million pounds of fish. The warm weather of September and October prevented the usual run of herring and whitefish from striking inshore, then the autumn gales practically suspended operations. At the end of November the weather somewhat moderated, when some of the fishermen tried to make up their loss but winter set in on December 4 so severely that some pound-nets were frozen in and lost. Three parties were fined for fishing gill-nets without licenses.

Overseer J. K. Laird also reports a good run of fish in the spring of the year, but fall fishing was almost nil, owing to the violent gales experienced there in October which rendered many nets entirely useless. Judging from the occasional good lifts in a few sheltered places the fish still remained plentiful inshore. The fishery regulations are now willingly complied with by the genuine fishermen, who are contented to notice the protection exercised in their interests.

Overseer Wm. Freeland reports a decrease of about 33 per cent from the previous catch. This is ascribed to the fact that there were eight nets less then last year. Here also the shortage is accounted for by storms partly destroying the pound-nets. While some of the fishermen cease operations on November 1, others keep it up to the end of the year. He reports no illegalities whatever.

Overseer W. P. Croome, of Grand River, reports that the catch of fish is fully up to the average. All the fish of this district are consumed by the anglers and their friends. The Rod and Gun Club have been a great preventive of illegal fishing here. The mill-owners have not allowed the refuse of their mills to escape in the streams of this district. The ten fishways of his division have all been repaired and are now in good condition. No illegal fishing came to his notice.

The total yield of Lake Erie is reckoned at $212,000; a deficit of about $30,000 from that of last year.

LAKE ONTARIO.

Overseer F. Kerr, whose division comprises parts of Lakes Erie and Ontario as well as the Niagara River, states that there was no scarcity of fish and the season's operations were generally satisfactory. The run of whitefish was steady throughout the season, especially from Burlington Beach to Niagara. Whitefish being in demand at good prices, many fishermen devoted their whole summer to it, making little or no attempts at herring. These fish seemed to come quite close to the shore on the old grounds of Burlington Beach where formerly seine hauling was carried on from May to August, taking fish of all sizes, but at present fishermen are getting quite reconciled to the gill-net system. They would not now return to the old destructive means of capture after witnessing the recent steady increase of this delicious fish. It is quite satisfactory for a person to be able to set a gill net in the evening within a few hundred yards of the shore and lift it the next morning with from 50 to 100 medium sized whitefish averaging four pounds and retailed at 10 cents per pound. At Winona there was not less than ten boats constantly pursuing this fishery until the end of the season, without apparent signs of diminution. Salmon-trout appears to have declined since a couple of years. He does not blame the scarcity of fish for it, but ascribes it to the fact that fishermen were more intent in the pursuit of whitefish using the 4½-inch mesh instead of the larger which should be used for trout.

Herring came a little later than last year, and so soon as the weather became favourable they were found so plentiful that fishermen were unable to handle them advantageously. They consequently restricted their nets, using a larger mesh and catching a larger sized fish commanding better prices. However at one time the market became entirely glutted, so large were the hauls made, as much as ten and twelve thousand being taken at one lift. Altogether this fishery was a success, and it seems to be steadily improving. Should a proper sized mesh be now adopted and kept, the supply would never fail. Apparently ciscoes have disappeared, and a once great winter industry has ceased to be. Occasionally an odd one is still found among the other herring, but it is a rarity. Many theories have been advanced for the cause

of their extinction, but in the opinion of Mr. Kerr they have simply deteriorated as a species and become crossed and absorbed by other predominating species. At the time of cisco fishing their grounds did not seem frequented by herring while now they have become the best herring grounds.

Sturgeon are getting scarce on the old Niagara grounds, the only apparent reason alleged being overfishing. Most of the sturgeon are caught on the United States side at the mouth of the river. Those caught on the Canadian side are bought by American dealers who run boats for that purpose, thus evading the duties. Unless special protection is enacted to preserve this valuable species it cannot withstand very much longer the present drain of constant fishing, regardless of size limit or close seasons, from early spring to the late autumn. Pickerel seemed quite plentiful in the usual localities, especially at old Niagara; an everage catch was secured and shipped to Buffalo. Perch are becoming a regular table fish and much sought after as such. Although tons and tons are annually caught with nets and hooks still the supply never seem to grow less. Since 'shad,' a diminutive inferior fish, has become abundant in Lake Ontario it seems to replace perch as food for the larger species, hence the abundance of the perch. Of recent years, carp has been introduced in our waters and it is now swarming in all our bays, inlets and rivers. It seems difficult of capture with the ordinary implements. The spear seems to be the best adapted engine for its destruction. It is a very objectionable coarse fish that should never have been introduced in our waters. Generally speaking, this was an exceptionally good season, fish were plentiful, prices fair, and the fishermen experienced no losses of implements by storms as is too often the case. Angling has improved in Niagara River since the abolition of the machine traps formerly fished at Queenston. Forty-five permits were issued to American anglers in that stream.

The fishery regulations were fairly well obeyed, hardly any illegal fishing coming to his notice. A few gill-nets were confiscated in the spring and the culprits prosecuted for fishing without a license.

Overseer R. J. Walker, of Halton and Peel counties, reports about an average catch. The herring only became really abundant in the fall. The whole catch is disposed of in Canada. Mill-owners complied with the sawdust regulation. Some fishermen attempted to lift their nets on Sundays, but desisted upon warning being given.

Overseer S. Freeman says that owing to the prohibition of the seine in his division an increase of fish is already noticeable. Only two cases of illegal fishing came to his notice. He confiscated the nets and imposed a fine. There are ten fishways in this district and he visited them all and cautioned the owners respecting the observance of the requirements of the law.

Overseer Jos. Redmond reports the catch to be about equal to the previous one. In fact he is inclined to believe that the fisheries are improving around Prince Edward county. This amelioration he unhesitatingly ascribes to the help received from the Government hatcheries, and fishermen of experience now speak highly of artificial culture. Several seizures and convictions were effected by him during the season for illegalities against the Fisheries Act.

Overseer W. P. Clarke reports an average catch of fish in Bay of Quinte but prices rules higher than last year. Seven-eighths of the catch is exported to the United States. The close seasons were observed and little or no illegal fishing came under his notice. He recommends that every licensed implement should bear some distinct mark of recognition to enable the officer to detect unlicensed gear.

Overseer Chas. Gilchrist reports that trolling for maskinonge in Rice Lake was excellent. Angling for bass was also satisfactory. Both white men and Indians admitted that fish were more abundant than during the past three seasons, as the poachers have recently been looked after rather closely. With proper protection this beautiful lake would never show signs of depletion.

Overseer E. H. Sills says the catch was an average one in the Napanee district. While some kinds of fish seemed more abundant others, notably whitefish, yielded less. No complaints were heard by him against the fishing laws and sawdust regulations. There are no fishways in this division.

ST. LAWRENCE RIVER.

Kingston to Lancaster.

Overseer John Purdy reports an increased catch of fish in his division over that of last year. Licensed fishermen have prosecuted their calling with vigour and were not troubled with illegal fishing. The use of hoop nets should be encouraged as it catches mostly coarse fish which are so detrimental to the young of the better grades. Nearly the whole catch of fish is shipped across the border via Cape Vincent.

Overseer S. Y. Bullis, of Charleton Lake, says that all the fish caught there by tourists and residents in angling and trolling is for home consumption. Salmon-trout, bass and pike are the principal kinds of fish in this lake.

Overseer H. R. Purcell reports that the tourists and sportsmen, camping in his division, have found pickerel and bass more plentiful than during the past seasons. He believes in the artificial breeding of fish. The salmon-trout fry planted in some of those lakes are doing well.

Overseer Ephraim Deacon, who protect the waters of Lanark, reports an increase in the different kinds of fish which he attributes to a more vigorous prosecution of the fishery. All fish caught are used for local consumption excepting catfish, which are sold to the Lake Ontario Fish Co. He has no prosecutions to report, as no violations of importance came to his notice, and he knows of no existing abuses.

SIMCOE DIVISION.

Overseer Wm. McDermott is of opinion that nearly all kinds of fish were more plentiful than for years past. The most noticeable improvement was in pike, bass and catfish; the former in Bailey and Nottawasaga Rivers, and the latter in Holland River. It is the opinion of several sportsmen that pike, being so similar in characteristics to maskinonge, should also have the same close season, and he recommends it. With the exception of a few convictions for fishing during the close seasons, the fishery laws were fairly well observed. The mill-owners are now complying with the requirements of the Act both respecting sawdust and maintenance of fishways in proper condition.

PARRY SOUND AND MUSKOKA.

Overseer G. R. Steele states that he visited the numerous lakes and streams in his division. He found two cases of sawdust violations and fined the offenders. Of the several cases of violations of the close seasons that came to his notice eight persons were fined, the others were dismissed for want of evidence. There was no complaint of the scarcity of fish excepting of Lakes Salmon and Otter, where, it is alleged, numerous tourists are depleting them by over fishing. From information received, and by observation, he is of opinion that the present close time for salmon-trout is unsuitable for the waters of this district, and he recommends that it should begin fifteen days earlier.

SCUGOG DIVISION.

Overseer A. Bradshaw says that while maskinongé seemed more plentiful than last year, the other species have diminished. Although his catch is only approximated, he believes it to be as nearly correct as possible. The fishery laws were well observed, only one prosecution taking place at Lindsay. The fish-way in the Lindsay dam has been of great benefit, as large numbers of fish have ascended it. He is of opinion that the spring close season should be a fortnight sooner to suit the waters of the locality.

WELLINGTON COUNTY AND VICINITY.

Overseer A. Hughson reports that speckled trout are increasing in those inland lakes. He finds it difficult to give even an estimate of the quantity caught by the anglers. Fishways would be required in several mill dams of that district. The catch is used for local consumption. The different regulations are well observed.

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RETURN of the Number of Fishermen, Tugs and Boats, the Quantity and Value of Fishing Materials in the Province of Ontario, for the Year 1900.

Number.	Districts.	Fishing Materials.									
		Tugs or Vessels.				Boats.			Gill Nets.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.
	Lake of the Woods.			$			$				$
1	Rainy River District	4	54	5800	14	24	2450	48	35	7000	1250
	Lake Superior.										
1	Port Arthur	3	58	3400	15	8	1600	16	....	24000	3600
2	Nepigon and Rossport	4	116	3000	20	6	1200	12	....	18000	2700
3	Jackfish	....	....	....	....	2	400	4	....	3500	700
4	Port Caldwell	2	37	3000	10	1	200	2	....	3000	600
5	Caribou Islands	....	....	....	....	5	750	10	60	30000	4000
6	Michipicoten Islands	1	50	4000	8	6	1200	15	100	50000	6000
7	Pilot Harbour	1	35	3000	7	4	800	11	85	35000	4200
8	Lizard Islands	....	....	....	....	5	1000	10	40	20000	2500
9	Point Namaise	1	35	3000	5	1	150	2	24	8000	1000
10	Batchewana Bay	1	38	2500	5	3	300	6	60	12000	1500
11	Goulais Bay	1	150	6000	12	12	600	36	90	6000	500
	Totals	14	519	27900	82	53	8200	124	459	209500	27300
	Values $	....	....	....	....	....	....	....	....	....	....

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ARIO.

all Fishing Materials, also the Kinds and Quantities of Fish in the **Province of** the Year 1898.

Pound Nets.		Kinds of Fish.											Total Value.	
Number.	Value.	Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Trout, salted, brls.	Pickerel, lbs.	Pike, lbs.	Maskinonge, lbs.	Mixed and coarse fish, lbs.	Sturgeon, lbs.	Caviare, lbs.	Bladders, lbs.		Number.
	$												$ cts.	
28	3300	.....	274540	15000	....	210000	30500	10500	89000	295900	26720	400	69,053 20	1
28	4200	66150	240660	240100	15	64970	7460	.....	.....	11530	.....	....	48,974 50	1
1	250	25000	140170	260000	....	6600	1000	.....	.....	500	.....	....	38,083 60	2
....	.....	.....	15000	30000	75	.....	.....	.....	.....	.....	.....	....	4,950 00	3
3	750	.....	*20000	15000	700	2000	.....	.....	.....	.....	.....	....	10,600 00	4
....	.....	.....	.....	152020	....	.....	.....	.....	.....	.....	.....	....	15,202 00	5
....	.....	.....	49000	250000	....	.....	.....	.....	.....	.....	.....	....	28,920 00	6
....	.....	.....	28000	168000	....	.....	.....	.....	.....	.....	.....	....	19,040 00	7
4	1600	.....	22020	91000	....	.....	.....	.....	.....	.....	.....	....	10,861 60	8
....	.....	.....	9000	50100	....	.....	.....	.....	.....	.....	.....	....	5,730 00	9
4	2000	....	81000	58200	....	6200	2100	.....	.....	31000	.....	....	14,554 00	10
2	1000	.....	46380	17920	....	4000	1500	.....	.....	2100	...	....	5,888 40	11
42	9800	91150	651230	1332340	790	83170	12060	.....		45130	..	....	.....	
....	.....	1823	53698	113234	7900	4159	482	.....	.....	2708	.....	....	202,804 10	

* In No. 4 include 40 barrels of salted whitefish, $400.

RETURN of the Number, Tonnage and Value of Vessels and Boats, and the Quantity

Number.	Districts.	Fishing Materials.											
		Tugs or Vessels.				Boats.			Gill Nets.			Pound Nets.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.
	LAKE HURON DIVISION.			$			$				$		$
	North Channel, Manitoulin and other Islands.												
1	St. Joseph's Island					2	200	2	30	6000	200	2	300
2	Thessalon					5	750	10	300	30000	2000	5	600
3	Mississauga					1	200	2				4	1000
4	John's Island					2	200	4				5	2500
5	Aird Island	1	26	1500	6	6	600	12	10	1000	100	10	3000
6	La Cloche	1	38	2500	5	5	800	10				6	2000
7	Gore Bay	1	38	1500	5	3	300	6	60	6000	600	7	2600
8	Kagawong	2	40	2000	10				200	12000	1000	1	200
9	Meldrum Bay	1	20	2500	6	2	200	4	60	6000	2500	9	2200
10	Little Current	2	60	2000	10	3	300	6	300	30000	2000	5	1500
11	Killarney					33	2000	66	500	98000	5000		
12	Bad River					15	1000	30	150	15000	500		
13	Bustard Islands					5	1000	10	200	20000	2000		
14	Squaw Island	4	150	10000	24	8	1300	16	600	50000			
15	Wikwemikong					30	1000	60	100	15000	1000		
16	Fitzwilliam Island					11	1000	22	400	40000	1000		
17	South Bay Mouth					12	1500	24	300	30000	2000	4	600
18	Duck Island	2	70	4000	12	10	1000	20	600	60000	3500		
19	Green Island	3	50	7000	18	2	200	4	400	20000	4000	6	2500
20	Cockburn Island	3	100	6000	18	6	800	12	700	40000	8000	8	2000
	Totals	20	592	39000	114	161	14350	320	4910	479000	35400	72	21000
	Values $												

and Value of Fish, &c., in the **Province of Ontario**—*Continued.*

Kinds of Fish.													Total Value.	Number.
Herring, salted, brls.	Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickerel, lbs.	Pike, lbs.	Maskinongé, lbs.	Sturgeon, lbs.	Caviare, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	$ cts.	
20	2000	7000	4000		150	3200		100					1,221 50	1
100	20000	28000	34000		2500	500							6,585 00	2
		7075	800	100	2330			4085					1,015 60	3
		2440	6715		21740	800		5830				500	2,345 50	4
100		14000	35000		120000	7000	2000	15000	800		3000		12,780 00	5
		14000	3000		65700	8500	700	30000	400		6000		7,207 00	6
		11825	10000		3000			3000					2,276 00	7
		11000	25000		2000	2500		2000					3,700 00	8
		28000	120000		42000			5000					16,640 00	9
	600	54000	48000		55000	4000	140	110		400	1500		12,099 00	10
		120000	130000		20000	5000	350	2000		1000	1000		23,991 00	11
100		32000	16000		6000	6000		3000			2000		5,320 00	12
	500	11000	10000	750	20000	30000		3000		1500	5000	2000	4,515 00	13
		161000	247000										37,580 00	14
		6000	60000		5000								6,730 00	15
		15000	65000		12000								8,300 00	16
		31000	108000										13,280 00	17
		35000	220000										24,800 00	18
		40000	268000										30,000 00	19
		17500	276000										29,000 00	20
320	23100	645840	1686515	850	377420	67500	3190	73125	1200	2900	18500	2500		
1280	462	51667	168651	68	18871	2700	191	4388	600	87	370	50	249,385 60	

RETURN of the Number, Tonnage and Value of Vessels and Boats, and the Quantity

Number.	Districts.	Fishing Materials.									
		Tugs or Vessels.				Boats.			Gill Nets.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.
	LAKE HURON—*Continued.*										
	Georgian Bay Division.			$			$				$
1	Point au Baril	1	20	2500	5	6	650	14	220	36000	7000
2	Mink Island and Shawanaga	1	25	3000	5	13	1300	28	2000	200000	18000
3	Umbrella Island and Copperhead	..	....	.....	....	7	800	16	140	30000	6000
4	Midland and Penetanguishene	..	....	.....	....	17	1800	40	340	51000	8000
5	Victoria Harbour	1	20	1500	5	15	1500	35	300	40000	7000
6	Waubashene	1	7	700	2	20	2000	45	400	45000	7500
7	Nottawasaga Bay	..	....	.....	....	9	380	18	115	11650	1320
8	Collingwood	3	76	9500	15	7	350	14	90	45000	4500
9	Thornbury	..	....	.....	....	3	225	6	20	2200	200
10	Meaford	3	51	7500	15	6	300	12	50	48000	4800
11	Cape Rich and vicinity	..	....	.....	....	8	325	16	120	13500	1350
12	Owen Sound Bay	..	....	.....	....	11	510	22	105	11050	1105
13	Colpoy's Bay to Cabot Head	5	115	23000	30	50	3000	127	1000	120000	8100
	Totals	15	314	47700	77	172	13140	393	4900	653400	74875
	Values $	..	....	.....	....	....	.....	....	....	.....	.....

and Value of Fish, &c., in the **Province of Ontario**—*Continued.*

Kinds of Fish.											Total Value.	Number.
Herring, fresh, lbs.	Herring, salted, brls.	Whitefish, brls.	Whitefish, lbs.	Trout, lbs.	Trout, brls.	Pickerel, lbs.	Pike, lbs.	Sturgeon, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	$ cts.	
.....	.....	....	66000	128000	.....	7000	10000	1000	....	.....	18,890 00	1
.....	.....	.....	60000	80000	.....	20000	10000	.....	.....	.....	14,200 00	2
.. ...	50	45	35000	30000	200	10000	.....	.....	.....	10000	8,950 00	3
.....	75	60	70000	60000	100	60000	30000	3000	.....	10000	18,080 00	4
10000	40	25	12000	50000	50	125000	27000	6000	5000	20000	15,060 00	5
.....	90	10	12500	15000	35	140500	25900	400	15000	.....	12,095 00	6
24100	.....	...	1050	1650	12	2200	.....	19630	....	.....	2,138 80	7
2000	.....	.....	700	40200	8	.....	.....	3000	..	.....	4,376 00	8
.....	....	.....	.....	4250	5	.....	.....	.....	.....	.....	475 00	9
.....	.....	.. ...	.....	202800	.....	.....	.....	.....	.....	.....	20,280 00	10
.....	.....	.. .	1000	71600	15	.....	.....	.....	.....	.....	7,390 00	11
4400	.....	.....	.....	43250	40	.....	.....	.....	.....	.....	4,813 00	12
31200	70	40	28500	500000	60	.....	.....	.....	.....	.....	54.184 00	13
71700	325	180	286750	1226750	525	364700	102900	33030	20000	40000	.....	
1434	1300	1800	22940	122675	5250	18235	4116	1982	400	800	180,931 80	

RETURN of the Number and Value of Tugs and Boats, and the Quantity and Value of Fish, &c, in the Province of Ontario—*Continued.*

Number.	Districts.	Fishing Materials.															Kinds of Fish.			Number.
		Tugs or Vessels.				Boats.			Gill Nets.			Seines.			Pound Nets.					
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Herring, fresh, lbs.	Herring, salted, brls.	Whitefish, lbs.	
	Lake Huron (Proper)—Continued.			$			$				$			$		$				
1	Cape Hurd to Southampton	4	74	10000	24	28	2500	60	500	102000	12940	3	300	150	....	.....	10000	800	210000	1
2	Southampton to Port Albert	1	20	2000	6	....	.....	....	100	12100	1500	....	.....	.....	....	.....	10000	....	10000	2
3	Port Albert to Goderich	3	70	9000	21	4	900	12	400	48000	6000	....	.....	.....	1	300	21000	....	5000	3
4	Goderich to Blue Point	2	37	4000	10	26	1833	58	250	26140	2660	....	.....	.....	20	2870	44100	....	23340	4
5	Blue Point to Baby's Point	....	....	.....	....	37	2000	65	....	.....	.....	12	650	985	23	4220	227300	50	1000	5
	Totals	10	201	25000	61	95	7233	195	1250	188240	23100	15	950	1135	44	7390	312400	850	249340	
	" for Georgian Bay	15	314	47700	77	172	13140	393	4900	653400	74875	....	.....	.....	....	.....	71700	325	*286750	
	" North Channel	20	592	39000	114	161	14350	320	4910	479000	35400	....	.....	.....	72	21000	23100	320	645840	
	Grand totals for Lake Huron	45	1107	111700	252	428	34723	908	11060	1320640	133375	15	950	1135	116	28390	407200	1495	1181930	
	Values $	....	....	.....	....	....	.....	....	.....	.....	.....	....	.....	.....	....	.....	8144	5980	94554	
	Lake St. Clair Division.																			
1	Lake St. Clair	....	....	.....	....	18	700	41	....	.....	.....	7	1000	1050	7	1700	1200	....	12900	1
2	Mitchell's Bay	....	....	.....	....	8	340	12	....	.....	.....	2	65	140	....	.....	.....	....	.....	2
3	Thames River	....	....	.....	....	35	675	130	....	.....	.....	34	2100	1650	....	.....	.....	....	.....	3
4	Detroit River	1	10	500	2	11	345	53	....	.....	.....	11	1200	950	....	.....	500	....	66450	4
	Totals	1	10	500	2	72	2060	236	....	.....	.....	54	4365	3790	7	1700	1700	....	79350	
	Values $	....	....	.....	....	....	.....	....	.....	.....	.....	....	.....	.....	....	.....	34	....	6348	

RETURN of the Number and Value of Vessels and Boats, and the Quantity and Value of Fish, &c., in the **Province of Ontario**—*Continued.*

Number.	Districts.	Kinds of Fish.											Total Value.	Number.
		Trout, lbs.	Trout, brls.	Bass, lbs.	Pickerel, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	Caviare, lbs.		
	Lake Huron (Proper)—Continued.													$ cts.	
1	Cape Hurd to Southampton	682500	150											89,950 00	1
2	Southampton to Port Albert	38000		1500	1500					8000		10000		5,435 00	2
3	Port Albert to Goderich	270000		9500	6000	800		3000		22000	1000	26000		30,292 00	3
4	Goderich to Blue Point	102720	12		47750			27570				24100		17,664 90	4
5	Blue Point to Baby's Point	3430		26080	341970	1500		251470	250	6420	1260	30410		40,523 10	5
	Totals	1096650	162	37080	397220	2300		285040	250	36420	2260	90510		183,865 00	
	" for Georgian Bay	1226750	525		364700	102900		33030			20000	40000		180,931 80	
	" North Channel	1686515		850	377420	67500	3190	73125		2900	18500	2500	1200	249,385 60	
	Grand totals for Lake Huron	4009915	687	37930	1139340	172700	3190	391195	250	39320	40760	133010	1200		
	Values $	400992	6870	3034	56967	6908	191	23472	15	1180	815	2660	6 0	614,182 40	
	Lake St. Clair Division.														
1	Lake St. Clair			2600	16000	5913	1000	41880		20000	12060	125000		8,214 52	1
2	Mitchell's Bay			300	800	20650		3100		6030	7520	44780		2,302 90	2
3	Thames River			35800	80400	31030	2680	4070		22120	24230	189630		13,471 00	3
4	Detroit River			2000	7500	2500	700	5000		3900		11000		6,613 00	4
	Totals			40700	104700	60093	4380	54050		51150	43810	370410			
	Values $			3256	5235	2404	263	3243		1535	876	7408		30,601 42	

* Add here 180 barrels whitefish, salted, $1,800, for Georgian Bay.

RETURN of the Number of Value of Tugs and Boats, and the Quantity

Number.	District.	Fishing Materials.													
		Tugs or Vessels.				Boats.			Gill Nets.			Pound Nets.		Herring, salted, brls.	Herring, fresh, lbs.
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.		
	Lake Erie.			$			$				$		$		
1	Pelee Island	..	....	....	..	9	1110	22	30	3000	300	8	2975	....	197860
2	Essex County	1	8	10000	7	31	3120	43	....	.....	.....	35	10300	....	723270
3	Kent County	*2	205	14500	14	51	5830	67	....	.....	.....	60	26000	105	2550640
4	Elgin County	5	62	12700	10	29	2850	54	5	500	150	47	16200	....	823360
5	Norfolk County †	6	134	11200	31	46	3000	110	300	16920	1700	27	7700	....	400120
6	Haldimand County	2	50	4000	5	10	200	20	30	9000	2500	....	.....	....	112100
7	Welland County	..	....	....	..	39	2390	56	400	36000	5800	2	600	....	32000
	Totals	16	459	52400	67	215	18500	372	765	65420	10450	179	63775	105	4-39350
	Total values...$	..	....	.....	..	...	.....	...	....	.....	.....	....	.....	420	96787

* One of these a sailing vessel, 198 tons. † In No. 5 add 15 seines 2,500 fathoms, valued at $1,365.

and Value of Fish, &c., in the **Province of Ontario**—*Continued.*

Kinds of Fish.											Total Value.	Number.
Whitefish, lbs.	Bass, lbs.	Pickerel, lbs.	Pike, lbs.	Maskinongé, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish lbs.	Caviare, lbs.		
											$ cts.	
10910	1730	2530	22800	.....	26330	.....	1330	870	.....	.....	7,644 90	1
47480	5540	40840	.....	.....	24790	.....	37460	5590	302260	.....	29,517 20	2
48175	515	93250	.....	.....	12030	.....	51085	1375	126350	.....	64,799 35	3
58150	2860	359690	.....	.....	28105	.....	31300	4610	42645	.....	42,902 90	4
75000	2500	160500	110000	.....	30400	.....	220415	8440	175100	8200	* 42,834 65	5
5000	11500	63600	9500	5000	5300	2000	15800	6700	20000	.....	8,868 00	6
650	5600	82000	3000	.....	158000	.....	22000	.....	26000	.....	16,020 00	7
245365	30245	802410	145300	5000	284955	2000	379390	27585	692355	8200		
19629	2420	40120	5812	300	17097	120	7588	552	13847	4100	212,586 10	

* Partly estimated.

RETURN of the Number and Value of Tugs and Boats, and the Quantity

Number.	Districts.	Fishing Materials.														Herring, salted, brls.	Herring, smoked, lbs.
		Tugs or Vessels				Boats.			Gill Nets.			Hoop Nets.					
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.				
	Lake Ontario.			$			$				$		$				
1	Niagara and Queenstown					11	1000	22	200	20000	6000						
2	Port Dalhousie	1	8	1800	3	7	600	14	250	25000	7000						
3	Beamsville					14	1000	28	300	30000	8000						
4	Burlington Beach					16	1100	32	320	32000	9300						
5	Angling and trolling in above districts																
6	Halton and Peel Counties					17	2900	40	755	37550	3335						596000
7	York County					10	1030	17	102	15000	1640						72000
8	Ontario County					5	90	10	9	1235	250						
9	Northumberland and Durham Counties					22	1000	30	23	24000	1200	17	250				
10	Rice Lake and Trent River					10	280	30				46	920				
11	Prince Edward County	2	100	5000	10	100	500	150	63	17900	*2000	36	720				
12	Bay of Quinte					53	1575	72	682	15850	1420	92	2000			175	
13	Lennox County and Napanee River					28	610	39	30	6000	690	50	920				
14	Amherst Island & vicinity					16	240	32	20	4125	225						
15	Wolfe Island and vicinity					22	540	37	35	5150	600	24	560				
	Totals	3	108	6800	13	331	12465	553	2789	233810	41360	265	5370			175	668000
	Values															700	13360

*2 seines, 300 fathoms, valued at $200.

and value of Fish, &c., in the **Province of Ontario**—*Continued.*

Kinds of Fish.												Total Value.	Number.
Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickerel, lbs.	Pike, lbs.	Maskinongé, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.		
10000	70000	1000	5000	25000	.....	....	30000	.....	22000	.....	10000	10,210 00	1
180000	18000	1000	1000	4000	.....	.....	500	1000	12000	.....	10000	6,070 00	2
280000	50000	6000	.....	10000	....	.....	4000	.....	10000	.....	2000	11,280 00	3
195000	41000	3000	4000	2000	4000	.....	1500	2000	12000	.....	2000	8,670 00	4
.....	.....	.....	14000	45000	4000	.....	.....	.....	60000	.....	.....	5,330 00	5
	200	14000	1000	.....	100	.....	.....	150	500	.....	300	13,450 00	6
70800	94200	9150	.....	.....	.....	....	....	.....	.....	.....	2700	11,361 60	7
4900	2950	100	.....	.....	250	.....	.....	.....	100	.....	.....	357 00	8
25000	12500	5400	...	.....	32000	.....	.....	1200	.....	35000	20000	4,492 00	9
.....	.....	...	50000	.....	11130	100000	....	5350	.....	50860	21450	12,212 40	10
50000	60000	60000	10000	10000	40000	20000	2000	10000	5000	20000	40000	17,970 00	11
104800	14770	...	6800	22000	109600	3150	.....	5850	48870	128800	58800	15,763 70	12
42000	21400	.....	600	31000	27000	.....	1000	13000	39000	.....	104000	9,320 00	13
.....	13400	2000	.....	.....	.....	.....	.....	.....	.....	.....	6200	1,396 00	14
1500	12000	....	.....	6900	19300	...	7600	8300	9800	23460	17900	4,182 20	1
964000	410420	101650	92400	155900	247380	123150	46600	46850	219270	258120	295350	.....	
19280	32834	10165	7392	7795	9895	7389	2796	2811	6578	5162	5907	132,064 30	

RETURN of the Number and Value of Tugs and Boats, and the Quantity

Number.	Districts.	Fishing Materials.							
		Boats.			Gill Nets.			Hoop Nets.	
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.
	St. Lawrence River, Kingston to Lancaster.		$				$		$
1	Frontenac County	46	580	56	60	2000	265	36	650
2	Fronting on County Leeds	70	3200	80	....	.....	....	3	50
3	Lakes in Leeds and Lanark	23	250	40	4	50	20	53	1170
4	*Grenville County to Lancaster	....	.....	....	....	.....	....	....	.....
	Totals	139	4030	176	64	2050	285	92	1870
	Value $	....	.....	....	....	...	....	....	.....
	Inland Divisions.								
1	*Prescott and Carleton Counties	....	.....	....	....	...	....	....	.....
2	*Renfrew County	....	.....	....	....	.....	....	...	.....
3	*Lake Nipissing	....	.....	....	....	.....	....	...	....
4	*Parry Sound and Muskoka	....	....	....	....	.....	....	....	....
5	*Peterborough and vicinity and Otonabee River	....	.....	....	...	.....	...	8	175
6	*Lake Scugog and Victoria County	....	.....	....	....	.....	...	....	.....
7	*Lake Simcoe, Couchiching and Severn and Holland Rivers	....	.....	....	....	.....	....	....	.....
8	*Wellington County and vicinity	....	.....	....	....	.....	....	...	.....
	Totals	....	..	....	....	....	....	8	175
	Value $	....	.....	....	...	.....	...	....	.....

* Angling, trolling and night lines.

and Value of Fish, &c., in the **Province of Ontario**—*Continued.*

Kinds of Fish.												Total Value.	
Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickerel, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	$ cts.	Number.
4800	.....	6500	4600	1800	46000	....	.....	38400	600	102500	25820	7,932 40	1
.....	.....	.....	21000	.....	96000	4700	34000	17000	24000	22500	42500	10,882 00	2
800	1000	20600	7800	4500	7650	....	.....	3125	2450	41900	28790	4,985 80	2
.....	.....	..	1500	550	6900	200	10500	800	600	1000	5000	1,215 50	4
5600	1000	27100	34900	6850	155650	4900	44500	59325	27650	167900	102110	.....	
112	80	2710	2792	543	6226	294	2670	3559	830	3358	2042	25,015 70	
....	600	....	9950	7270	9500	11100	1250	8800	9000	41100	57900	5,106 50	1
*	650	2000	4750	5100	10800	1800	3800	2100	600	1500	12500	2,079 00	2
.....	.....	.....	.....	.....	5000	.....	3000	.....	.....	.....	23000	840 00	3
.....	3750	43000	280500	184200	6000	4100	.....	.....	7000	3000	153000	40,066 00	4
.....	3200	58300	160000	1000	1000	268200	..	5400	2000	10450	76700	37,195 00	5
.....	.....	...	233000	....	....	311000	....	2600	....	.....	254000	42,536 00	6
*	30000	72300	43000	15400	3800	27000	2100	.....	16500	5000	55000	17,433 00	7
*	.....	15000	3000	....	.....	.....	....	.....	1500	2200	12000	2,069 00	8
.....	38200	190600	734200	212970	36100	623200	10150	18900	36600	63250	644100	.....	
....	3056	19060	58736	10648	1444	37392	609	1134	1098	1265	12882	147,324 50	

* Partly estimated.

RECAPITULATION of the Number of Fishermen, Tonnage and Value of Tugs, Boats, Nets, &c., and the Quantity and Value of all Fish caught in the **Province of Ontario,** for the Year 1898.

Number.	PROVINCE OF ONTARIO.	FISHING MATERIALS.																OTHER FIXTURES USED IN FISHING.				Number.
		Tugs or Vessels.				Boats.			Gill Nets.			Seines.			Pound Nets.		Hoop Nets or Verveux		Freezers and Ice Houses		Piers and Wharfs.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
				$			$				$			$		$		$		$		$	
1	Lake of the Woods	4	54	5800	14	24	2450	48	35	7000	1250	....	....	...	28	3300	14	600	8	8500	...	....	1
2	Lake Superior	14	519	27900	82	53	8200	124	459	209500	27300	..	....	....	42	9800	..	....	9	5400	21	17350	2
3	Lake Huron, including Georgian Bay	45	1107	111700	252	428	34723	908	11060	1320640	133375	15	950	1135	116	28390	6	180	45	28400	38	16475	3
4	Lake St. Clair	1	10	500	2	72	2060	236	.....	.....	.....	54	4365	3790	7	1700	21	1110	4	225	...	.....	4
5	Lake Erie	16	459	2400	67	215	18500	372	765	65420	10450	15	2500	1365	179	63775	....	....	63	21960	7	2200	5
6	Lake Ontario	3	108	6800	13	331	12465	553	2789	233810	41360	2	300	200	....	....	265	5370	64	1960	....	.....	6
7	St. Lawrence River, Kingston to Lancaster	.....	.....	.....	.....	139	4030	176	64	2050	285	....	....	....	....	....	92	1870	..	....	..	.....	7
8	Inland Districts	(Angling, trolling and with night lines.)										....	...	....	...	..	8	175	..	....	....	.....	8
	Totals	83	2257	105100	430	1262	82428	2417	15172	1838420	214020	86	8115	6490	372	106965	406	9305	193	66445	66	36025	

RECAPITULATION of the Number of Fishermen, Tonnage and Value of Tugs, Boats, Nets, &c., and the Quantity and Value of all Fish caught in the **Province of Ontario,** for the Year 1898—*Concluded.*

Number.	PROVINCE OF ONTARIO.	KINDS OF FISH.															TOTAL VALUE.	Number.
		Salmon-trout, brls.	Herring, salted, brls.	Herring, fresh, lbs.	Whitefish, brls.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickerel, lbs.	Pike, lbs.	Maskinongé, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	Caviare, lbs.	$ cts.	
1	Lake of the Woods	....	....	....	....	274540	15000	....	210000	30500	10500	295000	.....	....	....	89000	26720	† 69,053 20	1
2	Lake Superior	790	....	91150	40	651230	1332340	....	83170	12060	....	45130	....	....	....	.....	.....	202,804 10	2
3	Lake Huron, including Georgian Bay	687	1495	407200	180	1181930	4009915	37930	1139340	172700	3190	391195	250	39320	40760	133010	1200	614,182 40	3
4	Lake St. Clair	....	....	1700	....	79350	.....	40700	104700	60093	4380	54050	....	51150	43810	370410	.....	30,601 42	4
5	Lake Erie	....	105	4839350	....	245365	....	30245	802410	145300	5000	284955	2000	379390	27585	692355	8200	212,586 10	5
6	Lake Ontario	....	175	‡ 964000	....	410420	101650	92400	155900	247380	123150	46600	46850	219270	258120	295350	.....	132,064 30	6
7	St. Lawrence River, Kingston to Lancaster	....	....	5600	....	1000	27100	34900	6850	155650	4900	44500	59325	27650	167900	102110	....	25,015 70	7
8	Inland Districts	....	....	.....	....	38200	190600	734200	212970	36100	623200	10150	18900	36600	63250	644100	.....	147,324 50	8
	Totals	1477	1775	6309000	220	2882035	5676605	970375	2715340	859783	774320	1171580	127325	753380	601425	2326335	36120	1,433,631 72	

† In No. 1, add 400 lbs. sturgeon bladders, $400. ‡ In No. 6, add also 668,000 lbs. smoked herring, $13,360.

RECAPITULATION

Of the Yield of the Fisheries in the Province of Ontario for the Year 1898.

Kinds of Fish.		Quantity.	Price.	Value.
			$ cts.	$ cts.
Whitefish, salted	Brls.	220	10 00	2,200 00
" fresh	Lbs.	2,882,035	0 08	230,562 80
Trout, "	"	5,676,605	0 10	567,660 50
" salted	Brls.	1,477	10 00	14,770 00
Herring, "	"	1,775	4 00	7,100 00
" fresh	Lbs.	6,309,000	0 02	126,180 00
" smoked	"	668,000	0 02	13,360 00
Bass	"	970,375	0 08	77,630 00
Pickerel	"	2,715,340	0 05	135,767 00
Pike	"	859,783	0 04	34,391 32
Maskinonge	"	774,320	0 06	46,459 20
Sturgeon	"	1,171,580	0 06	70,294 80
" caviare	"	36,120	0 50	18,060 00
" bladders	"	400	1 00	400 00
Eels	"	127,325	0 06	7,639 50
Perch	"	753,380	0 03	22,601 40
Catfish	"	601,425	0 02	12,028 50
Coarse fish	"	2,326,335	0 02	46,526 70
Total 1898				1,433,631 72
" 1897				1,289,822 57
Increase				143,809 15

RECAPITULATION

Of all Fishing Tugs, Boats and Nets, &c., employed in Ontario for the Year 1898.

Articles.	Value.	Total Value.
	$	$
83 vessels, (2,257 tonnage; 430 men)	105,100	
1,262 boats, (2,417 men)	82,428	
		187,528
15,172 gill-nets, (1,838,420 fathoms)	214,020	
86 seines, (8,115 fathoms)	6,490	
372 pound-nets	106,965	
406 hoop-nets	9,305	
		336,780
Night lines, hooks, &c	2,000	
193 freezers and ice-houses	66,445	
66 piers and fishing wharfs	36,025	
		104,470
Total value		628,778

APPENDIX No. 11.

REPORT

ON

FISH CULTURE OPERATIONS

IN THE

DOMINION OF CANADA

1899.

REPORT BY PROFESSOR EDWARD E. PRINCE, COMMISSIONER AND GENERAL INSPECTOR OF FISHERIES FOR THE DOMINION OF CANADA, FOR THE YEAR 1899.

OTTAWA, December 31, 1899.

To the Honourable Sir LOUIS H. DAVIES, K.C.M.G., &c., &c.
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to present my annual report upon the work of fish culture carried on in the department's hatcheries during the year 1899. The numerical results, as shown by the subjoined statistical tables, are of the most satisfactory character as the total quantity of fry, whitefish, Atlantic salmon, Pacific salmon, Great Lake trout or salmon trout, and lobsters, planted in the various waters detailed in the several reports, considerably exceeds the annual average output for the last twenty years. What are the exact results of this annual effort to replenish the waters of the Dominion with the best and most valuable kinds of marketable fish admits of little question. Experts are agreed that fish-culture, if properly conducted, must of necessity show beneficial effects, and practical men interested in the fishing industry have expressed the opinion, almost universally, that the fisheries have benefited by the fish-breeding operation carried on under the department for over thirty years.

No one of course can deny that fish-breeding has limits, and very definite ones, and it must be admitted that much has been claimed for artificial propagation which a close and critical examination cannot fully justify. In my special report, included as Supplement No. 1 of the 29th Annual Report of the Department 1896, I pointed out (on p. 18, 'A concise Account of Fishes' Eggs') that the very nature of the eggs of certain species of fish prevented successful treatment by fish-culture methods. I said: 'It is, moreover, no uncommon thing for intelligent persons to apply to the Department of Marine and Fisheries for spawn, or for the young fry of fishes, the

eggs and young of which have never yet been seen by any one, and it is still more common for similar applications to be made for fry which on account of peculiar features in the nature of the spawn, it is impossible, or unprofitable, to deal with in fish-culture establishments,' and further on, upon the same page, I added that 'adhesive eggs, such as those of the black bass, maskinonge, sturgeon, &c., are most unsatisfactory for treatment by methods of artificial culture. With extra precautions and care a small percentage of their eggs can be hatched; but to obtain the best results the separate, non-adhesive kind of eggs only, should be hatched artifically.'

Hardly less hazardous is the attempt, which has been made upon an extensive scale in many countries, to artificially incubate the eggs of the sea-fishes notably cod, haddock, mackerel, sole and certain flat-fishes, whose ova are very minute and float in the open sea. In a prior report I referred to a system of saving from total destruction the eggs of marine fishes, at the time of their capture and I made reference to the practice followed by some United States fishermen in Lake Michigan, of taking the eggs from the fish captured at the spawning time, fertilizing them and then returning them to the water. Mr. Charles E. Fryer, one of Her Majesty's Inspectors of Fisheries for England and Wales, in his report for 1897 upon the Sea Fisheries of Britain (excluding Scotland) makes reference to this and goes on to remark:

'I very heartily concur in, and desire to strongly endorse, the doubt expressed by Professor Prince as to the advisability of relying solely on artificial breeding in any form as a means of keeping up the stock of any kind of fish; but there does not seem to be any reason why the principle thus described as being put in practice in Wisconsin with respect to trout should not be extended to other fish. In saying this I do not of course forget the essential differences between sea fish and freshwater fish; but what I wish to point out is the advantage which this suggestion has over the usual methods of the artificial hatching of sea-fish, viz., that at trifling expense, and without interfering with the ordinary fishing operations, it would result in the saving of millions of ova which would otherwise be destroyed.'

It is of course necessary to observe that while this rough and ready treatment at any rate saves from immediate and sure destruction the eggs thus scattered in the water, it is not always the case, probably very rarely so, that the eggs are returned to the water in localities favourable to their safety and successful development. Amongst freshwater fishes it is problematical whether the eggs cast overboard by the fishermen, will ever find a secure and appropriate resting place. With the sea fishes, above referred to, there is a greater possibility that the eggs will find themselves in favourable surroundings near the surface of the water but questions of salinity temperature, tides and currents are bound up with the matter, and under normal conditions, sea fishes no doubt spawn, when and where the most favourable conditions obtain. During the sittings of the recent Canadian Lobster Commission, 1898, of which I was appointed chairman, some evidence was given, which brought out forcibly the point upon which I have just insisted. A very intelligent and well-informed lobster packer in Cape Breton made the following recommendation to the commissioners: 'The best thing to preserve the lobster supply would be to preserve the ripe berried lobsters in a floating car at each cannery, and let an officer of the Dominion Government come round and remove the spawn. He should then scatter the spawn on a flat sandy bottom, cover it over, and let it hatch out naturally. Young lobsters are always found in the sand as I once got one alive about 100 yards out from the shore in three feet of water. It was white, but perfectly formed and not quite an inch long. We get millions of small lobsters on the sand after a soft ripple and a S.W. wind.., If the lobster packers assisted they would give all the aid necessary as they would get the market value for the lobsters after the removal of the spawn.' The department three or four years ago tried an analogous scheme and induced many lobster packers to remove the 'berries' from ripe lobsters, place the eggs in a floating wooden cage specially devised, and allow them to hatch near the cannery wharves. Reports came to hand that millions of small lobsters were seen swimming about in proximity to the hatching crates; but there is grave reason to doubt that they were lobster fry at all. At the Lobster Commission's sitting at Canso one of the most prominent fish merchants and lobster canners on the Nova Scotia coast proved this when he said: 'Many fishermen see small creatures in vast num-

bers in the inshore waters and they call them lobster fry. I sent some of these supposed lobster fry to Prof. Herrick, who has specially studied the lobster, and he kindly and promptly sent me a reply stating that the supposed fry of the lobster were simply sand-fleas.' In other words the system of returning ova to the water in unsuitable places and under unfavourable conditions results in attracting the enemies of the eggs and fry, and thus provides food for voracious scavengers ever on the look out for this dainty provender. If the eggs of fishes are removed from the parents and placed in safety in the hatching jars and trays while undergoing incubation, one great danger, perhaps the greatest danger of all, is avoided viz., the destruction of the helpless eggs by active and voracious enemies. The agile fry whether of salmon, whitefish, trout or lobster, has powers of rapid movement at an early stage of its life, subsequent to hatching—it is on the alert and can elude enemies, but the ova are helpless and exposed to innumerable perils.

During the past year twelve hatcheries have been in active operation and have turned out a total quantity of fry amounting to 222,350,000, of which nearly half were the fry of the lobster. As stated in my previous report, three of the establishments have not been in operation, and I regret to have to report that after the conclusion of the work at the Deeside Hatchery, on the Restigouche River, the building was destroyed by fire. An event so serious, is on every ground to be deplored, but there is special reason to regard with regret the destruction of an institution so famous and so successful as that which for fifteen years has held a most prominent place in the world of pisciculture. The officer-in-charge, in his subjoined report, makes reference to the opinion prevalent in the district that the burning of the building and all that it contained, was an act of incendiarism. It is difficult to conceive how an institution, which has been universally admitted to have benefited the salmon fisheries of the Bay of Chaleurs and the noted Restigouche and Metapedia rivers to an incalculable extent, should have aroused the malice of any responsible or intelligent residents in the district. The only fortunate circumstance is, that the fry had all been distributed, except a few thousands retained in a small pond close by, and the fishermen and anglers will not therefore have any grounds for the fear that they will be deprived during the coming year of the benefit of artificial fish propagation, on account of the destruction of this fine hatchery. A new building, upon a suitable and more accessible site, will be ready in time for the season's work 1899-1900, and there will be no interruption in salmon-breeding operations by reason of the unforeseen calamity alluded to. The necessary steps have also been authorized, preliminary to the erection of new hatcheries on the Pacific coast as well as on the Atlantic coast, and the buildings which it is proposed to erect will not only be of increased capacity, but will embrace many improvements which I have suggested, and certain new arrangements in accordance with recent advances in the science of fish-culture.

Following the same course at the Miramichi Hatchery, South Esk, N.B., which has been adopted since 1897, a quantity of the ova of the brook trout was placed in that building by Mr. D. G. Smith, the Provincial Fisheries Commissioner, and successfully incubated. Nearly 28,000 of these brook trout fry thus hatched were planted by Mr. Smith in tributaries of the Rivers St. John and Miramichi. This conjoint work on the part of the Dominion and Provincial Governments in recuperating the waters of the province with these game fish, has given the liveliest satisfaction to anglers and others.

The Government of New Zealand towards the close of the year 1898 expressed a desire to have sent out a supply of the eggs of certain Canadian fishes, especially the whitefish and the Pacific salmon, and arrangements were at once made for sending a shipment in the care of Mr. F. L. Ayson. Mr. Ayson was the commissioner appointed by the government of the colony to make a complete examination and survey of the systems of artificial fish-culture adopted in Canada, United States, in the British Isles and various European countries, and he spent some months in 1898 and 1899 on this continent. Mr. Ayson was most zealous in the prosecution of his mission, and every facility was given to him by the Department of Marine and Fisheries to enable him to investigate the methods so successfully adopted in the hatcheries of the Dominion. The officers at Sandwich and at New

Westminster were instructed to specially prepare supplies of ova of whitefish and British Columbia salmon for shipment across the Pacific Ocean. The whitefish eggs were carefully packed for their lengthy voyage by Mr. William Parker and they arrived in perfect condition at Vancouver, B.C., on Feb. 10. Mr. Ayson, who was waiting to receive them, immediately reported to me that 'they are splendid eggs and well-packed for the long journey they have to travel.' Unfortunately the salmon eggs in the Fraser River Hatchery were in a state of development too advanced to allow of shipping a suitable quota with any chance of success. The whitefish eggs, packed in thick 'canton flannel' in the perforated trays used for incubation, and well damped, were taken on board the SS. *Aorangi* by Mr. Ayson upon the 12th of February, and kept in a cool part of the ship. In a letter to me dated April 1, 1899, Mr. Commissioner Ayson wrote as follows:—'I took them on by the *Aorangi* sailing from there on the 12th February, arriving at Wellington, N.Z., on the 6th March. On the voyage down I kept them in the cool chamber at a temperature of from 35° to 40°. From Wellington I transhipped to one of the West Coast boats that run down to Greymouth on the west coast of the South Island. Arrived at Kaneiri Lake on the 9th March, arranged my hatchery jars in the trout hatchery there and got the eggs all unpacked on the evening of the 10th. The top trays of each case were in good condition, but in the bottom ones there was quite 30 per cent of loss, caused, I think by the 'canton flannel' covering the bottom of the trays being too thick in texture to allow the free passage of water as it came from the melting ice from the hopper above. The flannel held the water and the eggs were in a sodden state. The flannel in some of the trays had rotted and broke when the trays were being lifted out of the case. Any decaying fabric must be injurious to eggs coming in contact with it as these were. The lot from the American Fish Commission were also packed on trays covered with canton flannel, and there was about the same proportion of loss. We get the best results when perforated zinc is used for covering the bottom of the trays and the eggs packed between layers of green moss.

'The good eggs hatched out well, and I have liberated the young fish in the cool clear water of Kaneiri Lake. Our Government are very pleased with the results obtained from this lot.'

This letter of the special commissioner was followed later by a communication couched in the most courteous terms, addressed to me by the Premier of New Zealand, the Hon. Robert J. Seddon, acknowledging the help which it had been found possible to render. The letter is as follows:

PREMIER'S OFFICE,

WELLINGTON, N.Z., 17th August, 1899.

PROFESSOR PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to express the thanks of my Government for the courtesy which has been shown by your Government, and your department in particular, in facilitating the inquiries made by our commissioner, Mr. Ayson, into the working of your fisheries.

I have also to thank you for the consignment of whitefish ova which has been sent to this colony through him.

It is the desire of this Government to obtain a further consignment of whitefish ova, and also of the sockeye salmon (*Oncorhynchus nerka*), and shall be glad if you will kindly supply us with the same.

Particulars as to the quantity of each kind required will be duly forwarded by the New Zealand Inspector of Fisheries.

I have the honour to be, sir,
Your obedient servant,

R. J. SEDDON.

Accordingly arrangements were made for sending about half a million British Columbia salmon eggs to New Zealand, via Sydney, N.S.W., and it is expected that these eggs will reach their destination early in 1900, and the fry will be planted in various New Zealand rivers. Atlantic salmon do not appear to have succeeded at the Antipodes, possibly on account of the high temperature of the water; but there is much reason to believe that British Columbia fish will show better results.

In former reports I have alluded to the various conditions necessary for the successful incubation of fishes' eggs. The vulgar notion must be dispelled for ever that artificial fish-propagation merely consists in squeezing the eggs from parent fishes, then applying the milt, laying them upon trays, and letting them hatch out in due course without any experienced care or attention, and finally dumping the newly-hatched fry into any waters in which interested parties may wish the fish to be placed. Fish hatching to be a success demands the utmost care and all the resources of trained experience. The eggs must be taken in a proper and careful manner, or they will suffer harm and if they survive, will yield weak and malformed fry. During the many weeks or months of incubation constant attention is requisite, the supply of water being judiciously controlled, the sickly and dying eggs removed and all accidental impurities got rid of otherwise a large percentage of the eggs will die, and the deadly fungus will work havoc on the trays of ova. Nor is the need of an expert's attention and knowledge less urgent when the fry hatch out and the work of planting them out begins. All the season's operations will be wasted and of no effect, if the fry are not distributed with care and with due regard to the temperature, purity, depth, and character of the waters to be stocked. The nature of the bottom, the lack or abundance of microscopic food, and many other details call for attention, and rough handling or carelessness during transit by rail or wagon are to be avoided for failing a proper regard to such matters, the results of fish hatching will be disappointing. Indeed fish-culture must be a failure if conducted by careless and inexperienced officers. The operations carried on in the Dominion hatcheries since fish-culture commenced in Canada, have had the inestimable advantage of experienced guidance. The officers on the whole have shown zeal and careful attention in their work and most of these officers, after a period of preliminary training, have had an experience of many years of practical work. It is impossible to overestimate the advantage of possessing a staff of officers of experience and really interested in their work, whose services indeed have been regarded as of such value that in more than one instance the United States authorities have given lucrative positions to Canadian officers in charge of hatcheries.

That fish-culture should escape all criticism was not to be expected. Criticism as a matter of fact has been lavishly bestowed on fish-breeding work—in some cases it has been well merited, owing to the ignorance, indolence, or lack of experience of parties entrusted with fish-culture work. Some criticism, however, has been directed against the adopted methods, as methods, and changes or improvements have been repeatedly suggested. One of the most frequent criticisms is that directed against the planting of very young fry which it is alleged are unable to care for themselves, and cannot endure the changed temperature of their surroundings when removed from the transportation cans or vessels. The fry, it is urged, should be kept until they are some months old when they would be able to feed themselves, and have sufficient vigour and intelligence to avoid enemies and to withstand unfavourable conditions of temperature and the like. When over thirty years ago Mr. Livingstone Stone, the veteran fish-culturist of the United States, asked the late Seth Green, a pioneer in the same science, 'How many of those engaged in trout-breeding would succeed?' he answered with characteristic brevity, 'One in a million!' Six years later (in 1873) Mr. Green found himself able to regard more hopefully the work of pisciculture generally, for as a result of practice and observation the science has been reduced to rules, and the conditions of success had been so fully ascertained that, at any rate, with familiar species of the Salmonidae there was little risk of serious failure if ordinary intelligence were exercised. Indeed so exact and precise have these rules become that the late Sir J. Gibson Maitland of Howietown, Scotland, did not hesitate to affirm that 'there is no

longer any question as to how the fish are to be hatched, and under what conditions they can be grown. The questions in trout-culture are now precisely the same as those which demand solution in breeding cattle, namely, how to breed so as to produce the most desirable and suitable characteristics for the district where they are to be reared.' ' With respect to other fishes than Salmonoids it must be admitted that pisciculture is even yet in a large degree experimental. To use Professor Huxley's phrase 'well considered and scientific methods' have yet to be worked out and the cultivation of our prolific waters is as important as the cultivation and development of our land resources. I propose in a future report to deal exhaustively with the ceaselessly-debated question of 'Newly-hatched fry *v.* fingerlings'; but I cannot resist referring to the very able and apposite observations of Mr. Herschell Whitaker, one of the most zealous and thoroughly informed fish-culture authorities on this continent. In a report of the Fish Commissioners of the State of Michigan eight years ago, Mr. Whitaker expressed himself as follows:—

'All fishculturists who attempt to keep up their stock of parent fish by raising a certain quantity of fry each year are familiar with the great mortality occurring at the period when the young fish has finally absorbed his food sac, and is ready to take the natural food provided by nature. At this time when he "rises" in search of this natural food if he does not find it he is compelled to take the artificial food prepared for him, and the difficulty of adapting his stomach to this food results in a loss which varies somewhat from fifty to seventy-five per cent. If the young trout at this period of his existence were allowed to forage for his natural food this mortality would be greatly reduced. There are streams that are well known in Michigan which have had plants of fry not to exceed five hundred in number which within three years from the time of stocking have shown up well, and to-day without further stocking afford good sport to the angler.

'Within the current month there appeared in the Detroit daily paper an interview with a prominent fishculturist who took occasion to say: "I believe, and against great opposition have always maintained, that 100,000 yearlings planted were more likely to live and thrive than 5,000,000 fry." Making due allowance for the enthusiasm of the interviewed party and for the natural predisposition of man to defend his pet theories, let us see where these figures would leave us.

'We will start with 5,000,000 fry planted, and we will say that twenty-five per cent perished the first year, ten per cent the second year, and five per cent the third year. At the end of the second year after deducting the twenty-five per cent for loss, and estimating the number thus left to be composed of one-third females, which would cast on an average 250 eggs apiece, there would be added to the stock 281,250,000. Estimating that there will be a loss of seventy-five per cent of this number we have left 70,312,500. At the end of the third year we would have 1,068,750 spawning females casting on an average 450 eggs each, amounting to 480,937,500. Deducting from this amount seventy-five per cent for loss, and we have left 120,234,375. These added to the original plant, after having deducted therefrom for loss on the original plant twenty-five, ten and five per cent for the three years, and we have left as the result of a 5,000,000 plant 193,753,125.

'Now let us take 100,000 yearling trout: At the end of the first year after planting we deduct ten per cent for the mortality in the adult fish which leaves us 90,000. Of this number one-third being females, we would have 30,000 spawning fish which would cast on an average of 250 eggs apiece. This would give us 7,500,000 and deducting 75 per cent for mortality we have left 1,875,000. At the end of the second year after planting after having deducted five per cent loss for adult fish, 85,500. One-third of these being spawners, will cast 450 eggs each, amounting to 12,825,000. Deduct from this amount seventy-five per cent for mortality and we have left 3,206,250. At the end of the third year after having deducted five per cent for loss we have left 81,225 fish. One-third of this number being females will cast on an average 900 eggs to each fish amounting to 24,367,500. From this amount deduct seventy-five per cent for loss, leaving 6,091,875.

'At the end of the third year we must also take into consideration the fry hatched from the fish hatched at the end of the first year which will have arrived at their first spawning age. This number will amount to 1,875,000. From this amount

deduct twenty-five per cent for mortality and we have 1,406,250. One-third of these being females leaves 468,750 spawners which will cast 250 eggs apiece amounting to 117,187,500. Deducting from this quantity a loss of seventy-five per cent, and we have left 29,296,875. The above amounts added together make the total result of the planting of 100,000 yearling trout at the end of a three-year period amount to 40,551,225 as against 193,753,125 as the result of the fry planting of 5,000,000.

'Considering the results, therefore, of fry planting, from which practically all the results we have are due, we must assume that it has been eminently successful, and when we consider the cheapness with which this work is done it would seem that the ample success of fry planting is simply incontestable.'

A thorough study of the whole question as an expert has convinced me that the planting of young fry as carried out in connection with Dominion hatcheries has not only had substantial results, but results which could not be equalled by any other method. The limits of this report preclude a statement of the grounds upon which this opinion is based; but recognized authorities can be quoted extensively, all supporting the claim that the planting of young fry is an undoubted benefit. The following passage from a letter recently received from a widely known angler of long experience in Eastern Ontario may be quoted in proof:—

'The good angling here this past season has firmly convinced us, that the gradual increase of trout in our lake, for last 10 years, has been caused by the fry sent us from the Ottawa Hatchery. We hope next spring to receive a larger quantity.

'We would be pleased to have the close season for salmon-trout changed—say, to commence October 15, instead of November 1. This year the fish were through spawning before October 28.'

In other countries the Canadian system, where adopted, has been regarded as eminently successful. Thus I noticed in the Irish Fisheries Report five or six years ago that Mr. R. McLure wrote of salmon hatching operations on the River Blackwater that the planting of fry, say six, seven or eight weeks after hatching, had had undoubted beneficial results. He wrote (Feb. 16, 1895):

'On the Kerry Blackwater we have this year laid down over 100,000 ova and expect to succeed in getting from this quantity 90,000 to turn out in the streams and tributaries in the main river. We have for many years successfully hatched out about the same quantity with very good results. We have always removed the fish at about two months old to the minor streams.

'It would entail expensive arrangements to keep them in ponds, and I am not sure that very much better results would be obtained by doing so.

'The river is teeming with salmon this year; the owner spends about five pounds a week employing bailiffs during the spawning season when salmon are so easily destroyed by poachers.

'Artificial propagation on an inexpensive scale is in my humble opinion one of the best ways of developing the Irish salmon fisheries.

'I believe the Inspectors of Irish Fisheries, who are able men, would be in a position to do good service to our salmon fisheries if they had some fund placed at their disposal to initiate and encourage artificial propagation extensively in this country.'

If the fry are kept more than six or seven weeks systematic feeding must be resorted to. At the Restigouche Hatchery Mr. Alex. Mowat was granted permission to retain and rear 10,000 sea salmon fry until they were six months old and many of them fully three inches in length. This very successful attempt is referred to in the subjoined report by the officer named; but as already stated I propose to reserve my remarks for a future season upon the vexed question, 'Is the raising of fingerlings an established advantage?"

During the season 1898-99 a total quantity of fry was raised in all the hatcheries operated amounting to 222,350,000, a considerable advance over the preceding year.

It is possible to demonstrate beyond reasonable doubt that the stocking of waters with artificially hatched fry has been completely successful in restricted waters where the results could be tested and observed. The department has on record many instances of confined waters where the benefit could be shown by con-

vincing proof. In our great salmon rivers these benefits while less convincingly demonstrated are almost universally admitted by sportsmen and net fishermen. The residents upon such rivers would view with alarm the entire stoppage of fish-hatching operations. It must be admitted, however, that it is far less difficult to test the results of whitefish planting in the great lakes. Countless millions have been placed in all the more important inland waters of the Dominion, but opinions of the most opposite character prevail as to the results. In such a vast inland sea as Lake Erie the benefits have been repeatedly questioned. These once prolific waters appear to have been largely denuded of whitefish, and both Canadian and U. S. fishermen have come to regard Lake Erie as now mainly inhabited by the so-called lake herring or lesser whitefish. To the surprise of the most experienced men the last two years have witnessed a sudden and astonishing return of former plenty, and in the fall of 1899 the Canadian hatchery could have been filled with ease ten times over, so numerous were the schools of whitefish coming up out of the lake. On the U. S. side of these waters it has been the same. The New York *Forest and Stream* (December 16, 1899), referred to this amazing abundance of adult fish returning, as in former years of plenty, to the great spawning grounds of the Detroit River, and expressed itself in these terms:— In the Detroit River and the western end of Lake Erie there have been phenomenal runs of whitefish. The fishermen have made enormous catches, and the U. S. Commissioner will probably take 400,000,000 eggs of this important fish.'

The prevalent opinion, and it is a reasonable one, is that the whitefish fish-hatcheries are responsible for this improvement in the supply. Certainly the fisheries on the lake and in the river have been pursued with undiminished vigour during recent years, and no special effort has been made to curtail the catch and to encourage the natural multiplication of the species, beyond the protection afford by existing fishery regulations. These regulations in the Canadian portion of the waters of the great lakes have, it is true, been to some extent abortive on account of the total absence of restrictions upon the American side, or at any rate the very lax and ineffective enforcement of existing regulations in the several adjoining States. The International Commissioners in 1896 pointed out that the United States nets at the western end of Lake Erie had been multiplied beyond reason and should be reduced by at least one-half, and they recommended extended fish-hatching operations as a mean of improving the whitefish supply. They said 'While no positive evidence of 'the success of fish-culture on Lake Erie has been adduced, owing to the fact that the 'whitefish fry there planted represent the same variety which naturally inhabits the 'lake, we are confident that the supply of that species has been materially benefited 'thereby. As the advantages to be gained by this means must be measured by the 'quantity of young fish returned to the water, and as the stock of whitefish has been 'so greatly depleted, we strongly urge that the scope of the operations in this direc-'tion be increased to the fullest extent possible. We do not recognize the present 'need of propagating other species than the whitefish, unless it be the wall-eyed pike, 'which has already received some attention in that respect.'

The following table shows the respective quantities of each species successfully hatched and planted in the various waters.

QUANTITIES OF FRY DISTRIBUTED.

The following table shows the numbers planted of various species propagated :—

Salmon (*Salmo salar*)	7,710,000
Sockeye (Pacific) salmon (*Oncorhynchus nerka*)	4,742,000
Great Lake trout (*Salvelinus namaycush*)	2,778,000
Lake whitefish (*Coregonus clupeiformis*)	118,000,000
Lobsters (*Homarus americanus*)	100,000,000
	222,330,000

For facility of reference, the further table below specifies the name and location of each hatchery, also the quantities of young fish and of eggs in an advanced condition supplied by each establishment, respectively, and the species of fry or the kind of eggs so distributed during the season.

No.	Name of Hatchery.	Number of Fry distributed.	Number of Eggs sent to other Hatcheries.	Number of Eggs received from other Hatcheries.	Species.
1	Bedford, N.S.	1,025,000	.....	1,200,000	Atlantic salmon.
	"	3,000,000	.....	3,000,000	Lake whitefish.
2	Bay View, N.S.	100,000,000	.....	.....	Lobsters.
3	Sydney, N.S.	Not in operation.			
4	Dunk River, P.E.I.	" "			
5	St. John River, N.B.	950,000	.....	1,200,000	Atlantic salmon.
	" "	230,000	.....	250,000	Great Lake trout.
	" "	2,800,000	.....	3,000,000	Lake whitefish.
6	Miramichi, N.B.	1,605,000	300,000	250,000	Atlantic salmon.
7	Restigouche, P.Q.	2,025,000	250,000	.....	"
8	Gaspé, P.Q.	Not in operation.			
9	Tadoussac, P.Q.	2,125,000	.....	.....	Atlantic salmon.
10	Magog, P.Q.	2,950,000	.....	3,000,000	Lake whitefish.
	"	148,000	.....	150,000	Great Lake trout.
11	Newcastle, Ont.	1,100,000	1,900,000	.....	"
	" "	2,950,000	.....	3,000,000	Lake whitefish.
12	Sandwich, Ont.	73,000,000	15,000,000	.....	"
13	Ottawa, Ont.	2,400,000	.....	3,000,000	"
	"	1,300,000	.....	1,500,000	Great Lake trout.
14	Fraser River, B.C.	4,742,000	.....	.....	Sockeye salmon.
15	Selkirk, Man.	20,000,000	.....	.....	Lake whitefish.
	Total.	222,350,000	17,450,000	19,550,000	

STATEMENT showing the Places where, and the Years in which, the several Fish Establishment, annually, since they

	Year.	ONTARIO.			QUEBEC.			
		Newcastle.	Sandwich.	Ottawa.	Magog.	Tadoussac.	Gaspé.	Ristigouche.
		Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.
1	1868-73.	1,070,000	.....	.....	.....	.....	.....	.....
2	1874....	350,000	.....	.....	.....	.....	.....	100,000
3	1875....	650,000	.....	.....	.....	60,000	110,000	600,000
4	1876....	700,000	8,000,000	.....	.....	150,000	50,000	300,000
5	1877....	1,300,000	8,000,000	.....	.....	1,180,000	1,051,000	600,000
6	1878....	2,605,000	20,000,000	.....	.....	707,000	650,000	1,015,000
7	1879....	2,602,700	12,000,000	.....	.....	1,250,000	1,597,000	1,470,000
8	1880....	1,923,000	13,500,000	.....	.....	1,155,000	730,000	1,500,000
9	1881	3,300,000	16,000,000	.....	200,000	334,000	500,000	740,000
10	1882....	4,841,000	44,000,000	.....	975.000	660,000	530,000	1,400,000
11	1883....	6,053,000	72,000,000	.....	250,000	995,000	520,000	300,000
12	1884....	8,800,000	37,000,000	.....	100,000	985,000	859,000	940,000
13	1885....	5,700,000	68,000,000	.....	300,000	720,000	290,000	669,000
14	1886....	6,451,000	57,000,000	.....	1,400,000	1,627,000	576,000	1,380,000
15	1887....	5,130,000	56,500,000	.....	675,000	900,000	630,000	1,560,000
16	1888....	8,076,000	56,000,000	.....	3,475,000	850,000	800,000	1,720,000
17	1889....	5,846,500	21,000,000	.....	2,800,000	1,600,000	450,000	1,280,000
18	1890....	7,736,000	52,000,000	5,732,000	2,875,000	1,700,000	806,000	2,396,000
19	1891....	7,807,500	75,000,000	7,043,000	3,050,000	1,300,000	1,000,000	1,750,000
20	1892....	4,823,500	44,500,000	4,909,000	2,400,000	624,000	965,000	1,240,000
21	1893....	9,835,000	68,000,000	6,208,000	3,600,000	2,060,000	910,000	883,000
22	1894....	6,000,000	47,000,000	4,480,000	2,035,000	1,975,000	859,000	1,080,000
23	1895....	6,000,000	73,000,000	3,210,000	3,350,000	2,060,000	675,000	2,885,000
24	1896....	5,200,000	61,000,000	3,950,000	3,400,000	2,500,000	300,000	1,250,000
25	1897....	4,200,000	72,000,000	4,100,000	4,500,000	3,272,000	1,100,000	2,100,000
26	1898....	4,325,000	71,000,000	3,020,000	3,100,000	2,200,000	.....	1,135,000
27	1899....	4,050,000	73,000,000	3,700,000	3,098,000	2,125,000	.....	2,025,000
	Totals...	125,375,200	1,125,500,000	46,353,000	41,943,000	32,989,000	15,949,000	32,249,000

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Hatcheries have been erected; also the number of Fry distributed from each were built, including the Year 1899.

New Brunswick.		Nova Scotia.			P. E. Island.	British Columbia	Manitoba	Totals.	
Miramichi	St. John River.	Bedford.	Sydney.	Lobster Hatchery, Bay View.	Dunk River.	Fraser River.	Selkirk.		
Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	
.....	.....	.....	.....	.....	.....	.....	.....	1,070,000	1
60,000	.....	.....	.....	.....	.....	.....	.....	510,000	2
150,000	.....	.....	.....	.....	.....	.....	.....	1,570,000	3
60,000	.....	395,000	.....	.....	.....	.....	.....	9,655,000	4
320,000	.....	1,000,000	.....	.....	.....	.....	.....	13,451,000	5
665,000	.....	1,400,000	.....	.....	.....	.....	.....	27,042,000	6
1,025,000	.....	1,740,000	.....	.....	.....	.....	.....	21,684,700	7
805,000	170,600	730,000	.....	.....	500,000	.....	.....	21,013,000	8
770,000	50,000	680,000	.....	.....	375,000	.....	.....	22,949,000	9
640,000	588,000	850,000	315,000	.....	1,060,000	.....	.....	55,859,000	10
925,000	72,600	800,000	659,060	.....	1,210,000	.....	.....	83,784,600	11
795,000	811,000	1,000,000	853,000	.....	1,000,000	.....	.....	53,143,000	12
900,000	155,000	670,000	772,000	.....	1,100,000	1,800,000	.....	81,067,000	13
945,000	2,181,000	960,000	1,179,000	.....	400,000	2,625,000	.....	76,724,000	14
900,000	2,479,000	4,230,000	1,415,000	.....	500,000	4,414,000	.....	79,273,000	15
1,290,000	4,142,000	4,390,000	1,559,000	.....	.....	5,807,000	.....	88,109,000	16
850,000	3,570,000	3,850,000	2,034,000	.....	.....	4,419,000	.....	47,700,000	17
1,022,000	3,492,000	3,860,000	1,953,000	.....	.....	6,640,000	.....	90,213,000	18
1,503,000	3,165,000	2,550,000	1,000,000	7,000,000	.....	3,603,800	.....	115,772,300	19
1,310,000	2,378,000	2,620,000	690,000	63,500,000	.....	6,000,000	.....	135,959,500	20
975,000	3,299,000	3,180,000	.....	153,600,000	.....	5,764,000	.....	258,314,000	21
1,010,000	4,096,000	3,805,000	288,000	160,000,000	.....	7,800,000	14,500,000	254,919,000	22
1,200,000	4,060,000	3,815,000	195,000	168,200,000	.....	6,390,000	19,000,000	294,040,000	23
1,430,000	4,068,000	4,225,000	243,500	100,000,000	.....	10,393,000	4,500,000	202,459,500	24
1,558,000	4,155,000	5,450,000	496,000	90,000,000	.....	5,928,000	.....	198,859,000	25
1,557,000	3,290,000	3,000,000	.....	85,000,000	.....	5,850,000	9,000,000	192,477,000	26
1,605,000	3,980,000	4,025,000	.....	100,000,000	.....	4,742,000	20,000,000	222,350,000	27
24,270,000	50,202,200	59,225,000	13,652,500	927,300,000	6,145,000	82,175,800	67,000,000	2,650,468,200	

It should be added that a further new step was taken during last season, viz: the hatching of the famous game-fish the Rainbow trout. This was done at the Bedford Salmon Hatchery, N.S., and is referred to in the report on the operations at that establishment on a subsequent page. The work was undertaken at the suggestion, and with the co-operation, of the Nova Scotia Game and Fishing Society. This society purchased in Caledonia, State of New York, 25,000 eggs of the Californian trout. The department also secured a similar quantity and the entire shipment was transported to Bedford in charge of the department's officer at the hatchery there. They did well and the loss during incubation was extremely small. The fry were distributed in certain waters in the counties of Halifax and King's, N.S., and the result of the introduction of this western fish into eastern Canadian lakes and streams will be watched with interest. Opinions are divided as to the game qualities of this species after transplantation; but it is universally admitted to be, in many respects, one of the finest of our species of mountain trout. These fry, 46.100 in number, together with the brook trout fry hatched at the South Esk establishment N.B., viz: 28,000 incubated by arrangement with the New Brunswick Provincial authorities, if added to the total quantity of the fry of commercial fish hatched and planted, brings the grand total up to 222,424,100, a most creditable result in view of the strict economy exercised in regard to expenditure and the reduced appropriation available for fish-culture during the past season.

I have the honour to be, sir,

Your obedient servant,

EDWARD E. PRINCE,
Dominion Commissioner of Fisheries.

APPENDICES TO FISH-CULTURE REPORT.

1. BEDFORD HATCHERY, NOVA SCOTIA.

BEDFORD, December 9, 1899.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my annual report of work done at the Bedford hatchery for the year 1899.

In November, 1898, I received from the retaining pond at Carleton, N.B., 900,000 salmon eggs, and on April 12 last, 300,000 semi hatched salmon eggs from the Miramichi hatchery, also in March last, 3,000,000 whitefish eggs from the hatchery at Sandwich, Ontario.

On April 4 last, under instructions from the department, I proceeded to Caledonia, New York State, and purchased 25,000 eggs of the Rainbow or California trout. I also took charge of 25,000 eggs for the Halifax Game and Fish Club, all of which were laid down in the troughs here and with but a very small loss were hatched and distributed in lakes and rivers named below.

Whitefish fry.

McPherson's Lake, Pictou County, N.S.	50,000
Goshen Lake, Antigonish County, N.S.	200,000
Brazil Lake, Yarmouth County, N.S.	800,000
Paradise Lake, Annapolis County, N.S	700,000
Lake Au Law, Inverness County, N.S.	800,000
Total	3,000,000

Salmon fry.

Nine Mile River, Halifax County, N.S.	50,000
Rodden River, Halifax County, N.S.	50,000
Pennant River, Halifax County, N.S.	75,000
Herbert River, Hants County, N.S.	50,000
Avon River, Hants County, N.S.	100,000
Meander River, Hants County, N.S.	100,000
Cornwallis River, King's County, N.S.	50,000
Gaspereaux River, King's County, N.S.	150,000
Annapolis River, Annapolis County, N.S.	150,000
East River, Pictou County, N.S	50,000
Cariboo River, Pictou County, N.S.	50,000
Lochabar Lake, Antigonish County, N.S.	25,000
Vernon River, P.E.I.	75,000
Murray River, P.E.I.	25,000
Fox River, P.E.I	25,000
Total	1,025,000

Rainbow Trout fry.

Chocolate Lake, Halifax County	4,000
Spruce Hill Lake, Halifax County	4,000
Anderson's Lake, Halifax County	3,000
Bennett Lake, Halifax County	6,000
Cranberry and Flat Lake, Halifax County	6,000
Coldbrook Stream, King's County	100
	23,100
Halifax Fish and Game Club	23,000
Total	46,100

This season I kept in the breeding troughs about 100 each of salmon and Rainbow trout fry and fed them upon beef liver. The Rainbows did well and grew rapidly; some of them were 3½ inches long in September, when I planted them in Coldbrook Stream. As the troughs had to be renewed I could not retain the fry longer in the hatchery.

The salmon fry could not stand the warm water in July, all died, the temperature of the water at that time was 74°.

I am of the opinion that any effort to raise salmon, brook or sea trout to the fingerling or yearling stage would not be successful here as the water gets too warm for them in the summer, but Rainbows would do fairly well. Although the Rainbow trout is a good game fish, an active biter and makes a strong fight, giving great sport to the angler, I think that it would be a great mistake to introduce them into waters where our native trout abounds. Where food is plentiful, and waters moderately cool, the Rainbows will grow fast and attain a weight of from 5 lbs. to 10 lbs. and will no doubt soon destroy the native trout of smaller size. The Rainbow trout are not as fine a fish for food as our native species and the flesh will not keep firm long after being taken out of the water.

Under instructions from the department a new set of breeding troughs were constructed to replace the old ones which had become so bad that they would not hold water.

Next season it will be necessary to shingle the entire roof and paint the walls of the hatchery which look very dingy and bare.

Last month I obtained at the retaining Pond Carleton, N.B., 1,000,000 salmon eggs which are laid down in the new breeding troughs.

I am, sir,

Your obedient servant,

ALFRED OGDEN.

2. BAYVIEW LOBSTER HATCHERY, NOVA SCOTIA.

BEDFORD, N.S., December 9, 1899.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my annual report of the work done at the Bay View lobster hatchery for the season of 1899.

I am pleased to be able to state that the season's output of fry exceeds that of last year by twenty millions, not that there has been any increase in the supply of ova upon the old fishing grounds, but on account of extra exertions having been made in collecting ova on new grounds, a greater distance from the hatchery than could be covered previously. It has been the practice heretofore to collect ova from the lobster factories, and convey it to the hatchery, in large buckets, kept cool by changing the water frequently while in transit. This season I adopted a new plan, by constructing boxes filled with trays, the frames of which are made of wood and covered with fleecy cotton. Each box will contain about 3,000,000 eggs, and in cool weather can be carried a long distance and kept in perfect order. This method enables the steamer when collecting ova to cover more ground without loss of eggs, or delay in stormy weather. It also saves coal, water and labour, as the eggs can be kept in these boxes for several days in the hatchery before being placed into the jars. This season I had 15,000,000 eggs kept in boxes, ready to place in jars before starting the steam pump. Under the old system it would be necessary to get up steam for the first million eggs brought to the hatchery. I arrived at Bay View on May 16, and after getting the hatchery in good running order, commenced to run the steam pump on the 27th of that month. The steamer *May Queen* commenced work on May 25, and was employed thirty days in collecting ova and distributing fry. Ova were collected from fifteen factories between Caribou and Saddle Islands, around Pictou Island, and the north shore to Cape John. One trip was made to Canso and 12,000,000 eggs received there. The first fry seen in the jars was on June 14, distribution commenced ten days later, and on July 8, there had been planted in the waters between Caribou and Pictou Island 100,000,000 young lobsters.

Each year adds more factories on our coast and more traps on the fishing grounds, and it is a surprise to all that the fishery is holding out so long.

About all the fry that have been planted from the Bay View hatchery have been placed in Pictou Bay, and around Pictou Island, and I agree with the packers and fishermen who believe that the good fishing around this locality is largely due to the hatchery.

As previously reported the wharf requires repairing, and a new fresh water reservoir will be needed next spring, as wood will rot and decay when brought into contact with water.

In all other respects the hatchery is in fair order and the cost of necessary repairs will be light for next season.

I am, sir,

Your obedient servant,

ALFRED OGDEN.

3. ST. JOHN RIVER HATCHERY, NEW BRUNSWICK.

GRAND FALLS, N. B., December 30, 1899.

Prof. EDWARD E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—In compliance with the rules of the department, and in accordance with your instructions contained in your circular of the 4th instant, I have the honour to submit the following statement of the work done at the hatchery in my charge.

In presenting my annual report, for the transactions and the work done and performed at the Rapide des Femmes fish hatchery on the St. John River, for the year 1899, under my supervision, I beg to say that in the fall of 1898, as has already been reported, about 1,200,000 of sea salmon eggs were laid down in this hatchery; and in the month of March of this year an additional supply of fish eggs from Ontario consisting of 3,000,000 whitefish and 250,000 salmon trout eggs arrived at McAdam Junction in care of Mr. William Parker. I met him at McAdam and brought the eggs to this hatchery, they were in fair condition when they arrived and they did tolerably well all through the remainder of the hatching period. There was considerable loss in the salmon-trout eggs, which occurred about the time they were hatching out, but with this exception the results were fairly good.

DISTRIBUTION OF THE FRY.

Whitefish fry.

Harvey Lake, York County	320,000
Oromocto Lake, York County	240,000
Lake George, York County	240,000
Lake Yohoe, York County	320,000
Baldhead Lake, York County	240,000
Foster Lake, Charlotte County	240,000
Washademoac Lake, Queen's County	320,000
Grand Lake, Queen's County	320,000
Bolieu's Pond, Victoria County	240,000
Pond at the hatchery, Victoria County	320,000
	2,800,000

DISTRIBUTION OF SALMON-TROUT.

Temiscouata Lake, Temiscouata County	30,000
Shogomoc Lake, York County	30,000
Dumphy Pond, York County	20,000
Magaguadavic Lake, York County	30,000
Petitcodiac River, Albert County	40,000
Long Lake, Victoria County	30,000
St. John River, at the hatchery	50,000
	230,000

Sea salmon fry.

St. Croix River, Charlotte County	200,000
Loch Alva, Queens County	80,000
Skiff Lake, York County	160,000
Salmon River, Victoria County	80,000
Tobique River, Victoria County	80,000
St. John River, Victoria County	350,000
	950,000

RECAPITULATION.

Whitefish fry	2,800,000
Salmon-trout fry	230,000
Sea salmon fry	950,000
Total number of fry distributed	3,980,000

I might here state that in two instances the salmon-trout fry were planted in localities where they were not intended when they left the hatchery. This was the case with the fry that was put into Lake Temiscouata and Petitcodiac River, the former was intended for Grand Forks Lake, P.Q., and the latter for Livingstone Lake, Albert County, N.B., but in order to preserve the fry from becoming a total loss, they were planted in the waters above referred to.

It is a very risky matter for the department to undertake to fill applications made for young fry when the distance they require to be carried exceeds one hundred and fifty miles: this will apply more especially to salmon-trout fry. Parties applying for young fry do not appear to have the most distant idea of the risk there is carrying fish fry by train when it is not possible to get a change of pure and cold water except at long intervals. A person would suppose that it was a quantity of pickled fish they were applying for. I am of the opinion that some discretionary power should be given to officers in charge of hatcheries, with regard to the distance proposed by some applicants to carry fry and also the class of water and the kind of pond or place where it is intended to plant them. Occasionally we find an artificial pond of very small dimensions with scarcely two or three feet depth of water, or even in some cases not enough to prevent the whole thing from freezing up solid in a cold winter; and others wanting to stock some neglected, stagnant pool not much better than an old frog-pond scarcely fit for German carp to live in.

Collecting the Ova.

On the night of October 24 last, I and my man arrived in St. John West, all of my appliances having got there some time previous. As usual when I went to the pond I found that Mr. O'Brien had everything in first-class order to begin work, with boat, pontoons, seine and men all on hand. Thursday the 26th, I got some salmon put into the fresh-water tanks and in the afternoon I commenced to strip the fish; after I had manipulated two or three salmon, I found that they were not quite ripe, so I concluded not to interfere with them until Monday. On the 30th, Mr. Sheasgreen having arrived, we commenced to strip the fish, and continued so to do until November 9 when I finished. As Mr. Sheasgreen had some business in Fredericton I was alone the last day. The total number of salmon handled, according to my reckoning, was 722, of which there were 429 female and 293 male fish, yielding about 2,545,000 eggs, about one-half of which was sent to Bedford hatchery, and about 1,345,000 for my own hatchery. These figures are laid down as approximate numbers.

Repairs to the underground pipe.

In the early spring of the present year a very heavy freshet arose in the Rapide des Femmes Brook and overflowed the banks of the aqueduct just above where the C.P.R. received water in their tank, and carried away the embankment which was there and was of very inferior construction, and ran down through a field above the hatchery; the soil of the said field being of a sandy and gravelly nature it very soon washed out a large channel, about thirty feet in width and six feet in depth down through the entire field. In its course it stripped fifty-two feet of the underground pipe that supplies the hatchery with water. Consequently it became absolutely necessary to have this part of the washout wharfed up with bush, with earth, and gravel sufficiently high and thick to prevent the pipe from freezing in the winter; it was quite a job and cost nearly eighty dollars, including the repairs to the aque-

duct; but I am confident that it is all secure and safe from the winter frost for some time to come. At present we have an ample supply of water in the hatchery, and all the other arrangements are in good working order. The hatching troughs are all full of salmon eggs. I would therefore respectfully suggest that salmon trout eggs be not sent here this winter as there is no possible place to put them. Of course I can accommodate the usual quantity of whitefish eggs, as they do not hamper or in any way come in contact with the trays containing the salmon eggs.

There is another matter to which I beg to draw your attention. The main dam on the brook is now perfectly staunch and tight and about a foot higher than the old one, therefore in the time of low water it turns the principal part of all the water in the brook into the aqueduct. Consequently, in the time of a high freshet in the spring, such a heavy body is turned into the watercourse that it is liable at any moment to overflow its banks, which might be the cause of another washout; in order to prevent such another occurrence, I would suggest that a small flood gate should be put into the dam, so that the flow of water could be regulated according to circumstances. I think the whole thing would not cost more than ten dollars, and it would be the means of preventing some damage that would be much more expensive. Three new ladders are very much required for the hatchery, one from the ground to the eve of the building and two for the roof, one at each flue or chimney.

This establishment is now in good running order, with an abundant supply of good pure water and a large stock of ova; and it is beautifully and conveniently situated on the bank of the noble St. John River, and about thirty feet from the Canadian Pacific Railroad.

All of the foregoing is most respectfully submitted.

I am, sir,

Your obedient servant,

CHAS. McCLUSKEY,
Officer in charge.

4. MIRAMICHI HATCHERY, NEW BRUNSWICK.

SOUTH ESK, N.B., December 14, 1899.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my report on the operations in connection with salmon culture as carried on at this hatchery during the season of 1899.

As stated in my annual report for the year 1898, there were 1,730,000 salmon ova placed in this hatchery during the latter part of October of that year. According to instructions received from the department, I transferred 300,000 of these ova to the hatchery at Bedford, N.S., during the month of March, leaving a balance of 1,430,000. Later on there was 250,000 ova received from the Restigouche hatchery, and placed in the troughs here in good condition, making the total number of salmon ova then in the house 1,680,000. The 250,000 Restigouche ova were applied for by Mr. R. H. Armstrong, of Newcastle, N.B., who is manager for the Miramichi Fish and Game Club. This gentleman was anxious to have a much larger supply of salmon fry planted in the stream which his club controls than could be apportioned from this hatchery, therefore his application to the Restigouche house was necessary. The total loss of ova from the time of collection until distribution was completed,

amounted to 75,000, leaving a balance of 1,605,000, which were planted in the following streams, viz :—

Name of River.	Miramichi Fry.	Restigouche Fry.
North-west Miramichi River and tributaries	450,000	200,000
Main South-west Miramichi River and tributaries	250,000	
Little South-west Miramichi River and tributaries	400,000	50,000
Sevogle River	170,000	
Renous River	75,000	
Stewart's Brook	10,000	
Totals	1,355,000	250,000

These fry were all planted in a strong healthy condition, and as in former years on the best available grounds, and as far up the streams as possible. This part of the work was commenced on June 6, and completed on June 27. In the autumn of 1898 I obtained 28,000 trout ova, from parent fish that were taken from the Bartibogue River by the Provincial Commissioner of Fisheries. The ova hatched in good condition with very little loss, and the commissioner planted the fry in small lots on streams emptying into the St. John and Miramichi Rivers. He reports that the work was attended with complete success.

Repairs.

During the month of July an expenditure of $140 was allowed for repairing the different appliances in connection with the hatchery. A new sluice and gateway were built in the dam of the retaining pond and several other improvements made about the structure. Two new pontoons for carrying parent fish were built and the old ones repaired. The floor of the hatchery was repaired where it had become decayed from the dampness, and new pipes for carrying the waste water from the different ranges of troughs, were put in. The front wall of the building was also stripped and relined. The retaining pond was dredged and the sediment that had settled there during the spring freshet was removed, in order to give a clean gravelly bottom. The hatching trays and troughs were also varnished and all appliances put in good condition. Considerable trouble was experienced in repairing the pipes leading from the supply dam to the hatchery, and owing to this difficulty the total cost of repairing was increased about $25 over the amount asked for in the estimate, but this extra expenditure has been well repaid, by obtaining an excellent supply of water. Next year it will be necessary to replace several of the present hatching troughs with new ones, as they are becoming decayed and leaky in the bottom. The supply tank will also need some repairing, but this work will not incur any very large expenditure.

Capture of Parent Salmon.

On September 13 I received telegraphed instructions from the department to proceed with the work of procuring parent fish in the same way as in former years. This was about ten days later than the time this work is usually commenced. After repairing the seine and nets, the fishermen, who were under the direction of the assistant officer, immediately proceeded with the work of seining in the pools above the head of the tide on the North-west Miramichi. Large numbers of fish had passed up into those pools during the months of July and August, and all the fish required were obtained from these pools, except those taken by the set net on the Little South-west Miramichi. The first fish were obtained on September 20 and from that

date until the work was completed on October 24, the total number of fish taken was 378. Of this number, 81 were taken in the set net on the Little South-west, and the remaining 297 were obtained by seining the pools on the North-west Miramichi. The total number consisted of 247 females and 141 males. The cost of procuring this number of fish was $501.22, showing the average cost of each to be $1.33. The assistant officer reports that the pools were literally alive with fish when the work of seining commenced; in some pools as many as 200 grilse being liberated from the seine. When it is remembered that only four miles of one branch of this river is operated on with the seine, for the purpose of obtaining parent salmon for this hatchery, and that nearly 300 salmon were obtained therefrom, it will give a slight idea of the immense number of fish that must be in the waters of the Miramichi. The late October run of salmon were also very plentiful, but our supply was obtained before they could reach the pools above tide head, as the water continued very low all through the season.

Collection of Ova.

On October 17 the work of separating the fish in the retaining pond was commenced, and they were found to be in excellent condition. Quite a number of the fish were fed for stripping at this date, which is about the earliest that the fish in this river have ever been found to be ripe. The collection of ova continued until October 28, when there was still a balance of 47 females in the pond that were not ripe. The assistant having then been instructed to proceed to St. John to assist in the spawning operations at Carleton Pond, these fish were allowed to remain until his return. They were then found to be in fit condition for manipulation and the work of collecting ova was completed on November 13. The total number of ova obtained was 1,715,000. If the department sees fit to make a transfer to any of the other hatcheries, not fully stocked, about 300,000 of this number could be removed, and still leave as many as can be safely carried without the erection of extra hatching space. The Provincial Commissioner did not collect any parent trout this season, and this is very disappointing to parties who have been applying for these fry in small lots from nearly every part of the province. In my opinion it would be advisable for the department to allow a certain number of these fish to be taken next year and the ova placed in this hatchery, as the expense that would be incurred would amount to very little over the present ordinary routine expenditure, and as the hatching of trout and salmon can be successfully carried on together. In concluding this report I may say that the salmon fishing on this river during the past season has been very satisfactory, the net fishermen having made better catches than for some years past. In some cases the anglers were not as fortunate as in former years, but this was accounted for by the water being very low during the early part of the season. The parties who were on the rivers later in the summer made excellent scores, and on the whole the total catch of salmon considerably exceeded that of the two former years. The reports received by me from the anglers, as well as the various fish dealers, in regard to the results of the operations at this hatchery, are very gratifying, and there is abundant evidence to prove that the large annual output of artificially hatched fry is the main factor in supplying the steadily increasing demand that is being made on the salmon fishery of our river from year to year. During the past season the grilse were very abundant, and I would urge the department to instruct the protective officers to give these young salmon the best protection possible, in our inland waters, as upon them depends the future supply of mature fish. The importance of the salmon fishery should not be overlooked in any way, and every effort will be made to increase the usefulness of this hatchery in assisting to keep up the supply by stocking the streams with strong healthy fry. This year's supply of ova is, at present, in excellent condition and another large output of fry next season is assured.

Submitting all for your consideration.

I am, sir, your obedient servant,

ISAAC SHEASGREEN.

5. RESTIGOUCHE HATCHERY, QUEBEC.

RESTIGOUCHE HATCHERY, December 1, 1899.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit the following report *re* the Restigouche hatchery during the past year.

As shown in a previous report 2,500,000 fertilized eggs were deposited in the hatching trays at Dee Side in the autumn of 1898, from which crop of eggs were hatched 2,275,000 fry. These were planted in the following localities and streams :—

June 15–20, Kedgwick River, 55 miles from hatchery	400,000
" 21–27, Main Restigouche between hatchery and Cross Pt.	810,000
" 27–30, Upsalquitch River above Falls, 20 miles from hatchery	400,000
July 1–7, Metapedia River	400,000
" 7, Parker Lake, south of Campbellton	5,000
May 3, eyed eggs shipped to Miramichi hatchery	250,000
July 7, retained in tanks at hatchery	10,000
Total	2,275,000

The fry were conveyed to their destination in the floating crates and were distributed in a fine, healthy condition in fairly deep water, covering a large area of the natural spawning grounds of the rivers. This mode of distribution is most perfect: the crates containing from 300,000 to 400,000 fry are towed from fifteen to twenty miles per day, and are so arranged as to permit of the escape and liberation of the fry to be constantly going on while passing up and down the river. Only the select places high up the rivers are chosen for the planting.

Of the 5,000 fry planted in Parker Lake, Mr. Prichard, the proprietor of the property, says he saw numbers of these little fish in the lake a week after they were planted, active and healthy as could be. We have already succeeded in growing them in this lake to 2½ pounds weight.

As regards the 10,000 fry retained at the hatchery in open air tanks until six months old, the experiment was most successful. Many of these little fish were fully 3 inches in length when liberated in the autumn. The food for the fry consists of pulverized liver and raw fish, the fish only being used as a fluid food, and the liver grated into powder. A great amount of attention and care must attend the work of feeding the fry, and keeping all dead and decayed matter removed from the tanks. I am confident that from the trial made during the past summer at the Dee Side hatchery, that large numbers of the fry can be fed and reared in the tanks for at least six months before being liberated.

The Departmental Nets at Tide Head.

The retaining pond was made ready as quickly as possible in the spring, and the two nets got in operation, one on the 1st June, the other on the 10th. The following is a detailed record of the catch as kept in the two daily diaries for 1898 and 1899:—

Date.	Murray Island Station, 1899.	Pitts Creek Station, 1899.	Murray Island Station, 1898.	Pitts Creek Station, 1898.
June 1...	7	.....	10	.....
" 2...	Nil.	.....	8	.....
" 3...	6	.....	15	.....
" 4...	Nil.	.....	16	.....
" 5...	Nil.	.....	Nil.	.....
" 6...	3	.....	Nil.	.....
" 7...	4	.....	20	.....
" 8...	3	.....	8	.....
" 9...	3	.....	16	.....
" 10...	Nil.	1	7	7
" 11...	Nil.	Nil.	25	5
" 12...	Nil.	Nil.	Nil.	Nil.
" 13...	Nil.	2	Nil.	Nil.
" 14...	4	Nil.	Nil.	2
" 15...	8	4	Nil.	15
" 16...	19	Nil.	Nil.	3
" 17...	4	5	34	Nil.
" 18...	Nil.	Nil.	17	5
" 19...	Nil.	Nil.	Nil.	Nil.
" 20...	6	7	Nil.	Nil.
" 21...	11	2	15	3
" 22...	6	8	Nil.	Nil.
" 23...	7	Nil.	8	3
" 24...	10	5	4	Nil.
" 25...	Nil.	Nil.	2	1
" 26...	Nil.	Nil.	Nil.	Nil.
" 27...	6	5	Nil.	Nil.
" 28...	4	9	Nil.	4
" 29...	5	Nil.	6	6
" 30...	19	8	9	4
July 1...	Nil.	Nil.	4	3
" 2...	Nil.	Nil.	Nil.	5
" 3...	Nil.	Nil.	Nil.	4
" 4...	5	1	Nil.	Nil.
" 5...	Nil.	3	Nil.	Nil.
" 6...	4	Nil.	4	Nil.
" 7...	5	3	Nil.	Nil.
" 8...	5	3	5	1
" 9...	2	Nil.	6	Nil.
" 10...	Nil.	Nil.	Nil.	Nil.
" 11...	Nil.	2	Nil.	Nil.
" 12...	6	Nil.	2	3
" 13...	Nil.	Nil.	Nil.	Nil.
" 14...	Nil.	Nil.	Nil.	Nil.
" 15...	4	3	1	Nil.
" 16...	1	Nil.	.....	3
" 17...	Nil.	Nil.	.....	.....
" 18...	Nil.	Nil.	.....	.....
" 19...	2	Nil.	.....	.....
" 20...	2	2	.....	.....
" 21...	3	.....	.....	.....
" 22...	1	.....	.....	.....
" 23...	3	.....	.....	.....
	178	73	242	77

By the above schedule it will be seen the number of spawning fish for 1899 is 251. The manipulation of the fish began on October 18, and continued until November 1, 137 female and 114 male fish were operated upon, yielding about

1,500,000 eggs, these were carefully packed in the hatching trays and conveyed to Flatlands, where they will be deposited in the course of a few days in the new hatchery which is now being constructed. The eggs at the present time are looking sound and in a good condition, they were carefully packed in moss and linen cloth, and are constantly kept damp and at a temperature of 33 degrees Fah. The embryo is now quite visible and I anticipate a successful hatch.

The new Hatchery.

The burning of the Dee Side hatchery on the 6th of August last is greatly to be deplored, particularly as it is well known to be the work of incendiarism. Nearly all the plant of every description was stored in the building at the time and was also destroyed. Therefore the new hatchery which is now being built, including the equipment, will necessitate a large expenditure of money, which otherwise would not have been necessary but for the burning of the Dee Side house.

The present new hatchery is situated at Flat Lands, N.B., some twenty miles lower down the river from the site of the old one at Dee Side.

The selection of the present site was a very wise one, as it offers every facility for the transportation of eggs and fry, both by rail and water and is quite adjacent to the retaining pond at Tide Head, and will admit of public inspection at all times. A dam of 115 feet long, by 10 high, has already been constructed on the beautiful spring water brook, which will be used as a reservoir and water supply, the large gravelly pond in connection can be utilized for sea trout, and for retaining a number of young salmon until three years old, also smelt can be retained and utilized for food for the salmon fry. On the whole the new hatchery will be the most complete of any in the Dominion, and will offer every facility for the hatching and rearing of large numbers of salmon and trout fry, and if judiciously operated will certainly prove a great factor in regulating and keeping up supplies of fish in this locality. The building will not be entirely completed before next spring but all facilities for the reception and hatching of the eggs will be completed soon, and with your permission it is my intention to equip a portion of the hatching room with galvanized iron tanks so that a large number of the fry may be fed and retained for six months.

General Remarks.

You will notice by the schedule comparing the catches of fish for the pond in 1898 and 1899, the nets took 50 per cent more fish in 1898; this difference cannot be attributed so much to the scarcity of the fish as it is due to natural causes. The first run of salmon passed into the river early in May, and escaped both nets and anglers, and about the time the fish were expected to come, from June 1 to June 10, they were almost nil, consequently poor catches for both netters and anglers and when the best run of fish did enter the river the water had become so clear, the nets so foul, that fish could not be caught.

I will now give a few of the anglers scores made in July, which I believe to be authentic and furnish the best evidence that the rivers were well stocked with fish.

Three rods at Camp Harmony caught twenty-four salmon and twenty grilse in one week. The lessees of the Upsalquitch River killed some eighty fish in eight days fishing. Mr. Dawson's waters gave between forty and fifty fish, and H. B. Holland's waters eighty or ninety salmon. I heard of one man at Kedgwick taking nineteen grilse in one day. I myself at Kedgwick, about August 1, took twenty-four salmon and grilse in a few days. I heard of two gentlemen taking twenty-two salmon at Patapedia during last three days of the fishing season; this was remarkable fishing as it is often difficult to entice salmon to rise to the fly so late in the season, and is the strongest evidence that fish were very plentiful. I have talked with many of the guardians and scowmen, who were unanimous in stating that the salmon were never more plentiful on the spawning grounds of the rivers than this fall. In all my thirty years' experience in the fishery I never knew the grilse to enter the rivers so early

and so plentiful as this season. This is one of the best indications for the healthy condition of the river, and naturally must cause an immense run of adult salmon in the rivers in 1900 or 1901. I heard of a great deal of illegal fishing being done on the heads of the rivers. The provincial guardian at Kedgwick gathered a number of dynamite sticks, which were intended for use by parties of poachers from Madawaska County. The Upsalquitch River is not sufficiently guarded by the lessees. I heard of large numbers of poached salmon being taken there in a few hours.

It would be a great advantage were a capable officer appointed by your department to work in conjunction with the provincial and club guardians, with power to patrol that section from Dalhousie to the heads of the various rivers and see that the law is strictly enforced. This would certainly be the most effective way of conserving one of the most valuable salmon fisheries in the world.

I am, sir,

Your obedient servant,

ALEXANDER MOWAT.

6. TADOUSSAC HATCHERY, QUEBEC.

TADOUSSAC, December 9, 1899.

To Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of operations in connection with the Tadoussac hatchery for the year 1899. During the month of June I turned out 2,125,000 salmon fry in the rivers tributaries to the Saguenay River and a part in the Mowat's Lakes which is kept as a nursery for the young salmon. The following schedule will show the places where the fry were distributed:

Roberval Hatchery, H. J. Beemer, Esq	100,000
Ste. Anne River, Cousul Van Bruyssel	30,000
Murray River, County Charlevoix	150,000
River à Mars, County Chicoutimi	200,000
Tableau River "	100,000
St. John River, "	100,000
Ste. Marguerite River, County Saguenay	500,000
Baude River, "	300,000
Chisholm River "	200,000
Mowat's Lakes "	420,000
Hatchery Lake "	25,000
	2,125,000

As usual the distribution in the rivers of the Upper Saguenay was made with the assistance of the steam yacht *Forrest*. One lot of 100,000 were delivered at the Roberval hatchery; all the expenses paid by H. J. Beemer, Esq., the proprietor of the Roberval hatchery. I have also delivered to the same hatchery about 30,000 salmon-ouananiche fry, being the product of salmon eggs impregnated with the milt of male ouananiche. That lot of eggs was cared for by myself during last winter at the Tadoussac hatchery and the fry delivered in June at the Roberval hatchery in the very best condition, and to prevent any delay, a special train was waiting for the transport of cars from Chicoutimi to Roberval. As the pulling down of the old hatchery had made a large opening in the salmon pond, I have arranged a temporary means of closing the salmon pond by a fence of boards for the bottom and a wire net for the upper part. We have collected from the 200 female salmon kept

in the pond 2,000,000 of eggs now on the trays and looking well. The repairs made in October to the dams of the Hatchery Lake, had a good effect and the water has been rising since, and we have now a large supply for the hatchery. The damages to the building reported last season and detailed in official communications to the department, have also been repaired; nothing but heavy cedar has been used for the cross beams in the cellar, and a sill of cedar also has been placed under the walls all around the building, making of the whole a first-class work. We had to renew the greatest part of the floor as it was all rotten. I have also used cedar deals for the parts of the floor the most exposed to dampness, especially under the long eighty feet tank. A new porch has been made to replace the one carried away by a gale of north-west wind last winter. All the windows exposed to the north-west side are provided with wooden shutters for the night and for the stormy days. I consider the building is in good order for a good many years to come. The first thing wanted for another season, will be some more trays to replace the old wire ones still in use for a certain quantity of eggs. As mentioned in my report of last year, twenty-five large tin cans will be needed for the next distribution. Those cans could be made here during the winter. As we had had for a good many years past, no difficulty in preserving our supply of parent salmon for the Tadoussac hatchery, I would suggest, to meet the views of the Ste. Marguerite Salmon Club, and to allow the salmon to run up the Saguenay River more freely, to keep our Point Rouge fishery opened Sunday and Monday during the months of May and June, and Saturday, Sunday and Monday during the month of July. As it has been reported before at length, it would be advisable to plant a part of the salmon fry for the Ste. Marguerite River at the head waters; this could be done by landing our cans at Pelletier's Cove in the Upper Saguenay, and then, by overland, to Ste. Marguerite River, a distance of seven miles and a half, in making a rough road. During the summer I had the visit of Mr. Blackie, a gentleman from Toronto, with a letter of introduction from the Honourable the Minister of Marine and Fisheries. As I was anxious to show this gentleman some specimen of our young salmon, I invited him to drive down to the Mowat's Lakes for a day's fishing. Mr. Blackie took twenty-four fine young salmon, very gamy fish. He was delighted with his fishing. In my annual report of last year I spoke of the necessity of stocking those lakes with smelts to be used as a food for the young salmon. I recommend the same thing again this year. The cost of seining the smelts at Duck River, of taking the lattice boats to Tadoussac, and then the carrying the smelts, in our large distribution cans, to the Mowat's Lakes, will not exceed an expense of fifty dollars. In taking the smelts in October there would be considerable advantage, and in due course they would, no doubt, spawn in the lakes. The dam of the salmon pond will need repairing early next spring in time to receive the new supply of parent salmon for the season 1900. The temporary closing of the pond by a fence of boards and wire nets is not quite safe.

I have the honour to be, sir,

Your obedient servant,

L. N. CATELLIER.

7. MAGOG HATCHERY, QUEBEC.

MAGOG, QUE., November 23, 1899.

To Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries.
Ottawa.

SIR,—The following report of the operations carried on at the Magog fish hatchery, during the current year, is respectfully submitted.

On February 28 I received at Magog railway station from Mr. Wm. Parker, 3,000,000 whitefish eggs from Sandwich, Ontario, and 150,000 salmon-trout eggs

from Newcastle, Ontario; they all arrived in very good condition, and continued to do well through the period of incubation. The hatchery was in first class condition last season, with a plentiful supply of excellent water.

The distribution of young fry from this hatchery commenced on May 4 and continued until June 8, in the lakes herein named.

Salmon-trout.

Nicolet Lake, County of Richmond	25,000
Lake Fortin, County of Beauce	23,000
Spider Lake, County of Beauce	20,000
Lake Memphremagog, County of Brome and Stanstead	30,000
Lake Massawippi, County of Stanstead	10,000
Lake Nick, County of Brome	5,000
Trouser Lake, County of Brome	10,000
Orford Mountain Pond, County of Brome and Sherbrooke	5,000
Brome Lake, County of Brome	10,000
Lake Lyster, County of Stanstead	10,000
Total	148,000

Whitefish.

Lake Memphremagog, County of Brome and Stanstead	1,225,000
Lake Massawippi, County of Stanstead	400,000
Orford Lake, County of Brome and Sherbrooke	500,000
Lake Megantic, County of Megantic	200,000
Brome Lake, County of Brome	225,000
Key Pond, County of Sherbrooke	200,000
Nicolet Lake, County of Beauce	100,000
Lake Fortin, County of Beauce	100,000
Total	2,950,000
Total number of fry distributed	3,100,000

The fry were invariably planted in a sound healthy condition, and on the same waters as selected in former years, and in sections of the lakes where observation showed to be the best adapted for the purpose of planting young fry. I was unable to more than quarter fill applications for fry from the hatchery this season; and in my opinion there will be a still greater number of applications next year. It is hardly necessary to add that there could not be any better evidence of the good work done by the hatchery, than is shown by the increase in the number of applications from year to year.

Repairs.

After the distribution of fry was completed, the hatchery was cleaned and dried, all appliances put in good working order. The hatching troughs and trays were also thoroughly varnished. Later on the whole building was shingled as the old roof had completely rotted away. Within the last two weeks I notice that there is a serious leak at the bottom of the penstock. I will have to take up a part of the floor and see what is the matter. I am afraid it is rotted out as it is constructed of wood.

In all other particulars the outfit of the hatchery is in good working order.

I have the honour to remain, sir,

Your obedient servant,

ALEX. FINLAYSON,
Officer in charge.

8. NEWCASTLE HATCHERY, ONTARIO.

NEWCASTLE, December 5, 1899.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit a report of the fish cultural operations carried on at this hatchery during the past year.

The following schedule will show you the points of distribution, also the numbers and kinds of fry distributed and placed in each locality last spring.

Whitefish.

Lake Ontario, Hamilton	300,000
" Toronto	300,000
" Cobourg	300,000
Bay Quinte, Pictou	300,000
" Belleville	300,000
Lake Ontario, Consecon	300,000
Lake Simcoe, Barrie	300,000
Lake Couchiching, Orillia	300,000
Georgian Bay, Meaford	300,000
Lake Ontario, Bowmanville	125,000
" Newcastle	125,000
Total distribution whitefish	2,950,000

Salmon-trout.

Lake Ontario, Toronto	100,000
" Belleville	100,000
" Kingston	100,000
" Cobourg	50,000
Georgian Bay, Collingwood	100,000
" Meaford	100,000
" Wiarton	150,000
Lake Ontario, Consecon	50,000
Lakes, Haliburton	50,000
" North Hastings Co	200,000
" Northumberland Co	100,000
Total distribution salmon-trout	1,100,000
" whitefish	2,950,000
Eyed eggs shipped to Ottawa	1,500,000
" " Magog, P.Q	150,000
" " Grand Falls, N.B	250,000
Total distribution from Newcastle	5,950,000

I beg to inform you that the fry were all in first class condition and deposited in the different waters.

On January 4 last we had the misfortune of having our water supply cut off, through the dam giving away which necessitated the pumping of water from the stream night and day for ten days. Of this had not occurred we would have had a larger number of fry for distribution. Fortunately, through persistent effort, we came off with not more than a quarter loss.

According to your instructions on September 25, I proceeded to Wiarton with two assistants to procure the usual supply of salmon-trout ova for Newcastle, Ottawa

and other hatcheries in the lower provinces. We succeeded in getting our nets set about October 20 and at our first raising we secured about 120 trays of eggs in first class condition. The weather through the whole season was all that could be desired and our troubles were few. We wound up our operations this season about ten days earlier than last on account of getting an earlier start, during which time we succeeded in collecting about 4,500,000, out of which quantity Mr. John Walker of the Ottawa hatchery received 1,500,000, which leaves a balance of 3,000,000 in this hatchery in good condition and apparently doing well.

According to reports of fishermen and what I have seen myself at Wiarton fish are more plentiful this year than they have been for many years.

Our plant in Wiarton is now in good condition all and except our pile driver which is about 20 years old. We spent some $24 in repairing it this year but owing to the rottenness of the frame it is hardly possible to depend on its being serviceable for more than another season. The probable cost of a new one would be about $100.

The hatchery now is in first class condition. During the past summer it has been thoroughly renovated and painted inside and will not require any more repairs for some time.

I have the honour to be, sir,

Your obedient servant.

WM. ARMSTRONG,
Officer in charge.

9. SANDWICH HATCHERY, ONTARIO.

SANDWICH, December 30, 1899.

To Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—It is with extreme pleasure that I submit my annual report for the past year.

According to last year's report this hatchery contained 100,000,000 whitefish eggs, from which were turned out 88,000,000 young fry and semi hatched eggs, which were disposed of as follows:—

Eyed eggs.

Newcastle, Ont	3,000,000
Ottawa, Ont	3,000,000
Magog, Que	3,000,000
Bedford, N.S	3,000,000
St. John, N.B	3,000,000
Total	15,000,000

Young fry.

Point Edward, Lake Huron	4,000,000
Mitchell's Bay, Lake St. Clair	3,000,000
Peach Island, Lake St. Clair	3,000,000
Belle Isle, Detroit River	3,000,000
Fighting Island, Detroit River	4,000,000
In Bay below Fighting Island	4,000,000

Stony Island, Detroit Island	4,000,000
Bois Blanc Island, Detroit River	6,000,000
In Lake below Bois Blanc Island	4,000,000
Pigeon Bay, Lake Erie	4,000,000
Bar Point, Lake Erie	4,000,000
Colchester, Lake Erie	3,000,000
Kingsville, Lake Erie	1,000,000
Leamington Lake Erie	1,000,000
Rond Eau, Lake Erie	1,000,000
Port Stanley, Lake Erie	1,000,000
Hamilton, Lake Ontario	1,000,000
Niagara, Lake Ontario	1,000,000
Toronto, Lake Ontario	1,000,000
In river at hatchery	20,000,000
Grand total	88,000,000

All the above fry were placed in the water at the above named points in an excellent condition.

This fall we have in the hatching 100,000,000 whitefish eggs which are in a fine condition.

The total catch of fish this autumn was accounted for as follows:—

Liberated	14,500
Sold	2,500
Salted	160
Lost	100
Used	60
Hotel Dieu (hospital)	30
Total	17,350

The following are copies of a couple of letters forwarded to me from two of the best known and oldest French pioneer settlers and fishermen of Essex County. These letters contain some very valuable information in regard to the practical results which are being accomplished by the hatchery here.

SANDWICH WEST, December 26, 1899.

WM. PARKER, Esq.,
Supt. Sandwich Hatchery.

DEAR SIR,—I had occasion during the fall to visit some of the fishing stations worked by your men for the purpose of gathering spawn for the hatchery, and I must say that I came away more convinced than ever of the great usefulness of that institution. There is no doubt about it, the supply of whitefish in the Detroit River is increasing steadily year by year, and it is equally certain that the increase is due to the hatchery. It may seem strange to assert that artificial means can improve upon nature, and that the spawn extracted from a female whitefish and hatched by artificial means ensures better success than the same spawn would if left to its natural destination; and yet, such is the case. It is not that nature is at fault, but the condition of things has so changed, that what nature could do in the past, is now almost impossible owing to the many obstacles it has to overcome now, which it did not have then. The spawn of whitefish is exposed to so many dangers, taking as it does over five months before it is hatched, and the young fry having to fight its way down to the lakes amidst so many enemies, that it would almost be a wonder if any ever escaped. Of course, years ago, there was so much fish that, notwithstanding the vast amount of spawn destroyed, the supply could always balance the loss. With the spawn hatched in the hatchery it is different. The eggs are

brought there safely and manipulated so carefully, that a very small amount is lost, perhaps 12 per cent, and then, the young fry, when hatched, instead of being abandoned to shift for itself until it reaches the lake, is transported there and deposited in places where it is comparatively free from harm. There is another important advantage in artificial hatching, I have seen whitefish spawning; have observed them hundreds of times. The male and the female come up from the bottom to the surface side by side, and just as they turn to go down again the female emits her spawn in a spray perhaps three feet in diameter, which then sinks to the bottom. Now, sir, do you think that all those eggs are impregnated? My opinion is that a lot of them are not. With the hatchery, however, it is different. The spawn is gathered in vessels and put in contact with the milt for such a length of time as to insure impregnation of all the eggs, so that very few are lost.

The fish caught in the river this year was small, averaging about two pounds. No doubt this is hatchery fish, for the older fish is, by this time, pretty well destroyed. As I had occasion to remark to you before, no whitefish comes back to the river except when it is old enough to spawn. Prior to that, it remains in the lakes; and now, I suppose this fish is coming for the first time or so, and the quantity caught is increasing steadily. The hauls made this year, your men told me, were from 30 to 140, and I know that you could have caught far more fish than you needed for the hatchery. It is not very long ago that you had to fish the whole season and that you barely caught the number you needed.

Hoping that the one hundred million eggs now in process of hatching, will reach maturity, and that the hatchery under your management will keep on in its successful career, and soon be enlarged.

I remain,
Yours truly,

RICHARD GIGNAC.

PETITE COTE, ONT., December 27, 1899.

WM. PARKER, Esq.,
Supt. Sandwich Fish Hatchery.

DEAR SIR,—In regard to the good work being accomplished by the Sandwich fish hatchery in the rivers and lakes in this part of the Dominion I have no hesitation in giving it as my firm opinion that for the last past two years there has been a wonderful increase of whitefish in the Detroit River, and I believe that had fishermen fished this year after the manner in which they fished some thirty or forty years ago, there would have been almost as large a catch as there was then. Therefore, I believe that this hatchery, as well as others maintained in other parts of the Dominion by our Government, are doing a most excellent work.

I desire also to state that in my opinion the pound nets which are allowed to be used to a large extent in Lake Erie are a source of great injury to the whitefish in the Detroit River.

I hope and trust that the Government will see its way clear to very largely extend the usefulness of the hatchery here under your careful management.

I remain very respecfully,

LOUIS LAFFERTY.

There are some very necessary repairs required about the hatchery, to which I feel it my duty to draw the attention of the department, namely: the foundation under the boilers, pumps, racks and tanks requires to be renewed; a new waste water pipe leading from the hatchery to the river is also required.

I remain,
Your obedient servant,

WILLIAM PARKER,
Fishery Officer.

10. OTTAWA HATCHERY, ONTARIO.

OTTAWA, November 1, 1899.

Prof. E. E. PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of the operations carried on in the Ottawa hatchery during the year 1899.

On November 20, 1898, were received from the Newcastle Ont., Hatchery, about 1,500,000 salmon-trout eggs which were deposited in the hatching troughs in good condition; also in March, 1899, I received about 3,000,000 whitefish eggs from the Sandwich hatchery. The eggs from both hatcheries were in excellent condition. The fry hatched out strong and healthy in the months of April and May, 1899.

The work of distributing the fry was entrusted as in the past three or four years to Mr. Andrew Halkett with the assistance of Mr. A. M. Ross, both officials in the Fisheries Department.

I am pleased to inform you that the work was done in a very satisfactory manner and even more successful than in the past years, Mr. Halkett having had several years' experience in the distribution of the fry. In order to secure a successful planting of the fry, as this is of principal importance in order to accomplish the best results after the work of incubation is over, I would strongly report in favour of Mr. Halkett and Mr. Ross being appointed again for the same work next spring.

The hatchery is in good order and repair for the coming season's work. I expect the usual supply of salmon-trout eggs during this month.

The Canadian Fisheries Exhibits and Hatchery have been visited by over 20,000 persons during the year.

The fry having been deposited in the following named waters:

Whitefish.

Bass Lake	300,000
Humphries Lake	150,000
Green Lake	150,000
Rock Lake	300,000
Rond Lake	300,000
Otter Lake	180,000
Sharbot Lake	300,000
Hurd Lake	180,000
Rideau Lake	300,000
Mississippi Lake	240,000
Total	2,400,000

Salmon-trout.

Rideau Lake	50,000
16 Island Lake	50,000
Joliette Lake, No. 7	50,000
Eagle Lake	20,000
Sharbot Lake	40,000
Long Lake	40,000
Rock Lake	100,000
Otter Lake	30,000
Bass Lake	30,000
Victoria Lake	100,000
Villa Mon Repos (Three Rivers)	50,000
Rond Lake	50,000

Clear Lake	80,000
Hurd Lake	40,000
Humphries Lake	30,000
Green Lake	30,000
Gauthier Lake (St. Jovite)	60,000
Domain Pond and Stream (Lotbinière)	100,000
Charleston Lake	100,000
Whitefish Lake (Gatineau)	60,000
Joliette	100,000
Des Sables Lake (Ste. Agathe)	30,000
Rivens Lake	60,000
Total	1,300,000

I remain, sir,

Your humble servant,

JOHN WALKER,
In charge of Ottawa Hatchery.

11. FRASER RIVER HATCHERY, BRITISH COLUMBIA.

NEW WESTMINSTER, B.C., December 13, 1899.

E. E. PRINCE, Esq.,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—With regard to the Fraser River hatchery I beg to report that of the total number of eggs 5,502,000 placed in the hatchery in October and November of last year, 4,742,000 were hatched out, 4,262,000 fry being taken to Harrison River and the balance, 480,000, to Lake Pitt.

760,000, nearly 14 per cent of the eggs turned out bad. This high percentage seems to have been mainly occasioned by the muddy condition of the water during a great part of the season. Mr. McNab, at that time inspector and officer in charge, had the dam which had become completely silted up, partially cleaned out and so far, this season, we have not had any trouble with mud.

As I have already stated in the usual report on the work of obtaining parent fish, we secured this season between the 17th September and 21st October 7,496,000 eggs in good condition. Up to date 503,000 bad eggs have been picked out and I see no reason to anticipate that our percentage of bad eggs at the close of the season will exceed ten: indeed I trust that it will turn out less than this.

The season has been very mild, the average temperature of the water to date having been since the first lot of eggs were placed in the troughs, 43°·8 as contrasted with a temperature of 39° during the corresponding period last season. The eggs have in consequence progressed very rapidly, quite a number being already on the point of hatching or hatched.

Yesterday in accordance with your instructions, I had 500,000 of the ova, carefully packed shipped on the SS. *Warrimoo*, consigned to the care of the Colonial Secretary, Sydney, N.S.W., for the New Zealand Government. The eggs were taken from the last consignment to the hatchery and as the steamer's officers have engaged to keep them well iced during the voyage, will, I hope, arrive at their destination in good condition.

The flume for conveying the water from the dam to the hatchery is nearly rotted out, but as I understand the department contemplate making some changes

I did not think it advisable to have it renewed, and succeeded in getting the present flume repaired and made water-tight at a small cost.

The wooden railway used for carrying the eggs to the hatchery from the river bank and taking back the fry is badly in need of renewal.

Our supply of shipping trays and baskets are also now pretty nearly worn out, and for the last two years we have had to hire or borrow boats for the work at the spawning grounds and conveying the ova to the steamer at Chilliwhack.

If the hatchery were removed to a site further up the river, say nearer to the present spawning grounds at Morris Creek (and I think more than one suitable site could be found there), it could be operated more effectively and conveniently and at a considerable reduction in the annual expense. I understand that when this hatchery was first started that it was the intention to hatch more than one kind of salmon, and in 1884 and for some seasons subsequently the spring salmon or Quinnat were hatched along with the valuable sockeye salmon. The hatching of spring salmon was discontinued, as the great commercial demand has been almost solely for sockeyes. Recently, however, the other kinds have come into demand both for canning and for curing in various ways. The cohoe, which is a most excellent fish, is now of much market value, while the steelhead and even the dog-salmon is being utilized, whereas both these kinds were formerly dumped back into the river, when taken in the fishermen's nets. This fall there was a desire on the part of certain firms for opportunity to take humpback salmon, and as there is evidently a growing desire to utilize every kind of Pacific salmon, even those which have hitherto been rejected as of little or no value, the question arises as to whether in future operations of the hatchery other species should not be procured and hatched in the Government establishment.

As supplementary to the work of the hatchery I would ask if the department would take into consideration the advisability of making some moderate provision for the protection of the natural spawning beds. Morris Creek, where we now get the spawn, and which may be taken as a type of the spawning creek preferred by the sockeye, is a rapid stream running through a wooded bottom with a gravelly subsoil. The banks being very friable and heavy rains common during the spawning season, the regular bed of the creek frequently gets blocked by accumulations of drift, the water cutting fresh channels in which many of the salmon spawn, the ova being left dry on the subsidence of the freshet and the return of the creek to its original bed.

I have the honour to be, sir,

Your obedient servant,

C. B. SWORD,
Officer in charge.

12. SELKIRK HATCHERY, MANITOBA.

SELKIRK, December 31, 1899.

To Prof. E. E. PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit herewith a report of the operations at the hatchery at this place during the year 1899.

At the date of my last report we had in stock about thirty millions of whitefish eggs in splendid condition and promising very good results; the season was also favorable, inasmuch as the weather was steady and seasonable, without any marked variations of temperature. But owing to imperfect hatching jars, and being com-

pelled on account of the muddy condition of the Red River water to complete the hatching with water from the artesian well we did not succeed in bringing out more than two-thirds or twenty millions of healthy fry.

The question of suitable jars has been under consideration for some time, and it would be a great advantage if the hatchery were supplied with the regulation white-fish jar. I am satisfied our output would have been about 90 per cent of the eggs taken in, and it is safe to say that the jars would have paid for themselves twice over in result during the past two seasons.

As to the disposition of fry. I had two requisitions sent from your office, one from Mr. Fitzgerald, of Grenfel, N.W.T., and another from Mr. Powers, of Elkhorn, Manitoba, both of which I had determined to fill. When the fry were ready for transport I sent a telegram to each of the gentlemen named, and waited a full week for reply, receiving no answer; and the river here being open for quite a distance out into the lake, I decided to plant the whole output as far out in Lake Winnipeg as the ice would permit. This was accordingly done by Mr. Charles E. Page assisted by Mr. J. W. Ward, who report a very successful planting several miles from the mouth of the river in the direction of Grand Marais.

My decision regarding the disposition of the fry was rendered necessary from the fact that the tank in which the fry was held is supplied with water from the artesian well, which is entirely void of fish food and heavily charged with mineral of some sort, and as the food sack was being rapidly absorbed I could not hold them any longer, and have them in vigorous condition for planting.

On receiving instructions late in September last to procure supply of ova, I at once proceeded to make arrangements similar to those of last season. I left here on Friday, 6th October, for Lake Winnipegosis, and by the 14th had boats, nets and everything else ready for a start up the lake. I decided to go to the north end of the lake, where I found a harbour known as Whiskey Jack Harbour, the most favourable place I have yet seen for our purpose. Fish were there in abundance but not quite ready, by the 18th they began to spawn freely, and by the 22nd we had all the eggs we could handle, in fact, we had more than our trays would accommodate, and I put about one million of well fertilized eggs back into the lake. I arrived at home with my stock of ova on the night of the 25th, and found the hatchery in readiness to start operations, and also found that I had more eggs than the jars would accommodate. After overloading every jar in the building, we were compelled to dump about half a case in the Red River. I estimate seventy-five millions in the jars at starting, and though we started out with bright prospects I regret to say we have not met with the same measure of success as we did last year, owing to the extraordinary season we are experiencing here this winter. The river remaining open for such a length of time, subject to the action of the high winds, the mud we had to contend with was indescribable. This with the higher temperature and overloaded condition of the jars caused considerable banking, consequently we have had double the eggs affected with fungus we had last season. I now see that it would have been wise to put on some extra help for a time, but, nevertheless, if no accident overtakes us between now and the close, our output will be the largest in the history of the institution.

The hatchery building is not in a satisfactory condition; the floor became unsafe a few days after the operations began this year, and is now blocked up with timbers and blocks to enable us to complete this season's work. The foundation is made of 6 x 8 spruce, which if now seven years old and so badly decayed that an entirely new foundation will be absolutely necessary before the building can be used another year. The paint on the building could not have been properly applied when put on in the first instance, as it has now nearly all peeled off, and does not look well. I would certainly suggest that the building receive a good coat of paint the coming season.

The boiler was retubed in October, and is now in first class condition, nearly as good as new, and effects quite a saving in fuel.

The pump, although in poor condition on account of gravel sucked up through the supply pipe, is still working, and we hope will continue to do so until the end of the season; but it is a great risk, as has been previously pointed out to depend on

one boiler and pump to operate continuously, night and day for over 200 days without accident, and I would suggest that the institution be furnished with both an auxiliary pump and boiler before undertaking the work of another season.

The suction pipe was a source of annoyance again this year, and a steam tug had to be employed to find it, and dig the sand and gravel from off the mouth of it. I suggested last year that it should be extended several feet out into the river, the cost of doing so would be more than saved, in the repairs to, and tear and wear of the pump.

The tank which has caused so much trouble other seasons by leaking, and which is in a very unsafe condition, has been much tighter this year than last, but will not I fear, stand caulking again, and should be replaced the coming season with a circular iron bound one.

The premises on three sides are not properly fenced in as they should be, and the evergreen trees and hedges planted by my predecessor to beautify the grounds are daily being destroyed by cattle, horses, running at large which have access to the grounds. There is a dilapidated barbed wire fence on the west side along the street, but it is in such a condition that it has become a menace to all passers by and especially to children, and should be removed at once, and replaced by a less dangerous one.

In the matter of fuel for this season, when I found the price of wood advanced to $3.50 per cord, I ventured to recommend slabs instead, and I think the ultimate results will justify me in so doing, and effect a saving of about $200.

As to the benefits to accrue from the establishing of hatcheries for the restocking of depleted waters I had always been somewhat sceptical. During the past year I have made diligent inquiry from many of the settlers along the lake, particularly the southern part, and nearly all agree that hatcheries are beneficial, and that this one is serving the purpose for which it was intended I am now also convinced, from actual observation that a good percentage of the small fry escape the ravages of the voracious fish which infest these waters, and become in course of time parent fish. In my opinion this hatchery alone is inadequate to restore so large a body of water as Lake Winnipeg, and would recommend the construction of another, either at Pine Falls on Winnipeg River, or at Hole River where there is also a natural fall of water very superior in quality to that of Red River.

At either of these places a building could be erected and equipped with larger capacity than this one, for half the money that this cost; then the maintenance would be small indeed compared with this.

Having an unlimited supply of the best water no steam boiler or pump would be required, nor would so large an expenditure for fuel be necessary every year. You would not require an expensive engineer, a night fireman, or barrels of cylinder oil, coal oil, tools and sundry other things necessary where steam has to be employed, and again you would be right on the lake where the ova are obtainable, and the fry is to be planted and virtually take the one in at the front door and let the other go out the back.

I also consider it would be of great advantage, to both Lake Manitoba and Winnipegosis to have a small hatchery located near the mouth of some of the streams emptying there into; when one considers the immense value of our fisheries, and the importance of carefully guarding them, he cannot but be convinced that money spent in hatcheries is well spent, and bound to yield satisfactory returns.

The number of visitors is about the same as last year, the hatchery being now no 'New thing' for the people of the town and the immediate vicinity, hence our callers are limited to visitors from outside places during the winter season. If the hatchery operated during the picnic season we would have visitors in large numbers as I find almost every one takes a lively interest in fish culture, as soon as they know something of artificial propagation.

Respecting requests for fry,—I have had several, all from persons living in the vicinity of some small inland lake, and I have advised each one to make application direct to you, and their wants would receive consideration.

I have the honour to remain sir, your obedient servant,

F. W. COLCLEUGH, *Officer in charge.*

ANNEX A.

REPORT ON OYSTER CULTURE BY THE DEPARTMENT'S EXPERT FOR THE SEASON OF 1899.

OTTAWA, December 30, 1899.

To the Honourable
Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit to you my annual report for the past season.

During a portion of last year my time was taken up in cleaning an area of ground situated on the northern side of Reynolds' West Island in Murray River, P.E.I.; as this area was not finished on the closing of navigation, my time has been engaged with the aid of a small steamboat and crew, to remove the weed and eelgrass that was growing there, by using toothed frames of an oyster dredge, and by continually towing them over the ground the weed was torn out by the roots, the bottom became perfectly clean and was visible at a depth of ten feet from the surface. After this piece of ground was cleaned to my satisfaction I placed over fifteen hundred bags of gravel or beach stones on the western side of the bottom so as to form a foundation and make it firmer, this gravel was obtained along the shores of the different rivers in the locality, laying between low and high water mark; afterwards I laid a large quantity of oyster shells over the whole area, which were obtained during the previous winter from Murray River above McLure's dam by means of a mud digger. These shells were taken from dead oyster beds lying in fresh water on account of the dam being built across the river below where the beds existed and the shells were in a splendid state of preservation. One thousand loads of shell mud were obtained and after spreading this out to dry the shells were raked over and picked out, afterwards the mud was riddled and the small shells were also saved, so that not a shell was wasted; the shells were found to be in a much larger proportion than the mud. When the area was cleaned the shells were removed by means of scows, and towed down and spread evenly on the bottom. After finishing the above I was ready to stock the bed with young oysters and laid 84 barrels of small growing oysters averaging over 2,300 to the barrel from Richmond Bay, taken in the vicinity of Curtain Island. I was in hopes of laying a larger quantity but owing to the demand for marketable oysters being so great, and during the latter part of the season many of the oyster boats were smashed up by the heavy gales of wind which prevailed through the fall I had great difficulty to secure the number I did, as several parties agreed to collect small oysters for planting purposes but failed to do so and regret that a larger number were not laid, but those that were received were in excellent condition. The above work occupied a considerable portion of my time, and the other places on the island visited and examined by me were as follows:—

TRACADIE HARBOUR.

This is an extensive bay, oyster shells and dead beds covered over with mud and eelgrass were reported, and found to exist, although now of no value.

Between Queen's Point and Big Channel on the northside of the bay a large bed of dead oyster and clam shells were found lying in about 2 feet water and deepening steeply to 10 feet, these shells are bleached and are too hard for mud diggers to work upon. No life in the way of shellfish was discovered here.

On Big Bank, which is really a large flat of sand and eel grass extending from the shore to the south side of the northern channel, a few oysters are found scattered about but they are very scarce.

In McAulay's Cove, on the southern side of Queen's Point, three small patches were found lying in about 7 feet water and about 20 feet long, consisting of a shelly soil with a few growing oysters but not amounting to anything of importance.

Off McDonald's wharf at the head of the bay oysters were reported to have been caught last fall, but upon examination it was found to have been dug up during the winter by mud diggers, and nothing but a small patch was left. I only got one oyster there.

Off Kelly's Point at the entrance of Winter River an area of dead shells were found amongst soft soil which has been worked upon by mud diggers and is of no available use for any other purpose.

In Winter River above the bridge the ground has been cut up with mud diggers, the bottom consists of soft black mud with small mussels growing over the area. At the bridge I noticed several starfish clinging to the piles feeding on the mussels which were growing there. In McDougal's Cove there is a hard shelly bottom now covered with eelgrass, and has the appearance of an oyster bed which has grown to the level of the ice, as no live oysters are found and it is lying in about eighteen inches of water.

I also tried on various parts of the bay while sailing. and found some parts composed of hard sand covered with eelgrass while other parts consisted of soft mud. I do not see any ground here which I would recommend for preservation of the oyster industry or which could be utilized for the cultivation of the same.

SAVAGE HARBOUR.

Last season it was reported that an extensive oyster bed was found in this harbour, but from inquiries made it seems to have been exaggerated as far as the quantity caught was concerned. Oysters were found there and upon examination there is a firm area over which they fished, of roughly speaking, nine or ten acres, which consists of a firm sand and muddy bottom with some large and small stones, shells, and a number of mussels were found to be growing losely upon the area, the depth of water varied from about ten feet and gradually shoaled until it reached the shore. This area is situated at the southern part of the bay on the northern side of Canavoy Island.

Another smaller area similar to the above lies a little to the westward of the larger patch. Last winter the farmers made an effort to dig mud where the oysters were found, but were prevented by the fishery warden until an examination could be made. Mud digging has been carried on in McIntyre's Creek and at the head of the bay, and I consider they should remain there. An imaginary line drawn from the western part of Canavoy Island to eastern line fence of Samuel Coffin, is a good mark, to keep the mud diggers on the western side of line and the fishing on eastern side. This is a sandy soil and practically useless as a fertilizer, and it might be spoilt by the farmers if they were allowed access to it. On the other hand, I believe the above area could be cultivated successfully if an attempt were made.

MORELL RIVER.

The edges of the channel of this river are steep and for ages oysters have clung and grown to the sides forming long narrow ridges and small beds in the bends of the river until the shells were found to exist to quite a depth. Of late years the farmers have dug most of these beds up, leaving small patches of shell not larger than the width of a row-boat, the bottom is now very uneven and in most places the holes caused by the diggers have become filled in with very soft mud. Very few oysters are found on these disjointed patches The oysters have grown to a large size which shows there is but little fishing carried on, and that the area is very

limited. Below the railway bridge at the mouth of the river the water is very shallow and can be waded across at low water time. The bottom consists of an extensive bed of mussels partially covered with eelgrass where oysters of various sizes may be found, most of them being small; they are of a quick growth owing to the strong current and shallow water, but are not in any large quantities, and are of little commercial value.

MIDGELL RIVER.

This like Morell, has been destroyed by the diggers and there is not a bed in either river which has escaped their notice. There is no available area large enough or fit to cultivate or protect, and several of these so-called beds are covered over with mud, it being at times almost impossible to obtain any shells from them at all. Sometimes a person will be enabled to catch a few oysters for his own use but they do not amount to any quantity. Persons will talk of what they could catch fifteen or twenty years ago, and are under the impression the same can be done to-day. Mud digging is carried on in St. Peter's Bay but no oyster fishing or live beds seem to be reported there. I cannot see that any further action is necessary as far as protection is concerned in either of the above rivers, beyond the ordinary oyster regulations.

FORTUNE RIVER.

My attention was called to examine the condition of this river and to reserve a certain area for farmers to dig their mud. Also to inspect a piece of ground which has been applied for to lease, and to protect the area from being destroyed by mud digging. This area is located on a sandy and muddy soil, having been dug up years ago by mud diggers and is now covered nearly all over with mussels. The gentlemen who applied for this area have planted a small quantity of oysters at their own risk as an experiment, hoping to be able to lease the area. The bottom of this river, suitable for cultivation, is very limited, and I do not consider it should be destroyed, so I have arranged the following boundaries:—Mud digging should not be allowed on the river below the line road dividing Lot 56 and Lot 43 on the north side of Fortune River, nor above McKay's wharf, which is just below the bridge, as the most valuable part of the river bed lies between these two boundary lines, while good mud digging can be obtained above this area to satisfy the wants of the farmers.

The fishery officer would have liked me to have examined Souris River, as he stated oysters were found there, but, owing to the lateness of the season, time would not permit me doing so.

BEDEQUE BAY.

For years past, farmers have been destroying the oyster beds in Bedeque Bay and Wilmot Creek until the fishing area has become very limited, and to save the beds from utter extinction the boundaries have been laid out as follows:—Commencing with a straight line running in a southerly direction from the eastern range light (on George Stafford's farm) to McDonald's Point; this is the western boundary of the oyster area until it crosses the southern boundary line, which lays in a west-north-westerly direction from a marked tree (K) on Wilmot Point to the southern extremity of Government wharf, the north side of this line to the point where it crosses the western boundary line to be reserved for oyster fishing and the rest of the bay may be used by the farmers. The land on the north and south sides of Wilmot Creek to be the boundaries for oyster fishing until the eastern line is reached, which runs in a southerly direction from the line fence of George Price and Robert Stafford's farms on the north side of the creek to William Schurman's road open to the shore (on the south side of the creek) about 150 yards to the westward of Schurman's wharf. Mud digging may be carried on to the east of this line, reserving the side to the westward for oyster fishing.

This area reserved for oyster fishing should be satisfactory to all parties, as the farmers will know exactly where they can dig mud without injury to the oyster beds, as the oysters taken from here are very valuble to the fishermen and are reported to be improving in quantity. Instructions have been given to the inspector of fisheries to have the above boundary lines marked by bushes when the ice has formed, and to see that no person encroaches on the area with their mud diggers.

PROTECTION OF OYSTERS.

The demand for oysters is becoming greater each year, and is now far greater than the supply. This will eventually lead to the depletion of our public beds unless stringent measures are adopted to preserve them. The fisherman knowing there is a ready sale for his catch is naturally careless as to the size limit, and while oysters are becoming each year of greater value, more men will engage themselves in the industry, consequently at the end of each season there are less parent oysters left on the ground for breeding purposes and a larger number of small ones taken and while the demand continues the size and quantity of oysters will be gradually lessened. To counteract this evil I would strongly advise the department to have the fishing areas divided into two sections so as to fish one section alternately each year; also to restrict the size limit, to 3 inches only whether the oysters are round or long, as many fishermen will argue the point and call a long oyster a round one, and to remedy this, would be to change clause 6 of the oyster regulations which reads as follows:—'No persons shall fish for, catch, kill, buy, sell or have in possession any round oysters of a less size than two inches diameter of shell, or any long oysters measuring less than three inches of outer shell'. It would be in the interests of the oyster industry for this clause to be changed so as to read as follows:—No person shall fish for, catch, kill, buy or sell any oysters measuring less than three inches of outer shell; when measured the above size is found to be quite small enough to be taken from the beds for marketable purposes.

LEASED AREAS.

Another method of establishing and maintaining the supply is for persons interested in the industry to have a certain area under their own control for cultivating and planting purposes, it would also be of great value to wholesale buyers and packers to hold a plot of ground where they would place their small culls, also when a glut is on the market (as often happens during a spell of mild and fine weather) they would be able to hold their stock and meet the demands of the market as they are required.

Again, when bad weather approaches and oysters are scarce, a person having a stock on his own reserve will often find means to take them up and secure a higher price. Persons having areas under cultivation would naturally wish to send the largest and best selected oysters to market thereby obtaining a higher price for them, and, especially if sold by measure, they would return the small ones to the beds where they would develop into full-grown ones if left until probably the following season.

Another point to be looked at in granting areas to persons cultivating oysters in different parts of the provinces, is the distribution of the oyster spat during the spatting season. This is where man has no control; he may by his own efforts secure a large quantity, but natural beds may receive a large share, or the spat may spread over a large area of ground forming new beds if it is suitably adapted to receive it.

Some persons well state that those holding private areas will obtain a monopoly over the trade, but when it is seen that large quantities of American oysters are sold in Canadian cities it shows there is still room for more oysters from our own beds if we could supply them. And if the supply was increased to any great extent our merchants might compete with foreign markets for which there is always an outlet. But while prices increase and oysters are becoming scarcer it is only right to protect

them from extinction, and any person studying and cultivating oysters would also find it a very profitable industry.

FISHING SEASON.

The present fishing season commences on September 16 and remains open until closed by the ice forming over the beds, there being an Order in Council in force that:—'Fishing for oysters or any shell fish through the ice is prohibited.' On an average the ice forms the early part of December, which gives about 10 or 11 weeks fall fishing, and opens up again about the latter part of April when most of the men are engaged in lobster fishing consequently it is carried on in the spring in a much smaller way until the 31st day of May when the close season begins. These dates I am of opinion are well arranged and do not see any necessity for a change, as shortening the season will have no material effect on the oysters, the fishing would be prosecuted with the utmost vigour while it lasted, and it is clear to every one that a large number of fishermen working upon a bed for a short season, will do as much damage, or perhaps more, than a lesser number working for a longer time. It is also noticed than when the season first opens, there are men fishing from all parts, but as the season advances, the weather becoming colder and more boisterous, and oysters more difficult to obtain, many of them leave the beds and only the regular oyster fishermen stick to their work until compelled to leave on account of frost setting in.

A very extensive report on oyster culture is found in the thirty-first annual report of the Department of Marine and Fisheries (Fisheries part) for 1898, page 259, in which every subject is fully dealt with, and it is not necessary for me to repeat any of the details there given, in this present report.

I have the honour to be, sir,
Your obedient servant,

ERNEST KEMP,
Oyster Expert.

SESSIONAL PAPER No. 11a

APPENDIX No. 12.

REPORT OF THE FISHERIES PROTECTION SERVICE OF CANADA, BY COMMANDER O. G. V. SPAIN.

OTTAWA, December 30, 1899.

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

SIR,—I have the honour to report on the work performed by the Fisheries Protection Service of Canada, under my command, during the past season.

The vessels forming the fleet were:—

Acadia, Commander O. G. V. Spain.
Curlew, Captain J. H. Pratt.
Constance, Captain George May.
La Canadienne, Commander W. Wakeham.
Petrel, Captain E. Dunn.
Kingfisher, Captain W. H. Kent.
Osprey, Captain C. T. Knowlton.
Quadra, Captain J. Walbran; this vessel was employed on occasions, when necessary, on the Pacific coast.

Since commencement of the season several changes have been made in the Government ships; two new vessels have been built, one in Scotland, the *Minto*, and the other in Prince Edward Island, the *Brant*. The dimensions, &c., of these two vessels will be found in another portion of the Marine and Fisheries Report, and the tug *Dolphin*, which has been used for some years in Georgian Bay, looking after the interests of our own fishermen, (which business is now principally taken over by the Provincial Government), has been sold.

The patrols of the various above named vessels were generally as follows:—

The *Acadia*, patrolling the coasts from Cape Sable Island, in Nova Scotia, to Cape Gaspé, in Quebec, and as usual, generally supervising the fleet. This vessel was refitted last year at a cost of some $10,000, and is now in good condition to do her work for some years to come. Her boilers and machinery are in very fair order considering their age. This satisfactory state of affairs is nearly entirely due to the careful and painstaking manner in which the chief engineer, Mr. D. M. A. Mooney, who has had charge of this department on board since she entered the Government service, has looked after her.

Curlew.—The patrol of this vessel has been the Bay of Fundy, south-east coast of Nova Scotia, and the Cape Breton coast, with one trip to the Miramichi in connection with the pilotage question. She is an effective and handy little ship, and has done excellent work in stopping illegal lobster fishing, protecting the three mile limit, collecting bounty claims, &c.

Constance.—This vessel has again been used entirely in the revenue service. She has been painted white this season, which is supposed to make her less visible when on the watch for smugglers, than before, when painted black.

La Canadienne.—This vessel with Commander Wakeham in charge, has been working independently of the rest of the fleet, and mainly employed on the Quebec and Labrador coasts. A report of this officer's work will be found among the inspector's reports.

Petrel.—Employed on the great lakes protecting the boundary line, and looking after our fishermen's interests generally. This vessel has also been employed at intervals in placing and raising buoys in the vicinity of her fisheries work.

Kingfisher.—This schooner, as usual, was stationed at Souris, Prince Edward Island, for the first part of the season, but on the request of Captain Kent, I changed her headquarters to Georgetown later on. She has done good work in protecting the coast and stopping illegal lobster fishing. In the fall she was ordered to Sydney. Captain Kent was instructed to represent the Canadian service at Sydney Carnival, where a number of British and French men-of-war were assembled. Her crew won the "gig race," beating all comers, and I received a letter of thanks from the Mayor of Sydney for the great assistance the *Kingfisher* had been; she was provided later with a complete new outfit of sails. The captain was instructed that the build and material of these sails would be entirely left to him; up to the present time, I have had no opportunity of closely inspecting them myself.

Osprey.—The headquarters of this vessel were at Canso, and in the fall, at North Sydney. She has been principally engaged in stopping illegal lobster fishing.

General Lord William Seymour, commanding the forces in British North America, made a trip on board her in the spring, and was very much pleased with this smart schooner.

Captain Knowlton made a seizure at Canso in November, of United States fishing vessel *Flora L. Nickerson.* An account of this seizure will be reported later.

Quadra—This vessel has done valuable work on occasions when called upon, in British Columbia waters. Captain Walbran has been most careful in keeping me particularly well posted in reference to all the actions of foreign fishermen on our Pacific coast.

A report on the particular work of each individual captain, on the movements of the ship under his command, will be found herewith.

Three small tugs were again employed this year, in the suppression of illegal lobster fishing, which they managed to carry out successfully.

Florence C.—A chartered vessel under the command of First Officer Burns, of the *Curlew*, and manned by a crew from the same vessel. This tug's patrol was on the south-east coast of Nova Scotia.

Davies.—Owned by the department, under the charge of First Officer Graham, of the *Kingfisher*, and manned by a crew from the *Acadia*, was stationed in the Northumberland Straits and on the Cape Breton coasts.

Brant.—This is a new vessel belonging to the department, and when carrying on this particular work, was under the charge of Overseer Hobkirk, of Charlottetown. I am pleased to report that there was far less illegal fishing this year than ever before; and it was most satisfactory to myself and my officers, not to have so much of the disheartening work of destroying fishermen's valuable property, in the way of lobster traps, back-lines, &c.

It may be of interest to publish instructions given to the officer commanding the Fisheries Protection Service in 1886, and also issued to the different captains. Sir Louis H. Davies, the present Minister of Marine and Fisheries, instructed me to still continue the same regulations; they are as follows:—

INSTRUCTIONS TO COMMANDERS OF GOVERNMENT VESSELS ENGAGED IN THE PROTECTION OF THE INSHORE FISHERIES OF CANADA.

DEPARTMENT OF FISHERIES,

OTTAWA, March 16, 1886.

SIR,—In the performance of the special and important services to which you have been appointed you will be guided by the following confidential instructions.

For convenience of reference, these have been divided under the different headings, of *Powers, Jurisdiction, Duties, and General Directions.*

POWERS.

The powers with which you are invested, are derived from, and to be exercised in accordance with the following statutes, among others:—'The Fisheries Act' (31

Vic., cap. 60, of Canada); 'An Act respecting Fishing by Foreign Vessels' (31 Vic., cap. 61, of Canada), and the subsequent statute entitled: 'An Act to amend the Act respecting Fishing by Foreign Vessels,' made and passed the 12th May, 1870 (33 Vic., cap. 15, of Canada); also, 'An Act to further amend the said Act' (34 Vic., cap. 23, of Canada).

'Chapter 94 of the Revised Statutes (third series) of Nova Scotia' (of the 'Coast and Deep Sea Fisheries'), amended by the Act entitled: 'An Act to amend cap. 94 of the Revised Statutes of Nova Scotia' (29 Vic., cap. 35).

An Act passed by the Legislature of New Brunswick entitled: 'An Act relating to the Coast Fisheries, and for the prevention of Illicit Trade' (16 Vic., cap. 69).

Also an Act passed by the Legislature of Prince Edward Island (6 Vic., cap. 14) entitled: 'An Act relating to the Fisheries, and for the prevention of Illicit Trade in Prince Edward Island, and the coasts and harbours thereof.'

Also from such regulations as have been passed or may be passed by the Governor General in Council, or from instructions from the Department of Fisheries, under 'The Fisheries Act,' hereinbefore cited.

As fishery officer you have full authority to compel the observance of the requirements of the *Fisheries Acts* and regulations by foreign fishing vessels and fishermen in those parts of the coasts of Canada to which, by the Convention of 1818, they are admitted to privileges of taking or drying and curing fish concurrent with those enjoyed by British fishing vessels and fishermen.

You will receive instructions from the Customs Department authorizing you to act as an officer of the Customs, and in that capacity you are to see that the revenue laws and regulations are duly observed.

JURISDICTION.

Your jurisdiction with respect to any action you may take against foreign fishing vessels and citizens engaged in fishing is to be exercised only within the limits of 'three marine miles' of any of 'the coasts, bays, creeks or harbours,' of Canada.

With regard to the Magdalen Islands, although the liberty to land and to dry and cure fish there is not expressly given by the terms of the convention to United States fishermen, it is not at present intended to exclude them from these islands.

DUTIES.

It will be your duty to protect the inshore fisheries of Canada in accordance with the conditions laid down by the Convention of the 20th October, 1818, the first article of which provides:—

'Whereas, differences have arisen respecting the liberty claimed by the United States, for the inhabitants thereof to take, dry and cure fish, on certain coasts, bays, harbours and creeks, of His British Majesty's dominions in America, it is agreed between the high contracting parties, that the inhabitants of the said United States shall have, for ever, in common with the subjects of His Britannic Majesty, the liberty to take fish of every kind on that part of the southern coast of Newfoundland, which extends from Cape Ray to the Rameau Islands, on the western and northern coast of Newfoundland, from the said Cape Ray to the Quirpon Islands, on the shores of the Magdalen Islands, and also on the coasts, bays, harbours and creeks from Mount Joli, on the southern coast of Labrador, to and through the Straits of Belle Isle, and thence northwardly indefinitely along the coast, without prejudice, however, to any of the exclusive rights of the Hudson's Bay Company; and that the American fishermen shall also have liberty, for ever, to dry and cure fish in any of the unsettled bays, harbours and creeks, of the southern part of the coast of Newfoundland, hereabove described, and of the coast of Labrador; but so soon as the same, or any portion thereof, shall be settled, it shall not be lawful for the said fishermen to dry or cure fish at such portions so settled, without previous agreement for such purpose with the inhabitants, proprietors or possessors of the ground.'

'And the United States hereby renounce for ever any liberty heretofore enjoyed or claimed by the inhabitants thereof, to take, dry, or cure fish on or within three marine miles of any of the coasts, bays, creeks or harbours of His Britannic Majesty's dominions in America, not included within the above mentioned limits; provided, however, that the American fishermen shall be admitted to enter such bays or harbours, for the purpose of shelter and repairing of damages therein, of purchasing wood and of obtaining water, and for no other purpose whatever. But they shall be under such restrictions as may be necessary to prevent their taking, drying or curing fish therein, or in any other manner whatever abusing the privileges hereby reserved to them.'

By this you will observe, United States fishermen are secured the liberty of taking fish on the southern coasts of Labrador, and around the Magdalen Islands, and of drying and curing fish along certain of the southern shores of Labrador, where this coast is unsettled, or if settled, after previous agreement with the settlers or owners of the ground.

In all other parts the exclusion of foreign vessels and boats is absolute, so far as fishing is concerned, and is to be enforced within the limits laid down by the Convention of 1818, they being allowed to enter bays and harbours for four purposes only, viz.,—*for shelter, the repairing of damages, the purchasing of wood, and to obtain water.*

You are to compel, if necessary, the maintenance of peace and good order by foreign fishermen pursuing their calling and enjoying concurrent privileges of fishing or curing fish with British fishermen, in those parts to which they are admitted by the Treaty of 1818.

You are to see that they obey the laws of the country, that they do not molest British fishermen in the pursuit of their calling, and that they observe the regulations of the fishery laws in every respect.

You are to prevent foreign fishing vessels and boats which enter bays and harbours for the four legal purposes above mentioned, from taking advantage thereof, to take, dry or cure fish therein, to purchase bait, ice, or supplies, or to tranship cargoes, or from transacting any business in connection with their fishing operations.

It is not desired that you should put a narrow construction on the term 'unsettled.' Places containing a few isolated houses might not, in some instances, be susceptible of being considered as 'settled' within the meaning and purpose of the convention. Something would, however, depend upon the facts of the situation and circumstances of the settlement. Private and proprietary rights form an element in the consideration of this point. *The generally conciliatory spirit in which it is desirable that you should carry out these instructions, and the wish of Her Majesty's Government that the rights of exclusion should not be strained,* must influence you in making as fair and liberal an application of the terms as shall consist with the just claims of all parties.

Should interference with the pursuits of British fishermen or the property of Canadians appear to be inseparable from the exercise of such indulgence, you will withhold it and insist upon entire exclusion.

United States fishermen should be made aware that, in addition to being obliged, in common with those subjects of Her Majesty with whom they exercise concurrent privileges of fishing in colonial waters, to obey the laws of the country, and particularly such Acts and regulations as exist to ensure the peaceable and profitable enjoyment of the fisheries by all persons entitled thereto, they are peculiarly bound to preserve peace and order in the *quasi* settled places to which, by the liberal disposition of Canadian authorities, they may be admitted.

Wheresoever foreigners may fish in Canadian waters, you will compel them to observe the fishery laws. Particular attention should be directed to the injury which results from cleaning fish on board their vessels while afloat, and the throwing overboard of offals, thus fouling the fishing, feeding and breeding grounds. 'The Fisheries Act' (section 14) provides a heavy penalty for this offence.

Take occasion to inquire into and report upon any modes of fishing, or any practices adopted by foreign fishermen, which appear to be injurious to the fisheries.

GENERAL DIRECTIONS.

You will accost every foreign fishing vessel within the limits described, and if that vessel should be either fishing, preparing to fish, or should obviously have been fishing within the prohibited limits, you will, by virtue of the authority conferred upon you by your Commission, and under the provisions of the Acts above recited, seize at once (resort to force in doing so being only justifiable after every other effort has failed) any vessel detected in violating the law and send her or take her into port for condemnation.

Copies of the Acts of Parliament subjecting to seizure and forfeiture any foreign ship, vessel or boat which should be either fishing, preparing to fish, or should obviously have been fishing within the prohibited limits, and providing for carrying out the seizure and forfeiture are furnished herewith for your information and distribution.

Should you have the occasion to compel any foreign fishing vessels or fishermen to conform to the requirements of the 'Fisheries Act and Regulations,' as regards the modes and incidents of fishing, at those places to which they are admitted under the Convention of 1818, particularly in relation to ballast, fish offals, setting of nets, hauling of seines, and use of 'trawls' or 'bultows,' more especially at and around the Magdalen Island, your power and authority under such cases will be similar to that of any other fishery officer appointed to enforce the fishery laws in Canadian waters (*Vide Fisheries Act*).

If a foreign ship, vessel or boat be found violating the convention or resisting consequent seizure, and momentarily effects her escape from the vicinity of her capture or elsewhere, she remains always liable to seizure and detention if met by yourself in Canadian waters, and British waters everywhere if brought to account by Her Majesty's cruisers. But great care must be taken to make certain of the identity of any offending vessel to be so dealt with.

All vessels seized must be placed, as soon as possible, in the custody of the nearest customs collector, and information, with a statement of the facts, and the deposition of your sailing master, clerk, lieutenant, or mate, and of two at least of the most reliable of your crew be despatched with all possible diligence to the Government. Be careful to describe the exact locality where the violation of the law took place, and the ship, vessel or boat was seized. Also corroborate the bearings taken, by sounding, and by buoying the place (if possible) with a view to actual measurement, and make such incidental reference to conspicuous points and landmarks as shall place beyond doubt the illegal position of the seized ship, vessel or boat.

Omit no precaution to establish on the spot that the trespass was or is being committed within three miles of land.

As it is possible that foreign fishing craft may be driven into Canadian waters by violent or contrary winds, by strong tides, through misadventure, or some other cause independent of the will of the master and crew, you will consider these circumstances, and satisfy yourself with regard thereto before taking the extreme step of seizing or detaining any vessel.

On capture, it will be desirable to take part of the foreign crew aboard the vessel under your command, and place some of your own crew, a measure of precaution, on board the seized vessel; first lowering the foreign flag borne at the time of capture. If your ordinary complement of men does not admit of this being done, or if because of several seizures the number of your hands might be too much reduced, you will, in such emergency, endeavour to engage a few trustworthy men. The portion of foreign crew taken on board the Government vessel you will land at the nearest place where a consul of the United States is situated, or where the readiest conveyance to any American consulate in Canada may be reached, and leave them there.

When any of Her Majesty's vessels about the fishing stations or in port are met with, you should, if circumstances permit, go on board and confer with the naval commander, and receive any suggestions he may feel disposed to give, which do not conflict with these instructions, and afford him any information you may possess

about the movements of foreign craft; also inform him what vessels you have accosted and where.

Do not fail to make a full entry of all circumstances connected with foreign fishing vessels, noting their names, tonnage, ownership, crew, port, place of fishing, cargo, voyage, and destination, and (if ascertainable) their catch. Report your proceedings as often as possible, and keep the department fully advised on every opportunity, where instructions would most probably reach you at stated intervals.

Directions as to the stations and limits on which you are to cruise, and any further instructions that may be deemed necessary, will, from time to time, be conveyed to you.

Considerable inconvenience is caused by Canadian fishing vessels neglecting to show their colours. You will draw the attention of masters to this fact, and request them to hoist their colours without requiring to be hailed and boarded.

It cannot be too strongly urged upon you, nor can you too earnestly impress upon the officers and crew under your command, that the service in which you and they are engaged should be performed with forbearance and discrimination.

The Government relies on your prudence, discretion and firmness in the performance of the special duties entrusted to you.

I am, sir, your obedient servant,

(Sd.) GEORGE E. FOSTER,
Minister of Marine and Fisheries.

It is very gratifying to me to again report on the efficiency and general good conduct of the officers and men under my command during the past season. The work is trying and monotonous, and particularly arduous in the late fall.

The fleet patrolled over eighty-seven thousand miles of coast line, and foreign fishermen have little or no opportunity of poaching. The fishing fleet is persistently followed and boarded when in our waters and reports taken from them of all particulars with regard to their catch of fish, whereabouts caught, and the manner of catching them.

SEIZURES.

One seizure was made, by Captain Knowlton of the *Osprey*, at Canso, Nova Scotia, for an infraction of the fishery laws, in that the United States fishing vessel *Flora L. Nickerson* did purchase provisions and stores at Canso without first obtaining a Dominion license. This vessel was seized and a guard put on board, but I released her next day on orders from the department, after the master had consented to immediately secure a *modus vivendi* license.

Another seizure of the United States fishing vessel *Stranger* was made at Lockeport, Nova Scotia; but this was purely for a customs matter. She was released on payment of a fine of twenty-five dollars.

LICENSES TO UNITED STATES FISHING VESSELS.

The same Order in Council being passed as before, sanctioning the continuance of the issue of *modus vivendi* licenses to United States fishermen, similar permits were issued in 1899.

SESSIONAL PAPER No. 11a

SCHEDULE of United States Fishing Vessels to which Licenses were issued under the Act entitled 'An Act respecting Fishing Vessels of the United States of America' during the Year 1899.

Name of Vessel.	Port of Registry.	Tonnage.	Port of Issue.	Fee.
				$ cts.
Levanter	Salem, Mass.	28	Yarmouth, N.S.	42 00
Esther Anitu	Boston "	72	Shelburne, N.S.	108 00
Horace Albert	Gloucester "	65	Yarmouth, N.S.	97 50
Annie E. Lane	Salem "	29	"	43 50
Nannie C. Bohlin	Gloucester "	97	Halifax, N.S.	145 50
Elector	" "	84	Pubnico, N.S.	126 00
Anna L. Sanborn	Salem "	17	Yarmouth, N.S.	25 50
Parthia	Gloucester "	77	"	115 50
Fernwood	" "	96	"	144 00
A. R. Lawson	" "	85	Pubnico, N.S.	127 50
Florence	" "	63	Halifax, N.S.	94 50
Mystery	" "	89	Pubnico, N.S.	133 50
Senator Saulisbury	" "	77	"	115 50
W. E. Morrissey	" "	93	Tusket, N.S.	139 50
Emma E. Witherell	" "	81	"	121 50
Margaret	" "	107	"	160 50
Mabel D. Hines	Beverly "	92	"	138 00
Virginia	Gloucester "	81	Yarmouth, N.S.	121 50
Meteor	" "	96	Pubnico, N.S.	144 00
Hazel Oneita	" "	73	Tusket, N.S.	109 50
Lawrence A. Munroe	" "	84	Barrington, N.S.	126 00
John L. Nicholson	" "	92	Yarmouth, N.S.	138 00
Annie Wesley	" "	65	Pubnico, N.S.	97 50
Essex	" "	84	"	126 00
S. P. Willard	" "	88	Halifax, N.S.	132 00
Stranger	" "	59	Lockeport, N.S.	88 50
Thetis	" "	67	Yarmouth, N.S.	100 50
Shenandoah	" "	77	Barrington, N.S.	115 50
O. W. Holmes	" "	75	Lockeport, N.S.	112 50
Marsala	" "	54	"	81 00
Howard Holbrook	" "	69	"	103 50
Robin Hood	" "	65	Barrington, N.S.	97 50
Landseer	" "	71	Pubnico, N.S.	106 50
Harvester	" "	76	Shelburne, N.S.	114 00
Grayling	" "	88	Lockeport, N.S.	132 00
Admiral Dewey	" "	78	Canso, N.S.	117 00
E. C. Hussey	Beverly "	42	"	63 00
Fannie S. Ome	Gloucester "	61	Lockeport, N.S.	91 50
Edward A. Perkins	" "	58	Canso, N.S.	87 00
Ellen F. Gleason	" "	42	"	63 00
New England	" "	59	"	88 50
Hattie L. Trask	" "	48	"	72 00
Alice M. Parsons	" "	43	"	64 50
Richard Lester	" "	47	"	70 50
S. F. Maker	" "	78	Port Hawkesbury, N.S.	117 00
J. W. Collins	" "	52	"	78 00
A. R Crittenden	" "	56	"	84 00
D. A. Wilson	" "	61	Tusket, N.S.	91 50
Elsie M. Smith	" "	83	Arichat, N.S.	124 50
Eliza B. Campbell	" "	69	"	103 50
Mabel Leighton	" "	48	"	72 00
Lottie Gardner	" "	77	Barrington, N.S.	115 50
Hattie E. Worcester	" "	89	Shelburne, N.S.	133 50
Jennie B. Hodgin	" "	85	Arichat, N.S.	127 50
Masconoma	" "	67	"	100 50
Blue Jacket	" "	86	N. Sydney, N.S.	129 00
Nellie Dixon	Boston "	68	Liverpool, N.S.	102 00
Ralph F. Hodgson	Gloucester "	59	Amherst, M.I., Que.	88 50
Bessie M. Devine	" "	91	"	136 25
Quickstep	" "	75	Canso, N.S.	112 50
Harry G. French	" "	67	Shelburne, N.S.	100 50
Eliza H. Parkhurst	" "	85	Canso, N.S.	127 50
Lizzie Griffin	" "	71	"	106 50
Agnes E. Downes	" "	59	"	88 50

SCHEDULE of United States Fishing Vessels to which Licenses were issued—*Concluded.*

Name of Vessel.	Port of Registry.	Tonnage.	Port of Issue.	Fee.
				$ cts.
Lizzie B. Adams	Gloucester, Mass.	58	Port Hawkesbury, N.S.	87 00
Electa A. Eaton	" "	73	Whitehaven, N.S.	109 50
Eleazar Boynton	" "	63	N. Sydney, N.S.	94 50
Annie Greenlaw	" "	69	Yarmouth, N.S.	103 50
Reporter	" "	60	Liverpool, N.S.	90 00
F. W. Homans	" "	44	Port Mulgrave, N.S.	66 00
Golden Hope	" "	75	Pubnico, N.S	112 50
Helen F. Whittier	" "	92	Yarmouth, N.S.	138 00
Dawson City	Boston "	49	Canso, N.S	73 50
Winona	Gloucester "	78	Pubnico, N.S.	117 00
Commonwealth	" "	60	Canso, N.S.	90 00
Grace Darling	Salem and Beverly "	47	"	70 50
Lucille	Gloucester "	72	"	108 00
Oliver F. Kilham	Salem and Beverly "	44	"	66 00
Flora L. Nickerson	North Bay, Me.	63	"	94 50
George Temple	New York, N.Y.	44	Yarmouth, N.S.	66 00
	Total	5,511		$8,266 25

Number of vessels	80
Amount of tonnage	5,511
Amount received for fees	$8,266 25

The following is the statement of the number of licenses issued to United States fishing vessels in each season since 1888:—

1888	36
1889	78
1890	119
1891	98
1892	108
1893	71
1894	53
1895	47
1896	77
1897	40
1898	79
1899	80

Attached is a list of United States fishing vessels which have entered Canadian ports from January 1 to November 1, 1899, showing the number of times each vessel entered. The large number of these total entries, twelve hundred and twenty-eight in all will illustrate to what a great extent United States fishermen make use of our ports.

SESSIONAL PAPER No. 11a

LIST of United States Fishing Vessels which have entered Canadian Ports from October 31, 1898, to October 31, 1899, showing the number of times each Vessel entered the several ports; most of these Vessels besides entering at the Custom Houses were boarded by Canadian cruisers whithin the limits.

Number.	Name of Vessel.	Arichat.	Barrington.	Canso.	Georgetown, P.E.I.	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisbourg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P.E.I.	Whitehead.	Yarmouth.	Total entries.
1	Arthur D. Story	1								1										2
2	Admiral Dewey	1		4		2							1							8
3	A. R. Crittenden					1	2		1			2	1							7
4	Alva			1																1
5	Argo			1												1				2
6	Arbutus			1						2		1				2				6
7	A. E. Whyland									3										3
8	Atlanta															2			3	5
9	Annie Wesley			1					3	1									2	7
10	A. P. Gifford			1		1														2
11	Annie S. Sanbourne		2													1			12	15
12	Arthur Binney																		1	1
13	Agnes E. Downs			4								1				1				6
14	Annie Greenlaw					1				1						10				12
15	Alice R. Lawson			1						2		1				1			1	6
16	Alice M. Parsons			5																5
17	Arbitrator			1												2				3
18	A. T. Coffin																		1	1
19	Annie E. Lane		2																11	13
20	A. S. Clifford					1														1
21	Annie C. Hall		2				1									1				4
22	A. S. Cornell															1				1
23	Annie E. Waterman															1				1
24	Addie M. Story															2				2
25	Almeida															2				2
26	Blue Jacket			1						1									2	6
27	Bessie M. Devine			3								2								3
28	Belle Franklin			1																2
29	Bertha May												1						1	1
30	Braganza					2			1				1		1					5
31	Cecil H. Lowe															1				1
32	Commonwealth			3			1		2							5			2	13
33	Carrie W. Babson			1						1										2
34	Canopus															1				1
35	Columbia		1	1		1													2	5
36	Carleton Belle			1														1		2
37	Conductor			2			1										1	1		5
38	Centennial			1		2				1							1			5
39	Carrie E. Phillips															1			1	2
40	Cosmopolitan																		1	1
41	Carrier Dove																		2	2
42	Clara Clarita									1										1
43	Clara P. Sewell		1																	1
44	Carrie C															2				2
45	Dido			2																2
46	David Sherman																		1	1
47	D. A. Wilson			1						1						2			2	6
48	Dawson City			2						1		1	1							5
49	Dora A. Lawson									1										1
50	Eliza B. Campbell	4		2		1										1				8
51	Elsie M, Smith	2		2				1										2		7
52	Elenora	1		1									1							3
53	Eldora																	1		1
54	E. C. Hussey			1									1			3			4	9
55	Ethel B. Jacobs					1						1						2		4
56	Edward Trevoy						1									1		2	2	6
57	Edward A. Rich		1			2	1									1			1	6
58	Ella G. King							1	1										2	4
59	Ester Anita			2		1			7							8		1		19
60	Elisa Boynton											1				1				2

LIST of United States Fishing Vessels which have entered at Canadian Ports from October 31, 1898, to October 31, 1899, &c.—*Continued.*

Number.	Name of Vessel.	Arichat.	Barrington.	Canso.	Georgetown, P.E.I.	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisburg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P. E. I.	Whitehead.	Yarmouth.	Total entries.
61	Emma W. Brown															1				1
62	Elsie F. Rowe							1	1											2
63	Ellen F. Gleason			5		3		4						1		5	1			19
64	Edward A. Perkins			3				1		1		1				1				7
65	Emma & Ellen							1								1			1	3
66	Edwin B. Holmes		1	1															1	3
67	Electa A. Eaton			3														5		8
68	Eliza H. Parkhurst			5	1	1							1		1					9
69	Essex			1								3							6	10
70	Elector			1		1													1	3
71	Emma E. Wetherall								1										6	7
72	E. A. Rice																		1	1
73	Everett Pearce		1			1													1	3
74	Edward Glover															1			1	2
75	Effie M. Morrisey											1								1
76	Edith S. Whalen		2						2											4
77	Edith N. McInnes		1													1				2
78	E. S. Eveleth															1				1
79	Edith M. Prior															4				4
80	Evelyn L. Smith															2				2
81	Epes Tarr															1		1		2
82	Florence	2				1										3			1	7
83	Fanny S. Orne			1				1	1	3		1								7
84	Flora L. Nickerson		1	3																4
85	Fernwood			3								1				1			4	9
86	F. W. Homans				1				3						1		3			8
87	Grace Darling			1				3	1							1			2	8
88	Golden Hope							1								4			2	7
89	Governor Butler							1												1
90	Gladstone			1			1													2
91	Grayling		2	1					2							3			2	10
92	Glorianna			1																1
93	George F. Edmunds			1						1		4								6
94	Georgie Campbell			1								1				2				4
95	Golden Rod			1																1
96	Gardener M. Tarr																		2	2
97	George F. Pyke																1			1
98	Garland																1			1
99	Glenora																			1
100	Horace B. Parker	1											1							2
101	Harry G. French	3		1			2	2		2						1				12
102	Hattie A. Heckman			1		1		2	1		2					2				7
103	Hazen Abbott							1												1
104	Hattie & Lottie							3			1									4
105	Helen Story							2												4
106	Hattie M. Graham							1								1		1		2
107	Henri N. Woods			1				3										1		7
108	Henry W. Longfellow							2	1										2	5
109	Hattie L. Frask			4												2				5
110	Hattie E. Worcester			1					1							1				7
111	Howard Holbrook			2					3							4		1		7
112	Hazel Onita			1		1						1						1		7
113	Helen F. Whitten			3		1						1							3	6
114	Harvester			1								2							2	8
115	Horace Albert															5				6
116	Harvard																		6	6
117	Helen G. Wells									1										1
118	Henry M. Stanley					1				1										2
119	Hattie E. Herenan					2	2	1				1				3				9
120	Hiram Lowell												1							1
121	Helen May Butler												1			1				2
122	Hattie C. Clark										1									1
123	Herald of the Morning						1													1
																		1		1

LIST of United States Fishing Vessels which have entered at Canadian Ports from October 31, 1898, to October 31, 1899, &c.—*Continued.*

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124	Irving Leslie	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
125	Indiana	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	3
126	Iolanthe	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	3
127	Jennie B. Hodgdon	2	..	3	..	..	1	1	..	..	..	..	..	..	..	3	..	..	..	10
128	J. W. Collins	..	..	4	..	1	..	1	..	..	..	1	1	..	..	1	..	..	..	9
129	Joseph Rowe	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	1	..	4
130	James R. Clarke	..	..	..	..	..	..	1	1	..	..	..	..	..	..	2	..	..	..	4
131	James A. Garfield	..	2	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2	6
132	John L. Nicholson	..	..	3	..	..	..	1	..	..	..	4	..	..	..	..	..	..	2	10
133	John S. Presson	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2
134	Judique	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	3
135	James Rowe	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
136	James S. Steele	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	..	5	8
137	J. K. Manning	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
138	Joseph McGuire	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
139	James E. Stetson	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2
140	Jubilee	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	3
141	Kearsage	..	..	1	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	5
142	Kate L. Palmer	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
143	Loring B. Haskell	2	..	..	..	1	..	2	..	..	..	..	..	..	..	1	..	..	..	6
144	Laurence A. Munroe	..	4	3	..	..	..	1	3	..	..	1	..	..	..	..	..	1	..	13
145	Latona	..	..	..	..	..	..	2	..	..	1	..	..	..	..	4	..	2	..	9
146	Lizzie B. Adams	..	..	2	..	1	..	1	..	1	..	..	3	..	..	1	..	..	..	9
147	Lottie E. Hopkins	..	..	..	..	..	..	1	2	..	..	..	..	..	..	2	..	..	..	5
148	Lizzie M. Stanwood	..	1	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	4
149	Laurel	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	1	..	4
150	Lottie Burns	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
151	Landseer	..	1	1	..	..	..	..	..	1	..	..	..	..	..	3	..	..	3	9
152	Lottie Gardener	..	2	1	..	3	1	..	..	1	..	..	..	..	..	..	..	..	..	8
153	Lizzie Griffin	..	..	3	..	2	..	..	..	..	..	..	2	..	..	..	..	..	..	7
154	Lucille	..	..	1	..	3	..	..	1	..	..	..	..	..	..	1	..	1	3	10
155	Lavanter	..	3	1	..	..	..	1	2	..	..	3	..	..	..	1	..	1	18	30
156	Lewis H. Giles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
157	Lena & Maud	..	..	..	..	2	..	..	..	2	..	5	..	..	..	..	..	..	..	9
158	Lora Doon	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	3
159	Lizzie M. Centre	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	1	..	4
160	Laurence Murdoch	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
161	Mabel Leighton	1	..	1	..	..	..	2	..	1	..	1	1	..	..	3	..	1	..	11
162	Masconoma	4	..	2	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	8
163	Miranda	1	..	..	..	..	..	6	..	1	..	..	2	..	..	2	..	..	..	12
164	Monitor	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	3
165	Mabel M. Story	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3	4
166	Minerva	..	..	..	..	..	..	3	..	..	..	..	..	..	..	2	..	..	..	5
167	Maggie & May	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2
168	Margaretta	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	2
169	Margaret Mathers	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1	4
170	Maud M. Story	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2
171	Marsalla	..	..	1	..	1	..	2	5	..	..	1	..	..	..	..	..	..	..	10
172	Mattie Winship	..	..	..	..	..	..	1	..	..	..	..	..	..	..	3	..	..	2	6
173	Mystery	..	..	3	..	..	..	..	..	1	..	..	..	..	..	..	..	..	4	8
174	Meteor	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	6
175	Mondego	..	..	1	..	..	..	..	..	..	1	..	..	..	..	3	..	..	..	5
176	Margaret Haskins	..	..	1	..	..	..	..	..	1	..	4	..	..	..	..	..	..	..	6
177	Margaret	..	..	2	..	1	..	..	..	1	..	..	..	..	..	1	..	..	1	6
178	Madonna	..	..	2	..	..	..	..	..	1	..	1	..	..	..	..	..	..	3	7
179	Mabel D. Hines	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	6
180	Mathew Karney	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4
181	Mizpah	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6
182	Marshall L. Adams	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	1	4
183	Mary F. Chisholm	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
184	Marguerite	..	3	..	..	..	..	..	..	1	..	..	..	..	..	2	..	..	..	6
185	M. B. Stetson	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
186	M. H. Perkins	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	3

LIST of United States Fishing Vessels which have entered at Canadian Ports from October 31, 1898, to October 31, 1899, &c.—*Continued.*

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187	Martha A. Bradley	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
188	Minona	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
189	Nereid	..	..	..	..	..	..	2	..	..	..	..	..	..	..	5	..	..	..	7
190	Norma	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	3
191	Noonday	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
192	Nellie Dixon	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	1
193	Norman Fisher	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	..	4	8
194	New England	..	..	3	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	4
195	Norumbega	..	..	1	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	6
196	Nannie C. Bohlin	..	..	2	..	4	..	..	..	..	..	7	..	..	..	..	..	..	2	11
197	Nellie Bly	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	8
198	Normahal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
199	Nelson Y. McFarland	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	1	..	..	4
200	Oressa	..	..	..	..	..	..	1	..	..	..	..	..	..	..	3	..	..	..	3
201	Orpheus	..	..	..	..	..	1	1	8	..	..	..	..	..	..	..	..	..	..	1
202	Oliver F. Killam	..	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	11
203	Oliver Wendell Holmes	..	..	1	..	1	..	..	..	1	..	..	..	..	..	2	..	..	1	6
204	Oregon	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
205	Olympia	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
206	Otis P. Lord	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	4
207	Pinta	..	..	1	..	..	..	2	..	..	..	1	..	..	..	..	..	..	..	1
208	Pauline	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2	..	..	..	5
209	Puritan	..	..	..	..	..	..	1	1	..	..	1	..	..	..	..	..	..	..	3
210	Procyon	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4
211	Parthia	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3
212	Pilgrim	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	4	8
213	Polar Wave	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2
214	Pendragon	..	..	..	..	..	..	..	..	1	..	4	..	..	..	..	..	..	..	5
215	Patriot	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
216	Pythian	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
217	Quickstep	..	..	1	..	..	..	5	1	..	..	..	..	..	..	2	..	2	..	4
218	Reporter	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	8
219	Richard Lester	..	..	2	1	2	..	2	..	1	..	..	1	..	..	..	1	1	..	4
220	Robin Hood	..	4	2	..	1	..	3	1	..	..	1	..	..	..	..	1	2	1	13
221	Ralph F. Hodgdon	..	..	2	..	..	1	1	..	..	..	..	..	..	..	2	..	..	..	13
222	Ralph Russell	..	..	..	..	1	..	..	..	..	..	1	..	..	..	2	..	1	..	8
223	Rigel	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
224	S. F. Maker	1	..	1	..	..	..	2	..	..	..	..	..	..	..	2	..	..	..	3
225	Speculator	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	1	..	..	6
226	S. R. Lane	..	..	1	..	..	..	1	..	..	..	..	..	..	..	5	..	1	..	8
227	Susie Hooper	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	3
228	Sarah E Lee	..	..	2	..	..	..	3	..	2	..	..	..	..	..	..	..	..	..	2
229	Sigfred	..	..	1	..	..	..	2	..	..	..	..	..	..	..	2	..	..	..	9
230	Shenandoah	..	2	..	..	..	..	2	1	..	..	1	..	..	..	1	..	..	5	3
231	Samuel R. Crane	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	12
232	Senator	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
233	S. P. Willard	..	..	1	..	2	3	..	..	1	1	2	..	..	..	..	..	..	..	1
234	Senator Salisbury	..	..	3	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	11
235	Sheffield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	5	11
936	Stranger	..	..	..	..	2	..	..	4	1	..	..	..	..	..	..	..	..	2	2
237	Senator Frye	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	10
238	Sea Fox	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
339	Talisman	..	..	..	..	..	1	2	..	1	..	..	1	..	..	..	..	..	..	1
240	Tidal Wave	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	4
241	Thetis	..	..	4	..	1	..	..	..	..	..	2	..	..	..	..	..	..	..	2
242	Thomas Brundage	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	12
243	Titania	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	5	5
244	Triton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	4
245	Virginia	..	..	1	..	..	..	4	..	2	1	2	..	..	..	1	..	..	..	1
246	Vigilant	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	12
247	Viking	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	..	..	4
248	Vesta	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2
249	Valkyrie	..	..	..	..	..	..	..	..	1	..	2	..	..	..	1	..	..	1	2
																				3

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LIST of United States Fishing Vessels which have entered at Canadian Ports from October 31, 1898, to October 31, 1899, &c.—*Continued.*

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250	W. H. Moody	..	..	....	.	..	..	2	..	..	....	....	....	....	....	1	....	....	1	4
251	William H. Cross	..	..	....	.	..	..	1	..	..	....	1	....	..	....	1	...	1	....	4
252	W. E. Morrissey	..	..	1	..	..	..	1	1	2	....	1	....	....	....	1	....	....	2	9
253	Winona	..	..	1	..	..	..	....	..	..	....	1	....	....	....	....	....	....	5	7
254	W. M. Young	..	..	....	..	..	..	....	..	..	....	....	....	..	1	....	....	...	....	1
255	William H. Rider	..	..	....	..	..	..	....	..	..	...	....	...	....	....	3	....	....	....	3
	Total entries	27	44	183	4	68	27	128	65	69	8	87	26	1	5	213	12	44	217	1,228

In the Fisheries Intelligence Bureau Report annexed, will be found a list of LaHave bankers and trawlers, North Bay hand-liners and Labrador men, and the Lunenburg banking fleet. This list will show to what a very large extent the fishing industry is carried on in Lunenburg County.

THE MACKEREL FISHERY.

In nearly every locality, this fishery has been a most distinct failure. In num bers of places, not a single school has been sighted the whole season. There are, of course, all sorts of conjectures to account for this. Lots of fishermen think it is on account of the pernicious purse-seine; others say on account of the enormous quantity of decayed lobster gear; and again others, that it will not be any better till entirely new schools come on our coast; United States fishing vessels hardly did anything whatever, and the *Ethel B. Jacobs* usually the high liner, gave it up as hopeless, and proceeded to the Irish coast, where she was subsequently lost.

A firm at Canso made an experiment this season of the use of the *otter trawl*, which, though some people may not know it, is the English 'drag-net', now so extensively used by the fishing steamers in England and Scotland. Owing principally to the lack of experience in the use of this appliance, and not being properly equipped, the experiment was not a thorough success, but it has demonstrated that the use of the trawl is not impracticable on this coast, and those engaged in trying to carry on the work reached the conclusion, that with proper equipment, and the necessary experience, the appliance could be successfully operated here, and would probably be an improvement on present methods of fresh fishing. I am told it will be heard from again.

OFFICERS REPORTS.

EXTRACTS *from reports of captains commanding canadian cruisers, as follows :—Captain Knowlton, of the 'Osprey'; Pratt, 'Curlew'; Kent, 'Kingfisher'; Dunn, 'Petrel'; Walbran, 'Quadra' and May, 'Constance.'*

D. G. S. 'QUADRA'.

VICTORIA, B.C., December 30, 1899.

Commander O. G. V. SPAIN,
Commanding Fisheries Protection Service,
Ottawa.

SIR,—I beg to forward you the following report of the Fisheries Service performed by the *Quadra* during 1899.

Owing to the large number of lighthouses and other aids to navigation lately established in the waters of British Columbia, we were unable to give that attention to our fisheries which their growing importance demands.

On July 28, I proceeded on fisheries service to the west coast of Vancouver Island with Mr. Stumbles from the Marine and Fisheries Department, Ottawa. We visited San Juan River, the Somas River, Alberni, and Ucbucklesit Inlet and river leading to Anderson Lake. The obstruction to the salmon ascending the Somas River to the large inland lakes of Kleecoot and Great Central, known as the Paper Mill dam, was thoroughly inspected, and the river examined from Kleecoot Lake to Alberni. On the return cruise a stay was made at Otter Point where inquiries were made from residents as to the different points in this locality and the dates when the salmon are noticeable in large numbers on their way to the Fraser River.

On November 14, a fisheries court was held on the *Quadra* at Alert Bay, at which I presided, to investigate a charge made against the manager and head-fisherman of the Alert Bay Canning Company for illegally fishing in Campbell River, Vancouver Island. The defendants pleaded guilty to the charge and a fine was inflicted and paid.

I have the honour to remain, sir,

Your obedient servant,

JOHN T. WALBRAN,
Captain Fisheries Protection Service.

OWEN SOUND, Dec. 30, 1899.

Capt. O. G. V. SPAIN,
Commanding Fisheries Protection Service,
Ottawa.

SIR,—I have the honour to submit my annual report of the work performed during the past season by the *Petrel.*

On the receipt of your letter of the 11th of April, instructing me to proceed to Goderich and get the ship ready for commissioning, I did so, and departed for Owen Sound on the 28th to complete the fitting out, as also instructed, making a

departure for Lake Erie on the 8th of May, arriving at Amherstburg on the 9th at 2.25 p.m., and after taking on 21 tons of coal proceeded same day to Pelee Island and at once established the patrol of the boundary line as formerly. On the 11th prepared gas buoys, took them in tow for Pelee Passage and put one in place that evening, the other at daylight on the 12th, removing winter buoys in each case. On same day I seized twenty-three American gill-nets set in our waters. On the 16th I seized fifty-one American gill-nets three knots to the north of boundary line containing good catch of fish and forty ducks; nets set in eleven fathoms of water. On the 20th placed spar buoys on Grecian Shoal and North Harbour Reef; on the 22nd pulled out spars and cleared away wreck schooner *Groton* leaving from twenty-five to thirty feet of water over wreck; on the 24th had dressed ship to celebrate Her Majesty's birthday but received a telegram from the Deputy Minister to proceed at once to the wreck of the *Ganges*, which was said to be a derelict, so departed at 8 a.m. On the 25th commenced work on wreck of schooner *Ganges*; 29th, engaged diver, procured dynamite, a scow and other appliances. 30th, 31st, 1st and 2nd June continued work on wreck, completing on the last date, leaving over twenty feet least water over it. On the 7th I removed the life-boat and appurtenances from Pelee Island to Pelee Point; 14th, delivered 89 nets to C. Ross who tendered $1.35 per net. 30th, I seized twelve American gill-nets. July 1, Dominion Day at Port Dover dressed ship and fired a salute of fifteen guns. On August 7 placed spar buoy on end of shoal forming a harbour at Long Point. 26th, proceeded to Windsor to procure lumber for life-boat station to be built on Pelee Point. 28th, landed lumber, shingles, &c., on Pelee Point. 29th, procured stone for foundation; 30th, crew on shore at work building life-boat station; 31st, and 1st and 2nd September continued work, building nearly completed. On the 23rd I seized (at the request of Collector Gott of Amherstburg) the American tug *Leathem D. Smith*, for infraction of the Customs laws and delivered her to the collector. A fine of $400 was inflicted. 25th, having received instructions to take Judge Horne and party to Pelee Island to hold Court of Revision, took party on board and proceeded to Pelee Island. Not being able to land at Island, came to anchor off Leamington; 26th, landed Judge and party in small boat, could not land at dock on account of storm; Judge held court and again came on board, when departed for and landed party at Windsor. On 4th of October I seized twenty-three American gill-nets in our waters containing a few herring and five trout, one trout weighing 22 lbs. 3 oz., the largest caught for years in Lake Erie as far as I could learn. 12th crew employed painting life station on Pelee Point. On 18th, having received instructions to proceed to the mouth of Detroit River to see what was best to do with the wreck of the American schooner *Mary Amelia*, (to remove which $600 was asked by a wrecker,) I put my crew to work to clear away the booms and other spars, cut down the masts and towed the wreck out into the lake and took it as near the beach as possible and out of the way of navigation. On the 20th November, having heard that the American Lighthouse boat had started to take in the gas buoys, I took in the Pelee Passage ones, placing spar buoys for the winter in their place, towed buoys to Amherstburg and gave them in charge of Light-keeper Hackett of Bois Blanc Island. 28th took in spar buoys from Grecian Shoal, North Harbour Reef and one for Light-keeper Hackett off Detroit River Light. On December 4 I seized ten American gill-nets, which are stored in Amherstburg. On the evening of the 8th having received a telegram from you saying "if I thought there was any chance of being caught in the ice to proceed at once to Owen Sound" and as the ship was caught by one day's delay last season I deemed it wise to take as few chances as possible, so departed on the 9th, making Sarnia that night and proceeded up Lake Huron the next morning, lay in Sand Beach until 10.10 p.m. and made Cove Island soon after daylight and just in time to escape one of the heaviest gales of the season on Lake Huron. On account of trying to get the Surprise Shoal bell buoy at Jackson's Cove I did not reach Owen Sound until 12.25 p.m. on the 12th where ship was placed in winter quarters and put out of commission on the 14th.

REMARKS.

You will observe a very great falling off in the seizures of nets this year. The American fishermen are finding out that it does not pay to risk their nets in our waters. A very careful and watchful patrol of the boundary line was almost continually kept. I allow a margin in the open lake of a mile or so to be sure of my ground; over this they have sometimes passed. I find I must keep them to the line, if I leave one that is over the next fishermen who comes along will go a little further and so on. A great deal of grappling was done but no nets were got by that means. They lost too many that way last year and have given up setting without buoys.

You will also observe that much more work than formerly has been done for the Marine Department.

The fishing in Lake Erie, was, I think, fully up to that of former years for the whole lake. A very heavy run of fish took place early in the summer but the fall fishing was not so good. Mr. Edward Harris of the Long Point Company told me that it had been the best season for him in many years. Our own fishermen, as far I could learn and observe, kept within the laws and regulations very well. I counted all the pound-nets on our side and found that all were licensed. I inspected all the light-houses on our side Lake Erie with the exception of Mohawk; it was always blowing when I happened to be in that locality. I found them all fairly well kept. I have some fears for Pelee Spit and Colchester lights, as repairs to the cribwork in both cases are badly needed, and, should we have as much ice and bad weather as last winter, both lighthouses will be in great danger.

The *Petrel* logged during the season 15,324 miles.

I have the honour to be, sir,

Your obedient servant,

E. DUNN,
Commanding D. G. S. 'Petrel.'

To Commander O. G. V. SPAIN, R.N.,
Commanding Fisheries Protection Service of Canada,
Department of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to forward to you my annual report of work performed by the ship under my command during the season of 1899.

Receiving instructions from you late in March to place the *Osprey* in commission on April 20, I instructed Chief Officer Acker on April 15 to proceed at once with the work of getting ship ready to commission. I arrived at Shelburne on the 19. The work had progressed slowly, weather being unfavourable, however we went into commission on April 22. On the 24th, after having some difficulty in getting my crew gathered up, I sailed by your instructions eastward towards Magdalen Islands, calling at Halifax, Liscomb, Arichat, arriving at Port Hawkesbury on the 29th, found ice reported further north. May 1 ice cleared, proceeded calling at Pictou and Charlottetown, meeting with some stormy weather and drift ice. Arriving at Magdalen Islands on May 13, I found seven United States trawlers six held Canadian licenses the one who was unlicensed had nets to catch his own bait. There were several Canadian trawlers baiting, beside a number of small Canadian buyers. Herring having struck the islands very early. Now the last run was considered to be nearly over. I at once proceeded, being previously instructed by yourself to be at Halifax not later than May 21. 16th passed through Strait of Canso proceeding toward Halifax and arrived on the morning of 20th, where we had a few days of bad weather.

On the morning of 25th we proceeded toward Shelburne with our distinguished passenger General Lord William Seymour, yourself and Lieut. Bowker on board. After a few hours of very moderate weather we were favoured with a fine westerly breeze full sail, which his lordship enjoyed very much, Shelburne 26th and Halifax 29th by way of Lunenburg, all enjoying the round voyage.

May 30, by your instructions we proceeded eastward calling at Jeddore, and while there had an unpleasant duty to inflict a fine on a factory for illegal lobsters. On June 4 we took up our station between Liscomb and Louisburg, Canso headquarters mails and telegrams. Same date in company with several United States seiners cruising westward with fleet which did poorly, some going home clean while others had very small catches.

We continued to cruise not his station taking runs north to Gaspé and Prince Edward Island and westward to Halifax. Proceeding eastward we took up our station at Canso again, our attention mostly taken patrolling the coast looking after illegal lobster fishing which is followed only by a very few of the mean class of fishermen, while the respectable class hardly dare inform on them as their property might be in danger. On October 20 under cover of a dark, misty night (after all other means had failed) I manned my boat (ship lying at Whitehaven) to proceed to Whale Island which I had long been watching, last as well as this year, I found a good case a man just putting the finishing touch on the tins. Same night at Big Dover Island I came on a proper den of poachers. I destroyed and burned camp with all it contained.

On October 31, 9 a.m., detained the U.S. fishing vessel *Flora L. Nickerson* of Booth Bay for buying supplies without a Canadian license. This vessel was released at 9.30 p.m. on payment of a license.

On November 3 with yourself on board we proceeded towards Sydney passed through St. Peter's Canal 3 p.m. and on the 4th ran down the lake arriving at North Sydney noon of 5th. Both cruisers *Curlew* and *Kingfisher* in port with a fleet of five seiners. 6th, seiners went out, *Kingfisher* in company; we cruised 7th and 8th only to find that all the fleet had gone west for home, only one vessel being in luck had 140 barrels, another had six, so mackerel fishing proved a failure this season on this coast. On the 9th we proceeded west and arrived at Whitehaven on the 11th calling at Louisburg. We had several days of very heavy wind while at Whitehaven. On the 18th proceeded and calling at Liscomb and Spry Bay; arrived at Halifax on the 23rd, sailing again on the 26th, worked our way westward, arrived at Shelburne on the 28th and find that the fishermen report a very successful season which is a very unusual report.

We cruised in the vicinity of Shelburne until December 13 when we went into winter quarters and paid off the crew.

The season has been quiet and uneventful, except the detention of the *Flora L. Nickerson* which was released on payment of a license. Our annual sports passed off finely, the cruiser *Kingfisher* almost sweeping the board.

I have the honour to be, sir,

Your obedient servant,

C. T. KNOWLTON,
Commanding Cruiser 'Osprey.

CRUISER 'CURLEW.'

ST. JOHN, N.B., December 30, 1899.

Commander O. G. V. SPAIN, R. N.,
Commanding Fisheries Protection Service,
Department of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit to you herewith my annual report on the various duties performed by this ship during the past season of 1899.

According to the usual annual custom the ship was put into winter quarters in Magés dock during December, and while there during the winter a thorough overhauling was given the machinery. Other slight repairs were made throughout the ship, and she was put in thorough order for commissioning on April the 15th. On that date the ship was commissioned the crew signed, and during the afternoon we steamed for the mouth of the Bay of Fundy, I found the fishermen there preparing for the various fishing industries, while line fish and herring were beginning to put in an appearance along the coast. As the sardine factories were not yet in operation, the small herring that were being caught in the weirs, were finding a ready sale to Nova Scotia schooners buying lobster bait. The days were very busily occupied in distributing bounty cheques, issuing new licenses, and settling numerous fisheries disputes that were awaiting my arrival.

At the beginning of May I received your orders to report at Halifax to you on the 11th instant which orders I carried out. Making a run to Salmon River and return on the 16th and 17th instant, the condemned United States fishing schooner, *Frederic Gerring* was placed in our charge to be towed to Newcastle, N.B., for use as a lightship on the Miramichi River.

A heavy gale prevented us from leaving Halifax till the 22nd, but after an uneventful run of 48 hours Point Escuminac was rounded on the 24th at noon, arriving at Newcastle in the evening. Owing to the strike of pilots on the Miramichi River we were unable to procure one, and were compelled to take a fisherman instead.

On account of this strike the pilot commissioners of the river apprehended that trouble would result, and we were ordered to remain while the matters in dispute were being adjusted by Captain Douglass, who was sent there by the Department of Marine and Fisheries.

On May 31 orders were received to returned to the cruising grounds, and leaving there on June 1st we steamed to Pictou and bunkered. Arriving at Canso on June 3. The fleet of United States seiners were found to be cruising off White Head and catching very few mackerel. Dense fogs and stormy weather operated against the movements of the mackerel fleet, as well as the fish being unusually scarce.

As nearly all of the seamen that were shipped in St. John in the spring had by this time decided to return home, a run was made to Liscombe and Salmon River, and the vacancies were filled. From thence a cruise was made to Cape Breton anchoring at North Sydney, where we were joined by Inspector Bertram on June 12 and with him we left for a visit to all the lobster factories on the north and west coast of that island. Many of the factory owners were taken by surprise, and no doubt, much good was accomplished by our visit. Cheticamp was reached on the 14th, and we spent a day there while the Inspector visited the falls on Little River. Next day the cruise was resumed, inspecting factories in Gut of Canso and St. Peters Bay. Steaming through the canal and lakes to North Sydney where the Inspector left ship. On June 20 steamed to Mulgrave, via the lakes, where I received personal orders from you to steam to Poulamond and report as to the necessity of a lighthouse at the entrance of its harbour.

Your orders were then received to return to the Bay of Fundy, and calling at the numerous ports on the way to enforce lobster regulations. St. John was visited for bunkering purposes on July 4. Thence among the fishermen at the mouth of

the Bay, I found that good fishing of all kinds was in progress. After spending two days in Charlotte County we were ordered to return to the Nova Scotia coast again enforcing lobster regulations.

We also had the pleasure of meeting you at Guysboro, on July 20th and then returning to the south coast suppressing attempt at lobster fishing.

After a run to Louisburg for bunkering on July 29, we received your orders to be at Shelburne for the annual regatta held there on August 7, 8 and 9. Numerous yachts were there from Halifax and Yarmouth and very successful and enjoyable races were held.

Cruising westward the Bay of Fundy was again visited, where five days were spent, and then a run was made to North Sydney, arriving there on the 25th. After bunkering and receiving other supplies, Inspector Bertram came on board for the purpose of a second visit to the factories around the island. This work was completed by the 31st where we arrived at Port Mulgrave and the inspector returned by train to Sydney.

From Mulgrave we proceeded to Georgetown, P.E.I., meeting there the other cruisers in the service for the annual sports which took place on September 4 and 5. They were a great source of pleasure to the companies of all the ships, and all the sports were entered into by officers and men with great enthusiasm. While this ship made a much better showing than last season and was successful in capturing several of the prizes, still we hope to show a greater improvement at our next annual sport.

From Georgetown, Isaac's Harbour was reached on September 7, where we took into the government service the tug-boat *Florence C.* for the prevention of illegal lobster fishing between Halifax and Canso. First officer Burns was placed in charge, with three seamen, and she was fitted from this vessel with every essential for the successful prosecution of her work.

Yarmouth was reached on the 14th inst., where you came on board the ship and we steamed to Tusket, where you held an investigation among Tusket people, returning next day to Yarmouth.

Lobster matters again requiring attention on the eastern coast, a run was made in that direction, anchoring at Canso on the 20th. Cruising westward from there calling into various ports where illegal fishing was suspected, we put into Yarmouth on the 25th to scale boiler. After completing this a cruise was made upon the spawning grounds at Grand Manan, warning numerous vessels there against violations of the spawning ground regulations. Numerous fisheries difficulties in different parts of Charlotte County were then adjusted, licenses issued, besides acting as one of the judges at the Campobello Fish Fair. This regatta was held on the 19th October at Welshpool, and a strong breeze assisted the committee in carrying out the best programme of races they have had for years. On the 30th your orders were received to report to you from North Sydney, but bad weather prevented our arrival there until November the 4th, and we found very few United States mackerel schooners in Cape Breton waters.

Capt. Douglas, R.N.R., with workmen and supplies, were conveyed to St. Paul's Island, and after four days work there I brought them back to Sydney, where orders were awaiting us to return to the Bay of Fundy.

On November 11, while lying at anchor at Louisburg Harbour, bunkering, the schooner *Sailor' Home* of Halifax, while under way fouled us, carrying away our fore-topmast, requiring us to put into Halifax and being provided with a new foremast.

Leaving the *Gatling* at Halifax, we sailed westward on the 23rd for Port Mouton, where illegal lobster fishing was reported in progress. This was found correct, and we proceeded to destroy large numbers of traps, and narrowly searched a number of houses for evidences of illegal fishing. Yarmouth was reached for coaling on the 27th, and on the day following Charlotte county was reached, and we began the collection of fishermen's bounty claims and the settlement of numerous fisheries complications.

This kept us busily employed till December the 17th, when we steamed from Beaver Harbour to St. John to put steamer into winter quarters. This was done

on December 19, and the crew paid off same day, retaining the engineers and stokers to repair machinery.

My report showing cost of the several departments of the vessel for the year 1899 is almost ready, and will soon be forwarded to you, also the cost of patrol boat *Florence C.*

Special reports on various matters have been submitted to you at intervals during the year, which I trust you have found satisfactory.

I have the honour to be, sir,

Your obedient servant,

JOHN. H. PRATT,
Commanding 'Curlew.'

Commmander O. G. V. SPAIN,
Commanding Fisheries Protection Service of Canada.

SIR,—I have the honour to report the work done by the *Kingfisher* for the season of 1899 as follows:

On May 1st I proceeded to Shelburne to superintend the fitting out of the *Kingfisher*—on May 10 the ship was placed in commission and sailed on 13th.

The first American seiner arrived on the 15th, by the 17th I proceeded east with a small fleet, calling at Liverpool, Cape La Have, and Lunenburg. No Mackerel being seen west of Sambro, the vessels moved east by the 24th. I followed on the 25th, running down in company with several seiners to Cape Canso, when we fell in with twenty-two sail, which as far as I could ascertain comprise the whole Cape shore fleet. We cruised about Cape Canso for a few days, fleet finding no fish.

On May 31 orders were received to proceed to Charlottetown. I proceeded to that port, arriving on June 2—while there the ship's company were measured for uniforms. On June 4 we took up our station off East Point with headquarters at Souris, where I continued cruising until October 18.

The mackerel fishery was again a failure in the Gulf of St. Lawrence, the greater part of my time was taken up looking after illegal lobster fishing. I employed a steam launch for twenty days which was most effective and enabled me to do good work, making it about impossible for them to get traps out. I destroyed quite a number of traps but nothing compared to previous years. The assistance of the steam launch was very important.

On June 26 orders were received to be in Sydney on July 12 with the *Kingfisher* to participate in sports at the Carnival. I arrived at Sydney on the 10th in Company with six men-of-war, four English and two French. Immediately on arrival I called on Mayor Crowe and offered any assistance I could give him in carrying out his programme. His Worship accepted our assistance, requesting that we should trim the court house with flags and other decorations for the grand ball in honour of the fleet, which we did to the satisfaction of all concerned. The gig race between three of H.M.S. ships and the cruiser *Kingfisher* was very interesting and was won by the *Kingfisher* easily. The carnival was a grand success.

On July 21 I arrived back at my station off East Point. The vessels had found very few mackerel during my absence. A few small schools were seen off the 2nd Chapel first week in September, nothing later.

The mackerel fishery at the Magdalen Islands was also a failure in several localities; total catch for the Islands was 2,700 barrels. Fish being very large and eagerly sought after at $24 per barrel.

On August 15, acting on instructions from yourself, I proceeded to Pictou and put ship on marine slip. The next day we hauled over on the slip, had the decks caulked, bottom painted and other necessary repairs made. On the 19th we came off the slip and proceeded to Georgetown, my headquarters for mails and telegrams

having been changed to that port. While there I had the mainsail repaired, same having burst on the trip to Picton.

From that time until October 18, we were employed carrying out the law *re* the the Lobster close season. At the expiration of this time we sailed for Sydney, C.B., to meet the fleet of seiners which always assemble there for the fall catch. On arriving I found six seiners reporting no mackerel. On October 27, the schooner *Lena* and *Maud* made a haul of 135 barrels of very large fish, all extra 1. The other vessels of the fleet got nothing to speak of, only two or three barrels each.

On November 6, upon meeting you at Sydney I received instructions to proceed to Shelburne and lay the ship up for winter, on the 10th of that month. I sailed immediately arriving at Shelburne on the 9th, paying out of commission next day.

The Fisheries protection Annual Sports were held at Georgetown on September 4 and 5, five ships being present. My ship had the honour of retaining the Fisheries Protection Cup for rifle competition, also to capture the *Acadia-Kingfisher* Cup from the *Acadia*. Sir Louis Davies, Minister of Marine and Fisheries, was present on the first day of the sports. He takes a great interest in our ships and always on leaving the grounds has a word of praise for the officers and men.

I have the honour to be, Sir,

Your obedient servant,

W. H. KENT,
Commanding 'Kingfisher.'

QUEBEC, December 30, 1899.

To Captain O. G. V. SPAIN R.N.,
Commander of the Fisheries Protection Service,
Ottawa.

SIR,—In conformity with your instructions I have the honour to submit to you the following report which is a summary of the work performed by the revenue cruiser *Constance* during the past season of navigation, 1899:

On February 14 last my engineer and his crew began the work of fitting out, and during the first week of March work was commenced on the new deck for the bridge. On the 25th of March the crew arrived on board, and on the 5th of April all hands signed ship's articles.

On April 1 we began to cut the *Constance* out of the ice at her winter quarters in Indian Cove assisted by shoremen with their ice saws and crow-bars.

The afternoon of April 3 we cut the steamer clear and into open water, proceeding up to Quebec at once under steam and moored in the Louise Basin for safety from the drifting ice in the river.

After receiving on board a full supply of coal, provisions, &c., we left for the Gulf on April 7.

On April 27 seized the schooner *Providence* at St. Anne des Monts River for contravention of the Customs Act, towed her to Rimouski and handed her over to the collector of the port.

On May 15 received instructions from Mr. Fred L. Jones, inspector of customs, to proceed to Shippigan to watch for the schooner *Queen of the Fleet*, and to seize her on sight for smuggling on the Nova Scotia coast.

On May 19 we anchored in Shippigan harbour. Here we learned that the said schooner had been seized the previous day by the collector of the port.

We then proceeded up the Gulf, and from May 25 to June 6 we were at Quebec to take in a new tail shaft to replace the old one condemned by Inspector Samson, which was very much pitted by the action of the sea water. During the above time occupied by the engineer, the crew were employed giving the ship's bottom a thorough

scraping and painting; also had steering gear overhauled and put in good working order.

By instructions received we left Rimouski on June 20 for the Nova Scotia coast, and on Sunday, 25th, anchored at Port Hawkesbury, and at North Sydney the next afternoon.

The evening of June 29 we left North Sydney for St. Pierre Miquelon with Messrs. Jones and party on board and returned to Sydney on the July 3.

From July 4 to 18 our cruise was along the Cape Breton and Nova Scotia coasts to Halifax, but owing to the continued southerly winds and heavy fogs, little or nothing could be accomplished in the way of cruising, and on the latter date (July 18) we returned up the Gulf towards the St. Lawrence river.

On July 27 received instructions to proceed and cruise in the vicinity of Caraquet, Miscou and Shippigan, and to keep a sharp lookout for the topsail schooner *Resolute* from Jersey via Cadiz reported to have a lot of liquor on board to be smuggled ashore at the latter named place.

On the night of August 21 we succeeded in intercepting the said vessel. Next day, August 22, we followed the *Resolute* into Shippigan harbour, gave her a thorough search, and also watched her closely until the 24th, when her cargo of salt was discharged, but nothing of a contraband nature was on board of her except some six cases of brandy and whiskey, a couple of gallons of wine, and some cigars and cigarettes, all of which were entered on the ship's list of provisions, and were duly reported to the collector of the port. On Monday, September 11, we hauled off the schooner *Sanguan* stranded on the sands at Douglastown and towed her into Gaspé Basin.

On September 12, hauled off the schooner *Marie Elmire* stranded on the beach at Fox River and towed her also to Gaspé Basin.

With the exception of the time we were at St. Pierre Miquelon, and on the Nova Scotia coast, our cruise was along the north and south shores of the gulf. Anticosti, and the Bay Chaleurs, covering altogether 16,000 miles, also boarded and searched 107 vessels.

On November 28, we arrived here (Quebec) from the gulf to go into winter quarters at Indian Cove, and on December 4, paid off the officers and crew from further duty, leaving the vessel in charge, for the winter, of my boatswain's mate, John Johnson, and Telesphore Broulotte who keep watch in turn—week about.

I may here mention in conclusion that during the months of October and November the weather, although very open, was very cold with strong gales accompanied with an unusual amount of fog, but less snow than we generally have at that season of the year.

Nothing unusual occurred during the season except the shipping of a heavy sea on October 1, off the south-west point of Anticosti, during a north-west gale, which carried away our after-companion into the lee scuppers and flooding the cabin and officers quarter with from two to three feet of water.

To prevent a recurrence of the same I would suggest a continuance of the present deck house (that is now over the engine-room) to take in the companion leading to the cabin, making the vessel much more seaworthy, besides giving an additional and comfortable extra room which is very much required.

I have the honour to be, sir,

Your obedient servant,

GEO. M. MAY.

Fisheries Intelligence Bureau.

I have now fifty-three reporting and twenty-four bulletin stations; Mr. T. O'Brien, my new clerk in charge at Halifax, has carried out his work in an excellent manner, and to my entire satisfaction. Appended is a list of reporters, also the annual report of the Fisheries Intelligence Bureau.

List of Fisheries Bureau Reporters outside the Civil Service.

Residence.	Name.	Allowance.
		$ cts.
Beaver Harbour, N.B.	E. W. Cross	15 00
Bloomfield, P.E.I.	John Doyle	15 00
Caraquet, N.B.	Miss E. D. Chenard	15 00
D'Escousse, C.B.	R. F. Bourke	15 00
Escuminac, N.B.	J. J. Keary	15 00
Gaspé, P.Q.	J. J. Annett	15 00
Grand Manan, N.B.	E. A. Calder	15 00
Grand River, P.Q.	Mrs. John Carbery	15 00
Ingonish, C.B.	E. B. Burke	15 00
Isaac's Harbour, N.S.	S. R. Giffin	15 00
L'Ardoise, C.B.	John McIsaac	15 00
Long Point, P.Q.	John Vibert	15 00
Lunenburg, N.S.	W. A. Zwicker	15 00
Magdalen Islands	J. A. LeBourdais	15 00
Meat Cove, C.B.	Alex. B. McDonald	15 00
Newport Point, P.Q.	Mrs. Meunier	15 00
Paspébiac, P.Q.	Miss Ada Beck	15 00
Percé, P. Q.	Miss Kate Beck	15 00
Point St. Peter, P.Q.	Mrs. P. Bond	15 00
Salmon River, N.S.	J. H. Whitman	15 00
Seven Islands, P.Q.	P. R. Vignault	15 00
Shippegan, N.B.	Mrs. A. Hamon	15 00
S. W. Point Anticosti	Miss Grace Pope	15 00
Whitehead, N.S.	C. H. Felthmate	15 00
Yarmouth, N.S.	F. L. Hatfield	15 00

List of Fisheries Bureau Reporters who are Government Officials.

Residence.	Name.	Allowance.
		$ cts.
Alberton, P.E.I.	J. P. Brennan	15 00
Arichat, West, C.B.	C. P. LeLacheur	15 00
Bayfield, N.S.	E. G. Randall	15 00
Campobello, N.B	A. J. Clarke	5 00
Canso, N.S.	Thos. C. Cook	15 00
Cheticamp, C.B.	S. Aucoin	5 00
	C. E. Aucoin	10 00
Digby, N.S.	J. M. Viets	15 00
Gabarus, C.B.	R. McLean	15 00
Georgetown, P.E.I.	Chas. Owen	15 00
Hawkesbury, C.B.	J. C. Bourinot	15 00
Liverpool, N.S.	J. H. Dunlop	15 00
Lockeport, N.S.	J. R. Ruggles	15 00
Louisburg, C.B.	P. O'Toole	15 00
Mabou, C. B	Louis McKeen	15 00
Malpeque, P.E.I.	J. M. McNutt	15 00
Margaree, C.B.	M. A. Dunn	15 00
Musquodoboit Harbour, N.S.	George Rowlings	15 00
North Sydney, C.B.	A. G. Hamilton	15 00
Petit-de-Grat, C.B.	P. T. Fougere	15 00
Port Hood, C.B.	E. D. Tremaine	15 00
Port La Tour, N.S.	J. W. Taylor	15 00
Port Medway, N.S.	E. E. Letson	15 00
Port Mulgrave, N.S.	David Murray	15 00
Pubnico, N.S.	J. A. D'Entremont	15 00
Sand Point, N.S.	R. H. Bolman	15 00
Spry Bay, N.S.	W. C. Henley	15 00
St. Ann's, C.B.	D. McAulay	15 00
St. Peter's, C.B.	D. Urquhart	15 00

The whole most respectfully submitted.

O. G. V. SPAIN,
Commander of the Fisheries Protection Service of Canada.

ANNEX A.

DETAILED REPORT OF THE FISHERIES INTELLIGENCE BUREAU.

HALIFAX, December 30, 1899.

Commander O. G. V. SPAIN, R.N.,
Commanding Fisheries Protection Service Canada.

SIR,—I have the honour to submit the annual report of the Fisheries Intelligence Bureau, for the season of 1899.

In connection with the Bureau during the past year, the stations comprised the following, viz.,—Fifty-three reporting and twenty-four bulletin. A new reporting station at Douglastown was established to take the place of Gaspé. The latter place is still retained as a bulletin station. New reporters were appointed to Salmon River, Isaac's Harbour, and Campobello.

The following is a summary received from the various stations showing the result of fishing operations for the season of 1899.

T. O'BRIEN,
Clerk in charge.

CANSO.

Report from *A. N. Whitman & Sons, Canso, N.S.:*

Codfish.—The inshore catch of codfish for 1899 has been no improvement on previous years. As we have before remarked, the inshore fishery seems to be steadily, though slowly declining. This may be due to the increased traffic around our coast; to the disturbing of the water by the thousands of lobster traps and lobster boats in the early part of the season; or to other causes. The bank fishery has been somewhat of an improvement on last year, the most of the vessels having carried home good trips of fish, due perhaps to some extent to bait having been more plentiful on the fishing grounds. There seems to be no diminution of the number of codfish on the outside grounds, and the supply is no doubt practically inexhaustible. The early spring trip was made by a larger number of vessels, though with little profit, the main object in the early start apparently being to make sure of a crew, Canso continues to command a large share of the business of supplying the banking fleet. No place in North America combines so many advantages for the carrying on of the fishing business. The prices of codfish this autumn have shown a sharp decline and there seems no reasonable prospect of a rally, and as a large addition of first-class vessels will be made to the banking fleet in the coming spring, it looks as though low prices would probably rule next year, if the average catch should be maintained.

Haddock.—The haddock fishery of this port is of growing importance. Three firms here are now engaged in the production of finnan haddies, and it gives promise of becoming an important industry. The catch of the fall of 1898 and the winter of 1899, was a fair one and prices were fairly maintained. None were taken in the traps this year. The summer catch was about the average. One firm here ships a carload of fish, weekly, to Montreal and a large proportion of its contents are haddock. It is observed that an increasing number of people are learning the value of haddock as a food fish, as compared with other kind of fish, and this once rather despised fish is coming to the front.

Hake.—These fish are not abundant here at any time. The catch has been as usual and prices have been well sustained.

Herring.—The catch has been of the smallest the season through, but there is nothing to indicate that these fish have left us for good. The catch on the coast of Scotland last year was exceptionally large, this year it has been exceptionally small. So far as Canada is concerned the demand for salt herring is decreasing yearly, other fish and other food taking its place. There has been no special advance in price because of the scarcity.

Lobsters.—The lobster catch in this vicinity showed no special falling off this year, and a sharp advance in the price to the fishermen made the lobster season a profitable one for them. The keen competition between packers has got the business to a point where it has ceased to be profitable, and nothing but the high prices paid for the canned goods has saved them from serious loss. Take the business as a whole it has been operated this year without profit, and it will soon be a case of the survival of the fittest.

Mackerel.—As with herring so with mackerel. The mackerel catch the whole season has been a failure. Fishermen are of the opinion that there will be no marked improvement in the mackerel fishery until an entirely new school comes on the coast. There are not wanting signs of the coming of such a school.

Squid.—The catch of these valuable bait fishes inshore this year has not been large, but on the banks they have been plentiful, especially during the latter part of the season. A marked feature of the business this year has been the small quantity taken by the traps. What have been taken have been secured by means of the jig. The importance of laying in a stock of bait by freezing is becoming more clearly understood every year. The discussion of the subject by Dr. Kendall, M.P.P., of Sydney, both in the Legislature and out of it, has given added emphasis to it, and his scheme of a system of Government aided cold storage houses has received a good deal of attention. Whether it can be worked or not remains to be seen, but there is no doubt that the discussion will have done good in stimulating private enterprise in this direction. We are pleased to be able to add, that the cold storage of bait has been in successful operation here for ten years or more, putting us well in the front of improvement in this particular. From a thousand to fifteen hundred barrels of squid are now in cold storage here and in this vicinity, and this will be ample for local requirements for the remainder of the season.

CLARK'S HARBOUR.

Reporter, Mr. J. Lewis Nickerson :

Codfish were first reported May 9, in fair quantities, and continued so during the balance of the season. Our reporter says, 'Cod is plentiful, but could not be caught for want of bait.' The number of quintals shipped during the season was 4,500.

Haddock first appeared May 11, and varied from fair to poor the whole season. 1,300 quintals were shipped during the season.

Herring appeared on the 5th of August, and disappeared about the 25th, with the result that the total catch for the whole season was estimated at 400 barrels.

Lobsters were first reported on the 1st of January. The catch was very good, and continued so during the remainder of the month. From the 1st of February until the close of the season, the catches gradually decreased. On the whole a fair quantity was realized. Appended is the statement of the number of cases canned :—

	Cases.
M. G. Nickerson	700
Cape Island Packing Co.	800
Jas. McGrath	550
	2,050

The number of crates of live lobsters shipped during the season was 4,256.

Mackerel first appeared on the 18th of May. The catch was much below the average. The total number of barrels in traps as below:—

	Barrels.
Green Island trap	1,801
Seal Rock	160
Little Green Island	120
	2,081

The fishing throughout the whole season was greatly handicapped on account of scarcity of bait.

DIGBY.

Reporter, Mr. J. M. Veits:

Codfish was first reported May 2, and scarce. With the exception of a few days in June, when the catches were fair, the season's catch was light. Dog-fish were very troublesome during July and August. Numerous storms also contributed towards making the catch a light one. Total catch estimated at 359,000 lbs.

Haddock fishing commenced on May 2, and the catches were poor during the balance of the month. In June the catch varied from fair to poor and continued so to end of the season. The haddock fishing has been practically a failure, the total catch being 362,000 lbs., less than one-third of last year's catch. Enough are taken to supply the finnan-haddie business.

Hake this season was exceptionally good. Reported May 9 in small quantities to end of month. From June 13 to the end of the season hake was plentiful. Season's catch estimated at 2,270,000 lbs.

Halibut fishing, as far as this centre is concerned, is small. Digby vessels take their catches to Yarmouth, and sell there for American markets, therefore the total catch for this station, is for those vessels that come here at the end of the season. 7,150 lbs. being reported by these vessels.

Herring fishery has been much better this season than for many years past. First reported May 9 and varied from fair to good during the month. June catch was not as good as the preceding month. Fair catches were made in July, and varied from fair to good in August and September. The catch for the balance of the season was poor. Mr. Viets says, 'The Smith Cove and Little Joggins weirs, once noted for their "Digby Chickens" have taken a much larger quantity, and of better quality, than for many years past. This I cannot help feeling is owing to the scarcity of lobster pots in the vicinity of Digby Gut and in the harbour. Another reason for the failure of the herring fishing here, I cannot but record, in my observations is the awful and unnecessary destruction of the small fry of herring caught in the weirs, and unfit for market, but not allowed to escape. Consequently they are left to rot in weirs, or hauled therefrom and spread on land. Another reason is what is called "Drifting at night" with torches. Yet another reason, and perhaps as fatal, to the increase or even normal standard, is taking them for the sardine factories on the coast of Maine.' Seasons catch 415 brls.

Lobsters were first reported May 2, when a fair catch was made, but the balance of the month was poor. During June the catch varied from fair to poor. The head of the Bay of Fundy is the chief ground for this industry, in this district. The lobster fishing is fast failing. In 1895 it took one pot to do certain work, in 1899 it takes ten pots and men in proportion to do the same work. The catch is kept at its normal status, but at the expense, or rather slaughter of that fishery, by extra force.

Mackerel was reported first on May 30 and was scarce the whole season. The weir at Joggins had 20 brls. on May 26 and 60 brls. on May 27.

Bait was obtainable at this station and St. Mary's Bay throughout the season Digby fishermen find it hard to obtain bait along the North shore.

ISAAC'S HARBOUR.

Reporter, Mr. Simon M. Giffin:

Codfish.—The fishing at the early part of the season was only fair. Towards the end of August the fishing improved when boats averaged 2 quintals. The fishing for September opened well, cod averaged ¾ quintal per man, but a great many days were lost on account of storms. The October watch was fair, being interfered with by dog-fish. Total for Isaac's Harbour was 200 quintals. The total catch for the following places was 500 quintals, Drum Head. Seal Harbour, Fisherman's Harbour.

Haddock.—100 quintals were taken during the season.

Halibut was reported only one day during the season, and very scarce.

Herring.—The total catch of spring and fall herring is estimated at 900 brls. Fair catches were made in the early part of the season up to the end of August. The September catch was poor, with the exception of two days, when herring was reported very plentiful. Herring struck in at Carter, 8 miles west of Isaac's Harbour, in large quantities, when ten to fourty barrels were taken to fleet of nets, and continued good until September 22. Nothing was done in October.

Mackerel was very plentiful for the greater part of the season but as they were very small, the catches were light, on account of their not meshing well.

Pollock.—100 quintals were taken throughout the season.

LIVERPOOL.

Reporter, Mr. J. H. Dunlop:

Alewives first reported May 11, catches being light and irregular to the end of June. Nothing reported afterwards.

Cod first taken May 19; catches irregular, but fair to end of June. Scarcity of bait interfered greatly. Cod improved in July, being plentiful throughout the month. On the 2nd schooner *Priscilla* arrived with 700 quintals. Catch varied from good to fair for balance of season.

Haddock first reported May 27, catches being very irregular and light to the end of June. Fair and regular catches were made during July, after which haddock again fell off, light catches being made to end of season.

Herring was not reported until the 1st of July, catches varying from poor to good to 24th, when thirty barrels were taken in drag seine. Storms interfered with fishing during August. Catches were very light in September. Reported schooling off Port Mouton on 18th and 22nd. Nothing was done in October.

Lobsters were first reported May 4, good catches being made until the 22nd, when a storm arrived which destroyed the gear and put an end to the fishing for a few days. For the balance of the season the lobster fishing was very poor.

Mackerel.—Nothing was done in this branch until July 26 when they were reported fair. On 27 twenty-five barrels of very large mackerel were taken in trap. Twelve barrels were taken 12th of August and four barrels on 18th, which was about all taken during the month. In September mackerel was scarce, some boats getting about twenty large mackerel about every fourth day. On 12th twenty-five barrels were taken in drag net. Very little was done in October.

Squid when reported were fair.

LOCKEPORT.

Reporter, Mr. J. R. Ruggles:

Alewives first appeared May 5, but only in small quantities. Very little was done in this branch throughout the season.

Codfish.—Nothing was done in this branch until May 27, when good fishing was reported off shore, the small boats returning with very good catches. The June fishing opened fair, and steadily improved to 20th, when cod fishing was reported very good and all the boats doing well. On 15th of July the catch was

already far in excess of last year. For the balance of the season the cod remained very plentiful. In addition to the total catch it is reported that 322 barrels, or 9,660 gallons of cod oil was extracted.

Haddock.—A few haddock were first taken on July 1, but the catch gradually increased to fair to the end of the season.

Hake.—Although hake was not reported, the total catch shows a slight increase over last year.

Halibut.—The first halibut reported were taken about the middle of July. The fish was very fine, but in small quantities. In August not enough was taken to supply the local demand. Total catch estimated at 5,000 pounds.

Herring struck in June 21, and craft were able to secure enough for bait, sometimes readily and at others with short delay. During July herring appeared only in small schools, fishermen getting from two to three brls. Herring was reported very plentiful on the 1st and 2nd of August, but were poor for the rest of the month, some getting from ten to fifty and others nothing. Very little was done in this branch in September and October. In November herring were reported more plentiful than earlier in the season. The total catch this season is estimated at 1,900 barrels or 380,000 lbs.

Lobsters were first reported on May 1, when 2,000 were taken in this harbour. They continued in fair quantities until the 18th when they fell off and were so scarce that about the 27th a great many of the fishermen were talking of taking up their traps. During May storms destroyed much of the gear, which greatly interfered with this fishery.

No. of live lobsters taken for export.....112,500
No. of lobsters canned.....(1,000 cases) or 48,000 lbs.

In comparison the number of live lobsters exported was far in excess of last year, but a smaller quantity was canned.

CATCH of Fish at Lockeport Station for 1899.

Name of Vessel.	Catch.	Oil.
		Brls.
Springwood	624,000	59
Three Bells	447,500	39
Alice M. Buden	608,000	57
Mary C	367,000	31
Alina	361,250	38
Helene	501,500	40
Laurence	310,000	3
Agattia	435,000	39
Satellite	100,000	.....
Icelda	20,000	1
Only Son	21,000	.....
Altara	45,900	3
Trilby	25,500	3
Idith	136,000	5
News Boy	86,500	.....
Charlie Richardson	95,000	4
Boats from Port Hébert to Blue Island	500,000	.....
	4,684,150	322

Proportion of Cod	4,554,616	lbs.
" Haddock	83,311	"
" Hake	41,155	"
" Pollock	5,068	"
Total	4,684,150	"

LUNENBURG.

Reporter, Mr. W. A. Zwicker:

Cod were first reported May 1, the catch being good, but owing to storms nothing was done from this to 13th. From 14th to 30th the fish was plentiful, boats getting full fares, and bankers reporting cod good. During June the catches varied from very plentiful to fair. In July the fishing fell off slightly, owing to quantities of dogfish. The August fishing was about the same as July, owing to bait being scarce for some little time. Storms and dog-fish interfered somewhat with cod-fishing during the months of September and October, but when fishing was carried on the catches were good to fair. The shore catch was considered the best for years. The Labrador catch was a poor one. Throughout the entire season the fishing was very good at North Bay, Sable Island, Western, Middle, Quero and Grand Banks.

Dogfish was not quite as troublesome as in 1898 on the shore fishing grounds, but bankers found them very troublesome on Middle Bank.

Haddock first reported June 2, when good catches were made up to the 7th. From June 8 until September 4, the catch was fair, but fell off considerably from that until the 15th of October. From that date, until November 15, the haddock fishing was good. On the whole this season's catch was the best for a number of years.

Herring.—The first bank herring was taken May 16 in good quantities, but continued so for three days only, poor catches being made from 20th to 31st. From June 1st to 5th, the catch of herring was fair, but nothing was done, owing to scarcity of bait, from that until 20th. From June 21 to July 19, herring was very plentiful in traps, the catch being sold to bankers for bait. From July 20 to the first weeks in November, the catch was fair. This season's catch was below the average.

Lobsters.—The fishermen at this station commenced fishing in this branch on the 2nd of January, and stopped June 30. The catch for January, February and March was poor, the catch being exported to the United States. The April catch was good, May fair, and June poor. About 25 per cent of the larger ones taken in April and May were exported to the United States, the remainder being sold to packers. The season's catch was about an average one.

LUNENBURG BANKERS.—(TRAWLERS), LA HAVE.

	Lbs.		Lbs.
Harold J. Parker	560,000	Citizen	460,000
Carlraine	560,000	Majestic	440,000
Puritan	300,000	L. B. Currie	360,000
Barcelona	380,000	Jennie Myrtle	445,000
Bessie A	365,000	Beluga	350,000
Loreana Maud	540,000	Emulator	353,000
Torradon	320,000	Manal M. Parks	475,000
Grace	340,000	Carrie	470,000
Glyndon	500,000	Uruguay	530,000
Comrade	370,000	Collector	465,000
Alma Nelson	500,000	Leopold	460,000
Millie Mace	435,000	Madeira	525,000
Alberta	375,000	Volunteer	470,000
Joseph McGill	337,000	Alaska	400,000
Minnie J. Hackman	450,000	Talmouth	372,000
Avis	370,000	Carrie	475,000
Curfew	190,000	Roma	500,000
Perfect	160,000	Jessie L. Smith	300,000

NORTH BAY AND BANKS (HANDLINERS.)

Algoma	280,000	Gallant	300,000
Klondyke	440,000	St. Vincent	300,000
Lillian	550,000	Cayuga	360,000
Loraine C	265,000	Rowena	250,000
Cambrian	286,000	Fern	300,000
Georgina	70,000	Mischief	120,000
Enterprise	240,000	Nightingale	190,000
Puma	250,000	D. M. Owen	240,000
Calla Lily	80,000	Yosemite	460,000
Brittania	260,000	Melbourne	160,000

LABRADOR MEN.

Grenada	90,000	Abana	75,000
Valiant	50,000	Maggie	50,000
Ovando	120,000	Miletus	110,000
Mayflower	70,000	G. A. Smith	10,000
Garland	55,000	Garnet	120,000
Stella E	16,000		

Mackerel.—The first mackerel was reported May 18, one boat getting five. Nothing was reported in this branch until 26th, when boats averaged 100 mackerel. From 25th to 31st, some large mackerel being taken in nets. During June a few large and medium mackerel were taken every day. On July 3, six barrels of small mackerel were taken in traps. Nothing else was done until July 26, when 340 large mackerel were taken in trap. Two barrels were taken on August 5. Very little was done in this line for the balance of the season. This year's catch, on the whole, was not as good as former years.

Squid was plentiful from October 15 to November 10, but very scarce before and after these dates. Bankers report squid plentiful from July 15 to October 10 on all the banks.

LUNENBURG BANKING FLEET.

	Lbs.		Lbs.
O. P. Silver	340,000	Harry Smith	360,000
Dora	370,000	Malabar	430,000
Erminie	375,000	Minnie J. Smith	480,000
Blenheim	420,000	Milo	430,000
Tyler	330,000	St. Helena	420,000
J. C. Schwartz	380,000	Olive Louise	340,000
Lena J. Oxner	500,000	Robert F. Mason	300,000
Athelon	460,000	Panama	440,000
Basil M. Gilbert	450,000	Britannia	410,000
Wisteria	325,000	Gleaner	360,000
Elbro	290,000	Renown	320,000
Atlanta	490,000	Nonpareil	300,000
Lawrence	370,000	Luetta	410,000
Howard Young	505,000	Clara E. Mason	340,000
Bonanza	360,000	J. M. Young	300,000
Clarence Smith	460,000	Viking	390,000
Bona Fider	355,000	Huron	375,000
J. A. Silver	340,000	Werra	360,000
Yucaton	300,000	B. G. Anderson	420,000
Lilla B. Hirtle	528,000	Urania	450,000
Secret	450,000	Gladys B. Smith	520,000
Dictator	390,000	Torato	320,000
E. L. Mauner	440,000	Columbia	380,000
Ontario	370,000	Maggie M. W.	420,000
Argosy	365,000	St. Clair	430,000
J. H. Ernst	400,000	Muriel	540,000
L. E. Young	340,000	Minto	540,000
Arcana	400,000	Aroostook	290,000
B. L. Corkum	320,000	Laura Knock	370,000
Mascot	390,000	Alalia	140,000
Cordova	360,000	Gladys May	390,000

LUNENBURG LABRADOR FLEET.

Jennie May	100,000	Nicanor	110,000
Sadie	180,000	Monarch	90,000

LUNENBURG NORTH BAY FLEET.

Maggie E. Z	200,000	Rapture	140,000
Minnie B. Smith	150,000		

MAHONE BAY FISHING SCHOONERS AND THEIR CATCH.

Laura C. Zwicker	360,000	Unique	400,000
Genevieve	440,000	Elva M	250,000
Venus	380,000	C. U. Mader	385,000
Blanche A. Colp	410,000	Flo. M. Mader	420,000
Roe	300,000	Hattie L. M	260,000
Daisy Linden	420,000	Energy	400,000
Lawrence	330,000	Mildred	400,000
Snow Queen	275,000		

MAHONE BAY LABRADOR FLEET.

Nova Zembla	70,000	Irene M. B.	100,000
Senovar	65,000	D. A. Mader	120,000
C. A. Chisholm	45,000	Martello	120,000

MUSQUODOBOIT HARBOUR.

Reporter, Mr. George Rowlings:

Alewives were a total failure this year. No reason can be given for this, as there were many places clear of sawdust and other obstructions, which left a free passage to the lakes.

Cod were first reported May 29, catches being fair until the end of June. Nothing was done during the early part of July, but the catch improved towards the end of the month. Fish was scarce during the balance of the season, storms greatly interfering with the fishermen. Boat fishermen did more and vessels less than last year. On the whole the season's catch shows a slight improvement over last, but fishermen have to go out between one and two miles offshore, the fish keeping well off.

Haddock first reported June 6, fair catches being made to end of month. The last part of July and first half of August, haddock was plentiful, but catches gradually fell off towards the end of the season.

Herring reported June 13 in very small quantities during the month, but slightly improved in July. Very little was done in this branch for the balance of the season. On the whole the catch is much below that of last year.

Lobsters were not so plentiful as last year, there being not more than half the quantity shipped to Boston. A great many of the canners put up large quantities, which they intended to ship, but on account of the low prices in Boston, they did not ship, which makes the season's pack come nearly up to that of last year. About 23 tons were shipped in shell to the United States this season.

Mackerel has been a failure. The catches for the last four or five years has been small, but never so small as this year.

Salmon.—The catch this year was fair.

Trout were fairly plentiful.

Total catch of fish taken in the district, from Dartmouth to Ship Harbour:—

Alewives	66 barrels.
Cod	11,365 quintals.
Haddock	1,145 "
Halibut	26,000 pounds.
Herring	2,106 barrels.
Lobsters	68,866 pounds.
Mackerel	136 barrels.
Pollock	1,325 quintals.
Salmon	2,360 pounds.

PORT LA TOUR.

Reporter, Mr. J. W. Taylor:

The catch in general has been largely in advance of last year, although there has been no very large catches in any department, the work has been very regular.

Alewives.—The first good run was reported April 8 from Barrington. Very little was done at Port La Tour in this department.

Cod.—The season commenced rather dull in this line. The catch during May averaged one quintal per man, but improved towards the end of the month. The fishing was fairly regular in June, and when weather permitted fishermen averaged 1½ quintals per day. The July catch varied from fair to poor. Scarcity of bait

greatly interfered with the fishing in August. The early part of September was poor in this branch, but improved towards the end of the month. Schooner *Will Carleton* arrived from banks on September 9, with 1,300 quintals cod. Fair catches were made in October. The total catch at this station is estimated at 2,000 quintals, about 40 per cent better than last year.

Haddock were first reported July 1 in small quantities, and with the exception of some fair catches, were considered poor, although the total season's catch is double that of last year.

Herring were first reported June 5 off Cape Negro. The first report from this station was received June 23 when best netter had eighty herring. The July catch was poor. In August herring were very plentiful, but so small that they would not mesh well. On account of scarcity of bait the boats were unable to go out for the greater part of the month. Very little was done in September and a few fair catches were reported in October. The total catch is estimated at 300 barrels.

Lobsters.—The lobster fishery did not employ as many men this year on account of codfish striking in earlier than for several years. Lobsters were first reported May 8, the greater part of which were small. The catch was very poor for the balance of the season, but long before the close season a great many traps were taken up and their owners turned to codfishing. Before the close of the season prices went so high that the fishermen realized more than in former years.

Mackerel.—The mackerel fishing was a failure at this station. The largest catch reported being fifty to a net and that only three times during the entire season.

Squid were poor, and as at other places the fishermen were handicapped on account of scarcity of bait. Clams were, with one or two exceptions, used during the entire season.

PORT MEDWAY.

Reporter, Mr. E. E. Letson

Alewives.—First reported the 2nd of May, the catches being light, but regular during the month.

Cod.—Good appearance of cod was reported on May 8, but none were taken until 24th, when good catches were made. Storms interfered with the fishermen for the greater part of June. On 24th, the schooner *Gladys May* arrived with 600 quintals. From 25th to end of month cod was plentiful but would not take clam bait. The July catch was very regular, and the fishermen made good hauls throughout the month. During August the catch was not so regular, but were more plentiful. On 13th schooner *Myosotis* arrived from Grand Banks with 1,800 quintals. On account of the scarcity of bait, few boats went out in the early part of September. On the 9th fair catches were made and daily improved to the end of the season.

Haddock was not reported until the 20th of June, the catches being light, but regular to the end of July. From the first of August to the end of the season the catch was about the same as reported for cod.

Herring.—Small herring struck in July 11, in immense schools, but they would not mesh. Attempts were made to stop them with capelin seines, but few were taken. Dog-fish struck in on the 24th. A few large herring were taken on the 28th. The catches for the balance of the season were light, only enough being taken to supply bait for a few days.

Lobsters.—The catches throughout the month of May were very regular and fair. The storm of the 21st destroyed a great quantity of gear. United States schooner *Lotaria* dragged her anchor and stranded. Light catches were made during the rest of the season.

Mackerel were only reported three times during the season and then very scarce.

Salmon.—During May the catch varied from fair to poor, very little being done in this branch for the remainder of the season.

Squid was scarce all through the fishing season.

PORT MULGRAVE.

Reporter, Mr. David Murray:

The season of 1899 has been the poorest fishing since 1881. No spring mackerel. Not many summer herring, and fall herring has been a failure. Where we used to get 20 barrels to a boat, we have not got one herring. Some took as low as 100 herring all the season, and others got none. 500 barrels herring would cover the catch from Magdalen Islands to St. Peter's Island. On May 10 Captain Harding of the schooner *Annie D.* reported having sailed through large shoals of mackerel, but no boats in sight.

EAST PUBNICO.

Reporter, Mr. J. A. D'Entremont:

Codfish first reported May 16, fair and continued so up to 20th, when it began to slacken off. From June 5 to July 1, codfish was reported very plentiful. The fish was only fair to 10th of July, but gradually improved week of 18th, afterwards fell back to fair. All the boats were hauled up for the winter on September 12. On the whole the season 's catch was a good one, being estimated at 3,045,000 lbs.

Halibut.—The catch was very poor during the season.

Herring.—There was a few herring caught inshore about the last of September, and fair catches were made at Flat and Mud Islands, but the season's catch has been almost a total failure.

Lobsters were reported for the first time May 6. The catch was poor and remained so during the whole season.

Mackerel.—The first report of mackerel was received May 18, when 100 were taken in nets. Nothing was done from that date until 25th when fair catches were made to 31st. Trap had 15 brls. May 26. From 1st to 23rd June the mackerel fishing was fair. Nothing was done in this branch after that date. The total catch is considered a poor one.

SALMON RIVER.

Reporter, Mr. Thomas O'Leary:

The lobster fishery is about the only one that is carried on to any extent at this station. After it is over the fishermen pursue the hook and line fishing on a small scale, using clams for bait. The lobster fishery has been very good this season at Port Dufferin. The quantity to each boat has not been as large as last year but prices were much better.

There is no net fishing carried on here, except by the light keeper at Beaver Island, who has taken about 3 barrels during the season.

SAND POINT.

Reporter, Mr. R. R. A. Bolman:

Alewives were taken in light quantities from May 12 to June 1, about one-half of which were used fresh for bait by the shallops. The balance were salted and smoked for home consumption.

Codfish was fair 10 to 15 miles off shore during May, and improved during the months of June, July, August and the middle of September, when the squid left the grounds. Codfishing was exceedingly poor, all the season, inside of 8 miles from the shore. Dog-fish being very plentiful drove the fish off shore. About three-quarters of the boat-fishermen at this port closed up their fish stages and went to the United States. One shallop only fished from this port, hence the total catch of shore cod will not exceed 500 quintals. Mr. Bolman says:—'The exodus of young and middle-aged fishermen from this harbour and headlands to the United States, is three-fold that

known at any time for the past 30 years. Boats can be seen all along the shore hauled up and housed over, and their owners gone in American vessels.'

The Bank Quero fleet have done well with handlines and clam bait. The five vessels composing said fleet returned on their second trips with decks to the water. Total catch 9,500 quintals, with 100 men.

Haddock were poor during the whole season. Total catch 30 quintals.

Herring.—A small school struck in May 29. The latter part of August another school struck in. Total catch, 375 barrels, 300 of which were salted and the balance used fresh for bait. The first school were very small and fat, the last one large and poor.

Lobsters.—Fishing commenced on February 1. The catch was light during the month owing to bad weather. During March the fishing improved both in quantity and quality. The April catch was fair up to the middle of May, when it slacked off rapidly. On May 13 an American lobster smack loaded 9,000 large live lobsters, it being one week's catch from this place. The season's catch was below that of 1898, but prices ranged higher and the net proceeds were better than last year. The catch this season was about one-half large.

Mackerel appeared at intervals during September. The totol catch was 12 barrels, all of which were salted for market.

Salmon was first reported on May 19 in fair quantities, and continued so until July 10.

Squid was fair inshore and plentiful off-shore all the season up to September.

SPRY BAY.

Reporter, Mr. J. E. Conrad:

Cod.—The first cod were reported on May 12, boats taking from fifty to sixty each, but towards the end of the month the catch fell off, some boats only getting 10. The June and July catch varied from fair to poor, up to July 29 when dog-fish struck in. During the balance of the season the catch, with a few exceptions, was middling. As at other places storms and dog-fish greatly interfered with the fishing, the latter being particularly annoying.

Haddock.—Very little was done in this branch throughout the entire season, boats getting from five to twenty quintals each.

Herring first struck in about May 11, but very few were taken until June 4, when they became plentiful, and remained so for the better part of the month. The catch during the month of July and August was poor. The fishing slightly improved during September. Very little was done in October. The catch on the whole is better than for some years past.

Lobsters were first reported May 2, the catch being poor and continued so for the entire season.

Mackerel were first reported schooling at Pope's Head. First reported at this station being taken on May 4. Schools were also reported near this place on June 3, but very few were captured. The balance of the season was poor in this branch. Ten barrels represents the entire catch for this station for the season.

Pollock.—Total catch averages one to two quintals to a boat.

Salmon was poor throughout the season.

Squid when reported was poor, although they were very destructive to nets. Squid was used for bait when obtainable, but clams and herring was chiefly used.

WHITEHEAD.

Reporter, Mr. C. C. Feltmate:

Alewives were taken in light catches from May 31 and only lasted a few days. Total catch estimated at 75 barrels.

Codfish were first reported May 25 very plentiful. From June 1 to July 6 the catch was very poor, owing somewhat to bad weather and scarcity of bait. The

catch improved about the middle of July, but gradually decreased. The August catch was practically nothing; dogfish, bad weather and scarcity of bait, being the cause. During September the catch varied from fair to poor. 1,300 quintals is the estimated catch for this season.

Haddock was poor during the whole season. First reported May 24. Total catch 450 quintals, equal to about half of last year's catch.

Herring struck in May 24. The fishing was very poor during the months of May and June. From 1st to 15th July the catch was fair, poor remainder of month. No herring caught during the month of August, owing to bad weather, dog-fish and scarcity of bait. September and October catches were poor. On the whole the total catch shows a slight improvement over last year, 500 barrels being taken this season.

Lobsters were first reported May 2, catches varying from fair to light to the end of the season. Total season's pack estimated at 2,000 cases, about 400 cases less than last year.

Mackerel were reported schooling on May 25. On 29th of that month 3,000 were taken in trap. The month of June opened with 2,000 mackerel in trap, which were shipped fresh. From that to 19th very few were taken. On 19th, 40 barrels were in trap, which were also shipped fresh. No mackerel were taken during the balance of the season. Total catch 100 barrels.

Pollock were taken in fair quantities off and on during the season, a great many being taken in traps. Total catch estimated at 300 quintals.

Squid.—With one or two exceptions, bait was very scarce the whole season.

WOOD'S HARBOUR.

Reporter, Mr. W. L. Crowell :

Cod was first reported June 13 and fair catches were made from that date to July 8, after which none was reported. The season's catch was very light owing to the fishermen being unable to secure bait.

Herring were taken in light catches the last part of September, but after that never came inshore. There was not enough taken to supply the fishermen with bait. Large quantities were reported schooling outside of the harbour, but nothing was done. The total catch is below that of last year.

Lobsters were taken in fair quantities all through the month of January. Owing to bad weather very little was done in February, but in March some very good catches were made. The best fishing was done from 1st to 15th April after which light catches were made up to the end of the season. The catch is a little below last year's.

Mackerel were first taken about May 10 and fair catches were made to about the middle of June, after which none were captured. The catch was an average one.

Tusket River would be about as follows :—

Salmon,	fresh,	11,000	lbs.,	mostly exported.
Trout	"	8,000	"	"
Smelts	"	15,000	"	"
Frost fish	"	10,000	"	local use and lobster bait.
Shad	"	60	brls.,	different ways.
Eels	"	40	"	mostly exported.
Alewives	"	2,800	"	about half salted, balance fresh bait.

Salmon River fisheries :—

Salmon,	fresh,	1,000	lbs.,	mostly exported.
Trout	"	1,000	"	different ways.
Smelts	"	1,500	"	about half exported.
Frost fish	"	1,200	"	local use.
Eels	"	20	brls.,	mostly exported.
Alewives,	"	400	"	mostly fresh bait.

Eel Brook River fisheries:

Alewives, fresh,	250 brls.,	mostly fresh bait.
Eels "	120 "	local use.
Trout "	400. "	different ways.
Smelts "	1,500 lbs.,	exported.
Silver hake "	2,000 "	home use.

YARMOUTH.

Reporter, Mr. F. L. Hatfield:

Alewives were first reported May 1, catches being fair until 31st.

Cod were reported fair on May 12, catches remaining so until 17th when cod became very plentiful for one day only, after which it dropped back to fair. Very little was done in June until 22nd, after which date cod was very plentiful up to the end of the month. With the exception of one day, codfishing was very dull in July. Catches for the balance of the season were very irregular, owing to storms and scarcity of bait.

Haddock was about the same as cod throughout the season.

Halibut.—Fair but irregular catches were made during May and June.

Herring was poor all through the season.

Lobsters were reported May 1 when good catches were made, but decreased during the second week. Fair but irregular fishing was reported to end of month. Very little was for rest of season. During the past season the following quantities of live lobsters have been shipped to the United States from this port:—

1899.	Crates.	Value.
January	2,385	$34,971
February	1,176	16,793
March	1,468	27,350
April	4,847	64,850
May	3,301	32,131
June	1,404	17,730
July	324	4,852
	14,905	$198,677

The following are the shipments of canned lobsters of 1899 pack:—

1899	Lbs.	Value.
January	10,956	$ 1,893
February	24,198	4,454
March	9,900	1,640
April	53,300	9,435
May	348,115	50,216
June	156,650	23,229
July	68,750	13,364
August	3,100	620
September	1,200	300
	676,169	$105,151

Mackerel were first taken May 8, one trap having one dozen large fish. During the remainder of the month, the various traps in this district caught from one to one hundred and eighty barrels. The first fish taken by nets were reported on 18th, small catches being made, with exception of 29th to 31st, when mackerel was very plentiful in nets. During June traps varied from one to eighty

barrels. Net fishing was good early in the month. Traps were taken up on July 1.

Salmon when reported were fair.

Shad first reported May 4 in fair quantities, but catches were poor and irregular during May and June.

Trout were reported during May, fair and good, but very irregular. Nothing afterwards.

WEST ARICHAT.

Reporter, C. P. LeLacheur:

Alewives were again a failure this year, not more than fifty barrels being taken.

Cod struck in about the last of May and light catches were made, up to the middle of June, when occasionally fair hauls were made up to the end of the month. During the first part of July the catch was variable, but improved towards end of that month, while the herring were on the coast. The fishing during August and September was poor. Windy weather and scarcity of bait in September and part of October greatly interfered with the work. The total catch this year is considerably below the average. This may be attributed to the unusual scarcity of bait this season. The prices, however, were better than last year, which to a certain extent will make up for shortage of catch.

Haddock were first reported May 30, and small catches were made pretty regularly up to June 25. Very few were taken during the remainder of the season. The catch varies but slightly from last year; this season's catch being smaller than usual.

Herring were first taken about June 15, when good catches of medium sized fish were made close inshore. Some good hauls of large fat fish were again made from 26th to 28th of that month, the catch ranging from three to five barrels per boat daily. The school then left, and did not appear again until July 18, when for a couple of nights, some of the fishermen did fairly well. From that until the close of the season the fishing was poor. The usual 'August run' did not put in an appearance this year, consequently the total catch is not nearly as large as last year.

Lobsters.—Fishing commenced April 25, and closed about the middle of June. The fishing was poor all through the season. The factory closed on June 24 on account of scarcity of lobsters. The catch is steadily diminishing each year and the indications are that this once valuable industry will soon have passed away. Were it not for the very high prices paid this season, some of the fishermen would have barely paid expenses. The greater portion of the lobsters caught here were canned.

Mackerel.—A few of these fish made their appearance here 1st of June, but only a small number were taken. The catch this year was a failure.

Bait.—The fishermen of this place have not got into the way of importing herring for bait, but depend entirely on sculpine and flatfish, caught along the water's edge with spears or fished with hook and line. Therefore, unless the weather is favourable for catching these fish—a calm, clear water being necessary—their traps are sometimes very poorly baited.

ARICHAT.]

Reporter, Mr. E. P. Flynn:

Alewives, which some years ago were fairly plentiful seem to have abandoned our shores. Our reporter says:—'This I attribute, in a great measure, to the want of proper protection of the brooks leading into our lakes, where these fish resorted for the purpose of spawning.'

Cod were first taken here May 15, in very light quantities, and of an inferior quality. During the balance of the season the catch varied from fair to poor. The season's catch has been a poor one compared with other years. The prices were

very much higher than they have been for some years past. The short catch can be attributed to stormy weather and scarcity of bait.

Haddock.—The same may be said of haddock as of cod.

Herring first struck in about May 9, but nothing was done during that month. Another school struck these shores on June 20, and fair catches were made. The July catch was very good to the end of month, but gradually fell off. Nothing was done in August, and very little in September and October.

Lobsters.—The first lobsters taken April 14, and only in fair quantities. The factory here continued packing from the beginning of the season, until the last of June, when, owing to the scarcity of fish it closed. The quantity and quality were about the same as former years.

Mackerel struck in about May 25, but very few were caught. The mackerel fishery was practically a failure. Our reporter attributes the scarcity of this fish of late to the use of purse seines, which in following the mackerel drive them from the coast.

Bait was scarce during the better part of the season.

CHETICAMP.

Reporter, Mr. Chas. E. AuCoin:

The total number of boats registered this year is 21. Two new ones being registered this season.

The fisheries in general, as usual, have been greatly hindered by the inclemency of the weather, and a superabundance of that execrable dog-fish, although the progress is not by far to be complained at, save the mackerel fishery. The latter has entirely failed this year, but no cause whatsoever can be assigned to its failure. It is probable that large schools of whales and sea-hogs, so called, have been detrimental to the success of the fishermen. These have lashed the waters of the Gulf of St. Lawrence, the greater part of the month of June and, no doubt, have caused some havoc among other schools of fish.

Codfish was first reported May 8, and in small quantities, and continued so for the balance of the month. A slight improvement was noticeable during the month of June. The July catch varied from fair to good. During the balance of the season the catch varied from good to poor. A general deterioration is noticeable in the size of cod taken at present. Between 40 and 50 barrels of cod and dog-fish oil has been exported from this station.

Haddock were first reported May 15. The catches throughout the season were on the whole only fair.

Hake appeared May 19, but with the exception of a few fair catches in September, the season's work was poor. The total catch of cod, haddock and hake was 9,000 quintals. During the last few years hake has gone on a remarkable decline.

Halibut was first reported July 28. The whole season's catch was very small.

Herring was first reported May 2. Small thin herring have been captured in nets in the spring as usual; but in no large quantities. The herring, for some unaccountable reason, left these shores and were not reported the balance of the season. The most of the herring landed here comes from the shores of the Magdalen Islands, where a few of the largest boats go in the early spring. The total catch of herring, including what was brought from the Magdalen Islands, was 300 barrels.

Lobsters first report May 1 in fair quantities and varied from that to good during the balance of the season. The lobster catch was quite favourable to the fishermen at this station this year, but the quality of the fish seems to be deepening into inferiority every year.

Mackerel first appeared on the scene about the July 17, when a few were taken at Pleasant Bay. The quantity captured by each individual boat was small, although the aggregate from the whole fleet would still make up a good figure. Total catch 200 barrels.

Salmon reported first May 8. The capture of salmon has had a poor show this year. Owing to strict regulations by Government in connection with the setting

of nets, especially in Little River; and the vigilance tendered by the overseer and guardians, against the intrepid means of illegal fishing. Total catch for the season is estimated at 4,000 lbs.

Squid were fairly plentiful during the season.

D'ESCOUSSE.

Reporter, Mr. R. F. Burke:

Codfish.—Nothing was done in this branch on account of stormy weather, until May 24. The catch when reported was very poor and continued so to the end of June, with the exception of a few days at the end of month, when fair catches were made. Nothing was done during the balance of the season. The number of boats engaged in the fishing at this station is 25.

The total catch for the season is as follows:—

Schooner *Jaquis*	900	quintals.
" *Ginde*	600	"
" *Victoria*	400	"
" *Jubilee*	600	"
" *Nova Stella*	900	"
" *Ariquiba*	500	"
	3,900	"

Hake was first reported May 15 very scarce, and continued so to the end of the season.

Herring struck in May 8, but the catches were very poor during the month, and the first half of June. From the 15th to 30th of that month the fishermen did fairly well. Reported fair for a few days only in July. After that nothing was done.

Lobsters were reported in fair quantities May 3 and continued so for the balance of the season. A great quantity of gear was destroyed by storms in the early part of the year.

Mackerel were not reported until May 24, when some fair catches were made. The early part of June a few good hauls were taken, but nothing was done after that, with the exception of one day in August. The spring catch was better than last year.

GABARUS.

Reporter, Mr. R. McLean:

Caplin was very plentiful throughout the month of June.

Codfish.—The early part of May was occupied by the fishermen in getting ready for fishing, and the first report for cod was received May 25, boats averaging one quintal, which were principally caught in deep water. The June and July catch was an improvement on the previous month. Catches varied from two to three and a-half quintals per boat. The fish was very large. The August codfishing was very good, and of fine quality. On 21st boats brought in from 1,600 to 2,100 lbs. each. Cod was reported very plentiful in September and October, boats getting from three to seven quintals of fine large fish. The cod taken were larger and better than any caught for the last 18 years, being all first quality. The total catch this year is estimated at 2 500 quintals.

Haddock.—Fair catches were reported from June 5, and continued so until the middle of August, after which date haddock fell off considerably. Total catch estimated at 200 quintals.

Hake were first reported August 11, in small quantities, and light catches were made off and on during the balance of the season.

Herring first struck in June 9, but only light catches were made for the balance of the month. The first herring were taken in deep water. During the

first two weeks of July only enough herring was taken to supply the fishermen with bait. From the 15th, the catch greatly improved, varying from 600 to 3,000 large fish. Herring fell off considerably in August. Nothing was done in this branch during August and September. None of the fish taken were of second quality, being all merchantable. The catch is considered better than for the last 18 years. Total catch 539 barrels. Herring used for home consumption and bait not included.

Lobsters.—A great deal of injury was done, and a great many days were lost to the fishermen on account of storms, fog and heavy seas. The first lobsters were taken May 9, 500 being captured. Fair catches were made up to the end of the season.

Mackerel.—The first mackerel captured in this district were taken May 25, some boats getting from 50 to 100. On the 29th, the catch averaged two barrels. The catch for the early part of June was fair, but towards the end of the month it gradually dropped off, and nothing was done in this branch for the balance of the season. Large schools of very small mackerel appeared in August, but were only fit for bait. The season's catch is considered a light one, being but 80 barrels.

Squid appeared about June 23. With the exception of a few herring, mackerel and caplin, squid supplied all the bait used at this station. Clams were not used.

HAWKESBURY.

Reporter, Mr. J. C. Bourinot:

Alewives when reported in May were good at River Inhabitants and Port Malcolm. Very scarce in June.

Cod and *Haddock* fisheries are said to be a failure.

Herring.—Nothing was done in this branch at Hawkesbury, with the exception of one day in July, when herring was plentiful. Were also good at Basin River Inhabitants and Port Malcomn, between 22nd and 27th June.

Lobsters were reported May 8 in fair quantities, but were only taken once during the month at this station. Fair catches were made throughout May at Strait of Canso and Bear Island. Light catches were made at Hawkesbury during June.

Mackerel reported fair at Port Malcomn and Basin River Inhabitants May 30. Scarce for rest of season.

Pollock were very plentiful for the greater part of the season.

INGONISH.

Reporter, Mr. J. M. Burke:

Cod.—The fishing season opened up about a fortnight earlier than usual this year. Codfish were taken the first week of May, and continued fairly plentiful up to the middle of July. From that to the end of the month fishing was poor. Codfish was plentiful in August, boats getting from one to four quintals. August was the best month of the season in this branch. During the balance of the season, fishing was fair. On the whole, the catch is fully one-half better than for the past three years, prices being from $1 to $1.25 per quintal higher, hence the year has been an extraordinary one in this branch of the fisheries.

Haddock were first reported May 13, on trawls in shoal water, and the catch varied from good to poor, for about three weeks, when the school was over. The catch was about the same per boat, but as there were more boats engaged in this branch, this spring, the general catch was about one-third more.

Herring.—The spring run struck in the last week of April, in small quantities and were used entirely for bait for cod and lobster fishing. There was no July or summer herring at this station this season.

Lobsters were taken the last week in April, and a number of factories commenced packing about May 1, all being in operation from the second week in May. The catch was fair during the first five weeks, gradually decreasing towards the end of the season, in fact became so scarce that some packers closed their factories on or about July 15. The season's catch was an average one, good prices being obtained.

Mackerel appeared about May 20, but in such small quantities that there was not enough taken to supply bait for codfishing. A few were taken in shore-fast nets along in July and August. None were taken after September 1.

Salmon were first taken the last week of May. The season's catch was an average one, but some localities did not do so well owing to their position with the prevailing winds. Fair prices were obtained for the early catch, and what could be sold fresh brought fair value throughout the season.

Squid struck in between 1st and 10th July, and remained fairly plentiful, although irregular at times all the season up to about November 15.

The season has been a very remunerative one to the fishermen and dealers as well, at this station. The increased catch of cod and haddock with increased prices obtained puts the year's work in advance 50 per cent of any season for at least five years past.

L'ARDOISE.

Reporter, Mr. John McIsaac:

Codfish were first reported May 24, but in small quantities, until July 28, when a slight improvement was noticeable. The fishing days being very few, the catch on the whole was poor. The cod taken during the season was taken in deep water. Mr. McIsaac says:—'The cod and haddock fisheries are a thing of the past in this bay, only a few small boats attending to it.' The boats for Scattarie and Lingan have all done well, as also did four small boats at Eastern Bank.

Haddock.—The same could be said of haddock, as for cod. First reported May 24, scarce, and continued so until the close of the season. Haddock was formerly best for the poor classes as it used to be very plentiful and close inshore, but now very few are taken.

Herring.—The catch of fat herring was very good, both in quantity and quality. First reported May 24, very scarce and remained so until July 1, when it improved. Unfortunately a great many fishermen started for Scattarie too soon, expecting to meet the herring there. They struck in here better than any season for the past ten years. The fishermen who stayed here did exceptionally well.

Lobsters first made their appearence towards the end of April. Reported in fair catches during the season. On the whole the catch was not as good as last year, but owing to the high prices paid, the fishermen have done very well financially. The bulk of the catch was sold to factories.

Mackerel struck in as usual not in large quantities. First reported May 27. That and getting good prices brought the average higher than last year. The bulk of the catch prepared for the Halifax market, and the balance sold to bankers.

LOUISBURG.

Reporter, C. V. LaVatte:

Codfish first appeared the last of May, and were plentiful during the entire season. This branch of the fisheries was greatly handicapped by scarcity of bait and dog-fish. The total catch was about 50 per cent better than last year.

Haddock were first reported June 3 and plentiful and varied for that month from good to fair. With the exception of a few days in September nothing more was done in this line. The season's catch was about double that of last year.

Herring struck in May 1, and were scarce up to end of June. A slight improvement was noticeable in July, but after that the catch was very poor. The season's catch was about 30 per cent below that of other years.

Lobsters were first taken May 19 and continued fair up to the time the season closed. A great number of traps were destroyed by storms, and much time was lost in repairing and replacing them. The season's catch was considered an average one.

Mackerel first struck in about the last of May. The June fishing was poor. During July Louisburg harbour was alive with small mackerel, smaller than tinkers, and they took hook freely. In August swarms of tinkers struck in and plenty were taken, but they were too small to salt and made fairly good bait. The mackerel voyages were not as good as last year, being only about one-half.

Squid were very scarce in June and July, but plentiful in August, and for the balance of the season was only obtainable on certain days.

'The dog-fish question,' our reporter says, 'is a very serious one to our fishermen, as they prevent them from catching squid for bait and also hinder the catching of codfish. If out fishermen had cold storage facilities, so that they could take care of bait, days when fish is abundant, the catch would be increased at least 25 per cent. On the whole our fishermen are in a better position this year than they have been for some years past.'

MABOU.

Reporter, Mr. Lewis McKeen:

This year's returns show a marked decrease, probably 50 per cent in the catch of line fish (cod, hake and haddock), compared with the season of 1898.

Alewives reported for a few days only at the latter part of May, but in very small quantities.

Codfish appeared about May 25. Throughout June and July fresh bait was scarce, and as most of the fishermen were prosecuting the lobster fishery, very little attention was paid to line fishing. During the early part of August catches varied from poor to fair, but improved after the 10th. About September 1 dog-fish struck in and were found very troublesome. A number of the fishermen became discouraged and gave up fishing to work on the railroad. Since November dog-fish have not been so troublesome, but codfish have been scattered over the fishing grounds, consequently the catch has been small.

Herring.—A fair catch of spring herring was made in May. These fish, however, are used chiefly for lobster and cod bait, and are not of much commercial value. The July catch of fat herring was a failure. The scarcity of this fish greatly affected the catch of line fish in this district. The September catch was also much below the average.

Lobsters appeared about April 29, or immediately after the opening of navigation. Good catches were made during the first week, but at the end of that time a heavy northerly gale drove the ice inshore, and destroyed a large number of traps and herring nets. Throughout May, however, good catches were made. During the remainder of the season the catch was fair. The total pack was estimated in excess of 1898.

Mackerel.—This industry has practically become a thing of the past in this district. The very small catch of this season were used for home consumption.

Salmon.—The catch of salmon has been decreasing in this district during the last eight or ten years, until this season it was a complete failure. The few that were taken were disposed of for home consumption.

MARGAREE.

Reporter, Mr. M. A. Dunn:

Alewives.—The catch of these fish this season is almost a total failure. First reported May 10, and few were taken up to June 5. After that date nothing was reported.

Codfish were first reported taken with trawls of May 15, and with hand lines May 20. With trawls fair fishing was reported up to the end of June, but the catches with hand lines during this time was light. The fishing was good during

the months of July and August, particularly the week of August 26 which was considered the best of the season. Cod was reported plentiful during the remainder of the season, but could not be caught, owing to stormy weather, dog-fish and scarcity of bait. The catch for the whole season is estimated to be a little above the average year's catch.

Haddock movements were similar to cod, but catch much less than last year.

Hake were not reported until July 15 and in very small quantities, and remained scarce throughout the whole season with the exception of a few days towards the close, when fair catches were made.

Herring struck the coast April 28 and good catches were taken for a few days. On May 4 a storm destroyed a great many of the nets, after that the catch was only fair. On July 29 a large school of herring was reported off the coast, but very few were taken on account of the abundance of dog-fish, which prevented the nets from fishing, The first week in August, fishing was fair. During the balance of the season, very little was done. On the whole the season's catch was considered a failure.

Lobsters.—Fishing commenced May 8 and continued good until June 15, when it began to decrease gradually to the end of the season. The catch was considered an average one.

Salmon.—First taken in river June 1, and outside June 9. The catch continued light until June 15. From that until July 15 the catch was good. For the balance of the season fishing in this branch was light. Total catch was not up to last year.

Squid struck in about July 25, and were the chief source of bait during the season.

Dog-fish put in an appearance about July 20, and continued almost a constant source of annoyance during the whole of the season. This destructive fish has caused great loss to the fishing industry of this port, and especially in the lines of herring and codfish.

MEAT COVE.

Reporter, Alex. B. McDonald:

Codfish were very plentiful throughout the season, but there being no certain market for cod, not many were taken.

Lobsters.—Fishing was above the average although the season was a little late opening, on account of ice and heavy wind. As there was no gales to damage gear, lobsters were plentiful and of good size.

Mackerel fishing was a failure, only very few catches being made early in the season. Mature fish very scarce, only few being seen schooling. Tinker mackerel were plentiful, but would not take the hook.

The fishermen here are at a great disadvantage in not having a merchant buying fish, in the community, and having no regular steam communication with the outside world.

The only chance they have of selling their fish, after the middle of August, is the uncertain arrival of a trading schooner.

Net fishing is going out of practice altogether.

The dogfish are so plentiful, that they destroy any nets that are set, hence very few herring are caught.

Squid were plentiful at this station throughout the season.

PETIT-DE-GRAT.

Reporter, Mr. Peter T. Fougère:

Alewives.—None were taken here this season.

Codfish made their appearance about the 18th of May. They were not in large quantities as in former years, but still the catch was about the same as last year. The total catch is estimated at 1,200 cwt. The price has increased $1 over last year, which is equal to 200 cwt. over last year. In addition to the tota

catch it is reported that 1,700 gallons of oil was extracted from cod, 1,400 of which was shipped to Halifax and the balance kept by the fishermen for their nets and other purposes.

Dog-fish.—This fish made its appearance in July, and has been a source of worry to fishermen throughout the season. The estimated loss caused by them to nets, &c., is about $1.000.

Haddock were first taken about May 10. The catch this year is about 1,800 cwt. smaller than last season's. The fishermen assign the cause of the smallness of the catch to easterly winds, and some kind of small bait which took the haddock away with them. The prices were very good here, being $2.50 to $3 per cwt.

Herring struck in the 30th of May. The catch was a light one throughout the whole season. The total catch this year only amounted to 440 barrels, being about 960 barrels less than last season. The fishermen lost much by giving their time to netting. The price paid was the same as usual, $3.50.

Lobsters.—This was the very first fish taken in these parts, being captured about 12th of April, very good catches being made up to near the middle of May. From that on the lobsters were very scarce. Some of the fishermen hauled up their traps and got ready for haddock and codfishing, although they would have done much better had they kept at lobstering 1,200 cases were put up by the canneries here, and about 50,000 live lobsters were shipped to Upper Canada and the United States. Although the catch was smaller, better prices were paid, and on the whole the fishermen have done as well as heretofore.

Mackerel.—This fish is evidently a thing of the past in this locality. There were four vessels fitted out here to go mackerel fishing at the Magdalen Islands, two of these did fairly well, the largest sold its catch for $1,400, and the other for $800. The other two did nothing. 120 barrels of mackerel was all that was brought into Petit-de-Grat. No fall mackerel were caught here.

Pollock came in at the same time as the haddock. About 300 cwt. were taken. The price brought was the same as haddock.

Salmon.—This delicious fish came about the 20th of June, but not in such large quantities as last year. The amount taken was just about enough to supply the demand for fresh salmon. The value of the catch was about $250 less than last season.

Squid.—The late arrival of squid put the fishermen in this locality back very much for want of bait. Squid has been very poor throughout the season. The first squid were captured about the last of July.

PORT HOOD.

Reporter, Mr. E. D. Tremaine:

Codfish were first caught this season May 16, the catch throughout being light. Dog-fish arrived on the grounds August 31 and interfered with all kinds of fishing during the season.

Haddock were first reported June 5 in fair quantities, and continued so until the arrival of the dog-fish, when the catches were very poor.

Hake fishing was also practically ruined by dog-fish. Hake was first taken June 19. Up to the arrival of dog-fish the catch was fair, afterwards this branch of the fishing industry was almost abandoned.

Herring were first reported May 2 in fair quantities, and continued so during the remainder of the month. During June, July and August the catch was poor. From 1st to 14th September the catch gradually improved. Reported very plentiful on 14th. Remainder of month and October few were taken. On account of dog-fish many fishermen did not set their nets, not caring to have them cut to pieces.

Lobsters were first taken last week in April, in large quantities until May 6 when much of the gear was destroyed by storms. Afterwards, however, the catch improved, and upon the whole a good season's work was done.

Mackerel fishing was poor the whole season. First reported July 13; 75 barrels of good quality mackerel represent the total catch.

Squid was fairly plentiful during the season, with two or three very large runs.

ST. ANN'S.

Reporter, Mr. Thos. D. Morrison :

Cod first reported May 13 the catch varying from good to poor during the month. For the balance of the season, cod was regularly poor.

Herring reported May 9 in fair quantities. The fishing in this branch was very poor for the rest of season.

Mackerel.—Practically nothing done in this line.

Salmon first reported May 30. From that date until July 5 the catches were fair. Nothing was done afterwards.

Squid were reported very plentiful between 11th and 20th July, boats jigging from six to eight barrels per day. Several bankers baited here this season.

ST. PETER'S.

Reporter, H. D. Urquhart :

Alewives were very scarce. About the 1st of June a few were caught, the highest catch being not over a barrel.

Codfish and *haddock* were not caught in this bay this season, but the catches made by vessels from this vicinity on the eastern banks and North Bay were exceptionally good.

Herring.—The first run was about June 1. The catches were good, and the run lasted five days. July 20 saw the second run, and August 13, the third, the fish of the later run being exceptionally large. The highest catch was about 15 barrels.

Lobsters.—This branch of the fishing industry opened about the 20th of April. The May catch was fair, but fell off towards the end of the month. The fishing varied during June from fair to poor, very little was done for the balance of the season. The number of fishermen who follow this branch are increasing every year. That more were canned is no doubt due to this fact, and not to any increase in the fish.

Mackerel made their first appearance May 28, the fish being extremely large. The highest catch was 13 barrels. The second run came on the 10th of July, number three, the highest catch being three barrels. Towards the latter part of the month, the bay was alive with small mackerel known as tinkers, the largest being about 10 inches long.

Salmon fishing can hardly be said to be carried on in this bay, the catches made this season being very light.

PRINCE EDWARD ISLAND.

ALBERTON.

Reporter, Mr. J. P. Brennan :

Alewives were reported but twice during the season, and in very small quantities.

Cod.—The codfishing did not start until the 30th of May, owing to ice being still in the bay, and the prevalence of storms. Cod was fair during June at Alberton, and for a few days were reported plentiful at Waterford and Sea Cow Pond. The catch was good for the early part of July, but slackened considerably towards the end. During the balance of the season fish was very scarce at this station, but reported fair at times at Cape North and Black Marsh. During the storm of September 6, two Caraquet boats were lost at Alberton, seven men being drowned.

Haddock were reported June 13 in fair quantities, but after that date fishing was poor in this branch.

Hake.—The first hake were taken June 21, fair but irregular catches being made during the season.

Herring struck in on 6th of May, and were reported very plentiful at Alberton and Tignish for two days only, when they fell off, nothing being done in this line from May 31 to August 15, when herring reappeared, but in small quantities. A large number of nets were destroyed by the storm of June 22.

Lobsters were first taken May 6, in large quantities. Plentiful at North Cape and Tignish. No fishing was done from 14th to 25th May. The catch for June opened with lobsters reported very plentiful, but the catch greatly fell off during the month. For the balance of the season the catch varied from fair to poor.

Mackerel not reported until June 19, poor catches being made throughout the entire season.

BLOOMFIELD OR MIMINEGASH.

Reporter Mr. John Doyle:

Codfish.—On account of the ice not leaving the coast, the first report was received May 26. Fair catches were made during May and June. The fishing gradually decreased in July. Nothing was done in this branch during the month of August and the first three weeks of September. The balance of the season's catch was fair. On account of the scarcity of bait, the catch was about the same as last year.

Hake struck in on July 8 and fair catches were made up to the last week in September, after which the fishing fell off. Nothing was done in October. The total catch for the season was equal to last year.

Herring struck in May 12, and were reported plentiful from Cape Wolfe to Cape Gage. They only remained for about seven days during the month. No other school was seen for the balance of the season. There was not enough herring taken for bait.

Lobsters were reported May 11 which was later than usual. The catch was from fair to poor until the 20th, after which they fell off and only a few fair catches were made during the balance of the season.

Mackerel was first reported May 20. Fishing with hook and line may be called a failure. A few mackerel were taken in nets throughout the season, but in very small quantities. There was not a school of mackerel seen on this part of the coast at any time during the season.

Fish of all kinds being in great demand, fishermen say they have done as well this season as they have done for the last few.

GEORGETOWN.

Reporter, Mr. Charles Owen:

Codfish first reported May 19 in small quantities, but gradually improved towards the end of the month. Fair catches were made during June. The July catch at this station was poor. Cod reported very plentiful on 3rd, S.E. of Boughton Island, and on 22nd, off Murray Harbour. The catch for August and September was fair. October poor.

Hake has been plentiful throughout the season, and good catches have been made on the fishing banks extending from Pictou Island to East Point. First reported June 19.

Herring made their appearance April 12, when only a few were netted. On the 24th, one barrel per net was caught. From 1st to 30th May there was a large body in this vicinity, and during that month a number of bankers were supplied with bait, also a quantity secured by lobster fishermen for their traps. A large quantity was caught and loaded on small schooners in bulk, these cargoes being disposed of to the several lobster factories along the coast. On or about June 1, the school moved out of the bays and rivers, and small catches were made some distance off

shore. During September herring was netted off Pictou Island, and also from Wood Island to Cape Bear. In October, fair catches were reported, having been taken off Souris and Grand River.

Lobster fishing commenced on or about April 20, and fair to good catches were made up to May 15; from that to June 15 this branch slackened off so much, that the fishermen moved their traps into shallow water, where an improvement in the catch was observed for some days. During the balance of the season the catch per boat was poor. Owing to the advance in value of lobsters, the amount realized is equal to that of former years.

Mackerel fishing in this vicinity has been a failure this year. Very few have been taken by hook, and the quantity collected from all sources would not exceed 100 barrels.

Squid with one or two exceptions was fair. Bait could be obtained at Cardigan Bay and Panmuir Island during the early part of the season.

MALPEQUE.

Reporter, Mr. Jas. McNutt:

Cod were first reported May 25 in fair quantities. During the remainder of the season the catch varied from fair to good. This branch was greatly interfered with by stormy weather.

Herring first struck in May 6, and fair catches were made to 20th, after which very little was reported in this branch. Enough was taken during the season to supply the fishermen with bait and for home consumption. One schooner load was sold for bait elsewhere.

Lobster fishing commenced about the 10th of May, and with a few exceptions was reported poor up to 20th when a very severe north-east storm destroyed a great deal of gear, principally those in shallow water. The catch in June varied from fair to poor, and, as in May much gear was destroyed by the storm of June 22. The catch was poor for the balance of the season. The total catch is rated considerably below that of last year, but the prices being higher compensated somewhat for the small quantity.

Mackerel fishing was an entire failure at this station, so far as hooking is concerned. First reported July 6 in poor quantities and continued so for the balance of the season. Some nets were set along the shore, but very few mackerel were taken. The fishermen at this station contend that netting is the great cause of the failure of the mackerel fishery in this district.

NEW BRUNSWICK.

CAMPOBELLO.

Reporter, Mr. Luke Byron:

The catch of all kinds of fish at this station during the season has been fair. At first the fish was very plentiful, and close inshore. The catch was good of almost all kinds of fish, such as cod, hake, haddock, halibut, pollock and herring. Towards the end of the season the fish moved out into deep water, and the catch gradually diminished. All the fish taken here was of a superior quality, especially the herring, which was too large for canning purposes, and as a consequence several factories had to close down. The general opinion is that the sardine business must necessarily reduce the quantity of herring in this locality, if the demand for sardines continues, as the herring are getting scarcer every year.

ESCUMINAC.

Reporter, Mr. J. J. Keary:

Cod was first reported June 5 in fair quantities, and gradually improved towards the end of the month. For the balance of the season the catch was fair and regular.

Herring struck in May 8 in large schools, and remained very plentiful up to 13th when they left the shore. The season's catch is considered fair.

Lobsters were first taken on May 2 in fair quantities. The catches for the remainder of the season were very poor.

Mackerel.—The catch of mackerel this season was a very poor one. First reported June 24. Drift and set nets were used, nothing being done with hook. Our reporter says :—'That drift nets keep the mackerel out in deep water, thereby hurting hooking.'

Salmon were first reported May 19, from which date, with one or two exceptions, catches were very light.

Shad were first reported May 25 in fair quantities, and remained so to the middle of June, after which date nothing was done in this branch.

GRAND MANAN.

Reporter, Mr. Charles Dixon:

Codfish were not reported until May 17, and the catch to the end of the month was very good. Codfish gradually fell off during June, and with one or two exceptions little or nothing was done in this branch for the remainder of the season. The total catch will not exceed 500 quintals.

Haddock was reported May 17, but not in as large quantities as cod. Very plentiful for the greater part of June, boats getting from 5 to 10 quintals and vessels about 18 quintals daily. The catch varied from very good to poor from July 1 to August 8. Nothing much was done in this branch during the balance of the season. Total catch estimated at 500 quintals.

Hake was first reported on May 18, and the catches throughout the balance of the month were good. Hake was very plentiful at Long Island Bay, all the boats and vessels doing extra well during June. The catch of July was a good one, but fishing was not as steady. Dog-fish made their appearance about the 22nd and greatly bothered the fishermen. Fishing was good the first part of August, but nothing was done in this branch from the 8th to 25th of this month. Hake remained fair for the balance of the season. Hake was reported good during the fishing season from the various places in this district. 4,000 quintals is the total catch. 350 brls. fish oil have been put up at this station.

Halibut appeared May 23, and the catch was a poor one.

Herring were first reported on May 17, but very few were taken. Nothing was done in June. Some were taken in weirs and nets during July, but just about enough to supply bait. Reported fairly good the first and last part of August, boats getting from 2 to 8 brls. per day, and the weirs at Seal Cove and Long Island doing well. Herring were plentiful in all weirs in the island during September. Good netting was reported from Cheneys Island, South Head and Whale Cove, small schooners getting from 25 to 50 barrels per week. Nothing was done in October. About 6,000 half barrels of herring have been put by up the fishermen at this station, and 1,000,000 boxes smoked. The canning factory at North Head put up 1,700 cases of kippered herring, this year. 14,500 brls. small herring were sent to Portland and Lubec for the sardine factories.

Lobsters were reported May 17 owing to storms which destroyed a great quantity of gear. The fishing throughout the season was good. The factory at Grand Harbour canned 205,600 lbs. this season. About 3,000 cwt. fresh lobsters were exported to the United States.

Pollock.—4,500 quintals was the total catch for this station, the largest part of which were taken in the weirs.

Bait.—The first bait used was gaspereaux, obtained at St. John, N.B., during May and June. Herring was used for the balance of the season.

SHIPPIGAN.

Reporter, Mrs. A. Hammon:

Cod.—Owing to moving ice, boats were unable to start fishing before the end of May. The fishing at first was good to fair, but on account of the blustery weather the boats could not stay out. Towards the fall schooners made immense catches. The total catch was the best for years. The prices being maintained made it a prosperous year for the fishermen in this district. The total catch is estimated at 20,000 quintals, which was dried and shipped in bulk to ports in the Mediterranean, casked for West Indies and Brazil, and a great quantity shipped to local markets.

Herring.—None reported.

Lobsters.—This season's catch was considered fair. First reported May 17. The average catch per boat was about 450. About 7,000 cases were packed on Miscou and these shores this season. Good prices were realized.

Mackerel this year is a failure.

Salmon were very scarce. June was the only month that salmon was reported, but only for a few days, and in fair quantities.

PROVINCE OF QUEBEC.

DOUGLASTOWN.

Reporter, Mr. Chas. Viet:

Cod.—The catch of cod varied throughout the season from fair to poor. Storms greatly interfered with the fishing in this district.

Herring when reported from this station was poor.

Mackerel was not reported.

Squid was obtainable throughout the greater part of the fishing season. On the whole the catch of nearly all kinds of fish was fair.

GRAND RIVER.

Reporter, Mrs. John Carbery:

Capelin was very plentiful, but for a few days only.

Codfish first reported May 24 in fair quantities, and varied from that to poor during the months of June and July. From August 1 to September 15 dog-fish became so numerous and destructive that little or nothing could be done. This was followed by bad weather which made the fall catch a failure. The bank fishermen did fairly well.

Herring first struck in May 1, in very large schools and continued so, with a few exceptions, during the remainder of the month. During June the catch was poor. July and August varied from good to fair. Little fishing was done during the month of September, on account of the abundance of dog-fish, which was very destructive to nets and trawls. From 1st to 10th of October, storms stopped fishing, which was fair from 11th to close of season.

Lobsters first reported May 1, of fair size and very plentiful. During June the catch varied from fair to poor. On the whole the season's catch was fair.

Mackerel was very scarce all through the season.

Salmon were first reported May 26. The whole season's catch was poor, and the size of the fish small.

Smelt.—The catch this season was very good.

Squid were fair from August 1st to the close of the season.

LONG POINT.

Reporter, Mr. John Vibert:

Cod.—Owing to the number of storms on the coast, cod was not reported until the June 14, and then in very irregular catches. Good catches were made from July 5 to 15. With the exception of one day in August, when cod was reported very plentiful, nothing else was done in this line for the rest of the season.

Launce when reported were very plentiful.

Salmon was only reported three times during the season, when the catches were good.

Magpie.

Capelin appeared in large quantities on June 2, and remained so for the remainder of the month.

Cod first reported May 28, the catches varying from fair to good during the month, and reported very plentiful for the early part of July. Nothing was reported afterwards.

Launce when reported were very plentiful.

Salmon were reported plentiful the last part of June.

Moisie River.

Capelin was reported in fair quantities for only a few days.

Codfish was first reported May 30, but the catches, as far as were reported, were poor, until June 26, when fishing was good for a few days. During the balance of the season, the catches varied from fair to poor. Bad weather interfered greatly with the season's work.

NEWPORT POINT.

Reporter, Mrs. Meunier:

Capelin were first reported on May 31; small catches were made during June.

Cod appeared in very light quantities on May 2, but nothing was done for the remainder of the month owing to strong tides and storms. On 25th cod was reported very good on banks, boats getting from 10 to 25 drafts, The fishing during June was only fair owing to scarcity of bait, and storms. A slight improvement was noticeable in July. For the balance of the season the fishing continued fair. Fishing was reported fairly good on banks throughout the season. The total catch for this station is estimated at 11,000 quintals.

Herring struck in about May 1, and in large quantities, and excellent catches were made for the balance of the month. Throughout June and July the catch was fair but very irregular. This season's catch is 8,000 barrels.

Lobsters.—The season opened very favourably, and good catches were made up to May 5, after which date the catch kept gradually decreasing, little or nothing being done after June 9. The pack this year is slightly in advance of last, being 640 cases.

Salmon when reported was fair. The total catch is estimated at 3,000 lbs.

Squid was used throughout the season. It was scarce in the earlier part, but was more plentiful towards the end of the fishing season.

PASPEBIAC.

Reporter, Miss Ada Beck:

Capelin made their appearance about the June 1, and good catches were made up to the 17th, after which date nothing was reported.

Cod first reported May 2, in fair quantities. Nothing was done during the balance of the month owing to heavy winds. For the balance of the season the catches varied from good to poor, but were very irregular owing to scarcity of bait and high winds.

Herring struck in May 5, and good catches were made for the greater part of the month. Nothing was done in June and July. Light but irregular catches were made during the balance of the season.

Squid and all other kinds of bait was scarce throughout the season.

PERCÉ.

Reporter, Mr. E. G. Touzeau :

Cod fishing started May 7, but poor catches being made to the end of the month. A slight improvement was noticeable in June and July. Fair catches were made during the balance of the season. On the whole the season's work was only fair, owing more to the unsettled weather than to the scarcity of fish.

Herring struck in about the 2nd of May, and were plentiful up to the end of the month. June, July and August catches varied from very good to poor, being greatly handicapped by scarcity of bait and storms. Nothing was done in September and October. On the whole the catch is considered fair.

Lobsters were good in the early spring, but very scarce towards the latter part of the season.

Squid were plentiful up to the end of May, and greatly varied during the balance of the season.

POINT ST. PETER.

Reporter, Mrs. P. Bond:

Codfish were first reported on on May 22, in light quantities until June 1. From that date until 23rd, they varied from fair to good. Throughout July and August catches were fair to poor, owing to the unfavorable weather and scarcity of bait. During October, up to the closing of the season the catches were very good.

Herring struck in on May 17, and continued plentiful until 22nd, when the catches began to decrease until the close of the season. The herring generally were large and fat.

Lobsters were first reported May 10, and the catches throughout the season were very light.

Mackerel.—There was no mackerel taken in this district this season.

Salmon.—A few light catches were made during June.

Smelt.—Only fair catches were made from 10th to 14th October.

Squid first appeared on July 19, and in small quantities. From August 26 to the end of the season, squid reported very plentiful.

SEVEN ISLANDS.

Reporter, Mr. P. E. Vignault :

Codfish appeared late in June, and in small quantities, but the fishing was fair, when weather permitted, for the balance of the month, but decreased during July and August. September and October fishing was for the most part stopped by stormy weather. On the whole the total catch was considered poor.

Herring were first reported May 16, in small quantities and practically nothing was done in this branch during the season.

Salmon were first reported May 22 plentiful, and continued so until June 20, after which date light catches were made. The total catch is considered better than last year.

ST. JOHN'S RIVER.

Capelin first reported May 29. During June caplin was very plentiful.

Cod were first taken June 14, but in small quantities, plentiful towards the end of the month.

Launce were very plentiful the latter part of June. Nothing reported afterwards.

Salmon were reported plentiful for the greater part of June.

Trout when reported were plentiful.

SHELDRAKE.

Capelin reported very plentiful for the greater part of June.

Cod.—The catch during the season was very irregular, never being better than fair.

Launce when reported was fair.

Salmon catch was poor.

ANTICOSTI.

Reporter, Miss Grace Pope:

English Bay.

Capelin struck in very plentiful on June 6, and were reported abundant up to the middle of July.

Cod fishing began May 25, when light to fair catches were made up to the end of June. The July and August catch were generally poor. From the middle of September to the middle of October practically nothing was done in this branch. From October 15 to close of season the fishing was very good.

Herring struck in May 25 in fair quantities and continued so to June 10, when some very good catches were made. From 1st to 15th July herring was reported very plentiful. The balance of the season the fishing varied from fair to poor.

Squid made their appearance August 2 in small quantities, and remained so until middle of October. From that to the end of the season the fishing was very good.

Fox Bay.

Cod.—Very little fishing was done during the summer. Fair catches were made from October 10, but greatly handicapped on account of scarcity of bait. Salt squid being the only thing obtainable.

Herring.—First reported May 19. Very plentiful and continued good for balance of month and June. After that date catches were only fair.

South-west Point.

Capelin was remarkably good from June 5 up to the middle of July. Immense flocks of gannets reported constantly fishing. Some caplin found in fish, and reported in great abundance fifteen miles from South-west Point as late as August 15.

Cod.—There was no fishing done here in this branch during the season.

Strawberry Cove.

Fishing was practically the same as English Bay. The total catch at English Bay and Strawberry Cove for eleven boats was 105 barrels green fish and 170 quintals dry, to end of September.

MAGDALEN ISLANDS.

Reporter, Mr. J. A. LeBourdais:

Codfish struck inshore May 15 and remained until latter end of June, but only light catches were made on account of the small number of boats engaged in that branch, and bait being scarce. During July and September the catch was fair, but greatly hindered by bad weather. October, was in large quantities, but could not be caught on account of scarcity of bait and bad weather. The fishing boats engaged have done fairly well.

Herring struck in about April 26. First caught in nets and very plentiful. Also plentiful at the north part of the island, before the ice cleared, and continued so until the end of May, when it slackened. Herring seemed to be more abundant at Pleasant Bay than for several years past. Large quantities were taken for bait and local use. A large fleet of Nova Scotia and bank fishermen came to this place for their bait, some of them twice during the month. During the first part of September some few large herring were caught it nets, but none to mention, on account of bad weather.

Lobsters were first reported in the early part of May, prospects being very good and herring plentiful. During the month of June and early part of July the catch was fair, but gradually decreased. The lobsters are as plentiful this year as formerly, but on account of the number of boats engaged the catches were light. During the season the lagoons were literally covered with traps.

Mackerel struck in first week in June in fair quantities, but only light catches were made by netters. Reported taking hook freely July 17, and good catches were made in several of the bays daily until September 1. Very little fishing was done in that month owing to bad weather. Throughout the season mackerel seemed to be in fair quantities but would not take the hook, excepting during the time mentioned. The fishing at Byron was fairly good during August. All fishing, with the exception of herring, was not above the average.

The whole respectfully submitted.

T. O'BRIEN.