
ANNUAL REPORT

OF THE

DEPARTMENT OF FISHERIES

DOMINION OF CANADA

FOR

THE YEAR 1890.

PRINTED BY ORDER OF PARLIAMENT.



OTTAWA :

PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY.

1891.

*To His Excellency the Right Honourable Lord Stanley of Preston, P.C., G.C.B., &c., &c.,
&c., Governor General of Canada, &c., &c., &c.*

MAY IT PLEASE YOUR EXCELLENCY :

The undersigned has the honour to present to Your Excellency the Annual Report of the Department of Fisheries for the year 1890.

All of which is respectfully submitted,

CHARLES H. TUPPER,

Minister of Marine and Fisheries.

OTTAWA, 13th February, 1891.

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FOR THE YEAR 1890.

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SEVENTH ANNUAL REPORT
OF THE
DEPUTY MINISTER OF FISHERIES,
1890.

To the Honourable

CHARLES H. TUPPER,

Minister of Marine and Fisheries.

SIR,—I have the honour to submit the Annual Report of the Fisheries Department for the year 1890.

This report deals with the financial statements for the fiscal year ended 30th June, 1890, and such other general matters as are available. The fisheries statistics, however, and other data having reference to the season's catch, which are compiled to the end of the calendar year, will form the subject of a supplementary report.

EXPENDITURE AND RECEIPTS.

The total expenditure of the Department for all services, except Civil Government, amounted to, for the fiscal year, \$328,748.66, from appropriations of \$383,300.00, leaving an unexpended balance of \$54,551.34, which lapses to the treasury, no portion of this sum having been brought down for expenditure during the current fiscal year.

The revenue of the Department, including the receipts for licenses from United States' fishing vessels, and the proceeds of the sale of the condemned schooner "David J. Adams," amounted to the sum of \$56,976.83.

EXPENDITURE.

The sub-division of the expenditure is as follows:—

Service.	Expenditure.	Vote.
	\$ cts.	\$ cts.
Fisheries.....	65,873 32	80,500 00
Fish-breeding.....	39,126 91	40,000 00
Fisheries protection service.....	64,434 66	100,000 00
Fishing bounty.....	149,999 85	150,000 00
Miscellaneous expenditure.....	9,313 92	12,800 00
Total.....	328,748 66	383,300 00

The details are printed in the Auditor General's Report, under the proper heading.

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.....	14,539	87	20,000	00
do Quebec.....	9,670	94	14,000	00
do Nova Scotia.....	17,395	24	18,000	00
do New Brunswick.....	14,914	95	16,000	00
do Prince Edward Island.....	3,113	21	3,500	00
do British Columbia.....	3,634	41	6,000	00
do Manitoba.....	2,604	70	3,000	00
Total.....	65,873	32	80,500	00
Fish-breeding, Newcastle hatchery.....	5,583	66		
do Sandwich do.....	3,911	95		
do Ottawa do.....	1,998	70		
do Tadoussac do.....	2,393	91		
do Gaspé do.....	1,420	99		
do Magog do.....	679	02		
do Ristigouche do.....	3,876	23		
do Bedford do.....	3,768	31		
do Sydney do.....	2,838	64		
do Miramichi do.....	1,904	20		
do St. John River do.....	1,823	57		
do Fraser River do.....	4,202	61		
General account.....	4,725	12		
Total.....	39,126	91	40,000	00

This Expenditure by Provinces is sub-divided as follows—

	\$	cts.	\$	cts.
<i>Ontario.</i>				
Salaries of officers.....	9,832	36		
Disbursements of officers.....	4,433	96		
Miscellaneous.....		273	55	
Total.....			14,539	87
<i>Quebec.</i>				
Salaries of officers.....	6,991	57		
Disbursements of officers.....	2,516	83		
Miscellaneous.....		162	54	
Total.....			9,670	94
<i>Nova Scotia.</i>				
Salaries of officers.....	12,699	47		
Disbursements of officers.....	4,378	48		
Miscellaneous.....		317	29	
Total.....			17,395	24
<i>New Brunswick.</i>				
Salaries of officers.....	11,106	12		
Disbursements of officers.....	3,776	04		
Miscellaneous.....		32	79	
Total.....			14,914	95
<i>Prince Edward Island.</i>				
Salaries of officers.....	2,838	12		
Disbursements of officers.....		260	00	
Miscellaneous.....		15	09	
Total.....			3,113	21
<i>British Columbia.</i>				
Salaries of officers.....	1,982	90		
Disbursements of officers.....	1,070	60		
Miscellaneous.....		580	91	
Total.....			3,634	41
<i>Manitoba.</i>				
Salaries of officers.....	1,583	48		
Disbursements of officers.....		963	94	
Miscellaneous.....		57	28	
Total.....			2,604	70
Total.....			65,873	32
MISCELLANEOUS.				
Legal and incidental expenses.....	906	96		
Canadian fisheries exhibits.....		792	90	
Expenditure in connection with distribution of fishing bounties.....	6,050	21		
Herring delegation.....		1,563	85	
Total.....			9,313	92
Grand Total.....			75,187	24

FISH BREEDING.

	\$	cts.	\$	cts.
<i>Newcastle Hatchery.</i>				
Salaries.....	1,407	76		
Miscellaneous expenditure.....	4,175	90		
Total.....			5,583	66
<i>Sandwich Hatchery.</i>				
Salaries.....	900	00		
Miscellaneous expenditure.....	3,011	95		
Total.....			3,911	95
<i>Ottawa Hatchery.</i>				
Salaries.....	282	00		
Miscellaneous expenditure.....	1,716	70		
Total.....			1,998	70
<i>Tadoussac Hatchery.</i>				
Salaries.....	984	00		
Miscellaneous expenditure.....	1,409	91		
Total.....			2,393	91
<i>Gaspé Hatchery.</i>				
Salaries.....	350	03		
Miscellaneous expenditure.....	1,070	96		
Total.....			1,420	99
<i>Magog Hatchery.</i>				
Salaries.....	600	00		
Miscellaneous expenditure.....	79	02		
Total.....			679	02
<i>Restigouche Hatchery.</i>				
Salaries.....	968	33		
Miscellaneous expenditure.....	2,907	90		
Total.....			3,876	23
<i>Bedford Hatchery.</i>				
Salaries.....	1,300	00		
Miscellaneous expenditure.....	2,468	31		
Total.....			3,768	31
<i>Sydney Hatchery.</i>				
Salaries.....	859	92		
Miscellaneous expenditure.....	1,978	72		
Total.....			2,838	64

FISH BREEDING—*Concluded.*

		\$ cts.	\$ cts.
<i>Miramichi Hatchery.</i>			
Salaries		499 92	
Miscellaneous expenditure		1,404 28	
Total			1,904 20
<i>St. John River Hatchery.</i>			
Salaries		600 00	
Miscellaneous expenditure		1,223 57	
Total			1,823 57
<i>Fraser River Hatchery.</i>			
Salaries		1,950 00	
Miscellaneous expenditure		2,252 61	
Total			4,202 61
GENERAL ACCOUNT.			
Salaries of Superintendent and Clerk		2,350 26	
Miscellaneous expenditure		2,374 86	
Total			4,725 12
Total, Fish Breeding			39,126 91

STATEMENT of Fisheries Revenue paid to the credit of the Receiver-General of Canada, for the Fiscal Year ended 30th June, 1890.

	\$ cts.	\$ cts.
Ontario—		
Rents, license fees and fines	23,666 96	
Quebec—		
Rents, license fees and fines	5,409 81	
Nova Scotia—		
Fishery licenses and fines	5,424 95	
New Brunswick—		
Rent, license fees and fines	8,834 35	
British Columbia—		
Rent, license fees and fines	11,367 50	
Manitoba and North-West Territories—		
Fishery licenses and fines	794 00	
Prince Edward Island—		
Fishery licenses and fines	302 88	
Proceeds of sale of the United States' fishing schooner "David J. Adams"	1,176 38	
Total		56,976 83

 THE STAFF.

The changes in and additions to the outside staff of the Department have, during the year, been as follows:—

ONTARIO.

Owing to the illness of Overseer Charles Wilkins, of Belleville, Mr. William Clark of that place was formally authorized, on 20th August, to look after Mr. Wilkin's District; and subsequently, on the death of Mr. Wilkins, Mr. Clark succeeded to the overseership on the 20th September, 1890.

The services of Mr. Samuel Frazer, Fishery Overseer at Midland, were, 21st January, 1890, dispensed with for inattention to duty.

On the 20th May, 1890, the services of Mr. George Cochrane, Fishery Overseer for the inland waters of Peterborough County, were dispensed with for inattention to duty, and Mr. George W. Fitzgerald, of Lakefield, was appointed in his place on the 4th November last.

Mr. Andrew Telfer, of Braeside, resigned the office of Fishery Overseer for Lake Des Chats and Bonnechère River.

By the appointment of Mr. Charles W. Evans, of Cayuga, Fishery Overseer for a portion of the Grand River, the district of Mr. W. A. McCrae, of Dunnville, was curtailed to the extent of that allotted to Mr. Evans, viz., from the division line between North Cayuga and Cansborough on the east, to Caledonia on the west.

Owing to the death of Overseer James Greer, of Warburton, and the removal from his district of Overseer H. W. Johnston, of Farmersville, in April and March respectively, the Charleston Lake Division was reorganized and the salaries of the two overseers divided between four new ones, viz.: Samuel Boddy, of Athens; David Edgar, of Lyndhurst; John Moorehead, of Lyndhurst; and James Greer (a son of the deceased overseer) of Warburton, who were appointed on the 31st May, 1890.

Mr. Albert E. Mills, of Smith's Falls, having resigned the fishery overseership of Rideau River and Canal in that vicinity, was replaced by a temporary guardian, whose services will be utilized from time to time as required.

Mr. Thomas McKibbon, of Eganville, Fishery Overseer for Mink Lake and Lake Dore, in the County of Renfrew, resigned on the 31st January, 1890.

Mr. Henry W. Gill, of Ufford, was, on the 1st July, 1890, appointed a Fishery Overseer for the Muskoka Lakes, &c., which position was rendered vacant by the death of Mr. A. H. Smith, which took place in April, 1888.

Mr. J. C. Bowen, of Marmora, was, on the 21st July, 1890, appointed a Fishery Overseer for Crow River and Lake, and Belmont Lake in the Counties of Hastings and Peterboro'.

Mr. William Gainforth, of Haliburton, was, on the 21st July, 1890, appointed Fishery Overseer for the inland waters of the East Riding of Peterboro', in place of Mr. John Dauncey, whose services were dispensed with on the 28th December, 1889, for inattention to duty.

On the 4th November, 1890, Mr. George Thompson, of Sudbury, in the District of Algoma, was appointed a Fishery Overseer for Ramsey's Lake and neighbouring waters.

Mr. David Breeze, of Peterboro', was, on the 4th November, 1890, appointed a Fishery Overseer for Otonabee River.

The following Indian Agents were, on the 8th of March, 1890, appointed Fishing Overseers, without pay:—

Messrs. R. J. N. Pither, Lake of the Woods, Rat Portage; James McCracken, Rainy River and Lake Seul, Couchiching; J. McIntyre, Eagle Lake, Fort Willam; J. P. Donelly, Nepigon River, District, Port Arthur.

Mr. J. K. McDonald, of Toronto, has also been appointed a Fishery Overseer, without pay, for Lake Kagewong, Manitoulin Island.

In view of the extensive fishing interests of Lake Superior, Lake Huron and Georgian Bay a redistribution of the fishery districts was carried out under authority of an Order in Council dated 22nd November, 1890.

Under the old arrangement this large division was sub-divided into eight sections each under the supervision of one Fishery Overseer. But many of these sub-divisions being of very extensive limits and great importance it was found expedient to curtail the fishery districts and increase the number of officers thus admitting of a stricter and more satisfactory inspection.

This reorganization provides 14 subdivisions and officers instead of the 8 as formerly, while the expenditure will be increased less than \$200.

With the exception of Mr. Samuel Fraser, of Midland, the services of the former officers have been retained in the reorganization and their districts reconstructed. The new officers, among whom Mr. Fraser's successor is included, are as follows:—

John Donaldson, Pt. Boucher; Charles Gauthier, Algoma Mills; Frank Prout, Bruce Mines; Robert Boyter, Gore Bay; Isaac Turner, Little Current; Owen McDonald, Mamainse Lake; Harry Wilson, Jackfish Bay.

QUEBEC.

Mr. Napoléon Latraverse, of Sorel, was, on the 1st July, 1890, appointed Fishery Overseer for the Sorel district, in consequence of the removal from the district of his predecessor, Mr. Félix Latraverse. Subsequently, Mr. Napoléon Latraverse resigned, and Mr. Narcisse Lavallée was, on the 4th November, 1890, appointed to the vacancy.

Mr. Treflé Marchessault, Fishery Overseer at Brome Lake, having resigned on 4th March, 1890, Mr. W. G. Greene, of Brome Lake, was, on the same date appointed to succeed him.

Owing to the death of Mr. Philip Vibert, which occurred in June, 1889, the Gaspé fishery district, formerly under his charge, was divided between Mr. George F. Annette, of Peninsula, Gaspé, and Henry Jones, of Little River West, who were appointed Fishery Overseers on the 1st May, 1890.

On the resignation of Mr. Pierre Bibeau, of St. François du Lac, Fishery Overseer for Lake St. Peter, fronting on the County of Yamaska, Mr. Denis Shoener was appointed in his place by Order in Council, 4th June, 1890.

Mr. Emiel Diesner, of Blanche, was, on 8th August, 1890, appointed a Fishery Overseer (without pay) for the inland waters of the Townships of Mulgrave and Lathbury, in the County of Ottawa.

Mr. Joseph Charbonneau, of St. Césaire, was appointed a Fishery Overseer for Yamaska River and tributaries on the 12th April, 1890.

NOVA SCOTIA.

In the County of Antigonish, Mr. Angus McDonald, Fishery Warden at Tracadie, died on the 1st October, 1890.

In the County of Cape Breton, Mr. James P. Burke, Fishery Overseer at Main-à-Dieu, was authorized to exchange positions with Mr. William Burke, of Mira Ferry, Lighthouse keeper, each assuming the other's duties.

In the County of Digby Mr. William Hanley, Fishery Overseer, was relieved of his duties in consequence of his ill-health, and replaced by Mr. James W. Cosseboom, of Rossway.

In the County of Guysboro', Mr. James Cook, Fishery Warden for Salmon River, died 1st May, 1890.

In Halifax County, Fishery Warden John McDonald, of Laurencetown, resigned on the 1st of February, 1890. On the 20th August, Mr. George Leslie, of Spry Bay, was appointed a fishery overseer, and on the 16th September his district and that of Overseer George Rawling's, of Musquodoboit Harbour, were re-arranged for convenience and efficiency.

In Inverness County, Mr. Neil McKay, Fishery Warden of S. W. Margaree River, died on 1st October, 1890.

Warden Murdoch McDougall, of Trout Brook, having left the limit his services were dispensed with.

The following changes took place in the County of Lunenburg :

The services of Fishery Wardens John Hutt, of Middle Gold River, George A. Nesbitt, of Petite River, and Eli Hebb, of Petite River, were dispensed with for inattention to duty, while Isaiah Besancon, of Middle River was relieved of his duties in consequence of advanced age.

In Pictou County a change in the system was effected by Order in Council of 22nd November, 1890, and the county divided into four fishery districts, each under the supervision of one overseer. The office of permanent local fishery warden, of which seventeen existed in the county, was abolished, and local guardians were substituted. These will be engaged from time to time under different overseers, as the requirements of the service demands and will be selected from the parties previously acting as fishery wardens, all of whom will probably be employed at certain periods of the year.

The fishery overseers for the county are as follows:—

Eastern Division.—Allan McPhee, of Avondale.

Western Division.—Robert Sutherland, of River John.

Central Division.—A. C. Pritchard, of New Glasgow.

Southern Division.—John D. McQueen, of Little Harbour.

In the County of Queen's, upon the resignation of Fishery Overseer S. T. N. Sellon, Mr. Thomas Day was appointed on 1st August, 1890, to the vacancy.

In Richmond County, Mr. John Proctor, Fishery Warden for River Inhabitants, died 1st October, 1890.

In the County of Victoria, Mr. Francis McGregor, Fishery Warden at Baddeck River, died 6th September, 1890.

And in Yarmouth County, Fishery Warden J. A. Hatfield, of Tusket, was, in January, promoted to the overseership of the county, rendered vacant by the resignation of Mr. Enos Gardner.

The services of Fishery Wardens William Kavanagh, of Tusket, and Eustace Nickerson, of Yarmouth, were on 7th June, 1890, dispensed with for neglect of duty, while the services of Wardens Wm. Thurston, of Chegogin River, and James Jeffreys, of Overton, being unnecessary, were dispensed with.

NEW BRUNSWICK.

In Charlotte County, Mr. Robert Johnston, Fishery Warden at Upper Falls, Magaguadavic River, died 21st June, 1890.

In the County of Gloucester, Mr. Joseph Poirier, Fishery Overseer for Bay Chaleurs District, resigned on 8th January, 1890. Mr. William Sisk, Fishery Warden at Pokeshaw, died, and was replaced by a special guardian, to be employed when required.

In Kent County the only change was the substitution of a special guardian in the place of Warden James L. Miller, of Kingston, who died in June, 1890.

A thorough reorganization of the staff of permanent officers in the County of Northumberland was effected by an Order in Council of 30th June, 1890. The county divided into five districts, each under the supervision of a Fishery Overseer; these are the only permanent officers in the county, it being proposed to engage special guardians at per diem wages, at such times and places as the requirements of the service demand.

The Fishery Overseers are as follows:—

Prudent Robichaud, Upper Neguac; J. G. Williston, Bay du Vin; Wm. Wyse, Chatham; Pat. Hogan, Newcastle; Thos. Parker, Derby.

PRINCE EDWARD ISLAND.

The only change in the County of Queen's was the dismissal of Warden John Loughrin of Orwell, who removed from his district, and the employment in his place of a special guardian, when his services were necessary.

In the County of Prince the overseership became vacant by the removal of Mr. Henry Clark from the neighbourhood of his district, and was filled by the promotion of Fishery Warden Patrick McBride, of Central Bedeque. Mr. Stanislaus P. Arseneault, of Egmont Bay, Fishery Warden, died 1st October, 1890.

The only changes occurring in the County of King's are: the death on the 1st April, 1890, of Warden Patrick McCullough, of Morel River, and the resignation in the same month of Warden John Conaghan, of Bay Fortune.

MANITOBA AND NORTH-WEST TERRITORIES.

In the above division the changes during the the year were: the appointment of Mr. John Foster, of Silton, on 1st July, to the vacant fishery overseership of the Qu'Appelle District, rendered so by the resignation of Overseer Oliver T. Stone, and the appointment as fishery overseers (without pay) of the following Government Agents: C. L. Gouin, Crown Timber Agent, Calgary; S. B. Lucas, Indian Agent, Bear's Hills; R. S. McKenzie, Indian Agent, Duck Lake; and Robert Gunn, Wm. Toole, W. B. McLellan, Michael Fee, Winnipeg; A. E. Johnston, Edmonton; J. R. Thompson, Calgary; R. S. Cook, Prince Albert; H. J. Montgomery, Battleford, forest rangers.

FISH BREEDING.

Owing to the death of Mr. Philip Vibert, which occurred in 1889, the position of officer in charge of the Gaspé Government Fish Hatchery became vacant, and Mr. Henry Davis, the assistant, was promoted to the charge of the establishment 1st May, 1890.

FISHING BOUNTIES.

The payments made for this service are under the authority of an Act passed in 1882, intituled:—

“An Act to encourage the development of the Sea Fisheries and the building of Fishing vessels.”

This Act provides for the payment of a sum of \$150,000 annually, under regulations to be made from time to time by the Governor in Council.

The total number of fishing claims received for the year 1889 was 17,119, against 16,027 in 1888, an increase of 1,092 claims for the year 1889. Of this number 161 were rejected for non-compliance with the regulations, and 227 held in abeyance for investigation.

The total number of claims paid during the year 1889 was 17,078, which includes 347 claims for 1888 held over for investigation, an increase of 1,079 as compared with the year 1888.

The total amount of bounties paid on the basis of \$1.50 per ton to vessels, and \$3 per man to boat fishermen, was \$158,526.54, an increase of \$8,341.01.

This excess over 1888 is due to a large increase in the number of claims and to the payment of others for 1888 held in abeyance for further enquiry.

The number of vessels which received bounty in 1889 was 833, with a tonnage of 32,716 tons, an increase of 6 vessels and a tonnage of 1,076 tons over 1888.

The number of boats on which bounty was paid was 16,230, and the number of fishermen who received bounty was 31,525, an increase of 1,468 boats and 3,269 fishermen, as compared with the previous year.

The total number of fishermen in vessels and boats who received bounty during the year 1889 was 38,343, as against 34,887 in 1888.

For details of payments to vessels and boats, see Appendix No. 2.

The following statement in connection with fishing bounty payments since the year 1882 shows:—

1. The year when the bounty was established.
2. The number of claims paid each year.
3. The amount of bounty paid each year.
4. The proportion of bounty per head, or the basis of payments for each year.
5. The highest and lowest bounty paid per head to vessel and boat fishermen, and the general average per head.
6. The total cost of distribution since the bounty was established.

STATISTICS *re* FISHING BOUNTY.

1. Year when bounty was established, 1882.

2. Number of claims per year, as follows:—

In 1882.....	11,972,	representing	29,932	fishermen.
1883.....	13,086	do	33,399	do
1884.....	12,468	do	31,297	do
1885.....	14,124	do	33,564	do
1886.....	14,900	do	33,523	do
1887.....	15,416	do	34,387	do
1888.....	15,599	do	34,887	do
1889.....	17,078	do	38,343	do
Total.....	<u>114,638</u>	do	<u>269,302</u>	do

3. Amount of bounty paid per year, as follows:—

In 1882.....	\$172,285 47	In 1886.....	\$160,903 59
1883.....	130,344 85	1887.....	163,757 92
1884.....	155,718 98	1888.....	150,185 53
1885.....	161,539 39	1889.....	158,526 54
Total amount of bounty paid.....	<u><u>\$1,253,262 27</u></u>		

4. Proportion of bounty per head:—

In 1882 vessels were paid at the rate of \$2 per ton, one-half being payable to the owner and the other half to the crew.

Boats were paid on the basis of \$5 per man, one-fifth of which went to the owner and four-fifths to the men.

In 1883 the rate to vessels was \$2 per ton, and paid as in 1882. The basis of payment to boats was \$2.50 per man, one-fifth of which was paid to the owner and four-fifths to the men.

In 1884 vessels were \$2 per ton, as in 1882 and 1883; and owners of boats were paid as follows:—

On boats from 14 feet keel to 18 feet keel.....	\$1 00
do 18 do 25 do	1 50
do 25 do upwards.....	2 00

And boat fishermen \$3 each.

In 1885 vessels were paid \$2 per ton as in previous years. The rate to boats was the same as in 1884, with the admission of boats measuring 13 feet keel. Boat fishermen \$3 each.

In 1886 and 1887 the rate to vessels and boats remained the same as in 1885.

In 1888 vessels were paid at the rate of \$1.50 per ton, one-half to owner and one-half to crew, as formerly. Boats remained the same as in 1885-86-87, and boat fishermen \$3 each.

In 1889 the rate to vessels remained the same as in 1888. Owners of boats were paid \$1 per boat and boat fishermen \$3 per man.

The total number of vessels paid is 6,695 (with a tonnage of 255,197 tons), and the number of crew 53,568.

Average number of men, per vessel 8.

The total number of boats paid is 107,943 and boat fishermen 215,734. Average number of men per boat, 2.

5. The highest bounty paid per head to vessel fishermen was \$17.50, the lowest 83 cents.

The highest bounty paid per head to boat fishermen was \$4, the lowest being \$2.

The general average paid per head, \$4.65.

6. The total cost of distribution from 1882 to 1889, inclusive, is \$56,405.62, or an average of \$7,050 per year.

MANITOBA FISHERIES.

For some time past the necessity for affording additional protection to the fisheries of Lakes Winnipeg and Manitoba has been a subject of much discussion.

It was contended and persistently represented by persons claiming to have a knowledge of the subject that as the Indians of Manitoba and the adjoining Territory are to a large extent dependent on fish for food, the depletion of the fisheries of Lakes Winnipeg and Manitoba would be a serious matter, and would entail upon the Federal Government the necessity of providing them with food. It was also urged that as the water of Lake Winnipeg is shallow, and consequently afforded facilities for fishing at every available point, beside which the practice prevailed of setting nets at the mouths of rivers and inlets, when the fish were seeking these for the purpose of spawning, the fishing as a consequence soon become exhausted.

On the other hand, it was contended by the persons now engaged in fishing in this Lake that apprehensions as to the depletion of its fisheries were unfounded; that relatively, considering its area, Lake Winnipeg was less fished than many waters in the Province of Ontario, where no injurious result had followed the fishing, and that no danger of depletion existed so long as the laws and regulations enacted for the protection of fish were strictly enforced, and applied with equal stringency to Indians and white men.

It was further alleged that the injury to the whitefish fishery was due to the wasteful practices said to be carried on by the Indians, and employés of the Hudson's Bay Company, in destroying, when swarming the breeding ground, large quantities of fish for the purpose of feeding dogs, rather than to the nets used by white men.

Believing in the great importance of this industry, and aware of the interests that would be effected by a prohibition or greater restriction on the fishery than now in force, the Minister of Marine and Fisheries, with the concurrence of that the Superintendent General of Indian Affairs, instructed Mr. Samuel Wilmot, the Superintendent of Fish Culture, to proceed to Manitoba in July of this year, and discreetly examine into the condition of the fisheries in Lake Winnipeg generally, but taking special care to fully inform himself on the points mentioned in the voluminous reports and correspondence touching the subject in the Department of Indian Affairs and Fisheries.

Mr. Wilmot's report will be found at Appendix No. 3 to this report.

The following questions were submitted to Mr. Wilmot by you, previous to his departure. Mr. Wilmot's answers are now given at the end of each question.

"1. Whether there really exists a depletion of whitefish in the waters of Lake Winnipeg?"

There is a gradual but steady depletion of the whitefish product of Lake Winnipeg going on, from the effects of the present system of fishing.

"2. If so, in what waters and what are the causes of it?"

This depletion is experienced more particularly at the mouths of the larger rivers, and in the lower part of the lake, particularly in the Little Saskatchewan River, and St. Martin's Lake, caused by overfishing at improper times, notably at the mouth and bay of the Little Saskatchewan River. This course, if permitted to continue, and be allowed in other parts of the lake where similar conditions prevail, must assuredly hasten greater depletion and eventual ruination of the whitefish industry of Lake Winnipeg.

"3. What are the remedies?"

The remedies are, to reasonably restrict the present wholesale fishing now carried on by the fishing companies, by judicious regulations and to wholly prevent these companies, and others, from fishing in certain well-known localities where the whitefish congregate in great numbers prior to the close-time and preparatory to their breeding operations.

"4. Is the present close-season proper or sufficiently long for the efficient protection of whitefish, and if not, what dates would you recommend?"

The present close season (5th October to 30th November) is well chosen and should answer all purposes, if duly enforced.

“5. Should the permission granted Indians of fishing indiscriminately during the close-season be continued.”

It would be better for the general interests of the Lake Winnipeg fisheries that the Indians should not be permitted to fish indiscriminately during the close season. However, public policy, it appears, prevents this being carried out.

“6. Should the killing of whitefish during the close season, for the purpose of feeding dogs, be tolerated, and if so, under what circumstances?”

This is a necessary sequence to the former. The dog is the Indian's provider and his “beast of burthen,” so to speak, and food is a necessity for him as well as for the Indians. If the Indian is permitted to take whitefish for his purposes during the close season, the dog cannot be excepted. It would be found almost impossible to procure accurate data to show the quantity of whitefish required for feeding dogs.

“7. Should any and what waters be reserved for the exclusive use of Indians?”

Yes. Where there are no white settlers actually domiciled and carrying on agricultural or other fairly legitimate callings, the Indians should have the exclusive right of fishing in their reserves, and in all other waters which it may be considered expedient to set apart for them. Fish traders or other persons should not be allowed to fish in these waters under any pretence whatever.

“8. Should net fishing be curtailed, and to what extent?”

Net fishing should be limited in the licenses granted to fishing companies, and all others who carry on commercial fishing—that is, as now known by the methods of freezing for export purposes. Each license for this description of fishing should state a maximum limit for the number of boats and length of net to be used; and “domestic licenses,” that is the actual and *bona fide* settler or Indian, should also be limited to one boat, and a maximum length of net each.

“9. Is the present close season for sturgeon sufficiently long to ensure full protection to these fish?”

The close season for sturgeon should be from 15th of April to 15th of June, the license to state the locality in which fishing is to be permitted, the description, length and mesh of the net, and the character of boat to be used.

“10. Would it be desirable that Indians be supplied with large boats and longer nets, so as to enable them to fish in the deep parts of Lake Winnipeg, instead of on the shoals only, as at present?”

It would be undesirable that Indians should be supplied with large boats and longer nets, in order to fish in open or deeper parts of the lake. If the Indians desire to fish in waters outside their reserves, or other waters set apart for them, they place themselves in competition with other fishermen, and should therefore make their own provision for such outside fishing.

HERRING FISHING INDUSTRY.

It will be remembered there was submitted to Parliament at its last session, the report of the Special Commission appointed to enquire into "the most approved mode of catching, curing and packing herring. The first edition of this report fell far short of meeting the demand, and a second supply of 17,500 copies was printed, these have been distributed to the senators and members of Parliament representing constituencies interested in fishing, to boards of trade, merchants, fishermen, and others, where it was thought the report could be of service in bringing to the attention of those interested in the fishing industry the valuable information and suggestions which the report contained. Many satisfactory acknowledgments have been received, and it is earnestly hoped the result of the Commission's investigation will bring about an improved and profitable system of curing and packing herring in the Dominion. That this fishery has in the past been prosecuted in a very careless way, especially as regards curing and packing is generally admitted; the reason assigned therefor being that the low price the fish command in the home market does not warrant any expense in curing and packing that can be avoided, the fact being lost sight of, that this low price is largely due to the careless manner in which the herring are prepared for the home market or for export.

In the report of the Fishery Board for Scotland for 1888 it is stated the total quantity of cured herrings exported for that year amounted to the large number of 774,193 barrels, as against 865,911 barrels for 1887. An examination of the statistics shows that places out of Europe took 1,915 barrels more than in the former year, the great proportion of which were exported to America, chiefly in half barrels, quarter barrels, eighth barrels and sixteenth barrels. About 35,000 of the smallest size of these packages were shipped direct to America from Greenock, Leith and Aberdeen. These exports, however, form only a small portion of the Scottish herrings which went to that country, as a large quantity which had been exported to Hamburg was re-packed there into small kegs and re-shipped to America. Of the exports to Germany, Stettin alone took 292,290 barrels.

Of the winter herring fishery, it is stated the fluctuations are even greater than in the summer fishing; these may be largely attributable to the conditions of the weather, which have an important bearing on all the sea fisheries, but more particularly in the herring fishery. It has been observed for many years that during a long continuation of intense frost and snow, but with moderately calm weather in January and February, the principal months when the fishing is carried on, the herring shoals are found in the greatest abundance near the land, and therefore good takes are more readily captured than in open seasons, such as last year. As these herrings are not so rich in flavour as those taken in the summer (though of a larger size) very few are cured for exportation, nearly the whole of them being used in the country, either in a fresh state, lightly salted, or made into kippers or bloaters.

As regards hooping herring barrels, it is stated that up to three years ago it was only lawful to hoop such barrels with wooden hoops, but under a new regulation either wooden or iron hoops may now be used. The reason assigned for the change was the difficulty that frequently occurred in procuring wooden hoops, while an unlimited supply of iron was always available. The method of hooping partly with iron and partly with wood is, however, being generally adopted.

Regarding the size of barrels, it some times happens those of under size are used, prosecutions for this have been instituted and the herrings required to be repacked.

These extracts are quoted with a view of showing the enormous trade Scotland has secured in the export of herring, a considerable portion of which is stated to be with America. There is little doubt that this has been promoted by the admirable manner in which the herrings are cured, the care with which they are packed, and the convenient sized packages in which they are put up for export.

The conditions of the winter herring fishery in Canada which is principally carried on in the Bay of Fundy is in many respects similar to that of Scotland, and although the winter climate of Canada admits of a large trade in frozen herring for the purposes of bait, home consumption and export to a foreign market, the question suggests itself as to whether or not a large share of the United States' markets enjoyed by Scotland, might not with improved methods of curing and packing at other seasons of the year be secured to Canada.

Persons familiar with the winter herring fishery of the Dominion will readily understand how difficult it would be to induce the fishermen to undertake during this season a system of curing and packing, when owing to favourable conditions of the weather they can generally realise remunerative prices within a few hours of the catch and without the trouble of salting or curing. In view of this aspect of the winter trade, together with the fact that fish cannot be properly salted in cold weather, it will readily be seen that so long as the demand for frozen fish exists little or nothing is likely to be done at this season of the year in curing and packing for home consumption or export.

OPINIONS OF THE REPORT.

The following opinions of the report of Messrs. Gunn and McLeod will doubtless be gratifying to these gentlemen:—

Sir Thomas Brady, Chairman of the Board of Fishery Inspection for Ireland, says:—

I have read this report with great satisfaction.

The Hon. Doctor Prouse, of St. John's, Newfoundland, writes:—

I am very much obliged for the books sent. I think they are admirable, especially the Delegates' report on the herring fishery. The pamphlet has been very much read and appreciated here; it is practical and exceedingly valuable.

Many of the Boards of Trade also refer in complimentary terms to the Herring Report.

The law now relating to the inspection, chap. 99 of the Revised Statutes, will be found at Appendix No. 7.

When transmitting the Commissioner's report to the several Boards of Trade, and persons interested in the fishing business, the following circular letter was sent:—

OTTAWA, 15th April, 1890.

MY DEAR SIR,—I beg to forward, for the acceptance of your Board, a number of copies of the report of the delegates appointed to enquire into the herring industry

of Great Britain and Holland, with the object of improving this important industry in the Dominion.

I should feel obliged if your Board would favour me with its views on the present regulation, as contained in chap. 99 of the Revised Statutes of Canada, respecting the inspection of herring, and in regard to any modification of the existing inspection legislation, which, in the opinion of the Board, would tend to promote and improve the herring industry.

I would particularly refer the Board to that part of the report of the delegates, which deals with the inspection, classification and branding of herring; also the necessary improvements in regard to the barrels and small packages.

I would feel obliged for the views of your Board touching the necessity of further legislation upon this subject, or upon the question of improving the herring fishery generally.

Yours faithfully,
(Signed) CHARLES H. TUPPER.

A synopsis of the replies to this circular will be found of interest, as embodying the views of and suggestions from the representative bodies, and others to whom it was addressed, regarding the herring fishery.

The Halifax, Nova Scotia, Board of Trade, after conferring with a committee consisting of all the merchants in the city dealing in fish and fish oil, recommends:

That the Inspection Act of 1873, with amendments of 1876, with the following alterations and amendments, be made compulsory.

Each barrel not to contain more than 160 fish, the number to be stencilled on the head of the barrel.

Classification as follows:—

- (a.) No. 1. Herring 11 inches and upwards.
- (b.) No. 2. Herring under 11 and not less than 9.
- (c.) No. 3. Herring under 9 inches.

That a general supervisor of inspectors of pickled fish be appointed for Nova Scotia, with headquarters at Halifax.

That inspection be compulsory, and all packages that will not pass inspection be condemned; that parties offering such condemned packages for sale be subject to a penalty of 25 cents for each package so condemned, and that the bottoms of all barrels be full bound, as recommended by the Government Commissioners to Holland.

That section 19, chap. 99, be amended, to read after the words "to be inspected," in the second line as follows: excepting pickled fish, fish oils and empty fish barrels.

The St. John, New Brunswick, Board of Trade, at a meeting held 5th November, 1890, passed the following resolution:—

"That in the opinion of this Board, an Act for the compulsory inspection of pickled fish under competent responsible inspectors is much needed, and that the inspection of packages should be an essential part of any Inspection Bill."

The *Chambre du Commerce* of Montreal, in referring to the report of Messrs. Gunn and McLeod states:—

That for several years past the herring trade of the district of Montreal which should have augmented proportionally with the increased facilities of communication, has, on the contrary, greatly diminished, even evincing a retrograde movement during the past two years.

The reasons for this decline are held to be in the neglect given to the proper curing of the fish, and to frauds too often restored to, in general course of business respecting the quantity and quality of the fish, as well as to the bad condition of the barrels and then unsuitableness to retain the fish in good condition. These frauds finally disgusted the trade, while the result has often been pecuniary loss to the victims.

The Act of the Legislature which repealed the clause relating to compulsory inspection, however imperfect it may have proved, was a retrograde piece of business, the result of which is to-day apparent. Much better amend the law by abolishing inspection in large cities, where experience has proved that it could only be enforced with great difficulty and at a heavy cost, and enforce it where it should have been, on the spot where the fish are pickled, but on consideration that the Inspectors should attend to their duty, and not be Inspectors in name only—simply collecting fees attached to the situation—as has too often been the case.

The Board is of the opinion that the Government's policy, which is one of protection, should extend to the fisheries as well as other industries in the country by compelling foreign fish competing with our own to submit to the same inspection laws as are applied to the products of Canadian industry.

The decrease in the fish trade of this district is occasioned by the Newfoundland herring, as well as by the abolition of compulsory inspection, because purchasers being unable to discriminate between one kind of fish and the other reject both.

The Board desiring to afford its quota of assistance towards the resuscitation and improvement of a valuable and lucrative business, when pursued under the requisite conditions, and having taken communication of the report of the delegates, fully agrees with the recommendations as to an entire change of the present system of curing herring, and the adoption of that followed in Scotland, and in order to achieve this experts should be brought from Scotland, to instruct Canadian fishermen as to the system there pursued; also that barrels of a better class be provided and that the use of none but those regulated by law as suggested in the Commissioner's report be sanctioned.

The Board further specially recommends that the views of the Commissioners (page 74 of Report) as to inspection and brand, and those (at page 75) as to foreign herring of questionable quality being thrown on the Canadian market be adopted.

The Board concludes its valuable consideration of the report by acknowledging the wisdom of the Government in despatching the delegates to study so important an industry as the herring fishery, one that has already enriched Holland, Scotland and Norway, and expresses regret that instructions were not given the Commissioners to visit Norway for the purpose of enquiring into the modes of curing cod for the various markets of the world, adding that if the herring industry had some importance it is nothing compared with the cod fishery.

Montreal Board of Trade deeming the subject under consideration of much importance, referred the Herring Report to a sub-committee of the Board. The result of this reference was a unanimous report, embodying, among others, the following opinions and suggestions:—

That the herring industry depends greatly upon the demand for export, and this requires to be carefully cultivated not only by the curers of herring, but by legislative enactment, protecting alike the interests of the fishermen and the consumer; also; that a rigid inspection by reliable and competent inspectors is absolutely essential, both as regards fish and package, with fixed standards to put the industry upon a sound and permanent basis, such inspection being compulsory at the place of cure; that the packages should be substantial and well made, where possible of hardwood, in no case of fir or pine, and containing at least 200 pounds of herring, exclusive of salt. It is also deemed most desirable that all imported herring shall have been inspected in the country from which they came by Government inspectors, and that communication be had with the Governments of those countries to secure this.

That portion of the Delegates' report which deals with "Remedial Measures" commends itself specially to the judgment of the committee. They would, however, recommend a slight alteration in Para: 2a of report, making it read as follows:—

That there should be a Dominion Board of Fisheries, having jurisdiction, under the Department, over all matters of detail pertaining to the fishing industry of the Dominion, and which should appoint superintendents and inspectors in the different Provinces. The cost of this Board, it is considered, should be borne by the Federal Government, and that of inspection by the curer; the inspection fees should, however, be made as light as possible. It was noted with interest what had been accomplished by the Governments of Europe to enhance the value of their respective Fisheries, and the Dominion Government congratulated upon its endeavour to profit by their experience.

The concluding paragraph of this report is as follows:—

"Your committee begs to express its satisfaction with the admirable report on the herring industry herein referred to. No point of consequence appears to have escaped the attention of the gentlemen who compiled it, and the whole forms a most instructing and interesting volume. It is therefore recommended that the Government cause that report (or, better still, a good digest thereof) to be extensively circulated among the herring fishermen, and all connected with the herring industry, with a view to disseminating the very useful information contained in it."

The Charlottetown Board of Trade under date 8th October, 1890, acknowledges the receipt of the Department's communication of 15th April and 1st August, 1890, referring to the herring industry and asking for the views of the Board, and states the matter had been referred to a committee of the Board. No report has yet been received by the Department.

The council of the Quebec Board of Trade, after a careful perusal of the Herring Report, expresses the opinion that the trade in fish could be turned to a very valuable account, and that of the immense schools that frequent our coasts spring and autumn but a small quantity is taken. The use of fish as a fertiliser, which it is believed is carried on in some districts, is strongly deprecated. In connection with

the protection of herring and caplin the Board submits the opinion of a firm fully cognizant of the necessity for this in the interest of the codfishery. It is follows:—

“ We consider that the herring and caplin need protection, for the wholesale destruction of these for manure must result in the withdrawal from the coast of those fishes. It is notorious that fish become scarce when wastefully destroyed; and they will desert a coast when largely persecuted, and here we may mention that the wholesale destruction of impregnative herring spawn, also used for manure purposes, is probably as real a hindrance to the continual supply as the other practices complained of viz., the destruction of the herring.”

The Board considers compulsory inspection a necessity, as by this means a merchantable value and character will be given to the fish, which without it is purely speculative, and sees no reason why an exception should be made in favour of Newfoundland.

It is thought packing herring in a fresh state in cans will not prove a success, in consequence of the large percentage of water which this fish contains. This is, however, overcome when it is subjected to salt, which does not remove the oil, but aids the fish in becoming hard and palatable.

In concluding the report, the Board desires to impress upon the Government the necessity for making the inspection of salted codfish (not dried) also compulsory.

The council of the Hamilton Board of Trade, in considering the Herring Report, adopted the following resolution:—

“ That in the opinion of this Board of Trade it is desirable that thoroughly competent inspectors of fish should be appointed at convenient packing points in the Dominion, and an adaptation of the system adopted in Scotland for cleaning, curing, packing and branding should be arranged for, satisfactory to the purchasers and branders of fish. Until something of that kind is done, the brands here cannot command their fair value in our own or other outside markets where the packers are unknown.”

The Toronto Board of Trade is of the opinion that the inspection of herrings should be made compulsory, most thorough, and a guarantee of quality and the branding reliable. The barrels should be of a uniform size, and sufficiently strong to stand very rough handling in transportation. The opinion of the dealers in herring in Toronto is, that in the past the inspection has been resorted to as a shelter by the unscrupulous packer; and when he has succeeded in getting his fish branded, has refused to guarantee them up to what the inspection should warrant the purchaser in expecting to have supplied him as No. 1 inspected fish.

The Winnipeg Board of Trade has no suggestions to submit. Neither has the New-Westminster Board.

The Victoria, B.C., Board of Trade, in view of the small local demand, has no recommendations upon the subject.

The reports of Fisheries Inspectors Bertram, Pratt, Hackett, Hockin and Kinney, are printed as an Appendix No. 7 to this report. It will be observed that, with the exception of Inspector Kinney, all are in favour of compulsory inspection.

Fishery Overseer Kerr, of Hamilton, Ont., deals principally with the question of freshwater herring, and states that of late years very little salting or curing of freshwater herring has been done for exportation, most of the herring caught in the great lakes being shipped to the United States in a fresh or frozen state, as they realize a larger price in this condition than when cured. Overseer Kerr favours the use of hardwood barrels and a system of inspection.

Mr. Guptill, of Grand Manan, N.B., who has been in the fish business for forty years, considers that the decrease in the herring trade is due to the inferior quality of herring which are put on the market early, and bought by merchants unacquainted with the difference in quality, as well as to the fact that several classes of herring are really unfit for consumption. To remedy this, he suggests a restriction being placed upon the several classes of herring at certain periods of the year. He further suggests that it would be advisable to grant to fishermen engaged in the smoked herring business a bounty equal to the duty they paid on fish shipped to the United States.

Messrs. Parker, Eakins & Co., commission merchants, of Yarmouth, N.S., state: "The very interesting and valuable report of Messrs. Dunn and McLeod has recently come under our notice. We have read it with peculiar interest, because of our entire sympathy with the purpose of the investigation and report—that of devising and applying some remedy for the present wasteful and irregular method of curing and packing herrings. In common with everybody in this country who have handled herrings, we have suffered from the evils so fully set forth in the report, and we should be very glad to have an inspection law passed which would remedy some, at least, of the drawbacks to the successful conduct of the business."

Mr. Commissioner Gunn makes some suggestions in connection with the inland fisheries that are practical. He recommends that a test be made, by packing at the proper time a number of half barrels of salmon-trout, whitefish and herring in the pine packages at present in use, and with the same kind of salt as that now used in curing these fish. Then put the same kinds of fish, but carefully excluding all dead fish which may be found in the nets, using pine barrels, and the fish well roosed with salt before packing, but not washed. Repeat the same experiment on the same lines, using hardwood barrels. Cedar barrels might also be similarly tested, and the whole stored for twelve or eighteen months, and then tested.

It would appear the importance of protective measures and the introduction of improvements in the mode of curing and packing herring is not attracting the attention of Canada only. I find in the report of the Newfoundland Fisheries Commission for the year 1889 the following observations under the head of "Investigation of Herring Fishery:"—

"Last year the Commission was unable to accomplish much in the investigation of our herring fishery. That must be the work of the future. It is unnecessary to dwell on the importance of this fishery, and the need of protective measures, as well as the introduction of improvements in the mode of cure and packing for foreign markets. The Commission are persuaded that by due care the value of our herring fishery may be vastly increased."

I have drawn very copiously from the several reports, resolutions and letters having reference to the subject under consideration, with which the Department has been favoured from all parts of the Dominion. The object in this has been two-fold.

First, that in these extracts those interested in the practical aspect of the herring question might have in convenient form for reference the various opinions and suggestions that have been made to the Department from competent sources; and :

Secondly, that having this information, they may be enabled from a study of the question other than locally, to afford material aid in connection with the remedial measures it will at one be admitted are a necessity, not alone to promote what ought to be a valuable trade to Canada, but to rescue it from the injurious and deplorable condition into which it has been permitted to drift.

In the consideration of the measures, having this object in view, the fact must not be lost sight of that the fish trade of Canada has many aspects, and is carried on under different phases to that of any other country.

I have already referred to the winter fishery on the Bay of Fundy, Atlantic coast, and shown, while it can be carried on, as at present, and remunerative prices, realised for the total catch in a frozen state, fishermen or traders are not likely to embark in any new phase of this business where the process of curing, packing, seeking a market and the payment of commissions is to be substituted for spot cash. This same reasoning will hold good, not alone with all fish on the sea-board that can be exported fresh to the United States during the summer season, but also with reference to a large percentage of the catch of our inland waters, which, owing to the proximity of the United States, finds its way to a ready and remunerative market just as soon as the fish are available for export. I refer to this aspect of the fish trade of the Dominion to show that the curing and packing of our catch is not likely to at an early period assume large proportions, in view of the circumstances referred to.

Another fact, leading to a similar conclusion, is, that many of the herring, with which our shores abound in the spring and summer season, while quite marketable for bait or home consumption, are not of that quality which would justify an expenditure for curing and packing, to bring them into competition with the best grades of Scotch herring, and on this point the testimony of the inspector for Cape Breton will be found of interest. That a change can, with profitable results, be made in the mode of curing and packing some of the herring taken in the summer and fall on the Atlantic coast is certain, with others of them I doubt if the quality of the fish would justify any very great increased expenditure in putting them up. That the smaller packages consisting of kegs and of half barrels, say containing 50 to 25 pounds, of which the United States takes in a year the enormous quantity of packages, might, if our best herring are used, be packed with profit there is little doubt, but to induce this new departure in the herring business, it will be necessary to offer some incentive, and to this end it is worth consideration whether a bonus might not be paid on all herrings packed in hardwood packages, which come up to a certain standard of inspection equal to the difference of cost between the barrel at present used and that of the better package, which it is suggested in the Commissioner's report, should be adopted.

It will readily be admitted after a perusal of the different reports from which I have quoted, that the opinion as to the necessity of an inspection law is practically unanimous, and without at present dealing with the details of an Inspection Act, I would suggest its being framed on the basis:

1st. That an inspection of all herring packed, or imported into Canada shall be compulsory.

2nd. That an Inspection Act should provide for at least three grades of fish.

3rd. That a prescribed size and quality for the different packages be adopted, and that each package shall contain a required weight of fish, irrespective of salt or brine.

4th. That all herring below grade No. 3, should be branded "Culls."

5th. That the inspectors should be appointed by the Federal Government.

6th. That the Act should provide for the payment by the packer or importer of a reasonable scale of fees.

While these are my views I am free to admit that in framing an Inspection Bill, it is clear much difference of opinion as to details among those interested will be found. I have, therefore, to suggest in view of the radical measures which a Bill should provide, that no legislation be promoted on this subject until next year, meanwhile the report of Messrs. Gunn and McLeod will have been more widely considered, the various opinions referred to in this report more thoroughly discussed, and legislation may then be so framed as to meet with general approval and support.

THE LOBSTER FISHING INDUSTRY.

This branch of our fishing industry has always been peculiarly difficult of regulation, because of the impracticability of maintaining a strict supervision over the operations of the numerous canning establishments situated on remote parts of the coast, and supplied by thousands of boats, operating many thousands of lobster traps. Over these operators only a partial supervision could be hoped for, without an army of officers distributed throughout the country at each factory. The facilities afforded for evading the law by immediately canning illegal lobsters are very great, and with the machinery at present provided and the funds at the disposal of the Department a thorough and perfect protection of this valuable fishery is not possible.

Numerous and diverse recommendations have been made for the improvement of the condition of this fishery. The Department accordingly caused to be referred to its chief officers throughout the districts where this fishing is prosecuted, a scheme for regulations in substitution for those now existing, upon which their opinions, after careful consultation with interested parties, were sought.

The proposals for consideration were as follows:—

1. There shall be a general close season for lobsters, extending from 15th July to 1st January, during which no lobsters shall be caught, canned, cured, preserved or had in possession, under penalty of \$50 for each offence and \$1 for each lobster so caught, &c., during the above named dates.

2. The Atlantic and Gulf coasts of Canada shall be divided into three districts' as follows:—

(a.) District No. 1 to comprise that part of the Atlantic Ocean coast extending from Cape Canso and following the coast line of the Bay of Fundy to the United States boundary line.

(b.) District No. 2 to extend from Cape Canso to Cape Jourimain; thence in a straight line to Cape Traverse pier; thence round Cape Bear and East Point to and along the north shore of Prince Edward Island to North Point.

(c.) District No. 3 to comprise the Province of Quebec, including Magdalen Islands, that portion of the shore of New Brunswick extending from Cape Jourimain northward, and that of Prince Edward Island southward, from North Point to Cape Traverse.

3. (a.) The special close season for District No. 1 shall be from 2nd July to 28th May, and during such time it shall be unlawful to can, cure or preserve lobsters within the limits of the above named district.

(b.) For District No. 2 the close season shall be from 10th July to 5th June, with the same restrictions as above with regard to canning, &c.

(c.) And for District No. 3 the close season shall be from 17th July to 12th June, with same restrictions as to canning, &c.

4. During the legal season for canning, curing or preserving, as detailed in the above paragraphs, cannors shall not be restricted as to any regulations with regard to the size of lobsters so canned, cured or preserved.

5. The possession, sale or use of "berried" lobsters shall be prohibited.

6. Neither shall any lobsters be caught under 9 inches in length, except as provided in paragraph 4.

On these propositions reports were received from the different officers, of which the following epitome is given:—

Mr. Edward Hackett, of Tignish, Inspector of Fisheries for the Province of Prince Edward Island, informs the Department that immediately upon receipt of the reference he communicated with a number of the leading lobster packers in the Province, with the object of obtaining their views on the points submitted for consideration. From these he received intimation that owing to the importance of the questions involved a meeting of the parties interested in the industry would be convened at Charlottetown, during which the propositions would be considered and the results made known. Mr. Hackett attended this meeting, and during a full discussion he found a feeling in favour of the existing regulations predominant.

He deals with the proposals as follows:—

1. General close season.
2. Division of the coasts into districts.
3. District close seasons.
4. Size limit.

1. The general close season, from 15th July to 1st January, he approves, because he considers it would be a great factor in the protection of the lobster, which is essentially a coast crustacean especially susceptible of over-fishing, while the proposed penalty would, in his opinion, be sufficient to prevent infractions of the regulation.

2. He does not consider climatic differences in the territory embraced sufficiently defined to warrant so much discrimination in the open against the close season, especially as the date of commencement of fishing is fixed.

Were it decided to prevent canning before 15th May he would not favour sectional divisions, as a uniform fishing season would suit all the Provinces. But the proposed divisional districts in the main would not be adapted to the requirements of the Province of Prince Edward Island.

With the exception of Egmont Bay, the influences surrounding the fishery on the coast of Prince Edward Island are nearly alike, and if no fishing were allowed until after 15th May they would be exactly alike, and would all be able to commence on that date. If any change be made he would suggest :

1. That (b.) District No. 2 should be from Cape Canso to Cape Jourimain, thence in a straight line to Sea Cow Head, in Prince Edward Island ; thence around Cape Bear and East Point to and along the north shore of Prince Edward Island to West Point.

2. From West Point to Sea Cow Head to be included in District No. 3 as proposed.

3. He is of opinion the district close seasons are entirely too short to admit of successful operations by packers and fishermen, a total closure for a term of years being preferable, the present season being as short as can be withstood without closing the factories.

4. The size limit he considers an essential factor to the preservation of the lobster fishery, and to abandon it would result in permanent injury to the industry.

Mr. Hackett concludes by giving it as his opinion that the present regulations, as they effect the industry in his Province, are well calculated to serve the end in view, for, while affording good protection to the lobster they also admit of a fairly successful prosecution of the industry.

Subsequent to this meeting, however, another was held at Charlottetown on the 30th December, 1890, which was largely attended by the canners and fishermen of the Province. The resolutions adopted on the proposals which differ from, or are not covered by the opinions above expressed, are as follows:—

That the present open season be continued; the restrictions against "berried" and undersized lobsters removed, and hatching operations commenced; the members of the meeting agreeing to pledge themselves to extend to the Department all possible assistance in furnishing spawn and protecting such localities as may be selected for the purpose of artificial propagation.

Mr. J. R. Kinney, of Yarmouth, Inspector of Fisheries for District No. 3, Nova Scotia, is in favour of increasing the present staff of officers, to properly protect this branch of the fishery in his district.

The law prescribing a size limit is easy of infraction, and the are cases where the buyers keep the small fish separately in pounds or cars until after the visit of the officer, of whose inspections the packers have means of informing themselves. Previous to receipt of proposal he had intended to recommend :—A reduction of the size limit to 9 inches ;

That the penalty for possession of undersized or “berried” lobsters be \$1 for each undersized fish and \$5 for each “berried” lobster ; and a general fine of \$20 or \$25 ;

Licensing of packing establishments at a nominal fee. Violation of regulations to be punished—1st offence, \$100 fine ; 2nd offence, cancellation of license ; although he says on broaching the question of licenses the packers were “horrified at the bare idea.”

Failing the adoption of his recommendations, as above, he remarks on the proposals submitted for his opinion :

1. General close time entirely meets his views.

2. Division of districts—acceptable.

3. Divisional close seasons : Inasmuch as the canning season in his district ranges from sixty to eighty days, he thinks thirty-five days an unfair equivalent ; and he recommends that if packers are permitted to use fish regardless of size limit, they should be allowed an open season of forty-five days, which, he says, would meet the views of well-disposed packers.

Mr. A. C. Bertram, of North Sydney, Inspector of Fisheries for the Island of Cape Breton, District No. 1 Nova Scotia, reports he called a meeting of lobster packers, &c., which was held at North Sydney. Though the notification was widespread and general the attendance was not very large. Several of the Cape Breton factories were, however, represented at a similar meeting held at Halifax ; and the views of some absentees were given by letter.

On the reading of the proposals a warm discussion of the different points was entered into, and comparisons made of the lobster fishery of Cape Breton with that of other portions of the Maritime Provinces, resulting in a concensus of opinion against the shortening of the existing canning season as ruinous to the industry, giving the packers and fishermen less than twenty-five days active operations, when taking into consideration the drawbacks of the districts through storms, scarcity of bait, &c., Fishermen would not fit out for so short a season. A resolution was adopted unanimously to the above effect, and vigorously protesting against the proposed measure.

During the discussions it was stated by Messrs. Baker, Grant, Curry, Philips and McLeod that lobsters were more plentiful in their districts during the past season than any season during the last eleven years, and that the meat was firmer and the shell fuller at the closing days of the last season than at the beginning of the season in June.

The meeting was unanimous against a fixed date for commencing operations, as the drift ice sometimes delayed operations until second week in June, while during favourable seasons they could begin on 20th May.

Another resolution was adopted asking to commence lobster fishing when the spring opened each year and close on the 10th August.

The discussion of this resolution elicited that fall fishing in that district would be detrimental to the lobster fishery, it being stated by Mr. Philips, of Scattari, and Mr. McLeod, of North Shore, that during the great gales of December, 1890, thousands of lobsters were washed ashore, and that most of them were full of spawn, thus proving they spawn until the month of January.

The present legal gauge of $9\frac{1}{2}$ inches was too large, 8 inches being considered sufficient. To secure large lobsters fishermen were apt to ignore the law regarding "berried" lobsters, and wash the spawn off.

A resolution was therefore adopted asking for 8 or $8\frac{1}{2}$ inches legal gauge, and an increase in the penalty for violation.

In connection with the above, it was advanced that a smaller run of lobsters were found in bays shoal waters than were met with in deeper waters, fishermen often coming across 6-inch lobsters, containing spawn, in opposition to the theory that they do not spawn under 8 inches in length.

On the question of licensing fishing territories, the prevalent opinion seemed to favour leasing to each factory owner the territory now fished by him, the argument being that the lessees would preserve their holdings and would not employ fishermen who were known to be violators of the laws.

It was also considered that this would have the effect of reducing the number of small operators, who are not very particular as to the size or quality of the article canned for the market.

On the whole, Mr. Bertram approved of the proposals submitted for his remarks, except as regards the time to be allowed for canning in the Cape Breton division.

Mr. R. A. Chapman, Moncton, Inspector of Fisheries for District No. 2, of New Brunswick, reports that a meeting which nearly all the important lobster packers in his district, or their representatives, attended, was held in the town of Moncton, and in effect resolved as follows:—

The proposed regulation, after deducting the time lost through stormy weather would reduce the fishing season so much that it would virtually close a business which forms a great factor in the exports of the district, and affords employment to a large number of people.

That under the existing regulations the catches for the past two years had greatly exceeded that for 1888, showing an increase in the lobsters under the protection at present afforded.

That the Department be asked to fix the canning season in the district from the 1st May to 15th July.

That the Department be asked to remove the size limit, and the packers and fishermen would pledge themselves not to take small or "berried" lobsters, but would do all in their power to preserve and increase the lobster fishery, to which end they would recommend that all lobster traps hereafter made have slats not less than $1\frac{1}{4}$ inch apart.

And that incubators be established at one or more points, to test the practicality of increasing the fish by artificial means.

Mr. J. H. Pratt, of St. Andrews, Inspector of Fisheries for district No. 1, of New Brunswick, replies: That having instituted enquiries among those in his district interested in the lobster fishery, his views are as follows:—

1. The general close time which extends the open season fifteen days does not meet with much favour, as it seems to be the prevalent opinion that the present legal season is sufficiently long on the already overfished grounds for a reasonable return for the labour and capital invested.

3. (a) Restricts canning, &c., only between 28th May and 2nd July, and because the low price paid for small lobsters by canners does not repay the labour and expense, it meets with approval, while larger lobsters bring a high price. There being no canneries in his division, although several exist in the adjoining State of Maine, and much of the material for canning is taken on the New Brunswick side of the line and conveyed over by traders, therefore this section will not at present affect his division.

4. A disregard of the size limit during canning season he thinks would not work much harm to the fishery on account, of the extremely short season for operations.

5. The protection of "berried" lobsters is a measure which cannot be too strictly enforced.

6. The general size limit should be raised to 10½ inches, as the fishermen find fish of this size more profitable.

Mr. R. Hockin, of Pictou, Inspector of Fisheries for District No. 2, of Nova Scotia, called a meeting at Halifax of packers and other interested parties. The attendance represented about half of the packers in his district, and the several propositions were considered.

Sections 1 and 2 were not considered important; but section 3, proposing special district close seasons, was unanimously voted inexpedient, because it was held that the fishery did not show such evidence of decline under the existing regulations as to call for such drastic measures, it being the general opinion that a strict enforcement of the present restrictions would afford sufficient protection to the lobster fishery.

The effect of the proposition would be to shorten the canning season one-half, thus rendering it impossible to profitably run the business, and result in closing the canneries. The capital invested and outlay necessary to operating would be equally as great for a short season as for a long one; and it is advanced that the lack of supply through limited catch would lose the position to the product which it has obtained in the markets.

A resolution was unanimously adopted in effect as follows:—

The lobster fishery would be better preserved by a strict observance of the fishing season than by regulating the size limit.

They are of opinion not more than 5 per cent of lobsters under regulation size are returned to the water by the fishermen. If not bought by packers, they are used in some way.

That an attempted enforcement of the size limit bears hardly upon those packers under immediate supervision, while a strict enforcement could only be effected by large expense.

That districts where the season regulation has been observed have exhibited evidence of increase in the fishery, notwithstanding the size limit has not been well observed.

Mr. Hockin is averse to the proposal to shorten the present canning season in his district. He says there is evidence that during the latter part of May and first part of June the fish and fishery are at their best, while after the first week in June deterioration begins, both in quality and quantity.

He quotes statistics showing the annual catch since 1876 up to 1889, revealing a good average catch for 1889, much in excess of that of 1888, while the returns for 1890 will exceed those of 1889. The catches of 1885 and 1886 were the largest, but there were more factories in operation and more people fishing than since. He therefore holds that in his district the fishery is on the increase.

He believes the reduction of the size limit to 9 inches would meet with the sympathy as well as the interest of the packers.

Mr. Hockin concludes by recommending the resolution of the meeting to the consideration of the Department, and records his belief that the adoption of the proposed regulations is inexpedient and unnecessary in his division.

Mr. W. Wakeham, of Gaspé Basin, Inspector of Fisheries, for the Gulf division, reports that owing to the isolated and scattered position of many sections of his inspectorate it was impossible to get together at one time or place a large number of those interested in the lobster industry; but he took every opportunity of informing himself of the views of the canners and others he could reach. This division is included in District No. 3 of the proposals, a discussion of which elicited the following information:—

There being no export trade in live lobsters, and the product of the fishery being used only for canning and home consumption, he recommends the general close season to cover canning, curing, &c., and to be from 1st July to 15th May, although some of the canners would like to fish until 7th or 8th July.

He would recommend that lobsters be allowed to be taken at any time for domestic use, provided they were not under legal size, or "berried." The actual number would be very insignificant, and be consumed principally by tourists and the actual residents, who are but few.

The majority of canners approve the proposal to disregard size limit, as they find it impossible to comply with the law as it now stands in that respect. While anxious to get from fishermen as large lobsters as possible, rapid handling must necessarily pass lobsters verging on the legal size without actual measurement, and reliable canners estimate that 10 per cent. of undersized lobsters are so passed, though they try to comply with the law.

There is a difference of opinion as to the extent of shortening the canning season, which would be a fair equivalent for the withdrawal of the size limit. The proposal shortens it from fifty-three to thirty-six days. The proposed open season

would not suit his division, as the lobster fishing must begin with the opening of navigation. Therefore, any shortening must be at the end and not at the beginning of the season.

In 1887 lobster fishing began 30th May; in 1888, 25th May; in 1889, 23rd May; in 1890, 16th May.

Mr. Wakeham goes on to say that both as regards quality and quantity the fishery is at its best during the first ten days of June, or before the season would open if the proposal were adopted.

Mr. Wakeham is of opinion that there can be no question as to the correctness of the dates proposed by him—15th May to 1st July—if the restriction of size limit is removed, and any complaints which might afterwards arise would be only in the direction of seeking a few days longer in July say to 6th or 8th.

Messrs. Mitchell, Hitchens & Co., of Louisburg, dealers in canned and fresh fish, say that the propositions submitted fully meet with their views, with the exception that the time allowed for canning in their district is too short, and they recommend from 1st June to 15th July, which they consider would satisfy reasonable packers, while it would scarcely pay them to fit out for a shorter season. They strongly favour the change of size limit to 9 inches, as well as the protection of "berried" lobsters.

The 9½-inch standard has been ruinous to them, and the only packers who have done anything this year are those who succeeded in evading the law. The 9-inch limit is sufficient for all protective purposes.

Mr. J. M. Forrest, of Antigonish, Nova Scotia, having made a tour of the Atlantic coast of Halifax and Guysboro' Counties, with a view to ascertaining to what extent illegal lobster packing had been carried on, says that one of the principal difficulties is the fall packing, which, if not checked, will have a bad effect upon the fishery. This illicit packing, he says, is not carried on by the responsible business men in the factories, but by fishermen in huts and camps in the bush, who are actually packing thousands of cases in September, October and November, which the regular operators say greatly decreases their spring supply.

The strict enforcement of the 9½-inch limit would virtually close the factories in Nova Scotia and Prince Edward Island. There are more lobsters to be met with 9 inches in length than any other size, and he advocates a reduction in the legal limit to 9 inches.

He says the proprietors of existing factories think that the fall packing by irresponsible parties could be checked if they were to pay a license fee of \$150 per annum for each factory, each having a registered trade mark, and all canned goods not bearing a trade-mark to be seized.

From the views expressed as above, it will be observed that with the exception of some local changes in the dates during which fishing is to be allowed for canning, and a difference of opinion as to the practical good of a size limit, there appears to be a strong tendency in favour of the existing regulations, and it is even held that a marked improvement in the fishery is noticeable in those districts where something like a reasonable enforcement of the law has been maintained.

There also appears to be unity in the opinion that the proposed shortening of the open season in the respective districts is in each case too great to form a fair equivalent for the proposed privilege of disregarding the size limit. This view of the matter is shared alike by the interested parties and the fishery officers.

The question regarding the length of lobsters allowed to be taken is one of great importance both as to its probable effect upon the fishery if disregarded, and upon the canning industry if it could be strictly enforced. And upon this point I find, as might be expected, the unanimous voice of the packers in favour of its abolition.

On the part of some of the officers there is a leaning of opinion in that direction, or at least towards a reduction of the existing standard; Inspector Hackett, of Prince Edward Island, however, advocating its retention as a necessary remedial measure.

It has been attempted to show that the existence of a smaller run of lobsters nearer shore having been found in large quantities as small as 8 inches in length, a large proportion of which were "berried" (and which were spawning as late as December), proved that lobsters matured and reproduced their species at an age and size hitherto unaccepted, and that this fact clearly combatted the necessity for a size limit beyond 8 or $8\frac{1}{2}$ inches.

On this point will be found, at page 12 of the Annual Report of the Newfoundland Fisheries Commission for the year 1889," the following statement:

"In the course of his investigations Mr. Nielsen ascertained a most important fact in regard to the lobsters in our waters. He discovered that they have two different times of spawning. The larger run of lobsters spawn from the middle of July till the middle of August. The smaller and middle-size lobsters spawn in the latter part of October and the month of November. It is needless to point out that this discovery will have a very important bearing on the legislative enactments which may be found necessary for the protection of our valuable lobster fishery."

It would seem that wherever the protection of the lobster has engaged the attention of Governments and Commissions, the size limit has been considered expedient, and in some case all that was necessary.

In their "Report on the Crab and Lobster Fisheries of England and Wales, 1877," Messrs. Frank Buckland and S. Walpole recommended 8 inches, except in Sussex County, where they placed it at 7 inches. In Scotland they recommended 8 inches. Considering the difference in size of our lobsters, 8 inches in English waters would be equivalent to about $10\frac{1}{2}$ in our waters.

Messrs. John A. Blake, Joseph Hayes and Thomas F. Brady, in a similar report for Ireland, recommended 9 inches "from the end of the tail to the tip of the beak."

The data available on the lobster fishery of Norway, as applicable to its conditions in Canada, is meagre. I find, however, in a paper by M. Friele on the fisheries of Norway, in 1877, a short reference to that fishery, in which it is said: "Anybody is allowed to take lobsters, except from 15th July to 15th October, which constitutes a close time, during which this fishery is prohibited." From this it would appear the fishery is free, except during the prohibited season.

And in a report for 1875, by Professor G. O. Sars, to the Department of the Interior, on investigations of salt water fisheries, it is observed that on the question

of framing laws for the better protection of this fishery be considered, the principle should be much the same as that which forms all similar protective measures—that is, an attempt to secure to its propagation as little interference as possible. If the enormous quantity of ova which an adult female lobster is capable of producing were allowed to develop into young fish the result would amply compensate for the annual catch. The natural supposition was that a decrease in the quantity of lobsters was due to the capture of adult females during the breeding season.

He believed that if the lobster was thoroughly protected during the months of July and August there would be some guarantee at least of the production of sufficient young ones to make up for the take of the fishery during the other months.

And in the United States, where improvident fishing almost exterminated the fishery, the size limit is placed at $10\frac{1}{2}$ inches, which regulation is unflinchingly enforced.

While in Newfoundland, as will be seen from the report above referred to, although the lobster packing industry is one of comparatively recent establishment, and its prosecution has not yet had sufficient time to work any lasting destruction to the fishery, yet in localities where it is vigorously pushed a rapid diminution in the abundance and size of the lobsters is noticeable.

This, coupled with the observance of a marked decline in the production of the Canadian lobster fishery, has induced the Newfoundland authorities to take early measures to provide against the destruction, by improvident fishing, of that valuable industry around the coasts of that Island, and at the same time to assist in keeping up the supply by means of artificial hatching on a large scale.

At page 16 it is stated: "The lobster being a local fish, in the strictest sense of the term, never migrates far from its deep-water haunts, but comes in annually to pretty nearly the same place on the shore. Hence, by over-fishing, or taking immature fish that have never spawned, any given locality may be speedily depleted and ruined as a lobster ground. The keeping up of the stock by artificial breeding and stringent protective measures are thus seen to be paramount importance, if the lobster fishery is to be saved from destruction."

Mr. Nielsen, the Superintendent of Fisheries, after a careful investigation, recommends that the close season in Fortune and Placentia Bays be fixed from 15th July till 20th September, and in Trinity and Conception Bays from 15th July to 15th September. He considers an earlier close time injurious to those engaged in the packing industry, and in the event of extending the artificial hatching to the various bays he thought the close season could be shortened a few days without injury to the fishery.

Returning to the size limit, Mr Nielsen places great importance on prohibiting the catch of immature lobsters, which had not exercised their functions of propagation. "Berried" lobsters were seldom found under 8 inches, and more frequently over than under 10 inches. As the size varies in different localities—even in the same bay, a fixed limit could not be applicable to the whole Island. He therefore recommended "that a law be passed prohibiting the taking or packing of lobsters in Fortune Bay and at Moody Island, Placentia Bay, below 9 inches in length; and that no lobsters in any other part of Placentia Bay, or in Trinity or Conception

Bays, be taken or packed below 10 inches in length, reckoned from the tip of the rostrum, or frontal projection, to the end of the telson, or tail, the hairs not included."

The Commission, while concurring generally in the views expressed by Mr Nielsen, considered it desirable that the present regulation size (10 inches) should be general, with the exception of Fortune Bay, where a 9 inch standard seemed necessary.

The question of limiting the lobster factories was touched upon by Mr Neilson, who, though he deprecated generally the idea of restricting competition in any industry, so long as a permanent injury to that industry was not threatened, was forced to the opinion that if the factories continued multiplying, as they had for the past few years, the fishery would not be equal to the drain upon it, and it might be necessary to obtain legislation to interfere in this direction to save the fishery.

The Commission proposed that each factory, under certain penalties be required to take out a *free* license, to which conditions be attached, the violation of which were punishable by penalties provided.

The different views as to the legal fishing season may be summarized as follows:—

Present Canadian open season—(Canning) :—

Atlantic coast, from Canso westward, including Bay Fundy coast to United States boundary, 1st January to 30th June. Elsewhere, 1st January to 14th July.

Recommended by Inspector Kinney.—Forty-five days fishing.

do	do	Bertram.—From about 15th or 20th May to 10th August.
do	do	Hackett.—Adherence to present regulations.
do	do	Chapman.—1st May to 15th July.
do	do	Pratt.—Immaterial; no canning in his district.
do	do	Hockin.—Adherence to present regulations.
do	do	Wakeham.—15th May to 1st July.
do		Messrs. Mitchell, Hitchins & Co. (Cape Breton).—1st June to 15th July.
do		Superintendent Nielsen (Newfoundland).—Placentia and Fortune Bays, 21st September to 14th July.
do		Superintendent Nielsen (Newfoundland).—Trinity and Conception Bays, 15th September to 14th July.

Proposals submitted for opinions :—

District No. 1.—29th May to 1st July	} With a general close season from 15th July to 1st January.
do 2.—6th June to 9th July	
do 3.—13th June to 16th July	

It will be observed that in all the different propositions and regulations the Newfoundland law is the only one which countenances fall packing, and in the report of the Newfoundland Fisheries Commission it is stated that Messrs. Mitchell, Hitchins & Company, of Nova Scotia, had urged upon them the prohibition of fall

packing, as it did not pay, and the lobsters were unfit for food. The Commission reports, however, that Mr. Nielsen holds a different view. He states that after 20th September the meat is in good condition as an article of food, though the new shell formed after shedding is not perfectly filled out. If fall fishing were prohibited a great number of poor fishermen would be unable to earn a livelihood. When stormy weather prevents cod fishing, lobster fishing can be prosecuted in the arms and bays, enabling them to make some provision for the winter. He considers little injury can result from resuming fishing after 15th and 20th September, especially if the ova be collected and artificially hatched.

The Commission saw no reason for stopping fall fishing.

In view of the success which attended the experimental operations in the artificial hatching of lobsters, especially in Newfoundland, and being anxious to afford all possible assistance in the direction of keeping the supply equal to the tremendous drain upon this fishery, the necessary Parliament appropriation was procured for the establishment of a lobster hatchery, were the success, or otherwise, of hatching operations could be demonstrated.

The Superintendent of Fish Culture, under your direction, visited Newfoundland and made personal enquiries into the results of the work carried on there by Superintendent Nielsen. Mr. Wilmot's observations were such as satisfied him of the feasibility of the work and also its practicability in Canada.

A site has been selected on the Northumberland Strait, coast of Nova Scotia, the surroundings of which appear to peculiarly adapt it to the requirements of the operations, both as regards its fitness for the work and its convenient location for securing a supply of parent fish from which to gather the necessary eggs.

Arrangements for the construction and the equipment of a first-class lobster hatchery are rapidly progressing, and it is expected to have it in full working order for the approaching season.

Meanwhile, the following reference to the Report of the Newfoundland Commission may be made on this branch of the subject.

Great satisfaction was expressed at being able to announce the most successful experiments at Dildo Hatchery, which work was considered second in importance to cod propagation, and which is looked upon as a compensation for any disappointment experienced in connection with the propagation of cod. It is said :

“ While carrying out a vigorous search for cod ova, Mr. Nielsen decided on commencing the hatching of lobsters. Spawn was at first obtained at a small lobster factory in Green's Harbour, Trinity Bay. The first supply was brought to the hatchery on the 19th July and these were hatched by the 24th July. The work went steadily on and a number were hatched almost every day. The factories in Green's Harbour being insufficient to supply the number of eggs that could be handled, additional supplies of spawn were brought from Mr. Otis's factory in Long Harbour, Placentia Bay, also from Mr. Coffin's factory. During the month of August spawning lobsters became scarce, and after the beginning of September none but green eggs, which would require a couple of months to hatch, could be obtained. The lobsters hatched were healthy and lively; and as they were sufficiently matured to take care

of themselves, they were set free in various places around the head of Trinity Bay. Without going into details, it will be sufficient to state that four millions and thirty nine thousand lobster eggs were hatched during the season, and planted in the waters of the bay, as described. This gratifying measure of success was obtained, notwithstanding serious difficulties which had to be encountered. The apparatus of the hatchery, having been adapted for cod ova, was not well fitted for lobster hatching, so that not nearly as many eggs could be treated as in a proper lobster apparatus. Further, many bad and injured eggs were brought to the hatchery, owing to the rough treatment they often received from the lobster catchers while carrying them to the factories. No better source of supply, however, was available.

“The successful hatching of lobsters awakened much interest, and a large number of visitors were attracted to the hatchery to see the young fry vigorously disporting themselves in the hatchery boxes.

“The sight had a marked effect in removing the prejudices against the hatchery which many persons entertained, and in strengthening their belief in the possibility of hatching cod, which had been hitherto doubted. A few are still unable to divest themselves of the idea that the artificial propagation of fish is an impious interference with the order of Providence. In every age of the world, all new ideas and innovations on established usages have been regarded at first with similar distrust and suspicions, and have had a like opposition to overcome.”

The Commission was impressed with the importance of the initiation of successful lobster hatching as they considered a means was thus provided which, if properly operated, would prove a safeguard to the lobster fishery of the Island against the injury and ruin which had overtaken that industry in other countries. They believed that by this means the stock may not only be maintained, but greatly increased, while at the same time it rendered possible the introduction of this valuable crustacean into waters where at present they are not found.

They point out that the operations have been doubly valuable, because the eggs which were hatched by Mr. Nielsen and those which are proposed to be used by him are taken from the canneries, where hitherto they have gone to waste, thus neutralizing, to a great extent, the damage done in former years to the fishery by the destruction of “berried” lobsters, and they consider it would be difficult to over-estimate the value of the enterprise to the fishing interest of the colony.

In connection with this industry, the authorities of Newfoundland have been copiously referred to in the foregoing pages in view of the fact that it is a matter of considerable importance to the trade that the protective legislation of Canada and Newfoundland should be as much as possible assimilated.

At Appendix No. 8 will be found answers from Fishery Officers to a series of questions submitted by the Department affecting this fishery.

The information elicited would appear to largely justify the existing regulations, and with their rigid enforcement—it being a noticeable fact that some of the canners are already bearing testimony to the efficacy of these regulations—the future of the lobster fishery looking to its increased productiveness is assured.

To remove all restrictions as to size, or in the case of lobsters taken for the purpose of canning, as has been suggested, leaving this regulation in operation as regards lobsters taken for export fresh only, is, in my opinion, most objectionable.

The proposed reduction of the legal size to nine inches, together with the operations of the hatchery now in course of construction, and the establishment of a system of floating incubators, so successfully adopted in Newfoundland, should remove all opposition to the existing regulations.

THE FISHERIES PROTECTION SERVICE.

It is gratifying to again be able to report that the operations of this service during the season have been of a very satisfactory character.

The vessels forming the fleet were the Government steamers "Acadia," "La Canadienne," "Stanley," and the chartered steam yacht "Dream," together with the Government schooner "Vigilant," and the chartered schooners "Connaught" and "Critic." For a short period in the fall the Customs steam yacht "Argus," stationed at Halifax, was also employed.

The fleet was again under the immediate direction of Lieut. Andrew R. Gordon, R. N., on board the SS. "Acadia."

This officer's report, which forms Part II of this report, deals minutely with the details of the season's operations, and makes some suggestions as to the mackerel and lobster fisheries of much importance. His views will be studied with not a little interest by those immediately interested in these fisheries.

The cost of the service for the fiscal year 1889-90 was \$64,434.66, and for the calendar year ending 31st December, 1890, \$70,707.50, as against \$69,693.82 for the fiscal year 1888-89, and \$69,045.89 for the calendar year ended 31st December, 1889.

In this expenditure is, however, included that of the protection steam yacht "Cruiser," amounting to \$4,509.25, one-half of which (\$2,254.63) is paid, by arrangement, by the Customs Department. This vessel was commissioned on 15th September, under command of Captain Edward Dunn, for the protection of the fisheries of the Georgian Bay and Lake Huron.

The "Cruiser" remained in commission until the 9th December, and rendered most satisfactory service, especially during the month of November, which is the close time for salmon-trout and whitefish.

A vigorous protection of the fisheries of these extensive waters has become a pressing necessity. That a larger and more powerful steamer would accomplish still better work there is now no doubt. The question of providing such a vessel is engaging attention.

The only seizure effected during the past season was the United States' fishing schooner "Davy Crockett," Nelson Cantello, Master, which vessel was seized at Souris, P.E.I., on the 25th September, for fishing from dories within the three-mile limit. The "Davy Crockett" was taken to Charlottetown and proceedings instituted in the Admiralty Court. Pending the result of these proceedings, this vessel was released under a bond for \$2,500, this having been furnished to the satisfaction of the court.

The United States' fishing schooner "Nellie Irving" was detained by the Collector at Souris for an alleged infraction of the Customs regulations, but was subsequently released.

The period of two years for which the *modus vivendi* of the Treaty of Washington Act of 1888, provided for the issue of licenses to United States fishing vessels, having expired on the 14th of February, 1890, Parliament passed an Act intitled "An Act respecting fishing vessels of the United States of America," under which the system of licenses to foreign fishing vessels was authorized, the conditions being that upon the payment of \$1.50 per ton such vessels were permitted to enter Canadian ports for the purchase of bait, ice, seines, lines, and all other supplies and outfits, and the transmission of catch and shipping of crews.

Although an arrangement had existed with the Government of Newfoundland that the licenses of fishing vessels issued under the *modus vivendi* of the Treaty of Washington by Canada and Newfoundland should be mutually recognized, this arrangement was not continued on the part of Newfoundland, owing, it is alleged, to the fact that United States' fishing vessels had been found disposing of the bait they had obtained, presumably for fishing on the Banks, to French fishermen, thus rendering largely futile the operations of the Newfoundland Bait Act.

That United States' fishing vessels to a large extent took advantage of the renewed privilege is shown by the following figures:—

	Vessels.	Tonnage.	Amount Collected.
1888.....	36	2,554	\$ 3,831 00
1889.....	78	6,393	9,589 50
1890.....	119	9,641	14,461 50

The list of fishing vessels to which licenses were issued during 1890 is printed in Part II of this report.

On the part of owners and masters, the advantages these licenses were to the vessels obtaining them was freely admitted; and it is also very satisfactory to be able to state that in the cases of vessels which did not take licenses a generally willing compliance with their lessened privileges was observed, the result of which has been to establish a continuance of the amicable relations between the officers of the protection fleet and the masters of fishing vessels, to which I was enabled to refer in my last year's report.

FISHERY INTELLIGENCE BUREAU.

This service, which was inaugurated in a very small way in the season of 1889, was continued during the season of 1890 on a somewhat extended scale, at a cost of \$1,330.04. Stations were established at forty-four different points on the coast, and the results of the daily reports communicated to the head office at Halifax, where they were collated and transmitted by telegraph to the principal fishing stations and business centres in the Maritime Provinces.

The service has been very generally appreciated by the masters of fishing vessels and those interested in the fishing business.

Some suggestions are made in Lieutenant Gordon's report, looking to an increase in its usefulness, which are worthy of attention, and would not very materially

increase the cost. The procuring of fresh bait is so absolutely necessary to the successful prosecution of the deep-sea fishery that any information which facilitates this being done is a boon to fishermen, the full value of which can only be estimated by the results of active work on the part of a vessel and crew on the one hand, and enforced idleness on the other.

Attention is directed to the question of pilot dues exacted from fishing vessels, referred to in Leut. Gordon's Report. There can be no doubt but that the intention has been to relieve vessels of this class of all local dues from which they could reasonably claim exemption, and that pilotage dues are one of the chief of these will not be questioned.

The principle being admitted, the Pilotage Regulations should be so amended as to exempt all vessels absolutely engaged in fishing up to 250 tons that being the limit to which the Pilotage Act 59 Vic. chap. 86, authorizes local authorities to exempt fishing vessels from the payment of these dues.

Appended is a statement of the cost of this service for the calendar year of 1890.

STATEMENT of Expenditure in connection with Fisheries Protection Service for the Year ended 31st December, 1890.

Service.	Amount.	Total.
	\$ cts.	\$ cts.
<i>Str. "Acadia."</i>		
Wages of officers and men.....	7,495 76	
Provisions.....	2,274 19	
Fuel.....	1,385 74	
Repairs.....	2,497 79	
Miscellaneous expenditure.....	3,207 33	
		16,860 81
<i>Str. "La Canadienne."</i>		
Wages of officers and men.....	6,628 54	
Provisions.....	2,083 07	
Fuel.....	923 31	
Repairs.....	2,520 39	
Miscellaneous expenditure.....	2,846 60	
		15,001 91
<i>Str. "Stanley."</i>		
Wages of officers and men.....	4,944 97	
Provisions.....	2,517 22	
Fuel.....	2,641 18	
Miscellaneous expenditure.....	1,597 44	
		11,700 81
<i>Str. "Cruiser."</i>		
Wages of officers and men.....	1,651 13	
Provisions.....	303 12	
Fuel.....	429 49	
Repairs.....	1,612 87	
Miscellaneous expenditure.....	512 64	
		4,509 25
<i>Str. "Dream."</i>		
Wages of officers and men.....	2,812 82	
Provisions.....	822 14	
Fuel.....	637 09	
Charter, 11 months.....	3,300 00	
Miscellaneous expenditure.....	306 33	
		7,878 38

STATEMENT of Expenditure in connection with Fisheries Protection Service for the
Year ended 31st December, 1890—*Continued.*

Service.	Amount.	Total.
<i>Sch. "Vigilant."</i>		
	\$ cts.	\$ cts.
Wages of officers and men.....	3,033 07	
Provisions.....	1,012 07	
Repairs.....	148 88	
Miscellaneous expenditure.....	889 81	
		5,083 83
<i>Sch. "Critic."</i>		
Wages of officers and men.....	686 48	
Provisions.....	237 68	
Charter.....	520 00	
Miscellaneous expenditure.....	176 23	
		1,620 39
<i>Sch. "Connaught."</i>		
Wages of officers and men.....	1,673 63	
Provisions.....	741 53	
Charter.....	1,200 00	
Miscellaneous expenditure.....	392 13	
		4,007 29
Customs steam yacht "Argus," while employed on special services.....		158 75
General Account, miscellaneous expenditure.....		2,973 54
Fisheries Intelligence Bureau.....		912 54
Total.....		70,707 50

RECAPITULATION.

Str. "Acadia".....	16,860 81	
do "La Canadienne".....	15,001 91	
do "Stanley".....	11,700 81	
do "Cruiser".....	4,509 25	
do "Dream".....	7,878 38	
Sch. "Vigilant".....	5,083 83	
do "Critic".....	1,620 39	
do "Connaught".....	4,007 29	
Str. "Argus," special.....	158 75	
General Account.....	2,973 54	
Fisheries Intelligence Bureau.....	912 54	
Total.....		70,707 50
This amount will be reduced in the sum of \$2,254.63, being the share of "Cruiser" expenses paid by Customs Department.....		2,254 63
Net expenditure, Fisheries Protection Service.....		68,452 87

POUND-NETS.

The question of the effect upon the several fisheries in which nets of this character are used, as compared with those commonly known as gill-nets, has been a subject of much discussion on the part of those actively engaged in fishing by means of one or the other system.

Before proceeding to deal with this aspect of the question, I desire to submit a statement of the Department's action with reference to another phase of this industry, the importance of which is scarcely less than that above referred to.

It has long been a subject of complaint on the part of Canadian fishermen operating in the waters of Lakes Huron and Erie that while restrictions were placed upon the number of pound-nets for which licenses were granted in Canadian waters, as well as regards the periods of fishing, that on the United States' shore of these lakes the fishing was carried on without any restriction whatever, and that in consequence the operations of Canadian fishermen were prosecuted at a great disadvantage. Recognizing the force of this contention, but at the same time being fully aware of the baneful effect upon the fishing, which must follow, if the demands of our fishermen were conceded, it was deemed expedient to address the United States' Government on this subject, the initiatory step being taken in your report to the Privy Council of the 25th of June last, and upon which a minute was approved by His Excellency on the 5th of July, in the following terms :—

“On a report dated 25th June, 1890, from the Minister of Marine and Fisheries, stating that he has received urgent representations in the interests of the pound-net fishermen of Lake Erie, fronting on the County of Essex, asking that they be authorized to use double-headed pound-nets for fishing, instead of being limited, as at present, to the single pounds licensed by the Fisheries Department— their object being to increase the catching power of this fishing apparatus.

“The Minister observes that the question of pound-net fishing is one which has engaged the attention of the Department of Fisheries for years, and has always been found a difficult one to deal with, especially in waters adjacent to those of the United States, where fishing is carried on in close proximity to that in Canadian waters.

“Pound-nets are prohibited by the Fisheries Act (chapter 95, Revised Statutes), except under special licenses and subject to certain conditions. The policy of the Fisheries Department has been to curtail this mode of fishing within as reasonable limits as possible and minimize its destructiveness.

“The fact that these nets are allowed at all, though under a heavy license fee, is largely due to the strong representations on behalf of Canadian fishermen of the unequal position in which they were placed, both as regards the times and modes of fishing, as compared with the unrestricted fishing carried on in United States waters within their sight, and in which fishermen are permitted to take fish at all times and by all means.

“To protect the fishery, the operations of Canadian pound-net fishing on Lake Erie have been curtailed to the extent of discriminating as much as possible against the use of double-headed pounds.

“The Minister further observes that the importance of the interest involved and the difficulty which exists to maintain a proper observance of the different close seasons for fish by reason of the sedentary nature of pound-nets, which of necessity catch all kinds of fish at all times, render it highly inexpedient to relax the precautions of the Department of Fisheries towards the economical management and administration of the fishing industry; especially in view of the fact that observance of the close seasons and other Fishery Regulations is exacted from all other fishermen.

“The Minister regrets that there is an absence of similar legislation in this and other directions for the protection and preservation of the fisheries in the waters of

the neighbouring States of Michigan and Ohio, and before advising that the policy, as authorized, regarding pound-net fishing, be abandoned, he is of opinion that it would be well to seek co-operation on the part of the authorities of the States of Michigan and Ohio, and he therefore recommends that a copy of his report be transmitted to the Right Honourable the Principal Secretary of State for the Colonies, for submission to Her Majesty's Government, with a request that it be brought to the notice of the State Governments of Michigan and Ohio, as well as of the General Government of the United States.

"The Committee concurring in the above, advise that Your Excellency be moved to forward a copy of this Minute to the Right Honourable the Secretary of State for the Colonies, with a request that it be brought to the notice of the United States' Government and of the Governments of the States of Michigan and Ohio, and with the expression of a hope that the whole question of the protection of the fisheries in inland waters contiguous to the United States and Canada may be considered, with a view to some international action, having for its object the adoption of uniform regulations restricting the catching of fish at times and by means which tend to exhaust these fisheries."

No understanding has yet been arrived at with the United States' authorities on this subject.

To return to the question of pound-net and gill-net fishing and the effect of the respective modes on the fishing industry at large, there will be found in Appendix No. 6 to this report a memorandum on pound-net fishing, giving the answers by fishery officers and others to a series of questions through which it was desired to elicit the views of practical fishermen and others engaged in the fishing business.

As is the result in most enquiries of a character similar to that under consideration, there is a wide divergence of opinion on the part of those answering the questions. Mr. Charles Wilmot, the officer in charge of the fish hatchery at Newcastle, Ontario, and who has for some years past conducted the Department's operations at Georgian Bay in procuring salmon trout and whitefish spawn, reviews at length the answers given to the several questions, and in an interesting report supplements the result of his own observations on the matter at issue. Mr. Wilmot expresses an emphatic preference for fishing by means of pound-nets to that with gill-nets, and supports his conclusions and arguments with data which are certainly entitled to consideration. He has, however, dealt with two aspects of the question, which must certainly enter largely into its consideration before a satisfactory conclusion can be reached. The first is that to adopt a system of pound-net fishing to the exclusion of gill-nets would throw the business of fishing into the hands of extensive operators and capitalists, and as a result paralyze that branch of the industry carried on by means of gill-nets, and in which the aggregate capital invested amounts to a very large sum, beside throwing out of employment a considerable number of our population who now fish for a living by means of gill-nets.

The cost of a well-equipped pound-net with boat, new, ready to set is \$1,000, while a fisherman can equip himself with a boat and a gang of gill-nets for \$500. The cost of gill-nets can of course be illimitably extended by an increase of their number, but the point I wish to make is, that there are many men

engaged in gill-net fishing in a reasonable way who could not provide themselves with a pound-net outfit.

The second point is the absence of the consideration as to the locality in which the different modes of fishing can be carried on.

That the system of gill-nets is an advantage over that of pound-nets, in being migratory, thus enabling the fishermen to follow the fish to their haunts at different periods of the year, is admitted; and that this is not an unreasonable advantage, when legitimately pursued, will, I think, also be conceded when considering the operations of the Fisheries Intelligence Bureau on the Atlantic coast, which are undertaken solely for the purpose of informing the fishermen as to the presence of fish in the waters of a particular part of the coast. The fact should not be lost sight of that there are many long stretches of water bordering the shores of our inland waters where pound-nets cannot be used, owing to the nature of the bottom, for it is well understood that a mud or soft bottom is necessary in which to drive stakes to fasten the pound-net, and it will therefore be seen that were gill-nets prohibited it would mean the prohibition of fishing altogether in parts of our inland waters.

While the system of pound-net fishing has been sanctioned by the Department to a reasonable degree, not a little difficulty has been experienced in restraining the operators of this system from excessive fishing by what is termed "double-headed pounds."

The decided advantage the pound-net system possesses over that of gill-nets, in the better condition in which the fish so taken are available for market, is so fully dealt with by Mr. Wilmot that reference thereto seems unnecessary, beyond stating that I, on this point, very generally concur with Mr. Wilmot's statements.

Sufficient evidence has, I think, not yet been adduced to show that the Department would be justified in recommending the adoption of extreme measures looking to the abrogation of either of the systems of fishing named. I would suggest, therefore, a continuance of the pound-net system under such restrictions as may from time to time be considered necessary, but that "double-headed pounds" should not be sanctioned, and that the mesh of the nets should be fixed at a size sufficiently large to prevent the possibility of small or immature fish being gilled. A regulation should also be enacted fixing the distance apart at which these nets must be placed.

With reference to gill-net fishing, the length of the net which each boat under present regulations is entitled to fish is 6,000 yards. This, in my opinion, should be curtailed rather than advance the fee of \$5 per boat now paid for the privilege of fishing during the whole season with nearly $3\frac{1}{2}$ miles of net. It will, I think, be conceded that this charge is wholly inadequate to the privilege granted. The boats licensed should take out a fishing permit, which I recommend should be furnished free of charge, and should have painted or put on in some other distinguishing way, in a conspicuous part of the sail, the official number of such permit, and should also have this number painted on the bow. The nets used by a boat should have a tag attached thereto bearing this number, and having the owner's name legibly written or stamped thereon. I would further recommend that steps be taken to ascertain, so far as is possible, the principal spawning grounds to which the fish repair in the fall of the year to deposit their ova, and that no fishing be permitted within a mile of these localities.

The adoption of the regulations suggested, the rigid observance of close seasons together with that of the size of the mesh, will, aided by the Department's fish breeding operations, go very far towards bringing within proper control and the maintaining the supply to an industry the importance of which is scarcely estimable.

I confidently look forward to the day when the "poor fishermen," having realized the benefit to the fishery in which he toils, of wholesome regulations, unsparingly enforced, will look upon the Fisheries Department as his best friend.

OYSTERS.

The state of the oyster fishery in the Maritime Provinces of the Dominion has already attracted not a little attention on the part of those interested in its preservation.

A commendable effort has been made by a few persons towards the introduction of oyster culture by private enterprise, and the effort has, the Department is informed, been reasonably successful. It has, however, become apparent that if this fishery is to be saved from extinction radical regulations, looking to a less destructive mode of carrying it on, are imperative, as already some of the beds in the Provinces of New Brunswick and Prince Edward Island, which not many years ago were conspicuous for their oyster production, have either become wholly exhausted or so nearly so as to render fishery operations no longer profitable. Notable amongst these are the once prolific beds of the harbour of Shediac, N.B., and although these beds gave unmistakable signs of exhaustion many years before its accomplishment, an effort made by the Minister of Marine and Fisheries in 1875, looking to their preservation and resuscitation, met with so much opposition in the district that it was abandoned.

The existing reasons for the depleted state of the oyster fishery are so fully referred to in my annual report of last year that any repetition of the facts appears uncalled for.

In 1885 the close season for oyster was extended from the 1st to the 15th of September, and the season is now fixed, by regulation adopted on the 6th of August, 1885, at from the 1st day of June to the 15th day of September in each year. This is the only regulation in existence bearing upon the oyster fishery in the Dominion. The fishery has been relentlessly pursued, and may yet be, till the new regulations take effect, by any persons who see fit to rake oysters at any place and in any manner they please, and wholly regardless of the size of oysters taken or the injury to existing beds, by leaving large numbers of small oysters and shells on the ice to, in the spring of the year, drop upon and destroy the beds.

With a full sense of the importance of this question, an exhaustive report was, in March last, made to His Excellency in Council, in the following terms:—

DEPARTMENT OF FISHERIES,
OTTAWA, March, 1890.

To His Excellency the Governor General in Council.

Reverting to the enquiry made by the Commission appointed in 1887 to investigate the condition of the oyster fishery of Canada, the undersigned has the honour

to call attention to the report of that Commission, and to the necessity for the adoption of measures to ensure the preservation and improvement of this important Canadian industry.

The report of the Commissioners shows the great extent of area suitable for oyster culture in the Dominion, and they say that they found many of the beds extinct, while others were rapidly becoming exhausted, from want of proper cultivation and protection, from indiscriminate and improvident raking.

The Commissioners concluded their report with the following suggestions:—

They would respectfully recommend to your Honour's consideration that one general law or regulation should cover the whole of the Canadian Atlantic seaboard, with the following provisions, namely:—

I. That existing oyster beds be reserved to the public, and that their limits be officially defined;

II. That mud-digging be prohibited within sixty yards of any officially recognized workable live oyster bed;

And that suitable portions of bays, creeks, estuaries or harbours be considered closed for oyster fishing, and said closed portions be laid off for the digging of shell manure;

III. That bays of considerable extent, in which are many oyster beds, be marked off in two or more divisions, and that the divisions be fished only in alternate years;

IV. That, for the present, the existing close season be retained, namely, from 1st June to 15th September in each year, both days inclusive;

V. That under penalty of forfeiture of boat and appurtenances, no fisherman shall bring ashore (excepting for authorized purposes), any "round" oyster that does not measure fully 2 inches in diameter of shell, nor any long (oblong) oyster that does not measure fully 3 inches of outer shell, and that possession of such under-sized oysters by any person shall be punished by fine;

VI. That all winter fishing be prohibited for oysters (Commissioner Ogden dissenting);

VII. Temporary or permanent proclamation to close localities where the supply is so nearly exhausted as to warrant closure;

VIII. That under section 21, sub-section 4, of the Fisheries Acts a liberal inducement be offered, under a system of leases to persons who will undertake, under stringent regulations, to grow oysters on private beds, that is to say, that a lease be given (under bonds) for not more than nine years (renewable), at a nominal rent for the first three years, conditional on a sufficiency of brood oysters being planted on the area within one year after date of the issue of lease. The Government to have a lien on such planted beds;

IX. Easy and inexpensive arrangements, by which persons owning water frontages may lease their own foreshores for oyster culture from the Government;

X. That Parliament be invited to appropriate a sum or sums for the formation of oyster beds in various waters and places found adapted for that purpose, and for

transplanting oysters, and re-stocking exhausted fisheries by natural or artificial means—in accordance with section 21, sub-section 5, of the Fisheries Act;

XI. The appointment of a responsible officer of fisheries, capable of the position, and to rank with the Superintendent of Pisciculture as General Superintendent of Oyster Fisheries, and to have general superintendence of all public and private oyster culture;

XII. A system of registration of oyster boats, with other details to be arranged by the Department.

With reference to clause XII, Mr. Commissioner Ogden moved the insertion of the word “free” system of registration, &c.

Mr. Commissioner Deacon moved, seconded by Commissioner Duvar, that the annual registration fee for oyster fishing boats be one dollar—Carried. Mr. Ogden dissenting.

All of which above-written report is respectfully submitted.

Dated at Shediac, Province of New Brunswick, the fifth day of November, A.D. 1887.

EDWARD HACKETT, *Chairman*,
ALFRED OGDEN,
W. B. DEACON,
J. HUNTER DUVAR, *Secretary*.

Since the labours of this Commission were ended the undersigned has had the advantage of perusing, among other documents, a very interesting and recent work upon the “Economic Mollusca of Acadia,” written by Professor W. F. Ganong, a native of New Brunswick, at present a lecturer in the University of Harvard. Mr. Ganong reviews the condition of our oyster beds and says: “There are two futures open to the oyster industry of Acadia; free fishing by the people and a lingering death, or a vigorous Government interference, and a great and lasting prosperity. This is the kernel of the whole matter; Government interference. It has worked well in other countries; it would, under the same conditions, work well in this. The duty of the Government, if it take charge of it, would be two-fold; to regulate the fishery on the public beds, and to give encouragement to culture by corporations and individuals.

“As to the first, the position and extent of beds must be determined, and each one given a period of rest, being fished not oftener than once in three years; the close season should be vigorously enforced; fishermen should be made, under heavy penalties, to return to the water all oysters under certain sizes; mud machines must be restricted to certain places in each district, being given ample liberty, but not allowed within a certain distance of any living bed; mills must not be allowed to discharge sawdust into the water within a long distance of a living bed; fishing through the ice should be regulated, so that refuse cannot be allowed to fall on the beds. As to the encouragement of culture, laws should be enacted which would give to a culturist as good a right to his product, and as full protection from theft, as has a farmer. Areas in good localities should be set aside and leased for long periods; but, as a rule, the public beds should not be trespassed upon. Some beds should always be reserved for public fishing; freedom to take wild game under common sense condi-

tions the Dominion should be very slow to take from its citizens. Private individuals should be encouraged to take their seed-oysters from our own beds, as there are none better nor so good for our climate."

The undersigned observes that, in France and in the British Isles, as well as in some parts of the United States, the oyster beds are divided into public and private fisheries, and a leasing or licensing system prevails in these countries.

It was evidently the intention of the Canadian Parliament, so long ago as 1868, to encourage in the same way the development of this important industry, as witness the provisions of 31 Victoria, cap. 60.

By this Act Parliament provides for the granting of licenses or leases for the exclusive right of fishing oyster beds in any of the bays, inlets, harbours, creeks, rivers, or between any of the islands of the coast of Canada. It provides for the expenditure by the Minister of Marine and Fisheries of all sums appropriated by Parliament "for the formation of oyster beds in various waters and places found adapted for that purpose, and transplanting oysters."

This Act further provides that shell-fish fisheries shall be subject to any regulation or regulations to be made under the Fisheries Act.

In a recent opinion, the Minister of Justice says:—

"The whole of the provisions of the Fisheries Act respecting licenses and leases of fishing rights, including those relating to oyster beds, are within the authority of Parliament. The Minister of Marine and Fisheries may, therefore, give an exclusive right of oyster fishing for any area of the sea coast, including the foreshore, that he thinks fit."

Sec. 4 of the Fisheries Act, chap 95, Revised Statutes, enacts that;—

"The Minister of Marine and Fisheries may, wherever the exclusive right of fishing does not already exist by law, issue or authorize to be issued fishery leases and licenses for fisheries and fishing wheresoever situated or carried on; but leases or licenses for any term exceeding nine years shall be issued only under the authority of the Governor in Council."

Sec. 21, sub-sec. 4, of the same statute, also provides that:—"Special licenses and leases for any term of years may be granted to any person who wishes to plant or form oyster beds in any of the bays, inlets, harbours, creeks, or rivers, or between any of the islands on the coast of Canada; and the holder of any such lease or license shall have the exclusive right to the oysters produced or found on the beds within the limits of such lease or license."

On this point the Minister of Justice is of opinion that it would be well that, "the instrument given should take the form of a license rather than that of a lease, inasmuch that it might be contended that, by an instrument of the latter kind, the Department intended to give possession of the sea-bed as distinguished from a license, and the owner, whether the Dominion or Province, or a subject, might contend that such an instrument interfered with the rights of the owners in fee. If the instrument take the form of a license it will be of the same utility to the holder as a lease; but the holder, instead of having an estate in the soil itself, would only have an exclusive franchise or right of user for the purposes mentioned in the Statute."

It is therefore apparent that, so far as legislation goes, it is possible to regulate in Canada this fishery as effectively as is done elsewhere, and the undersigned believes that, much can be accomplished under a proper system of regulations.

In dealing with this matter it is essential to remember the large field open to Canadians for profitable enterprise. The area on the Canadian coast suitable for oyster culture is enormous. This mollusk has been found from Bay des Chaleurs to Baie Verte in the following places, viz; between Caraquet Banks, at Caraquet, St. Simon, Shippegan Harbour and Gully, Tracadie, Tabusintac, Burnt Church, Bay du Vin, and many other places in Miramichi Bay; Kouchibouguac, Richibucto, Buctouche, Cocagne, Shediac, and Baie Verte. In Nova Scotia the oyster is found at River Philip, Pugwash, Tatamagouche, River John, Pictou, Tracadie, Mabou, Margaree, Sydney, Albert Bridge, Country Harbour, St. Mary's River, Liscombe Harbour, Jeddore Head and nearly everywhere in the Bras d'Or Lakes. It is found all around the Island of Prince Edward; many places in British Columbia are also adapted for the cultivation of oysters.

In 1878, 30,090 barrels were taken in Canada, valued at \$90,270.00; and in 1882, 64,646, of a value of \$193,938.00; while in 1884, only 41,956 barrels, valued at \$126,458.00, were taken.

Prosecuted with greater energy than ever, and by more people, this fishery produced in 1888 only 56,234 barrels, valued at \$163,902.00; being less than in the years 1887, 1886 or 1882.

The consumption or demand for oysters in Canada is considerable, there being imported in the year 1888 as many as 1,698 barrels, 234,502 gallons shelled in bulk, and 198,543 pounds canned or preserved. In 1880 this industry, in the United States, employed 52,805 men, and yielded 22,193,370 barrels, worth \$9,034,861.00, and of this catch it is stated that 80 per cent. came from Chesapeake Bay. In 1881, in France, 29,431 men, women and children were employed in taking 374,985,770 oysters from September to June, worth 2,061,753 francs, equal to \$412,350.60. This was from the public beds alone, independent of private beds.

In England, in 1883, the value of oysters taken was nearly \$10,000,000.00 (£2,000,000.)

In a report made to the Minister of Marine in France by Mr. Brocchi, relative to oyster culture on the shores of the channel and of the ocean, and published in the *Journal Officiel de la République Française* of the 8th November, 1881, it is stated, when alluding to the success of the industry, that "the experiments to which the State devoted considerable sums produced great effect."

Attention should be directed to the Basin of Arcachon, where experiments have been crowned with wonderful success and to which the undersigned desires to call special attention. In 1863 oysters existed in a natural state in this basin, but ignorance and want of foresight had hitherto produced bad results. "The natural beds were silted up with mud, and the oysters were rapidly disappearing." The Government rented parts of the basin for culture, and in 1886 one of the places rented, that of Luhillon, four hectares in extent, furnished more than 5,000,000 oysters. The effect of this was to induce applications for concessions, which greatly increased. In 1879 one of the Government reserves (200 hectares) furnished

25,000,000 oysters. The Basin of Arcachon which, in 1858, only furnished oysters to the value of £100, in 1888, after the introduction of Government regulations and a system of cultivation, yielded 203,279,000 oysters, of a value of £178,887.00.

Mr. Brocchi states in his report that, while the number of "parcs" in 1865 was 297, it rose to 4,259 in 1880. That, during this period, the number of oysters exported rose from 10,584,000 to 195,477,375.

At Arcachon the rents ranged from 30 to 45 francs per hectare, according to the position of the "parcs;" while in Brittany 100 francs for an equal area is charged. Mr. Brocchi deprecates so high a tax upon the industry.

In a report to the Minister of Marine and Colonies in France by Mr. Bouchon Brandely, Secretary of the College of France, relative to the generative and artificial fecundation of oysters, published in the journal last referred to on the 15th December, 1882, he says:—

"The Marine administration has, since the creation of the ostricultural industry, never ceased to encourage by different measures, such as concessions, missions, &c., every attempt having for its object the development and perfecting of this industry. It is to this, unquestionably, that ostriculture owes its present prosperity and the constant progress it has achieved—a progress which has been so brilliantly represented at the Exhibition of Bordeaux."

Mr. Bouchon Brandely, in another report (*Rapport au Ministre de la Marine relatif à l'ostréoculture sur le littoral de la Manche et de l'Océan, extrait du Journal Officiel des 22, 24, 25 et 26 janvier 1877*) remarks on the progress of oyster culture in France:—"The strict observance of the decrees of 1852 in the conduct of the fisheries may be regarded as having contributed largely to their actual prosperity. These decrees, the wisdom and opportuneness of which the event has demonstrated, were intended to stop the spoliation and exhaustion of the oyster-beds and subject their exportation to strict and regular regulations."

The persevering application of these measures, the care unceasingly renewed, the encouragement and the example which the administration of the Marine continually gave, resulted in bringing about the restoration of the natural beds, which were approaching exhaustion, and in provoking a revival of oyster culture by private individuals.

Professor Huxley and Sir James Caird, together with Mr. Shaw Lefebvre, reported to the English Government in about the year 1863, calling attention to the falling off of the supply of oysters from the failure of spat. They recommended as therefore necessary the acquisition by individuals or companies of sea-bottom for oyster culture.

Archibald Young, advocate, Inspector of Salmon Fisheries for Scotland, in a report on the oyster and mussel fisheries in Wigtown Bay and Loch Ryan, and from Corsewall Point, outside Loch Ryan northwards, as far as the Island of Mull, remarks:—

"Promiscuous and ill-regulated fishing on any bed or scalp to which oysters or mussels are attached simply means the extinction of these oysters or mussels in a longer or shorter space of time, especially if no close-season is observed, and if immature fish are carried away and sold, instead of being returned to the bed.

“ On this subject I am glad to be able to quote from such authority as Mr. Harding, who, in his paper on mussels and other mollusks used as bait and food writes as follows :—‘ I consider the best and only way that existing natural mussel beds can be properly cultivated and protected is to make them the actual property of some one. If they are allowed to be fished indiscriminately they will quickly become exhausted, as has been the case with hundreds of natural scalps on the coast. Fifty years ago mussels were very prolific on the east coast of England, and almost every small harbour had its natural scalps outside, which fed the ‘ lays ’ or fattening grounds inside, to the great profit of the owners of such lays. About that period some ill-starred individual discovered that they were valuable for manure, when commenced a raid on the scalps, which is the origin of their present downfall. I can remember, as a boy, seeing hundreds and thousands of tons brought to land and sold to the farmers for manure at three-half pence a bushel.

“ ‘ An Act was passed by Parliament, in 1868, called ‘ The Sea Fisheries Act, 1868,’ which enables the Board of Trade to grant provisional orders to corporations and private individuals to regulate oyster and mussel fisheries ; but the result so far has been very unsatisfactory.”

Elsewhere he writes :—“ The secret of the whole matter is, that where mussel and oysters cultivation has proved successful the person undertaking the same has obtained a concession from the Government to work the beds exclusively himself, and has not been hampered by other persons claiming a right to fish on his grounds ; in other words, fishings are worked in precisely the same way as farms on the land, where the farmer sows his seed and, at the proper season, reaps his corn.”

“ He,” Mr. Gibbon, “ thinks that the allowance of the general public to fish for oysters or mussels without restriction or regulation means the inevitable destruction of the beds—some sooner, some later.”

“ The oyster fishings in Scotland, once so productive, have now dwindled down to a value of about £1,000 a year, or a fraction of what they once yielded. There are scores of proprietors in Scotland—I can state from personal knowledge—willing and anxious to begin oyster culture, to re-stock exhausted oyster beds or to establish new ones ; but they decline to make the experiment and run the risk unless they are protected, as in the United States of America, where, for example, in the State of New York, the States sells to individuals an absolute right to fore-shores and seabottom suitable for oyster culture, and guarantees, at the time, that that right will be protected by the State. It takes from three to four years to rear a marketable oyster ; and if during that period there is no security against a fleet of fishing boats swooping down and dredging out all the oysters, as has happened more than once, the proprietor would be a fool who would attempt oyster cultivation.

“ At Oban I had a long interview with M. Blackie, manager of the Highland Fisheries Company. He thinks that the Fishery Board should be empowered to regulate the mode of fishing oyster and mussel beds—that is to say, by marketing them out, and providing that a certain portion of them shall remain fallow every, and also by fixing a gauge, under which no oyster or mussel shall be allowed to be taken.”

“ Immediately after my visit to Loch Creran Mr. Anderson addressed to me the following letter, dated 27th July, 1887, on the subject of the oyster and mussel fisheries on the west coast :—

“DEAR SIR,—With regard to our conversation of yesterday as to the cultivation of shell-fish on the West coast, I trust the Board will see proper to take action so as to protect this industry, without which protection it can never assume any important proportions.

“I had formerly occasion to address the Board as to the cockle beds of Barra, since which these valuable beds have followed the great mussel grounds of Loch Roag and elsewhere to comparative destruction. Every bed attacked will be treated in the same manner. So long as there is no control the people will continue to fish them out; while, at the same time, they would willingly have the beds protected against themselves were they equally protected against their neighbours.

“Besides the acts of depredators upon private beds, the industry at present requires to be protected.”

During the last session of the Canadian Parliament an interesting discussion took place regarding the oyster fisheries of the Dominion. Senator Poirier brought the subject to the notice of the Senate, and especially alluded to the great destruction caused by winter fishing through the ice, when small oysters and spat were destroyed in great quantities. Senator McFarlane, whose great experience renders his views especially important, pointed out the hardships which the prevention of winter fishing would cause to many people. He strongly advocated restoration of exhausted beds by the Government.

Referring to the subject of Government cultivation, Mr. Young, from whom the undersigned has already quoted, says:—

“Mr. McGibbon, Ivy House, ex-Provost of Stranrar, who has long been well acquainted with the oyster fisheries in Loch Ryan, and takes a great interest in them, recommends that the Fishery Board should select a suitable locality for the cultivation of oysters and mussels, that is to say, a locality not only physically suitable for the cultivation of the mollusks, but also capable of being easily watched and protected, and demonstrate to the fishermen the advantages of scientific cultivation of both as regards themselves and the general public.”

The undersigned, in view of the experience obtained in other countries, and the opinion of the foregoing eminent authorities, accordingly approves of the suggestions of the Commissioners already referred to, in so far as they advise:—

1. Defining the limits of the oyster beds in Canada—that is, to survey the natural beds and prepare special charts showing the location of the present as well as of the abandoned beds, for the purpose of laying out areas in connection with a license system, which should be at once adopted and put in force.

2. Prohibiting mud-digging in the vicinity of oyster beds. The digging could be done under the sanction and direction of the nearest officer.

3. Fishing in certain divisions only during alternate years.

4. Retaining the present close-season, viz., from 1st June to 15th September.

5. No round oysters under 2 inches in diameter of shell, nor long oyster under 3 inches of outer shell, to be taken.

6. Prohibition of public fishing in localities where the supply is nearly exhausted.

7. That a sum be appropriated by Parliament for the formation of beds and for re-stocking exhausted fisheries, in accordance with sec. 21. sub-sec. 5 of the Fisheries Act.

The recommendations of the Commission regarding:

1. Prohibition of winter fishing;
2. Arranging for owners of fore-shore to lease the same for oyster culture;
3. Appointment of a special staff of officers;
4. Registration of oyster boats the undersigned does not think should be adopted.

The prohibition of winter fishing is, in the opinion of the undersigned, a measure far too severe to be at present enforced; it is possible to make other provisions preventing much of the injury done by winter fishing, such as to provide against leaving small oysters on the ice, but to see that they are immediately returned to the place from which they may come.

The suggestions regarding owners of fore-shore do not appear to be expedient, such owners having no special rights regarding the oyster fisheries.

As to the recommendation regarding the appointment of a special and expensive staff of officers, it appears to the undersigned that, with occasional local temporary help, it is possible to do all that is required with the staff in the service of the Fisheries Department.

The undersigned begs, therefore, to recommend the adoption of the following regulations:—

1. No one shall fish for or catch any oysters in the Dominion of Canada, except under the authority of the Minister of Marine and Fisheries;
2. No one shall fish for or possess any oysters between the first day of June and the fifteenth day of September in each year, both days inclusive.
3. No one shall fish for, catch or possess any oysters less than 2 inches broad or less than 3 inches in length. All oysters taken under these dimensions to be immediately returned to the water, under penalty of fine and forfeiture of all materials, implements or appliances used, and the cancellation of the license.
4. Mud-digging is prohibited within 200 yards of any live oyster bed, and then only at such place or places as may be prescribed by a fishery officer.

As the open season for oyster fishing began in September last, and will not end until June next, interference at present with the operations of those engaged in the industry; so far as the introduction of a license system, under the first regulation herein proposed, would be inexpedient. The undersigned therefore recommends that the said first regulation shall not be of any force or effect until September next.

The undersigned being anxious to establish the necessity of practically demonstrating the possibility of restoring oyster beds, and with the view of encouraging private culture, proposes to re-stock the once famous but now exhausted beds of Summerside Harbour and Bedeque, in the Province of Prince Edward Island; and for this purpose he has the honour to recommend that a sum of \$5,000 be placed in

the Supplementary Estimates towards assisting the formation and planting of oyster beds.

Respectfully submitted.

(Signed) CHARLES H. TUPPER,

Minister of Marine and Fisheries.

Upon this report a Minute was based, approving of its recommendations, except in the case of mussel-mud digging, which it recommended should be changed to a distance of not less than 200 feet, instead of 200 yards, as recommended.

This Minute further directed that the regulations should not take effect until a survey was made, and for which Parliament at its last Session made an appropriation of \$5,000. Steps have been taken to proceed with this survey, and it is confidently anticipated that before the end of the summer of 1891 it will have sufficiently progressed to admit of the formation and cultivation, under proper restriction, of public oyster beds.

Meanwhile, and to facilitate the applications of persons desirous of obtaining exclusive licenses for the cultivation of private oyster beds, the following "Regulations to guide Surveyors in preparing plans and descriptions for applications for oyster fishing licenses" have been prepared:—

REGULATIONS to guide Surveyors in preparing Plans and Descriptions for applications for Oyster Fishing Licenses.

1. All surveys of Oyster License Limits are to conform to the largest scale Admiralty Chart published, of the Harbor or locality to which the application refers. Such Chart can be seen on application to the Fishery Overseer of the District in which the limits are situated.

2. Boundaries are to be fixed by reference to well-defined objects marked on the charts, or by any surveyors' boundaries already existing, but in these last cases the surveyors' boundaries must be defined for platting on the chart by reference to points marked on the chart, so that they can be accurately located by the officers of the Department from the surveyor's description.

3. Where surveys are bounded by lines, these lines must be due astronomical east and west and north and south lines.

4. The extremities of any lines, or other boundaries, when on land, must be marked by monuments, in accordance with the law governing land surveys.

5. The boundaries of lots, when in the water, must be so defined that they can easily be located at any future time. Satisfactory definitions would be two cross ranges on land, separated by an angle of at least 60 degrees, with the objects in range defined on plan, or at least three sextant angles, each of not less than 40 degrees, measured to four prominent objects on shore shown on the chart. Compass bearings alone, unaccompanied by any other check, will not be accepted.

6. A plan of the survey must be furnished, which is to be made on the basis of the Admiralty Chart of the locality as above mentioned, either on the same scale or some multiple thereof, or it may be platted upon a printed copy of the chart. On the plan all boundaries, distances, bearings and connections, with reference points, must be distinctly shown, and an error, clerical or otherwise, will condemn the whole survey.

7. The plan must be accompanied by a description giving the metes and bounds of the lot and its area in acres, in such terms as would in the case of an ordinary land survey be held in a court of law to be a legal description for a title deed.

8. In the event of previous surveys having been made in the same locality, the plan is to show the nearest boundaries of such surveys, and their relation to the new survey.

Forms of applications and licenses have also been prepared. It is contemplated that the rental chargeable under these licenses shall be moderate, but that the *bona fide* character of the application shall be satisfactorily established, and that subsequently the conditions regarding an active and intelligent proceeding with the work shall be rigidly enforced. The questions of a better system of barrelling oysters, and that of inspection, are held for consideration later on; but I cannot refrain from stating, in this connection, that, there is no good reason (unless it be that of careless selection and packing) why Canadian oysters, better in flavor as they are, now bring but a little more than half the price of the American oyster.

The following memorandum by one of the Inspectors of Fisheries of the British Board of Trade (Mr. C. E. Pryer) will be found of interest:—

“The enquiry made by the Canadian Minister of Marine and Fisheries appears to refer to the methods adopted in England and France for the selection, for the purpose of oyster cultivation, of areas on which oysters do not naturally exist. So far as England is concerned, the efforts to develop the oyster fisheries have been almost entirely, if not altogether, limited to the maintenance of the supply from actually productive beds, and to the resuscitation of natural beds whose productiveness has deteriorated. Little or nothing has, as yet, been done in this country in the way of attempting to create new oyster beds by stocking grounds not previously known to have produced oysters naturally, though small areas of ground artificially prepared are, in some cases, used as places for the growth, or for the simple storage of oysters dredged from the natural beds, in contiguity to which such areas are usually located. In the majority of cases these areas are private property, and the steps taken are entirely at the discretion and risk of the proprietors or promoters. In cases where application is made for an order giving private rights over grounds on which there is a public right of fishery, it is usual for an inspector to make an examination of the ground by dredging, and to satisfy himself that the conditions are such that there is a reasonable prospect of oyster culture proving successful, and that the probable advantages are not so problematical as to render it undesirable to interfere with the public right of fishing for other fish.

“The conditions suitable for oyster culture vary, of course, in different localities and with different classes of oysters, but the general requirements may be said to be a suitable soil, consisting preferably of a bed of shells superimposed on hard mud or clay, an absence of sand, and of five fingers, dog-whelks, crabs and other enemies of the oyster, a tidal flow, and a certain admixture of fresh water, varying according as the bed is required for breeding purposes, or mainly as a fattening ground. In some cases oysters grow abundantly on rocky ground, and it is impossible to say generally, without a full knowledge of the circumstances of each case, how far any particular area may or may not be or become a likely oyster ground.

“A further consideration, which must not be omitted is, the difference between the ordinary American oyster and the European oyster.

“As regards France, I believe the above remarks apply generally. Oyster culture is carried on in that country to a far greater extent than in England, but I

am not aware of any French beds artificially constructed or improved which are not on the site of or closely contiguous to grounds originally producing oysters without artificial help.

“ At Arcachon, for example, where the most important of French artificial oyster fisheries are situated, the greater part of an extensive land-locked bay, portions of which originally contained natural oyster beds, has been converted into an oyster farm. The mud lands, foreshore and shallows are parcelled out into small areas allotted to different proprietors and concessionaries, and the flow and reflux of the tide are regulated by means of low embankments and sluices. In this way the water can be retained over ground, which would otherwise be too long exposed during the ebb, or it can be excluded when necessary for such purposes as the preparation of the ‘ collectors ’ for the spat, the removal of spat, the sorting of oysters, &c. The supply of suitable soil is limited, but in many cases, by its skilful utilization, it has been spread over areas otherwise unsuited for the purpose of oyster culture.

“ In Holland, also, where in some respects oyster culture is carried to a higher degree of development even than in France, and the area of many oyster beds has been extended over spots on which, without such artificial preparation, oysters could not possibly have grown, the natural beds have formed the nucleus of the ‘ artificial ’ grounds.

“ A notable instance may be found near Bergen-op-Zoom, where the construction of a railway embankment converted one of the mouths of the Scheldt into a quasi bay almost land-locked, which has since been cultivated as an oyster farm, similar in general features to that at Arcachon, the flow of the tide being regulated by sluices. Oysters always existed over certain parts of the area, but by the construction of dykes, pits and channels, the area naturally available for the production of oysters is largely increased.

“ It is not to be inferred that ground on or near which oysters have never existed may not possibly be converted into an oyster bed, but the probabilities are in favour of spots whose natural adaptability is shown by the presence or former existence of oysters.”

LAKE OF THE WOODS.

Another question which requires co-operation on the part of United States’ authorities concerns the fishing in the Lake of the Woods. Representations from various sources established that these waters were being over-fished. The large extent to which the Indians (both of the United States and Canada) were dependent upon the fisheries for their sustenance renders some action, looking to the preservation of the fisheries, of the utmost importance.

The circumference of the Lake of the Woods is about 300 miles ; its area 1,094 square miles, 457 of which are within the boundary of the United States. This will give some idea of the extent of its fishery. There are in the immediate vicinity of the lake about 1,000 Canadian Indians.

Concerted action of the Departments of Indian Affairs and Fisheries, looking to some limitation being placed upon fishing operations there carried on, being deemed

expedient, a Minute of Council, based upon the joint report of the Superintendent General of Indian Affairs and the Minister of Marine and Fisheries, was adopted on the 20th August, 1890, as follows:—

“ On a joint report from the Minister of Marine and Fisheries and the Superintendent General of Indian Affairs, stating that excessive fishing is now being carried on in Lake of the Woods, threatening the entire depletion of the fish therein, and that in order to conserve such fisheries as a means of livelihood to the Indians it is necessary to afford protection thereto, by prohibiting the use of pound-nets in the above mentioned waters.

“ The Ministers are impressed with the importance of the matter, and the advantage to the Government in connection with the support of the Indian population in the Lake of the Woods and Rainy River region lying within the Provinces of Ontario and Manitoba, as well as in the neighbouring State of Minnesota, of whom there are on both sides of the line about 3,000 souls.

“ Game is fast disappearing, while Indians are not sufficiently advanced in the art of agriculture to support themselves by tilling the soil, and unless some strict measures are taken to protect the fish supply their sustenance will devolve upon the Indian funds of the respective Governments.

“ The principal fish frequenting these waters is the sturgeon, a large fish, which forms the main article of food for the Indians. Its sluggish nature renders its capture comparatively easy, as they can be herded into nets with little difficulty.

“ The Ministers believe that the reservation of the fishing rights in these waters to the Indians, while interfering with no legitimate industry, will assure to them a means of support, which, by careful fostering and proper protection, can be made enduring, and thus obviate the necessity for large outlay on the part of the Government in sustaining these Indians in the future.

“ The Ministers further remark that a reservation of this nature would, in view of the geographical position of the waters in question, be equally advantageous to the Government of the United States as to that of the Dominion of Canada; and they are of the opinion that, as action by Canada alone would be of little value, it is desirable to seek the co-operation of the United States' Government, with a view to effecting some international arrangement by which the above mentioned waters would be reserved for the exclusive benefit of the Indians of the two countries, and that fishing by means of pound-nets and similar fishing engines be prohibited, reserving, however, the right in common of fishing by hook and line.

“ The Committee recommend that Your Excellency be moved to transmit a copy of this Minute to the Right Honourable the Secretary of State for the Colonies, for submission to Her Majesty's Government, with a request that it be brought to the notice of the Government of the United States of America, with the expression of a hope that the above mentioned arrangement may be effected.”

It has been learned, since this Minute was approved, that the American portion of the Lake of the Woods had lately been ceded to the Indians, and that this change in its status raised some question as to who should be the proper authority to deal with the question. The whole subject was referred to the Secretary of the Interior of the United States by the Government of that country.

NEWFOUNDLAND BAIT ACT OF 1889.

In 1887 the Legislature of Newfoundland passed an Act intituled, "An Act to regulate the exportation and sale of Herring, Capelin, Squid and other Bait Fishes."

In June, 1889, the Legislature of Newfoundland passed an Act intituled, "An Act to amend and consolidate the Laws relating to the sale and exportation of Bait Fishes," similar to that of 1887.

The 25th section of this Act provided that it shall come into operation at such date as shall be appointed by the Governor by his Proclamation. The Act was so proclaimed on the 3rd of April, 1890. The terms of this Act may, in brief, be stated as follows:—

All foreign and British vessels not belonging to this colony which require bait from our coasts for the prosecution of the cod fishery can only obtain it on taking out a license at an ordinary port of entry, and giving bond in the sum of 1,000 that the bait shall be used *bona fide* for the purpose for which it is obtained. This license is issued upon the payment of a fee of \$1 per ton, and entitles the holder to purchase bait for three weeks, but only to the extent of one barrel per ton register. Should fresh supplies of bait be required after the expiration of three weeks the vessel must re-enter at a Customs port, and again take out a license on similar terms to the first, and so on through the fishing season. Light dues will, of course, be exacted as heretofore.

The Colonial Secretary of Newfoundland, under date 15th April, 1890, in conveying information as to the terms of the Act to the Dominion Government, stated that the Executive Council deemed it desirable that the Government of Canada should be informed as to the course which had been decided upon for the carrying out of the Bait Act of this colony during the ensuing fishing season, so that vessels arriving from the Dominion may be prepared for the change which it has been found necessary to adopt in order to ensure that the intention of the Legislature should, as far as possible, be attained. It was further stated that it was not deemed necessary to remind the Canadian Government of the circumstances under which the "Bait Act" was passed; but, in explanation of the procedure adopted, it was stated to have been found impossible to so effectively carry out the law as to stop the French obtaining what they required, whilst the United States' vessels under the *modus vivendi* and British ships not of this colony, and over which it could exercise but scant control, were permitted to come to its shores and take full supplies, which, in many cases, found their way to St. Pierre. It was further stated that the Government had no alternative but to put all outside vessels on the same footing, thus securing to Newfoundland the advantages of a trade that others were engaged in at its expense, and limiting, so far as practicable, the destruction of its bait fishes.

On the 24th April, immediately upon the receipt of information as to the proclamation of the Act referred to, a Minute of Council remonstrating against the restrictions placed upon Canadian vessels by the Act was telegraphed to Her Majesty's Government.

Your report of 26th May, 1890, reviews the question, and I therefore, recite it here:—

" OTTAWA, May 26, 1890.

"The undersigned, advertng to the despatch of Sir Terence O'Brien to Your Excellency, dated the 15th April, 1890, and to the cable message of the 8th May from Lord Knutsford, has to observe that in the year 1886 an Act was passed by the Legislature of Newfoundland, entitled, "An Act to Regulate the Exportation and Sale of Herring, Capelin, Squid, and other Bait Fishes." This Act was in February 1887 disallowed by the Imperial authorities.

"On the 21st February, 1887, the Legislature again passed an Act, entitled, "An Act to Regulate the Exportation and Sale of Herring, Capelin, Squid, and other Bait Fishes."

"Upon the 11th April, 1887, a Minute of Council was approved by His Excellency Lord Lansdowne, in which various objections on the part of Canada to this legislation were mentioned. In this Minute it was shown that under the Act—

"1. Our fishermen upon the Grand Banks would be cut off from their free supply of bait, either by purchase or catch ;

"2. Our fishermen upon the coast of Labrador would be debarred from the privilege of free catch of herring and their hitherto untrammelled trading in herring ;

"3. Whatever trade was then done by Canadian vessels in herring, or bait-fishes, upon the Newfoundland coast, would be no longer left free.

"The Minister of Justice, to whom the report of the Minister of Marine and Fisheries (upon which the said Minute was based) was referred, concurred in the views therein expressed, and submitted the following observations :—

"It seems desirable that the attention of Her Majesty's Government should be called to some of the very unusual provisions in this Bill. The prohibition in reference to purchasing bait extends to all places on or near any part of the Colony of Newfoundland and its dependencies. This really gives no limit to the extent of the enactment capable of being defined, and, inasmuch as a violation of the provisions of the Bill is to be followed by very heavy penalties, he, the Minister of Justice, thinks that such an enactment would be embarrassing and oppressive in its operation.

"The Bill gives extraordinary jurisdiction to Stipendiary Magistrates. The most stringent Acts against fishing by foreign vessels in other parts of North America and given such jurisdiction only to the Vice-Admiralty Courts. The Stipendiary Magistrates' Courts are inferior tribunals, without any regular legal procedure, and presided over by persons who are not necessarily possessed of legal qualifications.

"The Bill contains extraordinary inducements to persons to take up the task of prosecution. On conviction half of the fine goes to the prosecutor; on acquittal the prosecutor is still to be rewarded; so that encouragement is given to those who would be disposed to harass and annoy vessels from other parts of British North America by prosecutions which cannot be sustained.

"It is to be observed that the appeal which is to be given from a Stipendiary Magistrate's decisions is of little advantage, as the fishing season would probably be passed and a captured vessel be rendered comparatively useless before the termination of the appeal.'

“ A remonstrance against the Royal Assent being given to the Act was accordingly forwarded to Her Majesty's Principal Secretary of State for the Colonies.

“ This despatch was referred by Her Majesty's Government to Sir R. Thorburn and Sir A. Shea, who had been delegated by the House of Assembly of Newfoundland to make representations to Her Majesty's Government on the subject of this Bill.

“ The assurance conveyed by the above delegates that Canadian fishermen would enjoy equal privileges with those of Newfoundland, and that there would be no restrictions on the bait supply of any British subjects, were deemed by Her Majesty's Government to offer, in the language of Sir Henry Holland, Secretary of State for the Colonies, ‘ sufficient safeguards for Canadian interests,’ and consequently, Sir Henry Holland went on to say, in his despatch to Lord Lansdowne, ‘ Her Majesty's Government did not, therefore, hesitate to advise Her Majesty's assent to it.’

“ Accordingly, the following Minute of Council was, on the 11th October, 1887, approved by his Excellency Lord Lansdowne:—

“ ‘ The Committee of the Privy Council have had under consideration a despatch, dated the 20th May, 1887, from Sir Henry Holland, enclosing copies of correspondence which had passed between the Colonial Office and the representatives of the Government of Newfoundland, then in London, regarding the Newfoundland Bait Bill.

“ ‘ The Minister of Marine and Fisheries, to whom the papers were referred, reports as follows : ‘ It appears from the correspondence that a copy of the Minute of Council, dated the 11th April, 1887, urging the objection taken by the Canadian Government to the Bait Bill becoming law, was submitted to Sir R. Thornburn and Sir Ambrose Shea for their consideration. The replies made thereto by these gentlemen conveyed ample assurances that the Government of Newfoundland, in the passage of this Bill, were not actuated by any desire to curtail the privileges of British fishermen, and had no intention of allowing the law to be operated to their prejudice; that no regulations were proposed which would unnecessarily hamper the operations of their own British fishermen, and that every facility would be afforded for procuring the licenses under the Act.’

“ ‘ Sir R. Thorburn also authorized the dispatch of a telegram by the Attorney-General of Newfoundland to the Canadian Government, conveying the assurance that Canadian fishermen would enjoy equal privileges with those of Newfoundland, and that there would be practically no restriction on the bait supply of any British subjects.

“ ‘ These assurances appear to Her Majesty's Government to offer such sufficient safeguards for Canadian interests that Her Majesty was at once advised to assent to the Bill.

“ ‘ The Committee, concurring in the report of the Minister of Marine and Fisheries, respectfully recommend that Your Excellency be moved to transmit a copy of the despatch above mentioned and enclosures (permission having been obtained from the Colonial Secretary) to His Excellency the Governor of Newfoundland, for the consideration of his Ministers, and with a request that they will indicate, at the earliest convenient period, the nature of the regulations under which it is proposed

that Canadian subjects shall enjoy the rights of fishing and procuring bait in the territorial waters of Newfoundland.

“ ‘The Committee further recommend that Your Excellency be also moved to transmit a copy of this Minute to His Excellency the Governor of Newfoundland.’

“ It is to be further observed that Sir G. William Des Vœux, Governor of Newfoundland, in his despatch of the 14th January, 1887, addressed to the Right Honourable Her Majesty’s Principal Secretary of State for the Colonies, when urging the allowance of this Bill, argued entirely upon the grounds that it was aimed solely against foreign fishermen, and Sir G. William Des Vœux, in this despatch, stated:—

“ ‘I may mention that every day’s delay is causing loss to this colony, in restricting preparations for next season’s fishing; for the allowance of this Bill would be at once followed by a large increase in the number of British vessels employed in Bank fishing: and even now it is too late, in some cases, for arrangements that would enable advantage to be taken of the earliest portion of the season.

“ ‘Moreover, it is only fair to the French that if they are to be prohibited from procuring bait here during the coming season, they should be made aware of the fact at once, in order that they may restrict their operations accordingly, it being probable, as regards the large number of vessels which annually leave France for these fishing grounds, that preparations are being made already for their dispatch in order to enable them to obtain bait and commence fishing at the beginning of April; and thus, not merely in the interest of this colony and Canada, but for the sake of international comity, I would respectfully urge that, in the absence of a fixed decision against this measure, the delay which has already taken place in respect of its allowance should not be further prolonged.’

“ Upon the 20th April, 1887, the Minister of Marine and Fisheries received, at Ottawa, the following telegram from the Government of Newfoundland:—

“ ‘We learn with surprise and regret that your Government apprehend our Bait Act will interfere with Canadian fishermen. I am authorized to give you fullest assurance no interference or hindrance whatever of Canadian fishermen contemplated. Act necessarily framed so as to confer upon Governor discretionary powers in granting licenses to sell or export bait, our only object being to prevent supply to foreign subsidized rivals. Fullest rights and privileges of all British fishermen to take or purchase for their own use, as hitherto enjoyed will be maintained. Please communicate this information to your representative or agents in London, to remove objection to our Act and promote Royal Assent.

(Signed) “ ‘ATTORNEY-GENERAL.’

“ In June 1889, the Legislature of Newfoundland passed “An Act to Amend and Consolidate the Laws relating to the Exportation and Sale of Bait Fishes.” This Act (June, 1889) was proclaimed by his Excellency Sir Terence O’Brien, Governor of Newfoundland, the 3rd April, 1890.

“ ‘By the provisions of this Act, as stated by the Colonial Secretary of Newfoundland to Cecil Fane, Esq., under date 15th April, 1890, ‘all foreign and British vessels not belonging to this colony which required bait from our coasts for the prosecution of the cod fishery can only obtain it by taking out a license at an ordinary port of

entry in the form herewith, and giving bond in the sum of \$1,000 that the bait shall be used *bonâ fide* for the purposes for which it is obtained.

“This license is issued on payment of a fee of \$1 per ton, and entitles the holder to purchase the bait for three weeks, but only to the extent of one barrel per ton register.

“Should fresh supplies of bait be required after the expiration of three weeks the vessel must re-enter at a Customs port and again take out a license on similar terms to the first, and so on through the fishing season. Light dues will of course be exacted as heretofore.’”

“Loud complaints have reached the undersigned from Canadians interested in Bank fishing against this legislation, which threatens most serious injury to a large and important portion of Canadian industry. It is represented by those engaged in the cod fishery from Nova Scotia that the effect of this heavy tax will be to destroy the Bank fishing of that Province.

“The returns for the last year show that of Canadian vessels engaged in the Bank fishery there were not less than 203, with a tonnage of 18,124. The total catch amounted to 35,821,871 lbs. of fish.

“Accordingly, on the 24th April Your Excellency was pleased to approve of a Minute in Council recommending that a telegram be sent to the Right Honourable the Secretary of State for the Colonies, expressing the desire of Your Excellency’s Government that a remonstrance should be made to Her Majesty’s Government on the restrictions placed on British ships owned or sailed by Her Majesty’s subjects in Canada under the Newfoundland legislation referred to.

“From the telegram of the 8th May from the Right Honourable the Secretary of State for the Colonies to Your Excellency, it appears that Lord Knutsford does not consider the Bait Act *ultra vires*, and His Lordship supposes representations have been made direct to Newfoundland.

“The undersigned has not discussed the authority of the Legislature of Newfoundland to enact the legislation complained of; but he desires to call attention to the solemn assurance given by the Government of Newfoundland, of the definite and positive character already referred to, to the effect that it was not intended to enforce this Act against Canadian and British vessels, and that it would not be so enforced.

“It is therefore with surprise that the undersigned now learns that the provisions of the Act are being enforced against Canadian and British vessels, as well as against those of foreign countries, and he trusts that when the attention of the present administration of the Government of Newfoundland is called to the agreement of its predecessors in office, that in accordance with that understanding the provisions of the Act will no longer be enforced against British or Canadian vessels.

“It may not be out of place to refer to the friendly co-operation which has hitherto existed between the Governments of Canada and Newfoundland in connection with their respective fishery and commercial interests.

“Fishing-vessels of Newfoundland are now and have always been permitted to enjoy the inshore fisheries and port privileges of Canada, in common with those of Canada, and while light dues, harbour dues, and pilotage dues, are exacted

by the Government of Newfoundland from Canadian fishing craft, there are no corresponding taxes paid by the vessels of Newfoundland to the Dominion of Canada.

“Canada at present maintains, free of all charges upon shipping, five lights and four fog-signals on the coast of Newfoundland, and by liberal subventions serves many ports in Newfoundland by a mail and freight packet.

“The Bank fishery is now in an advanced stage, and the undersigned has the honour to recommend that the Government of Newfoundland be directly advised that the Canadian Government confidently expect that on a consideration of the facts connected with this legislation and of the relations hitherto existing between the Dominion of Canada and that colony, the Administration of the Newfoundland Government will be pleased to suspend the operations of the Act so far as it affects Canadian and British vessels.

“The undersigned further recommends that the Right Honourable the Secretary of State for the Colonies be informed that Your Excellency’s advisers earnestly desire the immediate co-operation of Her Majesty’s Government in preventing serious loss and damage being inflicted upon so many of Her Majesty’s subjects as are interested in the important industry of the Bank fishery.

“Respectfully submitted,

“ (Signed) CHARLES H. TUPPER,

“ *Minister of Marine and Fisheries.*”

On the 20th June, 1890, a Minute of Council was adopted by the Governor of Newfoundland to the effect that from this date the vessels requiring capelin and squid may, instead of paying tonnage license, obtain a license to purchase the particular quantity of bait they require, by paying a license fee calculated at the rate of \$1 per barrel, but no vessel to take more than 40 barrels. It was represented, however, that in the opinion of the Canadian Government, this modification in no way met the objections to the Bill.

The subject was fully discussed on the occasion of the visit of the Honourable the Minister of Justice to England. Members of the Government of Newfoundland met Sir John Thompson and the High Commissioner and the question was to receive careful attention on the part of the Newfoundland Government on the return home of the delegation from that Government then in London.

I am not aware of any further communication having as yet been received from Newfoundland on this subject.

INTERNATIONAL SAWDUST.

The question of the injurious effect resulting from the deposit of sawdust and mill rubbish upon the salmon fishing in the River St. John, and especially in the head waters of the river, has for some time past engaged the attention of the Department.

In a Memorial from the owners of saw-mills on this river, praying for the exemption of their mills from the operations of the Fishery and Navigable Rivers Act, it was set forth that no law existed in the State of Maine on this subject, and that on that portion of the River St. John which formed the boundary line between

the United States and Canada there were at least eight or ten mills on the United States side to one on the Canadian side of the river, and that as all the sawdust from the mills on the Maine side were permitted to be carried into the river, without restriction, any benefit which could possibly result from a stringent enforcement of the law in New Brunswick would be very trifling, and outweighed many times by the injury to the milling business in that Province.

In consequence of the above statement, an exhaustive report, dealing with the question in all its aspects, was submitted to the Privy Council and as a result a Minute adopted, recommending that a copy of the report be transmitted through the usual channel to the Government of the State of Maine, in order that the question might be considered by the Government of that State and united action adopted by both the Canadian and State Governments.

The Department has been advised, through the usual channel, that the matter had been brought to the notice of the Governor of Maine, and that it would engage the attention of the Legislature of that State.

PROTECTION OF LABRADOR FISHERY.

A somewhat lengthy correspondence has taken place between this Department and the Quebec Board of Trade, relative to the protection of fish on the coast of Labrador. Owing to inaccurate information and an incomplete knowledge of the question, the Board claimed that seine and trap fishing, were injurious to the cod fishery. It was informed that this mode of fishing had been practised for many years on the coast, and that no specific charges, supported by facts, were ever made against the system. It was also explained that the Labrador fishery was altogether different from any other fishery in the Gulf, or on the sea-coast. The fishing season is short, lasting barely one month; sometimes only a week. When cod are schooling inshore, after capelin, they will not take the hook, however abundant the fish may be. Twine must then be used, or the fishery becomes a failure. Cod fishing is always uncertain, several unsuccessful years being generally followed by successive good ones. Last year was a good year.

PURSE SEINES.

The destruction that the use of these seines has worked in the mackerel fishery, both on the coasts of the United States and Canada, has ceased to be either a matter of doubt or controversy; the consideration, therefore, of remedial measures is of paramount importance.

By reference to Appendix 9 it will be seen with what unerring certainty, the decline of this fishery during the past few years has gone on, and although in particular localities the take of mackerel for the season of 1890 shows an increase, as a whole the catch has been less than any year in the history of the fishery.

Shore fishing in Canadian waters was, during the past season, carried on almost wholly by means of hook and line, and the high prices obtainable for mackerel, rendered the operations of the fishermen very profitable.

It is, of course, well understood that United States fishing vessels have, since the lapse of arrangements under the Washington Treaty, been prohibited from

fishing by purse seines, or any other means, within the territorial waters of the Dominion, but they have been, and are, free to pursue their fishing operations, outside such limits, in any manner they see fit. When it is remembered that during the season of 1885, the last in which United States vessels had free access to our inshore fisheries, the total catch was 330,000 barrels, while the catch during the past season was but a little over 100,000 barrels, it will be realized how startling the decrease has been. The fact, however, must not be lost sight of that the percentage of fish taken by our own fishermen within our territorial jurisdiction largely exceeded in 1889 that of 1885.

The United States Government realizing the disastrous falling off on its coasts of the mackerel fishery, but being unable to directly control or successfully prohibit the use of purse seines, to which such falling off was attributed, passed an Act prohibiting the landing of mackerel taken by means of these seines on any part of the coast of the United States, before the first of June in each year. As by this date many of these migratory fish had found their way to the coast of Nova Scotia and the Gulf of St. Lawrence, it will readily be seen that had the fish been at all plenty in the waters named, the seining operations of the United States vessels would, to a very much larger extent than was done, have been there carried on all such vessels being provided with purse seines.

To take any action looking to a restriction upon Canadian vessels in the use of purse seines, while those of the United States continue fishing operations therewith, would be manifestly unjust, and it was therefore deemed expedient to seek joint action on the part of the Governments of the United States and of Canada, having in view the abrogation of this mode of fishing to which may be directly traced the well nigh destruction of our valuable mackerel fishery.

On the 22nd May 1890 the following minute of the Privy Council was adopted, based upon your report, dealing with the whole question, and as directed by this minute, the subject was brought to the notice of the Government of the United States through the usual official channel:—

“ On a report dated 24th April, 1890, from the Minister of Marine and Fisheries, stating that the records of the Department of Fisheries are replete with reiterated complaints against the use of purse seines for the capture of mackerel, on account of their destructive nature.

“ The Minister observes that the principal arguments against this particular form of fishing engine are that a vast and alarming numbers of young and unmerchantable fish are destroyed, and while they at the period of destruction are of no commercial value, yet if allowed to remain in the water they would in course of time mature and keep up the supply of this fish. The effect of the purse seines upon the fish when schooling is to break up the schools: rendering the fish wild and shy, keeping them constantly on the move, an frequently causing them to disappear for a long time.

“ The Minister further observes that the Purse Seine is very fully described in Professor Brown Goode and associate's report as follows:—

“ ‘ The large seine used only in connection with the largest kind of seine boat is 190 to 225 fathoms in length, and 20 to 35 fathoms in depth when it is hung,

being deeper in the centre of the bunt than at the extreme wings, one of which, the 'boat end,' is from one to 10 fathoms deep, and the other, the 'dory end,' varies from about 7 to 15 fathoms in depth. It is made of three kinds of twine. The bailing piece, which is a section of the net occupying about 10 or 12 fathoms along the centre of the cork line, and having about the same depth as length, is made of the stoutest twine. Beneath this and composing the remainder of the bunt and extending to the bottom of the seine is a section knit of twine a size smaller. There is also a band of large twine 15 meshes in depth, extending along the cork line of the seine on either side of the 'bailing piece' to the extremity of each wing. The remainder of the net is made of smaller twine.

"A seine 300 fathoms in length is usually about 1,000 meshed deep, both in the bunt and in the wings. The strongest twine is placed at those points where the seine is subjected to the greatest strain. On the cork line are two or three sizes of corks, the largest being placed over the 'bailing piece,' the smallest generally at the ends of the wings. The cork in the middle of the seine is much larger than the rest, and is painted or covered with canvas in order that it may be easy to find the centre of the net either night or day. To one end of the cork-line at the upper corner of the wing which is first thrown out when the seine is set, is a buoy. The seine is hung to lines which are called the hanging lines. The lead line is placed as in an ordinary seine, and is weighted with sinkers about two ounces in weight, which are attached to it at intervals varying from a few inches to several feet. The arrangement of the pursing rings and bridle is described elsewhere. In a mackerel seine of 175 fathoms the bridles are about 15 to 18 feet in length, and the rings, which weigh $1\frac{1}{2}$ lbs. and are three inches in diameter, are fastened to the middle of each bridle. The middle ring is on the bottom of seine, opposite the middle cork already referred to, and is usually made of different metal from the other rings, or is larger, so that the centre of the bottom of the seine can be easily found. Small galvanized-iron blocks or pulleys are now used to a considerable extent instead of rings, and are found much better adapted for the purpose, since the purse line runs far easier through them. The purse-line extends through the rings, its centre is marked by a line tied around or tucked through its strands, but more frequently now by a brass swivel, into which the purse line is spliced, and which serves the double purpose of marking the centre of the line and preventing it from kinking.'

"Its early history is described thus: Captain E. J. Deblois of Portsmouth, Rhode Island, says:—

"The first purse seine that was made so far as I know, was made by John Tallman, the first, and Jonathan Brownell and Christopher Barker, in the year 1886. It was 264 meshes deep and 65 fathoms long. The purse weight was 56 pounds weight, and the blocks were the common single block, and they have to reeve the end of the purse line through the blocks before they put the purse weight overboard.'

"The Minister further observes that the first seine operated north of Cape Cod was used by Captain Nathaniel Adams of Gloucester, in the schooner 'Splendid,' in the year 1850, but it was not until about 1860 that it became generally used in a form similar to the present purse seine, since which time it has undergone great improvements and its destructiveness has been much enhanced, particularly within

the past two years, by the introduction of the steam seine boat. By the adoption of these steam propellers the boats are enabled to surround the schools of fish much more readily and with wonderful rapidity, besides which advantage is taken of the steam power to purse the nets, which can be done in this manner in an incredibly short space of time.

“The Minister further observes that it thus appears that this fishing engine may be said to have reached the height of its destructiveness, and in the face of the appended extracts from reports of fishery officers, total depletion of the sea coast fisheries seems to be what must inevitably follow the continuance of its use.”

(See Appendix No. 9 to this Report.)

The Legislature of the State of Maine seemed to be fully alive to the baneful effects of this destructive method of fishing, for in the year 1883, that body passed an Act for the protection of migratory fish, prohibiting the use of the purse and drag seines for taking mackerel within any bay or inlet, not more than two miles wide, under a maximum penalty of \$200, (*Rev. Statutes of Maine, '83, sec. 17, c. 40, p. 373*) and later on, in 1885 this Act was amended to include bays three miles wide, and the extreme penalty increased to \$500, making the Statute read as follows:—

“Sec. 17. The taking of mackerel, herring, shad, porgies or menhaden, and the fishing therefor by the use of purse and drag seines is prohibited in all small bays, inlets, harbours or rivers, where any entrance to the same, or any part thereof, from land to land, is not more than three nautical miles in width, under a penalty upon the master or person in charge of such seines, or upon the owners of any vessel or seines employed in such unlawful fishing of not less than \$300, or more than \$500, to be recovered by indictment, or action of debt, one-fourth of the penalty to the complainant or prosecutor, and three-fourths to the county in which the proceedings are commenced, and there shall be a lien upon the vessels, steamers, boats and apparatus used in such unlawful pursuit until said penalty, with costs of prosecution is paid, but a net for meshing mackerel or porgies, if not more than 100 meshes in depth, and a net for meshing herring of not more than 170 meshes in depth, and a net for meshing shad of not more than 75 meshes in depth shall not be deemed a seine.” (*Acts and Resolves of the State of Maine, 1885, c. 261, p. 215.*)

“And the Federal Legislature of the United States recognized the necessity for some restrictive measure, if even of only a partial nature, as is shown by the following law providing against the landing or importation of mackerel so caught between the 1st of March and the 1st day of June into the United States:—

“An Act relating to the importing and landing of mackerel caught during the spawning season.

“Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled. That for the period of five years, from and after the 1st-day of March, 1888, no mackerel, other than what is known as Spanish mackerel, caught between the 1st day of March and the 1st day of June, inclusive of each year, shall be imported into the United States or landed upon its shores. Provided, however, that nothing in this Act shall be held to apply to mackerel caught with hook-and-line from boats, and landed in said boats, or in traps and weirs connected with the shore.

“Sec. 2. That section 4321 of the Revised Statutes is amended for the period of five years aforesaid, so as to read before the last sentence as follows:—‘This license does not grant the right to fish for mackerel, other than for what is known as Spanish mackerel, between the 1st day of March and the 1st day of June, inclusive of this year.’ ‘Or in lieu of the foregoing there shall be inserted so much of said period of time as may remain unexpired under this Act.’”

“Sec. 3. That the penalty for violation or attempted violation of this Act shall be forfeiture of license on the part of the vessel engaged in said violation, if a vessel of this country, and the forfeiture to the United States, according to law, of the mackerel imported or landed, or sought to be imported or landed.

“Sec. 4. That all laws in conflict with this law are hereby repealed. (Approved 28th February 1887.)

“Prof. Brown Goode (Sec V. Vol. I) says: ‘Opposition to the purse seine from 1870 to 1882.’

“Since the adoption of the purse seine no year has passed without a considerable amount of friction between the fishermen using this engine of wholesale destruction in the capture of mackerel, and those engaged in fishing with other forms of apparatus. Petitions to Congress and State Legislatures have been made from both sides, and in some instances laws have been passed by State Legislatures prohibiting the use of nenhaden seines, within certain specified tracts of water, such as the Chesapeake Bay. These laws, while especially antagonistic to the nenhaden fishery, were aimed chiefly at the purse seine as a means of capture and doubtless would have been equally prohibitory of mackerel fishing with purse seines, had this been attempted within the limits. * * * * In 1878, a delegation of fishermen from Portland, Me., and Gloucester, Mass., visited Washington for the purpose of securing the passage of a law prohibiting the use of purse seines in the mackerel fishery.’

“In 1877, the late Commissioner of Fisheries, Mr. Whiteher, in his annual report for that year, said: ‘The modes of fishing most objectionable amongst the fishermen, and not provided against by our fishery laws, are purse seines and trawls. Their use has been petitioned against from several sea-coast districts.’ (*Supp. No. 5, 10th Ann. Rpt. Min. M. & F., 1877, p. lii.*)

“On the 27th March, 1879, the late Dr. Fortin, M.P., at one time commander of the fisheries protection vessel ‘La Canadienne,’ in forwarding to the Department a resolution of the County Council of Gaspé, strongly urging the abolition of purse seining along the shores of the Gulf of St. Lawrence, said: ‘No doubt it has been proved beyond question that those engines are too destructive to be tolerated much longer on our shores.’

“In a haul of the purse seine it frequently happens that there are enclosed say 100 barrels of fish, only a small portion of which are marketable, the remainder being thrown overboard dead, and sinking to the bottom, foul the ground and drive off the other fish.

“In evidence procured by the Department of Fisheries from 20 masters of United States’ and 10 masters of Canadian vessels, 14 of the former and 9 of the latter utterly condemned the purse seine as injurious to the fishery, and the

interests of the fishermen alike, not only from the total loss of the unmerchantable fish (which form a large proportion of the take), but from the defilement of the waters and bottom, and the consequent diversion of the schools of fish from their accustomed haunts.

“It must be remembered that while the mackerel cannot be caught by hook and line during the spawning season, since they will not bite at that time, the purse seines take them at all times. Captain John Nason, of the schooner ‘Pendragon,’ Gloucester, 40 years a mackerel fisher, says: ‘All mackerel killed before 1st July in the Gulf are killed before spawning.’

“Captain John Staples, schooner ‘Vesta,’ Gloucester, 30 years a mackerel fisherman says: ‘In the North Bay, before the 1st July, about two-thirds of the catch are female spawn mackerel, which of course are destroyed before spawning. Upon the least I should say that more than 100 barrels are destroyed for every barrel caught before the 25th July, in the North Bay.’

“The preponderance of the evidence by many others proved that at least half of the catch was killed before spawning.

“The effect upon the incoming schools of fishes can perhaps be appreciated, if it be remembered that the fishing fleet consists of, say 250 sail, each attended by two seine boats, in all 750 craft, large and small, manoeuvring within a distance of five miles from the shore, day and night, on an extent of 20 or 25 miles of coast, afterwards dispersing into squadrons of from 50 to 60 vessels.

“Apart from the damage to the fishing grounds by purse seines breaking up the schools of fish, the proportion of useless fish thrown overboard dead, as previously explained, with attendant deleterious results, is almost incalculable.

“The Minister desires to invite attention to the statistics of the mackerel importations in the State of Massachusetts for three decades: the first from 1850 to 1859, during which period the purse seine was not in use; the second from 1863 to 1872, ten years following the general introduction of the purse seine; the third from 1880 to 1889, after the purse seine had been continuously used for many years. (*15th Annual Report of the Boston Fish Bureau, 1889.*)

BARRELS OF MACKEREL INSPECTED.

Year.	No. 1 Grade	Total catch.
1850	88,401	242,572
1851.....	90,765	329,244
1852.....	84,030	198,120
1853.....	49,015	133,340
1854.....	30,595	135,349
1855.....	29,302	211,956
1856.....	89,333	214,312
1857.....	84,519	168,705
1858.....	75,347	131,602
1859.....	61,330	99,715
Total	682,637	1,864,915
Yearly average.....	68,263	186,491

Year.	No. 1 Grade.	Total catch.
1863.....	67,985	306,943
1864.....	103,383	274,357
1865.....	153,723	256,796
1866.....	150,332	231,696
1867.....	122,808	210,314
1868.....	93,091	180,056
1869.....	72,924	234,210
1870.....	66,046	318,521
1871.....	105,187	257,416
1872.....	71,866	181,856
Total.....	1,007,345	2,454,265
Yearly average.....	100,734	245,426

Year.	No. 1 Grade.	Total catch.
1880.....	20,453	243,958
1881.....	15,598	256,173
1882.....	39,045	258,382
1883.....	20,852	154,140
1884.....	22,377	283,794
1885.....	15,742	215,576
1886.....	19,574	66,042
1887.....	23,893	77,488
1888.....	14,545	50,907
1889.....	7,143	12,143
Total.....	198,222	1,618,603
Yearly average.....	19,822	161,860

“These figures reveal a most alarming decrease in the total catch of mackerel, and especially so in that of No. 1 grade, for during the first decade, without the assistance of this improved and destructive method of catching fish, the take was very large, being 1,864,915 barrels, or an average of 186,491, while of this quantity there was of No. 1 quality 682,637 barrels, an average of 68,263 barrels per annum.

“The next decade covers a period almost immediately following the general introduction of purse seines and, as is to be expected, shows an increased catch, the total take being 2,454,265, an average of 245,429 barrels per annum, while of No. 1 quality the catch was 1,007,345, a yearly average of 100,734 barrels. This productive state however, could not long obtain, as the fish could not withstand the enormous drain upon its marketable and immature product by the destructive purse seine.

“The last decade, which comes down to the year 1889, after about 20 or 30 years, use of purse seines, shows that notwithstanding the improvements of late years to enhance their effectiveness, a deplorable decline in the catch has taken place, for we find a total catch of only 1,618,603 barrels and an annual average of 161,860 barrels and of No. 1 Grade a total of 198,222, a yearly average of but 19,822 barrels.

SUMMARY.

Years.	Total Catch.	Yearly Average.	No. 1 Quality.	Yearly Average.
1850-59.....	1,864,915	185,491	682,637	68,263
1863-72.....	2,454,265	245,426	1,007,345	100,734
1880-89.....	1,618,603	161,860	198,222	19,822

“Comparing the catch of the later decade with the aid of its perfected and destructive fishing engines, with that of the first decade, with its primitive modes of capture, an annual average decline in the total catch of mackerel of 23,631 barrels, and in catch of No. 1 Grade of 48,441 barrels appears.

“While the Minister of Marine and Fisheries is not prepared to state that this decline is due solely to the use of improved fishing engines, or that some other natural or minor causes may not affect the movements of the vast mackerel schools in approaching the shores, yet he is of opinion that enough evidence has been adduced to attribute the steady decrease in the size and superior quality marketed, mainly to the destruction of small and immature fishes and the breaking up of the schools by purse seines.

“The question now being dealt with is one of paramount importance to all interested in the deep sea fisheries of the Atlantic coasts of America, and it is submitted that some concerted action is necessary towards ameliorating the evil effects of this highly improvident method of fishing.

“The Committee concurring in the above report recommend that Your Excellency be moved to forward a copy hereof to the Right Honourable the Principal Secretary of State for the Colonies for submission to Her Majesty’s Government with the request that it be brought to the notice of the Government of the United States of America, with the view to obtaining some International action or Legislation looking either to the prohibition or restriction of the use of purse seines as may be deemed advisable for the preservation of the mackerel fishery.

This Department has since been advised that the Secretary of State for the United States had expressed his willingness to give the subject his careful consideration, with a view to the adoption of concerted measures to diminish the mischief complained of. I am, therefore, losing no opportunity of collecting further data and evidence on this important question, that it may be available when the subject comes up for consideration.

The opposition to a restriction being placed on the use of these nets will, at the present time, probably be much less than it would have been up to a recent period, many of the fishermen having at last conceded the irreparable damage their use entailed, in the destruction of immense quantities of both immature and spawning fish.

“All which is respectfully submitted for Your Excellency’s approval.”

THE BEHRING SEA.

Although the usual number of Canadian vessels were engaged in "sealing" in the Behring Sea during the season of 1890, no seizures were made by the United States' cutters cruising therein.

The usual statutory proclamation, however, which the President is bound by law to issue "at a timely season in each year" was published.

The question of the right of the United States' Government to exercise jurisdiction outside of the territorial limit of that portion of the Behring Sea which it acquired from Russia is still the subject of diplomatic correspondence.

A complete record of this and of the negotiations since the inception of the Behring Sea difficulty has been compiled and is now in course of printing for submission to Parliament.

As the lease to the Alaskan Commercial Company expired in May, 1890, the Secretary of the United States' Treasury, in January of that year, invited tenders for the exclusive privilege of taking fur seals on the Islands of St. Paul and St. George of the Pribylov Group in the Behring Sea, commonly known as the Seal Islands for a term of twenty years from the 1st of May, 1890.

The principal difference in the proposed lease, and that held by the Alaskan Commercial Company, was the limitation of the number of seals to be annually killed, which it was provided should be under the new lease 60,000 for the first year, instead of 100,000 under the old lease, and for subsequent years the number was to be fixed by the Treasury Department. There was, however, one very important difference; the lease was awarded to the "North American Commercial Company," of San Francisco, at an annual rental of \$57,100, with a revenue tax or duty of \$2 per seal skin, in addition \$3.25 for every skin taken, instead of the terms obtaining in the old lease which were—a yearly rental of \$55,000 and a royalty of \$2.62 for each skin.

As the issue of the advertisement for tenders for a new lease indicated an intention on the part of the United States' authorities, regardless of the proposal of the Hon. Mr. Bayard for international action in looking to the establishment of a close season for seals in the Behring Sea, to continue the monopoly of the seal industry, which had existed for the past twenty years, regardless of any close season applicable to the breeding-ground or rookeries of the seals, it was deemed urgent that the attention of Her Majesty's Government should be called to the existing facts, as it was apprehended the lease might interfere with the proposed negotiations for a close season for seals in the Behring Sea. This was done by a Minute of Council, under date 14th January, 1890, based upon a very full report of this aspect of the question.

During the year the following claims have been submitted for presentation to the Government of the United States:—

Schooner "Minnie" for compensation for loss incurred by reason of seizure in the Behring Sea, and the removal of seal skins, guns and spears in September, 1889.

Schooner "Pathfinder," for seizure and detention in Neah Bay; the vessel having been recognized as one which had been seized and escaped during the previous year.

Schooner "Triumph," for boarding, searching and warning off the Behring Sea under threat of seizure, in 1887.

SCHOONER "W. P. SAYWARD."

This vessel as the record shows was seized in the year 1887, for sealing in the Behring Sea, and was condemned to forfeiture by the District Court of Alaska.

This case was taken on appeal by the owners of the vessel to the Supreme Court of the United States. The Canadian Government having undertaken on behalf of the owners the further prosecution of the case, decided to abandon the appeal and with the concurrence of the Imperial Government moved the Supreme Court of the United States for a writ of prohibition directed to the Alaska Court, forbidding it further to proceed in the matter, upon the ground that the offence, if any, was committed beyond the territorial jurisdiction of the municipal courts of the United States.

That course was adopted, and on the 2nd February the Supreme Court of the United States decided to give the Government an opportunity of arguing the matter fully, and such argument will be had on the 13th April next.

CONCLUSION.

It will be seen from the foregoing pages that the work of the Department is rapidly extending, that new and important regulations affecting the fishing industries of the Dominion have been adopted, while others are engaging the Department's earnest enquiry.

The reports of several Inspectors and the statistics of the catch which with other matter not now available will, as stated, form the subject of a Supplementary Report. I cannot at this moment write definitely as to the fishing operations of the year, but sufficient data is at hand to reveal a fairly successful season's fishing.

It is gratifying to be able to record an increasing appreciation of the protective regulations regarding the fisheries on the part of those in whose interests they were and are especially designed.

I have the honour to be, Sir,

Your obedient servant,

JOHN TILTON,

Deputy Minister of Fisheries.

PART I.

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APPENDICES.

APPENDIX No. 1.

SCHEDULE of Fishery Officers in the Dominion of Canada for the Year 1890.

PROVINCE OF ONTARIO.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
Thomas A. Keefer	Overseer...	Port Arthur	About 270 miles of the waters along the north shore of Lake Superior, extending from Pigeon River to Slate Island.
Harry Wilson	do	Jackfish Bay.....	That portion of the waters of Lake Superior, in the neighborhood of Jackfish Bay.
O. O'Donnell.....	do	Mamainse.....	That portion of the waters of Lake Superior, in the neighborhood of Mamainse.
Jos. Wilson.....	do	Sault Ste. Marie..	That portion of the waters of Lake Superior, extending from Sault Ste. Marie to the Slate Islands.
A. Brinkman.....	do	Manitowaning ...	That portion of the waters of Georgian Bay, extending from Manitowaning to and including, South Bay, also the waters surrounding Club, Lonely, Fitz, William and other Islands in the neighborhood of Manitoulin Island.
J. K. McDonald.....	do	Toronto	Lake Kagewong, Manitoulin Island.
Isaac Turner.....	do	Little Current....	That portion of the waters of the North Channel of Lake Huron, in the vicinity of Little Current.
Robert Boyter	do	Gore Bay.....	That portion of the waters of the North Channel of the Lake Huron, in the vicinity of Gore Bay, Manitoulin Island.
Chas. Gauthier.....	do	Algoma Mills.....	That portion of the waters of the North Channel of Lake Huron, in the vicinity of Algoma Mills.
Frank Prout.....	do	Bruce Mines.....	That portion of the waters of the North Channel of Lake Huron, in the vicinity of Bruce Mines.
John Marks.....	do	Marksville.. ..	That portion of the waters adjoining St. Joseph and other Islands, in the North Channel of Lake Huron.
D. Cameron.....	do	Killarney.....	That portion of the waters of Georgian Bay, extending from Collin's Inlet to Whitefish River, including Squaw Island and the surrounding waters.
F. G. M. Fraser.....	do	Victoria Harbour.	That portion of the waters of Georgian Bay, extending from Point Marks to Collin's Inlet, with islands opposite, and including the mouths of Severn and Muskoka Rivers.
John Donaldson.....	do	Collingwood	That portion of the waters of Georgian Bay, extending from Point Boucher to Point Marks, including Christian, Beckwith and other Islands and the surrounding waters; also Nottawasaga River.
G. S. Miller	do	Owen Sound.....	That portion of the waters of Georgian Bay, extending from Colpoys Bay to Point Boucher.
John Shackleton.....	do	Wiarthon.....	That portion of the waters of Georgian Bay, extending from Cape Hurd to and including Colpoys Bay, also the waters surrounding White Cloud, Griffith's and Hay Islands.
John Hoar.....	do	Lafontaine.....	About 18 miles of the waters of Georgian Bay, around Christian Island.

SCHEDULE of Fishery Officers, &c.—*Continued*,
 PROVINCE OF ONTARIO—*Continued*.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
R. H. Murray.....	Overseer....	Allenford.....	About 70 miles of the waters of Lake Huron, from Cape Hurd to Southampton, beside the inland waters of the County of Bruce, south of division line between Amable and Albermanle, comprised within an area of about 800 square miles.
H. W. Ball.....	do	Goderich.....	About 60 miles of the waters of Lake Huron, from Southampton to Goderich.
H. B. Quarry.....	do	Parkhill.....	About 65 miles of the waters of Lake Huron, extending from Goderich to Blue Point.
J. C. Pollock.....	do	Forest.....	About 45 miles of the waters of Lake Huron and St. Clair River, extending from Blue Point, on Lake Huron, to Baby's Point in River St. Clair.
C. W. Raymond.....	do	Mitchell's Bay....	About 30 miles of the waters of Lake St. Clair, from Little Lake to its head.
A. Quenneville	Warden....	Stony Point	About 10 miles of the waters of Lake St. Clair, from division line between Dover, East and West, to Stony Point.
Joseph Boismier.....	Overseer....	Sandwich.....	About 20 miles of the waters of Lake St. Clair, from Stony Point to Detroit River.
Wm. Prosser.....	do	Leamington.....	About 50 miles of the waters of Lake Erie, from the mouth of Detroit River to Point Pelee.
David Girardin.....	do	Point Pelee.....	About 50 miles of the waters of Lake Erie, around Point Pelee Island and adjacent islands.
Horace Bartlett.....	Warden....	North Harbour Island.	About 20 miles of the waters of Lake Erie, around North Harbour and Middle Sister Islands.
John McMichael.....	Overseer....	Blenheim.....	About 110 miles of the waters of Lake Erie, fronting on the Counties of Kent and Elgin.
David Sharp.....	do	Port Ryerse.....	About 70 miles of the waters of Lake Erie, fronting on the Counties of Norfolk and part of Haldimand as far as South Cayuga.
W. A. McRae.....	do	Dunnville.....	About 10 miles of the waters of Lake Erie, from Cayuga to Moulton Bay and Grand River (30 miles), from mouth to Caledonia.
Charles W. Evans.....	do	Cayuga.....	The waters of Grand River, from the Division Line between North Cayuga and Canborough, on the east, to Caledonia, on the west.
Peter Price.....	do	St. Williams.....	About 30 miles of the waters of Lake Erie, around Long Point Island.
Fred. Kerr.....	do	Hamilton.....	About 50 miles of the waters of Lake Ontario, from Brant House, Burlington Beach, to Niagara, including the Niagara River, 50 miles; in all, 100 miles.
Wm. Sargent.....	do	Bronte.....	About 20 miles of the waters of Lake Ontario, extending from Port Credit to Burlington Beach, at Brant House.
Wm. Helliwell.....	do	Highland Creek....	About 26 miles of the waters of Lake Ontario fronting on the County of York.
Chas. Gilchrist.....	do	Port Hope.....	About 40 miles of the waters of Lake Ontario fronting on the County of Northumberland. Together with Rice Lake and tributaries, about 60 square miles of water.
W. P. Clarke.....	do	Belleville.....	Bay of Quinté, comprising about 80 miles of coast line of Counties of Prince Edward and Hastings, from Carrying Place to opposite Mill Point.
Joseph Redmond.....	do	Picton.....	About 90 miles of the waters of Lake Ontario fronting on the County of Prince Edward.
A. D. Sills.....	do	Napanee.....	About 35 miles of the waters of Lake Ontario fronting on the Counties of Lennox and Addington, and upper part of Amherst Island; also the inland waters of the Counties of Lennox and Addington, comprised within an area of about 1,600 square miles.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF ONTARIO—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
R. R. Finkle	Overseer....	Bath.....	About 25 miles of the waters of Lake Ontario fronting on the Township of Earnestown in the Counties of Lennox and Addington, and the lower part of Amherst Island.
A. H. Crosby.....	do	Forest	That portion of the waters of Bay of Quinté from Three Brothers' Island, near Kingston, to Trenton, at the head of the Bay.
Peter Kiel.....	do	Wolfe Island	About 60 miles of the waters of Lake Ontario around Wolfe, Simcoe, Horseshoe and Pigeon Islands.
Thomas Merritt.....	do	Kingston.....	About 20 miles of the waters of Lake Ontario fronting on the Township of Pittsburgh and Kingston, County Frontenac, including part of Bay of Quinté and River St. Lawrence.
John Cox.....	do	Howe Island.....	About 16 miles of the waters of Lake Ontario and River St. Lawrence, around Howe Island.
Nassau Acton.....	do	Gananoque.....	About 6 miles of the waters of the River St. Lawrence, from Howe Island to Jack Straw Lighthouse, together with the waters around Admiralty group of Islands; also, Gananoque River, comprising 10 miles inland waters.
J. G. Wallace.....	Warden....	Ivy Lea	About 10 miles of the waters of the River St. Lawrence, extending from Jack Straw Lighthouse to Rockport, including the islands therein.
Henry Hunt.....	do	Rockport.....	About — miles of the waters of River St. Lawrence around LaRue's Island.
John H. Davis.....	do	Gananoque.....	About — miles of the waters of the River St. Lawrence, extending from Sheriff's Point to head of Grenadier Island.
Wm. Pool.....	Overseer....	Rockport.....	About 32 miles of the waters of the River St. Lawrence, extending from Rockport to Prescott.
Sydney Pattison.....	Warden....	do	About 32 miles of the waters of the River St. Lawrence from Gananoque to Brockville.
John Mooney.....	Overseer....	Maitland	About 60 miles of the waters of the River St. Lawrence from Brockville to Cornwall.
Robt. P. Boyd.....	do	Lyn.....	About 6 miles of the waters of the River St. Lawrence, extending 3 miles above and 3 miles below Cole's Shoal Lighthouse.
T. McGarity.....	do	Cornwall.....	About 40 miles of the waters of the River St. Lawrence, fronting on the Counties of Stormont and Glengarry.
Pierre St. Pierre.....	do	Point Fortune....	About 40 miles of the waters of the Ottawa River extending from Point Fortune to Wendover, in the County of Prescott.
Olivier Miron.....	do	Alfred	The waters of the South Nation River, County of Prescott, comprising about 50 miles of inland waters.
W. W. Boucher.....	do	South March.....	About 60 miles of the waters of the Ottawa River, fronting on the Counties of Russell and Carleton.
John Grant.....	do	Forester's Falls...	About 55 miles of the Ottawa River, fronting on the County of Renfrew from the foot of Upper Allumette Lake to Des Joachims, together with about 75 miles of inland waters, comprising Petewawa River and tributaries.
Archibald Acheson.....	do	Westmeath.....	About 25 miles of the Ottawa River, comprising Lower Allumette and Coulonge Lakes.
J. S. Richardson.....	do	Sturgeon Falls....	The waters of Lake Nipissing, comprising about 160 miles, together with the Mattawa River, about 36 miles, and French River and tributaries, about 100 miles of inland waters.
George Thompson.....	do	Sudbury	Ramsay's Lake and other waters in the neighbourhood of Sudbury, Algoma District.

SCHEDULE of Fishery Officers, &c.—*Continued.*
 PROVINCE OF ONTARIO—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
	Overseer.....	Bracebridge	Inland waters of the Townships of Watt, Stephenson, Brunnel, Franklin, Monk, McAulay, McLean, Ridout, Muskoka, Draper, Oakley, Morrison and Ryde, in the District of Muskoka, comprised within an area of about 1,000 square miles.
Geo. R. Steele.....	do	Lorimer Lake.....	The inland waters of the Townships of Cowper, Foley, Christie, McDougall, McKellar, Ferguson, Carling, Shawanaga, Burpee, Hagerman, Brown and Wilson, in the Districts of Muskoka and Parry Sound, comprised within an area of about 1,000 square miles.
J. G. Rumsey.....	do	Huntsville	The inland waters of the Townships of Chaffey, Cardwell, Stisted, Sinclair, Bethune, Monteith, McMurrich, Perry, Spence, Ryerson, Armour and Proudfoot, in the Districts of Muskoka and Parry Sound, comprised within an area of about 1,000 square miles.
Wm. Lockhart.....	do	Denville	The inland waters of the Townships of Croft, Chapman, Strong, Jolly, Ferries, Lount, Machar, Laurier, Mills, Pringle, Gurd and Himsworth, in the Districts of Muskoka and Parry Sound, comprised within an area of about 1,000 square miles.
Henry W. Gill.....	do	Ufford	Lakes Joseph, Rosseau, Three Miles Lakes, Skelton Lake and Muskoka Lake, and all waters west of said lakes to Georgian Bay, and from River Severn, inclusive, to the northern boundary of the Townships of Humphrey and Conger in the County of Simcoe and Districts of Muskoka and Parry Sound.
L. S. Sanders.....	do	Barrie.....	About 110 miles of the waters of the north shore of Lake Simcoe and its tributaries, Couchiching and Holland Rivers.
Wm. Hastings.....	do	Roach's Point.....	About 30 miles of the waters of the south shore of Lake Simcoe from Cook's Bay to Beaverton.
Fred. Webber.....	do	Orillia.....	About 40 miles of the waters of Lake Couchiching and Severn River in the County of Simcoe.
Wm. McDermot.....	do	Beeton.....	The inland waters of the South Riding of the County of Simcoe, comprised within an area of about 900 square miles.
H. McFayden.....	do	Durham.....	The head waters of Saugeen River and tributaries, comprising an area of about 1,000 square miles.
Patrick McCarron.....	do	Wallaceburg	The waters of Sydenham River and tributaries, comprising about 65 miles.
J. B. Moody.....	do	Waubuno.....	The north branch of Sydenham River, from junction with main river to its sources, comprising about 20 miles.
Peter McCann.....	do	London.....	About 65 miles of the River Thames, from Wardsville to London.
John Crotty.....	do	Bothwell.....	About 25 miles of the River Thames, extending from Wardsville to Lewisville.
Timothy McQueen.....	do	Chatham.....	About 25 miles of the River Thames, from Lewisville to its mouth.
W. P. Croome.....	do	Brantford.....	About 150 miles of the waters of the Grand River and its tributaries, from Brantford upwards.
W. B. Jelly.....	do	Bowling Green.....	The inland waters of the North Riding of the County of Wellington, comprised within an area of about 600 square miles.

SCHEDULE of Fishery Officers, &c.—Continued.

PROVINCE OF ONTARIO—Continued.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
Andrew Hughson.....	Overseer....	Orangeville.....	About 25 miles of the waters of River Credit, extending from Orangeville to Norval; together with the inland waters of the Townships of Mono, East Garafraxa, Amaranth, Albion and Luther, comprised within an area of about 500 square miles.
Robert Stewart.....	do	Claude.....	The inland waters of the County of Cardwell, comprised within an area of about 400 square miles.
Wellington Hull.....	do	Erin.....	The inland waters of the Townships of Eramosa, Erin, Caledon and Esquessing, comprised within an area of about 400 square miles.
Alex. Blakely.....	do	Port Credit.....	About 1½ miles of the waters of the River Credit—from Norval to its mouth, in the County of Peel.
Nelson Simmons.....	do	Meyersburg.....	The waters of Trent River, in the Counties of Northumberland and Hastings, comprising about 80 miles.
J. R. Graham.....	do	Fenelon Falls.....	The inland waters of the North Riding of the County of Victoria, lying north of Fenelon Falls, and comprised within an area of about 800 square miles.
G. B. McDermot.....	do	Port Perry.....	About 22 miles of the waters of Lake Ontario, fronting on the County of Ontario, together with Lake Scugog, including Lindsay and Scugog Rivers, in the Counties of Durham, Victoria and Ontario, about 50 miles.
J. C. Bowen.....	do	Marmora.....	Crow Lake, Belmont Lake and Crow River, in the Counties of Hastings and Peterboro'.
Geo. W. Fitzgerald.....	do	Lakefield.....	The inland waters of the County of Peterboro', within the Townships of Harvey, Burleigh, Dummer, Douro, Smith and Ennismore.
David Breeze.....	do	Peterboro'.....	Otonabee River, extending from Peterboro' to Rice Lake, in the County of Peterboro'.
Wm. Gainforth.....	do	Haliburton.....	The waters of Gull and Burnt Rivers and tributaries, together with Drag, Eagle, Moose, Redstone, Crooked and other lakes, lying within the East Riding of the County of Peterboro', and comprised within an area of about 400 square miles.
B. H. Sweet.....	do	Bancroft.....	The inland waters of the Townships of Wollaston, Limerick, Cashel, Farraday, Dunganon, Mayo, Herschel, Monteagle, Carlow, McClure, Wicklow, Bangor, in the County of Hastings, and comprised within an area of about 1,000 square miles.
H. R. Purcell.....	do	Colebrook.....	The inland waters of the Townships of Camden, Portland, Loughboro', Sheffield and Kennebec, in the Counties of Addington and Frontenac, comprised within an area of about 500 square miles.
Robt. Gilbert.....	do	Ompah.....	The inland waters of the Townships of Palmerston, Clarendon, North Canonto, South Canonto and Miller, in the County of Frontenac, and comprised within an area of about 500 square miles.
George Lake.....	do	Tichbourne.....	The inland waters of the Townships of Bedford, Hinchinbrooke, Olden and Oso, in the County of Frontenac, and comprised within an area of about 400 square miles.
Samuel Boddy.....	do	Athens.....	Upper Beverley Lake, Bass Lake, Little Lake, Wiltse Lake and Mud Lake, in the County of Leeds.
David Edgar.....	do	Lyndhurst.....	Lower Beverley Lake and tributaries to Morton and Lyndhurst and Griffin Lake, in the County of Leeds.

SCHEDULE of Fishery Officers, &c.—Continued.

PROVINCE OF ONTARIO—Concluded.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
John Moorehead.....	Overseer....	Lyndhurst.....	From Lyndhurst to the divisions line between Leeds and Lansdowne, in the County of Leeds.
James Greer.....	do	Warburton	Gananoque River from Marble Rock to division line between the Township of Leeds and Lansdowne, including South Gananoque and Round Lake and Cherry Pound, in the County of Leeds.
Wm. Hicks.....	do	Athens.....	The waters of Charleston Lake, in the County of Leeds.
Geo. Jeacle.....	do	Wesport.....	The waters of Rideau, Upper Rideau, Openicon, Otty, and neighbouring lakes, in the County of Leeds, comprised within an area of about 200 square miles.
John Murphy.....	do	Perth.....	The inland waters of the South Riding of the County of Lanark from the narrows between Upper and Lower Rideau Lakes to Smith's Falls, comprising about 25 miles.
Eph. Deacon.....	do	Bolingbroke.....	The waters of River Tay and tributaries and Fall Bay River, in the County of Lanark comprising about 35 miles.
Alexander Wilson.....	do	Carleton Place.....	About 60 miles of the waters of Mississippi River and Lake in the County of Lanark.
.....	do .....	.....	Rideau River and tributaries from Ottawa to Burritt's Rapids, including Jack River, in the County of Carleton, comprising 55 miles.
.....	do	Braeside.....	The waters of Bonnechère River and lakes in the County of Renfrew, comprising about 45 miles.
M. L. Russell.....	do	Renfrew.....	The waters of Bonnechère River and tributaries, in the County of Renfrew, comprising about 50 miles.
Hugh Gallagher.....	do	Sebastapol.....	The inland waters of Townships Sebastapol, Radcliffe, Lyndoch and Gratton, in the County of Renfrew, comprised within an area of about 400 square miles.
.....	do	Eganville.....	The waters of Mink and Doré Lakes in the County of Renfrew, comprising within an area of about 100 square miles.
Geo. Douglas.....	do	Snake River.....	The waters of Muskrat Lake and Snake River, in the County of Renfrew, comprised about 25 miles.
Joseph Bélanger.....	do	High Falls.....	The waters of Calabogie Lake and the inland waters of the Township of Bagot, County of Renfrew, comprised within an area of about 100 square miles.
R. J. N. Pither.....	do	Rat Portage.....	Lake of the Woods. (Indian Agent.)
Jas. McCracken.....	do	Couchichung.....	Rainy Lake and Lake Seul. do
J. McIntyre.....	do	Fort William.....	Eagle Lake. do
J. P. Donnelly.....	do	Port Arthur.....	Nepigon River. do

PROVINCE OF QUEBEC—TIDAL DIVISIONS—SOUTH SHORE.

Wm. Wakeham.....	Officer in charge of the Fishery Protection Str. "La Canadienne."	Gaspé Basin.....	Lower St. Lawrence River and Gulf.....
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SCHEDULE of Fishery Officers, &c.—*Continued.*
PROVINCE OF QUEBEC—TIDAL DIVISIONS—SOUTH SHORE.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
J. A. Verge	Overseer ...	Cross Point.....	The estuary division of the River Restigouche, extending from Point Maguasha to Head of Tide, on the Quebec side, and from Dalhousie to Head of Tide on the New Brunswick side, comprising about 60 miles.
Pierre Cyr.....	do	Nouvelle.....	About 35 miles of the waters of Bay Chaleurs, extending along the coast from Maguasha to Grand Caspédia River, including the estuary thereof.
John Smith.....	do	New Carlisle.....	About 40 miles of the waters of Bay Chaleurs, extending along the coast from the mouth of Grand Caspédia River to Paspebiac.
John Phelan	do	Port Daniel.....	About 30 miles of the waters of Bay Chaleurs, extending along the coast from Paspebiac to Point Macquereau.
Henry Jones.....	do	Little River West.	That portion of the waters of the County of Gaspé from corner of the Beach to Point Macquereau, including Bonaventure Island, Little Pabos, Grand Pabos and Grand Rivers.
Geo. F. Annette.....	do	Peninsula, Gaspé.	That portion of the waters of the County of Gaspé from Cape Rosier to corner of the Beach, including Dartmouth, York, St. John and Malbaie Rivers.
Ant. Chevrier.....	do	Amherst.....	About 100 miles of the waters of the Gulf of St. Lawrence around the Magdalen Islands.
Joseph Lemieux	do	Montlouis	About 80 miles of the waters of the south shore of the River St. Lawrence, fronting on the County of Gaspé, and extending from Cape Rosiers to Mountlouis.
Jos. I. Letourneau	do	Ste. Anne des Monts.	About 80 miles of the waters of the south shore of the River St. Lawrence, fronting on the County of Gaspé, and extending from River Ste. Anne des Monts to Cap Chatte.
Johnny Joncas.....	do	Matane.....	About 54 miles of the waters of the south shore of the River St. Lawrence, fronting on the County of Rimouski, and extending from Cap Chatte to River Blanche; together with the River Matane, comprising about 12 miles of inland waters.
L. E. Grondin.....	do	Rimouski.....	About 45 miles of the waters of the south shore of the River St. Lawrence, fronting on the County of Rimouski, and extending from River Blanche to Rimouski.
H. Martin.....	do	do	About 35 miles of the waters of the south shore of the River St. Lawrence, fronting on the County of Rimouski, and extending from Rimouski to the division line between the Counties of Rimouski and Temiscouata.
Nap. Levesque.....	do	Isle Verte	About 30 miles of the waters of the south shore of the River St. Lawrence, fronting on the County of Temiscouata.
Xavier Pelletier.....	do	Ste. Anne de la Pocatière.	About 45 miles of the waters of the south shore of the River St. Lawrence, fronting on the County of Kamouraska.
Eug. Pelletier.....	do	St. Roch des Aulnais.	About 70 miles of the waters of the south shore of the River St. Lawrence, fronting on the Counties of L'Islet, Montmagny, Bellechasse and Lévis, extending from Ste. Anne de la Pocatière to Point Lévis.
L. P. Huot.....	do	St. Roch de Québec	About 50 miles of the waters of the north and south shores of the River St. Lawrence around the Island of Orleans.
U. Bhéreur.....	do	Malbaie	About 60 miles of the waters of the north shore of River St. Lawrence, fronting on the County of Charlevoix, and extending from River du Gouffre to the division line between the Counties of Charlevoix and Saguenay.

SCHEDULE of Fishery Officers, &c.—*Continued.*
 PROVINCE OF QUEBEC—TIDAL DIVISIONS—NORTH SHORE.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
L. N. Catellier	Overseer....	Tadoussac	About 80 miles of the waters of the north shore of the River St. Lawrence, fronting on the County of Saguenay and extending from the division line between the Counties of Charlevoix and Saguenay to Bersimis; and the tidal waters of the River Saguenay from its mouth to Chicoutimi, comprising 70 miles; in all, 150 miles.
Jos. Boily	Warden	Milles Vaches....	About 45 miles of the waters of the north shore of the River St. Lawrence, fronting on the County of Saguenay and extending from Escoumains to Bersimis.
N. A. Comeau	Overseer....	Godbout	About 115 miles of the waters of the north shore of the River and Gulf of St. Lawrence, fronting on the County of Saguenay and extending from Manicouagan to Baie des Rochers, including the estuaries of Godbout, Trinity and Pentecost Rivers.
T. Mignault	do	Montmagny	About 75 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the County of Saguenay and extending from Baie des Rochers to Point St. Charles, including the estuaries of Marguerite and Moisie Rivers.
Geo. L. Duguay	do	Murray Bay	About 105 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the County of Saguenay and extending from Point St. Charles to Esquimalt Point, including the estuaries of the St. John and Mingan Rivers.
Geo. Gaudin.....	do	Natashquan.....	About 100 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the County of Saguenay and extending from Esquimalt Point to Natashquan River, including the estuaries of the Rivers Agwanus, Nabissipi and Natashquan.
G. Mathurin.....	do	Montmagny	About 100 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the County of Saguenay and extending from River Natashquan to Cape Whittle, including the estuaries of Washecoutai, Kegashca, Musquarro and Olmonosheeboe Rivers.
Jean Legouvé.....	Warden	Pacachoo	About 140 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the County of Saguenay and extending from Cape Whittle to Checatca.
W. H. Whately.....	do	Bonne Espérance..	About 65 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the County of Saguenay and extending from Checatca to Blanc Sablon, the boundary line between Quebec and Newfoundland, on the coast of Labrador, including the estuary of the Esquimalt River.

PROVINCE OF QUEBEC—NON-TIDAL DIVISIONS.

Alf. Blais.....	Overseer....	CausapscaI.....	About 30 miles of the waters of Lake and River Metapedia, in the County of Metapedia, from head of Lake to CausapscaI.
George Gagnon.....	Warden	St. Hubert.....	The inland waters of the County of Temiscouata, comprised within an area of about 2,000 square miles.
Henri Côté.....	do	Baie St. Paul.....	Lakes in rear of Murray Bay and Bay St. Paul.
Edward Martin.....	do	do	do
Jos. Simard.....	do	Ste. Agnes.....	do

SCHEDULE of Fishery Officers, &c.—*Continued.*
 PROVINCE OF QUEBEC—NON-TIDAL DIVISIONS—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
J. F. Picotin.....	Warden	Drummondville...	About 60 miles of the River St. Francis, in the Counties of Yamaska and Drummond, extending from its mouth to Richmond.
N. A. Beach.....	Overseer	Georgeville.....	The waters of Lake Memphremagog, in the Counties of Brome and Stanstead, comprising about 50 miles.
P. C. Bourke.....	do	Somerset	The inland waters of the County of Megantic, comprised within an area of 850 square miles.
J. Laberge.....	Warden	Chateauguay.....	About 40 miles of the waters of the River St. Lawrence, fronting on the County of Chateauguay, including Chateauguay River.
John Kelly.....	Overseer	Beauharnois	About 50 miles of the waters of River St. Lawrence, fronting on the Counties of Beauharnois and Huntingdon; together with about 35 miles of the waters of Chateauguay and Trout Rivers.
J. O. Dion.....	do	Chambly	About 42 miles of the Richelieu River, extending from Sorel to Richelieu Village.
J. B. Chevalier.....	do	Iberville.....	About 30 miles of the waters of Richelieu River, extending from St. John to Lake Champ-lain.
P. E. Luke.....	do	Philipsburg.....	About 15 miles of the waters of Missisquoi Bay and Pike River, in the County of Missisquoi.
P. W. Nagle.....	do	Sherbrooke	The inland waters of the County of Stanstead, comprised within an area of about 540 square miles.
Joel Shurtleff.....	do	Compton	The inland waters of the County of Compton, comprised within an area of about 1,600 square miles.
A. L. Darche.....	do	Sherbrooke.. ..	About 10 miles of the waters of Lake Megantic, in the County of Megantic.
J. B. McDonald.....	do	Echo Vale	About 10 miles of the waters of Lake Megantic, in the County of Megantic.
W. G. Greene.....	do	Brome Lake.....	Brome Lake.
John McCaw.....	do	Sherbrooke.....	Lakes in Counties of Megantic and Wolfe.
V. Veilleux.....	Warden	St. Ephemre de Tring	The inland waters of the County of Beauce, comprised within an area of about 1,600 square miles.
Jos. Lambert.. ..	Overseer	Three Rivers.....	About 25 miles of the River St. Lawrence and Lake St. Peter, fronting on the County of St. Maurice.
Denis Shoener.....	do	St. François du Lac	That portion of Lake St. Peter fronting on the County of Yamaska and the River St. Francis within the limits of the said county.
Geo. Boisvert.....	do	Bécancour	About 36 miles of the waters of the River St. Lawrence and Lake St. Peter, fronting on the County of Nicolet.
Jos. Gingras.....	do	Rivière David....	About 30 miles of the waters of Yamaska River, in the Counties of Yamaska and St. Hyacinthe.
Joseph Charbonneau.....	do	St. Césaire.....	Yamaska River and its tributaries from West Farnham to St. Hughes, including Black River.
J. A. Grant	do	Louiseville.....	About 35 miles of the waters of the River St. Lawrence and Lake St. Peter, fronting on the Counties of Maskinongé and Berthier, including the islands in front.
Jos. Boivin.....	do	River Beaudet....	About 20 miles of the waters of the River St. Lawrence, fronting on the County of Soulanges, and extending from Point Beaudet to Coteau Landing.
Narcisse Lavallée.....	Warden	Sorel.....	That portion of the waters of the River St. Lawrence fronting on the County of Richelieu, including the islands therein.
John Morris.....	Overseer	St. Lambert	About 50 miles of the waters of the River St. Lawrence, fronting on the Counties of La-prairie, Chambly and Verchères.

SCHEDULE of Fishery Officers, &c.—*Continued.*
 PROVINCE OF QUEBEC—NON-TIDAL DIVISIONS—*Concluded.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
André Robert.....	Overseer....	Lachine	About 15 miles of the waters of the River St. Lawrence, fronting on the County of Jacques Cartier.
Julien Montpetit.....	do	Isle Perrot.....	About 15 miles of the waters of the River St. Lawrence, surrounding Isle Perrot.
Jos. Lauzon	do	Terrebonne.	The Rivers Jesus and Des Prairies, comprising about 50 miles.
Jos. Filiatrault.....	do	Ste. Adèle.....	The inland waters of the Townships of Morin and Beresford, in Terrebonne and Wolfe Counties, and de Salaberry and Grandison, in Argenteuil County, comprised within an area of about 500 square miles.
Toussaint Cloutier	do	Piedmont	The inland waters of the Townships of Abercrombie, Wexford and Kilkenny, in Terrebonne and Montcalm Counties, comprised within an area of about 300 square miles.
R. W. Jones.....	do	St. Andrews.....	About 15 miles of the waters of the north side of the Ottawa River, extending from Oka to Carillon.
Theo. Sabourin.....	do	Rigaud	About 30 miles of the waters of the south side of the Ottawa River, extending from Cascades to Point Fortune.
Pierre St. Pierre	do	Point Fortune	About 40 miles of the waters of the Ottawa River, extending from Calumet to Carillon.
Jos. Marion.....	do	Hull.....	The waters of the Ottawa River, fronting on the County of Ottawa, comprising about 75 miles.
Ed. Mohr.....	do	South Onslow....	The waters of the Ottawa River, fronting on the County of Pontiac, extending from the division line between the Counties of Ottawa and Pontiac to Fort Coulonge, and comprising about 50 miles.
J. T. Coghlan	do	Chapeau	The waters of the Ottawa River, fronting on the County of Pontiac, extending from Fort Coulonge to Des Joachims, and comprising about 75 miles.
Robt. Joynt.....	Warden	Joynt	The inland waters of the Townships of Masham, in the County of Ottawa, including Bernard Lake, comprised within an area of about 90 square miles.
Emiel Weisener.....	Overseer....	Blanche	The waters of the Townships of Mulgrave and Lathbury, Ottawa County.

PROVINCE OF NOVA SCOTIA.

A. C. Bertram.....	Inspector of Fisheries.	North Sydney	District No. 1, comprising the Island of Cape Breton.
Robert Hockin.....	do	Pictou	District No. 2, comprising the Counties of Cumberland, Colchester, Pictou, Antigonish, Guysborough, Halifax and Hants.
J. R. Kinney.....	do	Yarmouth.....	District No. 3, comprising the Counties of Lunenburg, Queen's, Shelburne, Yarmouth, Digby, Annapolis and King's.
		<i>Annapolis County.</i>	
Bailey, W. M.	Overseer....	Round Hill... ..	The County of Annapolis.
		<i>Antigonish County.</i>	
Aymer, J. R.	Warden	Pomquet Forks, Antigonish	From mouth of harbour to Forks; from thence on the Pomquet River to V. Chisholm's Mills, and from Forks, on the Black River, to Falls.

SCHEDULE of Fishery Officers, &c.—Continued.

PROVINCE OF NOVA SCOTIA—Continued.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>Antigonish County</i> —Continued.			
Cameron, Lochlin.....	Warden....	Upp'r South River, Antigonish.....	From McWilliam's Bridge to head of lake.
Chisholm, Hugh.....	do.....	Lower South River, Antigonish.....	From Antigonish Harbour to McWilliam's, or St. Andrew's Bridge.
Chisholm, Donald.....	do.....	Salt Springs, An- tigonish.....	From Trotter's Mill Brook to W. Thompson's Dam.
Dexter, Jno.....	do.....	Antigonish.....	From Antigonish Harbour (foot of marsh) to Trotter's Mill Brook; thence up said brook to Trotter's Mill, including both branches of West River and Bailey's Brook.
Fraser, Duncan.....	do.....	St. Joseph.....	From Pinkeytown Bridge to Stewart's Mills.
Macadam, Alex.....	do.....	West River.....	From Thompson's Dam to Addington Forks Bridge.
McDonald, John.....	Overseer....	Doctor's Brook....	Antigonish County.
McDougall, Arch'd.....	Warden....	McNair's Cove, Cape George....	From John McDonald (Bun's) Cove, north side of Cape George, to Crebbing Head, St. George's Bay.
Randall, Albert.....	do.....	Bayfield.....	From shore to Lake.
<i>Cape Breton</i> <i>County.</i>			
Barrington, York.....	Overseer....	Sydney Mines....	North of East Bay to Head of Sydney River, including part of Boularderie Island.
Burke, William.....	do.....	Main-à-Dieu....	Main-à-Dieu and Mira Bay.
Burke, Wm.....	Warden....	Burk's Bridge, Mira River....	Mira Bridge and Trout Brook.
Curry, James N.....	do.....	Sydney Forks....	Sydney River and Forks.
Howie, Donald.....	do.....	do.....	do do
Fleming, Michael.....	do.....	Little Bras d'Or..	Little Bras d'Or District.
Keefe, P.....	do.....	Lingan.....	North-West Brook, Grand Lake and tributaries.
Morrison, Angus.....	do.....	Marion Bridge, Mira.....	Marion Bridge, Mira.
McAdam, Allan.....	do.....	Eskasoni.....	Eskasoni.
McCormack, Donald.....	do.....	Leitche's Creek..	Leitche's Creek and George's River.
McDonald, Alex.....	Overseer....	East Bay.....	South of East Bay to Salmon River.
McDonald, Archibald.....	Warden....	Ball's Creek.....	Ball's Creek.
McEachen, Jno.....	do.....	Grand Mira, North	Salmon River.
McLean, Alex.....	do.....	Boisdale.....	Mill Brook.
McLellan, M.....	do.....	Rory Brack's Brook	Rory Brack's Brook.
McNeil, D. J.....	do.....	Benacadie River..	Benacadie River and Lake.
Quinan, Francis.....	Overseer....	Sydney.....	From Low Point to south head of Cow Bay, and north side of Mira Bay, including Salmon and Sydney Rivers.
<i>Colchester County.</i>			
Corbett, H.....	Warden....	Five Islands.....	Harrington and North Rivers.
Davison, J. W.....	Overseer....	Upper Economy..	Colchester County, Western Division.
Frame, Samuel.....	Warden....	Shubenacadie Riv. Stewiacke.....	Shubenacadie River and Gay's River.
Fulton, George.....	do.....	River, Brookfield)	Stewiacke River (upper portion).
Fulton, R. K.....	do.....	Folly Village....	DeBert River.
Fulmer, Jesse.....	do.....	Five Islands.....	East and Bass Rivers.
Gass, H.....	Overseer....	Tatamagouche....	Northern Divison, County Colchester, comprising Tatamagouche Bay, French and Waugh's Rivers.
Johnson, A. O. B.....	Warden....	Middle Stewiacke	Lower Stewiacke River.
Johnson, T.....	do.....	Salmon Riv., Truro	Salmon River.
Moore, George.....	do.....	Economy.....	Economy River.
Murray, Math. G.....	do.....	Truro.....	Salmon River.

SCHEDULE of the Fishery Officers, &c.—Continued.

PROVINCE OF NOVA SCOTIA—Continued.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>Colchester County—Continued.</i>			
McKay, Dan	Warden	Tatamagouche Riv.	Waugh's River.
Pollock, R. J.	Overseer	Lower Stewiacke..	Stewiacke River (lower portion).
Rutherford, Ed.	Warden	Stewiacke	Stewiacke River.
Urquhart, Hy	do	Folly Village.....	Folly River.
<i>Cumberland County.</i>			
Fowler, Elijah.....	Overseer	Parrsboro'	Cumberland County, Western Division, including all streams flowing into the Bay of Fundy.
Gilroy, Geo. W	do	Oxford	Cumberland County, Eastern Division, embracing all streams emptying into the Straits of Northumberland.
Harrison, Moses.....	Warden	Maccan.....	Maccan River.
Jenks, Frs. L.....	do	Parrsboro'	Parrsboro' Head.
Logan, Isaac.....	do	Amherst Point..	Laplanche and Nappan Rivers.
Murphy, Wm.....	Overseer....	Wallace.....	Wallace River.
McPherson, Samuel.....	Warden	Pugwash River..	Pugwash River.
Porter, Jos	do	River Herbert ..	River Herbert.
Smith, Sydney	do	Advocate Harbour	Apple River.
Smith, Thos. R.....	do	Shinimicas River..	Shinimicas River.
Taggart, Pat.....	Overseer....	Pugwash	Smelt and oyster fisheries at Pugwash.
Wills, Alex. M	Warden	Moose River.....	Moose and Harrington Rivers.
<i>Digby County.</i>			
Collins, J. A.....	Overseer....	Westport.....	Western Division of Digby County, comprising the waters of St. Mary's Bay. Long and Brier Islands.
J. W. Cosseboom.....	do	Roseway.....	Eastern Division of Digby County, comprising the waters of Digby County, except those of St. Mary's Bay, and around Long and Brier Islands.
Journey, Robt	Warden	Weymouth	Sissiboo River.
McKay, Lochlin.....	do	Barton	St. Mary's Bay.
Potter, Chas T.....	do	Joggins' River...	Joggins River to Bear River.
<i>Guysboro' County.</i>			
Bruce, J. R.....	Warden	Guysboro'	From mouth Clam Harbour River to Upper Falls.
Cameron, Angus	do	East River.....	East River, St. Mary's.
Cameron, D., sen	do	Upper Caledonia..	West River, St. Mary's, from Wallace's Bridge to head of River.
Cross, John.....	do	Indian River	Indian River, from mouth to source, District of St. Mary's.
Gunn, Donald	do	Cross Roads	From mouth of Scott's Place, to Country Harbour Lake, including Gunn's Brook, from Main River to Hurley's Lake.
Henderson, Jas	do	Isaac Harbour....	Isaac Harbour and River.
Hudson, Samuel (Lewis' son).....	do	Country Harbour..	Country Harbour and River, from Bridge at Narrows to Mouth.
Jones, John.....	do	Mouth of Salmon River	Mouth of Salmon River.
Jordan, Wm.....	do	Glenelg.....	St. Mary's River, extending from Alex. Ross' (above still water) to Hugh Halters', on the West River.
Kenny, Chas.....	do	Salmon Riv., West Branch Guysboro'.....	From foot of Neil's Lake to Beaver Dam Lake, inclusive, and all the lakes through which it passes.
Manson, Alex.	do	Lochaber Lakes..	St. Mary's River, from Wallace's Lake to Fischer's Mill Dam.

SCHEDULE of Fishery Officers, &c.—*Continued.*
 PROVINCE OF NOVA SCOTIA—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
		<i>Guysboro' County</i> —Con.	
Mattie Frederick.....	Warden	Tracadie, County of Antigonish....	Tracadie River to Counties of Guysboro' and Antigonish.
Munroe, W. M.	do	Cole Harbour.....	Cole Harbour River.
McDonald, Wm.	do	Stillwater.....	St. Mary's River.
McKay, Robt.	do	Guysborough, In- tervale	From head of tide to head of Intervale, on the North Branch, and to Cameron's Mill, on the Valley Branch.
McKeen, Thos.	do	Melrose	From Forks to County Line, including McQueen's Mill and Brook to Lake.
McEllum, Jas.	do	Salmon River.....	From Graham's West Line to foot of Neil's Lake, including North Branch and Lake.
McGrath, Adam.....	do	Cross Roads, St. Mary's	From junction of Antigonish Branch, St. Mary's River, to the head of Two Mile Lake.
McQuarrie, Allan.....	Overseer	Sherbrooke.....	District of St. Mary.
Pride, Wm.	Warden	Sherbrooke, St. Mary's.....	From mouth of St. Mary's River to Sinclair Point, including stream from Wine Harbor to Lake.
Sinclair, Robt.	do	Goshen.....	Eight Island Lake, from Sinclair's Mill to head waters.
Smith, J. L.	do	Cross Roads	From Cross Road Bridge, County Harbour River to Eight Island Lake.
Smith, J. P.	do	West River.....	From H. Hattie's north line to Indianman's Brook, including all tributaries.
Sears, George.....	do	Sherbrooke.....	Sherbrooke.
Tory, Jas. A.	Overseer	Guysborough.....	Guysborough County.
		<i>Halifax County.</i>	
Blakely, Jas.	Warden	Ship Harbour.....	From Ship Harbour to Chezzetcook inclusive.
Coolen, Chas.	do	Shad Bay.....	Peggy's Cove to Torrence Bay, including Pro- spect and Nine Mile River.
Conrad, Chas.	do	Cole Harbour.....	Cole Harbour.
Fitzgerald, John.....	Overseer	Portuguese Cove..	Halifax Harbor to Margaret Bay, Portuguese Cove.
Fraser, John.....	Warden	Moser's River.....	Moser's River and Ecum Secum and Smith's Brook.
Fraser, O. P.	do	Ecum Secum, Co. Guysboro'	Ecum Secum River.
Henry, Chas. G.	do	Upper Musquod- oboit.....	Upper Musquodoboit River.
Hughes, P.	do	Tangier River.....	Tangier River.
Hemiaw, Joshua.....	do	Nine Mile River..	Upper Nine Mile River.
Keizer, Geo.	do	Lake Porter.....	Lake Porter and Streams.
Leslie, Geo., senr.....	Overseer	Spry Bay.....	Halifax County, from Pope Harbour and Har- bour Island to Ecum Secum.
Mason, Nath.	Warden	Head of Margaret's Bay	From Hubert's to Peggy's Cove, Margaret's Bay, Ingraham and Indian Rivers.
Mosher, Dan.	do	Cow Bay, Dart- mouth	Cow Bay Run.
McKiel, Nath.	do	Sheet Harbour.....	Sheet Harbour.
McCleam, Donald.....	do	Chezzetcook River.	Chezzetcook River.
McLeod, George.....	do	Little Musquod- oboit	Middle Musquodoboit River.
Rowlings, Geo.	Overseer	Musquodoboit Har- bour	Halifax County, East Division, Dartmouth to Pope Harbour and Harbour Island.
Shatford, H. A.	Warden	Hubbard's Cove..	Hubbard's River.
Stevens, Robt.	do	Musquodoboit Har- bour	Musquodoboit River.

SCHEDULE of Fishery Officers, &c.—Continued.

PROVINCE OF NOVA SCOTIA—Continued.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
		<i>Halifax County— Con.</i>	
Walker, Wm. G.	Warden ...	Little Salmon R., Preston Road ...	Little Salmon River.
Whitman, James E.	do ...	Salmon River.	Salmon River.
		<i>Hants County.</i>	
Burnham, P. S.	Overseer ...	Windsor ...	Hants County, Western Division, from Western County Line to Walton.
Colter, John B.	do ...	Milford, ...	Shubenacadie River.
Horne, Arch.	Warden ...	Enfield ...	South end of Shubenacadie and Nine Mile River.
Mosher, Jas.	do ...	Brynlyn ...	Rivers Meander and Herbert, from mouth to source.
Mosher, Noah.	do ...	Mosherville ...	Kennetcook River, from mouth to head of tide.
O'Brien, Jas.	do ...	Maitland ...	Walton and Kennetcook Rivers.
Smith, W. B.	Overseer ...	do ...	Shubenacadie River from Five Mile River to its mouth and the south side of Cobequid Bay to Noel.
Snide, John.	do ...	Shubenacadie ...	Shubenacadie River from Shubenacadie to and including Five Mile River.
		<i>Inverness County.</i>	
Benzie, Peter.	Warden ...	Mabou, Brook Vil- lage	Mabou River.
Coady, James.	Overseer ...	S. W. Margaree ...	Inverness County, East Division.
Crowdis, Mark.	Warden ...	Big Intervale ...	From Bridge to Forks North-East Margaree- River.
Dowling, David.	do ...	Riverside.	River Inhabitants.
Gillies, Peter.	do ...	S. W. Mabou.	S. W. Mabou.
Graham, Stephen.	do ...	Long Point.	Long Point and Judique Rivers.
Murphy, Moses.	do ...	N. E. Margaree ...	Ainslie Lake.
McDonald, M. B.	do ...	River Dennis ...	River Dennis.
McEachan, P.	Overseer ...	Glendale ...	South Inverness District.
McEarlane, Angus (An- gus' son).	Warden ...	Upper South-West Margaree River.	Upper South-West Margaree River.
McKay, Neil.	do ...	Trout Brook ...	Trout Brook, Lake Ainslie.
McKinnon, Angus.	do ...	N. E. Margaree Riv	Crowdis Bridge to head of river.
McLean, D. F.	Overseer ...	Port Hood.	Inverness County, Western Division.
McLennan, Allan.	Warden ...	River Dennis.	River Dennis and Basin.
Ross, David.	Overseer ...	N. E. Margaree ...	Inverness County, East Division.
		<i>King's County.</i>	
Bishop, C. E.	Warden ...	Horton.	Gaspereaux River.
Brown, Philip.	do ...	Blomidon ...	Blomidon.
Miller, Jas. S.	Overseer ...	Canning.	King's County.
Murphy, L. A.	Warden ...	Gaspereaux.	Gaspereaux River.
McIntyre, W.	do ...	Aylesford.	Annapolis River.
Reid, R. F.	Overseer ...	Wolfville.	King's County.
Thorpe, J. W.	Warden ...	Hall's Harbour. ...	Hall's Point to Cape Split.
		<i>Lunenburg County.</i>	
Boylan, Edward.	Warden ...	New Ross.	Upper Gold River.
Burns, Amon.	do ...	Upper La Have ...	From Cooks to source of La Have River.
Cooney, Wilbur.	do ...	Chester.	East Branch, Middle River.
Croft, Wm.	do ...	Chester Basin.	East Gold River, from Bongard's Point to Gold River Branch, thence to Clarke's, Clinton's and Henry's Lakes.
Demon, David.	do ...	Lower Gold River.	Lower Gold River.

SCHEDULE of Fishery Officers, &c.—Continued.

PROVINCE OF NOVA SCOTIA—Continued.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>Lunenburg County</i> —Continued.			
Evans, David.....	Overseer....	Chester.....	Lunenburg County, East Division, Middle Gold Martin's and Mushamush Rivers.
Godard, C. E.....	do.....	Bridgewater.....	La Have River.
Keating, Michael.....	Warden.....	East River.....	East River.
Keddy, J. H.....	do.....	New Ross.....	Larder's River.
Langille, James.....	do.....	Chester.....	Martin's River.
Mossman, Josiah.....	do.....	Lunenburg.....	From Henry Kock's to Knock's.
Meisner, Jacob.....	do.....	Chester.....	East River.
Schmeisser, N.....	do.....	East La Have Ferry	La Have River, from mouth to Wilkie's Cove.
Solomon, W. M.....	Overseer....	Lunenburg.....	Western Division, Lunenburg County.
<i>Pictou County.</i>			
McPhie, Allan.....	do.....	Avondale.....	Eastern Division, comprising the coast waters from Pictou Harbour to Antigonish County line, including French River, Barney's River, Bailey's Brook and streams tributary thereto.
McQueen, J. D.....	Overseer....	Little Harbour....	Southern Division, comprising Sutherland's River, Moose River, Garden of Eden Lake, East River, St. Mary's and streams tributary thereto.
Pritchard, A. O.....	do.....	New Glasgow.....	Central Division, comprising Pictou Harbour, Pictou Island, East, West and Middle Rivers of Pictou.
Sutherland, Robert.....	do.....	River John.....	Western Division, comprising the coast waters from Colchester County line to Cole's Reef at Pictou Harbour, and all waters flowing into these waters, viz.: River John and tributaries. Toney River, Big Cariboo and Little Cariboo Rivers.
<i>Queen's County.</i>			
Day, Thos.....	Overseer....	Liverpool.....	Queen's County.
Fitzgerald, John.....	do.....	Mill Village.....	From Steam Mills to Salter's Falls on Port Medway River.
Ford, Theo.....	Warden.....	Milton.....	Milton Bridge up to Port Liverpool River.
Foster, I. C.....	do.....	Port Medway.....	Puddingpan Island to Toby's Island.
Miles, Barnabas.....	do.....	Greenfield.....	Salter's Falls to Pawn Hook, on Port Medway River.
<i>Richmond County.</i>			
Cameron, Duncan.....	Overseer....	St. Peter's.....	Eastern Division, from Bourgeois to east boundary of County, including said River.
Grant, Charles.....	Warden.....	River Inhabitants.	River Inhabitants.
Gerroir, Felix.....	do.....	Arichat.....	Grand Ruisseau.
Grouchy, J. P.....	do.....	do.....	Descousse River.
Kyte, Patrick.....	do.....	River Tier, St. Peter's	River Tier.
Marmeau, Frs.....	Overseer....	Arichat.....	Western Division, from River Bourgeois to west boundary of County.
Murchison, Donald.....	Warden.....	Grand River.....	Grand River.
McPherson, Farquhar.....	do.....	Riv. Moulin, Grandigue Ferry.....	River Moulin.
McRae, Allan.....	do.....	West Bay.....	West Bay, Black River.
Sampson, M.....	do.....	Petit de Grat.....	Petit de Grat Inlet.
Sampson, J.....	do.....	L'Ardoise.....	L'Ardoise.
<i>Shelburne County.</i>			
Acker, Timothy.....	Warden.....	Birchtown.....	Birchtown River.
Crowell, P.....	do.....	Barrington.....	Barrington River.

SCHEDULE of Fishery Officers, &c.—Continued.
 PROVINCE OF NOVA SCOTIA—Continued.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>Shelburne County—</i> Concluded.			
Goudy, E. S.	Overseer	Barrington	Clyde River to Yarmouth County Line.
Holden, C. A.	Warden	Jordan River	Ogden's Brook and Indian River.
Kehoe, M.	do	Lockeport	Green Harbour.
McGill, W. Jno.	Overseer	Shelburne	Shelburne County.
McKinney, Lewis.	Warden	Round Bay	Round Bay River.
McLean, Wm.	do	Port Saxon	Port Saxon.
Nichol, F. G.	do	Clyde River	Clyde River.
Ryer, George.	do	Shelburne	Roseway River.
<i>Victoria County.</i>			
Beaton, Roderick.	Warden	McNaughton	Hume's River.
Bingham, Wm.	Overseer	Englishtown	Englishtown and Ingonish Division.
Buchanan, Donald	Warden	Barachois River	Barachois River.
Capstick, Thos.	do	Bay St. Lawrence	Salmon River, Bay St. Lawrence.
Finlayson, Donald	do	Middle River	Middle River.
Foyle, Wm.	do	Baddeck River	Peter's Brook.
Hellen, Robt.	do	Cape North	Cape North.
Ingraham, G	do	Baddeck	From Baddeck to head of Long Point.
McAuley, Donald	do	do	Baddeck River.
McCharles, D.	do	S. Gut, St. Ann's.	South Gut, Ste. Ann's.
McDonald, Duncan.	Overseer	Aspy Bay	Victoria County, North Division, from Smoky Head to Bay St. Lawrence.
McDonald, Archd.	Warden	do	South Branch, Middle River.
McDonald, Archd.	do	North Harbour	North Harbour.
McDougall, Michael	do	Washabuck River	Washabuck River.
McIver, Malcolm.	do	Indian Brook	Indian Brook.
McKenzie, Chris.	do	Baddeck	Middle River.
McLeod, Donald.	do	St. Ann's River	River St. Ann's.
McLellan, John	do	Middle River	Middle River.
McMillan, Donald	do	Baddeck	Baddeck River.
McNeil, John S.	do	Grand Narrows	From Grand Narrows to McKay's Point.
McQuarrie, Donald.	Overseer	Baddeck	Victoria County, South Division.
McRae, John (Rory's son)	Warden	McLeod	Middle River.
McRae, Donald	do	Baddeck	Baddeck River and tributaries.
McRae, Kenneth.	do	Middle River	Indian Brook.
McRae, Donald	do	Red Head, Baddeck	Red Head, Baddeck.
McRae, John.	do	Gold Diggings, Middle River	Gold Diggings, Middle River.
<i>Yarmouth County.</i>			
Brand, J. I.	Warden	West Pubnico	Pubnico and Argyle.
Doucet, Jérôme.	do	Tusket	Tusket River.
Hatfield, J. A.	Overseer	do	Yarmouth County.
Muise, Vital	Warden	Tusket Forks	Tusket Forks.
Porter, Z.	do	Beaver River	Beaver River.
Porter, John B.	do	Eel Lake	Eel Lake.

PROVINCE OF NEW BRUNSWICK.

J. H. Pratt	Inspector of Fisheries and officer in command of Cruiser "Dream."	St. Andrew's	District No. 1, comprising the County of Charlotte, including the Islands of Campobello and Grand Manan, and Passamaquoddy Bay.
Robert A. Chapman	Inspector of Fisheries.	Moncton	District No. 2, comprising the Counties of Restigouche, Gloucester, Northumberland, Kent and Westmoreland.
David Morrow	do	Oromocto	District No. 3, comprising the Counties of Albert, St. John, King's, Queen's, Sunbury, York, Carleton and Victoria.

SCHEDULE of Fishery Officers, &c.—Continued.

PROVINCE OF NEW BRUNSWICK—Continued.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>Albert County.</i>			
Dryden, J. W.	Warden	Hillsboro'	Mouth of Petitcodiac River and Dorchester Bay
Oliver, Bartlet	do	Harvey, Little Rocher	Rocher Bay.
Stewart, Suthd.	Overseer	Alma	County of Albert.
Taylor, Wallace.	Warden	Coverdale	Petitcodiac River.
Wilbur, Kinnear T.	do	Midway, Harvey.	Germantown Lake and Shepody River.
<i>Carleton County.</i>			
Burt, George R.	Overseer	Upper Woodstock	St. John River and tributaries, from Long's Creek to Tobique River.
Lindsay, G. Alex.	do	Highlands	Miramichi River(S.W) from head waters to forks.
Scott, J. W.	Warden	Canterbury	St. John River, from Eel River to Woodstock.
<i>Charlotte County.</i>			
Ash, Wm	Overseer	Beaver Harbour	East District of County Charlotte.
Barry, Thos.	Warden	Lower Falls, Magaguadavic	Lower Falls, Magaguadavic River.
Brown, Barth	Overseer	Campobello	Campobello and West Isles, with coasts and streams in Charlotte County.
Campbell, D. F.	do	St. Andrews	Inner Bay of Passamaquoddy.
Carrol, Edward	Warden	Grand Manan	Whitehead Island.
Dick, Samuel	do	La Tête	Inner Bay, Passamaquoddy.
Dixon, Robert	do	Lepreaux	Seeley's Cove to Lepreaux.
Holmes, Thomas	do	Deer Island	West side, Deer Island.
Lord, J. M.	Overseer	do	Deer Island.
McLaughlin, W. B.	do	Grand Manan	Grand Manan Island and spawning grounds.
Todd, Frank.	do	St. Stephen	St. Croix River and tributaries.
<i>Gloucester County.</i>			
Aché, Adolphe	Warden	Shippegan	Shippegan.
Boyd, Alex.	Overseer	Miscou Harbour	Little Shippegan to Miscou.
Calnan, John, jun.	Warden	Kinsale	That part of River Tête à Gauche, from a mile above the Mill Dam to the source of said river.
Comeau, Frédéric	do	Petit Rocher	Petit Rocher, from Belledune to Mill Stream.
Cormier, Gustave	Overseer	Caraquet	Caraquet Herring Banks.
Dempey, Miles	Warden	Salmon Beach	Salmon Beach, from Bass River to Grindstone Point.
Gibbs, Valentine	do	Pokemouche	Pokemouche.
Hache, J. L.	Overseer	Caraquet	Caraquet and Shippegan oyster beds with St. Cimon's Inlet and River.
Hickson, James	do	Bathurst	River Nepissiguit and tributaries, with sea coast and streams, from Belledune River to Grindstone Point.
Robicheau, Olivier	Warden	Ferguson's Point	Coast from Northumberland County line to Green Point, with Big and Little Tracadie Rivers.
Trudel, Camille	do	Shippegan	Shippegan.
Walsh, William	Overseer	Pokemouche	The District of Pokemouche.
<i>Kent County.</i>			
Collet, A. L.	Warden	Buctouche	Buctouche Bay.
Cormier, Chas	Overseer	Cocagne	Cocagne River.
Girouard, M. A.	do	Buctouche	Big Buctouche River.
Guimon, Lazare	do	St. Louis	From Kouchibouquacis to Cockfish River.
Hannah, Wm. F.	do	Richibucto	Richibucto River.
Leger, F. B.	Warden	Little Buctouche River	Little Buctouche River.
Leblanc, A. T.	Overseer	Legerville	Canaan River (upper part).
Mauzerolles, Nicholas	Warden	Kouchibouquacis	From Kouchibouquacis River to Point Sapin.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF NEW BRUNSWICK—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>King's County.</i>			
Belyea, J. A.	Overseer ...	Westfield	St. John River and Belle Isle Bay and streams running thereinto.
Fenwick, Edwin	Warden ...	Studholm	Millstream.
Gosline, Samuel	Overseer ...	Smith's Creek	From mouth of Smith's Creek, upwards.
Pearson, I. R.	Warden ...	English Settlement	Washademoak Lake and its tributaries in King's and Queen's Counties.
Spragg, Z. S.	do ...	Belle Isle	Belle Isle Bay.
<i>Northumberland County.</i>			
Robichaud, Prudent....	Overseer ...	Upper Neguac....	District No. 1—The north coast of Northumberland County extending from Gloucester County line up the Miramichi Bay and River to Oak Point as far as midchannel, including all bays, gullies, islands, rivers and streams entering thereinto.
Williston, J. G.	do ...	Bay du Vin... ..	District No. 2—The south coast of Northumberland County, extending from Kent County line up the Miramichi Bay and River to Point aux Carr as far as midchannel, including all bays, gullies and islands and rivers and streams entering thereinto.
Wyse, William	do ...	Chatham	District No. 3—Both shores of the main Miramichi River extending from a line drawn from Point aux Carr on the south side to Oak Point on the north side, to its junction with the north-west and south-west Miramichi Rivers, together with all islands therein and all rivers and streams emptying thereinto.
Hogan, Patrick	do ...	.....	District No. 4—The north-west branch of the Miramichi River, with all its tributaries, extending from its junction with the Main River to its sources.
Parker, Thomas	do ...	Derby	District No. 5—The south-west branch of the Miramichi River, with all its tributaries, extending from its junction with the Main River to its sources.
<i>Queen's County.</i>			
Hetherington, I. T.	Overseer... ..	Jenkins, Johnson..	From Cole's Island to foot of Washademoak Lake
Langan, Isaiah	Warden ...	Chipman, Gaspereaux	Salmon River.
Philips, Robert	do ...	Canaan Rapids....	Head waters, Washademoak Lake.
<i>Restigouche County.</i>			
McPherson, Alex.....	Overseer... ..	River Charlo... ..	From Belledune to Dalhousie.
<i>Sunbury County.</i>			
Griffith, Chas.	do ...	Burton	St. John River, Indiantown to County Line of York.
Hoben, G. W.	Warden ...	Sheffield	do do do
<i>St. John County.</i>			
O'Brien, Jos.	Overseer... ..	Carleton, St. John.	St. John County.
Rourke, E. V.	do ...	St. Martin's . . .	Eastern part of St. John County, from Quaco Head to Goose River.

SCHEDULE of Fishery Officers, &c.—Continued.

PROVINCE OF NEW BRUNSWICK—Concluded.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>Victoria County.</i>			
Caron, Magloire	Warden	Middle St. Francis	Above Fish River Rapids.
Edgar, Thos.	do	Three Rivers	Middle Division, Tobique River.
Larlie, Daniel.	do	Andover	Salmon River.
McDougall, John.....	do	Rocky Brook, Parish of Lorne.	Three Brooks, Branch of Tobique River.
Pelletier, Beloni	do	Caron's Brook.....	Baker's Lake and adjoining streams.
Roberts, Chas., jun.....	do	Andover	Lower Division, Tobique River.
Ryan, Thos. D.....	Overseer.....	Grand Falls.....	County of Victoria.
<i>Westmoreland County.</i>			
Cormier, D. T.....	do	Pré d'en-haut.....	Dorchester Bay.
Deacon, W. B.....	do	Shediac	Shediac Harbour and River.
Goodwin, Robt.....	do	Bay Verte.....	The Parishes of Sackville and Westmoreland.
<i>York County.</i>			
Campbell, J. A.....	Warden	Kingsclear, Fred- ericton	Grand Pass, on St. John River, upwards, from Crock's Point to Lower Line of York County, including Nashwaak River.
Cronkhite, A. B.....	do	Southampton.....	St. John River, from Upper Line of York County to Crock's Point, on River St. John.
Cunningham, A.....	Overseer.....	Canterbury Station	Skiff and Palfry and other lakes.
Glendenning, D.....	Warden	Harvey Station.....	Magaguadavic Stream and Lake Oromocto and other lakes.
McNelly, L.....	do	Upper Kingsclear.	From Burgoyne's Ferry to Nackawack.
Moir, A.....	Overseer.....	Bloomfield	From Price's Bend to Burnt Hill, S.W. Mira- michi.
Orr, Robt.....	do	Fredericton	County of York.

PROVINCE OF PRINCE EDWARD ISLAND.

Edward Hackett	Inspector of Fisheries..	Tignish	Prince Edward Island
<i>King's County.</i>			
Cuddie, James	Warden	Murray Harbour ..	Murray Harbour and River, with Lots 63 and 64.
Dingwell, J. H.....	do	Morell River	Fourth District of Morell
Duffy, Peter.....	do	St. Peter's.....	St. Peter's and Morell.
Griffin, Henry.....	do	Georgetown	Cardigan Bay and Montague River
Mathewson, M.....	do	Grand River	Grand River.
Mitchel, James.....	do	Peake's Road.....	First District of Morell.
Morrow, Henry.....	do	Souris River	Souris River.
McDonald, Allan.....	do	North Lake.....	North Lake.
McDonald, Ronald.....	do	Naufrage River.....	Naufrage River.
O'Brien, John	do	Morell River.....	Second District of Morell.
Reilly, Daniel	do	Montague River.....	Montague, from Georgetown Road to Whim Road.
<i>Queen's County.</i>			
Beers, George F.....	Warden	Cherry Valley	Pownal Bay and Seal River.
Buotte, Dominique.....	do	Rustico	District of Rustico.
Currie, Neil	do	Long Creek, West River	Shore of Lot 65, South of West River.
Delaney, Jonathan.....	do	New London	New London.
Garnun, Lionel.....	do	Winter River.....	Winter River.
Howatt, James.....	do	Crapaud	Crapaud.
MacKenzie, Finlay.....	do	Pinette River.....	Lots 60 and 62.

SCHEDULE of Fishery Officers, &c.—Continued.
PROVINCE OF PRINCE EDWARD ISLAND—Concluded.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>Queen's Co.—Con.</i>			
Murphy, Thomas	Warden	Stanley Bridge	Trout River.
Murphy, Joseph	do	China Point, Lot 50	District of Pownal Bay and Seal River.
McDonald, Charles C.	do	Blooming Ponds	Alewife fishery of Blooming Ponds.
Power, James	do	Hunter River	Huntley and Wheatley Rivers.
Ready, Michael	do	Tracadie	Winter River.
Shaw, A. C.	do	Long Creek, Lot 65	District of West River.
Stanley, Francis	do	Charlottetown	Charlottetown, including East, West and North Rivers.
Stephenson, George	do	New Glasgow	New Glasgow River.
Traynor, James P.	do	Johnston's River	Johnston's River, including oyster fishery at its mouth.
Whitehead, William	do	S. W. River	South West River.
<i>Prince County.</i>			
Aylward, Peter	Warden	Tignish	Skinner's Pond, southward, from south end of Nail Pond to Black Pond, inclusive, and east to railway.
Bryant, D. L.	do	Mount Pleasant, Lot 18	From western bank of Big Pierre Jacques River to the point where the north line of Lot 15 touches the shore of Egmont Bay.
Chiasson, John (Chapel).	do	Tignish	Tignish, from line of Lot 2, northward to include Little and Big Tignish, and westward to Railway.
McBride, Patrick	Overseer	Lower Freetown	County of Prince.
Doyle, Lawrence	Warden	Lot 3	From Little Miminigash to Cape Wolfe.
Gillis, V. S.	do	Indian River, Lot 18	Richmond Bay and Malpeque.
Holland, J. F. B.	do	Bedeque	From Graham's Head, Lot 26, to Cape Traverse.
Howat, Calvin	do	Tryon River	Tryon River.
McDonald, James A.	do	Grand River	Grand River.
McDonald, Alex.	do	Alberton	Cascumpeque Bay and Inlet, from the Narrows to Kildare Capes.
Nelligan, James M.	do	Nail Pond	Nail Pond, Skinner's Pond.
Ramsey, J. A.	do	Hamilton, Lot 18	Oyster Cove, Richmond Bay.
Ramsey, James	do	Tyne Valley	Lot 13, Trout River.
Ramsey, J. K.	do	West Cape	From Cape Wolfe to Brae River.
Reid, Peter	do	Coleman	Lots 5, 6 and 10.
Rix, John	do	Miminigash	Miminigash.
Sharpe, John A.	do	Summerside	Summerside, including Bedeque Bay and South part of Richmond Bay.
Sharpe, George A.	do	Lot 12	Lot 12, on the Narrows.

PROVINCE OF MANITOBA AND NORTH-WEST TERRITORIES.

Alex. McQueen	Inspector	Winnipeg	Province of Manitoba.
F. C. Gilchrist	Overseer	Fort Qu'Appelle	Qu'Appelle River and adjoining lakes.
John Foster	do	Sussex, Craven P. O.	Long Lake, North-West Territories.
C. L. Guoin	do	Calgary	District of Calgary, N. W. T.
S. B. Lucas	do	Holbrooke	District of Peace Hills.
R. S. McKenzie	do	Stobart	District of Prince Albert.
Robert Gunne	do	Winnipeg	} Each within the limits of his district as a Forest Ranger.
William Toole	do	do	
A. B. McLellan	do	do	
Michael Fee	do	do	
A. E. Johnston	do	Edmonton	
J. R. Thompson	do	Calgary	
R. S. Cook	do	Prince Albert	
H. J. Montgomery	do	Battleford	

SCHEDULE of Fishery Officers, &c.—*Concluded.*
PROVINCE OF BRITISH COLUMBIA.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
Thomas Mowat.....	Inspector....	New Westminster.	Province of British Columbia.
J. W. McKay.....	Overseer....	Kamloops	District of Yale.

FISH CULTURE.

Name.	Rank.	P. O. Address.
Samuel Wilmot.....	Superintendent of Fish Culture for the Dominion....	Ottawa.
Charles Wilmot.....	Officer in charge of Government Fish Hatchery.....	Newcastle, Ont.
William Parker.....	do do	Sandwich, Ont.
L. N. Catellier.....	do do	Tadoussac, Que.
Henry Davis.....	do do	Gaspé Basin, Que.
Alex. Mowat.....	do do	Deeside, Metapedia, Que.
A. H. Moore.....	do do	Magog, Que.
A. B. Wilmot.....	do do	Bedford Basin, N.S.
C. A. Farquharson.....	do do	Sydney, C.B., N.S.
Isaac Sheasgreen.....	do do	South Esk, N.B.
Charles McCluskey.....	do do	Grand Falls, N.B.
Thomas Mowat.....	do do	New Westminster, B.C.

RECAPITULATION.

Provinces.	No. of Officers.
Ontario.....	112
Quebec.....	68
Nova Scotia.....	214
New Brunswick.....	77
Prince Edward Island.....	47
Manitoba and North-West Territories.....	14
British Columbia.....	2
Fish Culture.....	12
Officers and crews of eight fisheries protection vessels.....	175
Total.....	721

In addition to the above regular staff, 103 temporary local Guardians were employed during the year as occasion required.

APPENDIX No. 2.

FISHING BOUNTIES.

GENERAL STATEMENT of Fishing Bounty Claims received for the Year 1889.

Province.	County.	No. of Claims Received.	No. of Claims Rejected.	No. of Claims held in abeyance.	No. of Claims Paid.
Nova Scotia	Annapolis	183	1		183*
	Antigonish	154			154
	Cape Breton	515	2		513
	Digby	286		1	285
	Guysboro'	1,203	3		1,200
	Halifax	1,523	19	3	1,515*
	Inverness	695	1		694
	King's	48	2		46
	Lunenburg	887	8		880*
	Pictou	19			19
	Queen's	264	1		263
	Richmond	1,325	53	209	1,063
	Shelburne	746	2		744
	Victoria	749	2		747
	Yarmouth	219	1	1	217
		Totals	8,816	95	214	8,523
New Brunswick	Charlotte	851	1		850
	Gloucester	1,190	19	13	1,158
	Kent	286	1		285
	Northumberland	20	2		19*
	Restigouche	2			2
	St. John	72	1		71
	Westmoreland	7			7
		Totals	2,428	24	13	2,392
Prince Edward Island	King's	638	6		944*
	Prince	436	6		430
	Queen's	137			137
		Totals	1,211	12		1,511
Quebec	Bonaventure	1,622	7		1,623*
	Gaspé	2,447	17		2,432*
	Rimouski	28			28
	Saguenay	567	6		569*
		Totals	4,664	30		4,652

RECAPITULATION.

Nova Scotia	8,816	95	214	8,523
New Brunswick	2,428	24	13	2,392
Prince Edward Island	1,211	12		1,511
Quebec	4,664	30		4,652
Grand Totals	17,119	161	227	17,078

* NOTE.—The number of Bounty Claims paid for 1889 includes several claims for the year 1888 held in abeyance for enquiry. This will explain the difference between claims paid and claims received after deducting those rejected and held in abeyance.

**GENERAL STATEMENT of Payments made on account of Fishing Bounty Claims to
Boats and Vessels, for the year 1889.**

Province.	County.	Amount Paid.	Total.
		\$ cts.	\$ cts.
Nova Scotia	Annapolis	1,226 31	
	Antigonish	1,012 00	
	Cape Breton	3,777 47	
	Digby	3,329 61	
	Guysboro'	9,067 57	
	Halifax	12,156 08	
	Inverness	6,207 96	
	King's	324 50	
	Lunenburg	20,761 42	
	Pictou	153 00	
	Queen's	3,023 06	
	Richmond	9,359 92	
	Shelburne	8,367 80	
Victoria	5,051 00		
Yarmouth	6,324 81		
			90,142 51
New Brunswick.....	Charlotte	6,930 16	
	Gloucester	10,412 95	
	Kent	2,248 65	
	Northumberland.....	499 37	
	Restigouche	28 00	
	St. John	864 66	
Westmoreland	43 00		
			21 026 79
Prince Edward Island...	King's	7,715 02	
	Prince	4,765 25	
	Queen's	1,514 26	
			13,994 53
Quebec.....	Bonaventure.....	10,689 00	
	Gaspé	17,453 34	
	Rimouski	160 00	
	Saguenay.....	5,060 37	
			33,362 71
	Grand total.....		158,526 54

NOTE.—Of the above amount, \$8,526.69 has been charged against the appropriation for 1890-91.

DETAILED STATEMENT showing Fishing Bounties paid to Vessels in each County, for the Year 1889.

Province.	County.	No. of Vessels.	Tonnage.	Average Tonnage.	No. of Men.	Amount Paid.
						\$ cts..
Nova Scotia	Annapolis.....	6	136	23	29	182 31
	Cape Breton.....	12	220	18	41	307 47
	Digby.....	51	1,177	23	351	1,721 61
	Guysboro'.....	19	677	36	120	974 57
	Halifax.....	123	3,052	25	698	4,367 08
	Inverness.....	22	741	34	141	1,037 96
	King's.....	5	75	15	12	112 50
	Lunenburg.....	159	11,519	72	2,019	17,184 42
	Pictou.....	1	22	22	4	33 00
	Queen's.....	18	1,048	58	212	1,524 06
	Richmond.....	65	1,932	30	471	2,825 92
	Shelburne.....	53	2,835	53	653	4,127 80
	Victoria.....	1	14	14	3	21 00
Yarmouth.....	62	3,675	59	930	5,428 81	
	Totals.....	597	27,123	45	5,684	39,848 51
New Brunswick.....	Charlotte.....	88	1,501	17	306	2,127 16
	Gloucester.....	31	401	13	102	590 95
	Kent.....	3	51	17	10	71 50
	Northumberland.....	9	291	32	62	414 37
	Restigouche.....	1	14	14	3	21 00
	St. John.....	21	332	16	82	487 66
	Totals.....	153	2,590	17	565	3,712 64
Prince Edward Island.....	King's.....	20	764	38	134	1,043 02
	Prince.....	12	461	38	89	651 25
	Queen's.....	3	49	16	16	69 26
	Totals.....	35	1,274	36	239	1,763 53
Quebec.....	Gaspé.....	16	660	41	122	856 34
	Saguenay.....	32	1,069	33	208	1,600 87
	Totals.....	48	1,729	36	330	2,457 21

RECAPITULATION.

Nova Scotia.....	597	27,123	45	5,684	39,848 51
New Brunswick.....	153	2,590	17	565	3,712 64
Prince Edward Island.....	35	1,274	36	239	1,763 53
Quebec.....	48	1,729	36	330	2,457 21
Grand totals.....	833	32,716	39	6,818	47,781 89

DETAILED STATEMENT of Fishing Bounties paid to Boats for the Year 1889.

Province.	County.	No. of Boats.	No. of Men.	Amount Paid.
				\$ cts.
Nova Scotia..	Annapolis	177	289	1,044 00
	Antigonish	154	286	1,012 00
	Cape Breton..	501	990	3,470 00
	Digby.....	234	457	1,608 00
	Guysboro'	1,181	2,303	8,093 00
	Halifax.....	1,392	2,129	7,789 00
	Inverness.....	672	1,498	5,170 00
	King's	41	57	212 00
	Lunenburg	721	954	3,577 00
	Pictou	18	34	120 00
	Queen's.....	245	418	1,499 00
	Richmond	998	1,845	6,534 00
	Shelburne	691	1,183	4,240 00
	Victoria	746	1,428	5,030 00
	Yarmouth	155	247	896 00
		Totals.....	7,926	14,118	50,294 00
New Brunswick.....	Charlotte.....	762	1,349	4,803 00
	Gloucester.....	1,125	2,904	9,822 00
	Kent	282	631	2,177 15
	Northumberland.....	10	25	85 00
	Restigouche.....	1	2	7 00
	St. John	50	109	377 00
	Westmoreland	7	12	43 00
	Totals	2,237	5,032	17,314 15
Prince Edward Island...	King's	923	1,910	6,672 00
	Prince	418	1,221	4,114 00
	Queen's..	134	437	1,445 00
	Totals.....	1,475	3,568	12,231 00
Quebec.....	Bonaventure.....	1,623	3,024	10,689 00
	Gaspé.....	2,414	4,729	16,597 00
	Rimouski.....	28	44	160 00
	Saguenay.....	537	1,010	3,459 50
	Totals.....	4,602	8,807	30,905 50

RECAPITULATION.

Nova Scotia.....	7,926	14,118	50,294 00
New Brunswick.....	2,237	5,032	17,314 15
Prince Edward Island.....	1,475	3,568	12,231 00
Quebec.....	4,602	8,807	30,905 50
Grand Totals.....	16,240	31,525	110,744 65

DETAILED STATEMENT of Fishing Bounties paid to Vessels, for the Year 1889.

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.	Amount of Bounty Paid.
							\$ cts.
57,153	Cygnets	Yarmouth	19	Warren Snow	Hillsburn	4	28 50
90,667	Edward Everett	Digby	57	David Hayden	Lower Granville	10	78 36
77,766	Laconic	Shelburne	15	Jno. W. Sproule	Leitchfield	7	22 50
88,685	Ladora	St. John, N.B.	12	Stephen Baker	Margaretville	3	15 75
77,958	Maggie M.	Annapolis	16	Parker Zwicker	Clementsport	2	16 80
83,253	Rescue	do	17	Josiah Burrell	do	3	20 40

CAPE BRETON COUNTY.

88,507	Belle of Rome	Sydney	14	Thos. Bagnell	Gabarouse	3	16 80
92,592	Dread Not	do	10	Peter Leblanc	Little Bras d'Or	2	15 00
90,718	Gladys	do	57	D. A. Smith	North Sydney	4	67 17
88,513	Ida	do	10	Isaiah Leblanc	Little Bras d'Or	2	15 00
92,600	Merit	do	13	Alex. Leblanc	do	3	19 50
80,973	Ocean Wave	do	20	Samuel Moore	do	4	30 00
88,504	Quick Step	do	12	Fred. Marsh, <i>et al.</i>	Langin	3	18 00
57,681	Quick Step	Halifax	22	Wm. O'Brien	Little Bras d'Or	3	33 00
74,038	River Queen	Sydney	32	Peter Deveaux	do	6	48 00
77,857	Sailor's Bride	do	10	Edward O'Brien	do	3	15 00
92,593	Thomas Parnell	do	10	Wm. Anderson	North Sydney	4	15 00
88,518	W. F. Elizabeth	do	10	Wm. Curry	S. Head, Cow Bay	4	15 00

DIGBY COUNTY.

72,978	Annie Coggins	Digby	22	L. Coggins, M.O.	Westport	7	30 93
90,660	Alice May	Yarmouth	18	Bradish Bailey	do	7	25 31
83,431	Acadian	Weymouth	32	Samuel Thurber	Freeport	8	48 00
75,612	Alice	Yarmouth	17	Chas. E. Finigan	do	6	23 67
83,258	Alfred	Annapolis	22	Amos H. Outhouse	Tiverton	10	33 00
75,721	Angeline	Yarmouth	67	Wm. Snow	Digby	14	100 50
74,331	Condor	do	11	Howard Titus	Westport	5	16 50
83,421	Charley	Weymouth	10	Delaney Graham	Centreville	2	11 24
85,684	Constitution	Digby	28	James W. Dillon	Digby	8	42 00
88,403	David Sprague	do	31	Colin Titus	Westport	3	37 20
75,711	Dove	Yarmouth	20	Joseph Ossinger	Tiverton	7	30 00
77,740	Elmer	Digby	15	Walter Coggins	Westport	6	22 50
75,757	Etta	Yarmouth	17	J. W. C. Webber	do	6	25 50
85,683	Edith L.	Digby	16	Isaac Peters	do	4	29 00
80,797	Ella H.	do	13	T. W. Whiteneck	Freeport	5	19 50
90,662	Edward A. Horton	do	67	Joseph E. Snow	Digby	14	100 50
74,329	Fairy Queen	Yarmouth	13	Wallace Coggins	Westport	5	17 87
80,798	Fredie G	Digby	18	Geo. Gower	do	6	27 00
75,614	Fawn	do	17	Isaac Peters	do	7	25 50
75,601	Flash	do	10	James A. Peters	do	5	15 00
85,550	Fair Play	Yarmouth	11	Jno. Sollows	Port Maitland	5	16 50
85,686	Gladstone	Digby	16	Augustus Haycock	Westport	6	24 00
83,260	Gazelle	Annapolis	20	D. & O. Sproule	Digby	5	30 00
80,799	Hattie T.	Digby	16	Frank P. Titus	Westport	6	24 00
80,800	Helen Maud	do	20	Chas. McDormand	do	7	30 00
75,751	Helen Gertrude Nickerson	Yarmouth	16	M. & E. Haines	Freeport	5	22 00
80,604	Jennie C.	do	16	Charles Hicks	Westport	6	24 00
94,693	John H. Kennedy	Digby	54	J. S. Hayden	Granville	9	76 95

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.

DIGBY COUNTY—Concluded.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.
							\$ cts.
85,685	L. M. Ellis.....	Digby.....	35	Holland Outhouse.....	Tiverton.....	11	52 50
80,786	Lizzie P.....	do.....	12	Mary E. Wyman.....	Freeport.....	5	16 50
85,690	Lora T.....	do.....	15	Joseph Thurber.....	do.....	6	22 50
88,404	Live Yankee.....	do.....	57	Howard Anderson.....	Digby.....	12	85 50
75,594	Lizzie G.....	do.....	16	Wm. McGrath.....	Granville.....	7	24 00
85,682	Malapert.....	do.....	22	James Glaven.....	Westport.....	8	33 00
80,794	Minnie C.....	do.....	18	Charles Bailey.....	do.....	6	27 00
77,618	May Queen.....	Barrington.....	34	Livingstone Coggins.....	do.....	11	51 00
85,533	Minnie C.....	Yarmouth.....	12	J. N. Sanders.....	Port Maitland.....	3	15 75
90,873	Primrose.....	do.....	34	Wm. McKenzie.....	Westport.....	10	51 00
75,714	Prince.....	do.....	10	Geo. Stevens.....	Freeport.....	5	15 00
83,132	Restless.....	Digby.....	25	Frank Suthern.....	Westport.....	8	37 50
85,558	S. A. Crowell.....	Yarmouth.....	23	Wallace Gower.....	do.....	8	34 50
80,784	Silver Cloud.....	Digby.....	41	Andrew Coggins, M.O.....	do.....	10	61 50
75,725	Stella.....	Yarmouth.....	24	Byard Powell.....	Freeport.....	7	36 00
75,726	Thrush.....	do.....	13	Handley Outhouse.....	Tiverton.....	5	19 50
94,694	Utah Unice.....	Digby.....	33	M. & E. Haines.....	Freeport.....	8	49 50
37,282	Victoria.....	do.....	29	Jno. Outhouse.....	Tiverton.....	10	43 50
74,317	Willie.....	Yarmouth.....	21	Henry Glaven.....	Westport.....	8	29 75
85,559	Willie F.....	do.....	12	Edw. C. Thurber.....	Freeport.....	4	18 00
75,757	West Wind.....	Digby.....	25	James Cousins.....	Digby.....	5	32 14
75,722	Yuba.....	Yarmouth.....	15	George Denton.....	Westport.....	6	22 50
77,953	Zulu.....	Annapolis.....	18	Jno. McKay.....	Tiverton.....	4	24 30

GUYSBORO' COUNTY.

80,985	Annie Roy.....	Guysboro'.....	80	G. E. Jost.....	Guysboro'.....	14	120 00
80,991	Atalanta.....	do.....	80	Stephen Sweet.....	Isaac's Harbour.....	15	120 00
90,736	Alert.....	Pt. Hawkesbury.....	11	W. A. Keating.....	Port Mulgrave.....	3	16 50
41,771	Atalia.....	Guysboro'.....	34	Thos. H. Peeples.....	Pirate Harbour.....	4	51 00
90,841	C. W. Lundy.....	do.....	12	Wm. Luddington.....	Coddles Harbour.....	5	18 00
80,988	Dido.....	do.....	59	Stephen Sweet.....	Isaac's Harbour.....	12	88 50
80,996	Gertie Belle.....	do.....	15	Alex. Munroe.....	White Head.....	3	18 00
80,999	Guardian Angel.....	do.....	21	Joseph Fougère, jun.....	Larry's River.....	4	23 35
57,715	John Lawrence.....	Halifax.....	22	Alex. Henderson.....	New Harbour.....	5	33 00
77,942	Julia Franklyn.....	Charlotte town, P. E. I.....	79	Henry Linden.....	Charlo's Cove.....	8	93 14
85,724	Jumbo.....	Halifax.....	20	do.....	do.....	8	30 00
80,989	Laura.....	Guysboro'.....	80	Henry M. Jost.....	Guysboro'.....	12	115 38
69,964	Lizzie A.....	Pt. Hawkesbury.....	20	J. F. & A. H. Reeves.....	Pirate Harbour.....	4	30 00
69,141	Mary Elisabeth.....	Halifax.....	16	Wm. G. Webber.....	Torbay.....	4	24 00
74,142	Mary A.....	Lunenburg.....	45	Robert Jamieson.....	Canso.....	3	54 00
83,092	Maud F.....	Pt. Hawkesbury.....	11	Wm. Critchett.....	Steep Creek.....	2	16 50
80,970	Orion.....	Halifax.....	24	E. B. Pelrine.....	Larry's River.....	6	36 00
75,892	Peter Mitchell.....	Pt. Hawkesbury.....	26	Wm. & Wm. P. Power.....	Pirate Harbour.....	4	39 00
36,991	Vegete.....	Lunenburg.....	32	Jno. Maskell.....	Jeddore.....	4	43 20

HALIFAX COUNTY.

77,826	Abbie G.....	Halifax.....	31	Walter Glawson.....	Pleasant Hbr.....	6	46 50
83,106	Annie Isabel.....	do.....	23	Peter Bowser, sen., et al.....	Musquodoboit Harbour.....	5	28 02
73,964	Aubrey S.....	do.....	21	Jeffrey Gilbert.....	Petpiswick Hbr.....	3	25 20
36,996	Agile.....	Lunenburg.....	27	Henry A. Shatford.....	Hubbard's Cove.....	8	36 44
57,727	Agnes.....	Halifax.....	21	John Hayes.....	Herring Cove.....	6	31 50
61,625	Alpha.....	do.....	18	Jno. Smith, M.O.....	French Village.....	7	27 00
74,020	Addie.....	do.....	16	Denis Fagan, M.O.....	Ketch Harbour.....	5	24 00

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.
HALIFAX COUNTY—Continued.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.
							\$ cts.
37,619	British Queen	Halifax	20	Wm. Hublely	Spry Bay	4	25 00
90,721	Brilliant Star	do	36	P. & J. Hartling	East Jeddore	10	54 00
94,662	Bessie Florence	do	12	Chas. W. Twohig	Pennant	3	15 75
90,496	Black Prince	do	18	James W. Slaunwhite	Terrence Bay	4	27 00
92,566	Cassie M.	do	13	W. H. Munro	Sheet Harbour	3	19 50
75,806	Can't help it	do	57	Wm. Beazley	Ferguson's Cove	13	85 50
61,629	Carrie R	do	17	Jno. Jollimore	Terrence Bay	3	20 40
85,381	Champion	do	17	Stephen Slaunwhite	do	4	25 50
74,108	City Belle	do	21	Joseph Graves	East Dover	4	28 35
85,667	Dart	do	10	Geo. Julyan	W. Chezzetcook	2	15 00
85,655	Daisy	do	16	C. & W. Johnson	Indian Harbour	4	24 00
85,663	Daring	do	18	Chas. Slaunwhite	Terrence Bay	3	23 62
83,320	Dessie M.	Port Medway	80	James T. Thompson	Halifax	16	120 00
77,607	Dianthus	Lunenburg	45	P. & J. Dauphiney	French Village	10	67 50
92,564	Evangeline	Halifax	23	D. & G. Baker	West Jeddore	7	34 50
74,091	Eastern Clipper	do	35	Jno. H. Fader	St. Margarets	3	45 93
57,259	Ella	Lunenburg	40	Jno. D. Wynaught	North Shore	9	57 00
90,481	Ella D.	Halifax	32	Archibald Darrah	Herring Cove	6	42 00
85,738	Emna F	do	13	Artemas Zink	West Dover	3	17 06
80,832	Ella May	Lunenburg	16	Amos Murphy, M.O.	French Village	4	24 00
90,726	Ellen Maud	Halifax	16	Geo. Schnare	Pennant	4	24 00
94,678	Extenuate	do	10	Alex. Tough	do	3	15 00
88,227	Fleetwing	do	32	Thos. Lapierre, Sr., et al	W. Chezzetcook	9	43 62
85,644	Flora	do	42	Patrick Scallion	Herring Cove	6	50 40
77,751	Flora Dell	do	63	Geo. W. Smith	Indian Harbour	8	94 50
90,717	Florence	do	80	C. W. Anderson, M.O.	Halifax	13	108 75
83,180	Friend	do	17	James H. Scott	East Dover	3	19 11
57,760	Guardian Angel	do	36	Jno. McCarthy	Taylor Head	7	54 00
90,489	Greenleaf	do	44	James Julien, M.O.	W. Chezzetcook	12	66 00
85,382	G. H. Marryat	do	24	Edmund A. Creighton	Shad Bay	6	36 00
37,488	Gipsy Lass	do	26	Jno. P. Slaunwhite	Terrence Bay	5	39 00
96,782	Glide	do	10	Geo. Burgoyne	Hackett's Cove	2	15 00
88,220	Grandee	do	14	Aaron Martin	Pennant	4	21 00
42,295	Hero	do	34	Peter Mason	Tangier	7	51 00
92,574	H. W. Wentzel	do	36	Wm. Wentzel et al	W. Chezzetcook	11	54 00
69,097	Highland Jane	do	32	Geo. Hartlin	East Jeddore	9	45 60
88,213	H. H. Belle	do	13	Isaiah Covey et al	Indian Harbour	3	19 50
77,786	Hesperus	do	16	Joseph Reyno	Herring Cove	3	24 00
83,134	Infant	do	14	Alex. Coolen	do	5	20 50
83,306	Iona	do	26	Andrew Sullivan	do	7	36 56
74,080	J. A. Kirk	do	16	Jno. Jackson	Spry Bay	6	24 00
74,105	Jessie	do	21	P. & A. Myers	Head Jeddore	7	31 50
54,132	John Franklin	do	18	James Dempsey, Sr.	Herring Cove	4	27 00
75,779	John Millard	Barrington	68	Thos. H. Renner	Halifax	13	95 20
94,665	Louis Luby	Halifax	41	Simon Lapierre, M.O.	W. Chezzetcook	13	59 30
94,661	L. C. Tough	do	12	Jno. E. Tough	Pennant	4	16 20
69,105	Lady of the Lake	do	20	Edward Walsh	Upper Prospect	3	30 00
74,099	Leading Breeze	do	15	David F. Covey	Hackett's Cove	2	15 75
92,572	Mattie B.	do	32	Raymond O'Brien	Ship Harbour	5	48 00
90,722	Minnie Bell	do	11	Jno. Kent	M usquodoboit Harbour	2	13 75
85,385	Minnie M.	do	27	Wm. Nieforth et al	Seaforth	7	36 00
83,408	M. A. Franklyn	do	22	Albert Launt	West Dover	5	33 00
94,671	Mary A. W.	do	13	Andrew Blaikley	Indian Harbour	2	19 50
85,664	Mary E.	do	14	Andrew Twohig	Pennant	3	21 00
85,653	Mary O'Dell	do	10	J. L. Richardson	Indian Harbour	2	15 00
92,576	Mayflower	do	13	James Young	Sambro	3	19 50
85,646	Maude	do	15	Alfred Boutillier	do	4	22 50
59,474	Merit	do	41	Lawson, Harrington & Co	Halifax	5	45 95
90,716	New Dominion	do	34	J. & J. Fillis	W. Chezzetcook	8	51 00
83,107	North Star	do	26	James Lapierre et al.	do	8	39 00

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.

HALIFAX COUNTY—Concluded.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.
							\$ cts.
85,665	Nellie D.	Halifax	12	Daniel Smith	Sambro	3	18 00
80,843	Nettie B. H.	do	23	Wm. Hearn	Upper Prospect	5	31 62
94,667	Nettie M. G.	do	32	S. Hubly & C. Garrison	Indian Harbour	10	48 00
37,608	Ocean Belle	do	68	James Allen	Halifax	5	102 00
64,018	Ocean Bride	do	23	Mathew Lynch, Jr.	Ferguson's Cove	7	34 50
94,679	Progress	do	14	G. A. Leslie	Spry Bay	1	12 60
88,215	Peep O' Day	do	12	Isaac Corney	East Dover	2	18 00
92,571	Primrose	do	14	J. F. Slaunwhite	Terrence Bay	3	18 37
59,462	Rival	do	20	Henry Faulkner	Ship Harbour	6	30 00
77,729	Royal Charlie	do	31	James Jennex <i>et al.</i>	East Jeddore	12	46 50
77,787	Rescue	do	20	Edw. Corney	East Dover	6	26 24
88,223	River Belle	do	11	Jno. D. Christian	Upper Prospect	3	16 50
88,223	Robinetta	do	14	Wm. S. Henneberry	Sambro	4	21 00
53,551	Roving Bird	do	24	Jno. Brown	Herring Cove	6	36 00
73,119	Royal	do	12	Thos. O'Neil	Halifax	3	18 00
37,519	Safeguide	do	36	Jno. T. Abriel	Pope's Harbour	8	54 00
94,675	Success	do	16	Isaac Prest	Spry Bay	5	24 00
74,087	Sea Gem	do	30	Wm. Jennex	East Jeddore	6	45 00
88,229	Seaway	do	22	Gabriel Murphy	W. Chezzetcook	7	33 00
83,114	Sailors Fancy	do	16	Lawson Pace	Hackett's Cove	3	19 20
64,869	Sarah L. Oxner	do	33	Edward Hayes	Herring Cove	7	46 40
83,118	Spray	do	15	Chas. Fadaer	St. Margaret's Bay	2	16 87
53,600	Starlight	do	29	Patrick Power	Herring Cove	7	40 79
85,390	Susan C.	do	21	Daniel Croucher	Hackett's Cove	3	25 20
75,833	Twilight	do	14	Eli Baker	East Jeddore	6	21 00
77,836	T. W. Smith	do	35	Chas. Beaver	Spry Bay	7	52 50
90,490	T. W. Wolf	do	31	Robt. Wolf, M. O.	W. Chezzetcook	8	46 50
90,494	Two Brothers	do	21	J. J. Gaetz, M. O.	Seaforth	7	31 50
74,118	True Love	do	31	S. P. Slaunwhite	Terrence Bay	8	46 50
90,482	Two-Forty	do	18	G. H. Slaunwhite	do	3	23 62
61,946	Union	do	23	Colin Mitchell	Head Jeddore	7	34 50
57,662	Village Bride	do	24	Andrew Crawford	Hd. Chezzetcook	7	33 75
90,485	Violet West	do	36	C. Nieforth, M. O.	Seaforth	10	54 00
90,488	Wave	do	19	Jno. Blackburn	Upper Prospect	5	28 50
88,222	Wave	do	15	Arch. Jollimore	Terrence Bay	3	19 68
83,042	Western Belle	do	23	Jno. Thomas	Herring Cove	8	34 50
92,578	Willetta	do	12	Joseph Gray	Sambro	3	18 00
66,727	Willow	do	18	Jeffry O'Gorman	Herring Cove	2	20 24
75,578	Wily	Lunenburg	13	James Morash, jr	West Dover	4	16 24
71,368	Zelu	Halifax	21	S. & A. Publicover	do	5	31 50
85,378	Zephyr	do	14	R. & W. Slaunwhite	Terrence Bay	2	15 74

INVERNESS COUNTY.

90,739	Arizona	Pt. Hawkesbury	49	W. H. & F. L. M. Paint	Pt. Hawkesbury	5	73 50
90,731	Annie E. Paint	do	80	do	do	10	100 00
75,783	Crescent	Arichat	27	Camille White	Margaree	9	40 50
88,343	Ceylon	Pt. Hawkesbury	80	W. H. & F. L. M. Paint	Pt. Hawkesbury	13	112 00
37,565	Defiance	do	24	Jno. Walker	Riv. Inhabitants	3	36 00
38,418	Dolphin	Arichat	36	C. Robin & Co., Limited	Cheticamp	8	54 00
83,082	Emma	Pt. Hawkesbury	24	Séverin Arseneau	Margaree	7	36 00
41,925	Euxine	Arichat	38	Arsène Doucet	Grand Etang	9	51 81
83,088	Good Intent	Pt. Hawkesbury	22	George Walker	Basin, River Inhabitants	2	33 00
90,734	Helen M. Crosby	do	64	Peter Paint, jr	Pt. Hawkesbury	7	70 40
92,313	Martha	Liverpool	10	Eusébe Chiasson	Eastern Harbour	4	15 00
69,125	May Flower	Halifax	11	P. Cormier, <i>et al.</i>	Grand Etang	5	16 50

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.
 INVERNESS COUNTY—Concluded.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.
							\$ cts.
69,969	Morning Light	Pt. Hawkesbury	39	David Walker	Basin, River Inhabitants	5	58 50
69,959	Quickstep	do	35	Lewis Murray	Port Richmond	4	47 25
64,033	Ripple	do	34	J. W. Cruickshanks	do	4	51 00
83,096	St. Patrick	do	11	Allan Walsh	Port Hastings	3	14 43
75,830	St. Thomas	Guysboro'	38	Médéric Aucoin	Eastern Harbour	9	57 00
90,733	Saint Joseph	Pt. Hawkesbury	27	Jno. Desveau	Friar's Head	5	34 70
83,094	Saint Mary	do	15	Desiré Chiasson	Margaree	6	22 50
64,718	Temperance	do	26	Jno. McFarlane	do	8	39 00
92,567	Trial	Halifax	13	M. Chiasson & P. Gallant	do	5	17 87
73,962	Willie B	Liverpool	38	Wm. Delaney	Friar's Head	10	57 00

KING'S COUNTY.

94,727	Aurelia	Windsor	21	H. & J. Parker	Hall's Harbour	2	31 50
94,721	Dove	do	17	Sylvester Bolsor	Blomidon	3	25 50
75,430	Dolphin	Annapolis	11	Henry E. Ogilvie	Kingsport	3	16 50
92,499	Lorena Jane	Windsor	11	Willard Coffill	Blomidon	2	16 50
85,629	Unexpected	Parrsboro'	15	Fred. Parker	Hall's Harbour	2	22 50

LUNENBURG COUNTY.

94,790	Abana	Lunenburg	80	James Romkey, M.O.	LaHave	14	120 00
90,866	Alice	do	12	Solomon Richard	do	3	18 00
46,476	Amiel Corkum	do	52	Josiah Wilkie, M.O.	do	11	78 00
85,739	Aubrey A	do	80	Ben. Anderson	Lunenburg	14	120 00
94,783	Alaska	do	80	do M.O.	do	14	112 50
94,965	Alice B	do	65	Adnah Burns	LaHave	12	97 50
90,870	Arietis	do	80	Chas. Hewitt, M.O.	Lunenburg	14	120 00
83,176	Amazon	do	73	Edward Hirtle	do	11	104 93
92,621	A. G. Heisler	do	80	Alfred Heisler, M.O.	Lunenburg	14	120 00
90,864	Advance	do	80	S. Watson Oxner	do	17	120 00
94,778	Argosy	do	80	Chas. Smith, M.O.	do	16	120 00
90,600	Acadia	do	79	David Smith	do	12	118 50
90,852	Athlete	do	78	Jno. B. Young, M.O.	do	14	117 00
94,644	Angler	do	80	Arthur H. Zwicker	do	14	120 00
94,961	Altona	do	67	Emanuel Zellers	do	13	100 50
94,648	Batavia	do	80	J. Spearwater, M.O.	LaHave	14	120 00
85,730	Beulah	do	80	Dan. Lohnes, M.O.	do	14	120 00
94,647	Bonus	do	80	Geo. Kreser	do	14	120 00
94,651	Bessie A	do	80	Rufus Oxner, M.O.	do	14	120 00
92,637	Bertie C. H.	do	80	Wm. Gilfoy	Lunenburg	14	120 00
94,784	B. C. Smith	do	80	Joshua Hirtle	do	16	120 00
94,782	Bona Fides	do	80	J. Joseph Rudolph	do	14	120 00
88,341	Blizzard	do	80	A. J. Wolf	do	16	120 00
85,347	Brilliant	do	80	John B. Young, M.O.	do	14	120 00
85,345	Beatrice	do	79	Wm. A. Zwicker	do	15	118 50
90,824	Ceto	do	80	James Conrad, M.O.	LaHave	14	120 00
94,643	Carrie M. C.	do	39	Norman Chandler	Fox Point	9	55 57
88,348	Cymbeline	do	80	J. N. Rafuse, M.O.	LaHave	11	120 00
94,652	Cashier	do	80	W. N. Reinhardt	do	16	120 00
90,856	Cleta	do	80	W. N. Reinhardt, M.O.	do	14	120 00
90,857	Capio	do	72	Albt. McKean, M.O.	Pleasantville	12	108 00
94,645	C. A. Chisolm	do	80	Abraham Ernst	Mahone Bay	12	120 00
94,658	C. A. Ernst	do	57	do	do	12	120 00
94,653	C. U. Mader	do	80	C. U. Mader	do	12	120 00

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.

LUNENBURG COUNTY—Continued.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.	
							\$	cts.
85,642	Charlotte E. C.	Lunenburg.	80	C. U. Mader.	Mahone Bay.	12	120	00
90,869	Clara E. Mason.	do	80	David Smith.	do	12	120	00
94,646	Carrie C. W.	do	80	Martin Westhaver, jr.	Martin's Brook.	14	109	41
92,622	Coronet.	do	80	Arthur H. Zwicker.	Lunenburg.	14	120	00
88,618	Darling.	do	80	J. B. Sarty, M.O.	LaHave.	13	115	71
42,505	Delight.	do	48	James W. Zwicker.	Mahone Bay.	9	72	00
88,355	D. A. Mader.	do	80	C. U. Mader.	do	11	115	00
90,855	Delta.	do	25	Joshua Knickle.	Lunenburg.	7	37	50
88,358	Dolphin.	do	80	Howard Wynthacht.	do	10	102	84
85,736	Dominion.	do	80	Wm. Young.	do	14	120	00
94,650	Elsie.	do	47	John Schmeisser, M.O.	LaHave.	8	70	50
94,960	Eureka.	do	80	Rueben Smith, M.O.	do	14	120	00
83,136	Eva Stewart.	do	80	Saml. Risser, M.O.	do	13	120	00
88,606	Egeria.	do	80	J. D. Sperry.	Petite Rivière.	15	120	00
75,569	Empress.	do	47	Simon Pentz, M.O.	LaHave.	10	70	50
94,659	Enterprise.	do	80	Robt. Dawson, M.O.	do	14	120	00
90,584	Eldora.	do	75	Wm. McGregor, M.O.	do	8	112	50
88,356	Energy.	do	80	A. Chisholm.	Mahone Bay.	14	120	00
85,731	Eva L. H.	do	62	Jacob Hiltz.	do	10	93	00
69,173	Ellen May.	do	60	Abraham Ernst.	do	8	90	00
90,590	Evelyn.	do	77	Amiel Corkum.	LaHave.	12	115	50
66,749	Flash.	Halifax.	24	Robt. Coolen, sr.	Fox Point.	7	33	75
94,656	Florin.	Lunenburg.	58	Edward Weagle, M.O.	LaHave.	12	76	12
94,957	Feronia.	do	77	James Baggett.	Martin's River.	12	115	50
94,771	Florence M. Smith.	do	80	B. Anderson & G. A. Smith.	Lunenburg.	14	120	00
94,952	Finance.	do	58	John Hines.	do	10	87	00
88,357	Floresta.	do	57	Stephen Moser, M.O.	do	12	85	50
92,638	Florence M.	do	80	Alex. Silver, M.O.	do	12	120	00
85,631	Forest Belle.	do	80	Leonard Young.	do	12	120	00
94,958	Genesta.	do	80	Lemuel Romkey, M.O.	LaHave.	14	120	00
94,963	Golden Seal.	do	32	Chas. Bell, M.O.	do	7	48	00
90,862	Grenada.	do	80	Reuben Romkey, M.O.	do	14	120	00
85,734	Glenola.	do	80	Chas. L. Silver, M.O.	Lunenburg.	14	120	00
94,773	Galatea.	do	80	Jno. B. Young, M.O.	do	14	120	00
88,347	Geneva.	do	80	James Young.	do	17	120	00
90,582	G. A. Smith.	do	80	Wm. Young.	do	14	120	00
90,859	Hector W. McG.	do	80	Wm. McGregor, M.O.	LaHave.	14	120	00
90,585	Iris.	do	80	D. Smith, M.O.	Lunenburg.	14	120	00
83,485	John M. Inglis.	Liverpool.	79	J. S. Wolf, M.O.	West Dublin.	11	99	95
92,639	Jennie Miller.	Lunenburg.	80	Henry Adams, M.O.	Lunenburg.	12	120	00
94,789	Joseph McGill.	do	80	David Ritcey, M.O.	LaHave.	14	120	00
94,785	J. C. Schwartz.	do	80	Chas. Hewitt, M.O.	Lunenburg.	16	120	00
94,654	J. W. Geldert.	do	80	S. Watson Oxner.	do	17	120	00
85,723	Jessie A. Loye.	do	80	Leonard Young.	do	14	120	00
74,019	Jewel.	do	52	do	do	10	78	00
36,495	Lady Speedwell.	do	56	John H. Publicover.	Blandford.	5	84	00
88,352	Linaria.	do	80	Sam. Hilton, M.O.	Petite Rivière.	14	120	00
88,360	Lettie M. Hardy.	do	80	W. A. Pickels.	Mahone Bay.	20	120	00
94,788	Laura C. Zwicker.	do	80	Abraham Ernst.	do	12	120	00
90,854	Latona.	do	80	L. Anderson, M.O.	Lunenburg.	12	120	00
94,780	Lawrence.	do	80	Simeon Hebb.	do	17	120	00
94,781	Leonora B. Winter.	do	80	Isaac Mason.	do	14	120	00
90,867	Laura A. Smith.	do	80	S. Watson Oxner.	do	14	109	41
88,351	Louisa J. Selig.	do	80	J. Moyle Rudolph, M.O.	do	14	109	41
83,173	Maggie Smith.	do	80	Reuben Smith, M.O.	LaHave.	12	120	00
90,823	Miletus.	Port Medway.	80	John Shankle, M.O.	do	14	120	00
94,772	Molega.	Lunenburg.	80	B. Anderson, M.O.	Lunenburg.	14	120	00
92,640	Minerva.	do	80	Wm. C. Acker, M.O.	do	12	120	00
94,775	Malabar.	do	80	R. H. Griffiths, M.O.	do	14	120	00
92,633	Magnolia.	do	80	Joshua Heckman, M.O.	do	12	120	00
94,777	Maurice C. Geldert.	do	80	Anthony Lohnes, M.O.	do	16	120	00

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.

LUNENBURG COUNTY—Continued.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty paid.
							\$ cts.
83,177	Maggie Belle	Lunenburg	72	Martin Mason, M.O.	do	12	108 00
94,951	Maggie McNeil	do	75	Frank L. McNeil	do	10	112 50
74,319	Merino	do	46	J. Joseph Rudolph	do	9	69 00
92,635	M. B. Smith	do	80	Wm. C. Smith, M.O.	do	14	120 00
92,632	Monarch	do	80	Henry Wilson, M.O.	do	14	120 00
90,586	Morris Wilson	do	80	do	do	14	120 00
94,655	Nevada	do	46	James Bell, M.O.	La Have	9	69 00
88,603	Nokomis	do	80	C. U. Mader	Mahone Bay	14	120 00
88,342	Nova Zembla	do	80	Freem'n Anderson, M.O.	Lunenburg	12	120 00
90,851	Niagara	do	73	Henry Gerhardt, M.O.	do	12	109 50
92,634	Nellie B.	do	80	Alfred Heisler, M.O.	do	16	120 00
88,613	N. P. Christian	do	80	do	do	13	120 00
85,343	Narcissus	do	80	S. W. Oxner, M.O.	do	14	120 00
94,966	Nicanor	do	79	D. Westhaver	Martin's Brook	13	118 50
92,636	Nonpareil	do	80	John Zinck	Lunenburg	17	120 00
75,570	Olive Branch	do	14	John Church	Aspotogan	3	21 00
88,346	Olive	do	80	Dan. Getson, M.O.	La Have	14	120 00
94,641	Ovando	do	80	Jeffry Publicover	do	15	120 00
90,587	Ornatu.	do	80	Albert McKean, M.O.	Pleasantville	12	120 00
94,954	Otto	do	80	Abraham Ernst	Mahone Bay	12	120 00
88,350	Orion	do	78	C. U. Mader	do	11	112 12
90,598	Osprey	do	80	Christian Geldert	Lunenburg	14	120 00
88,344	Onward	do	80	Charles Hewitt	do	12	120 00
85,632	Ocean Belle	do	80	James A. Hirtle	do	12	120 00
94,786	Ontario	do	80	Wm. Jefferson	do	17	120 00
85,562	Oressa	do	14	Arthur Mason, M.O.	Eastern Point	4	21 00
94,779	O. P. Silver	do	80	Chas. L. Silver, M.O.	Lunenburg	14	120 00
74,133	Pioneer	Halifax	80	David Mills	Chester	11	120 00
94,774	Puritan	Lunenburg	80	Theo. Creaser, M.O.	La Have	14	120 00
77,622	Pleasantville	do	80	Albert McKean, M.O.	do	14	120 00
85,647	Pembina	do	80	L. Anderson, M.O.	Lunenburg	15	120 00
85,641	Pieroma	do	80	John C. Corkum	do	16	120 00
85,331	Parisian	do	80	A. R. Morash, M.O.	do	14	120 00
92,631	Ray	do	11	Henry Awalt	Aspotogan	3	16 50
90,593	Ralph	do	51	Solomon Smith, M.O.	La Have	10	76 50
92,320	Rialto	Liverpool	46	L. B. Currie, M.O.	New Dublin	9	69 00
57,688	River Dale	Lunenburg	48	Lewis Strum	Mahone Bay	10	72 00
85,349	Rise Over	do	80	Wm. Smeltzer	Lunenburg	14	120 00
92,629	Sea Queen	do	21	George Young	Mill Cove	5	31 50
94,962	Stella E.	do	80	Reuben Ritcey, M.O.	La Have	14	120 00
88,349	Senovar	do	80	Nathan Hiltz	Martin's River	14	120 00
94,787	Samoa	do	80	Joseph Dauphinee	Lunenburg	17	120 00
85,350	Saxon	do	79	James A. Hirtle	do	12	118 50
85,737	Scylla	do	80	James W. King	do	9	120 00
90,868	Sadie	do	79	C. Smith, M.O.	do	14	118 50
94,955	Tioga	do	80	Louis S. Miller	LaHave	14	120 00
92,623	Torrison	do	80	Wm. McGregor, M.O.	do	14	120 00
35,886	Trial	Halifax	43	Album Corkum	Chester	5	45 70
94,657	T. W. Langille	Lunenburg	71	Francis Conrad	South	14	106 50
94,956	Venezuela	do	80	Wm. Mossman, M.O.	Kingsbury	14	120 00
83,164	Valiant	do	80	Ammon Ritcey, M.O.	LaHave	12	120 00
85,635	Vanilla	do	80	John M. Ritcey, M.O.	do	14	120 00
94,776	Volunteer	do	80	Wm. McGregor, M.O.	do	14	120 00
94,649	Valenar	do	80	Nathan Hiltz	Martin's River	12	120 00
85,338	Viola	do	80	Alf. Heisler, M.O.	Lunenburg	14	120 00
85,334	Valorus	do	57	Benjamin Lohnes	do	12	85 50
88,353	Violet	do	80	David Smith, M.O.	do	13	120 00
85,735	Victory	do	80	Leonard Young	do	14	120 00
90,597	Vivian	do	80	A. H. Zwicker	do	14	120 00
94,953	W. D. Richard	do	80	W. N. Reinhardt, M.O.	LaHave	17	120 00
88,614	Wilhelmina	do	54	Edward Neal, M.O.	do	9	81 00
94,642	Winnie C.	do	55	Edmen Walters	do	12	82 50

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.
LUNENBURG COUNTY— Concluded.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.
							\$ cts.
94,967	White Cloud	Lunenburg	80	C. W. Mader.....	Mahone Bay....	14	120 00
88,174	W. E. Young.....	do	80	Henry Wilson, M.O..	Lunenburg	14	120 00

PICTOU COUNTY.

38,510	Lily.....	Pictou.....	22	James R. Reid.....	Pictou	4	33 00
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QUEEN'S COUNTY.

92,324	Arbutus.....	Liverpool.....	79	Colin McLeod, M.O..	Liverpool.....	14	118 50
85,482	Angola.....	do	80	J. C. Innes, M. O.	do	19	120 00
75,778	Coronila.....	do	64	Colin McLeod, M.O.	do	14	96 00
75,620	Cordelia.....	Shelburne	15	Oliver Tupper.....	Port Le Bear ..	4	22 50
85,344	Donzella.....	Lunenburg	80	Adam Selig.....	Vogler's Cove..	14	120 00
35,622	George.....	Liverpool.....	30	Henry A. Rhynard....	Brooklyn.....	4	40 50
90,825	Henry N. Batchelder.....	Port Medway... ..	80	S. E. Teel.....	Vogler's Cove..	14	109 42
83,494	Lizzie Wharton.....	do	80	W. R. Cohoon.....	Port Medway... ..	16	116 48
83,316	Lottie.....	do	80	S. E. Teel.....	Vogler's Cove..	14	109 42
83,493	Mary C.....	Liverpool.....	80	A. W. Hendry, M.O.	Liverpool.....	18	120 00
75,762	May Queen.....	do	17	Joseph Winters.....	do	4	25 50
83,310	Myosotis.....	Port Medway... ..	80	Asa Morin & Son.....	Port Medway... ..	20	120 00
83,315	Mazaruka.....	do	80	Wm. Vogler.....	East P. Medway	14	109 42
80,838	Ocean Bride.....	Lunenburg	20	Geo. M. Mack.....	Port Medway... ..	5	25 72
92,325	Rattler.....	Liverpool.....	13	Wm. Rhynard.....	Brooklyn.....	3	15 60
83,500	Stella.....	do	10	Wm. A. Farquhar.....	Hunt's Point... ..	3	15 00
83,314	Spartan.....	Port Medway... ..	80	W. R. Cohoon.....	Port Medway... ..	17	120 00
83,495	Utopia.....	Liverpool.....	80	James C. Innes, M.O.	Liverpool.....	15	120 00

RICHMOND COUNTY.

64,713	Amelia M.....	Port Hawkesb'ry	14	Andrew Boudrot.....	Gros-Nez.....	3	21 00
83,086	Ada M.....	do	20	Wm. Burke.....	River Bourgeois.	5	27 50
77,544	Alpha.....	Arichat.....	41	Wm. LeVesconte.....	D'Escousse.....	11	61 50
38,501	B. Weir & Co.....	do	25	Wm. Bissett.....	River Bourgeois.	6	32 80
77,851	Buxom.....	Sydney.....	11	Daniel McGrath.....	L'Ardoise.....	3	16 50
75,561	Boreas.....	Lunenburg	41	John Colford.....	Port Richmond..	6	61 50
35,996	Blue Bell.....	Arichat.....	25	D. Gruchy & Son.....	Poulamond.....	7	35 16
72,061	C. P. M.....	do	22	Désiré Burke.....	River Bourgeois.	5	28 30
74,100	Candid.....	do	23	do	do	7	34 50
43,109	Chatham Head.....	Miramichi, N.B.	24	Dominick Fougère.....	Poulamond.....	9	36 00
61,606	Edmund Russel.....	Arichat.....	28	F. L. Malzard.....	Arichat.....	6	39 00
75,616	Eliza Jane.....	Shelburne	22	Alex. Vigneau.....	Arichat.....	2	33 00
69,190	Emma.....	Arichat.....	47	A. J. Boyd.....	River Bourgeois.	10	70 50
83,395	Elerie.....	Halifax.....	29	Chas. Boudrot.....	do	7	43 50
38,477	Elizabeth.....	Arichat.....	18	Placide Burke.....	do	6	27 00
61,617	Eva May.....	Guysboro'.....	29	Daniel Sampson.....	do	6	38 06
77,843	Elizabeth.....	Halifax.....	30	Isidore Sampson.....	do	8	45 00
77,822	Eliza Smith.....	Arichat.....	44	Léonie Poirier.....	Lw'r D'Escousse	11	66 00
74,116	Fama.....	Halifax.....	43	Wm. Levesconte.....	D'Escousse.....	10	64 50
83,399	Fannie R. C.....	do	22	P'Er Boudrot.....	River Bourgeois.	7	33 00
57,733	Farewell.....	Arichat.....	23	Abram Sampson.....	West Arichat... ..	2	34 50

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.

RICHMOND COUNTY—Continued.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid
							\$ cts.
88,599	Guide.....	Halifax.....	38	Désiré Poirier.....	D'Escousse.....	10	57 00
90,735	Hector.....	Pt. Hawkesbury	11	Joseph Catherin.....	St. Peter's.....	3	16 50
38,326	Harriet.....	Arichat.....	26	Arthur Leblanc.....	Arichat.....	3	39 00
85,560	Jacques.....	Yarmouth.....	58	S. & F. Poirier.....	D'Escousse.....	13	87 00
88,454	Jubilee.....	Arichat.....	34	D. Gruchy & Son.....	Poulamond.....	9	51 00
80'972	John Vincin.....	Sydney.....	17	David Sampson.....	River Bourgeois.	6	25 50
83,135	J. B. M.....	Halifax.....	20	Abram Fougère.....	do.....	7	30 00
38,486	Julia.....	Arichat.....	20	Louis Burk.....	do.....	6	30 00
83,091	Jennie.....	Pt. Hawkesbury	11	Isaac Dugas.....	do.....	2	16 50
38,516	Lady of the Lake	Arichat.....	25	Peter Landry, jun.....	French Cove.....	7	37 50
72,071	Lumen Diei.....	do.....	20	Urbain Samson.....	River Bourgeois.	6	30 00
72,070	Lennox.....	do.....	46	D. Gruchy & Son.....	Poulamond.....	11	69 00
75,875	Linda and Lizzie	do.....	56	Wm. Le Vesconte.....	D'Escousse.....	14	84 00
88,455	Laura Victoria	do.....	39	Jno. Mauger.....	Cap la Ronde.....	11	58 50
38,459	Mary Ann.....	do.....	29	Alex. Petitpas.....	D'Escousse.....	9	43 50
46,082	Mary.....	Pt. Hawkesbury	43	D. Gruchy & Son.....	Poulamond.....	10	64 50
38,417	Messenger.....	Arichat.....	30	Dominick Fougère.....	do.....	9	42 75
38,413	Morning Star.....	do.....	25	Amable Pâté.....	River Bourgeois.	9	37 50
83,100	Morning Star.....	Pt. Hawkesbury	13	Abram Gerrior.....	Port Royal.....	2	19 50
69,109	Marcella Butler.	Halifax.....	38	Daniel Fougère.....	River Bourgeois.	7	53 44
88,431	Mayflower.....	do.....	21	Stephen Dugas.....	do.....	3	23 64
72,047	Mary Moulton.....	Arichat.....	26	Celestin Cordeau.....	do.....	7	36 57
38,522	Mary.....	do.....	23	Isaiah Boudrot.....	do.....	4	25 86
85,388	Mary Alice.....	Halifax.....	21	Wm. Malcolm.....	Port Malcolm.....	3	*31 50
72,063	Mayflower.....	Arichat.....	12	M. Burke & M. Fougère	French Cove.....	4	16 20
72,048	Neptune.....	do.....	26	Henry Sampson.....	River Bourgeois.	6	36 21
42,388	Nimble.....	Halifax.....	45	P. W. Gruchy.....	D'Escousse.....	8	60 74
54,139	Ocean Belle.....	do.....	20	A. J. Boyd.....	River Bourgeois.	6	30 00
61,630	Olive J.....	do.....	57	Capt. P. Malcolm.....	Port Malcolm.....	9	85 50
38,462	Partners.....	Arichat.....	25	Thos. Samson.....	River Bourgeois.	8	37 50
38,414	Philomel.....	do.....	26	Mathurin Dugas.....	do.....	8	39 00
72,067	Philomen D.....	do.....	22	Tranquil Digout.....	do.....	6	33 00
88,452	R. Ferguson.....	do.....	24	A. J. McDonald.....	Lewis Cove.....	7	36 00
72,059	Richmond Queen	Halifax.....	37	Anselm Fougère.....	Poulamond.....	10	55 50
42,281	Renfrew.....	do.....	42	Simon Poirier.....	D'Escousse.....	10	63 00
74,335	Safe.....	Yarmouth.....	35	Samuel Burke.....	French Cove.....	10	50 12
51,781	S. E. Cove.....	Arichat.....	54	Peter Campbell.....	Arichat.....	12	81 00
36,521	Shooting Star.....	do.....	32	Wm. LeVesconte.....	D'Escousse.....	10	48 00
37,612	Sea Slipper.....	Lunenburg.....	40	Chas. Mauger.....	do.....	11	60 00
38,480	Two Brothers.....	Arichat.....	32	Simon P. Landry.....	River Bourgeois.	6	42 00
61,990	Union.....	Halifax.....	20	Felix Burke.....	do.....	6	27 86
38,523	Victoria.....	Arichat.....	24	H. & P. Burke.....	French Cove.....	6	36 00
71,034	Vanguard.....	Barrington.....	47	Thos. Boudrot.....	Petit de Grat.....	10	70 50
61,921	W. E. Wier.....	Arichat.....	41	Chas. Fougère, M.O.	D'Escousse.....	10	58 71

SHELburne COUNTY.

94,632	A. C. Greenwood..	Shelburne.....	14	Thos. D. Goodick.....	Sand Point.....	5	19 25
90,655	Annina.....	Yarmouth.....	11	Isaiah Smith.....	Wood's Harbour	7	16 50
83,054	Ardella.....	Shelburne.....	80	Jonathan Locke.....	Lockeport.....	16	120 00
88,552	Afton.....	do.....	72	do.....	do.....	15	104 63
85,479	Alina.....	do.....	80	Churchill Locke.....	do.....	9	84 51
85,567	Annie Robertson.	Barrington.....	80	W. W. Kenney.....	do.....	15	110 01
88,551	Blanche M. Thorburn	Shelburne.....	80	Jno. H. Thorbourn....	Jordan Bay.....	22	120 00

*NOTE.—This amount although reckoned as an expenditure was not paid to the claimants of schooner "Mary Alice," the claim having been found fraudulent after the cheques were issued and the account for the year closed.

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.
SHELBURNE COUNTY—Continued.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.
							\$ cts.
85,490	Billy Brown	Shelburne	80	Enos Churchill	Lockeport	16	120 00
94,942	Coronilla	do	23	C. Locke & Co.	do	8	34 50
61,905	Champion	Liverpool	14	Jos. W. Hopkins	Barrington	4	18 90
75,624	Devina	Shelburne	52	Wm. Lloyd	Lockeport	11	72 00
83,492	Dessie	Liverpool	11	Churchill Locke	do	4	14 85
83,043	Ella A. Downie	Shelburne	73	Enos Churchill	do	13	105 59
77,603	Eldon C.	Barrington	27	Jno. E. Hopkins	Barrington	10	40 50
75,558	Emma B.	do	80	Wm. T. Wickens	do	20	120 00
83,047	Festina Lente	Shelburne	80	Wm. A. McDonald	Lockeport	16	110 55
85,476	Fleetwing	do	11	Edward Hammond	Jordan Bay	6	16 50
83,255	Floyd	Annapolis	20	Thos. D. Crowell	Shag Harbour	10	30 00
80,831	Glide	Lunenburg	16	Jacob Lloyd	West Head	6	24 00
88,555	G. C. Kelly	Shelburne	80	W. W. Kenney	Lockeport	17	120 00
85,478	Glenora	do	75	John Locke	do	14	112 50
85,568	Georgie Harold	Barrington	80	W. W. Kenney	do	16	120 00
85,563	Helena Maud	do	80	H. Doane	Barrington	20	120 00
85,570	Hattie Perry	do	80	W. W. Kenney	Lockeport	16	113 34
94,941	John Purney	Shelburne	80	John Purney	Shelburne	16	110 55
88,554	Jersey Lily	do	80	Enos Churchill	Lockeport	16	120 00
85,566	J. Lyons	Barrington	15	Thos. L. Banks	Barrington	4	18 76
77,761	Knight Templar	Shelburne	80	Enos Churchill	Lockeport	18	116 85
77,957	Kedron	Annapolis	21	Churchill Locke	do	5	31 50
61,837	Laughing Waters	Yarmouth	32	Raymond Wilson	Barrington	12	48 00
54,114	Lone Star	Halifax	29	C. Locke & Co.	Lockeport	9	43 50
94,639	Libbie	Shelburne	80	Jno. A. McGowan, jun	Shelburne	16	120 00
85,488	Mabel Somers	do	80	Enos Churchill	Lockeport	16	120 00
85,484	Mellacoree	do	80	Geo. J. Thorbourne	Shelburne	18	114 00
85,477	Myrtle	Barrington	80	D. V. Kenney	Cape Island	19	120 00
75,560	Matilda	do	80	Arthur McGray	do	13	108 75
83,256	Marquis of Lorne	Annapolis	26	Churchill Locke	Lockeport	6	34 12
88,543	Max O'Rell	Shelburne	80	do	do	17	113 70
74,301	Minnihaha	Barrington	13	S. E. Countaway	Barrington	5	19 50
88,583	Mary O'Dell	Yarmouth	14	Jno. Sholes	Bear Point	6	21 00
74,365	Nova Stella	Shelburne	52	Wm. Lloyd	Lockeport	13	78 00
83,060	Nellie Morrow	do	80	C. Locke & Co.	do	16	120 00
55,830	Oregon	do	20	Jno. C. McGray	Cape Sable Isl'd.	3	30 00
37,523	Snow Drop	Liverpool	29	James Crowell	Port La Tour	5	43 50
90,690	Sandalphon	Shelburne	80	C. Locke & Co.	Lockeport	17	113 70
85,483	Sarah H. Seeton	do	80	do	do	19	117 00
59,496	Thetis	Lunenburg	41	do	do	13	61 50
77,759	Thomas Robertson	Shelburne	66	Stephen Giffin	Louis Head	10	99 00
88,542	Three Bells	do	80	Sephorus Thorburn	Jordon	19	120 00
77,744	Whip-poor-will	do	15	Jno. B. Harding	Rockland	6	22 50
85,487	Willie McGowan	do	80	Jno. A. McGowan, jun	Shelburne	23	120 00
85,541	Willie M.	Yarmouth	24	Isaac Kendrick	Barrington	9	34 20
74,336	Zouave	Barrington	19	Jno. M. Shand	do	7	23 34

VICTORIA COUNTY.

77,858	Sambo	Sydney	14	Arthur Campbell	R. Side	3	21 00
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YARMOUTH COUNTY.

80,627	Annie D	Yarmouth	71	Geo. D. D'Entremont	Pubnico	14	106 50
71,030	Arizona	do	80	Sylv. D. D'Entremont	do	14	120 00
61,595	Annie Louise	Shelburne	39	Harvey Goodwin	do	15	53 64

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.

YARMOUTH COUNTY—Concluded.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.
							\$ cts.
80,647	Annie M. Bell.....	Yarmouth.....	64	James Amiro.....	West Pubnico...	21	96 00
71,007	Alfarata.....	do.....	45	M. D'Entremont.....	Pubnico.....	17	67 50
75,733	Alfred.....	do.....	46	Parker, Eakins & Co.....	Yarmouth.....	10	69 00
90,653	Alba.....	do.....	58	G. G. Sanderson.....	do.....	19	87 00
66,682	Brisk.....	do.....	67	Leon D'Eon.....	Pubnico.....	20	100 50
85,549	Byron.....	do.....	80	Byron Hines.....	do.....	18	120 00
80,605	Coral Leaf.....	do.....	71	Geo. B. Goodwin.....	do.....	14	106 50
85,536	Circassian.....	do.....	80	Jeremiah Gayton.....	Lower Argyle...	16	120 00
69,217	Chlorus.....	do.....	57	A. F. Stoneman & Co.....	Yarmouth.....	14	80 16
66,679	Diploma.....	do.....	80	Louis D'Eon.....	Pubnico.....	15	116 25
90,883	Donald Cann.....	do.....	80	H. B. Cann.....	Yarmouth.....	18	120 00
90,871	Dora.....	do.....	63	A. F. Stoneman & Co.....	do.....	18	92 01
88,552	Edith A.....	do.....	80	Geo. D. D'Entremont.....	Pubnico.....	15	120 00
80,646	Emma S.....	Yarmouth.....	80	Geo. Bates.....	Yarmouth.....	21	120 00
53,811	Electric Flash.....	Halifax.....	53	David D'Entremont.....	Pubnico.....	19	79 50
85,551	Ethel.....	Yarmouth.....	80	J. H. Porter & Co.....	Tusket Wedge...	17	116 67
90,654	Flora.....	do.....	64	David D'Entremont.....	Pubnico.....	20	96 00
75,720	Florence B. Parr.....	do.....	80	Parker, Eakins & Co.....	Yarmouth.....	17	120 00
94,972	Florence.....	do.....	11	Joshua Boudreau.....	Tusket.....	2	16 50
90,885	Georgiana.....	do.....	80	Eli Leblanc.....	Tusket Wedge...	16	120 00
80,643	Hazel Dell.....	do.....	80	Parker, Eakins & Co.....	Yarmouth.....	14	120 00
85,554	Hazel Glen.....	do.....	80	T. J. Perry.....	Arcadia.....	16	120 00
90,647	Hattie Emeline.....	do.....	11	Peter A. Amiro.....	Pubnico.....	2	16 50
80,641	Jonathan.....	do.....	68	David L. Amiro.....	do.....	17	102 00
88,581	Kingfisher.....	do.....	47	A. F. Stoneman & Co.....	Yarmouth.....	17	70 50
71,005	Kelso.....	do.....	80	J. H. Porter & Co.....	Tusket Wedge...	19	120 00
90,887	L'Etoile.....	do.....	48	do.....	do.....	16	72 00
80,614	Louise.....	do.....	80	do.....	do.....	16	120 00
80,632	Lumen.....	do.....	30	do.....	do.....	13	45 00
90,888	Laura I.....	do.....	54	Chas. M. Boudreau.....	do.....	18	81 00
61,587	Loretta Jane.....	do.....	80	A. M. Perrin.....	Yarmouth.....	17	120 00
80,624	Lima.....	do.....	12	Henry Lewis.....	do.....	5	18 00
51,972	Lydia Ryder.....	do.....	57	Louis D'Entremont.....	W. Pubnico.....	18	76 48
80,648	Maria.....	do.....	30	Byron Hines.....	Pubnico.....	20	120 00
88,596	M. A. Louis.....	do.....	63	Marc A. Surette.....	do.....	20	94 50
61,510	Mansimalo.....	Shelburne.....	50	Remi D'Entremont.....	W. Pubnico.....	13	64 60
75,550	Martino.....	Barrington.....	11	A. A. Amiro.....	L. E. Pubnico.....	5	15 13
94,635	Mildred J. McLean.....	Yarmouth.....	80	H. B. Cann.....	Yarmouth.....	18	120 00
74,339	Maitland.....	do.....	44	Henry Lewis.....	do.....	16	66 00
90,874	Maggie Bell.....	do.....	10	Doctrove Surette.....	do.....	4	11 79
90,892	Nellie.....	do.....	59	J. H. Porter & Co.....	Tusket Wedge...	18	88 50
74,330	Nokomis.....	do.....	68	T. R. Crosby.....	Yarmouth.....	13	98 36
90,659	N. A. Laura.....	do.....	59	Julien D'Entremont.....	W. Pubnico.....	20	88 50
85,553	Onyx.....	do.....	80	Parker, Eakins & Co.....	Yarmouth.....	18	120 00
80,645	Opal.....	do.....	80	do.....	do.....	16	120 00
74,332	Proditor.....	do.....	54	Zachariah D'Eon.....	W. Pubnico.....	18	78 87
80,628	Roseneath.....	do.....	80	Byron Hines.....	Pubnico.....	16	120 00
74,323	Regina.....	do.....	57	Archange D'Entremont.....	do.....	15	78 39
75,724	Sea Foam.....	do.....	75	J. H. Porter & Co.....	Tusket Wedge...	14	112 50
85,535	Sigefroi.....	do.....	40	do.....	do.....	15	60 00
90,648	Stranger.....	do.....	15	Alf. H. D'Entremont.....	Pubnico.....	6	20 90
90,894	Theresa.....	do.....	18	Eli Bourque.....	Eel Brook.....	2	16 50
90,881	Tiger.....	do.....	57	G. G. Sanderson.....	Yarmouth.....	17	81 00
88,597	Unde Sam.....	do.....	80	Geo. D. D'Entremont.....	Pubnico.....	16	120 00
90,882	Will-o-the-Wisp.....	do.....	51	Anthony D'Entremont.....	do.....	19	76 50
66,685	Wide Awake.....	do.....	77	A. F. Stoneman & Co.....	Yarmouth.....	14	115 50
90,896	Wapiti.....	do.....	80	do.....	do.....	18	120 00
90,897	Wrasse.....	do.....	56	do.....	do.....	15	75 16
71,334	Watchman.....	Barrington.....	15	P. L. Walker.....	Tusket.....	6	20 90

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.

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.	Amount of Bounty Paid.
							\$ cts.
88,288	Annie May	St. Andrews	11	Lewis Frankland	Grand Manan	2	13 75
92,487	Alice Maud	Windsor, N.S.	12	James Barry	Beaver Harbour	3	18 00
83,478	Argyle	St. Andrews	10	Joseph Murphy	Le Tête	3	15 00
83,469	Austin P	do	12	Jno. Marshall	Deer Island	4	18 00
92,517	Ada	do	10	Wm. Philips	Campobello	2	15 00
75,599	Blue Jay	Digby, N.S.	14	Eben. Gaskill	Grand Manan	4	21 00
59,311	Blooming Rose	St. Andrews	19	Aaron Cook	Deer Island	5	28 50
88,290	Crusoe	do	13	James Starkey	St. Andrews	3	19 50
92,519	Catherine	do	13	Alex. McKenzie	Grand Manan	2	14 62
88,387	Comet	Windsor, N.S.	10	Thos. Carter	Red Head	2	15 00
35,338	Caroline	St. Andrews	18	Henry Stuart	Deer Island	4	24 30
59,375	Cadet	do	13	Chas. Savage	Wilson's Beach	3	19 50
88,409	Carrie	Digby, N.S.	12	James McLeese	Back Bay	2	15 00
74,326	Dreadnaught	Yarmouth, N.S.	19	Wm. Mathews	Campobello	4	28 50
92,515	Dispute	St. Andrews	13	Melvin Hatch	do	3	19 50
92,503	Defiance	do	17	Frank Calder	do	4	25 50
88,253	E. B. Colwell	St. John	19	Geo. F. Paul <i>et al.</i>	Beaver Harbour	3	28 50
80,803	Exenia	Windsor, N.S.	13	Wm. F. Parker <i>et al.</i>	Cornwallis, N.S.	4	27 00
59,373	E. M. Oliver	St. Andrews	14	Wm. J. & Jas. Oliver, jr.	Back Bay	1	13 12
88,280	E. B. Lane	do	12	Theo. H. McConnell	do	2	15 00
88,281	Eastern State	do	22	Nelson W. Dick <i>et al.</i>	Le Tête	3	33 00
92,505	Edith R.	do	47	Lincoln Richardson	West Isles	8	70 50
77,968	Empress	do	14	G. & M. Caffay	Mace's Bay	3	21 00
92,516	Emma	do	22	Wm. Shaw <i>et al.</i>	Lepreaux	3	26 40
92,502	Elizabeth Ann	do	14	Thos. Haggerty	New River	4	18 90
80,882	Ella Mable	do	14	Daniel Calder	Campobello	3	21 00
92,511	Fleet Wing	do	11	Addison Matthews	St. George	2	16 50
59,400	Foam Belle	do	10	Thos. Ellsworth <i>et al.</i>	Pennfield	3	15 00
79,963	Freeman Colgate	do	26	Aretas English	Deer Island	6	39 00
59,393	Fannie	do	12	James A. Greenlow	Lord's Cove	3	14 40
88,276	Falcon	do	12	Wm. Brown	Wilson's Beach	3	18 00
94,834	Flora Woster	do	22	Henry Burnham	Grand Manan	3	33 00
92,508	Grey Eagle	do	13	Nehemiah Mitchell	Campobello	3	19 50
59,396	Gurtie Westbrooke	do	16	James Cline	Deer Island	5	22 00
75,728	George Killam	Digby, N.S.	30	Sidney L. Justason	Pennfield	5	45 00
94,835	Georgie Linwood	St. Andrews	25	Joshua Hawkins <i>et al.</i>	do	5	37 50
80,650	Happy Home	Yarmouth, N.S.	14	Michael Nodding	Beaver Harbour	3	21 00
75,587	Happy Return	Weymouth, N.S.	13	Daniel Campbell	Dipper Harbour	3	15 60
59,394	Hattie	St. Andrews	10	Chas. Harkins	do	3	15 00
83,463	Havelock	do	33	Wm. James	Wilson's Beach	4	49 50
83,465	Look Out	do	48	Alf. W. Ingersoll	Grand Manan	4	64 80
83,464	Little Annie	do	19	E. & J. Holmes	Le Tête	5	28 50
51,734	Lavinia	do	13	Lewis Stanley	North Head	3	15 60
59,118	Linnet	St. John	29	H. & C. Trynor	Beaver Harbour	4	43 50
59,399	Leona	St. Andrews	12	David Lasley <i>et al.</i>	Back Bay	3	15 75
59,395	Little Minnie	do	11	Joseph McGee	do	2	13 75
59,342	Lizzie S. McGee	do	14	Andrew McGee	do	4	18 90
88,273	Lillian E.	do	13	do	do	2	14 62
83,474	Letter B.	do	12	Sophia Cook	Le Tête	3	18 00
59,388	Letitia	do	10	Frank Johnson	Deer Island	3	13 13
75,598	Lizzie Jane	Digby, N.S.	18	Gilbert Green	West Islands	5	24 75
77,965	Lydia B.	St. Andrews	12	Jno. M. Calder	Campobello	3	18 00
59,321	Little Nell	do	21	Wm. McLellan	do	6	31 50
80,881	Lena May	do	18	George Kirkpatrick	do	4	27 00
88,407	Linnet	Digby, N.S.	15	Alva Brown	Wilson's Beach	3	22 50
83,472	Lindon	St. Andrews	12	Oliver G. Brown	do	2	18 00
77,970	Mary Emeline	do	18	Calvados Brown	do	3	27 00
88,271	Magellan Cloud	do	20	Simon Brown	do	5	30 00
59,125	Mount Whatley	St. John	28	Hugh Belmore	Dipper Harbour	3	36 75

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.

CHARLOTTE COUNTY—Concluded.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.
							\$ cts.
92,514	Maggie Jane	St. Andrews	10	Victoria A. Cook	Mascarene	3	15 00
59,326	Maud Holmes	do	21	Jacob Cook	Le Tête	3	25 20
38,109	Mary	Yarmouth, N.S.	16	James Thompson	Black's Harbour.	2	20 00
85,442	Mystery	Windsor, N.S.	14	E. & S. Munroe	Beaver Harbour.	3	21 00
88,277	Maggie Jane	St. Andrews	18	S. B. & A. Cross	Pennfield	3	21 60
92,501	Maybe	do	11	Jno. Kelly	White Head	2	13 75
88,402	Mizpah	Digby, N. S.	52	Eben Gaskill	Grand Manan.	9	68 25
94,833	Newsboy	St. Andrews	16	Ernest Lank	Wilson's Beach.	2	18 00
77,967	Naomi	do	14	Wm. James	do	3	21 00
75,602	Ocean Lily	Digby, N. S.	17	Thos. Mitchell	Campobello	6	25 50
94,837	Olga	St. Andrews	11	Lincoln Richardson	West Isles	2	13 75
75,716	Onward	Yarmouth, N. S.	10	John Watt	North Head	3	15 00
92,518	Peril	St. Andrews	18	Martin Eldridge, et al.	Pennfield	3	23 62
59,383	Pilgrims Progress	do	16	Arthur Porter	Campobello	3	24 00
75,591	Rise and Go.	do	16	Wm. Sirles	do	3	24 00
75,547	River Rose	Barrington, N.S.	13	E. C. Bowers	Westport, N. S.	3	19 50
88,287	Satellite	St. Andrews	26	Milton Eldridge, et al.	Pennfield	5	39 00
88,284	Sea Foam	do	13	Dan'l Leavitt	L'Etang	2	19 50
88,272	Simeon H. Bell	do	14	Edward Mathews	Le Tête	3	21 00
59,357	Silver Bell	do	13	John Malloch	Wilson's Beach.	3	19 50
59,387	Telephone	do	19	Joseph McGee	Back Bay	6	26 47
88,414	Trumpet	St. John	20	Andrew Holmes	Beaver Harbour.	4	27 00
92,504	Tiger	St. Andrews	15	J. & Geo. Nesbitt	North Head	3	22 50
83,468	Village Belle	do	15	Allan P. Dixon	do	4	22 50
88,282	Veritas	do	10	Chas. Mathews	Le Tête	3	15 00
35,331	Victor	do	16	Frank Campbell	Dipper Harbour	5	24 00
94,832	Venus	do	42	Simon Brown	Wilson's Beach.	7	63 00
77,969	Wave Queen	do	11	Wm. McMahon	Le Tête	2	12 38
83,427	Zoulu	Weymouth, N.S.	12	Eben Gaskill	Grand Manan	4	18 00

GLOUCESTER COUNTY.

92,419	Anna	Chatham	12	Docité Chiasson (Jos.)	Lamèque	4	18 00
72,099	Adelina	do	12	Auguste Poulin	do	3	18 00
96,725	Bessie T	do	10	C. C. Turner	Tracadie	3	15 00
72,079	Betsy	do	13	Sebastien Noel	Little Lamèque	3	19 50
61,431	Bee	do	11	Paul Noel	Lamèque	4	16 50
61,403	Belmont	Miramichi	13	Angus McLean	Bathurst	2	16 25
92,412	Dollie Dutton	Chatham	13	J. & R. Young	Tracadie	3	17 07
96,723	Emma	do	15	Ludger Duguay	Shippegan Is'ld.	3	22 50
92,417	Evangeline	do	11	Jno. & R. Young	Tracadie	5	16 50
61,445	Flavie	do	13	Theophile Duguay	Lamèque	3	19 50
61,437	Flying Fish	do	11	Eli Chiasson	Little Lamèque	3	16 50
92,413	Grip	do	12	James Davidson	Tracadie	4	18 00
61,425	Hope	do	13	R. Robin	Caraquet	3	17 07
96,724	Isabel	do	11	Peter Noel	Lamèque	3	16 50
92,420	Mary Louise	do	13	Wm LeBreton	Pokemouche	3	17 06
88,669	Morning Star	do	12	Gustave Gionet	Ste. Rose	3	18 00
92,413	Mary Jane	do	14	Theodore Savoy	Tracadie	4	21 00
61,442	Marie Cécile	do	15	Oliver Duguay	Lamèque	4	22 50
72,100	Marie	de	11	Onesime Chiasson	do	3	16 50
61,447	Merida	do	13	André Aché, sr.	do	3	19 50
33,652	Marie Louise	New Carlisle	16	Nap. H. Roy	Petit Rocher	3	24 00
85,692	Mary	Chatham	11	Jos. N. LeBoutillier	Caraquet	3	16 50
92,403	Maria	Miramichi	25	Ubalde Landry	Grande Anse	4	37 50
72,076	Providence	Chatham	12	Eutrope Duguay	Shippegan	3	18 00
61,406	Reward	do	11	Jos. N. LeBoutillier	Caraquet	3	16 50
96,727	Ryse	do	11	Jeremiah Aché	Shippegan	3	16 50
61,438	Rosane	do	13	Lange Duguay	Petit Lamèque	4	19 50

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.

GLOUCESTER COUNTY—Concluded.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.
							\$ cts.
92,404	Rosa	Chatham.....	17	Octave Aché, sr.....	Lamèque	4	25 50
85,696	Rose	do	11	Mara Basque.....	Tracadie.....	3	16 50
92,408	Sarah A. W.	do	15	Robt. J. Wilson.....	Wilson's Point..	3	22 50
74,401	Sara	do	11	Nazaire Noel.....	Lamèque	3	16 50

KENT COUNTY.

83,105	Katie Bell	Richibucto.....	11	Jno. Bell	Richibucto.....	4	16 50
83,104	Minnie Long	do	20	Wm. Long.....	do	2	25 00
61,411	Telegraph	do	20	Frank Hawes.....	Kingston	4	30 00

NORTHUMBERLAND COUNTY.

61,417	Belle	Miramichi.....	12	James Brenner	Chatham	3	18 00
75,904	Empress	Chatham	26	Robert R. Call	do	6	39 00
88,668	General Middleton.	do	67	William S. Loggie	do	13	96 92
75,891	May Queen	do	23	R. R. Call	do	4	34 50
74,368	Maggie Roach	do	44	William S. Loggie	do	13	66 00
78,044	Princess Louise	do	21	R. R. Call	do	5	31 50
75,895	Two Brothers	do	26	do	do	6	39 00
72,091	White Wings	do	19	Thomas B. Williston..	Baie du Vin	4	28 50

RESTIGOUCHE COUNTY.

80,950	Jessie	Chatham	14	Simon McGregor.....	Dalhousie.....	3	21 00
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ST. JOHN COUNTY.

80,093	Anna K.	St. John.....	14	William Spence	Portland, N.B. ..	4	21 00
72,246	Alpha	do	21	C. & J. Cobham	Carleton.....	3	27 56
79,977	Amanda Green	do	15	Sam'l Hutton	do	3	22 50
57,171	Anna Bell	St. Andrew's ..	19	William Stinson, <i>et al.</i>	Pisarinco.....	4	28 50
72,192	Ada	St. John.....	19	J. K. Ferguson, <i>et al.</i>	do	4	28 50
80,072	Buena Vista	do	14	John McNulty, sen ..	Musquash	3	21 00
85,972	Dove	do	11	Samuel Maguire	Pisarinco.....	3	16 50
99,926	Emma	do	13	David Thompson	Musquash	3	15 60
85,503	G. P. Taylor	do	14	D. G. Toole, <i>et al.</i>	Carleton.....	3	21 00
57,181	Hattie	Windsor, N.S. ..	13	S. & J. J. Galbraith..	Pisarinco.....	4	19 50
83,259	Hettie May	Annapolis, N.S.	15	John Butler	Musquash	5	22 50
88,261	Little Joe	St. John.....	18	Joseph O'Brien	Carleton.....	4	27 00
88,266	Lizzie Young	do	13	Nathaniel Young	Pisarinco.....	5	19 50
52,159	Mary E.	do	21	Frederick Buchanan ..	Carleton.....	4	31 50
72,973	Sea Breeze	Digby, N.S.	13	Daniel Tolan, <i>et al.</i>	Musquash	5	19 50
59,322	Sea Flower	St. John.....	11	James Thompson	do	3	16 50
59,156	Tom	do	14	Peter Boyle	do	5	21 00
59,313	U. S. Grant	Yarmouth, N.S.	33	J. & R. Hutton	Carleton.....	5	49 50
80,630	Vanity	do	14	Wallace E. Belding ..	Musquash	5	16 50
72,321	Widgeon	St. John.....	10	James Kennedy	St. John.....	2	12 50
88,264	Walter J. Clarke ..	do	20	George H. McAuly	Carleton.....	5	30 00

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.

PRINCE EDWARD ISLAND.

KING'S COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.
							¢ cts.
66,428	Albert	Charlottetown	40	James A. Herring	Murray Harbour	5	60 00
66,242	Amorette	do	18	Peter Roberts	do	5	27 00
69,132	Belle of the Bay	Guysboro'	20	Isaac Kirby	do	6	30 00
92,675	Can't Help it	Pictou, N.S.	39	John Herring	do	6	58 50
83,196	Ethel Blanche	do	12	Reuben Cahoon	do	4	18 00
71,412	Emerald	Charlottetown	25	James Burke	Georgetown	1	21 42
88,644	Hattie	do	18	Henry Dicks	Murray Harbour	4	27 00
83,198	Harriet	Pictou, N.S.	27	William Reynolds	do	8	40 50
75,566	Julia A	Lunenburg, N.S.	15	James McKinnon	do	4	22 50
92,458	Jubilee	Charlottetown	76	Malcolm McDonald	Georgetown	15	110 44
75,882	Lord McDonald	do	15	David Cahoon	Murray Harbour	4	22 50
83,095	Mary Margaret	Port Hawkesbury, N.S.	17	John Cahoon	do	4	25 50
80,937	Montague	Charlottetown	16	Michael Jackson	do	4	24 00
90,639	Morell	do	16	Edward Delcry	Georgetown	1	15 00
88,230	Morning Light	Halifax, N.S.	28	Julius Cox	Morell	5	42 00
92,469	Nutwood	Charlottetown	80	John McLean	Souris	14	112 50

PRINCE COUNTY.

72,081	Annie	Chatham, N.B.	13	John McDonald	Campbelton	2	19 50
71,310	Black Watch	Charlottetown	23	Benjamin Perry	Kildare	5	34 50
82,086	Charlie	do	64	J. H. Myrick & Co.	Tignish	12	81 90
88,642	Express	do	46	John Champion	Alberton	13	69 00
55,829	Emma McMillan	Pictou, N.S.	20	John Coughlan	Campbelton	3	30 00
80,946	Janet A.	Chatham, N.B.	29	Donald Hanrihan	Tignish	4	43 50
66,948	Lois	Charlottetown	67	John A. Matheson	Campbelton	12	93 32
59,663	Lettie	do	57	J. H. Myrick & Co.	Tignish	15	85 50
92,455	Mikado	do	38	Terrence Farrell	Alberton	4	44 79
77,619	Milford Guy	do	60	James S. Gordon	do	12	90 00
74,155	Maggie McBeth	do	26	J. P. Thompson	Campbelton	5	39 00
72,087	Spy	Chatham, N.B.	18	Isaac Lewis	Alberton	2	20 24

QUEEN'S COUNTY.

92,464	Eliza M.	Charlottetown	17	William Bell	New London	4	21 26
92,466	G. H. Gardiner	do	17	E. Marshall	N. Rustico	6	25 50
94,993	Onward	do	15	William Keizer	Tracadie	6	22 50

DETAILED STATEMENT of Fishery Bounties paid to Vessels, &c.—Continued.

PROVINCE OF QUEBEC.
GASPÉ COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount of Bounty Paid.
							\$ cts.
73,495	Canadienne.....	Halifax, N.S.....	53	J. N. Arseneau.....	Amherst.....	9	69 54
55,642	Delaney.....	Magdalen Isl'ds.	44	Camille Delaney.....	House Harbour.	8	52 25
58,391	Esperance.....	do	31	Célestin Boudreau.....	Aubert.....	8	43 91
71,357	Emma Gidney.....	Halifax, N.S.....	47	Damien Devaux.....	do	10	70 50
77,604	E. D. Myra.....	Lunenburg, N.S.	43	F. H. Delaney.....	House Harbour.	10	59 12
73,029	F. P. T.....	Magdalen Isl'ds.	41	Camille Delaney.....	do	8	55 34
85,393	Formosa.....	do	43	P. P. Delaney.....	do	10	59 12
77,612	Gold Hunter.....	do	41	Edwd. Bourque.....	do	7	52 26
73,024	Marie Enésie.....	do	47	W. G. Leslie.....	Grindstone.....	8	58 74
73,025	Marie Euphrosyne.....	do	39	Jno. Binet.....	Etang du Nord..	9	51 18
73,493	Marie Joseph.....	do	56	Philippe Gaudin.....	House Harbour.	7	66 50
73,491	Mary Jane.....	do	47	Jno. Binet.....	do	8	58 74
75,577	Mary Ann Bell.....	Lunenburg, N.S.	33	Jno. Arseneault.....	do	7	44 00
73,021	Mary Anne.....	Magdalen Isl'ds.	46	do	do	10	63 24
38,351	Nancy.....	Arichat, N.S.....	17	Alcide Cormier.....	Amherst.....	3	25 50
73,028	Richard B.....	Magdalen Isl'ds.	32	Herbert Taker.....	Grosse Ile.....	1	26 40

SAGUENAY COUNTY.

57,742	Acara.....	Halifax, N.S.....	30	Fred. Jomphe.....	Esquimaux Pt..	7	45 00
42,436	Amelia.....	Gaspé.....	50	P. Cormier & Bros.....	do	10	75 00
74,270	Amarilda.....	Quebec.....	24	L. & M. Pineau.....	Bic.....	4	36 00
59,468	Busy.....	do	39	Vigneau & Blais.....	Esquimaux Pt..	7	58 50
63,370	C. M. G. P.....	do	46	G. Picard.....	do	10	69 00
61,966	D. Cronan.....	Halifax, N.S.....	40	P. Lemarquand.....	do	8	60 00
66,028	Emerillon.....	Quebec.....	14	Auguste Michaud.....	Isle Verte.....	4	21 00
80,754	Eugénie.....	do	48	Vigneau & Blais.....	Esquimaux Pt..	8	72 00
59,909	Elizabeth.....	do	27	Luc Cormier.....	do	7	40 50
85,459	Florida.....	do	13	Wm. Michaud.....	Isle Verte.....	2	19 50
75,679	Gleaner.....	do	41	S. Landry & Bros.....	Esquimaux Pt..	9	61 50
85,750	H. B.....	do	57	H. & J. B. Boudreau.....	do	8	85 50
85,753	Java.....	do	46	Dom. Cormier.....	do	11	69 00
42,435	Labrador.....	Gaspé.....	43	P. Doyle & Bros.....	do	8	64 50
77,868	Léodore.....	Quebec.....	39	F. X. Corriveau.....	do	8	58 50
55,863	Marie Adelmira.....	do	13	C. Levesque.....	Isle Verte.....	5	19 50
80,766	Marie Anne.....	do	17	Thos. Riverin.....	Malbaie.....	3	25 50
77,886	Marie Laure Attala.....	do	27	P. Michaud.....	Isle Verte.....	3	40 50
69,584	Marie Louise.....	do	23	Narcisse Rioux.....	Quebec.....	3	34 50
55,912	Marie Louise.....	do	14	Pierre Ouelette.....	do	4	21 00
69,380	Marie Anne.....	Gaspé.....	35	Dominique Landry.....	Esquimaux Pt..	7	52 50
42,434	Marguerite.....	do	27	Michel Giasson.....	do	6	40 50
69,382	Marie du SacréCœur	do	46	Turbis, Briand & Landry	do	10	69 00
77,866	Pioneer.....	do	39	Picard & Lebrun.....	do	9	58 50
75,445	Phœnix.....	do	28	P. Vigneau & Bros.....	do	7	39 37
42,437	Progress.....	do	52	Boudreau & Leblanc.....	do	7	78 00
83,360	Ste. Anne.....	do	13	Pierre Fraser.....	N. D., Isle Verte	2	19 50
73,026	Ste. Anne.....	do	20	do	Isle Verte.....	2	30 00
75,680	Sea Star.....	Quebec.....	52	Jude Poirier.....	Betchouan.....	9	78 00
80,753	Stella Maris.....	do	51	L. Cummings & Bros.....	Esquimaux Pt..	10	76 50
69,659	St. Joseph.....	do	18	Turgeon & Corriveau.....	do	6	27 00
69,591	Ste. Marie.....	do	37	Alex. Scherrer.....	do	7	55 50

The following Vessel claims for 1888, held in abeyance, were paid in 1889-90.

PROVINCE OF NOVA SCOTIA.
HALIFAX COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew.	Amount Paid.
57,727	Agnes.	Halifax.	21	John Hayes	Herring Cove.	6	31 50
90,496	Black Prince.	do	18	Jas. W. Slaunwhite.	Terence Bay.	4	24 30
75,806	Can't Help It.	do	57	Wm. Beazley	Ferguson's Cove.	13	85 50
61,629	Carrie R.	Guysboro'	16	James Reyno.	Herring Cove.	1	15 00
90,481	Ella D.	Halifax.	32	Archd. Darrah.	do	7	48 00
85,644	Flora	do	41	Patrick Scallion.	do	10	61 50
77,786	Hesperus	do	16	Joseph Reyno, sen	do	4	21 60
83,135	J. B. M.	do	20	Henry Brown.	do	4	30 00
61,939	Margaret.	do	22	Frs. G. Henrion.	Ferguson's Cove.	4	33 00
64,018	Ocean Bride.	do	23	Mathew Lynch.	do	8	34 50
53,551	Roving Bird.	do	24	John Brown.	Herring Cove.	6	36 00
64,869	Sarah L. Oxner	do	33	Edward Hayes.	do	8	49 50
53,600	Star Light.	do	29	Mark Power.	do	8	43 50
77,836	T. W. Smith.	do	34	Wm. Hayes	do	8	48 16

PROVINCE OF NEW BRUNSWICK.
NORTHUMBERLAND COUNTY.

59,371	A. J. Franklin	St. Andrews.	53	W. S. Loggie.	Chatham.	8	60 95
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PROVINCE OF PRINCE EDWARD ISLAND.
KING'S COUNTY.

92,452	Ella Blanche	Charlottetown.	76	McEachern & Co.	Souris.	11	98 80
90,621	Maggie Alice.	do	79	James Lanigan	do	7	83 61
92,469	Nutwood	do	80	John McLean	do	16	120 00
90,632	Samuel Drake.	do	67	do	do	10	83 75

COMPARATIVE STATEMENTS.

COMPARATIVE STATEMENT of Fishing Bounties Paid, from 1882 to 1889, inclusive.

Number.	Province.	County.	1882.			1883.			1884.			Number.
			Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	
			Amount.	Amount.		Amount.	Amount.		Amount.			
			\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1	Nova Scotia.....	Annapolis.....	472 00	1,998 00	2,470 00	838 00	1,207 50	2,045 50	648 00	1,503 50	2,151 50	1
2		Antigonish.....		840 00	840 00		482 50	482 50		799 50	799 50	2
3		Cape Breton.....	294 00	5,167 00	5,461 00	436 00	2,853 50	3,289 50	383 00	3,909 00	4,292 00	3
4		Colchester.....							64 00		64 00	4
5		Cumberland.....		20 00	20 00					7 50	7 50	5
6		Digby.....	1,436 00	4,118 66	5,554 66	2,652 00	2,182 50	4,834 50	3,322 84	2,234 50	5,557 34	6
7		Guysboro'.....	2,380 73	7,913 75	10,294 48	2,914 00	4,645 00	7,559 00	3,371 90	6,485 50	9,857 40	7
8		Halifax.....	3,599 50	11,118 31	14,717 81	6,020 00	6,080 50	12,100 50	5,834 00	7,898 00	13,732 00	8
9		Inverness.....	950 00	5,432 00	6,382 00	572 00	3,422 50	3,994 50	1,208 00	4,522 00	5,730 00	9
10		King's.....	46 00	125 00	171 00	146 00	157 50	303 50	196 00	70 50	266 50	10
11		Lunenburg.....	15,161 03	3,112 00	18,273 03	17,658 00	1,850 00	19,508 00	19,648 24	3,162 00	22,810 24	11
12		Pictou.....	202 00	95 00	297 00	202 00	120 00	322 00	177 76	107 50	285 26	12
13		Queen's.....	1,638 00	1,917 00	3,555 00	1,826 00	810 00	2,636 00	2,408 00	836 50	3,244 50	13
14		Richmond.....	3,853 15	7,998 50	11,851 65	3,558 00	4,225 00	7,783 00	3,266 58	6,325 00	9,591 58	14
15		Shelburne.....	7,294 00	4,332 00	11,626 00	8,744 00	2,326 50	11,070 50	8,928 27	2,781 50	11,709 77	15
16		Victoria.....	284 00	4,861 00	5,145 00	492 00	2,830 50	3,322 50	60 00	4,045 50	4,105 50	16
17		Yarmouth.....	7,825 09	1,615 00	9,440 09	9,486 00	695 00	10,181 00	9,758 00	971 50	10,729 50	17
18		Totals.....	45,435 50	60,663 22	106,098 72	55,544 00	33,888 50	89,432 50	59,274 59	45,659 50	104,934 09	18
19	New Brunswick..	Charlotte.....	2,140 00	5,641 00	7,781 00	2,380 00	2,830 00	5,210 00	2,792 00	3,035 00	5,827 00	19
20		Gloucester.....	422 00	5,368 00	5,790 00	492 00	3,568 50	4,060 50	508 00	4,799 00	5,307 00	20
21		Kent.....	768 00	965 00	1,733 00	266 00	1,197 50	1,463 50	246 00	764 50	1,010 50	21
22		Northumberland.....		45 00	45 00	68 00	52 50	120 50	66 00	68 00	134 00	22
23		Restigouche.....	28 00		28 00	52 00		52 00				23
24		St. John.....	984 00	591 00	1,575 00	861 20	587 50	1,448 70	956 00	260 00	1,216 00	24
25	Westmoreland.....		45 00	45 00		40 00	40 00		81 50	81 50	25	
26		Totals.....	4,342 00	12,655 00	16,997 00	4,119 20	8,276 00	12,395 20	4,568 00	9,008 00	13,576 00	26

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COMPARATIVE STATEMENT of Fishing Bounties Paid, from 1882 to 1889, inclusive.

Number.	Province.	County.	1882.			1883.			1884.			Number.
			Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	
			Amount.	Amount.		Amount.	Amount.		Amount.	Amount.		
			\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	cts.	\$ cts.	\$ cts.	\$ cts.	
27	P. E. Island.....	King's.....	252 00	5,024 00	5,276 00	293 14	2,790 50	3,083 64	475 44	3,028 00	3,503 44	27
28		Prince.....	316 00	6,709 00	7,025 00	418 00	3,429 50	3,847 50	520 00	3,642 00	4,162 00	28
29		Queen's.....	210 00	3,626 00	3,836 00	96 00	1,550 00	1,646 00	65 02	1,473 50	1,538 52	29
30		Totals.....	778 00	15,359 00	16,137 00	807 14	7,770 00	8,577 14	1,060 46	8,143 50	9,203 96	30
31	Quebec.....	Bonaventure.....		8,945 00	8,945 00		3,846 50	3,846 50		5,508 00	5,508 00	31
32		Gaspé.....	2,070 00	17,899 75	19,969 75	2,152 00	9,302 50	11,454 50	1,906 00	13,879 50	15,785 50	32
33		Rimouski.....										33
34		Saguenay.....	2,350 00	1,773 00	4,123 00	2,320 01	2,319 00	4,639 01	2,023 09	4,687 50	6,711 43	34
35		Temiscouata.....		15 00	15 00							35
36		Totals.....	4,420 00	28,632 75	33,052 75	4,472 01	15,468 00	19,940 01	3,929 93	24,075 00	28,004 93	36

RECAPITULATION.

37	Nova Scotia.....	45,435 50	60,663 22	106,098 72	55,544 00	33,888 50	89,432 50	59,274 59	45,659 50	104,934 09	37	
38	New Brunswick.....	4,342 00	12,655 00	16,997 00	4,119 20	8,276 00	12,305 20	4,568 00	9,008 00	13,576 00	38	
39	P. E. Island.....	778 00	15,359 00	16,137 00	807 14	7,770 00	8,577 14	1,060 46	8,143 50	9,203 96	39	
40	Quebec.....	4,420 00	28,632 75	33,052 75	4,472 01	15,468 00	19,940 01	3,929 93	24,075 00	28,004 93	40	
41		Totals.....	54,975 50	117,309 97	172,285 47	64,942 35	65,402 50	130,344 85	68,832 98	86,886 00	155,718 98	41

COMPARATIVE STATEMENT of Fishing

Number.	1885.			1886.			1887.	
	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	Vessels.	Boats.
	Amount.	Amount.		Amount.	Amount.		Amount.	Amount.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	430 08	1,180 00	1,610 08	431 60	1,063 50	1,495 10	305 27	1,162 00
2		982 50	982 50		832 00	832 00		924 50
3	210 00	4,012 50	4,222 50	392 00	3,765 00	4,157 00	374 14	3,600 00
4	74 00		74 00	74 00		74 00	74 00	
5								
6	3,036 02	1,993 00	5,029 02	2,131 79	1,924 50	4,056 29	2,671 34	1,582 50
7	3,312 53	7,129 50	10,442 03	2,936 90	7,521 00	10,457 90	2,210 58	7,963 50
8	5,984 77	8,398 00	14,382 77	4,947 02	8,200 50	13,147 52	5,097 61	8,333 50
9	884 00	4,913 50	5,797 50	1,294 12	5,265 00	6,559 12	1,582 88	5,091 00
10	54 00	185 50	239 50	96 00	297 50	393 50	218 00	242 00
11	17,315 34	2,947 00	20,262 34	16,755 64	3,122 00	19,877 64	16,154 33	3,751 50
12	154 00	132 00	286 00	156 00	94 50	250 50		130 00
13	1,854 00	1,190 50	3,044 50	1,814 60	957 00	2,781 00	1,650 00	1,212 50
14	3,164 49	7,046 00	10,210 49	2,650 00	6,941 00	9,591 00	2,762 86	7,704 00
15	9,198 00	3,201 50	12,399 50	7,880 67	3,072 00	10,952 67	6,678 62	3,687 00
16	166 00	4,487 00	4,653 00	222 20	4,599 50	4,821 70	88 00	4,600 50
17	9,415 50	968 50	10,384 00	8,513 60	829 00	9,342 60	8,539 40	1,230 50
18	55,252 73	48,767 00	104,019 73	50,295 54	48,494 00	98,789 54	48,407 03	51,215 00
19	2,508 25	3,937 00	6,445 25	2,579 67	4,246 00	6,825 67	3,292 65	4,681 50
20	452 00	5,876 00	6,328 00	516 00	6,462 00	6,978 00	618 75	7,136 00
21	184 00	1,309 50	1,493 50	206 00	1,473 50	1,679 50	370 00	1,728 50
22	180 00	80 50	260 50	592 00	80 50	672 50	445 00	229 00
23				28 00	7 00	35 00		
24	902 00	367 50	1,269 50	1,054 40	424 00	1,478 40	786 25	291 00
25		111 50	111 50		225 50	225 50		121 00
26	4,226 25	11,682 00	15,908 25	4,976 07	12,918 50	17,894 57	5,512 65	14,187 00

Bounties Paid, from 1882 to 1889, Inclusive.

Total.	1888.			1889.			Grand Total.	Number.
	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.		
	Amount.	Amount.		Amount.	Amount.			
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1,467 27	217 01	1,153 50	1,370 51	182 31	1,044 00	1,226 31	13,836 27	1
924 50		1,063 50	1,063 50		1,012 00	1,012 00	6,936 50	2
3,974 14	423 33	3,618 00	4,041 33	307 47	3,470 00	3,777 47	33,214 94	3
74 00	85 50		85 50				371 50	4
							27 50	5
4,253 84	1,696 68	1,749 50	3,446 18	1,721 61	1,608 00	3,329 61	36,061 44	6
10,174 08	1,289 71	8,274 50	9,564 21	974 57	8,093 00	9,067 57	77,416 67	7
13,431 11	3,809 99	7,806 00	11,615 99	4,367 08	7,789 00	12,156 08	105,283 78	8
6,673 88	1,247 90	5,432 00	6,679 90	1,037 96	5,170 00	6,207 96	48,024 86	9
460 00	123 45	272 50	395 95	112 50	212 00	324 50	2,554 45	10
19,905 83	13,893 81	3,794 00	17,687 81	17,184 42	3,577 00	20,761 42	159,086 31	11
130 00		110 50	110 50	33 00	120 00	153 00	1,834 26	12
2,862 50	1,495 82	1,174 00	2,669 82	1,524 06	1,499 00	3,023 06	23,816 38	13
10,466 86	2,390 65	8,108 50	10,499 15	2,825 92	6,534 00	9,359 92	79,353 65	14
10,365 62	5,193 59	3,842 50	9,036 09	4,127 80	4,240 00	8,367 80	85,527 95	15
4,688 50	36 00	4,963 50	4,999 50	21 00	5,030 00	5,051 00	36,786 70	16
9,769 90	5,661 46	858 50	6,519 96	5,428 81	896 00	6,324 81	72,691 86	17
96,622 03	37,564 90	52,221 00	89,785 90	39,848 51	50,294 00	90,142 51	782,825 02	18
7,974 15	2,113 50	4,447 50	6,561 00	2,127 16	4,803 00	6,930 16	53,554 23	19
7,754 75	537 46	8,212 50	8,749 96	590 95	9,822 00	10,412 95	55,381 16	20
2,098 50	244 48	1,770 50	2,014 98	71 50	2,177 15	2,248 65	13,742 13	21
674 00	155 34	73 00	228 34	414 37	85 00	499 37	2,634 21	22
	28 50		28 50	21 00	7 00	28 00	171 50	23
1,077 25	487 64	312 00	799 64	487 66	377 00	864 66	9,729 15	24
121 00		72 50	72 50		43 00	43 00	740 00	25
19,699 65	3,566 92	14,888 00	18,454 92	3,712 64	17,314 15	21,026 79	135,952 38	26

COMPARATIVE STATEMENT of Fishing Bounties

Number.	1885.			1886.			1887.		
	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.
	Amount.	Amount.		Amount.	Amount.		Amount.	Amount.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
27	626 15	4,090 50	4,716 65	770 44	4,149 50	4,919 94	1,225 78	4,396 00	5,621 78
28	426 00	3,552 50	3,978 50	967 40	3,413 00	4,380 40	1,127 00	3,636 00	4,763 00
29	76 00	1,433 50	1,509 50	271 53	1,364 00	1,635 53	734 73	1,409 00	2,143 73
30	1,128 15	9,076 50	10,204 65	2,009 37	8,926 50	10,935 87	3,087 51	9,441 00	12,528 51
31	.....	8,005 00	8,005 00	.....	9,294 00	9,294 00	.....	8,862 00	8,862 00
32	1,524 26	14,900 50	16,424 76	1,176 98	15,465 50	16,642 48	1,233 98	15,335 25	16,569 23
33	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	1,988 00	5,047 00	7,035 00	2,227 63	5,119 50	7,347 13	2,354 00	4,122 50	6,476 50
35	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	3,512 26	27,952 50	31,464 76	3,404 61	29,879 00	33,283 61	3,587 98	28,319 75	31,907 73

RECAPITU

37	55,252 73	48,767 00	104,019 73	50,295 54	48,494 00	98,789 54	48,407 03	51,215 00	99,622 03
38	4,226 25	11,682 00	15,908 25	4,976 07	12,918 50	17,894 57	5,512 65	14,187 00	19,699 65
39	1,128 15	9,076 50	10,204 65	2,009 37	8,926 50	10,935 87	3,087 51	9,441 00	12,528 51
40	3,512 26	27,952 50	31,464 76	3,404 61	29,879 00	33,283 61	3,587 98	28,319 75	31,907 73
41	64,119 39	97,478 00	161,597 39	60,685 59	100,218 00	160,903 59	60,595 17	103,162 75	163,757 92
	Less Refund.....		58 00						
			161,539 39						

Paid, from 1882 to 1889 inclusive.

1888.			1889.			Grand Total.	Number.
Vessels.	Boats.	Total.	Vessels.	Boats.	Total.		
Amount.	Amount.		Amount.	Amount.			
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.		
654 06	2,067 00	2,721 06	1,043 02	6,672 00	7,715 02	37,557 53	27
782 00	3,826 50	4,608 50	651 25	4,114 00	4,765 25	37,530 15	28
180 90	1,582 50	1,763 40	69 26	1,445 00	1,514 26	15,586 94	29
1,616 96	7,476 00	9,092 96	1,763 53	12,231 00	13,994 53	90,674 62	30
	9,891 50	9,891 50		10,689 00	10,689 00	65,041 00	31
1,098 05	16,527 50	17,625 55	856 34	16,597 00	17,453 34	131,925 11	32
	27 50	27 50		160 00	160 00	187 50	33
1,573 20	3,741 00	5,314 20	1,600 87	3,459 50	5,060 37	46,706 64	34
						15 00	35
2,671 25	30,187 50	32,858 95	2,457 21	30,905 50	33,362 71	243,875 25	36

LATION.

37,564 90	52,221 00	89,785 90	39,848 51	50,294 00	90,142 51	782,825 02	37
3,566 92	14,888 00	18,454 92	3,712 64	17,314 15	21,026 79	135,952 38	38
1,616 96	7,476 00	9,092 96	1,763 53	12,231 00	13,994 53	90,674 62	39
2,671 25	30,187 50	32,858 75	2,457 21	30,905 50	33,362 71	243,875 25	40
45,420 03	104,772 50	150,192 53	47,781 89	110,744 65	158,526 54	1,253,327 27	41
Less Refund.....		7 00			Less Refund..	63 00	
		150,185 53				1,253,262 27	

APPENDIX No. 3.

SPECIAL REPORT

OF

MR. S. WILMOT,

RELATIVE TO THE

PRESERVATION OF THE WHITEFISH FISHERIES

OF

LAKE WINNIPEG.

OTTAWA, October, 1890.

The Honourable CHARLES H. TUPPER,
Minister of Marine and Fisheries.

SIR,—Having received instructions from you to go to Manitoba to examine into the condition of Lake Winnipeg fisheries, covering the grounds mentioned in certain correspondence regarding the alleged depletion of whitefish, and to investigate other matters connected therewith; and having carefully read the numerous files of correspondence, relating to the above subject, which have passed between the Departments of the Interior and of the Fisheries; and also having personally visited some of the most important fishing stations on Lake Winnipeg, mentioned in the aforesaid correspondence, I beg to report, for the information of your Department, the following views which I entertain and the conclusions I have formed on the subject matter under consideration.

Lake Winnipeg lies partly in the two Provinces of Manitoba and Kéewatin. It is the largest and most important body of water in these Provinces, with an area of some 9,550 square miles. Its extreme length takes in about 270 miles, and its greatest width is about 70 miles. It runs in a line nearly north and south. The southern half of the lake is very narrow, and largely cut up with small bays and inlets, and filled with numerous islands. The northern or upper half opens out to a width of some 60 miles, and covers nearly three-fourths of the whole area of the lake.

It is supplied by numerous large rivers which flow into it at various points around the whole extent of its shores.

The two principal tributaries on the west side are the Great and Little Saskatchewan Rivers—the former at the north-west end of the lake, the latter about midway of its extreme length. The feeders on the east side comprise many large rivers also, which drain an extensive territory. The southern or very narrow part of this lake, which is so largely interspersed with islands, is reported to be very shallow; whilst the upper or northern part, which is comparatively free of islands, is broad and deep. It is navigable throughout its whole extent for steamers and other craft for all ordinary purposes of traffic.

The principal product from Lake Winnipeg is the famous and highly-prized whitefish, *coregonus albus* which, for domestic and commercial purposes, no doubt stands foremost on the list of fresh water fishes in America. These fish have been, and no doubt are yet, quite numerous in Lake Winnipeg, although it is held by many persons, and truly so, that in certain localities a depletion is already felt from the wholesale methods of fishing practised by certain fishing companies, who carry on this industry quite extensively almost wholly for the United States markets.

Much controversy has arisen regarding this alleged excessive fishing in Lake Winnipeg between these fishing companies and leading inhabitants of Manitoba, and also with the settlers and Indian tribes around the lake, which has culminated to such a degree at last as to call for the serious consideration of the Departments of the Fisheries, and of the Interior to investigate this matter from a disinterested and public standpoint, not only with regard to the above issues, but also in the interests of the general public.

It is therefore of vital importance to all concerned that some practical solution should be reached by which, if possible, the fishing industries of Lake Winnipeg should not be speedily impoverished, but should be maintained as a source of wealth, and luxury for the inhabitants generally of Manitoba, both for the present and the future.

There are several separate interests connected with the fisheries of Lake Winnipeg which are dwelt upon somewhat lengthily in the Departmental correspondence

referred to—each claiming that the views held by them are the correct ones, in so far as the question of depletion of the whitefish in the lake is concerned. These different interests may be classed as follows:—

(1.) The Indian tribes under the control of the Department of the Interior claim that, many parts of the lake which formerly supplied them with the requisite abundance of fish-food are now showing depletion by reason of the excessive and wholesale fishing carried on by certain large fishing corporations.

(2.) Prominent officials and leading citizens of Manitoba also represent that Lake Winnipeg is undergoing a falling off in many localities of its former whitefish crop, and that, therefore, means should be instituted to stay this too rapid destruction of fish by judicious regulations, which, whilst protecting the fish, will not too seriously interfere with the fishing industries of the country.

(3.) The fishing companies, who are largely engaged in capturing, and freezing whitefish for export, principally to the United States, from their standpoint claim their catch of fish, when compared with other fisheries in the eastern waters where whitefish are taken, that Lake Winnipeg is not becoming depleted, but, on the contrary, this lake shows evidence of increase rather than decrease.

These contradictory statements require looking into, and due consideration given to them, before suggesting a system by which the different conflicting interests may be possibly and fairly overcome, by the introduction of some just and equitable code of regulations, which, whilst they may not be wholly suitable to the individual contending parties, may nevertheless be such as the Department of Fisheries can adopt with justice to all, and more especially in the interest of the great fishing industries of Lake Winnipeg, which the Government should, no doubt, be most desirous of maintaining.

First.—“The Indians, and the interests of the Department of the Interior.”

Voluminous evidence is given in the correspondence showing quite conclusively that the Indians on some of the reserves around Lake Winnipeg are suffering from the want of their former supplies of whitefish, which in past years were obtained readily and in great abundance; and notable instances are related where waters which at one time were teeming with these fish have now become very scarce, and fears are entertained that the usual supplies of fish-food for the Indians will soon be at an end, and that this has been brought about by over-fishing at the mouths of rivers by fish traders, who are permitted to carry on this excessive fishing regardless of consequences. It is also represented that unless this reckless system of fishing be discontinued these Indians, who are the wards of the Government, will have to be supported by other means from the public funds of the country.

These are no doubt pressing facts, and must be so considered from an uninterested and practical comprehension of the state of affairs as they now exist. It is therefore expedient that the Government should meet this subject in the spirit of reciprocity; as between the requirements of the Indian, the settler and the fish trader each have their rights and are entitled to full consideration as inhabitants of the country.

It is in this broad view of the question that it is submitted to the Department, and not in the manner in which some parties desire to represent it, when they say that “the Indians should not be considered, or allowed to kill whitefish, and feed them to their worthless dogs, as formerly;” for it must be understood those dogs are the beasts of burthen for the Indian, and are used as such, and require food to sustain them, in like manner as the horse and the ox are required by the white man, though fed in another way.

Second.—The statements made by prominent individuals and leading inhabitants of Manitoba are, that over-fishing of the whitefish in Lake Winnipeg is being experienced, and is steadily increasing, and that it should be stayed, in the interests both of the present and incoming inhabitants of Manitoba and the North-West, and that the whitefish industry should be studiously husbanded. This advocacy for the preservation of the fishing wealth in Lake Winnipeg by the leading inhabitants of Manitoba should be sustained by the Department of Fisheries, in order to prevent

a repetition of the sad experiences which are now felt in many of the waters in the Eastern Provinces, where over-fishing has brought depletion to such an extent as to be almost wholly beyond recovery.

It is important, when submitting the different points at issue to your Department, and in order to make them more fully comprehended, that some description of the fishing grounds now occupied by the fishing companies, and the methods of fishing now employed in Lake Winnipeg, should be given, and that a plan of the lake should be appended, on which will be shown the position of the several fishing, and freezing establishments where the great commercial catch of whitefish is carried on.

Formerly this industry was pursued in the lower or southern parts of the lake; but the catch becoming much lessened there the fish traders have established themselves about midway up the lake, and at Selkirk Island, at the head of the lake. The principal points for their operations at present are at Beren's Island, Reindeer Island, and at the mouth of the Little Saskatchewan River, about midway of the lake, and at Selkirk Island, near the mouth of the Big Saskatchewan, at the north end. Other places may be only temporarily fished; but the above named localities form the present headquarters of the fishing companies.

At Beren's Island a good natural harbour is formed on the southern side. Here the two principal firms have each extensive ice-houses and freezing-houses, also landing piers for their steam-tugs and barges; similar works, but less extensive, are at Reindeer Island and at Selkirk Island. But the most extensive buildings and works are just at the mouth of the Little Saskatchewan River, where two companies each have large ice-houses, freezers and piers on either side of the mouth of this river, which is only about 100 yards wide.

The present mode of fishing by the companies is with gill-nets, which are fished at certain distances off the shores of these islands, varying from one to six and ten miles, according to the "running" of the whitefish, as it is termed.

This net-fishing commences generally about the beginning of June at Beren's, Reindeer and Selkirk Islands, where large quantities of whitefish are taken; but when the latter end of the month of August is reached these companies stop their operations at these islands, by taking all their movable fishing gear and plant to the Little Saskatchewan, where the whitefish by this time have been congregating in great numbers, preparatory to going up the river and to St. Martin's Lake, which are their specially-adapted natural breeding-grounds. Here, perhaps, about one-third of the whole season's catch is taken by these fishing companies in the narrow confines of the bay, which forms the estuary or outlet of the Little Saskatchewan River.

At this point the greatest destruction is evidently going on, and it is here, and up the river, and in Lake St. Martin's, where the Indians and others contend that depletion of the whitefish crop is most serious and very marked indeed, when compared with former years; and this great falling off is caused by the fact of the whitefish being intercepted by the numerous nets set throughout the bay and are stopped from passing up the river to their natural haunts above and to St. Martin's Lake.

Just at the mouth of this river is a small Indian reserve, where its inhabitants, together with some Indians from other localities meet late in the fishing season. Some of these Indians obtain daily employment, whilst others are furnished with boats and nets by the fishing companies, who buy the fish from the Indians at certain current prices.

Upon arrival of the steamer at the mouth of the Little Saskatchewan River, a council of the Indian chiefs and councillors was being held; about thirty were present. Inspectors McQueen and McColl, of the Fisheries and Indian Departments (who accompanied me on this trip), and myself, were invited to attend this Indian council, and the following expression was given by these Indians on the subject of depletion of whitefish on the Little Saskatchewan and in St. Martin's Lake. The substance of their deliberations at this council was given to me at the time by an intelligent half-breed interpreter, quaintly, as follows:—

"Can't catch enough whitefish for our families up river any more; all caught in mouth of river and in bay by white men traders for freezers. In old time plenty fish go up river and into St. Martin's; could then catch plenty fish for families all along banks of river with small scoop nets, easy, but now can't get fish that way anyhow—fish too scarce. Indians willing to stop fishing short time and let fish lay eggs, but white men must be stopped killing all fish with big nets at mouth of river and bay. Some young Indians want to work for freezer men to get money and spend it; don't know what way; but old Indians, squaws and children get no good, no work, no fish. Indians want big fish traders kept away from mouth river and bay with big steamboat fishing; let trader fish in big water out in lake, where Indian can't go with small canoe. Young men and boy Indian get some good, but old men and families get nothing to make up for great loss of winter food, which came up river very plenty old time before. Not much whitefish caught any time before September; very plenty after that in old time, before white man kill so many ten thousands at mouth of river in September and October. Indians can't get fish plenty any more through ice; got too scarce."

These views were given by this body of Indians in council, without any hesitation or dictation on the part of any one, but with much warmth and frankness, and certainly without any previous knowledge of our presence, as the steamboat which took us there had only just then reached the place.

The methods pursued by the fishing corporations in catching whitefish, freezing and transporting them to market, is coupled with a good deal of risk and considerable expenditure; each company necessarily employs one or more steam tugs, which are used for transporting their material and other requisites for their fishing operations to and from their headquarters at Selkirk, a town on the Red River some twenty miles north of Winnipeg city. These tugs are principally used for towing large barges laden with fish, frozen and otherwise cured, down to Selkirk. The barges are really immense floating freezers, in which fish are not only frozen by the usual process, but are also the receptacles to store away in their ice chambers the cases of fish which have been frozen in the shore establishments. When heavily laden they require strong steam power to tow them, and considerable risk is experienced in their transport up and down the lake. Two of these tugs and barges were cast on shore by the violence of the weather at the time of my going up the lake.

The nets used by these fishing companies are also extensive and expensive, as they require frequent renewing from time to time during the fishing season, on account of the rotting of the twine by the action of the milky-coloured sedimentary matter appearing everywhere, and caused by the disturbance of the clayey-bottomed parts of the lake by prevailing winds.

These nets are called gill nets. One boat's complement for fishing may be 600 to 750 fathoms in length, comprised of 12 or 15 gangs of 50 fathoms each. The size of mesh required by the regulations is 5 inches, extension measure. The fishermen, however, find it to their advantage to use $5\frac{1}{2}$ inch meshes. The usual gill net is made 16 meshes wide, or about $5\frac{1}{2}$ feet deep when set. Some fishermen use 24-meshed nets, thus increasing the depth of their nets to 8 feet. This size of net appears to be optional with the fishermen. The nets are set in long, straight lines on the bottom of the lake; they are balanced with corks and leads, so that when they rest on the bottom; they stretch upwards their whole width by the floating power of the corks, which are just sufficient to keep the net distended without lifting it from the bottom of the lake. The whitefish on their feeding grounds in the open lake, or on their migration to the bays, rivers and other spawning grounds, come in contact with these nets, and in their efforts to pass through them become entangled and are caught in the open meshes by their gills, and sometimes by other parts of their bodies.

If severe storms prevail, which is very often the case in the open lakes, these nets cannot in many cases be lifted until the winds subside, which may not be for several days, in which case the fish in the meantime die, partial decomposition sets in, and

they become unfit for use, and the whole catch, sometimes amounting to many thousands, are thrown away. Great destruction is caused in this way, and a question has arisen whether it would not be better to do away with the gill net and substitute the pound or trap net under certain regulations, as the pound net would not only save the fish which are lost by the gill nets, but would also raise the standard of the whitefish generally in the markets of the country; whereas it is now somewhat lowered by the many fish which are offered for sale that are unwholesome for food, by reason of the blemished fish whose injuries and defects are hidden by the freezing process. The pound net would no doubt be very acceptable to the fishing companies generally, not only to obviate the difficulties above mentioned, but on account of being less expensive in their general working.

The quantity of gill nets set in Lake Winnipeg in 1889 covered about 60 miles in length. These gill nets, though apparently small, and averaging but 6 feet in depth, are nevertheless from their many miles of length where set, very deadly engines, and capable of causing great havoc in circumscribed limits, such as small bays and rivers. As an evidence of this it may be stated here that in Lake Winnipeg, where only three fishing companies are carrying on the fishing trade, the quantity of whitefish reported to be shipped by one firm alone in 1889 amounted to 9,000 boxes of 130 lbs. each, making 1,170,000 lbs., the other two companies making up a similar amount, thus showing that this small number of traders are capable, with the present improved methods of fishing, of capturing upwards of two and a-quarter millions of pounds of whitefish in Lake Winnipeg during one short season alone, the greater portion of which passed directly out of the Province, causing the home consumption of Manitoba and other parts of the country to be only sparsely supplied, and at high prices.

Now, while about two-thirds of this large catch of whitefish were captured fairly in the open waters of Lake Winnipeg at the proper season of the year, the other third were said to be taken in the narrow limits of the bay at the mouth of the Little Saskatchewan River, where it appears the whitefish collect in great numbers in September and October, preparatory to their going up this river and to St. Martin's Lake for breeding purposes.

This taking of upwards of two and a-quarter millions of pounds of whitefish by these fishing companies in Lake Winnipeg, more particularly that portion of the catch taken at the mouth of the Little Saskatchewan River, must, in the common sense reasoning of things, go to show that, the originally intended balance of nature regarding these fish is being largely interfered with, and to such an extent if continued, as to cause well grounded alarm for a rapid decline of the whitefish industries connected with Lake Winnipeg, and many of the tributary waters belonging to it. And it must be understood, also, that the above, described quantities of whitefish only include those taken by these three fishing companies operating in Beren's, Reindeer and Selkirk Islands, and at the Little Saskatchewan River, irrespective altogether of the supplies that are caught by all other fishermen, Indians and settlers in other parts of the lake during the whole fishing season of the year.

It cannot therefore be otherwise than reasonably concluded that some better and wiser regulations for the preservation and future maintenance of the whitefish industry in Lake Winnipeg, and other waters connected with it, than those at present in force should be established and efficiently enforced, the result of which would undoubtedly benefit all concerned. The fishing companies could then rely with greater certainty in the belief that the capital invested by them in the fish trade would not be improvidently spent upon a too rapid depletion of the fish products of Lake Winnipeg, but that the traffic would assuredly be more lasting and remunerative in the long run. The Indian tribes could place reliance upon a lengthened continuance of supplies of whitefish which has hitherto been found to be the principal food upon which they largely subsisted; and the settlers and inhabitants of Manitoba, generally, would be enabled to retain within the limits of their own province a lasting store of valuable fish-food, both for the present time and the future; and the

Government of the Dominion would be credited for husbanding a wholesome and luxurious source of fish-wealth, which Providence had so wisely provided for its inhabitants.

Having considered the leading points at issue, which are referred to in the correspondence, the following suggestions are offered as remedial measures, by which a fair and equitable solution of the difficulties may be come to, as regards the better preservation of the whitefish industries connected with Lake Winnipeg—:

A tracing of the lake is appended, on which will be shown the boundaries beyond which the more extensive, or commercial, fishing by companies and traders should not be carried on; which gives to them the most extensive area of the lake for their operations, and shuts them out from only one locality which they at present enjoy, and in which it would be manifestly unwise to allow them to exercise their calling hereafter, by reason of the large amount of capital, with fishing gear, boats, nets and other plant, which these companies bring to bear in the prosecution of their work within such narrowly-confined limits as the bay at the outlet of the Little Saskatchewan River.

This bay is the key to the extensive whitefish breeding grounds in the Little Saskatchewan River and St. Martin's Lake, which is about 30 miles up the river. It is therefore self-evident that this bay should be guarded against over-fishing—in fact, if the maintenance of the whitefish industry in a large section of the western shore of Lake Winnipeg is to be considered of any importance, commercial fishing of any description should be wholly excluded from this bay.

It will be seen by a reference to the plan of the lake that at Beren's Island, Reindeer Island and Selkirk Island, and at the Little Saskatchewan River, the fishing companies have permanent establishments, marked thus **x**, consisting of ice-houses, freezing-houses, and landing-piers. Therefore, in any regulations that may be found advisable to adopt for the future, as suggested herein, these establishments will not be interfered with, unless with those at the Little Saskatchewan River, where the present system for catching whitefish in the bay and mouth of this river should not be allowed. But as a depot for storing and freezing fish, these establishments at the Little Saskatchewan River would in no wise be interfered with. This restriction against commercial fishing at the mouth and bay of the Little Saskatchewan would only affect in some degree the fishing companies of Gauthier & Co., and Robinson & Co., who have similar establishments for curing and freezing fish at Beren's Island and elsewhere on the lake.

The plan proposed is to exclude the granting of licenses for commercial fishing—that is, fishing by the modes and system now adopted by the present fishing companies—from certain well-defined limits, where it is known that the whitefish collect together preparatory to, and at, the time of spawning. These excluded waters against the above mentioned "commercial fishing" should be as follows: All the waters of Lake Winnipeg south of a line running from a point laid down in the map on the western shore of the lake, called "Dancing Point," to Cat Point, on Lynx Island, and thence across the lake to Pigeon Point.

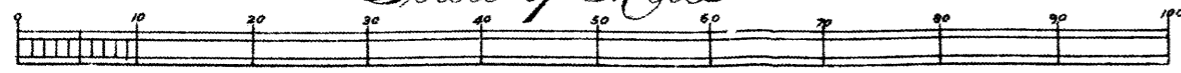
All the waters of Lake Winnipeg east of certain lines, commencing at Pigeon Point and running across to the extreme north-eastern point of Berens Island, thence across again to Mossy Point, and from Big Stone Point to George's Island, and thence northward to a point three miles above the mouth of Big Black River, and from Montreal Point, at the entrance to Playgreen Lake, on a line running due west into Winnipeg Lake five miles, and from thence running due north to the Peninsula forming Mossy Point; and the waters of, and connected with, the Great and Little Playgreen Lakes. The waters on the north end of Lake Winnipeg, namely: Limestone Bay and its outlet south to Eagle Island; all the waters on the western shore from the north end to the south end of Selkirk Island, and from thence southward to a projecting point on the mainland of Long Point, as shown on the plan, and including Cedar Lake and Cross Lake, and the waters connecting them with Lake Winnipeg, together with the waters of all rivers, and the mouths thereof, emptying into the above-described excluded parts of Lake Winnipeg, and including St. Martin's Lake also.



MAP OF PARTS OF
MANITOBA SASKATCHEWAN AND KEEWATIN

Showing the principal Lakes and Rivers.

Scale of Miles



Note.—The red lines shew the boundaries from which, shoreward, it is proposed “Commercial Licenses” shall not be granted.—All other Licenses to be called Domestic Licenses and issued under restrictions for Home use only.

× Shews the places where the Fishing Companies now carry on their fishing operations.

That the "Commercial Fishing License" to be granted to any fishing company or other person shall limit the number of fishing boats to be used, the length, width and size of mesh of each net to be fished, and the number of boats and nets under each license shall be limited to a maximum number therein mentioned.

That a license, to be called a "Domestic License," be granted to Indians and settlers to carry on fishing for home use, and not for export traffic; one net only allowed to such applicants, the length of such net not to exceed a maximum therein mentioned.

That the present close season for whitefish in Lake Winnipeg, from 5th October to 30th November, inclusive, be continued and enforced against all persons.

The following questions relating to the whitefish fisheries in Lake Winnipeg being submitted for my consideration are herewith answered *seriatim* :—

(1.) "Whether there really exists a depletion of whitefish in the waters of Lake Winnipeg?"

There is a gradual but steady depletion of the whitefish product of Lake Winnipeg going on, from the effects of the present system of fishing in certain parts of the lake.

(2.) "If so, in what waters, and what are the causes of it?"

The depletion is experienced more particularly at the mouths of the larger rivers, and in the lower parts of the lake, particularly in the Little Saskatchewan River and St. Martin's Lake, caused by over-fishing at improper times, notably at the mouth and bay of the Little Saskatchewan River. This cause, if permitted to be continued here, and to be allowed in other places similarly situated in other parts of the lake, must assuredly hasten rapid depletion and eventually termination of the whitefish industry of Lake Winnipeg.

(3.) "What are the remedies?"

The remedies are to reasonably restrict the wholesale fishing now carried on by the fishing companies by judicious regulations, and to wholly prevent these companies, and others, from fishing in certain well known localities, where the whitefish congregate in great numbers prior to the close season and preparatory to their breeding time.

(4.) "Is the present close season proper or sufficiently long for the efficient protection of whitefish, and if not, what dates would you recommend?"

The present close season (5th October to 30th November) is well chosen, and should answer all purposes, if duly enforced.

(5.) "Should the permission granted Indians of fishing indiscriminately during the close season be continued?"

It would be better for the general interests of the Lake Winnipeg fisheries that the Indians should not be permitted to fish indiscriminately during the "close season;" however, public policy, it appears, prevents this being carried out.

(6.) "Should the killing of whitefish during the close season, for the purposes of feeding dogs, be tolerated; and, if so, under what circumstances?"

This is a necessary sequence to the former question. The dog is the Indian's provider, and his "beast of burthen," so to speak; and food is a necessity for the dog as well as the Indian. If the Indian is permitted to take whitefish for his own purposes during the close season the dog cannot be excepted, and it would be found almost impossible to procure accurate data to show the quantity of whitefish required for feeding dogs.

(7.) "Should any, and which waters, be reserved for the exclusive use of "Indians?"

Yes. Where there are no white settlers actually domiciled, and carrying on agricultural or other fairly legitimate callings, the Indians should have the exclusive right of fishing in their reserves, and in all other waters which it may be considered expedient to set apart for them. Fish traders or other persons should not be allowed to fish in these waters under any pretence whatever.

(8.) "Should net fishing be 'curtailed,' and to what extent?"

Net fishing should be limited in the licenses granted to "Fishing Companies," and all others who carry on "Commercial Fishing"—that is, as now known by the methods of freezing and curing for export purposes. Each license for this description of fishing should state a maximum limit for the number of boats, and length and description of net to be used; and "Domestic Licenses," that is for the actual, and *bona fide* settler, or Indian, should also be limited to one boat and a maximum length of net each.

(9.) "Is the present 'close season' for sturgeon sufficiently long to ensure full protection to these fish?"

The close season for sturgeon, should be from what is at present known of its habits, from 15th April to 15th July. The license to fish sturgeon should describe the location where to fish, the description, length and size of mesh of the net, and the description of boat to be used.

(10.) "Would it be desirable that Indians be supplied with large boats and longer nets, so as to enable them to fish in the deep parts of Lake Winnipeg, instead of on the shoals only, as at present?"

It would be undesirable that Indians should be supplied with large boats and longer nets in order to fish in open or deeper parts of the lake. If the Indians desire to fish in waters outside their reserves, or other waters set apart for them, they place themselves in competition with other fishermen, and should therefore make their own provision for such outside fishing.

CONCLUSION.

There are, no doubt, many minor details which may be gone into in the future for practically carrying out the suggestions which have been offered to your Department, should they be considered worthy of adoption. The varied and complicated issues which are embodied in the correspondence make the solution of them extremely difficult to overcome, or to be placed under a standard of regulations, without in some manner affecting the interests of one or the other of the parties concerned.

But after mature consideration of the general subject I see no other way by which the true interests of the whitefish industries of Lake Winnipeg can be so well conserved as by the adoption of the recommendations which I have embodied in this report, believing that they will render the greatest amount of good to the greatest number of inhabitants of Manitoba and the country generally.

Whilst consideration has been given herein regarding the importance of preserving the whitefish fisheries of Lake Winnipeg, it is of equal, if not of greater importance, that similar protection should be at once extended to the waters of Lakes Winnipegosis, Manitoba, and all other lakes in the North-West. Their smaller and narrower areas, and numerous little bays and inlets offer greater facilities for a more speedy termination of the whitefish industries connected with them than with Lake Winnipeg; and if the improvident system of commercial fishing practised by fishing and trading corporations be allowed to prevail, as at present, the whitefish wealth of the lakes of the North-West will soon become exhausted.

Respectfully submitted.

SAMUEL WILMOT.

APPENDIX No. 4.

SPECIAL REPORT

BY

MR. S. WILMOT

ON THE

SALMON FISHERY

AND

FISHERY REGULATIONS

OF

FRASER RIVER, B. C.

1. The Canning Industry.
 2. The Fishery Regulations.
 3. Supplementary.
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OTTAWA, November, 1890.

The Honourable

CHARLES H. TUPPER,

Minister of Marine and Fisheries.

SIR,—In accordance with your instructions in August last I visited the Fraser River in British Columbia to investigate certain matters relating to the fishery regulations as applied to the taking of salmon by the several fishing companies engaged in the canning industry.

On my arrival at New Westminster I obtained copies of the regulations in force at that time, and then proceeded to visit a number of the principal canning establishments along the river, in order that I might form a somewhat practical knowledge of the operations connected with the salmon canning industries of the Fraser River.

Many of the canning factories are very extensive establishments, both as regards the size of the buildings, their general equipments and their adaptability for the work for which they are intended. The method employed is very similar in each, only differing somewhat as regards the more systematic application of machinery and work, and the greater capacity which some of the institutions have over others.

There are seventeen of these factories for canning salmon on the tidal and estuary parts of the Fraser River. They are all located between a point a short distance above New Westminster and the outlet of the Fraser into the Strait of Georgia, taking in about twenty-five miles of the river.

Within this limit the extraordinary quantities of salmon that were being caught during my stay there would be quite beyond the conception of any one, unless he had been an eye-witness of the prodigious numbers that were delivered at and passed through these canneries daily.

During one day alone it was computed that, some 150,000 salmon were delivered at these factories, all of which passed through the various stages of cleaning, cooking, canning, and packing ready for shipment the same day for the markets of America, Europe, Australia, and other countries.

This enormous fishing business goes on daily, until the great run of "Saw-kay" or suck-eye salmon ends. These salmon generally enter the Fraser River about the middle or latter part of July, and continue till about the end of August, when they became unfit to can, and those that may have escaped the nets in the lower waters may be seen passing up the Fraser and its tributaries to their spawning grounds in very great numbers.

There are several kinds of the salmon family that enter the Fraser River, but the so-called Suckeye "*Oncorhynchus Nerka*" is by far the most numerous, and forms the great commercial catch which the canning companies operate so largely with for export purposes.

The Quinnet or spring salmon "*Oncorhynchus Chouica*," are an earlier run of fish which enter the Fraser: They are much larger, reaching 20, 30 and 50 pounds in weight; their numbers, compared with the "Saw-kay," are very small indeed, and therefore of less commercial importance to the canning companies. The Saw-kay's superiority for traffic consists in the great number that can be readily obtained for extensive export trade, and the high blood-red colour of their flesh, which is retained in the canning process, giving them a preference on this account in the markets of Europe and elsewhere.

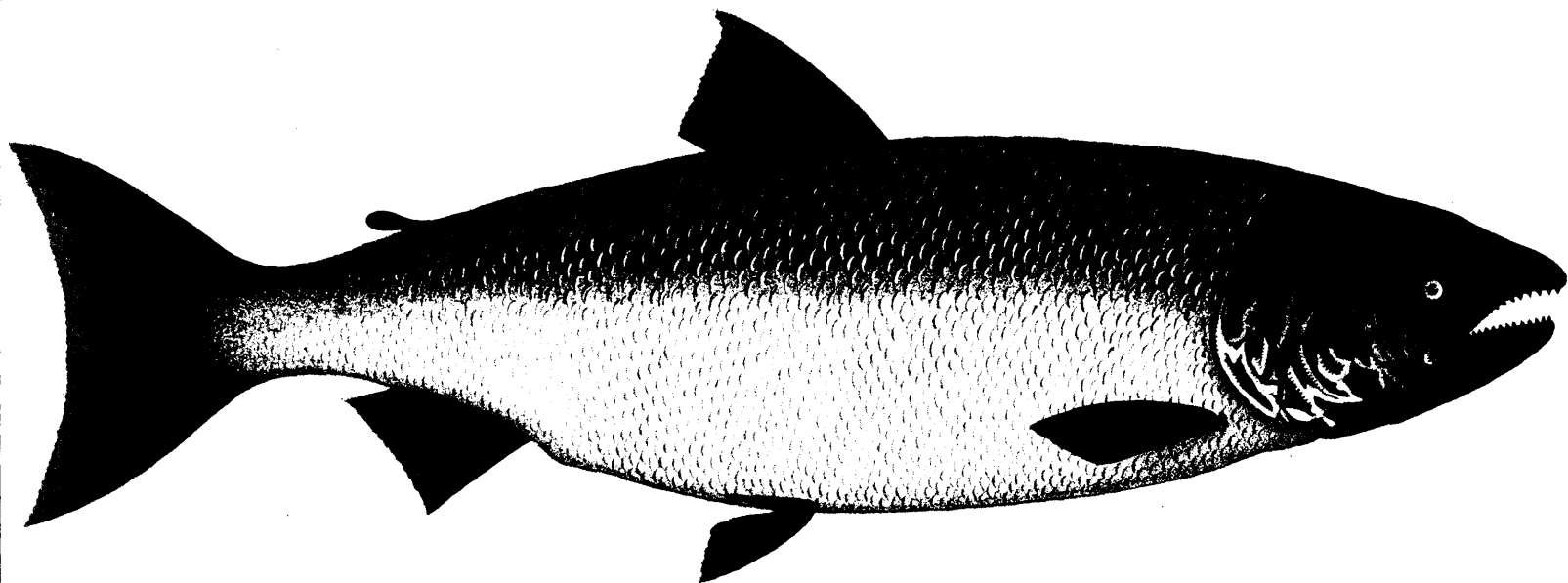
As previously stated, the "Saw-kay" salmon enter the Fraser in July. They are principally caught with drift nets. The regulation length of these nets is 150

fathoms, and size of mesh $5\frac{3}{4}$ inches extension measure. These nets are cast from the fishermen's boats and allowed to drift with the tide on the surface, being kept in place by the usual cork and lead system. The salmon passing up come in contact with these nets and get "gilled." The fishing boats, which are limited in number on this river to 500, are seen dotted all along the river. By far the greater amount of fishing is carried on near the outlet of the river into the straits, where the fishermen seem most anxious to set their nets, for the first chance in meeting the incoming fish from the sea. It is not unusual for a single boat, in one drift of a net of a quarter of a mile, to fill the boat with several hundred salmon. These are immediately taken to the company's factory where the boat is owned or the fisherman is employed, and thrown upon the landing platform. On these platforms at one end of the factory will be seen a mass of salmon numbering 8,000 and 10,000, which have been brought in by the fishermen's boats during the previous night and early morning.

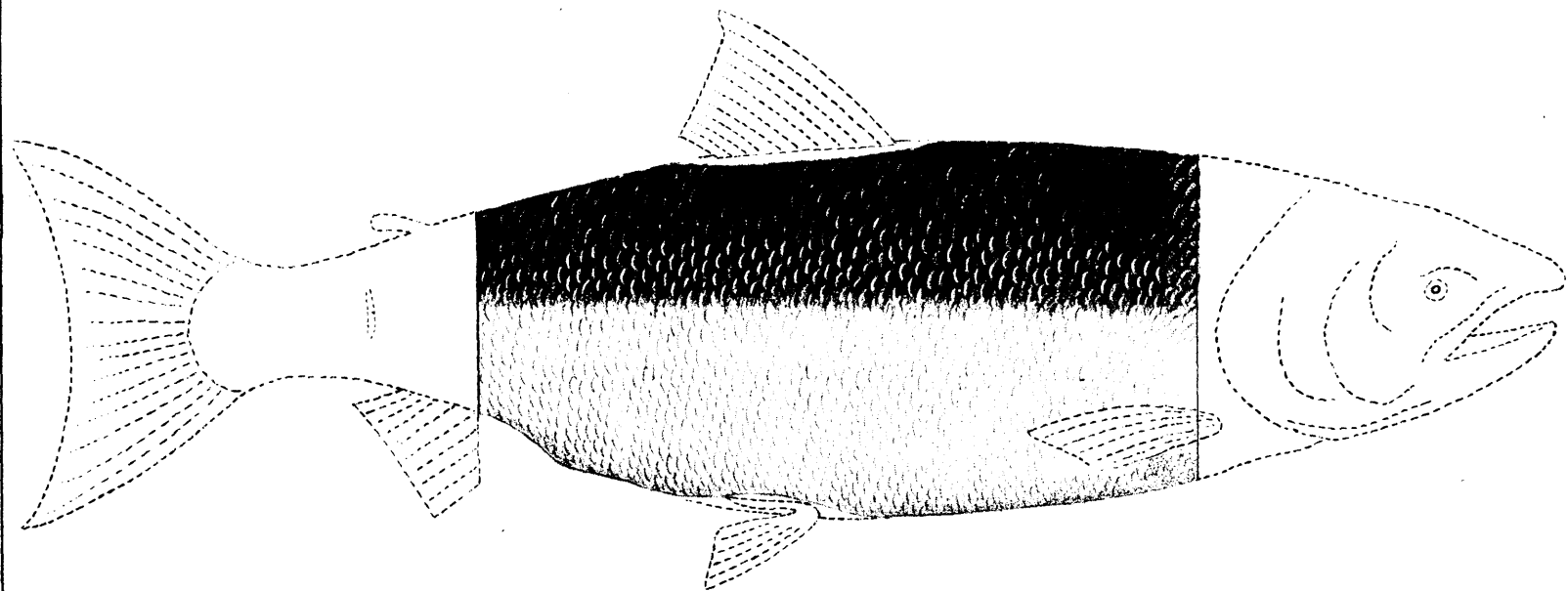
These salmon, whatever their numbers may be, are all passed through the several stages of the clearing, cooking, and canning process during that same day, so that there shall be no overlapping of one day's catch upon another. This expedition is absolutely necessary, as the fish must be put up in the most perfect fresh condition; consequently, the number of persons employed at these factories is very large, ranging in the neighbourhood of 200 to 300, depending upon the capacity of the cannery and the number of boats employed in fishing for it. Indians and Chinese are almost wholly employed in these factories.

To the ordinary observer the work of curing these great masses of salmon appears most interesting and instructive. The expeditious and systematic manner in which it is done is wonderful; but he is struck with astonishment with the wholesale and wanton waste that is going on in throwing away as offal such a vast quantity of rich, wholesome fish, food, which ought and might be made use of profitably for human food, or other useful purposes. A brief description of this wanton waste of fish is here given.

From the great mass of salmon on the platform just described the fish are thrown up singly upon the end of a long, narrow table, on either side of which the workmen stand. One, with a large knife, at one cut severs the head, shoulders and pectoral fins from the body. The next man grasps the fish by the tail and makes a small cut across (thus |) into which his thumb will penetrate a little to hold the fish from slipping from his hand; then with a large knife in his other hand he slices off with one cut the dorsal or back fin; with another stroke the two ventral or belly fins are slashed off. In both operations a goodly slice of flesh goes with the fins. The tail is then cut off near the vent. The body is then passed along to another operator, who opens the belly and takes out the entrails; and on it goes through the hands of many operatives till cooked and canned. Coming back to the waste—the head, shoulders, tail-cut, fins and entrails, making nearly one-third of the whole salmon, is shoved off the table into an open hopper-hole, all falling into the river underneath as offal. The following illustrations are given to show the waste in cutting up the fish.



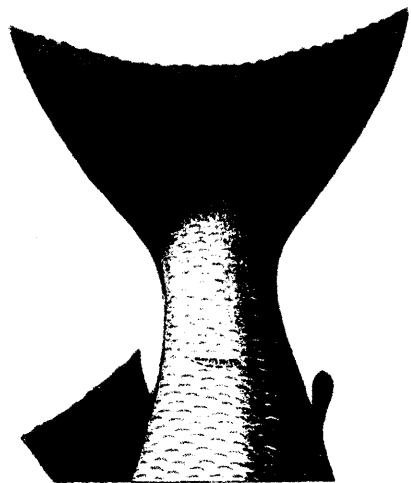
RED SALMON OR SUCK-EYE.
"ONCORHYNCHUS NERKA."
FRASER RIVER.



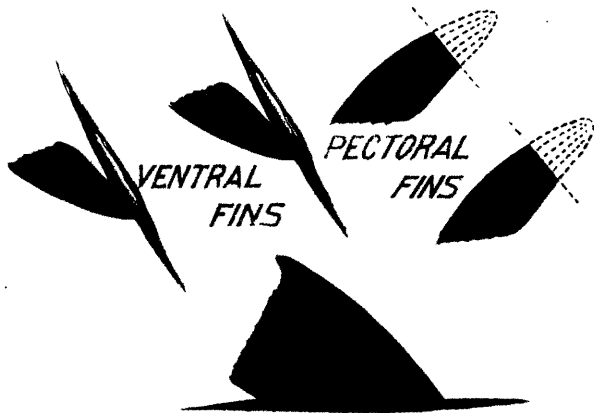
BODY FOR CANNING.

WITH HEAD AND SHOULDERS, TAIL AND ALL FINS

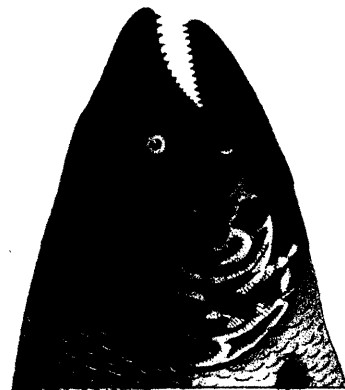
CUT OFF AS OFFAL.



OFFAL



DORSAL FIN



OFFAL

OFFAL AS CAST AWAY.

The usual weight of the general run of "Saw-kay" salmon in the Fraser River will average between 7 and 8 pounds. If the fish are very plentiful in the river the canneries give a little more latitude to the *slashers* who cut off the heads, tails and fins, which they take advantage of by being more generous in the size of the parts they cut off as waste, as it is much easier to do so. In this case an average 8 pound salmon will make from four to four and a-half 1 pound cans for market. If, on the other hand, the fish are not so plentiful, less curtailing of the body of the salmon is done, and four and a-half or five cans may be got from the same sized fish. Thus, nearly one-third of the whole salmon is actually thrown away to rot and pollute the river.

The question arises, why should such a sacrifice of fish-food be allowed, to gratify the avarice of the packers and the fastidious taste of the wealthier class of consumers? Why not compel the canner to arrange his business so that this wanton waste of fish shall be largely diminished; or induce him to put up two classes of goods, equally suitable to the wants and means of the richer and poorer classes of consumers; or, if this should be incompatible with the trade, why not convert this vast quantity of fish matter, now thrown away as offal, into usefulness of some kind, in the way of oil, or fertilizers of some description?

THE FISHERY REGULATIONS.

In passing up and down the Fraser River and in visiting several of the canning factories opportunity was afforded for obtaining information from some of the proprietors of these establishments, and from others as well, regarding the working of the present fishery regulations. I had in my possession then only a copy of the Order in Council of 14th March, 1890. I had not then seen or read the lengthy correspondence which had passed between the Fisheries Department and the proprietors of the canneries on the river; this correspondence was on file in Ottawa. When leaving Ottawa for Manitoba on Lake Winnipeg matters, the trip to British Columbia was not contemplated, otherwise the correspondence relating to the Fraser River fishery regulations would have been closely looked into before leaving. Since my return, however, I have looked over the file 5049—89, in which the views of your Department and of the canners are fully discussed *pro* and *con*. With the information obtained by reading the correspondence referred to, and from the practical knowledge obtained by a personal inspection of the principal canning establishments on the river, and by conversations had with some of the leading proprietors of factories on the Fraser River, I feel myself better prepared to offer my views and conclusions regarding the working of the present fishery regulations, as applied to the Fraser River salmon fisheries in British Columbia.

I may here, at the beginning, state that I learned from the general expression given by all parties that no serious objections were raised to the working of the present regulations. It will, nevertheless, be understood that, with an industry so extensively carried on as the salmon canning business is on the Fraser it would be extraordinary indeed not to find some grumbling, especially amongst the more selfish and grasping persons engaged in the trade; but from every source, and upon general principles as regards the maintenance of the salmon wealth of the Fraser River, it was universally admitted that this great natural product of the waters should be more carefully husbanded than hitherto, and that it was the bounden duty of the Fishery Department to surround the industry with such judicious regulations as would prevent this extravagant and improvident fishing, with the view to maintain the source of wealth for the present and the future, which the river is so bountifully supplied with, for the commercial and domestic benefits and comforts of its inhabitants.

LIMITATION OF BOATS.

Whilst this somewhat quiet and satisfactory disposition was shown regarding the present regulations, it does not follow that this will be continuous in following years. The present season, and that of 1889, have given enormous catches of salmon,

in fact quite unprecedented in the Fraser River, and the canning companies have been enabled to procure full supplies of fish for their factories with the present limitation of boats allowed them (namely, in the gross number 350), without any difficulty. In fact, these cannerymen could have largely increased their individual pack of canned salmon if they had made the necessary preparations to do so. The fish were there, but it was useless to take more than they could handle daily, or that they had made provision for in their establishments. Thus, it would appear that this more than ordinary contentment prevailed regarding the present regulations in the number of boats allotted to them. Should the crop of salmon in the river prove to be considerably less in following years the demand would be (as has been asked for) that the number of boats should be increased, in order that with a decrease in fish, and an increase in boats the probabilities would be that the full supply of salmon to fill their factories would be secured:—

This gives evidence of the wisdom of the regulation as now laid down for a maximum limit in the number of boats to be licensed, because it has been found that, during the past two seasons, this limit of boats has been quite, if not more, than sufficient to supply all the canneries with all the salmon their factories could well accommodate. If the number of boats were to be increased because the number of salmon were less in any one year, it would simply mean that the Department would be aiding the avaricious fisherman to destroy in a greater degree the reduced stock of salmon entering the river; whilst, if the desire is to husband this industry, the true plan would be to reduce the number of boats for the season in which there might be a reduced run of fish in the river. Hence, it must be concluded that this fixed limit of boats of 350 for the canneries (which no doubt, is all the river can reasonably bear) should be fixed, and not be made changeable from year to year to suit the demands of the canning companies.

This view of the matter is equally applicable to the remaining 150 licenses which, by the "regulations," are to be granted to the "proprietors of freezers on the river, and to fishermen."

LICENSE FEES.

Regarding the discrimination of the license fee in favour of the freezers and fishermen against the cannerymen, the latter feel dissatisfied. The fees under the regulations are \$20 for the cannerymen up to a limit of twenty licenses each, with \$5 for freezers and fishermen, and \$2 to actual settlers or farmers who fish only for their own use, not for sale or barter. Whilst this reduced fee for the settler or farmer is no doubt correct, why should not the proprietors of freezers, and fishermen, be placed on the same list with regard to license fees as the canneryman? They are each, so to speak, professionally engaged in catching salmon for traffic—the canneryman and the freezer for commerce and export; the fisherman for sale and barter to the canneryman, the freezer, or the community generally, at his pleasure. If, then, the freezer, or the trading fisherman, becomes a competitor with the canneryman in the traffic of the salmon caught by them, why should they not pay the same license fee, namely, \$20, for this privilege? The reduced fee of \$2 for licenses to the actual settler or farmer is no doubt correct, because he is only permitted by this privilege to catch salmon for his own domestic purposes, but not to sell or trade them as a business. It gives to the settler on the river the opportunity of getting a fair share of the fish passing him for his own consumption, which may not exceed one or two hundred salmon, which, under ordinary circumstances, might be taken in the course of a few days fishing. In this way he is encouraged by the regulations in being able to get his own family wants supplied; yet he is restricted from going into the business of fishing for "sale or barter," which would draw him from the actual duties of his proper vocation of tilling the soil.

This is not the case with the trading or actual fisherman, who, as a rule, follows fishing as a regular calling, and spends the whole season capturing salmon, and selling them to the canneries, or to the freezers, or to the inhabitants generally. In many instances these fishermen are not actual settlers, but transients, persons of

all nationalities—coming in many cases, from places far away from the fishing grounds on the Fraser River, in order to pursue their calling in killing, trading and generally dealing in fish, for which privileges they only pay a license fee of \$5, as against the farmer's fee of \$2, who is not allowed to trade, sell or make money out of the fish he catches; and also against the canner, who pays a fee of \$20 and upwards and spends thousands of dollars in the erection of factories, and employs hundreds of workmen in carrying on the fishing industry of the country.

As it is, no doubt many of these trading fishermen take out their licenses at \$5, and transfer them with their boats, fish, &c., over to a canner, who by this means gets the advantage of the Department in buying up, say ten of these fishermen and their licenses, costing him \$50, whereas if the license fee to the actual fisherman was (as it should be) \$20, and the canner felt disposed to increase his "pack" by buying out these men, the Department could, under the circumstances, get \$200 from these licenses, whereas now they only get \$50 by this evidently unfair discrimination in favour of the trading fishermen.

WEEKLY CLOSE TIME.

The weekly close time established by Order in Council, 14th March, 1890, was that "Fishing for salmon shall be discontinued from 6 o'clock p.m. on Saturday to 6 o'clock a.m. on the following Monday." This it appears was changed by instructions from the Department to read as follows:—

"Fishing for salmon shall be discontinued from 6 o'clock a.m. on Saturday to 6 o'clock p.m. on the following Sunday."

This latter "close time" is undoubtedly nearer the proper one. It gives free passage of salmon up river during the whole of Saturday and Sunday, and gives opportunity for fishermen, workmen and others to keep Sunday as a day of rest. When fishing was permitted on Sunday it became a necessity that the Sabbath should be broken in order to put up the Saturday's catch, which, if left over for Monday, would become injured to such a degree as to be unfit for canning. As there is no Order in Council for this change, it is suggested that one should be passed repealing the close time now appearing in the printed regulations, and substituting the one acted upon during the past season. But if the Sabbath is to be kept the close time should cover the whole of Sunday—thus—from 6 a.m. on Saturday till 12 p.m. on Sunday.

DESCRIPTION OF NETS.

By the Regulation of 14th March, 1890, which is the latest, no special description of nets is laid down for capturing salmon on the Fraser River, or in the Province of British Columbia. Drift nets are, however, incidentally mentioned in the Order in Council, with reference to how and where they shall be used. Nothing else is said in relation to any other description of net. Other nets than drift nets are said to be used for taking salmon in some of the rivers, and other waters of British Columbia. It was reported that 10,000 salmon were taken with a seine at one haul in one of the rivers further up on the coast. The use of seines for catching salmon should be forbidden in British Columbia, as they are in almost every other country when the preservation of this fish is considered to be of importance. A seine may be cast across the whole width of a river, and sweep in every fish within the limit of its draft, leaving little, if any chance for salmon to escape. Not so with the drift net, for in working it floats on the surface along with the tide; it is narrow in depth, and many salmon therefore escape this drift net, either by going round it, or getting under it. The seine sweeps from top to bottom of the river in drawing, and surrounds the fish and encloses them like the deadly purse seine. The fish once within its circle can have small chance for escape. The drift net only should be allowed for taking salmon in the waters of British Columbia; its maximum length and depth, and its minimum size of mesh, should be established by the Department and strictly enforced.

ANNUAL CLOSE TIME.

British Columbia is the only Province of the Dominion where no annual "close time" is provided for the protection of salmon during their spawning time. This appears extraordinary indeed that the salmon, which is the principal source of commercial wealth in the rivers of British Columbia, should be allowed to be killed during their breeding season. Not only are there laws for protecting salmon at their spawning time in all other Provinces of the Dominion, but similar laws are found to be in existence in all civilised countries in the world, in the waters of which salmon are found to be indigenous. This absence of a "close season" for salmon in British Columbia is truly paradoxical, and calls forth from the Department energetic action for establishing a proper close time for the protection of this valuable fish at its breeding season, and for some short time also during their migration up river.

OFFAL OF FISH.

Nothing whatever is said in the Regulations of the 14th March, 1890, with regard to the prevention of fish offal being cast into any of the waters of British Columbia. This restriction, it is presumed, was considered unnecessary to be inserted in that Order in Council, as a clause referring to it is embodied in the general Fisheries Act of 1886—where a penalty is imposed against any person who causes to be thrown, or deposits in any water where fishing is carried on, "remains, or offal of fish."

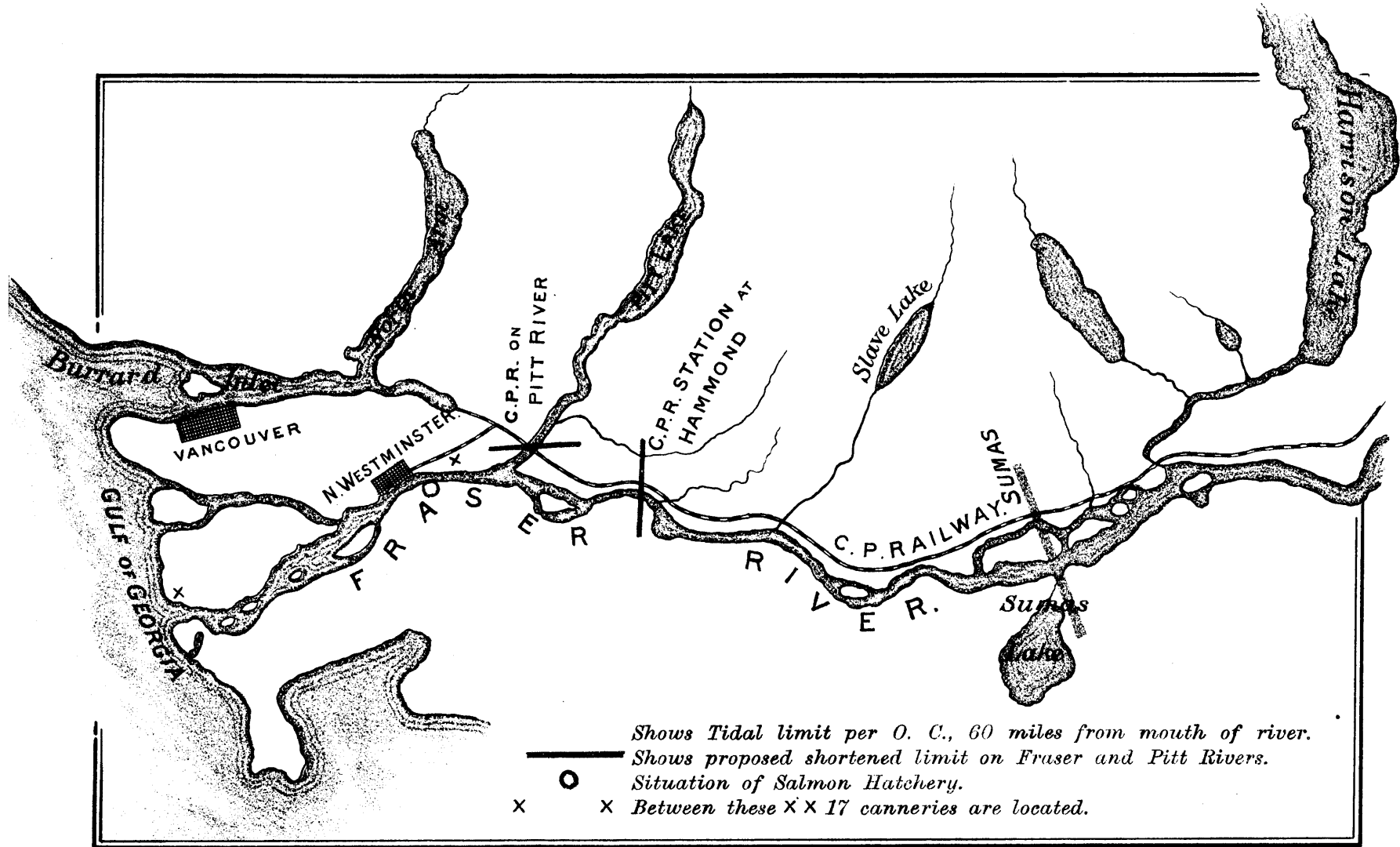
This restriction appears very clear; yet it is held by some fishermen, who persist in casting all their fish offal into the rivers, that because no provision is made in the Fishery Regulations relating to British Columbia waters they are not violating any law in doing so.

The forbidding of throwing the remains or offal of fish or any other deleterious matter into waters frequented by fish is not only the law of Canada, but of almost every other country; but, notwithstanding this wise provision in the Fisheries Act of Canada, fish offal is cast into the Fraser River from all the canning factories in the most wholesale and indiscriminate manner. It is needless to dwell here upon the pernicious effects which must result from this evil practice if allowed to be continued. The strongest evidence of this view of the matter is the stringent legislation in Britain and other European countries against the pollution of their waters from this cause.

In order to form an estimate of the magnitude of the quantity of offal and waste parts of the salmon which are cast into the Fraser River from these canning establishments alone in one season, it may be here stated that the returns of 1889 show 14,789,856 1-pound cans put up by these canneries. Allowing five cans (an over allowance) for each fish, it would represent of the "Saw-kay" species 2,957,971 salmon, which, at the usual average of 8 pounds each, would give a gross weight of 23,663,768 pounds. The amount from this put up in pound cans was 14,789,856, leaving 8,873,912 pounds, or 4,436 tons of fish and offal, all of which was cast into the river to decay and pollute the water. Of this mass of fish matter thrown away, fully one-fourth, or upwards of 1,000 tons, or 2,219,900 pounds of good, wholesome fish-food, quite equal to that which is canned, was wantonly destroyed and lost for human wants. To show this loss in another way, there was an equivalent in numbers to (not including the real offal, actually unfit for food) 277,489 of the above described salmon taken in 1889 allowed to go to waste and pollute the river.

LIMIT OF TIDAL FISHING.

The limit of the Fraser River set aside for net fishing by Order in Council, 25th July, 1889, covers too great a length of the river; it extends as far up as Sumas



River, which is about sixty miles from the mouth. A shorter limit made at the present time would prevent the erection of canneries hereafter on the narrow and more confined parts of the river, and also give greater freedom for the passage of fish to their breeding grounds. At present there is nothing to prevent a person putting up a canning factory anywhere on the river up to Sumas River. This would be ruinous to the salmon industry, for after the fish shall have passed the gauntlet and escaped the numerous nets with in twenty-five miles of the mouth, a factory or more some forty or sixty miles further up, with their twenty boats each and upwards, would almost annihilate the balance of the salmon in the river. To obviate such a calamity to the river, which undoubtedly must take place as the demand for canned fish becomes greater, and the avarice of the fisherman increases in the same ratio to catch them, the tidal limit should be very much shortened, say to the end at Hammond, on the Fraser, and the Canadian Pacific Railway crossing on Pitt River, two unmistakable boundaries. (See map.)

At the present time a factory for canning salmon could be built anywhere on the river, up to Sumas River (sixty miles), without obtaining authority or consent from the Department. To check this, the canners in future should be compelled to take out a "Factory License," which shall give the location of the factory, as well as the number of boats to be used. In this way the factories would come under the jurisdiction of the Department with regard to their location, etc. Certainly no new factories should be permitted to be built at or above New Westminster in the interest of the fisheries, as well as from a sanitary point of view for that city.

SUMMARY.

The following is a summary of the views put forth in this report regarding fishery regulations for the Fraser River, B.C.

(See Order in Council, 14th March, 1890.)

SECTION 1.

Clause 1. Fishing allowed only under licenses, and Providing for Indians, etc.—Satisfactory.

Clause 2. Meshes of nets to be $5\frac{3}{4}$ inches extension measure, etc.—Satisfactory, if fraud is not practiced, and by which the mesh becomes much lessened by wet or otherwise. A $5\frac{3}{4}$ mesh, when dry will be reduced to $5\frac{5}{8}$ when wet. To properly establish a $5\frac{3}{4}$ mesh when fishing, it should be $5\frac{7}{8}$ when dry.

Clause 3. (a.) (b.) Drifting with salmon nets, etc.—Under no circumstances should any other description of nets be allowed but drift-nets. Seines, stake-nets, pound or trap-nets should be prohibited for taking salmon in the Fraser or other rivers of British Columbia.

(c.) Weekly close time from 6 o'clock a.m. Saturday till 6 o'clock p.m. Sunday following (as amended).—This should be 6 o'clock a.m. Saturday till 12 o'clock p.m. following Sunday. In this way no violation of the Sunday would be permitted by the Department. At present Sunday fishing is sanctioned by the Department from 6 to 12 p.m. Sundays in British Columbia, but nowhere else in the Dominion.

Clause 4 (a.) (b.) The numbering of boats and nets licensed.—Satisfactory.

Clause 5 (a.) Determining of the number of boats and nets to be licensed.—Satisfactory.

(b.) Total number of licenses for canneries, 350, for freezers and other fishermen, 150—total 500.—Satisfactory.

Fee for boats to canners up to twenty in number, \$20 each, with increase as per allotments.—Satisfactory.

Fee for boats to freezers, and other fishermen (not farmers) \$5, should be \$20, same as canners.

SECTION 2.

Trout Fisheries.

Close Season, 15th October to 15th March, should be 15th September to 15th March.

SAMUEL WILMOT.

October 1st, 1890.

P.S.—After this report on the Salmon Fisheries of the Fraser River was submitted, and placed in type, the following extracts were taken from a valuable article on the salmon fisheries of Alaska, which appeared in the *American Angler* of 22nd November. Finding them applicable to, and corroborative of the subject under consideration they are hereto appended:—

“The red salmon or red-fish also known as the *sawqui* next to the humpback is the most abundant salmon of the Alaska territory. Commercially it is the most important fish and indeed the most valuable product of Alaska. The United States Government has a prospective revenue of \$1,000,000 annually from its seal islands. The people engaged in the salmon fishery last year took about \$3,000,000 worth of fish from Alaska waters, and they were chiefly this little red salmon. This is not a large fish for it averages only seven or eight pounds in weight. * * * It travels the whole length of rivers pushing on to their sources, but unlike its big relative (the quinnat) it spawns chiefly in lakes, and in their tributary streams. At one station in Alaska the principal red salmon station, upwards of 150,000 salmon have been taken in a day. A first class cannery can use about 25,000 red salmon daily. Thirty-six canneries were operated in Alaska in 1889, the value of the pack at an average of \$5 per case was about \$3,000,000.”

“It is asked is this tremendous drain of 8,500,000 salmon in a year, likely to endanger the food supply of the natives? Will this industry decline in value from year to year as it has on some of the more southern rivers? Undoubtedly it will, if over-fishing and injurious methods are continued; barriers obstructing the ascent of breeding fish will unquestionably exterminate the species in after years; continual *seining across the mouths of rivers* will certainly hasten the same unfortunate result. The necessity of protecting this valuable resource must be apparent to every intelligent person. Alaska furnishes to-day one-half of the American yield of salmon, and it will be our own fault if the industry is destroyed. We must regulate the fishing by suitable laws, and refuse injurious privileges. The supply must be kept up and increased also by artificial propagation. Fish culture cannot find a more promising field, or a more propitious and urgent occasion. There are still plenty of breeding salmon. * * * The climate is favourable and the population is in sympathy with fish cultural works. Surely here is an opportunity not to be neglected and the time to improve it is now.”

SUPPLEMENTARY REPORT.

At the request of the Minister of Marine and Fisheries for a further consideration of certain matter in the report, the following is submitted:

LICENSE FEES.

The regulations of 14th May 1890, read thus:—“The total number of licenses on the Fraser River shall be limited to 500; of this number 350 shall go to the canners at \$20 each, up to a limit of 20; when additional licenses beyond that number may be allotted to the canners at \$50 each, if the whole number does not exceed 350.

“The remaining 150 Licenses are to be issued at \$5 each to the proprietors of freezers on the river, and to fishermen, as the Minister may authorise, but no fisherman to receive more than one license.”

The deduction from this regulation is that proprietors of freezers may be granted any number of licenses at \$5 each, whilst a fisherman is restricted to only one license at a similar fee of \$5, but the total number of licenses so issued must not exceed 150.

In a further consideration of this matter it must be understood that in all cases the allotment of 350 licenses to the canners will be fully taken up, and it is not only possible but very probable that, the canners will in one way or another also absorb a large proportion of the remaining 150, intended by the regulation for the freezers and fishermen, for it will be found that a large proportion of the \$5 licenses granted to fishermen will be got directly or indirectly, through the medium of the canners who employ these fishermen. In this way the canners may really become the monopolists, in a large degree, of almost the whole of the 500 licenses, and at a much more reduced price than if the trading fishermen were to pay the more equitable fee of \$20 all round.

It will be found that the payment of \$20 fee by the fisherman for his license would in no way stop the canner from obtaining it in like manner as with the \$5 fee, because the canners are not only anxious, but are asking from the Department the privilege of getting additional licenses at \$20 over the number now allotted to them under the regulations.

Then why should the so-called fisherman, or trader, be permitted to act as the middle man between the canner and the Department at this small fee of \$5, more than with a fee of \$20, for in either case the canner will get the benefit of the increased number of boats over his allotment by the present regulations. The difference is, that the canner gets by this means his additional boats over twenty from the fisherman at \$5 each, instead of \$20 each, which he ought fairly to pay under the operations of the present requirement in the regulation. The fisherman is no better off in either case; the Department loses \$15 on each of these licenses, and the canner gains the \$15.

As an illustration, take two British Columbia inhabitants one an actual settler, or farmer; who pays \$2 for the privilege of fishing for his family's uses only, and is forbidden to sell or barter his fish away, he cannot speculate with the canner in the disposal of anything connected with his license. The other is a person who may be anything, a farmer, trader, fisherman or transient person from any where. He takes out a fisherman's license at \$5, with no restrictions whatever attached; he passes it over to a canner, who gets an additional boat over his limit of twenty under the regulations, and probably makes \$15 into the bargain by this side-wind out of the Department. When put into round figures, the transactions as at present will show as follows:—

Say 350 licenses to canners, @ \$20.....	\$7,000
do 150 do to fishermen, @ \$5.....	750
500	Total.....
	\$7,750

This sum divided by 500 gives an average of \$15.50 each.

On the other hand, if all are put on an equality, thus:—

Say, 500 licenses @ \$20.....	\$10,000
Deduct 500 licenses, as above.....	7,750
Difference... ..	\$2,250

Now, instead of the greater portion of this \$2,250 going into the Department's hands, as it would with a fair and legitimate fee of \$20 to the licensees all round, it goes in this indirect way into the pockets of the canners, and the discrimination intended to be made by the Department in favour of the fisherman by a \$5 fee is, in

the majority of instances, not realized by the fisherman, but is partaken of by the canners.

It may be said by some persons that the present low license fee of \$5 prevents a monopoly of the boats by the canners. The above shows it to be otherwise, and gives the chances to the canner to become the monopolist upon more favourable terms than if the licenses were all placed upon the same standard of \$20 each.

The following is, therefore, submitted, viz.: Give to the canners the 350 licenses at \$20 each, and give to the proprietors of freezers, and to the trader or fisherman, the 150 licenses at the same figure, and if the freezers and fishermen do not take up the whole allotment of 150, then divide the balance of the 150 not taken up amongst the canners *pro rata*.

WEEKLY CLOSE TIME.

In the report on British Columbia Regulations, on page 13, the weekly close time, as taken from the regulations of 14th March, 1890, commences on Saturday at 6 o'clock p.m., and closes at 6 o'clock a.m. on Monday following. This was changed by the Department on 27th April, 1890, making the weekly close time from 6 a.m. on Saturday till 6 p.m. on Sunday. This latter time is maintained as being the more correct one, both in the interests of the fishery and from a moral standpoint for the keeping of the Sabbath. But after looking over the various opinions given in the general correspondence, it is contended from both of the above recited causes the close time should end at 12 o'clock midnight on Sunday, thus: "Fishing for salmon shall be discontinued from 6 o'clock a.m. on Saturday to 12 o'clock midnight on the following Sunday."

The Department has already established the time to be from Saturday a.m. till Sunday p.m. at 6, by permission—not by Order in Council. This was done at the request and with the consent of the Canners Association.

The weekly close time, it appears, was established by law in 1878, "from 8 a.m. on Saturday till midnight Sunday." This was changed again to read "from Saturday noon till 6 p.m. Sunday." Then again in 1888, "from 6 a.m. Saturday till 6 a.m. Monday." Then again in 1889, "from 6 a.m. on Saturday till 6 a.m. on following Monday." Again, in 1890, the close season was changed to read, "from 6 p.m. Saturday to 6 a.m. Monday;" and lastly, by permission of 27th April, 1890, "from 6 a.m. Saturday to 6 p.m. Sunday."

This last period being only of a permissive character for the time being (unless fortified by an Order-in-Council) places the Order-in-Council of March 14th, 1890, as the legal weekly close time for salmon fishing in British Columbia, which is "from 6 p.m. Saturday to 6 a.m. Monday."

This means that the tens of thousands of salmon legally taken during Saturday must, in order to prevent their being thrown away, be dressed and canned on Sunday, and that the many hundreds of hands employed by the canners will be compelled to work during the Sabbath, and that as no fishing for salmon is permitted (legally) on Sunday, Monday may, or may not, become "the day of rest," instead of Sunday.

At a meeting of the salmon canners of Fraser River 28th October, 1889, they resolved to direct their delegates to obtain from the Department the same weekly close season that was in existence in 1888, viz.: From 6 a.m. Saturday to 6 a.m. Monday, forty-eight hours. This would mean the keeping of the Sabbath from canning operations, and giving the numerous workmen in the factories an opportunity of keeping Sunday as a day of rest. In this way the requirements of the "Sunday observance laws and of the Fisheries Act would be upheld in British Columbia, as in all other parts of the Dominion. By this request of the Canners Association for the close season of from Saturday morning till Monday morning the supplies of salmon for Monday's operations in the factories would have to be caught after 6 o'clock a.m. of that day. From this it must appear, from their own evidence, that the canners would be benefited materially by the permanent establishment of a close time, commencing on Saturday morning at 6 o'clock and ending on Sunday at mid-

night—forty-two hours—from which time fishermen could commence fishing and furnish a fair supply of fish for Monday's work in the factories.

This forty-two hours "close time" from Saturday morning till Sunday at midnight, is no doubt, when taken from every standpoint, the correct one, and should be at once established by the Department as a finality to this hitherto uncertain and changeable system connected with the salmon fisheries of British Columbia.

IN 72 ANNUAL CLOSE TIME.

It was stated in the report, that it seemed paradoxical that no close time existed in British Columbia for the protection of salmon during their breeding seasons, whilst in the other Provinces of the Dominion, and also throughout the world generally, it was considered necessary to have stringent laws enacted to protect salmon from being caught or killed when going to or upon their spawning grounds.

Why a Province like British Columbia, which sets forth that the salmon fisheries are one of the principal sources of its wealth, should not be anxious to render every assistance possible to aid the general Government in establishing and enforcing laws to sustain that source of wealth cannot be well understood, unless it be admitted that the particular interests of some score or more proprietors of canning factories are of greater consideration than the general benefit which would accrue to the inhabitants as a whole if such a protective regulation were instituted.

The law giving free access for salmon to reach their spawning rivers, and to prevent unlicensed destruction of them, just before or at their breeding season, is a universally recognised custom the world over, and to allow British Columbia to be an exception to this wise maxim must be considered injurious to the general prosperity of that Province, and unwise for the general Government of the Country not to enforce a salutary law for the protection of salmon at the breeding time.

The close season for salmon in the Eastern Province rivers covers a period from 15th August to 1st March following; and when it is found that the annual migration of these fish up the rivers on the Atlantic and Pacific coasts is about one and the same time, and when it is also known, from the practical operation of gathering ripe ova for the hatcheries on the Atlantic and Pacific sides, that the parent fish lay their eggs about the same time, the strongest evidence is brought out to show that a close season for salmon on the one side of the continent would not be inapplicable to the other side.

The operations of the close time being strictly adhered to has undoubtedly been the principal means of upholding the salmon fisheries of the Atlantic rivers. If the system had prevailed on the Atlantic side which is now so improvidently carried on in the British Columbia rivers, giving unrestricted fishing the whole year round, salmon would have become a thing of the past many years ago in the Eastern Maritime Provinces. Therefore it is that much wisdom would be shown if the Department were to establish a proper close season for salmon in the waters of British Columbia before the point is reached when such a remedial measure would prove less beneficial, and perhaps barely possible to overcome the destructive effects from the absence of a close time.

Whilst the periods of migration and spawning of the salmon in the Eastern rivers and in those of British Columbia are in general terms about the same, yet from a slight difference in the character of some of the species of the Pacific salmon it might not be inexpedient to shorten the close season somewhat in the British Columbia river—say, to commence on the 1st September, instead of the 1st and 15th August, as in the Eastern Provinces.

If a close season regulation in British Columbia waters is not established and enforced the result must be, with the present wholesale fishing going on throughout the whole year, that eventually the salmon crops will become so reduced as, if not to bring about extermination, certainly such a falling off in numbers as will make the industry unprofitable alike to our fisherman and to the inhabitants of British Columbia.

CLOSE SEASON FOR TROUT.

Why desire a change from the present regulation from 15th October to 15th March?

The recommendation for a change is based upon the propriety of having a proper close time—one which will cover the actual period in which these fish lay their eggs. Although the 15th October will take in a portion of the time in which trout spawn it is nevertheless somewhat too late for its commencement, as large numbers of these fish drop their ova during September and the earlier part of October. If, therefore, the close time for trout were to commence on the 15th September, it would be more in keeping with the object in view, namely, to protect trout during the actual time of their spawning.

If a close time is established by a regulation which does not cover the right time it becomes not only nugatory, but admittedly legalises the killing of fish, where, by the wording of the regulation, it is proposed to protect them.

REGARDING SEINES IN BRITISH COLUMBIA.

In the report nets are referred to as follows: "By the regulation of 14th March, 1890, no special description of net is laid down for capturing salmon in British Columbia. Drift nets are mentioned only." Seines for capturing salmon have always been described as being a very destructive net to be allowed in rivers. It has been almost impossible to find out much concerning the use of seines in British Columbia. During 1890 one license for a seine net was granted at \$25, of 200 fathoms, with meshes of $3\frac{1}{2}$ inches extension measure, to fish in Bute Inlet; no other evidence is shown of licenses being granted for seines. As nothing whatever was laid down about seines in the Order in Council of 14th March, 1890, the inference would be that this kind of net was not permitted; but looking up former papers of 1887, the inspector there recommended licenses for seines to fish in salt water to be charged \$25 each; length of fathom 150 and size of mesh $3\frac{1}{2}$ inches. The inspector was instructed to issue such licenses. It appeared then that seines have been permitted; but the inference is that when the Order in Council of 14th March, 1890, was issued, it was considered unnecessary to mention what kind of net should be used in British Columbia for taking salmon. Sub-section 1 of section 1, Orders in Council has been relied upon for granting licenses for "any kind of nets." But sub-section 2 comes in conflict for granting a license for any kind of a net for capturing salmon, with meshes under $5\frac{3}{4}$ inches extension measure. The mesh may be enlarged, but it cannot be reduced under this size in the Order in Council.

In looking at the matter from a practical point, does it not seem somewhat out of place that the seine mesh as formerly laid down at $3\frac{1}{2}$ inches, and which has been licensed in 1890, should be allowed, when the drift net is restricted to $5\frac{3}{4}$ inches mesh? A seine with $3\frac{1}{2}$ inches mesh when drawn must be more fatal to the fish than a drift net, which simply floats on the surface with its $5\frac{3}{4}$ inches mesh. No salmon could pass through $3\frac{1}{2}$ inches, whilst many might escape through $5\frac{3}{4}$ inches. Therefore, a feeling may justly exist against the practice for seining for salmon, as being more destructive than the drift net, and to give the seine additional destructive power with its $2\frac{1}{2}$ inch less sized mesh than the drift net must appear to be conclusively wrong.

RECAPITULATION REGARDING CLOSE SEASON FOR SALMON IN BRITISH COLUMBIA.

In looking more closely for matters *in re* seines it is found that a close season is mentioned in the letter of the Inspector of 11th January, 1887, and in an official memo. thereon of 16th February, 1887, recommending a close time for salmon from 1st November to 1st February. No authentic information is to hand of its adoption by the Department; in fact, the Order in Council of 14th March, 1890, (the latest on record) makes no mention of it, nor is a close season inserted in the Consolidated Regulations as published, but a close season is mentioned in some of the licenses which

had been issued in 1890. Thus, "Annual close season from 1st November to 15th June" appears more particularly as per license to the Skeena River. This must go to show the necessity that exists for having some uniform code of regulations which will establish the description of net and mesh to be used, and the close season to be kept.

In this way more comprehensive information would be obtained for the guidance of fishermen and all others interested in the great salmon fisheries of British Columbia.

I have the honour to be, Sir,

Your obedient humble servant,

SAMUEL WILMOT.

APPENDIX No. 5.

MEMORANDUM ON POLLUTION OF STREAMS AND CONTRIVANCES
ADOPTED FOR THE DISPOSAL OF SAWDUST AND MILL REFUSE.

In the introductory portion of last year's report, at page xxxiii, under the heading "Pollution of Streams," the highly detrimental practice of discharging into the public waters of Canada, the refuse from saw-mills was quite fully dealt with. The different statutes providing against the practice were cited and the "Act for the better protection of navigable streams and rivers" (assented to 23rd May, 1873) was quoted in full.

At the same time it was advanced that, with but trifling cost and very little inconvenience to the extensive milling interests of the country, effectual arrangements could be made to economically dispose of the refuse from the saw-mills, and secure to the fisheries and navigation immunity from an evil which must eventually result in the destruction of both interests, unless some timely measures are adopted to put a stop to the improvident practice.

The destruction and injury to navigation and fish life caused by sawdust is too well established, and has too frequently formed the theme of reports, to need any further arguments in that line in the present connection; but I may remark that in continuation of the report of last year above referred to, and with a view to demonstrating that any reasonable endeavours on the part of the mill-owners to comply with the wholesome statutes provided in this behalf would be attended with successful and inexpensive results, the Department caused a circular to be sent to its local officers throughout the Dominion, particularly with a view to ascertaining whether any and what measures were adopted by the mill-owners to carry out the provisions of the law, and if any machinery was provided for the economical disposal of the sawdust and mill refuse.

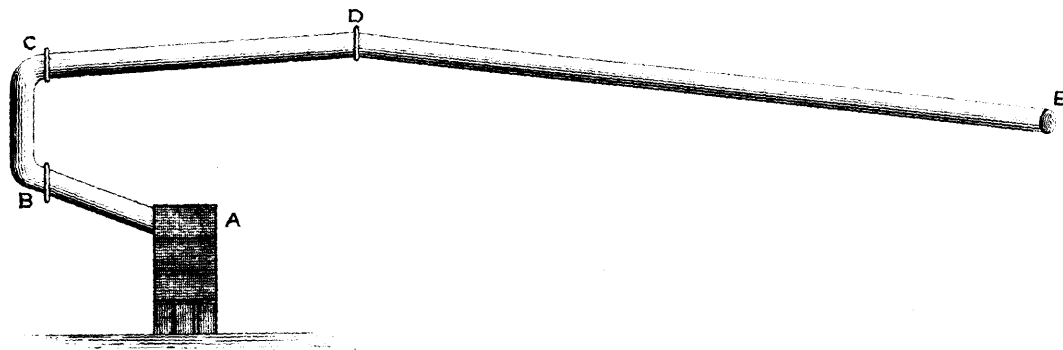
This circular elicited replies of which a synopsis is hereto appended, from which it will be observed that while in many instances endeavours were made by the mill-owners to meet the demands of the law, in many other instances insufficient means were provided and not enough care taken to prevent the refuse from passing into the water-courses.

In these latter cases the Department issued instructions to its officers to maintain a strict supervision and take steps to have the law observed, where no exemptions from the law had been obtained.

It will be noticed on reference to page 80 of the appended synopsis that the late fishery overseer for the Peterboro' division in Ontario, forwards a plan and description of an adaptation of the "carrier" principle adopted by the Lakefield Lumber Company, which he states prevents as much as possible the sawdust and rubbish from entering the river, and conveys the latter to a kiln where it is burned, the sawdust being carted away. The cost of this effective machinery is about \$1,500.

At page 79 Inspector Hockin, of Pictou, Nova Scotia, furnishes a sketch of a blast used at the American Wood and Lumber Company's spool factory, at Tangier River, Halifax County, which is represented as being most efficient, and capable of adaptation to a gang-saw. Its cost including freight, duty and setting up is placed at \$350.

Inspector J. R. Kinney, of Yarmouth, Nova Scotia, submits a sketch (see page 81) of a very simple and inexpensive contrivance adopted by the mill-owners at Carleton, Yarmouth County, Nova Scotia, for the conveyance of sawdust from circular saws.



SKETCH NO. 1,
ACCOMPANYING REPORT OF INSPECTOR R. HOCKIN.

 SYNOPSIS.

Inspector BERTRAM, Cape Breton, N.S.:

1. Very few extensive saw-mills in his division and operated only at certain seasons of the year.

2. When called upon in 1888, nearly all mills had boxes erected to catch sawdust. Those who neglected were afterwards compelled to reluctantly comply.

3. Though operations limited, believes sawdust has in past years injuriously affected the fisheries, by polluting waters and covering spawning beds.

A. L. DARCHE, Quebec :

No provision made for disposal of sawdust except "the steam mill" which burns it. No navigable rivers in his district; not enough sawdust to affect fisheries.

ALEXANDER McQUEEN, Manitoba :

When appointed, took steps to keep sawdust out of streams; result fairly satisfactory; refuse now carted away or consumed. At Rat Portage and Keewatin, mill-owners constructed appliances, whereby sawdust is transferred to fire-pit and consumed. Six saw-mills on Lake Winnipeg, one on Winnipeg River, two on Bad Throat River, one in Moose Creek, one at Fisher Bay, one at Humbeg Bay, one at Fisher River, sawdust from which carted away from water's edge. In Lake Manitoba, one mill located at Ebb and Flow Lakes; sawdust not allowed into lake. One at east side of lake at Lundyville, not in operation. One mill at Birdtail Creek, near Birtle, two on Lower Saskatchewan River near Manitoulin Post and Rapid City. Regulations observed by them.

Only one stream, the Pembina River, which flows into United States from his district; no saw mills on it.

Inspector HOCKIN, Nova Scotia :

The only machinery in his district is at a spool factory, Tangier River, Halifax County, owned by American Wood and Lumber Company. It consists of a blast which blows the sawdust through a pipe 18 inches in diameter turning corners as in sketch No. 1:—

It is situate in the basement, and blows the sawdust from ABCD to the exit E, 100 yards from the blast. Could drive the dust as far again. If larger pieces screened, could be made to work on gang saw. Cost \$180 in Boston; freight, duty and setting up bring aggregate cost, \$350.

Overseer G. R. STEELE, Ontario :

Previous to his incumbency quantities of sawdust were allowed to pass into stream to the detriment of the fisheries and navigation. Now violations of the law very rare. The refuse from Parry Sound water mill disposed of as follows : Slabs carted away for fuel ; the sawdust and trimmed ends are caught by elevators to iron burner in the mill yard with brick foundation and extending 150 feet from the ground. The Conger Lumber Company's mill, Midland, and North Shore Lumber Company, the Parry Sound Lumber Company, also Midland and North Shore Shingle and Planing Mill, all steam mills at Parry Sound. At Armstrong's steam mill, 1 mile from Parry Sound the refuse is drawn to the mill yard and disposed of as fuel. At their water mill (at McKellar), sawdust is burned. At John Flesher's mill, on Isabella Lake, refuse is run out into the yard by water power. Sawdust is injurious to both navigation and fish.

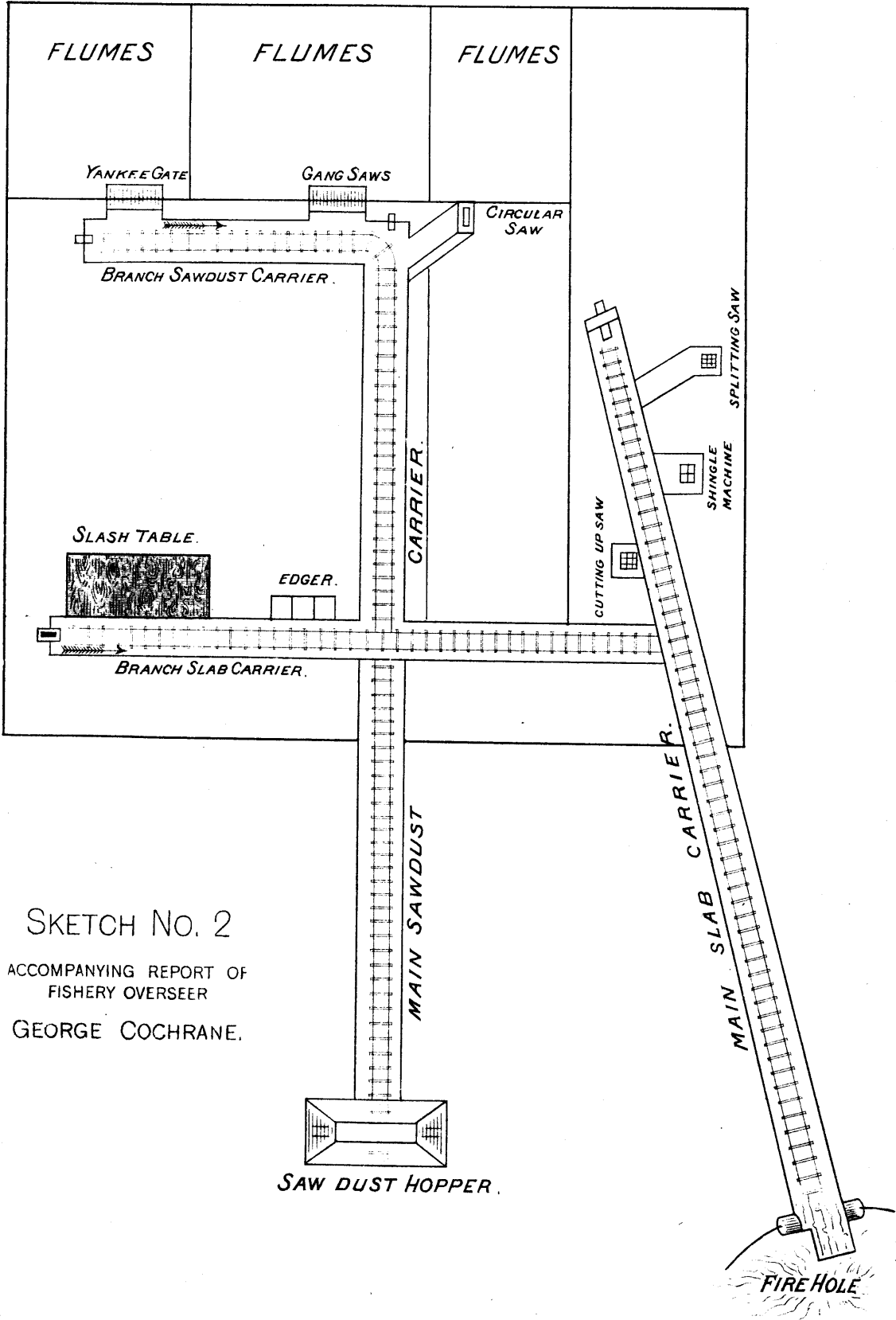
Inspector J. H. PRATT, New Brunswick :

With the exception of the mills at Bonny River, which burn all refuse during the sawing season the sawdust runs into the rivers. On St. Croix River, mills are exempt and sawdust runs into the river ; large refuse is burned and hauled away for firewood. All sawmills above tide water. Navigation obstructed by sawdust. Will watch Lepreau and Magaguadavic Rivers sharply. Sawdust highly injurious to fisheries.

Overseer GEO. COCHRANE, Ontario :

All saw-mills on the Otonabee River have machinery for the disposal of sawdust. The Lakefield Lumber Company's being the best, and therefore a sketch is attached. Prevents all sawdust and rubbish from entering river that is possible in a water mill. The boxes in which the carriers run are tight and admit of no sawdust escaping. The sawdust is carted away from the hopper. That which goes into the main slab carrier is burned at the kiln, which is built of stone, 15 feet diameter, 20 feet high. Only small portion of sawdust burned, the rest carted away. Pitman holes, 8 by 30 inches and 3 by 24 inches which is the only chance for the escape of sawdust. Cost of machinery about \$1,500. Sketch No. 2.

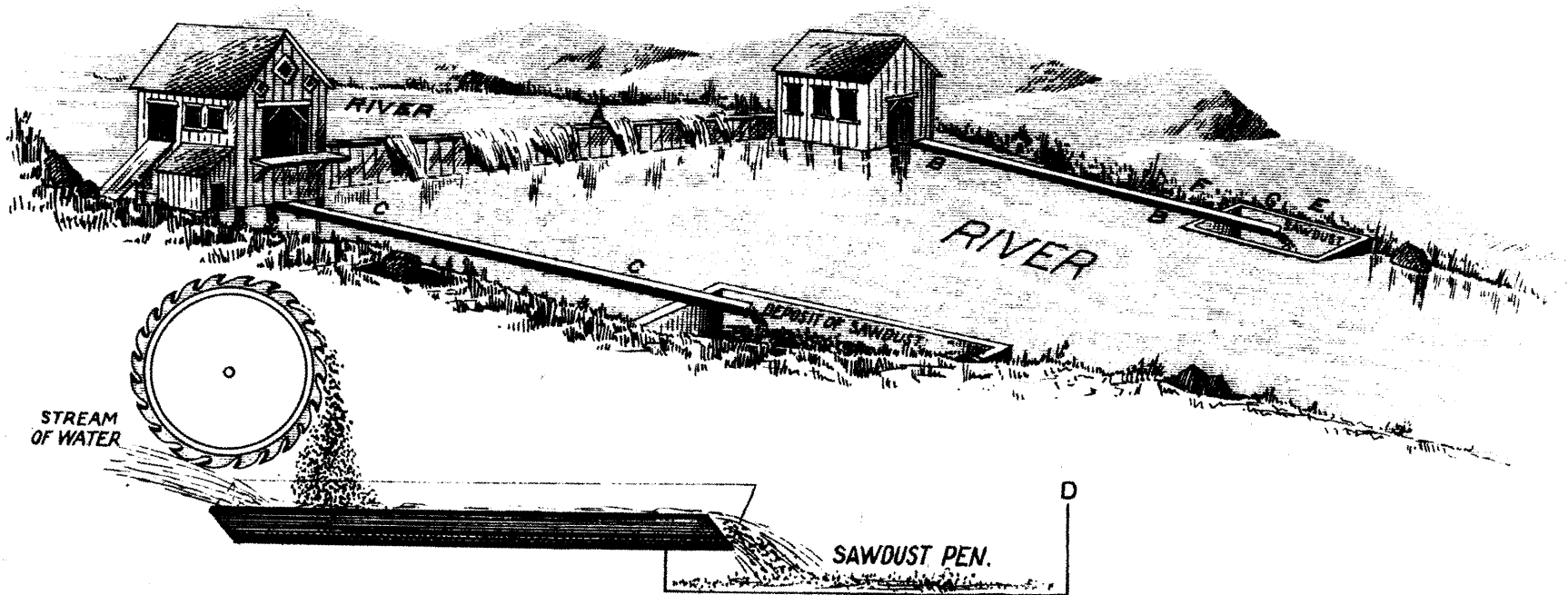
PLAN OF SAWMILL & CARRIER.



SKETCH NO. 2

ACCOMPANYING REPORT OF
FISHERY OVERSEER

GEORGE COCHRANE.



- A. Dam.
- B, B, C, C. Sluiceway of V shaped boards, 12 in. wide, into which drops the sawdust from circular saw, behind which flows a small stream of water.
- D. Large pen at edge of river protected by slab enclosure.
- E. Low land at side of river enclosed by tight wood barrier.

SKETCH NO. 3,
 ACCOMPANYING REPORT OF
 INSPECTOR J. R. KINNEY

At Blyth Mills, Peterboro', the sawdust falls into carriers and is taken to a hopper in the attic, dropped into waggons and carted away. The sawdust from the upright saws falls into the pitman hole and into an apron which throws it into the carrier. Slabs and other rubbish carted to mill yard.

Nassau water mill, refuse burned; sawdust falls through pitman hole.

Dixon & Co.'s mills, carriers from all saws except uprights.

Fishing as good as ever. Navigation interfered with only at Little Lake.

Overseer CHARLES GILCHRIST, Ontario:

Only Messrs. Hillyard and Strickland, at Peterboro', have tried to prevent the sawdust from falling into the river.

Strickland's plan works well and is as follows:—A cross-carrier takes all the sawdust and mill refuse from the pitman hole to a main carrier, which conveys all the dust and refuse to an elevated hopper under which carts are driven and the stuff hauled away. Hilliard's plan is the same, but his floor is defective. Hazlett does the same at his two small mills, but nothing at his large one. Effects of sawdust on navigation and fisheries disastrous.

Overseer HUGHSON, Ontario:

A good number of millers use carriers which conduct the sawdust to the banks of rivers. Some mills have railways and little trucks which are pushed by hand. The steam-mills burn their sawdust. Effects disastrous to the fish in his division.

Inspector HACKETT, Prince Edward Island:

Several small saw-mills in the Province used principally for sawing for domestic use. Provided with no machinery for disposal of sawdust, but are generally provided with a floor below the saw, upon which the dust falls and is wheeled away by wheel-borrows; mills only operated for short time in spring and fall, and if any effort is made to keep out sawdust, the evil is very slight. Sawdust injurious to fisheries, but has never been in sufficient quantities in Prince Edward Island to affect navigation.

Overseer P. W. NAGLE, Quebec:

No sawdust put into the rivers from mills in his division; all carted away and burned or otherwise utilized. Would injuriously affect fish and navigation.

Inspector J. R. KINNEY, Nova Scotia:

Majority of millers merely cart away their sawdust to some dumping ground.

At Carleton the following simple device is adopted:—Sketch No. 3.

A. Dam.

B.B. C.C. Sluice way of V. shaped boards 12 in. wide, into which drops the sawdust from circular saw, behind which flows a small stream of water.

D. Large pen at edge of river protected by slab enclosure.

E. Low land at side of river enclosed by tight wood barrier.

Sawdust has seriously affected streams in his division.

Overseer F. C. GILCHRIST, North West Territories :

No saw-mills in his district.

Overseer J. S. RICHARDSON, Ontario :

Four steam mills in his division; have carriers and burn refuse; three water-mills, two of which have carriers and cart refuse away, the other piles it near the river, and when water raises it is carried away. Sawdust and mill-refuse is very injurious to fish.

Overseer JOEL SHURTLEFF, Quebec :

No machinery for disposal of sawdust; some millers burn it, but he believes that a large quantity is being put into the water.

Overseer F. WEBBER, Ontario :

Majority of mills are steam-power and have iron burners for disposal of sawdust. The largest water-mill (Drinkwater's), on North River, also has burner; most of the other water-mills have stone burners.

Since prosecution of mill-owners on Severn River two years ago, millers in his district have complied with law. Besides, sawdust is in great demand for road-building and in the extensive ice business carried on there by Americans.

Overseer J. R. GRAHAM, Ontario :

Twelve steam and four water mills in his division. The greater part of sawdust is burnt, and some is carted away, and some used for building piling grounds. Believes sawdust is injurious to fish.

Overseer F. G. M. FRAZER, Ontario :

Steam mills have sheet-iron burners for disposing of sawdust, as also have some of the water mills. Thinks it almost impossible to prevent sawdust from going through pitman hole, but believes improvement could be made if law was strictly enforced. Sawdust is frequently shovelled into the water, which, if not prevented, will destroy fisheries. It also interferes with navigation.

Overseer A. D. SILLS, Ontario :

Sawdust is sold for various purposes, and in mills where it is not sold it is carried by chains from the saw to a platform under the mill. The mill-owners state that it is drawn away from here, but he is of opinion that large quantities are secretly dumped into the stream.

Steam mills burn it.

Its effects on navigation is shown by the operations of dredge at Napanee, where hundreds of tons have been taken out.

It is also injurious to spawning beds.

Overseer J. GRANT, Ontario :

Two steam and two water mills in his district; steam mills burn part of sawdust and use rest for building piling grounds. Water mills cart away and burn what they don't use otherwise. None put in river. Very injurious to navigation and fisheries.

Overseer J. KELLY, Quebec :

Those who have not elevators for disposing of sawdust have floors from which it is carted away. They promise to get elevators. Considers it injurious to spawning beds.

Inspector R. A. CHAPMAN, New Brunswick :

The steam mills burn most of the sawdust for fuel. The water mills in nearly every case, and some of the steam mills, let it run into the water, much to the injury of spawning beds. Recommends enforcement of the law. To give any idea of the different kinds of machinery used would involve visiting mills in different parts of his district and making plans and specifications.

Overseer P. C. BOURK, Quebec :

At Geo. Bertrand's mill at Plessisville, on White River (water power), sawdust thrown into river. Thos. Kelly's steam mill, in the Township of Somerset South, on Black River, empties into the river all the sawdust and part of the other refuse. Messrs. King Bros.' steam mill in Township of Nelson, on Becancour River, refuse burned for fuel, sawdust all put in river. Believes sawdust to be injurious; fish diminishing every year.

Overseer W. McDERMOT, Ontario:

Only three mills have machinery, on the principle of elevators, with slats instead of buckets. All the other mills (seventeen), except two, dispose of it with carts and wheelbarrows; the two exceptions float it away in troughs or sluices. Some leave it piled up high near the banks, and it is carried into the water by freshets. Recommends that Act be amended to specify distance from the shore at which it shall be placed.

Overseer W. HELLIWELL, Ontario:

Only two water mills in his division—one on the Humber, the other on the Rouge. They are situate above grist and woollen mills, and the small amount of sawdust they make does not affect navigation or the ascent of suckers, the only fish frequenting these streams. The timber supply has long disappeared, and other mills have rotted away.

Overseer F. KERR, Ontario:

Has heard no complaints of the effects of sawdust either on fisheries or navigation. No lumbering or sawmills along the rivers in his locality. The best contrivance that he has observed is at Samuel Campbell's mill, Progresston, Wentworth County, on the Twelve Mile Creek. It consists of a large brick furnace, with high funnel; a wooden flume runs from under the saws to the furnace, with elevators and belt carriers, which convey all sawdust and rubbish to the furnace.

Overseer BRINKMAN, Ontario:

Sawdust much complained of on the south side Manitoulin Island. It is said to come across Lake Huron from Michigan. Flour mills at Little Current have burners; no complaints. Mr. Mutchmore, owner of mills at Providence Bay, should be compelled to provide a carrier or burner to dispose of refuse. Heard no complaints against sawdust impeding navigation.

Commander WAKEHAM, Quebec:

Has now visited all sawmills in his division. Law fairly well observed. No navigable rivers in division; greatest number of mills in estuary of Restigouche. Of late years care taken to prevent sawdust from entering rivers.

No. 1. Steam Sawmills.

Montgomery's, New Richmond, pine and spruce; Kelly's, Port Daniel, pine and shingles; King Bros, Pabos, pine and shingles; Baird, Douglastown, shingles; McKinnon, Gaspé, boards and shingles; Russell & Richardson (spool-wood) Cape Chatte; O'Leary's, Mission Point, pine and spruce (not in operation); Ross Estate, Magdalen River, pine and spruce, (not in operation). Sawdust refuse burned or carted away.

No. 2. Large Water Mills.

Lowery's, Oak Point, Restigouche, pine and spruce; Gagnon Bros., Penticost, north shore, spool-wood and spruce.

No. 3. Small Water Mills.

Monderson's Maria, boards; Day's, Bonaventure, boards; Welsh's, Shegawake, boards; Birger's, L'Anse à la Barbe, boards and shingles; Laterrer's, Cape Cove, boards; Savage's, Cape Cove, boards; MacCallum's, Barachois de Malbaie, boards.

No. 4. Spool-Wood Mills by Water.

Pierre Leclerc's, Ruisseau Arbour, spool-wood; Chs. Bertram's, Marsoins, spool-wood; Chs. Bertram's, St. Ann's, spool-wood; T. J. Lamontague, St. Ann's, spool-wood; Jos. Labrie, St. Ann's, spool-wood.

Very little sawdust made by these mills and very little escapes into the water. The only machinery used is an endless belt system, with slats (carriers).

At Gagnon Brothers they have a water-box underneath the mill, through which is a constant flow of water when the mill is at work, and the sawdust is run into ponds and retained.

Cannot find any evidence of bad effect on fisheries or navigation in his division.

Overseer G. B. McDERMOT, Ontario:

Only sawmill in his division of any importance is Sadler, Dundas & Co.'s water mill at Lindsay. They use all their sawdust to run their grist mill, and sell the edgings. Scugog division perfectly free from sawdust nuisance.

Overseer W. P. CLARKE, Ontario:

Gilmour's mill at Trenton, Holton's at Belleville and Rathbun's at Deseronto are the only sawmills in his division. Gilmour's burns all refuse in large furnace. Horton's used for fuel and packing ice. The sawdust from Rathbun's mill is used for fuel, &c. No water mills in his division.

R

APPENDIX No. 6.

POUND-NET FISHING—GEORGIAN BAY.

- I. Initial Report by Mr. Charles Wilmot.
- II. Opinions of officers and others.
- III. Review by Mr. Charles Wilmot.

I

INITIAL REPORT BY MR. CHARLES WILMOT.

NEWCASTLE, 1st January, 1890.

Honourable CHARLES H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—In addition to the customary annual report upon fish-breeding connected with the Newcastle establishment, which I am called upon to forward to the Department, I take the liberty of giving information gleaned from my observations with fishing interests, and my practical experience in connection with the collection of fish eggs for the hatcheries in Canada during the past ten years, upon the relative merits of the pound and gill-nets, legally used for catching the marketable fish of our great lakes.

This subject has caused considerable discussion among fishermen and wholesale dealers for several years past, and the opinion generally prevails that all information bearing upon this important question should be submitted to the Department, in order that the most beneficial net, viewed from every standpoint, may be adopted.

The large amount of money invested in fishing enterprises in the Province of Ontario, and the revenue derived by the Government from this industry, make it important that such action should be taken as to render the too rapid depletion of our fish impossible, and the means employed for capturing them made so satisfactory that when eaten by the consumer they will be in good condition. At the present time a great deal of dissatisfaction exists among wholesale dealers and their customers, owing to the fish not being in a sound condition for food, especially when arriving at destinations long distances from the fishing grounds. The cause of this, in my opinion, is largely due to the use of the gill-net. The present system of operating the gill-net by the ordinary run of fishermen is to have from two to four gangs set in different localities; these are lifted alternately, usually remaining in the water from three to four days, but in case of rough weather the fishermen cannot reach them, and the fish are not removed for a much longer period. The result is that a large proportion of the fish, when taken from the net, are in a somewhat decomposed state, and it stands to reason that their condition will not be improved by the time they arrive at the important fish markets, such as Toronto and Buffalo, to be sold to the retail dealers of Canada and the United States, after having been kept for a week or more. It is well known that a large percentage of the fish taken by the gill-nets are unfit to be shipped fresh. If in good order when caught it would profit the fishermen to ship them in that state, as they command a much higher price than when salted. The reason that such a large number of fish are salted is, simply because they are not marketable to ship as sound, fresh fish. The effect of

the salt put upon them for curing purposes temporarily hardens the fish, deceives the buyer, and leads the consumer to the mistaken idea that they are wholesome, when in a great many instances they are really unfit for human food.

On the other hand, the fish caught in pound-nets are kept alive and uninjured until taken out, and even in the event of a storm arising to prevent the fisherman from going regularly to his nets it makes no difference, as their construction permits the fish to swim around the pound or trap without injury; consequently, they are in a better condition when arriving at market than those captured by the gill-net, which gills and kills the fish, and where they remain in the water for days, to be knocked about by the storms until taken from the meshes of the gill-net. The effect upon fish, left in the water in a dead state, is to deprive them of their flavour, and to make them soft, flabby and unwholesome as food, thus greatly reducing their marketable value.

I am of the opinion that the gill-net is much more destructive than the pound-net, and its use as at present practised must eventually exterminate the salmon trout and whitefish. In districts where extensive fishing is carried on by means of gill-nets many miles of fishing grounds are covered, and while the meshes of these nets are made sufficiently large (say, $4\frac{1}{2}$ or 5 inches) to capture the most marketable fish, they allow the poorer classes (such as the sucker, the mullet and the ling, averaging 2 pounds in weight, and for which there is no demand) to escape. These useless fish must naturally increase and multiply rapidly, and during the winter and the spring months they are known to live very largely upon the eggs and the fry of the salmon trout and whitefish, and if no steps are taken to exterminate them they must eventually sooner bring about the extinction of the better class of fish. An important principle in agriculture is that the weeds and tares must be destroyed in order to permit the proper grain to grow. This rule is also applicable to the successful growth and maintenance of fish, and we must, therefore, remove the useless fish as much as possible, if the better kinds are expected to bring about fruitful results.

Another object to be gained is that it would be impossible to use the pound-net illegally with any degree of success during the close time, for the following reasons: An ordinary pound-net is about 30 feet square, and generally stands above the surface of the water from 4 to 6 feet when set; it must be placed in a sufficient depth of water, on clay bottom, to allow the necessary stakes to be driven to hold it in place; it cannot be set upon the shoals and gravelly spawning grounds, and in either case it could be readily seen at a long distance by any active fishery officer or other person; its cost is such that no fisherman would run the risk of its being seized and confiscated, and therefore the provisions of the law for the protection of the fish would be more strictly obeyed if the pound-net system were adopted.

It is not my intention to make any statements here or to cast reproach upon persons having a large amount of capital invested in gill-net fishing, as I am fully convinced, from the views expressed to me by many of them, that they are equally anxious with the Government to carry out the provisions of the law, and to do all they can to preserve the fishing interests of the country.

It would be well to note that in most cases the law is violated more by persons having very small capital invested, and who do not follow fishing wholly as a means of livelihood, and in many instances obtain no license or legal permit to fish at all; but, owing to the fish being captured very readily during the spawning season, almost opposite their own doors, they can, by the gill-net system, do a vast amount of harm with a very small investment and little labour.

There is no question in my mind but that too many gill-net licenses are granted; they cause the feeding and breeding grounds to be too extensively fished, and storms have an injurious effect upon them, owing to many of the gill-nets being cast adrift containing large numbers of fish, which die and pollute the waters.—This in addition to the over-fishing, hastens depletion, and the grounds become barren.

The pound-net, if made with a legal mesh (say 4 inches), would not only capture the desired fish, but also retain the inferior ones; and if the fishermen were compelled

by legal enactment to take these useless fish ashore, which are so rapidly filling the waters, the farmers would only be too glad to draw them away for the purpose of fertilizing the soil. By this means the sucker, the mullet and the ling would diminish, and their powers to injure the propagation of the salmon trout and whitefish would be very much lessened. This method of fishing with the pound-net would enable the half grown and immature salmon trout and whitefish to escape uninjured, and the objections and defects complained of, where the 2½-inch pound-net is in use, would be remedied.

It might be supposed by those unacquainted with the habits of the better class of fish that they live upon the inferior ones. This, however, is not the case. Salmon trout feed largely upon herring; the sucker, the mullet and the ling form no part of their food, while the whitefish are not of a predaceous nature, but live wholly upon crustacea and insect food. As a further proof of the correctness of my theory in upholding the merits of the 4-inch pound-net, it should be observed that, while the larger herrings may be caught in it for marketable purposes the supply of smaller ones, upon which the salmon trout feed, will not become exhausted, as they pass easily through and out of this net.

This cannot be said of the gill-net in regard to small salmon trout, which come under the classification of predaceous fish. Large numbers of them, averaging 6 and 8 inches in length, are frequently entangled by their teeth, on account of the net being constructed of such fine thread, and they do not see it until caught in this way. The pound-net is made of much coarser twine, and is so conspicuous, having been coated with tar to prevent its decay, that these small fish readily see it, and are not injured in passing through.

During the close time of thirty days in November the salmon trout and whitefish frequent the shallow waters, where gravelly bottoms are to be found, for the purpose of spawning; here they are more easily caught than in the deeper waters in the open season. The construction of the gill-net is specially adapted for the destruction of the parent fish in these localities; it can be used illegally by fishermen, without even a buoy to mark its location. It is therefore impossible for the most energetic fishery officers, having as they do, districts under their charge extending over limits a hundred miles or more, to enforce the law. It is at this season of the year that so much harm is done to the fisheries by these illegal fishermen, who fish in a wholesale manner, and either salt the fish, or sell them to other parties having facilities for freezing them, and then after the close time is passed, they are disposed of as marketable fish which were captured in the open season.

The large amount of money invested in gill-net fishing by virtue of the numerous licenses which are granted from year to year renders it almost impossible to adopt immediate steps to abolish this system, even if the Department felt inclined; but in my opinion the number of licenses should be gradually reduced, and, finally, none granted for gill-net fishing later in the fall than 15th October, as this is the time of the year when the salmon trout and whitefish leave their feeding grounds, and seek their breeding grounds for spawning purposes.

CHAS. WILMOT,

Officer in charge of the Newcastle Hatchery.

II

In accordance with directions, a circular was sent to fishery officers and others on Georgian Bay, asking their views as to the advisability of allowing a limited amount of pound-net fishing in the above named waters, and curtailing gill-net fishing.

The following answers to the questions submitted, together with a review by Mr. Chas. Wilmot, Fishery Officer in charge of the Newcastle hatchery, have been received:—

QUESTION No. 1.

Whether it would be advisable to allow pound-net fishing in Georgian Bay, under certain restrictions?

Overseer Shackleton, Colpoy's Bay.—No.

Overseer Miller, Owen Sound.—Yes; on the mainland, and on condition that the nets do not extend more than half a mile outside.

Warden Cameron, Killarney.—No. Gill-net fishing is now carried on so extensively in the bay that further devices for catching fish are unnecessary.

Overseer Wilson, Sault Ste. Marie.—Yes; should be allowed under certain conditions and restrictions.

Overseer Fraser, Victoria Harbour.—No; should be forever prohibited—very destructive to all kinds of fish.

G. P. McIntosh, Fish Dealer, Meaford.—Yes; would allow them in any part of the bay, but those on mainland not to extend more than half a mile from shore.

Overseer Brinkman, Manitoulin Island.—Yes, under certain restrictions.

Charles Noble, Fish Dealer, Killarney.—Yes; too many of them might not benefit the fisheries, but they would not be half as objectionable as those set in the channel of Lake Huron.

C. W. Gauthier, Fish Dealer, Windsor and Detroit.—Yes, under certain restrictions.

W. A. Clark, Fish Dealer, Collingwood.—Pound-nets are very destructive.

QUESTION No. 2.

What size of mesh would you recommend?

Overseer Shackleton.—Leader, 8 inches; pot, 5½ inches.

Overseer Miller.—Leader, 6 inches; pot, 4 inches.

Warden Cameron.—No recommendations.

Overseer Wilson, Sault Ste. Marie.—All parts of pound-nets should be not less than 6 inches, extension measure. Nets should be at least six miles apart.

Overseer Fraser, Victoria Harbour.—No recommendations.

Mr. McIntosh, Meaford.—Any size in lead ; not less than 4 inch in pot.

Overseer Brinkman.—Leader, 5 inches ; pot, immaterial.

C. W. Gauthier.—Leader, 7 inches ; pot, 4 inches on three sides, and for the back 3½ inches.

W. A. Clark.—Leader 5½ inches ; pot. 5 inches.

QUESTION No. 3.

In what particular places of Georgian Bay would you recommend that pound net fishing be allowed ?

Overseer Shackleton.—Nowhere.

Overseer Miller.—Anywhere on the mainland.

Warden Cameron.—No answer.

Overseer Brinkman.—Localities should be decided upon by local fishery officers. No pound-nets should be allowed in channels, mouths of rivers and fish "runs."

Overseer Wilson, Sault Ste. Marie.—Not sufficiently familiar with Georgian Bay to recommend particular places. Strongly advises that they be not allowed in or near the channels between Owen Channel and Cape Hurd, including former.

Overseer Fraser, Victoria Harbour.—No recommendations.

Mr. McIntosh, Meaford.—Anywhere on the mainland.

Chas. Noble.—This should be decided by the Department, in accordance with information received.

C. W. Gauthier.—On the west side of Georgian Bay only, no pound-nets should be allowed on the east side, nor around Squaw and Bustard Islands, as these are considered to be the natural spawning grounds of whitefish.

W. A. Clark.—Would permit pound net fishing between Cape Rich and Cabot's Head, on the western shore of Georgian Bay, Lonely Island, Point Grondines, or at any exposed places where "the early gales in September and October would blow these nets from their moorings."

QUESTION No. 4.

Would it be advisable to prohibit gill-net fishing entirely, or curtail it, by increasing the fee \$10, and prohibiting fishing with tugs ?

Overseer Wilson, Sault Ste. Marie.—Not entirely ; both licenses to be increased to \$20, and all fishing operations by tugs prohibited.

Overseer Fraser, Victoria Harbour.—Curtail it, by making fee for boats \$10. Fee for tugs fishing over 10,000 fathoms to be \$50 would not do away with fishing with tugs.

Mr. McIntosh, Meaford.—Fee of \$5 sufficient ; not necessary to prohibit gill-net fishing ; all protection needed is enforcement of 5-inch mesh ; would prohibit fishing by tugs.

Overseer Shackleton.—No. The 5-inch mesh should, however, be strictly adhered to. The fee is high enough, but would recommend curtailing the quantity of nets to be used.

Overseer Miller.—No. The fee is high enough for all purposes of protection. The trouble is, that the regulation 5-inch mesh is not observed. Tug fishing is very injurious.

Warden Cameron.—To prohibit gill-net fishing altogether would be a great hardship. To increase the fee to \$10 would be more in keeping with the additional quantity of nets used by each boat. Tug fishing is a nuisance (they use enormous quantities of nets and injure boatmen's nets, by setting across the latter.)

Overseer Brinkman.—Would not favour total prohibition of gill-net fishing, but would recommend placing the fee at \$10. Tug fishing is not a bit more injurious than boat fishing, if properly carried on, with nets of legal size.

Chas. Noble.—It would be utterly impossible to prohibit gill-net fishing now, because each fisherman on Georgian Bay has his whole invested in it. The trouble is, that there are too many persons engaged in the business. In the neighbourhood of Collingwood there are 1,500 persons depending on this industry for a living. Five dollars for a boat is high enough. The fee on tugs should be reduced to \$10.

C. W. Gauthier.—Does not favour total prohibition of gill-nets, but rather curtail them, by limiting each boat to 6,000 yards of net and raising the fee to \$10. Tugs should be rated at \$25 each, and limited to 15,000 or 20,000 yards of net.

W. A. Clark.—Total prohibition would be a great hardship. An increase of the fee to \$10 would also be heavily felt by the majority of fishermen. Tugs are more advantageous than sail boats for fishing, and fish double the quantity of nets.

QUESTION No. 5.

Under what restrictions as to localities, number and size, should gill-net fishing be permitted?

Overseer Shackleton.—A general reduction in mileage is necessary.

Overseer Miller.—Fishermen should be allowed to fish in any part of the bay, and the 5-inch mesh strictly enforced.

Warden Cameron.—No change recommended.

Overseer Brinkman.—No change recommended.

Chas. Noble.—Recommends that the size of mesh be fixed at $4\frac{3}{4}$ inches. Most of the nets now fished are $4\frac{1}{2}$ and $4\frac{5}{8}$ -inch.

C. W. Gauthier.—Gill-net fishing should be allowed on the south and western sides of the bay, but not on the eastern side, or around Squaw Island and Bustard Island, as these are the natural breeding grounds of whitefish. Meshes should be $4\frac{3}{4}$ inches.

Overseer Wilson, Saulte Ste. Marie.—Reduce the number of nets to each boat and strictly enforce the 5-inch mesh.

Overseer Fraser, Victoria Harbour.—Cannot see that anything can be done in restricting fishermen to certain localities. Fee for boats fishing more than 8,000 fathoms should be \$15; mesh, $4\frac{3}{4}$ inches.

Mr. McIntosh, Meaford.—Allow fishermen in any locality in bay.

W. A. Clark.—The mesh should be $4\frac{3}{4}$ inches. After 18 months, notice all nets found under this size should be confiscated.

QUESTION No. 6.

Name localities where, in order to secure the better protection of breeding fish, no fishing of any kind should be allowed?

Overseer Shackleton.—No places named. Suggests strict observance of close-season and law regarding offals.

Overseer Miller.—No places named. Five-inch mesh and law against throwing of offal should be strictly enforced.

Warden Cameron.—No fishing should be allowed at the mouth of Bad River, near French River, Fox Islands and Frazer's Bay.

Overseer Wilson, Sault Ste. Marie.—No fishing should be permitted within a radius of ten miles from any hatchery. Recommends prohibition of exportation of speckled trout.

Overseer Fraser, Victoria Harbour.—Waters comprised within following bounds: from one mile out abreast of Grumbling Point thence to lighthouse on Bustard Island to a point one mile abreast of Byng Inlet lighthouse; thence to the inside end of McKay's Island; thence to the Red Rock lighthouse, on to Sandy Island; thence to a point one mile abreast of Moose Deer Point; thence to the Gin Rock lighthouse, and on to the buoy at the southerly end of Beausoleil Island.

Fishing for herring during months of October and November only to be allowed in above limits. Herring fishermen not to pay more than \$5 fee, if boat license is raised to \$10.

Mr. McIntosh, Meaford.—No recommendations as to localities. Considers whole question of protection summed up in enforcement of the 5-inch mesh.

Overseer Brinkman.—Difficult question to answer, as the fish change their breeding grounds every season.

Charles Noble.—Suggests putting up hatcheries on the bay to hatch out the ova collected from Killarney to Christian Island.

C. W. Gauthier.—No fishing should be allowed on the east side of Georgian Bay, from Fox Islands to Penetanguishene.

W. A. Clark.—No pound-nets should be allowed in the north channel of Lake Huron, "only on the head lands and in places unprotected against the gales."

III

REVIEW BY MR. CHARLES WILMOT.

NEWCASTLE, 1st January, 1891.

The Honourable C. H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—In compliance with your direction I herewith submit a supplementary report dealing fully with the question of pound-net as against gill-net fishing, the merits and demerits of which were referred to in a previous report from me upon which the Department obtained some opinions from its officers as well as interested parties which were referred to me for report. Owing to the importance of this subject and the interest at stake, not only to the fishermen engaged in this industry, but to the future commercial welfare of the country, I have purposely delayed submitting this review until I could thoroughly acquaint myself with every phase of the subject. This I considered could not be accomplished in a practical way without having every facility for securing information; and as Warton is the largest shipping point for fish in Ontario caught by means of the gill-net, and also the field of our operations for securing a supply of eggs by the pound net system, I thought it well to defer the report until after my visit there.

Before finally reviewing the correspondence referred to, I would like to call your attention to a few additional arguments to those I had previously submitted.

It is a well known fact that in the deeper waters of the lake there are varieties of vegetable growths upon which certain insects exist. These insects are the food of the young salmon trout, whitefish and herring. Here the full grown adult and marketable fish are captured by means of the gill-net whilst they are in that locality preying upon the smaller fry. In some places this vegetable production matures earlier than in others, and it will be readily understood that the instinct of the smaller fish teaches them to leave these grounds as they become barren of food.

In fact, the maturing and dying of the vegetable growth referred to means a general change for all—insects, fry, parent fish and the fishermen. The latter, who find the fishing grounds exhausted, naturally remove their nets from place to place, until they have found the habitation of the fish, which virtually means a locality where a later production of vegetable matter is to be found. Here the gill-net fisherman, for a certain period, meets with success; but later on in the season (say 15th September) the call of nature instinctively leads the salmon trout and whitefish to seek the shallow waters around the islands and along the main shores where there are natural spawning grounds. The fisherman operating the gill-net system again removes his nets to these grounds where the fish are gathered in large numbers, and on account of their pregnant state they are dull and sluggish, and more readily caught than at any other period of the year.

From the foregoing explanations, it will be observed that, with gill-net appliances and their facilities for easy removal from feeding to spawning grounds, it is a very difficult matter for the fish to escape being caught. A deplorable fact in connection with this system, and one very much to be regretted, is that a large proportion of the fish caught by means of the gill-net are taken off the spawning grounds at a period when they are not in marketable condition.

The loss of the fish at this season, even though not fit for food, is of little moment when compared with the destruction of the tens of millions of eggs which should have been deposited naturally. Had the parent fish not been molested by the gill-nets, they would have produced supplies of valuable fish food for future years.

From the peculiar construction of the pound-net it cannot be removed from place to place, as it is a stationary engine, and the fish must come in contact with it; otherwise, they are not caught; and as it must be set in deep water, with clay or mud

bottom, it does not capture them so readily upon the spawning grounds. The result of this is that in grounds where pound-nets have been in use for the past fifteen years the fishing is apparently almost as good as ever, but in localities where the gill-nets have been operated the grounds have become entirely depleted in about five years time.

As an illustration of the correctness of this view, I would call your attention to the American shores of Lake Erie, where, even with a small-meshed pound-net (say 1½ and 2 inches, which I am strongly opposed to) fishing has been carried on for the past twenty years in a most extensive manner, without any apparent signs of decrease in the better classes of fish; while in the Canadian waters, in the vicinity of Goderich, Kincardine, Southampton and other important localities where gill-net licenses were extensively granted in past years, the fish are almost exterminated, and the large capital invested in fishing enterprises at these points has been withdrawn, to be utilized in new fields of operation.

By means of the gill-net, fishing is carried on in a very extensive way; and to give an idea of its magnitude I may cite the case of the Georgian Bay, where parties holding tug and fishing boat licenses, the Indians and persons fishing without the lawful right to do so, have yearly upwards of 1,000 miles of gill-nets in use, or almost enough net set to encircle those waters twice. Even if the nets were set, as above described, they would not be nearly so injurious as when placed upon the feeding and spawning grounds of the fish in every possible shape and form; and to make matters still worse, large numbers of these nets are cast adrift from their buoys by storms never to be found again by the owners, but their construction is such that portions of them continue gilling and destroying the fish, and polluting the waters for many months after they have been lost. This, in my opinion, is one of the great evils of this system, and requires the most careful consideration upon the part of the Fisheries Department, in order to have it properly remedied.

The evil spoken of in connection with gill-nets, so far as polluting the waters and fouling the fishing grounds with dead fish is concerned, cannot possibly occur where the pound-net is in use, as the fish escape uninjured in case the net becomes adrift. Neither can it exhaust the fish on their feeding or spawning grounds, because it cannot be set in either very deep or very shallow water.

I am informed that a petition was signed some years ago by a large number of gill-net fishermen in the Georgian Bay district, which stated that the pound-net was a most destructive engine, and its use was fast exterminating the salmon trout and whitefish in this locality.

The arguments set forth in this petition must have carried considerable weight with the Department, as the pound-nets were immediately abolished. I feel confident that the cry must have been exaggerated, and had the pound-net fishermen had an opportunity to show their side of the question in its true light the Department would have looked into this matter more thoroughly, before taking final steps to do away entirely with this less objectionable and scientific method of fishing in these important waters.

REVIEW.

A great deal of difficulty attends the summing up and reviewing of the correspondence transmitted to your Department by fishery officers and interested fish dealers, as the former do not appear sufficiently familiar with the practical working of the pound-nets to give an opinion upon which the Department could prudently take action. In the majority of instances the gill-net system is the only one brought to the notice of the overseers of the Georgian Bay; and having no pound-nets in their district, they have no opportunities of becoming acquainted with the working of that appliance; while, on the other hand, the fish dealers referred to would naturally favour the system in which they have their capital invested, and from conversations with some of them I am of the opinion that they have not made a study of this important question.

In support of this view I might quote Overseer Shackleton, who, in answer to question No. 1: "Whether it would be advisable to allow pound-net fishing in the Georgian Bay, under certain restrictions?" simply answers "No," without giving any argument in support of his contention; and in reply to question No. 2: "What size mesh would you recommend?" says: "Leader, 8 inch, pot 5½". Any one acquainted with the pound-net must know that if these dimensions were adopted it would not only allow the enemies of the better class of fish, such as the sucker, the mullet and the ling, to escape, but the average-sized marketable fish as well. Then, again, the same officer, in answer to question No. 3: "In what particular place in the Georgian Bay would you recommend pound-net fishing to be allowed?" instead of giving information in regard to the matter, states "Nowhere". Then, further, in answer to question No. 5: "Under what restrictions as to localities, number and size, should gill-net fishing be permitted" Officer Shackleton evades the question altogether and says: "A general reduction in mileage is necessary"!

In my opinion, the Departmental Regulation now in force in reference to the number of yards or miles of net to be used by each license holder is right; but the fault is in the officers permitting gill-net fishermen to use almost any quantity of net and size of mesh they desire. Warden Cameron, in answer to question No. 1, says "No; gill-net fishing is now carried on so extensively in the bay that further devices for catching fish are unnecessary." This is really no argument at all, for if a better and less destructive method of fishing could be established surely it is in the interest of the fishermen and the Department to bring about its adoption. He evidently appears satisfied to permit this "extensive" gill-net fishing to continue, but suggests nothing to prevent the depletion of these valuable fisheries in the Georgian Bay, which must, in the course of a few years, become almost exterminated by this "extensive" gill-net system. For some reason, Officer Cameron gives no answer to questions 2, 3 and 5. I am quite in accord with the views of this officer in answering question 4, where he states, "\$10 license per boat should not be considered an overcharge"; but I will suggest a fair and just way to decrease the number of licenses to be granted gill-net fishermen. In the first place, no person should be granted a license to fish who does not make it a specialty for his livelihood in that way. A great many cases are known where bushmen, labourers and farm hands, engaged in work at fair wages during the summer months, deliberately leave their employers service (inconveniencing them), between the 1st and 15th of October, and when the fish are seeking their spawning grounds they commence fishing. These so-called fisherman are provided with-gill net appliances by extensive fish dealers, by employees of the American fish monopoly. At this season the fish are easily captured, and these parties reap a good harvest, much to the injury of the regular fisherman. Having no capital of their own at stake they run great risks of losing their outfit, and fish in such remote places, as a rule, that they don't even pay the license, unless the fishery officer happens to come in contact with them, and in nine cases out of ten fish during the entire close season. The fish captured in this way after the 30th of October are either frozen or secretly salted and put upon the market at a later period. This is not only a violation of the fisheries law, but a damage impossible to reckon to the fishing interests of the country. If the Department compelled their officers not to grant licenses to these parties there would be no difficulty in having the grievance remedied of which officer Cameron complains, that of "extensive" gill-net fishing. Officer Miller, in answering the questions sent him by the Department, displays considerable knowledge of the subject, and I quite agree with many of his views; but I differ with him, however, in part of his answer to question No. 4, where he states that "the present fee of \$5 is high enough for purposes of protection," and that "tug fishing is very injurious."

The \$5 fee encourages persons not engaged in fishing as a regular calling to fish in the fall of the year; and, in my opinion, the tug system is a much more satisfactory one than the sail boat. I might give a few reasons why I uphold it: 1. A tug cannot set upon the shoals in very shallow water, where the majority of salmon trout and whitefish spawn, while the sail boats and fishing smacks can; 2.

With the tug they are enabled to lift the nets regularly, and consequently the fish arrive at market in very good condition, but in cases of unfavourable winds and rough weather the sail boats and fishing smacks cannot reach the grounds upon which their nets are set until the wind and sea moderates. Under these circumstances, the sail boat and fishing smack, operating by the gill-net principle, can not lift regularly, and in too many cases, I regret to say, the fish are brought ashore in a semi-decomposed state and unfit to be eaten. In the event of these fish not being in a condition to be sold fresh, it also encourages salting and putting up large numbers of packages of decayed fish, with the idea of deceiving the buyer and consumer.

Officer Brinkman appears favourable to the use of the pound-net under certain regulations as to localities where they might be set. In regard to the size of the mesh to be allowed for pound-nets, he considers the legal mesh sufficiently large to allow the small fish to escape; but what the legal mesh is at present for pound-nets I am unable to ascertain; but if it is not as large as I have suggested (4-inch pot) I disagree with his opinion, and have every reason to believe I have shown fair reasons in support of the large meshed leads and pots.

Mr. Charles Noble, fish dealer, Killarney, is of the opinion that a limited number of pound-net licenses should be granted in the Georgian Bay; but it is evident, from summing up his report, that he is specially interested in gill-net fishing. In answer to No. 4 he appears to think "it would be utterly impossible to prohibit gill-net fishing now;" and while I am of the opinion that it would be impracticable to do so entirely, still the system could and should be reduced by the plan I have already suggested, together with an enlarged fee for fishing licenses.

W. A. Clarke, an extensive gill-net fish dealer of Collingwood, in stating that in his opinion pound-nets should only be permitted to be set at "exposed places, where the early gales of September and October would blow these nets from their moorings," proves conclusively that he is either unacquainted with the merits of this appliance, or that if he furnished a fair statement of the facts of the case he would damage his own gill-net business. He also states that "the mesh of the gill-net should be $4\frac{3}{4}$ inches, and after eighteen months' notice all net under this size should be confiscated." It may be all very well for Mr. Clarke to make that statement, but as very few (if any) of the Georgian Bay fishermen have carried out the provisions of the law by using the legal mesh of 5 inches, it is not at all likely they would restrict themselves to $4\frac{3}{4}$, as they have been using a smaller size for years, unless the Department insisted upon their local fishery officers enforcing the law more rigidly than the majority of them have in the past.

Mr. C. W. Gauthier, fish dealer, of Windsor and Detroit, in giving his opinion as to what should constitute a fair sized mesh for a pound net states: "lead, 7 inches; pot, 4 inches on three sides, and for the back $3\frac{1}{2}$ inches." In this I agree with him, with the exception of a $3\frac{1}{2}$ inch back, which, in my opinion, is not large enough, and would gill and kill a great number of salmon-trout and whitefish of too small a size to be placed upon the market, whereas if the whole pot was a uniform 4-inch they could escape and mature. I quite agree with Mr. Gauthier's answer to question No. 4 in every particular. There may be considerable force in his suggestions in answer to question No. 5, but I would advise the Department not to set apart any reserves where fishing would be entirely prohibited in deep water during the summer months without the most thorough investigation showing these grounds to be the natural feeding places of the immature salmon-trout and whitefish.

Mr. G. P. McIntosh, fish dealer, of Meaford, who has been in the business for the past twenty-five years, agrees with my views that pound-nets are not so destructive as the gill-nets, and also concurs with my opinion that the immature salmon-trout and whitefish are not to be found in the shallow water along the shores of the main land or islands, but that their feeding grounds are found in the deeper water in the middle of the lake. In all my experience, and from conversation with pound-net fishermen and others, I have never known a small salmon-trout, from 6 to 9 inches long, weighing a quarter or half a pound, to be captured, even in a pound-net,

sufficiently small in the mesh to retain the smallest sized herring; while in the deeper water, where the gill-net is used extensively, I have seen thousands of them caught by their teeth. This statement can be verified by fishermen engaged in gill-net operations, and goes a long way towards upholding the future establishment of the pound-net.

Mr. Joseph Wilson, fishery officer at Sault Ste Marie, is decidedly of the opinion "that pound-net fishing should be allowed in the Georgian Bay and Lake Huron." In answer to No. 2: "What size mesh would you recommend?" he makes a very peculiar statement when he says that "all parts of the pound-net should not be less than 6 inches, extension measure." The average size of the salmon-trout and whitefish in the Georgian Bay and Lake Huron is five pounds, so that a pound-net of this mesh would really not capture anything but the overgrown fish. Mr. Wilson further suggests that "the fee for boat licenses should be increased to \$20, and would prohibit all fishing operations by tugs." I do not agree with these views, and I am convinced that a sudden change from \$5 to \$20 license fee for boats would be unjust, and considered by the fishermen a great hardship.

Overseer Fraser, of Victoria Harbour, suggests "prohibiting forever" pound-net fishing in the Georgian Bay, and states that the "gill-net is the only true way of fishing." From my arguments, it will be noticed that I am decidedly opposed to this officer's opinion, and I am convinced that the Department should not attach much weight to the views of any person who simply asserts, without giving practical reasons in support of their views, especially upon a question that requires the best possible action in order to do away with the very noticeable evils of excessive fishing which at the present threaten to destroy the vast wealth to be derived from the great lakes.

To substantiate my argument in regard to useless information sent to the Department, I wish to call your attention to a portion of Captain Holmes' report of 1888 upon the fisheries of the Georgian Bay and Lake Huron, in which he states that, "from conversation with fishermen of from twenty to forty years' experience I am induced to believe that it would be greatly to the interest of the fisheries and the fishermen were pound-nets entirely prohibited, at least for a term of years; but should this be deemed too abrupt a measure, without one or two years' notice, then I would recommend that the leaders be of 2 or 3-inch mesh, and the hearts not less than $4\frac{1}{4}$ or 5 inches, thus allowing the small fish to escape, instead of destroying everything which comes into the pound." This unreliable information Mr. Holmes has gained from old and established fishermen is most injurious, and leads the Department to have a very mistaken belief. For instance, the 2 or 3-inch mesh for the lead is altogether too small, as it would have the injurious effect of leading the very smallest fish into the pot; whereas, with 6 or 7 inch mesh they would readily escape. The inference to be drawn from his report is, that the pot or pound where the fish are captured and retained is of no importance, as he says nothing in reference to it, when it is decidedly the all-important part of the net for capturing fish.

At the earnest solicitation of a petition gotten up and signed by a large number of gill-net fishermen, your Department was induced to abolish the so-called destructive $2\frac{1}{2}$ inch pound-net; and judging by Mr. Holmes, observations, he is evidently inclined to make it more destructive than ever, by saying nothing about the enlargement of the pot, but suggesting that the leader, which was usually 5 should be reduced to 2 or 3 inches, thus making it impossible for small fish to escape becoming impounded. The size of the pound-net which I advocate is to have the leader 6 inches, with the hearts, tunnel and pot or pound not less than 4 inches. After having reviewed the whole of the correspondence sent me, in the most careful way, I am more thoroughly convinced than ever that, notwithstanding the misrepresentations which have been circulated in regard to the destructive qualities of the pound-net, that, when made of the proper dimensions, it is far less injurious than the gill-net system. I have in all probability studied and investigated the relative merits and demerits of these appliances more than any officer of your Department, and am quite confident that I could substantiate the correctness of my views against any opposition.

To my mind, the regulation of the fisheries of the great lakes is one of the most important questions with which the Department has had to deal for many years.

It must be acknowledged that by the present exhaustive gill-net system that these valuable fisheries are being rapidly destroyed, and unless some remedial measures are adopted and stringently enforced it is only a question of a few years until this source of wealth to our people is entirely swept away; and to effect this object I would respectfully suggest the adoption of the following regulations, which could be enforced if considered advisable:—

1st. The close season for salmon-trout and whitefish to extend from 15th of October to 1st of January.

2nd. That $4\frac{1}{2}$ inches be the regulation mesh for gill-nets capturing salmon-trout and whitefish.

When asked by the Minister in Ottawa last winter, I suggested $4\frac{1}{2}$ inch mesh; but since looking into this matter thoroughly, I am convinced that $4\frac{1}{2}$ is the fair and proper standard.

3rd. That the present number of yards of net allowed for boat and tug licenses be strictly enforced.

4th. That boat licenses be raised to \$10 and tugs \$30.

5th. That fishermen be compelled to bring ashore all decayed and useless fish and fish offal, instead of polluting and destroying the grounds with it; or, in my opinion, the only true way to avoid this ruinous practice, which, without a doubt, destroys important fishing grounds, would be to impose a heavy fine upon fishermen who gut and clean their fish while returning from their nets to their points of shipment.

6th. That no license be granted to persons other than those who make an exclusive business of fishing. The idea is, that such action would do away with unfair competition from parties who fish for only a month in the fall when the fish are easily captured in the act of spawning.

7th. That certain grounds be set aside for natural and artificial propagation, and that a fish hatchery be established at Wiarton, or some other convenient and suitable point on the Georgian Bay.

8th. That a limited number of pound-nets be allowed to be used for the Georgian Bay and Lake Huron.

9th. That the legal mesh for the leaders be 6 inches; tunnel hearts and pot or pound not less than 4 inches.

10th. That the lead shall not extend more than a quarter of a mile.

11th. That only one net in a locality be permitted, and that the present system of setting several pound nets attached to one leader in consecutive order be strictly forbidden.

12th. That care be taken to prohibit the setting of pound or gill-nets at the mouths of rivers and entrances of bays, in such a way as to obstruct the passage of the fish.

13th. That fishery officers be compelled to enforce the provisions of the law, and that all licensed fishermen be supplied with a tag or check, to be produced when demanded by the officer.

Before closing this report I beg to call your attention to the fact that in former years wholesale fish dealers, with moderate capital, were stationed at different points, such as Collingwood, Meaford, Owen Sound and other places, and purchased from time to time the fish brought to market by the fishermen of Georgian Bay; but I regret to say that an extensive Fish Company, composed of American capitalists, have bought or squeezed out all the local dealers, and now have a complete monopoly of the fish caught in these waters. The Canadian fish dealers have to pay three-quarters of a cent per pound upon salmon-trout and whitefish shipped to the United States, while the American fish Companies can ship fish caught in the Canadian waters to that country without any exaction of this kind. This means a heavy discrimination against Canadian fish dealers, and makes it almost impossible

for them to compete against American firms. I would suggest that the Department look into this matter, and ascertain the true facts, with a view to remedying this state of affairs, which is not only depleting our waters, but usurping the rights and privileges of *bona fide* Canadian fishermen.

Under these circumstances, would it not be a move in the right direction to fix an export duty upon fish caught in the Canadian waters and shipped to the United States by American dealers? If nothing of a more retaliatory character were arranged, this would at least place the Canadian dealer upon a fair footing with his American competitor. As the Georgian Bay is the main source of fish-food for the Province of Ontario, and the Buffalo fish monopoly now have complete control of it, it is only reasonable to assume—in fact, the present aspect indicates that Canadians will only be able to secure supplies of salmon-trout and whitefish at a very high market price, and only then when there is an over supply for the American trade.

In conversation with interested fishermen at various points, and in the vicinity of Wiarton (the main export depot of the American Fish Company), I find that considerable dissatisfaction exists among Canadian fishermen on account of the privileges which these American Capitalists have usurped, and which they claim must soon drive Canadians out of the trade of exporting fish altogether.

I have the honour to be, Sir,

Your obedient servant,

CHARLES WILMOT.

APPENDIX No. 7.

THE CANADIAN HERRING INDUSTRY.

(a.) Special reports on raising the standard, by :

- I. Mr. A. C. Bertram, Inspector of Fisheries, District No. 1, Nova Scotia.
- II. Mr. Robert Hockin, Inspector of Fisheries, District No. 2 do
- III. Mr. J. R. Kinney, Inspector of Fisheries, District No. 3 do
- IV. Mr. J. H. Pratt, Inspector of Fisheries, District No. 1, New Brunswick.
- V. Mr. Edward Hackett, Inspector of Fisheries, Province of Prince Edward Island.

(b.) Extracts from various sources on the question of packing and curing fish.

(c.) Comparison of inspection laws affecting fish and fish oils.

I

NORTH SYDNEY, C. B., 31st October, 1890.

To the Honourable

CHARLES H. TUPPER, Minister of Marine and Fisheries,
Ottawa.

SIR,—In accordance with your instructions of the 8th of September, No. 2672-90, I have carefully gone over the “copy of an abstract of the various suggestions and recommendations made to your Department with regard to the sea and fresh-water herring industry of Canada and the best means of raising its standard.”

I have made enquiries and consulted with several in my district who are qualified to give an intelligent opinion on the subject. I shall deal with each of the subjects under their respective heads as is done in the abstract.

HERRING.

I may say at the outset that we by the sea know little or nothing of fresh-water herring and have no idea that they should be treated in the same way as our sea herring. Any remarks or recommendations I shall make refer alone to the herring frequenting the waters surrounding Cape Breton. Of these, we have three distinct kinds or varieties: 1st. The “spring run,” so called because caught in our waters in the early season in the latter part of April and in May—a small and lean kind, only used for bait, some fresh, but the bulk salted down for lobster and mackerel bait; 2nd. “The summer run,” caught in the latter part of June, in July, and sometimes running into August—a large, fat herring, which, when well cured, there are no herring richer in quality or sweeter to the taste; 3rd. The “fall run,” caught in September—as large in size but not nearly so fat or delicate as the summer or July herring, but of fair quality.

These three kinds being different, the one from the other, it will readily be seen that no one certain system of cure will suit all three, and that methods suitable to the kind, season and quality must be adopted to produce the most satisfactory results.

Our spring herring have little commercial value, and, for the purpose of your enquiry, may be dismissed from consideration, with simply saying that some restrictive measure or regulation should be adopted to prevent the wholesale destruction of these fish, as is sometimes done when they “strike in” in large quantities and they are used for manuring land.

The question of raising the standard of our summer herring is one of lasting importance to the country, and the attention and consideration given the subject by your Department is in every way praiseworthy, and must be fraught with great advantage to this fishing industry. That this fish is greatly undervalued is best known to those who have been fortunate enough to taste some thoroughly cured Cape Breton summer herring, and it is too much to be feared that this low estimation is largely due to the causes of which the Montreal Board of Trade complain—"bad preparation and fraud practised on the trade." Most emphatically it is not due, as Mr. Gunn seems to intimate, to the "inferior quality" of the fish. I have not in the slightest degree overdrawn in describing the good qualities of our summer herring. I firmly believe that if the fishermen of this coast could be induced to give better attention to the curing of their catches of herring and could successfully place them on the markets of the country in thoroughly good order, after carefully culling and properly grading the different kinds, the result in increasing the public appreciation of this article of food would prove highly satisfactory and remunerative. These remarks will apply with equal force to the September herring, but as they are caught at a time of year when they are not so liable to spoil, the same amount of care in curing is not expected.

CURING.

The delegates to Scotland strongly favour the Scotch method of curing; but I find very few of our fishermen, whose opinions are entitled to weight and consideration, agree with them in applying that method or system to our summer herring. These are delicate and sensitive to the influence of the sun and our summer heat—they are, you will observe, caught in our hottest season—when exposed thereto for even a few minutes. Any damage done them at this stage cannot by any possible attention thereafter be overcome. This, however, does not, as I have already pointed out, apply to our fall or September herring, and I am fully of opinion that the Scotch method of curing applied to these latter would be quite the best that could be pursued by our fishermen, and calculated to bring about the best results.

With our summer herring, there is no question that the best results have been attained by first after taking the fish out of net, carefully covering and protecting them from the rays of the sun, getting them ashore and under a covered and cool place as quickly as possible, gibbing, splitting them up the bellies and scraping the blood from their backs with a knife rounded like a small table knife, and washing, but not allowing to soak, in sea water frequently changed. It would be a great improvement if this water could be kept cool by lumps of ice—indeed, it would be a most decided improvement, if when taken out of the net and covered, preparatory to taking them in, lumps of ice could be thrown on them and under the covering. They should at once be carefully packed in barrels well soaked in water and tested to the light, first filling their bellies with salt and laying them on their backs, head and tail in circular form, as preferred, and scattering a little salt over each layer about the stave especially. Enough salt will adhere to their backs to preserve them until the brine or pickle runs around them. It is a mistake to say our fat summer herring are injured or lose their flavour by over-salting. Liverpool salt is what is chiefly used around the east and southern shores of Cape Breton. If they could be induced to use Trapani or St. Martin's salt I am strongly of opinion that an improvement in the curing of herring would result.

BARRELS.

In view of the unqualified conclusion of the Montreal Board of Trade, already quoted, it is, I think, simple justice to those engaged in this arduous occupation to say that one of the chief factors in depreciating herring is found in the barrels being constructed of wood so thin and hooped so unsecurely that they are not able to stand the "rough and tumble" they are subjected to in transit by road, boat and rail. Our fish must eventually find its best markets in the western and prairie Provinces, and to place herring in those distant markets we must, I believe, put them up in barrels

made of the harder kinds of wood—at least, the large packages, such as 200 lbs. It will I fear, be difficult to get the fishermen to adopt the hardwood barrel. The price generally paid for 200 lbs. of herring put up and barreled is about \$4 to \$4.50; and at \$1 for the barrel, with the cost of salt, it will be seen that one-third of the price received goes to cover salt and barrel. Unless it can be fully proven that the price this fish will realize so put up will more than pay for the increased cost of the hardwood barrels I see no way of overcoming the objection Mr. Bauset seems to anticipate.

INSPECTION.

I fully concur in the opinion expressed by the Montreal Board of Trade, that “the repeal of compulsory inspection was a step in the wrong direction.” Inspection should be done on the spot, and not in cities, where it cannot be done without damage to the fish and increased cost to the packer. With due care in selecting properly qualified inspectors, stringent regulations and penalties adopted, in which the responsibility of the inspectors should not be overlooked, to prevent packing unsound with sound herring, and making the fees low, I do not see why a very decided improvement in their preparation should not be noticeable, and think it well worth a trial.

GENERAL REMARKS.

I do not think it out of place to observe that, in my opinion, another cause of the bad preparation of our herring may be traced to the fact that in nearly every instance each fisherman packs and cures his own catch. In this way we have many methods or ways of packing, and as the fisherman fancies his responsibility ceases when he gets them off his hands he is rather anxious than otherwise to palm off an unsound fish when he can. On the other hand, if we can have large quantities put up by regular curers these latter would have a personal interest in getting a reputation for putting up superior stock.

I should exceedingly like that the suggestion made by Mr. Gunn, respecting a trial of the methods of curing and barrels, recommended with reference to lake or fresh-water herring, be tried in its fullest sense with our sea herring. If this were done, and they were then sent to Industrial and Agricultural Exhibitions in the western Provinces, I am quite confident the fine qualities of our herring would receive such favourable notice that it would prove a valuable incentive to our fishermen to strive and raise the standard of their products.

I have the honour to be, Sir,

Your obedient servant,

A. C. BERTRAM,

Inspector of Fisheries.

II

Pictou, 31st December, 1890.

The Honourable

CHARLES H. TUPPER, Minister of Marine and Fisheries,
Ottawa.

SIR,—In compliance with circular No. 2,672 upon the herring fishery, I have the honour to report.

The points raised in this circular are: 1st. The general decline in the herring fishery; 2nd. A compulsory inspection of fish; 3rd. Inspection of packages.

To the herring trade of Nova Scotia there are known two distinct grades of fish—one caught in July, and always distinguished as July herring, which is a very superior fish, unsurpassed by any other; but it is said that there are degrees of

excellence even in these—that herring taken in July from Cape North and Louisburg are larger and fuller than those taken from Louisburg to Halifax, which again excel in quality those taken between Halifax and Sable Island.

All other herring than the July fish are classed as inferior fish, being lean or spent fish, and the only market for them being the West Indies, where they are consumed by the negroes, and because of their being devoid of fat they keep in the hot climate.

It is said that those fish of this quality which are shipped to Boston ultimately find their way to the West Indies.

A large business is done in this poorer herring, the price averaging about \$3,00 per barrel, while that of July herring averages about \$5, being no less than the same fish brought fifteen years ago.

The decline in the volume of trade is owing to the fact that fewer fish are taken now than formerly; firms in Halifax which formerly handled 10,000 barrels do not ship 1,000 now—they are not to be had. With the decline in the quantity there is perhaps no corresponding increase in price, because it is suggested that owing to the general prosperity of the country people live better than they did under the régime of free trade, and more expensive and presumably more substantial and palatable food is consumed in preference; perhaps also for the reason that the price is not very remunerative the fishery is not prosecuted with vigour, the mackerel fishery offering greater rewards. Upon the question of compulsory inspection of herring, the Halifax Board of Trade, on 25th April, 1890, considered certain propositions, which I believe were prepared by Messrs. Henry Hart and Charles Creed, advocating a compulsory inspection of herring and submitting a standard.

“A” No. 1 to be 11 inches and upwards.

“B” No. 2 do 9 inches to 11 inches.

“C” No. 3 do under 9 inches.

I wish to suggest that such a standard would be far from indicating the value of the fish, and that a July herring 11 inches and a fall herring 11 inches are very different articles.

I found in Halifax, among the merchants I consulted, a decided opinion against inspection of fish being compulsory.

Mr. A. W. Smith says he has met more fraud under inspection than can be without. He is a large dealer in fish; they inspect their own, and can do it much more cheaply and to their own satisfaction than possible with official inspection. They brand the fish as packers; their brand is accepted as reliable, and every thing is satisfactory.

To inspect fish and brand the quality sold to the West Indies as No. 3 fish would be injurious to the trade; for, as a matter of fact, they are No. 1 fish for that particular trade.

The Messrs. Hart & Co., West Indies, and fish merchants, also do not favour compulsory inspection. Both Messrs. Hart and Smith propose as a substitute, that packers be required to brand their own names upon the packages.

Mr. D. F. Power does not favour a compulsory inspection of fish; but all of the foregoing are decidedly in favour of an improvement in the packages.

The Inspector of Fish for the city of Halifax has occupied that position for a number of years, appoints his own deputies and imposes fines upon them for dereliction of duty.

This inspection meets with approval and is relied upon. Merchants willing to guarantee fish that have passed a city inspection would not do so upon an inspection outside of the city.

This inspector is of opinion that there should be compulsory inspection, and especially so of packages.

Regarding the kind of wood for packages: Pine is not used for fish barrels, and hardwood is impracticable being much too expensive. What is wanted for fish

is a barrel of $\frac{3}{4}$ -inch staves, with sixteen hoops; hoops to be not less than $1\frac{1}{4}$ inches at the smallest part. Wood for staves should be seasoned, and made of larch or spruce, free from sap.

Cheap fish are now packed in barrels, with staves in some instances not exceeding $\frac{1}{2}$ inch.

The inspector is of opinion that if a reliable inspection could be had it would soon make itself compulsory, because the trade would only handle first-class goods that had been inspected.

If some device could be secured that would give sufficient distinctness to inspected fish—say, for instance, require them to be stamped in large letters “Officially inspected,” and the name of the inspector to be branded; have the barrel staves, where not covered with hoops, painted—say blue. Then buyers would soon learn the value of the inspection, if it had a value.

The law would, of course, have to make it so far compulsory that no fish should be branded or stencilled as No. 1 Prime Fish, Crown Prime, &c., except as done officially.

This, it would appear, would be elastic enough to allow sufficient freedom for a trade to be done in unbranded fish, and at the same time the public would soon learn the value of inspection.

I would further suggest that, in addition to requiring that each packer of fish brand his own name on it, that imported herring should be branded with the name of the place from whence they come. Newfoundland herring is an inferior fish, and should be branded “Newfoundland herring.”

I have the honour to be, Sir,

Your obedient servant,

ROBERT HOCKIN,
Inspector of Fisheries.

III

YARMOUTH, N. S., 1st December, 1890.

The Honourable CHARLES H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—In compliance with circular *re* herring trade, I have to say that the manner and mode of taking and curing herring, and marketing the same, which prevail in this district, are of such a nature that I cannot conceive of any legal enactment which would be of benefit or profit either to the producer, buyer or consumer.

The writer was prominent in inaugurating the movement for amending the inspection laws, to the extent of making the inspection of herring optional. The reasons given at that time were formed upon the basis of a quarter of a century of contact with the producer, and nearly a like time as a dealer in the article under review.

Herrings are taken in western Nova Scotia by small boats, often manned by a single man, and rarely more than three. The fish are cured in small quantities and packed to suit the purchaser, who is the trader buying to ship to the West Indies and United States, in neither of which countries are any marks of quality or inspection noticed, the fish being sold solely upon their merits, upon being opened and examined.

I can readily understand that in some parts of Canada, where fish are taken in large quantities and packed for sale in other countries than those I mention, the same rule as to packing, &c., does not apply. For instance, herring, I understand, are

sold in Montreal and Quebec upon the merits or demerits of their brand, in which case it might become needful that some legal significance should be attached to the marks; but, as I have stated, there is no necessity for any change in the present regulations, so far as this district is interested.

I have the honour to be, Sir,

Your obedient servant,

J. R. KINNEY,

Inspector of Fisheries.

IV

DOMINION S.S. "DREAM,"

ST. ANDREW'S, N.B., 31st October, 1890.

The Honourable CHARLES H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—In reply to your letter of the 8th ult. (No. 2672-90), including copy of an abstract of the suggestions and recommendations made to your Department regarding the herring industry of Canada, and requesting from me a report on this subject, after making enquiries among those persons best qualified to give an opinion I beg to report as follows:—

I have made, as directed, every possible enquiry among fishermen and dealers engaged in the herring industry, and as taking and curing this fish form one of the principal occupations for the inhabitants of this division it is therefore a subject on which they can speak intelligently. Of course, the sardine and smoked herring industry supplies remunerative employment to a large number of fishermen the greater part of the year, but nearly all of them owning schooners fit them out about September, when the schools of large fall herring strike our shores, and begin netting them for pickling purposes.

A large fleet of schooners each autumn moor in Three Island Harbour, Grand Manan, and set their nets in the surrounding waters. About forty schooners are anchored there and in its vicinity at the present time, and as pickled herring commands a good price, and the catch being good, our fishermen will be enabled to make a good fall's work.

I write the foregoing to show how important this herring industry is to the fishermen of the Bay of Fundy, and what an immense quantity of fish are taken and packed by them during a season.

Among this fleet there are many old, experienced fishermen, who have nothing to learn in reference to the correct method of curing and packing herring, and who put up their catch in a first-class manner. But there are others again who will not exercise any care, and seem to make it a point to put up as large a quantity as possible, without the slightest regard to quality. They are well aware that without a compulsory inspection law they can command as good a price for their catch as their neighbour who puts up good fish.

The decrease in the demand for pickled herring is attributed by many, and it is also my opinion, to the careless methods pursued by many fishermen in curing and packing their catch. Although they are well aware that by placing badly cured fish on the market the confidence of the buyer will be destroyed, still there are many who yet pursue these careless practices, well aware of the results, which cannot be otherwise than detrimental to their own interests.

In regard to the question of barrels, the kind used altogether in this division are made of spruce, with pine heads. None are made or used here with pine staves.

Opinion among the fishermen and dealers is in favour of spruce barrels being continued in use and no compulsory change made to hardwood barrels. I do not find much complaint regarding spruce barrels; they seem to answer their intended

purpose, if proper care is exercised in their construction. Where the half-barrel now costs 35 or 40 cents and the barrel 60 or 65 cents, they feel that an increase to 75 cents and \$1 for a half-barrel would be an injury instead of a benefit to them, and they do not believe the price would increase to correspond with the increased cost of the barrel.

I would not therefore recommend a compulsory change in the matter of barrels at the present time, trusting to the good sense of our fishermen to use none but good ones, and the judgment of the inspector in examining all barrels thoroughly.

In reference to the subject of curing herring, the fishermen of these waters believe that they fully understand the proper method to be pursued in curing and packing herring, and from what I have seen I am firmly of the same opinion. If they do not practice the best method it is not because they are ignorant of it.

The method employed by them to put up good fish is, to "gib" the herring as soon as possible after being taken from the nets, and with a very little washing (if any), in order to clean the blood off them, pack in barrels, with a generous supply of salt, especial attention being paid to having the bellies of fish well filled with salt. A slight cut is made in the fish near the back-bone, to enable the salt to penetrate in that vicinity.

They are afterwards re-packed in new salt, when the old pickle, which is discoloured by the blood, is removed, and new pickle made and poured over the fish. After being headed up, they are ready for shipping to market.

INSPECTION.

The matter of inspection of herring is a subject in which all fishermen take a sound interest, and all I have conversed with on the subject, together with many fish dealers, believe that a compulsory inspection law cannot be adopted too soon. To ensure proper inspection, I think it would be advisable to have it done at the several fishing villages near the fishing grounds, a reliable, practical fisherman to be appointed as inspector in each village, who will thus be personally acquainted with each fisherman, and will therefore know who puts up good or bad fish. This knowledge will assist him materially when the fish come before him for inspection. It is also my opinion that the fees should be light, and be borne by the curer. As fishery matters are at present in these waters, the fisherman finds that after catching his herring, instead of using his time boating his fish to somebody else to pack, or to a factory, it is to his interest to cure and pack the fish himself, and he can; if required by an inspector, put them up just as well as can be done at a factory.

Mr. Gunn's recommendation, that a number of barrels of pickled fish of a different kind, each packed in a different kind of barrel, and to be stored at Ottawa for a time, is in my opinion a good one, and should be carried out, in order that the question whether the wood composing the barrel affects the flavour of the fish or not should be settled. I find that our fishermen are not aware if fish take up any flavour from the wood composing the package.

Trusting the foregoing will be satisfactory.

I have the honour to be, Sir,

Your obedient servant,

JOHN H. PRATT,

Inspector of Fisheries.

V

TIGNISH, P.E.I., 12th November, 1890.

The Honourable CHARLES H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to acknowledge receipt of your letter of 8th September, accompanying certain recommendations made to the Department with regard to the herring industry of Canada and the best means of raising its standard. As directed, I consulted with persons engaged in the fishing industry in all parts of this Province, and whose long experience qualified them to give an opinion on the subject. The general opinion, as expressed to me, was, that the decline of the herring industry was mainly due to the careless manner in which the curing and packing was done by those engaged in the business, who as a rule, make the herring fishing subsidiary to other branches of the fishing industry, and consequently do not give it proper attention.

The result has been an inferior article, scarcely fit for food, and which the consumers will not use while they can obtain other kinds of fish. To raise the standard of Canadian herrings will require a decided change in the mode of handling the fish, from the time they are taken out of the water until placed on the market for sale as a finished article. At present the curing and packing are done in a very careless and imperfect manner.

The fish, when taken from the nets, are allowed to remain a considerable time before being gutted; no salt is thrown among them at this period, and many of them are spoiled before the gutting takes place. After being gutted they are thrown into barrels and salted, no attempt being made to separate and remove the injured and broken fish, or to sufficiently "roose" them with salt before placing them in the barrels. Then after being covered with pickle and the barrels coopered in an imperfect way they are considered ready for sale. A system of this kind pursued with regard to any commodity must result in lowering its value, and it is not surprising that a decline has taken place in the herring industry.

In referring to the different parts of the process of curing and packing, I beg to take them in the following order:—

CURING WHEN TAKEN FROM NETS.

This is the most important stage through which the pickled herring passes in preparing it for consumption. Any neglect at this time will result in making an inferior article, and no subsequent use of salt or pickle can restore the loss. When the fish are taken from the nets they should be gutted with all possible speed. If any time is allowed to elapse between the landing and gutting, salt should be strewn in liberal quantities over the fish, which will have the effect of hardening them, thus preventing heating or tainting. The gutting should be done by skilful and experienced operators, who would be able to perform their part of the work with rapidity and dispatch. After passing the gutting process the fish should be placed in troughs or tubs, where they could be effectually "roosed" with salt before being packed. They should then be packed in layers in good barrels, a sufficient quantity of salt being sprinkled between each layer of fish, and in warm weather it is a wise precaution to place a little salt in the belly of each herring at the time of packing. There is considerable diversity of opinion with regard to the quantity of salt necessary to properly cure a barrel of herring, some holding that one and a-half bushels are required, while others contend that one bushel is sufficient.

My opinion is, that one bushel of salt is sufficient to cure a barrel of herrings, and that Liverpool salt of good strength is the best, as it will strike the fish more quickly than salt of a coarser grade.

Too much salt should not be used, as it has the effect of drying up the fish and rendering it tasteless. Washing before salting, so extensively practised by Canadian

curers, should be prohibited, as it injuriously affects the quality of the fish. As the fish settle down in the barrel more should be added from day to day until the barrel is thoroughly filled and ready for coopering. The cooper should examine the barrels carefully each morning, and see that all are perfectly tight and full of pickle.

While this process is going on the fish should be kept as much as possible from exposure to the weather, and the barrels, when completely packed, should be covered and kept from the sun and rain.

BARRELS.

The herring barrel should be a strong, substantial package, made of good, sound wood, and bound with the best quality of ash hoops. I notice what is stated in the recommendations with regard to substituting hardwood for softwood barrels, as at present used. There is no doubt but barrels made of pine, fir or cedar are not suitable for packing herring.

Barrels made of those kinds of wood are generally of a poor class, most difficult to tighten properly and will not stand the rough handling to which they are subjected in course of transportation. I am of opinion, however, that a good spruce barrel, properly made and bound with ash hoops, would be found sufficient to answer all purposes in the herring industry.

Barrels of this kind would be very strong, are easily tightened, and calculated to stand a great deal of handling.

The material for making them could be readily procured in the Maritime Provinces, and the cost would not exceed \$1 each.

The undersigned was for many years engaged in the fishing industry in this Province, and has exported thousands of barrels of mackerel (a much more delicate and valuable fish than herring) by railway and steamboat to the American markets, and never met with any serious loss from breakage or leakage, and did not hear any complaints that the wood imparted a foreign taste to the fish.

The barrels used in this business are made of spruce, and I am fully convinced that such barrels would be found suitable for packing the best quality of herrings.

Hardwood barrels would be expensive, and I fear that any regulation compelling their use would be oppressive, and, instead of stimulating, would rather restrict the industry.

INSPECTION.

On the subject of inspection a great deal of difference of opinion exists. There are numbers of men of long experience who state that compulsory inspection is of no benefit to the trade, that the fish are sold on their merits, and that compelling a packer to pay a fee for the use of a brand that is of no service is a great hardship. With this view I cannot agree. My opinion is that there should be a strict inspection of pickled herring within Canada, that this inspection should be compulsory and that all packers and dealers be compelled to bring their fish up to a given standard. Herrings packed in the country could be inspected at the curing houses before being offered for sale, while on importations from abroad the inspection might be made at the port of entry. The inspectors should be competent men, having a thorough knowledge of the industry, and should be required to give bonds for the faithful discharge of their duties.

Proper standards should be established, and no person allowed to deal in an article not up to the required grade.

A system of this kind would have a great effect in restoring confidence in the trade, as the brand affixed would to some extent be a guarantee that the article was as represented, and would undoubtedly materially assist in raising the standard of the herring industry in Canada.

I have the honour to be, Sir,

Your obedient servant,

EDWARD HACKETT,

Inspector of Fisheries

EXTRACTS FROM VARIOUS SOURCES ON THE QUESTION OF PACKING
AND CURING OF FISH.

Rev. John Ambrose, on Margaret's Bay fishing grounds, in "Proceedings and Transactions of the Nova Scotian Institute of Natural Science, 1866-67, Vol 2, part 1.

* * * * *

"One remark, however, I may venture with reference to the barrels in which our Nova Scotia herrings are too frequently packed. They are not only defective in material but faulty in size, for many of them are too large, so that the fish working loose, become softened and spoil in long voyages to warm climates.

"A good system of inspection of both fish and packages is a great desideratum in this Province. A Chief Inspector, thoroughly competent to teach our fishermen the best and most improved systems of catching and curing fish, would prove a very valuable officer, if possessed of zeal and tact. His salary should be paid out of the public revenue, and not by the fishermen, who would also be expected to pay the duty inspectors (page 76.)

* * * * *

"A very considerable proportion of the catch of mackerel is annually lost to the Province by the very careless method of curing and packing too frequently followed on our shores. In the first place they are often left too long exposed to the sun and air before salting, and for this cause many barrels of Nova Scotia mackerel are every year condemned in foreign markets. Another evil is the insufficiency of the barrels used by too many fishermen. Two hundred pounds of No. 1 fish, worth from \$12 to \$15, and sometimes even \$20, are too often packed into a barrel costing 25 or 30 cents, made of knotty and unseasoned stuff, and therefore dear even at that price. These barrels bear no rough handling, soon shrink and lose the pickle, the contents are spoiled, and the character of our fish is depreciated in comparison with those of other countries (page 74.)

* * * * *

"If the proposed negotiations with Brazil and other Roman Catholic countries should open up new markets to our staple products, a great deal has yet to be learned by our shore and Labrador fishermen in the way of curing fish for such markets; for that which has been tolerated among the negroes of the Southern States and the West Indies will not tempt the fastidious palates of the more civilized people, with whom we soon hope to trade. Time forbids my entering on the superior mode of curing cod, hake, haddock and pollock practised by the leading Jersey houses, which gives them a decided advantage over us in the fish trade," (pp: 42 & 43.)

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Report of United States Commission of Fish and Fisheries, 1886, part 14, p. 155:—

"The preparation of fish for the market has also been the subject of legislation. Many nations which pay no particular regard to the times, places, and circumstances of the sea fisheries have considered it expedient to secure the interest of the purchaser by regulating and restricting the mode of preparation and packing, this being the case, perhaps, more especially in the Scandinavian countries and Holland than elsewhere. The herring fishery in Holland was formerly kept, in all of its stages, under the control of the Government, although of late years this is more particularly confined to the packing and inspection."

Quebec Board of Trade, 22nd February, 1865:—

“OFFICE OF THE QUEBEC BOARD OF TRADE,
“QUEBEC, 22nd February, 1865.

“EXTRACT from a report by a sub-committee appointed to examine into the provisions of the Bill M, “An Act to make better provisions for the official inspection of Fish and Fish Oils,” received and adopted by the Council this day:

“Your Committee recommend that the Council oppose the inspection or culling of dried or green codfish in bulk. From the nature of the business it would not be possible to provide inspectors on the coast in sufficient numbers to perform the service—nor, if performed, would it be of any use, inasmuch as the fish could not be identified. A system of this kind would prove a hindrance to the fishermen, and of no utility, except for statistical purposes, for which other and more suitable measures can be devised.”

“Certified correct.

“A. FRASER.”

Report of the Department of Marine and Fisheries for the year ending 30th June, 1871. Report of the Honourable Peter Mitchell page 64:—

“The voluntary system which at present exists does not either prevent the frauds practised in curing and packing fish nor enhance the value of the produce of our fisheries in foreign or home markets. Complaints are rife of the vexatious impositions and losses to which purchasers of pickled fish are now exposed and of the consequent depreciation of the character and price of this commodity throughout the agricultural districts and amongst the population of the interior especially. The Department has received from various quarters urgent representations on this subject. It is still under consideration, but although unprepared as yet to suggest legislation, I hope soon to be in a position to submit to the Government a measure on the subject which may prove acceptable to the fishermen and to the trade, and also beneficial to consumers.”

“To the Honourable

“The Minister of Marine and Fisheries.”

Report of the Department of Marine and Fisheries for, the year ended 30th June, 1872. Report of Hon. P. Mitchell, page 62:—

Inspection of Fish and Fish Oils.

Government propose to include in consolidation of inspection laws a scheme to ensure proper curing and packing of fish and fish-oils. An Inspection Bill is intended to be submitted to Parliament, amending and consolidating the existing Provincial Acts *re* inspection of certain staples of Canadian produce; also extending the measure to the whole Dominion of Canada, and including the produce of the fisheries in its provisions. This Act will embody the system contemplated in my remarks on the subject in the last Annual Report. Nothing has been done for the official inspection of fish and fish-oil under the existing laws. Frauds practised in curing fish still continue, and no efforts have been made to enhance the value of our fisheries in the markets. Complaints are prevalent of the impositions practised and the losses to which purchasers of pickled fish are put, and urgent representations have been received by the Department on this matter. After the failure of the voluntary system, after so long and fair a trial, it appears very desirable to try the experiment of a compulsory one.”

Letter from Mr. Alfred Ogden :—

“OTTAWA, 7th June, 1889.

“SIR,—At your request I now give you my opinion upon an industry which is of importance to a large number of the citizens of Canada and could be made much more valuable. I have spent nearly all of my life among fishermen, and have for over thirty years been engaged in the catching and the curing of fish. Although the herring fishing industry, according to the reports of your Department, stands but fourth, and the present prices are very low, yet with a little care and attention it could be made to assume much greater proportions.

In the Maritime Provinces herrings are now packed in barrels made of soft wood (except the bungstave), with wooden hoops, in the same manner as they were half a century ago, when they were carried to market by water in sailing ships and carefully handled. Now, being carried chiefly by rail and steamships and subject to rougher handling, the chimes of the barrels are frequently broken and the hoops separated; consequently, the pickle leaks out and the fish become dry and rusty and unfit for food. This is perhaps the chief cause of the deterioration in the value of and the demand for sea herrings in the markets of the Upper Provinces of the Dominion. More care should certainly be taken in packing these fish for shipment. The blood should be thoroughly soaked and washed out, and care should be taken to put enough salt in the barrels to save them. They should be packed in barrels bound especially around the chimes with iron hoops; the fish would thus reach the markets in proper condition, and, once their reputation was established, would command a much higher price, besides being in greater demand than at present, which would more than recoup the extra cost of more careful cleaning and the using of iron hoops on the barrels.

“Wooden-bound barrels suit tolerably well when for one direct shipping; but transhipped and handled roughly once or oftener, they are very liable to become damaged, as before stated.

“I was entrusted with the duty of collecting and re-packing about all of the commercial samples of dry and pickled fish that were exhibited at the Great International Fisheries Exhibition held in London, England, in 1883, which were sent from Ontario and Nova Scotia. I took great care in packing the pickled fish in good substantial, iron-bound barrels, and I was pleased to learn from the Hon. A. W. McLelan (then Minister of Marine and Fisheries) that these fish were superior in quality to any others shown at that exhibition.

“I extract from the report of Department of Fisheries, 1884 (Preliminary), page 27, the following, referring to dried as well as pickled fish, which were entrusted to my supervision :—

“Dried Fish.—This exhibit consisted of codfish, haddock, capelin, boneless cod and hake, cod, sturgeon and hake sounds, &c., &c. The samples were shown in large glass cases, and the cod especially, for soundness, preservation of colour, taste, &c., were not equalled by any in the exhibition. Whilst other countries had to replace or supplement their stock from time to time, on account of deterioration in the damp atmosphere of London, the samples from Canada remained unchanged and uninjured during the whole exhibition. For this class of exhibits the highest awards and three gold medals were given. It is believed that considerable trade will yet spring up between Canada and fish markets of England from the introduction of our staple fish through the channel of the Fisheries Exhibition. Inquiries have already been made by reliable English houses for consignment of our dried, pickled and canned fish.

“Pickled Fish.—The samples of pickled fish were numerous, of great variety well preserved, and were put up in barrels, half-barrels, kits or boxes. The wooden heads of the packages were taken out and glass ones substituted, so the whole exhibit was ever open to the public for inspection. The samples of this exhibit, from almost every Province of the Dominion, consisted of herring, mackerel, haddock, shad, salmon, trout, whitefish, eels, tongues and sounds, &c. These fish all

kept well, as they were intentionally salted somewhat heavier than if they were to be placed at once on the markets, and received most favourable notice, not only from reliable fishmongers and practical fishermen, who frequently inspected them, but also from the jurors, who awarded the exhibit three gold medals, three silver medals and two diplomas of honour.'

"Our fishermen are not slow to adopt any new mode or style of curing and packing fish, if it can be shown to them to be of any advantage, or that any benefit can thereby be derived.

"I may say I understand not only the catching and curing of herring, but also packing as well, and I feel confident that if the fishermen of our country could be taught that it is to their interest to give more time and expense to the curing and packing of these fish the result would not only reward them, but be of great service to our export trade.

"I have the honour to be, Sir,

"Your obedient servant,

"ALFRED OGDEN "

"The Honourable C. H. TUPPER,

"Minister of Marine and Fisheries,

"Ottawa."

From a letter from Mr. John A. Boak, St. Paul, Minn., 4th March, 1890.

"I am in receipt of your favour of 28th ult., and am obliged for the reports.

"It will give me great pleasuse to give your Department my views on same. My company import upwards of a thousand barrels of herrings from Norway annually, and about ten thousand kegs of herrings from Holland, besides those we get from Nova Scotia and Newfoundland.

"I have for the past ten years tried to impress on the Nova Scotia shippers the necessity of using better packages and packing their fish full (200 lbs.) two hundred pounds to the barrel but without success.

"I have yet to find the first barrel of sour Norway herring, but regret to say that we scarcely ever receive a shipment from Canada but we find more or less sour and rusty fish.

"We have repeatedly made claims for allowance for such goods, but have invariably had the same reply: the goods were inspected by a Government inspector, and we cannot make any allowance."

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Report on the Cure of Codfish and Herrings, by Adolph Nielsen, Superintendent of Newfoundland Fisheries, 1890.

THE CURE OF HERRING IN EUROPE.

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"If too much salt or too strong pickle is employed, the flesh of the herring will after a short time become hard and dry, and will be deprived of its real good and natural flavour. The less salt and the weaker pickle can be used the longer and better it will retain its nice flavour; but on the other hand, if sufficient salt and proper pickle is not employed, the herring will get tainted, and not fit for human food. The art of curing herring as well as other fish with salt depends mainly upon knowledge of what quantity really the different kinds of herring take in different seasons, and what quantity of salt is required to preserve the herrings for the various markets, and in different ways they are to be treated for such markets.

"In Europe the salted herring for export are all put up either round or mostly gibbed or gutted; none, as far as I am aware, are ripped down the stomach, as they do in Newfoundland, the Dominion of Canada and partly also in the United States. In each of these instances different quantities of salt must be employed. A round

herring takes more salt than a herring which is gibbed and gutted, and these last again more than the herring which is ripped in the stomach and all the entrails removed. Again, a fat herring takes more salt than a lean one; a large herring more than a smaller one; and in the hot season of the year all herring requires more salt than in the cold season.

“Besides the proper amount of salt employed to the different kinds of herrings for the markets and in the different seasons of the year, due attention must also be paid as to how the herring is treated, packed, and what kind of barrels is employed, if a real good article shall be obtained, (page 50).

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“The ripping of the herring down the stomach and the removal of all the entrails and blood, before it is put in salt, is certainly the most proper and complete mode of treatment; but as the continental consumers of herring generally value either the fat of the milt and roe very much, this way of treatment finds no acceptance in Europe. It has, therefore, to be cured according to the consumer's taste, with the fat, milt and roe left in the fish, in order to meet a demand in the markets, (page 52).

Object of Gibbing and Gutting Herring.

“The object of gibbing and gutting is:—

“1. To liberate the herring from the blood, which is done by the removal of the gills, the throat and heart.

“2. To remove such ingredients as are already in a state of decomposition (such as the stomach and intestines), or such matter as is most apt to decay, before the salt has a chance to penetrate into all parts of the herring.

“3. To give the pickle a better chance to act upon the herring, as well from the inside as from the outside, through the skin.

“4. Finally, to lessen the quantity of salt used in the cure of herring, and thereby improve the flavour of the fish.

“In Norway, as a rule, only the throat, pectoral fins, the heart, and in some cases the gills, are removed. By this operation, which is done either by tearing out a piece in the throat with the fingers, or by clipping it out with a scissors made for that purpose, the first object (to remove the blood) is obtained, and even this only partly. The Dutch and the Scotch remove the gills, throat, pectoral fins, liver, heart, stomach, crown or blind gut, if the herring is intended for export to foreign countries; and by this operation the full object of gibbing and gutting is obtained. What is left then is only the milt and roe, which some people are very fond of. The blind gut is claimed by many curers and consumers to give the herring a nice flavour, and for this reason it is often allowed to remain,” (pages 52 and 53).

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“Newfoundland Herring.

“Although the Newfoundland herrings are large, they cannot compare with the best Labrador or European herring in fatness and fine flavor. Still, the good winter herring, which I have seen in Placentia and Fortune Bay, are fully equal to the herring caught in Europe in the winter and spring, if not better; and if put up in a good European way would I consider, be fully able to compete with those herring in the American markets. Whether these large herring would suit the European markets is a question. The continental people, as a rule, do not care much for very large herring. They consider the flesh in those too coarse, (page 54).

“Qualities of the Good Herring.

“Concerning the nature of the fresh herring, it is required, in order to obtain a good article, that the herring also possess certain qualifications, such as sufficient size and maturity, fleshiness and fatness. A lean, dry, dismembered or half-rotten herring can never give a good article, even if it is cured ever so well. A small

herring, which has not reached the full state of maturity, fetches only small prices in the markets. Of much importance is also the development of the sexual organs. If these are in a far advanced state, the herring loses in fatness and flavour. These should be firm, and the whole flesh penetrated with a certain quantity of fat. Large amounts of fat around the blind gut is a sign of the herring being fat right through the flesh. As a rule, ocean herring (such herring as pass most the of the time in the ocean, and only approach the coast for reproductive purposes) are considered superior to the herring that keep themselves close to the coast or in the bays all the time. Of these herring again, those which are caught in deep water are better than those caught in shoal water. A first-class herring is known by its small head, short and plump body; is broad across the back, and plump towards the tail, and has got a great depth from the back to the abdomen, which gives this a well-rounded shape, (page 54).

“Importance of early Salting.

“In order to obtain a good article of salt, cured herring it is necessary that the herring is liberated from its food, and put in salt as soon as possible after being brought out from the water. Even if the quality is ever so fine, a good article can never be had if it is not properly treated during the whole cure. The Scotch herring cannot get the official Crown brand except they are salted at least twenty-four hours after being brought out from the sea. As a rule, the curers do not care about herring which is more than twenty-four hours out of the sea before they are landed, and only take those at a low figure. In Holland, even, a distinction is made between the herring which are taken out first and those which are taken last from the nets. The cure of herring on board the fishing crafts commences therefore, if circumstances allow, soon after the nets are hauled in. To leave the herring exposed to the hot sun while being conveyed to the salting place, or to leave the herring in the nets until the shore is reached, if the catch has taken place a long distance off the shore, is objectionable. An old law in Norway, of 1775, even prohibited people from taking such herring from their seines, in the summer time, before 10 o'clock in the evening and after 5 o'clock in the morning, if it was going to be salted for export,” (pages 54 and 55).

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“Best Salt for Herring.

“In regard to what kind of salt is the most suitable for salting herring, it is difficult to give any one sort the preference. The choice of salt depends much upon how the herring is going to be cured, and upon the size and quality. The main thing is, that the salt is clean, and that it is used in proper quantities. Fine and watery salt melts quicker, but gives weaker pickle. In cases where it is of importance to form pickle speedily fine salt is preferable; while coarse salt is better for use in filling and re-packing, or when the herring is intended for export to hot climates, or to be kept in stock for any length of time. The Scotch curers use Liverpool salt, the Dutch light Cadiz or Lisbon salt, while the Norwegians use St. Ybes salt. It is of much importance, as formerly stated, to put the herring in salt as quick as possible, if a first-class article shall be obtained. For this reason the Scotch, as the herring is landed, sprinkle it heavily with salt in bins or vessels made for that purpose, before it is gibbed and gutted. Generally they use one barrel of Lisbon or coarse Liverpool salt (or sometimes both mixed) to about ten barrels of herring. By this means the herring keep their scales better and brighter, and can also be handled better and quicker, when they are afterwards gibbed and gutted. The Hollanders roll their herrings in trays filled with fine Liverpool or St. Ybes salt as soon as they are gibbed and gutted, before they pack them in barrels; and this work is done very precisely. In Norway no sprinkling with salt, as a rule, is used before the herrings are gibbed or packed in barrels, but instead thereof they have to use more salt in packing than the Dutch and Scotch. The sprinkling of herring with salt as soon as they are landed or brought on board of the vessels is considered also to improve the flavour of them very much,” (page 56).

“ Packing Herring.

“ In packing the herring in barrels it is recommendable not to pack them too tight before they have shrunk in the salt, and also to pack herring of the same size and quality right through the whole barrel. The packing is performed differently among different nations. In Norway the herrings are packed slantways on their back, while the Scotch and Hollanders pack them fully on their back. By this last mode (which no doubt is the best) the herring get a more round and thick appearance in the back; and it has also this advantage, that the pickle has got a better chance to get in and saturate through the abdominal cavity of the gutted herring. After the herring has shrunk in the salt the barrels are filled up again, and put away, but care is taken that the herring is not packed too hard. As long as the barrels are left to remain still there is no need of hard packing, but when they are to be shipped it is recommendable to repack the herring so tight that they do not move about, even if the barrels are handled ever so roughly, so that the receiver may be exempted from filling the barrels again after they have reached their place of destination. (Pages 56 and 57.)

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“ The Norwegian Cure of Herring.

“ As formerly stated, the largest quantity of herring in Norway is caught in the fjords by seines, and kept barred until what food the herring may contain is worked out in the natural way before they are taken up, dressed and salted. As a rule, the herring are salted in the vicinity of the places where they are caught, so that they can be put in salt almost alive, which is of the utmost importance in order to obtain a good article. In this way they have an advantage over the Scotch, who have to go far off the coast for their herring, and cannot get them in salt before they reach the shore, which often takes a long time. They have an advantage over the Dutch, because although they salt their herring on board of their vessels soon after they are caught, still they may have been dead several hours in the nets before they are hauled on board, and at all events none of the herring taken in drift-nets or other nets can be deprived fully of the injurious food they may contain as they can when barred in a seine. When brought to the shore or salting places from the seine the herrings are gibbed in this way—that a triangular piece of the throat, large enough to admit the heart and the pectoral fins to be removed, is cut out by the means of scissors made for that purpose, or by a small knife (some also use the fingers). This cut should be made deep enough to divide the large blood-veins situated close to the neck-bone, in order to remove the blood it contains. Sometimes also the gills are removed, especially on the full herring caught in the spring. (Page 59.)

“ Salting and Packing.

“ Generally a large enough crew is employed to admit the gibbing and the salting to take place at the one time. On account of the herring caught in seines being always mixed every gibber has got placed before him or her so many barrels or tubs as the herring are to be sorted in (from three to five); and according as they are gibbed every herring is also at the same time, by the gibber, sorted and placed in the various barrels or tubs to which the belong. The salter then takes the herring and packs them in new barrels, which lately have been soaked in sea-water, slantways on their back, with $\frac{1}{4}$ barrel of St. Ybes salt to 1 barrel of herring. The herring are packed loosely, one lays across the other the whole barrel through. The uppermost layers are packed sometimes slantwise, back up. Some packers put from $1\frac{1}{2}$ to 2 gallons of pickle (made of $\frac{1}{4}$ brl. of salt to 1 brl. sea-water) on the herring soon after it is salted, and head up the barrels immediately. Others again let the barrels remain unheaded for one day before they fill them with pickle. Before the barrels are headed up a layer or two of herring are generally put into the barrels, in order to fill up the empty room caused by the shrinking of the herrings. By putting the pickle on the herring soon after they are packed the salt dissolves

quicker and saturates the herring more speedily, so that the contents of the stomach (provided the food is liberated) hardly has got any injurious effects upon the durability of the herring. After the barrels are headed up they are broached in the head and blown into by means of a brass pipe containing a valve, which is put down in the hole, and if found tight the hole is plugged up as soon as the air has escaped; if not, they are made tight in the places where they are leaky, and blown over again before they are stowed down on board the vessels. (Pages 59 and 60.)

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“ Branding—Its Value.

“The system of culling, along with the official Crown mark on all exported herring barrels, has contributed more to the good reputation the Scotch herrings have gained in the continental markets than many may imagine.

“The dealers, on reception of Scotch herring with the Crown brand, are satisfied that the barrels really contain what they are branded for, in regard to quality and weight; and this has given them such confidence in the Scotch herring that these are received and approved of without even being opened; while the Norwegian herring barrels, since the official branding was abolished in 1851, must be opened and re-packed before the recipient can sell them, which often causes a good deal of inconvenience. (Page 63.)

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“ Consumers’ Tastes to be Consulted.

“It is an important point to cure the herring according to the consumers’ taste, and not according to one’s own, and to put them up in packages suitable for the different markets. Most of the continental people in Europe hold the opinion that the original pickle (blood-pickle called) gives the herring a nice flavour; and it is also held that the Dutch herrings are superior to any other because they are salted on board immediately after being caught, and the motion of the vessel has a beneficial influence upon the pickle and the herring. The Dutch believe much in the original pickle; and when this gets short, they even make pickle of the fresh offal after gibbing or gutting, instead of making pickle of clean salt and water. A good pickle should have a mild and sweet taste. If the pickle commences to get a disagreeable taste it is a sign that the herring has not been salted satisfactorily, and that the herring will spoil within a short time. In such cases it is recommendable to do away with the bad pickle, if the herring still is good, and supply the barrels with new pickle, made of clean salt and water.

“ How the Americans like their Herrings.

“The European herring are mostly consumed among the continental people in Europe and the European population of America. These people seldom cook their herring, but eat them in the pickled state, after being soaked in fresh water, or pack them up into salad, or in pickle, in various ways, made of vinegar and spices. For this reason they do not care for a herring which is over-salted and hard in the flesh, or deprived of its flavour by too much salt, nor do they care for too large herring with coarse flesh, nor for lean herring; but prefer a middle sized one, with rich, fine and tender flesh, salted as mild as possible. They appreciate a herring of such a quality and so cured that it almost melts away in their mouths when it is eaten. The Dutch reckon they use in all one barrel of Lisbon salt to five barrels of herring in the hot season, and one barrel of salt to six barrels of herring in the colder seasons of the year.

“ A short view of the European Herring Business in the United States of America.

“Of the European herring the Dutch cure has gained the widest markets in the States. The export of herring to the United States from Holland has increased

largely of late years, and at the same time also the demand for the best and finest qualities, which has become an universal article of food among a large number of the inhabitants. (Page 67.)

* * * * *

“ Season for Herrings in the United States.

“The first Dutch matties arrive in the States in the month of June—‘Voll’ herring arrive in the latter part of July, but the great demand for and sale of herring commences about the first of September and continues until the middle of November. From this time and until the month of February only a small business is done in herring in the States. The season for demand and sale open again about the first of February and continues to the middle of April. The stock of herrings is as a rule disposed of before the hot weather sets in. It is of no use to keep herring in stock the summer over, in the States, or to send old herring there, because these cannot be sold, and will only bring the shippers heavy loss. The people who consume European herrings want to get a fresh and newly-cured article.” (Page 68.)

“ Prices in the United States.

“The prices on Dutch as well as other herrings vary often, and like other articles are regulated by the supply and the demand. Sometimes kegs which contain only milt-herring will fetch from 15 to 20 cents more than kegs which contain milt and roe herring mixed. Certain brands of selected superior herring, packed by careful shippers, also fetch higher prices than the common packing. The average prices for the kegs of Dutch herring are from 40c. to 70c. and \$1.10; and by the barrel from \$9 to \$10, according to quality and packing.” (Page 69.)

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“ Scotch Herrings in the States.

“The import of Scotch herrings to the United States is yet limited, but a few thousand barrels have been imported and sold at favourable prices; and as the Scotch are working hard to get their herrings introduced into the American markets, no doubt by continued shipping of the finest and best cured herring they, after a time, will gain markets and increase their export. A Scotch barrel of herring contains about 250 pounds of fish, exclusive of pickle, and from 700 to 800 large herring with milt and roe. I have been informed that Scotch Crown full herring has been sold in New York at \$9 and \$10 per barrel, according to quality and packing.” (Page 70.)

COMPARISON OF INSPECTION LAWS AS AFFECTING FISH AND FISH OIL.

1873.

1874.

Revised Statutes, 1886.—Text of Existing Laws.

Synopsis of Act 36, Vic., cap. 49. Synopsis of Act 37 Vic., cap. 45.

Sec. 59. Inspector to provide himself with proper branding irons and to know that his deputies are also so provided.

Sec. 60. Inspecting, culling, classifying, etc., to be done in presence and sight of inspecting officer.

Sec. 61. Duty of inspecting officer to see that all kind of split, whole, pickled or salted fish intended for packing and barreling and inspection are well struck with pickle and salt, and are free from taint, rust or damage, and that all fish or oil branded as merchantable shall be well and properly packed.

Tierces, barrels or half-barrels to be made of sound, well-season-

Sec. 61 requires that every inspector shall provide himself with proper branding irons or stencil plates for the purpose of branding such packages of fish as he may inspect, and that it shall be his duty to see that each of his deputies are duly provided with the same.

Sec. 62 provides that inspecting, culling, classifying, &c., of any fish or fish-oil shall be done in the immediate presence and sight of an inspector or deputy.

Sec. 63. It shall be the duty of the inspecting officer to see that all kinds of split, whole, pickled or salted fish intended for packing or barreling, and submitted to him for inspection, are well struck

71. The expression “ fish-oils,” in the following provisions respecting fish and oils, includes whale, seal, porpoise, cod, herring, sturgeon, siskawitz and all other kinds of oils derived from fishes or marine animals. 37 V., c. 45, s. 67, *part*.

72. Every inspector shall provide himself with proper branding irons, or stencil plates, for the purpose of branding or marking such casks, barrels and boxes as are by him inspected pursuant to this Act; and every inspector shall see that all the deputy inspectors under him are duly provided in this respect. 37 V., c. 45, s. 61.

73. The inspecting, culling, classifying, weighing, packing and branding or marking of any fish or fish-oil shall be done in the immediate

COMPARISON OF INSPECTION LAWS AS AFFECTING FISH AND FISH OIL.

ed split or sawed staves, free from sap, planed on outside, and at least three-quarters of an inch in thickness. Staves for salmon and mackerel barrels shall be twenty-eight inches in length, and the heads between the chimes seventeen inches. For herring barrels staves shall be twenty-seven inches long, and the heads between the chimes sixteen inches. All casks to be hooped one-third of their whole length from each chime, with sound hoops of not less than one inch in width. Makers of all packages to brand their names near the bung staves—for not doing so, a penalty of twenty cents for each package is provided.

Sec. 62. Inspection of all pickled fish and fish-oil for market or exportation, and of all fish-oils, cod-fish, tongues or sounds cured for such purpose is compulsory, throughout the Dominion, where an inspector has been appointed, except in Manitoba and British Columbia, under penalty of forfeiture, and five dollars per package.

Sec. 63. Pickled fish, fish-oils, cod-fish tongues and sounds, shall be inspected in accordance with the Act, and all green cod-fish shall be inspected or culled, and a certificate of inspection stating quality and quantity thereof, so inspected, shall be granted by inspecting officer.

Sec. 64. Provision is made for the branding of the different qualities of salmon, mackerel, herrings, gaspereaux, alewives, smoked herrings, sea trout, lake and salmon trout, whitefish and green cod-fish.

Sub-sec. 9. All other fish not named, but belonging to denominations specified in this Act, shall be branded as such, and must be sound and well cured.

Sub-sec. 10. Small fish, usually packed whole with dry salt or pickle, shall be put in good casks of the size, etc., as required by the Act, shall be packed close edgewise, and the casks branded with the denominations of the fish, etc.

Sub-sec. 11. Rusty or sour fish shall be so branded.

Sub-sec. 12. No foul, tainted or mutilated fish, that marks of illegal capture may be concealed, shall pass inspection, and any deputy inspector may seize, and any magistrate confiscate such fish.

Sub-sec. 13. Fish known as pickled fish, cured in bulk, shall, in addition to other brands, be branded with the word "bulk."

Sub-sec. 14. Each package of fish shall contain fish of the same kind, properly packed in separate

with pickle and salt, and are free from taint, rust or damage, and that all fish or fish-oil branded as merchantable shall be well and properly packed in substantial packages, except green codfish packed without pickle, which may be packed in barrels or packages, not tight.

Tierces, barrels, or half-barrels to be made of sound, well-seasoned split or sawed staves, free from sap, and in no case to be of hemlock. The heading to be of hardwood, pine, fir, or spruce, free from sap, planed on the outside, and at least three-quarters of an inch in thickness. Staves shall be $\frac{3}{4}$ of an inch in thickness. Staves for salmon barrels shall be twenty-nine inches in length and the heads between the chimes seventeen inches. Staves for barrels for herrings shall be twenty-seven inches in length, and heads between the chimes shall be sixteen inches, and the bung staves of all such barrels shall be of hardwood. All casks shall be hooped with not less than twelve sound, good hoops of not less than one inch in width on the large end for all tierces and barrels, and in no case to be of alder.

The makers of all tierces, barrels and half-barrels to brand the initials of their christian names and their whole surnames, and also the letters "S," "M" or "H," according as the package made is intended for salmon, mackerel or herring, at or near the bung stave. For not doing so a penalty of twenty cents for every package is provided. All empty barrels shall be subject to inspection and approval. Any of such packages that will not pass inspection are to be branded with the word "condemned," immediately after the maker's name.

Sec. 64. Inspection of all pickled fish for market or exportation, and of all fish-oils, codfish tongues or sounds, cured for such purpose, shall be compulsory throughout the Dominion where an inspector has been appointed, except in Manitoba and British Columbia, under a penalty of not less than one dollar and not more than five dollars for each package.

Sec. 65. Pickled fish, fish-oils, codfish tongues and sounds, shall be inspected in accordance with Act, and all green codfish shall be inspected or culled, and a certificate of inspection stating quality and quantity thereof so inspected shall be granted by inspecting officer.

Sec. 66 provides for the branding of the different qualities of salmon, mackerel, herrings, gaspereaux, alewives, sea trout, lake

presence and sight of an inspector or deputy inspector. 37 V., c. 45, s. 62.

74. The inspector or deputy inspector shall see that all kinds of split, whole, pickled or salted fish, intended for packing or barrelling, and submitted to him for inspection, have been well struck with pickle and salt, in the first instance, and preserved sweet, free from taint, rust, salt-burn, oil or damage of any kind; and all fish and fish oil intended for market or exportation, and branded or marked as inspected and merchantable, shall be well and properly packed in good, tight and substantial packages or casks, and in the case of fish with clean salt—except green codfish packed without pickle, which may be packed in barrels or packages which are not tight; and all other packages shall be made of the materials and in the manner following:—

(a.) Tierces, barrels and half barrels shall be made of sound, well seasoned split or sawed staves, free from sap, and in no case of hemlock, and the heading shall be of hardwood, pine, fir or spruce, free from sap, and planed on the outside, and shall be at least three-quarters of an inch in thickness; the staves shall be five-eighths of an inch in thickness; staves for salmon and mackerel barrels shall be twenty-nine inches in length, and the heads between the chimes seventeen inches; staves for barrels for herring shall be twenty-seven inches in length, and the heads between the chimes shall be sixteen inches; and the bung staves of all such barrels shall be of hardwood; all casks shall be hooped with not less than fourteen sound, good hoops, of not less than five-eighths of an inch at the small end for all tierces and barrels, and in no case to be of alder; the makers of all tierces, barrels and half barrels shall brand the initials of their christian names and their whole surnames, and also the letters S., M. or H., according as the package is intended for salmon, mackerel, or herring, at or near the bung staves, and in default of so doing shall incur a penalty of twenty cents for every package not so branded;

(b.) Barrels of the following dimensions may also be used for a special quality of fish, that is to say: the staves shall be twenty-eight inches long, the head seventeen inches between the chimes; the chimes shall be one and a-quarter inches, and the head three-fourths of an inch in thickness, and the bung stave shall be of hardwood: every such barrel shall be branded with the words "special size:"

COMPARISON OF INSPECTION LAWS AS AFFECTING FISH AND FISH OIL.

layers, and salted with good clean suitable salt, at discretion of inspecting officer, and, after the cask has been properly packed and branded, shall be filled with clean pickle strong enough to float a fish of the kind packed.

Sub-sec. 15. If an inspecting officer decides that a portion of the fish in a package only is sound he shall separate the sound from the unsound, and so brand them.

Sub-sec. 16. If, owing to a casualty, it becomes necessary to re-pack inspected fish, it shall be done by and in the presence of an inspecting officer.

Sub-sec. 17. Fish branded by a deputy inspector, which may prove unequal in quality or quantity to that indicated by the brand, may, by order of the inspector, be re-inspected, and if it should prove that such deficiency was the result of any neglect on the part of the deputy, the cost and charges of re-inspection may be recovered from such deputy.

Sub-sec. 18. Duly inspected and branded pickled fish and oils under the Act shall not be subject (except in cases already provided) to re-inspection within the Dominion.

Sub-sec. 19. The weight of all fish when packed shall be clear avoirdupois, exclusive of salt and pickle.

Sub-sec. 20. On the head or butt of each cask there shall be branded the description of fish in the package, the weight and quality, together with the inspecting officer's name, and date and place of inspection.

Sec. 65. The Boards of Examiners, and inspectors of fish and fish-oils, shall fix and have in charge the standard for fish-oils in Nova Scotia, New Brunswick, Quebec and Ontario respectively, and the same shall be classified and branded according to such standards.

Sec. 66. For the classification and fees *vide* Act. Any person causing his fish or oil to be inspected may employ at his own cost a cooper to assist the inspecting officer, in which case such officer shall not be allowed any charge for cooperation. The cooper so employed shall be guided solely by the inspector's directions.

Sec. 67. Fish and fish-oil may be inspected either at the place where they are packed or manufactured or at the place of sale within the Dominion.

Sec. 68. When fish are not inspected at place of packing the packer's name and quality of fish must be marked in paint on each package, and when inspected at

and salmon trout, white-fish and green codfish.

Sub-sec. 9. All other kinds of fish not named, but belonging to a denomination specified in this Act, shall be branded as such, and must be sound and well cured.

Sub-sec. 10. Small fish usually packed whole with dry salt or pickled shall be put in good casks of the size, &c., as required by this Act, and shall be packed close edgewise, and the casks branded with the denomination of the fish, &c.

Sub-sec. 11. Rusty or sour fish shall be so branded.

Sub-sec. 12. No foul, tainted or fish mutilated so that marks of illegal capture may be concealed shall pass inspection, and any deputy inspector may seize and any magistrate confiscate such fish.

Sub-sec. 13. Fish known as pickled fish cured in bulk shall, in addition to other marks, be branded with the word "bulk."

Sub-sec. 14. Each package of fish shall contain fish of the same kind, properly packed in separate layers and salted with good, clean, suitable salt, at discretion of inspecting officer, and, after cask has been properly packed and headed, shall be filled with clean pickle strong enough to float a fish of the kind packed.

Sub-sec. 15. If any inspecting officer decides that a portion of the fish in a package only is sound he shall separate the sound from the unsound, and so brand them.

Sub-sec. 16. If, owing to a casualty, it becomes necessary to re-pack inspected fish, it shall be done by and in the presence of an inspecting officer.

Sub-sec. 17. Fish branded by a deputy inspector which may prove unequal in quality or quantity to that indicated by the brand may, by order of the inspector, be re-inspected, and if it should prove that such deficiency was the result of any neglect on the part of the deputy, the cost and charges of re-inspection may be recovered from such deputy.

Sub-sec. 18. Duly inspected and branded pickled fish and oils under the Act shall not be subject (except in cases already provided) to re-inspection within the Dominion.

Sub-sec. 19. The weight of all fish when packed shall be clear avoirdupois, exclusive of salt and pickle.

Sub-sec. 20. On the head or butt of each cask there shall be branded the description of fish in the package, the weight and quality, together with the inspecting officer's name, and date and place of inspection.

2. Every inspector or deputy inspector who inspects, marks or brands any fish packed in barrels, tierces or other packages, which are not in accordance with the requirements of this Act, shall incur a penalty of one dollar for each such barrel, tierce or package inspected, branded or marked. 48-49 V., c. 66, s. 14.

75. All pickled and smoked fish cured for market or exportation, and all fish oils, codfish tongues and codfish sounds, shall be inspected, weighed or gauged, and branded or marked, only in accordance with this Act; and all green codfish, in boxes or packages, shall be inspected and culled, and a certificate of inspection for the latter, stating the quality and quantity thereof so inspected, and shipped on board any vessel, shall be granted by any inspector or deputy inspector. 37 V., c. 45, s. 65;—43 V., c. 20, s. 2.

76. The various kinds of fish to be inspected under this Act shall be branded or marked of the following denominations respectively:—

(1.) Salmon branded or marked "No. 1" shall consist of the largest or best and choicest kind, well split, having the blood well washed out before being salted, well cured, in the best condition, and in every respect free from taint, rust or damage of any kind;

(a.) Those branded or marked "No. 2" shall comprehend the best salmon that remain after the selection of the first quality, and shall be good, sound, well split and cured fish, in the best condition, and in every respect free from taint, rust or damage of any kind;

(b.) Those branded or marked "No. 3" shall consist of those that remain after the selection of the two first two qualities, but shall be good, sound fish, and in every respect free from taint, rust or damage of any kind;

(2.) Mackerel branded or marked "mess mackerel" shall consist of the best and fattest mackerel, well split, having the blood well washed out before being salted, well cured, in the best condition, and free from taint, rust or damage of any kind, and shall be such as would have measured not less than fourteen inches from the extremity of the head to the crotch or fork of the tail, and shall have the heads and tails taken off;

(a.) Those branded or marked "Extra No. 1" shall consist of the best and fattest mackerel, well split, having the blood well washed out before being salted, well cured, in the best condition, and free from taint, rust or damage of any kind, and shall measure not less than fourteen inches from the extremity

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the place of sale ten packages of each hundred shall be emptied.

Sec. 69. When fish are inspected a bill of inspection shall be furnished by the inspecting officer, setting forth the particulars of such inspection.

Sec. 70. The Act is not to apply to fish landed at any port in the Dominion from United States fishing vessels for the purpose of re-shipment to the United States, unless inspection is desired by the owners. Provided always, that such fish, if so re-shipped, shall not be branded.

(For classification and fees see Act.)

Any person causing his fish or oil to be inspected may employ (at his own expense) a cooper to assist the inspecting officer, in which case such officer shall not be allowed any charge for co-operation. The cooper so employed shall be guided solely by the inspector's directions.

Sec. 69. Fish or fish-oil may be inspected either at the place where they are packed or manufactured, or at the place of sale within the Dominion.

Sec. 70. When fish are not inspected at the place of packing, the packer's name and quality of the fish must be marked in paint on each package, and when inspected at the place of sale ten packages of each hundred shall regulate the grade of the fish so submitted for inspection.

Sec. 71. When fish are inspected a bill of inspection shall be furnished by the inspecting officer, setting forth the particulars of such inspection.

Sec. 72. This Act is not to apply to fish landed at any port in the Dominion from United States fishing vessels for the purpose of re-shipment to United States, unless inspection is desired by the owners; provided always that such fish so re-shipped shall not be branded. In 1876 the above Act was amended as follows:—

1876.

Act 39 Vic., cap. 33.

Sec. 1 amends section 63 of Act 37 Vic., cap. 45, by striking out the words "one inch in width at the large end," and inserting in place thereof the words "five-eighths of an inch at the small end."

Sec. 2 substitutes for section 64 the following:—

The inspection of all pickled fish cured for market or exportation, and of all fish-oils, &c., shall, whenever such pickled fish or oils are removed beyond the limits of the inspection district in which they are pickled or packed, be compulsory in every Province of the Dominion except British Columbia and Manitoba, where an inspector is appointed by law, and if any such pickled fish, &c., be sold or removed for sale beyond the limit of such district without being inspected under this Act, the person so selling or removing the same shall incur a penalty of not less than one dollar and not more than five dollars for each and every package.

of the head to the crotch or fork of the tail:

(b.) Those branded or marked "No. 1" shall consist of the best and fattest mackerel, well split, having the blood well washed out before being salted, well cured, in the best condition, and free from taint, rust or damage of any kind, and shall measure not less than thirteen inches from the extremity of the head to the crotch or fork of the tail;

(c.) Those branded or marked "No. 2" shall comprehend the best mackerel that remain after the selection of the first qualities, and shall be properly split and washed, well cured, and in every respect free from taint, rust or damage of any kind, and shall be divided into two qualities, those thirteen inches and upwards not sufficiently fat to make No. 1 being branded No. 2 large, and those from eleven inches up to thirteen inches being branded No. 2;

(d.) Those branded or marked "large No. 3" shall consist of good, sound mackerel, properly washed, well cured, and free from taint, rust or damage of any kind, and shall measure not less than thirteen inches from the extremity of the head to the crotch or fork of the tail;

(e.) Those branded or marked "No. 3" shall consist of good, sound mackerel, properly washed, well cured and free from taint, rust or damage of any kind, and shall measure eleven inches and upwards from the extremity of the head to the crotch of the tail;

(f.) All mackerel under eleven inches in length, of good, sound quality, and free from taint, rust or damage of any kind, shall be branded or marked with the words "small spring" or "small fall" in the place of a number;

(g.) All short, sunburnt or ragged mackerel, not otherwise defective, of whatever class, shall be branded or marked "No. 4;"

All spring mackerel shall be packed in coarse or ground West India salt.

(3.) Herrings, branded or marked "No. 1 Extra," shall be thirteen inches and upwards in length, and fat, and shall be well struck with salt, thoroughly cured and cleaned, and bright in colour.

(a.) Those branded or marked "No. 1" shall be from ten to thirteen inches in length, well struck with salt, thoroughly cured and cleaned, and bright in colour;

(b.) Those branded or marked "No. 2" shall be from eight to ten inches in length, and shall comprehend the best herrings that remain after the selection of quality No. 1;

COMPARISON OF INSPECTION LAWS AS AFFECTING FISH AND LISH OIL.

Sec. 3 amends sub-section 4 of section 66, by adding the following words to the first paragraph:—

And every such box of smoked herrings shall contain at least twenty pounds of fish; and half boxes shall be twenty-two inches long, four inches deep and eight inches wide, and to contain not less than ten pounds of fish.

Sec. 4 amends sub-section 8 of section 66, as follows:—

Every barrel of pickled codfish shall contain two hundred pounds of fish, and every half barrel one hundred pounds of fish.

(c.) Herrings under eight inches in length shall be branded or marked "No. 3," with the word "small" in addition to the other brands or marks;

(d.) All ripped herrings shall be branded or marked with the word "split," in addition to other brands or marks;

(e.) All gibbed herrings shall be branded or marked with the word "round" in addition to other brands or marks;

(f.) All herrings that are not gibbed or ripped shall be branded or marked with the word "gross" in addition to other brands or marks;

(g.) All spring-caught herrings shall be branded or marked with the word "spring" in addition to other brands or marks.

The above shall be well cleansed and cured, and in every respect free from rust, taint or damage;

All spring and fall herrings shall be packed in coarse or ground West India salt;

Herrings that are caught at the Magdalen Islands, Baie des Chaleurs, Labrador or Newfoundland, and brought into port in Canada in bulk and packed in Canada, shall be branded or marked "Magdalen Islands," "Baie des Chaleurs," "Labrador," or "Newfoundland," respectively, in addition to other brands or marks;

(4.) Smoked herrings branded or marked "No. 1" shall comprehend the best and fattest fish; and those branded or marked "No. 2" shall consist of the poorer, smaller and inferior fish;

(a.) Both of these qualities shall be well smoked, free from taint, and not burnt or scorched; and no red or smoked herrings shall be so branded or marked unless they are well and sufficiently saved and cured and carefully packed in good and substantial barrels or half-barrels;

(b.) If smoked herrings are packed in kegs or boxes, the same shall be of well-seasoned boards the sides, top and bottom of not less than half an inch in thickness, and the ends at least three-quarters of an inch thick; the inside measurement of each box shall be eighteen inches long, nine inches broad, and eight inches deep, the joints well nailed, and the tops or covers smoothed;

And every such box of smoked herrings shall contain at least twenty pounds of fish; half boxes shall be twenty-two inches long, four inches deep and eight inches wide, and shall contain not less than ten pounds of fish;

(c.) Tainted, burnt, scorched and badly smoked herrings shall be considered "refuse," and may be

COMPARISON OF INSPECTION LAWS AS AFFECTING FISH AND FISH OIL.

branded or marked as such without any other character.

(5.) Gasperaux or alewives, branded or marked "No. 1," shall consist of the largest and best fish, measuring nine inches and upwards, well struck with salt, thoroughly cured and cleaned, and bright in colour ;

Those branded or marked "No. 2" shall be from seven to nine inches in length, and shall be the best that remain after the selection of quality No. 1 ;

Those under seven inches in length shall be branded or marked "No. 3," with the word "small" in addition to the other marks or brands ;

All gasperaux and alewives shall be packed in coarse or ground West India salt ;

(6.) Sea trout branded or marked "No. 1" shall consist of the largest, best and fattest kind, well split, and in every respect free from taint, rust or damage of any kind ;

(a.) Those branded or marked "No. 2" shall comprehend the best trout that remain after the selection of the first quality, and shall be good, sound fish, free from taint, rust or damage of any kind ;

(7.) Lake and salmon trout, branded or marked "No. 1 lake," shall consist of the largest and fattest fish, and be free from taint, rust or damage ;

(a.) Those branded or marked "No. 2 lake" shall consist of the next best fish, free from taint, rust or damage ;

(8.) Whitefish branded or marked "No. 1" shall consist of the largest and fattest kind, cured in good condition, and in every respect free from taint, rust or damage ;

(a.) "No. 2" shall consist of those that remain after the selection of the first quality, and be free from taint, rust or damage ;

(9.) Green codfish in barrels, with or without pickle, classed "No. 1, large," shall consist of the best and fattest fish, well split and cleansed, well cured, in first-rate condition, and in every respect free from taint, salt-burn, rust or damage of any kind, and shall measure twenty inches and upwards to the crotch of the tail ;

(a.) Those classed "No. 1" shall consist of the best and fattest fish remaining after the selection of quality No. 1, large, well split and cleansed, well cured, in first-rate condition, and in every respect free from taint, salt-burn, rust or damage of any kind, and shall measure from sixteen to twenty inches to the crotch of the tail ;

(b.) Those classed "No. 2" shall consist of those remaining after selection of quality No. 1, and shall be sound, well cured fish, and free from taint, salt-burn, rust or damage of any kind ;

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(c.) Every barrel of pickled codfish shall contain two hundred pounds of fish, and every half-barrel one hundred pounds of fish;

(10.) All other kinds of fish not enumerated herein, such as ling, hake, haddock, pollock, catfish, halibut, shad, bass and eels, codfish tongues and codfish sounds, in casks or barrels, shall be branded or marked as such, and shall be sound and well cured, free from taint, salt-burn, rust or damage of any kind;

(11.) Small fish, which are usually packed whole, with dry salt or pickle, shall be put into good casks of the size and materials required by this Act for the packing of split, pickled fish, and shall be packed close, edgewise in the cask, and properly salted with good, coarse, wholesome, dry salt, and the casks shall be filled full with the fish and salt, and no more salt shall be put with the fish than is necessary for their preservation; and the casks containing such whole fish shall be branded or marked with the denomination of the fish, and a like designation as is prescribed by this Act in respect of the qualities of other pickled fish;

(12.) All rusty or sour fish, of whatever kind or class, shall be branded or marked with the word "rusty" or "sour," as the case may be, in addition to the other brands or marks;

(13.) No foul or tainted fish, or fish mutilated for the purpose of concealing marks and appearances of illegal capture, or unsizeable fish, shall pass inspection;

(14.) Fish known as pickled fish, which are cured in bulk, if not inspected and certified as aforesaid, and afterwards packed in barrels, shall be branded or marked with the word "bulk" in addition to other brands or marks;

(15.) Each cask or package of fish shall contain fish of the same kind, or parts of the same kind and quality, properly packed in separate layers, and on every layer of fish so packed in the cask a sufficient quantity of good, clean, suitable salt, free from lime, shall be regularly placed, in the proportion of half a bushel for each barrel of fish, and in like proportion for other packages, at the discretion of an inspector or deputy inspector; and after the cask has been properly packed and headed it shall be filled with clean pickle, strong enough to float a fish of the kind so packed;

(16.) If it appears to any inspector or deputy inspector that a portion of the fish inspected by him is sound, and another portion unsound, he shall separate the sound from the unsound, re-pack the sound fish, and brand or mark the same according to its quality; and such portion

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as the inspector judges incapable of preservation he shall condemn as bad, and mark "refuse," in addition to other marks;

(17.) If any casualty renders it necessary to re-pack inspected fish, it shall, in all cases, be done by and in the presence of an inspector or deputy inspector; and any other person attempting to re-pack or brand or mark the same shall incur a penalty not exceeding twenty dollars for every such offence;

(18.) When any fish, branded or marked by a deputy inspector, proves unequal in quantity or quality to that which is indicated by the brand or mark, or deficient in any way in the requisites prescribed by this Act, the inspector may cause the same to be re-inspected; and if it appears that the defect arose from the condition of the fish, or the bad quality of the cask, or the bad packing or pickling of the fish at the time of the inspection, he may recover the cost and charges of such re-inspection from the deputy inspector who branded or marked the same;

(19.) Pickled fish, duly inspected, packed and branded or marked, and fish oils, inspected and branded or marked under this Act, at any place in the Provinces of Nova Scotia, New Brunswick, Quebec, Ontario, or British Columbia, shall not be subject to re-inspection within Canada, except in cases already provided for in this Act;

(20.) Each tierce shall contain three hundred pounds, and each half tierce one hundred and fifty pounds; each barrel shall contain two hundred pounds, and each half-barrel one hundred pounds; each quintal shall weigh one hundred pounds; each draft shall mean two hundred pounds; and each box of herrings shall contain twenty pounds at least; and in each case the weight shall be clear avoirdupois, exclusive of salt and pickle.

(21.) There shall be branded or marked on the head or butt of each cask of pickled or dry-salted fish, in plain, legible letters, after the same has been inspected, culled, classed, weighed and packed, in accordance with this Act, the description of the fish, the weight and quality contained in the package, the initials of the christian name or names, and the whole surname of the inspector or deputy inspector by whom the fish was inspected, and the name of the place where he acts as inspector, and the month and the year of inspection. 37 V., c. 45, s. 66, *part*;—39 V., c. 33, s. 3;—45 V., c. 25, s. 1;—47 V., c. 33, s. 5;—48-49 V., c. 66, s. 15.

77. Every inspector or deputy inspector shall seize, and any magistrate may confiscate to Her Majesty,

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all fish found or exposed for sale which have been killed or captured during prohibited seasons or by unlawful means, and all fish at any time offered for sale or barter, or attempted to be exported, whilst in an unwholesome condition. 37 V., c. 45, s. 66, *part.*

78. The boards of examiners of inspectors of fish and fish-oils shall fix and have in charge the standard of fish-oils in Nova Scotia, New Brunswick, Quebec and Ontario, respectively; and the same shall be classified and branded or marked according to such standards as follows:—

(1.) Whale oil shall be free from adulteration of every kind, and shall be branded as such, with the class according to quality appointed by standard,—if No. 1, “pale;” if No. 2, “straw;” if No. 3, “brown;”

(2.) Seal oil shall be free from adulteration of every kind, and shall be branded as such, with the quality per standard,—if No. 1, “strictly pale;” if No. 2, “pale;” if No. 3, “straw;” if No. 4, “brown;” if No. 5, “dark brown;”

(3.) Porpoise oil shall be free from adulteration of every kind, and shall be branded as such, with the quality per standard—if No. 1, “pale;” if No. 2, “straw;” if No. 3, “brown;”

(4.) Cod oil shall be free from adulteration, and be branded as such—first quality, “A,” second quality “B;”

(5.) Herring, hake, pollock and dog-fish oil, and all other oils, shall be branded as such—first quality, “A;” second quality, “B;”

2. An inspector or deputy inspector shall determine the gauge of each cask, and the outs thereof, and shall mark the same on the cask; and the barrels shall be in good order and condition, sound and staunch, and made of hard wood; and if any cask or casks are found to contain water or other adulteration, the fact shall be scribed or branded by the inspector or deputy inspector on the cask:

3. Casks containing fish oils shall be scribed or branded with such quality, the month and the last two figures of the year when inspected, the initials of the christian name or names, and the entire surname of the inspector, and also the place of inspection, and the initial letters of the name of the Province in which it is inspected. 37 V., c. 45, s. 67.

79. Every inspector or deputy inspector who inspects and brands or marks any cask or package of pickled fish or pickled fish in bulk, or smoked fish or any fish oil, in accordance with the provisions of this Act, shall be entitled to fees at the following rates, which shall be paid

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by the original owner or the person who employed him in the first instance, that is to say :—

(1.) For each tierce of salmon, salmon trout or sea trout, fifteen cents ;

(2.) For each half tierce of salmon, salmon trout or sea trout, ten cents ;

(3.) For each barrel of salmon, salmon trout or sea trout, fifteen cents ;

(4.) For each half barrel of salmon, salmon trout or sea trout, ten cents ;

(5.) For each barrel of mackerel, ten cents ;

(6.) For each half barrel of mackerel, five cents ;

(7.) For each barrel of herring, seven cents ;

(8.) For each half barrel of herring, four cents ;

(9.) For each barrel of shad, ten cents ;

(10.) For each half barrel of shad, seven cents ;

(11.) For each barrel of whitefish, ten cents ;

(12.) For each half barrel of whitefish, seven cents ;

(13.) For each barrel of pickled codfish, hake, haddock or cat-fish, five cents ;

(14.) For each half barrel of the same, three cents ;

(15.) For each quarter barrel or kit of pickled fish, one and one-half cent ;

(16.) For each barrel of dry-salted codfish, hake, haddock, catfish, ling or pollock, five cents ;

(17.) For each half barrel of the same, three cents ;

(18.) For each barrel of bass, ten cents ;

(19.) For each half barrel of bass, seven cents ;

(20.) For each box of smoked herrings, one cent ;

(21.) For each half box of smoked herrings, one-half cent ;

(22.) For each quarter box of smoked herrings, one-quarter cent ;

(23.) For each barrel of cod tongues, cod sounds, halibut or eels, ten cents ;

(24.) For each half barrel of the same, seven cents ;

(25.) For inspecting, gauging and branding each puncheon of oil, twenty cents ;

(26.) For inspecting, gauging and branding each hogshead of oil, fifteen cents ;

(27.) For inspecting, gauging and branding each tierce of oil, twenty cents ;

(28.) For inspecting, gauging and branding each barrel of oil, fifteen cents ;

(29.) For inspecting empty packages, one cent ;

2. The foregoing rates shall be calculated exclusive of salt, pickle,

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cooperage, storage and labour employed in washing, rinsing, cleaning, nailing, screwing or re-packing and pickling any fish ;

3. Provided always, that any person causing his fish or fish-oil to be inspected, may employ, at his cost and charges, a cooper to attend upon and assist the inspector or deputy inspector in the performance of his duty,—in which case the inspector or deputy inspector shall not be allowed any charge for cooperage,—and the cooper so employed shall be governed and guided solely by the directions which he receives from the inspector or deputy inspector with respect to any fish or fish oil by him inspected, and not by any other person. 37 V., c. 45, s. 68 ;—44 V., c. 22, s. 1 ;—48-49 V., c. 66, s. 16.

80. Fish and fish oil may be inspected either at the place where they are packed or manufactured, or at the place of sale within Canada. 37 V., c. 45, s. 69.

81. Whenever fish are not inspected at the place of packing, the packer's name and the quality of the fish shall be marked in paint, on each barrel, half barrel or package ; and when they are inspected at the place of sale the inspector shall empty out ten packages in each hundred of any lot submitted to him for inspection, and such inspection of ten packages out of every hundred shall regulate the grade of the fish so submitted for inspection. 37 V., c. 45, s. 70.

82. So soon as any fish are inspected, a bill of inspection shall be furnished by the inspector or deputy inspector, specifying the quality as ascertained by inspection, and whether each package contains the weight prescribed by this Act, with the name of the packer, and of the inspector at the place of packing. 37 V., c. 45, s. 71.

83. This Act shall not apply to fish landed at any port of Canada from United States fishing vessels for the purpose of re-shipment to the United States, unless the owners of such fish wish them to be inspected ; but such fish, if so re-shipped without being inspected, shall not be branded or marked. 37 V., c. 45, s. 72.

 APPENDIX No. 8.

 QUESTIONS SUBMITTED BY DEPARTMENT OF FISHERIES AND REPLIES
 THERETO BY FISHERY OFFICERS REGARDING THE LOBSTER FISH-
 ING INDUSTRY IN THEIR RESPECTIVE DISTRICTS.

 QUESTION No. 1.—*Please state number of canneries in your division, and owners' names ?*

ANSWERS :

Fishery Officer Wakeham, Gulf Division, Province of Que- bec.....	Thirty-three.
Inspector Hackett, Prince Edward Island.....	Ninety-eight.
Inspector Bertram, Dis- trict No. 1 of Nova Scotia, com- prising the Island of Cape Breton.....	Thirty-five.
Inspector Hockin, District No. 2, Nova Scotia, comprising the Counties of Cumberland, Colchester, Pictou, Antigonish, Guysboro', Hants and Halifax .	Seventy-four.
Inspector Kinney, District No. 3, Nova Scotia, comprising Counties of Lunenburg, Queen's, Shelburne, Yarmouth, Digby, Annapolis and King's.....	Twenty-four.
Inspector Pratt, District No. 1, New Brunswick, com- prising the County of Charlotte.	None.
Inspector Chapman, Dis- trict No. 2, New Brunswick, comprising Counties of Resti- gonche, Gloucester, Northum- berland, Kent and Westmore- nd.....	Upwards of one hundred.

 QUESTION No. 2.—*How many of these are owned by Canadians, and how many by
 United States citizens ?*

ANSWERS :

Fishery Officer Wakeham.	Twenty-four by Canadians ; nine by United States citizens.
Inspector Hackett.....	Eighty-seven by Canadians ; eleven by United States citizens.
Inspector Bertram.....	Twenty-five owned by Canadians ; nine by United States citizens, and one by an Italian.
Inspector Hockin.....	Forty-nine by Canadians ; twenty-five by United States citizens.

ANSWERS:

Inspector Kinney.....	Sixteen by Canadians; eight by United States citizens.
Inspector Pratt.....	All have been in the past owned by Canadians.
Inspector Chapman.....	Three or four by United States citizens; rest by Canadians.

QUESTION No. 3.—*State probable number of lobster traps used in your division?*

ANSWERS:

Fishery Officer Wakeham..	43,900 in use; 50 per cent. of new traps each year to make good loss by storms, &c.
Inspector Hackett.....	95,725 traps used in 1890.
Inspector Bertram.....	About 42,150.,
Inspector Hockin.....	118,000.
Inspector Kinney.....	140,000.
Inspector Pratt.....	14,766 traps used in 1890.
Inspector Chapman.....	Upwards of 100,000.

QUESTION No. 4.—*Number of persons employed: (a) In fishing; (b) In canning.*

ANSWERS:

Fishery Officer Wakeham.	(a) 457 men and boys; (b) 692 men, women and boys.
Inspector Hackett.....	2,031—(a) 869; (b) 1,162.
Inspector Bertram.....	2,409.—(a) 1,679; (b) 730.
Inspector Hockin.....	3,779.—(a) 2,269; (b) 1,510.
Inspector Kinney.....	2,300.—(a) 1,700; (b) 600.
Inspector Pratt.....	320.—(a) 320; (b) canning not carried on.
Inspector Chapman.....	(a) 1,050; (b) 1,950—or about 3,000 in all.

QUESTION No. 5.—*How many of each class are Canadians, and how many are foreigners?*

ANSWERS:

Fishery Officer Wakeman.	In the United States factories (owned in) the foreman or manager is generally from the States, but all other hands employed are Canadians. (The other Inspectors made no answer to this question.)
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QUESTION No. 6.—*To what extent is the lobster fishery for export "alive" carried on in your division?*

ANSWERS:

Fishery Officer Wakeham.	Not at all.
Inspector Hackett.....	No lobsters fished for export <i>alive</i> .
Inspector Bertram.....	No export of <i>live</i> lobsters.
Inspector Hockin.....	A very small trade done from west division of Halifax County; none from other divisions.
Inspector Kinney.....	About one-third of the take is sold in United States <i>alive</i> .
Inspector Pratt.....	All lobsters taken are exported <i>alive</i> .
Inspector Chapman.....	Very little, if any at all.

QUESTION No. 7.—*At what earliest date does such fishing begin ?*

ANSWERS :

- Fishery Officer Wakeham. Depends on action of drift ice in spring. Magdalen Islands.—Earliest 10th May; latest 2nd June; average, about 20th May. Gaspé and Bay Chaleur—Earliest 1st May; latest 23rd May; average 10th May. Gulf division—About 15th May. At spots sheltered from easterly winds and drift ice fishing begins earlier than in exposed places. At Carleton, Maria and Pleasant Bays, and Grand Entry, traps not put out till seining for spring herring is over.
- Inspector Hackett. No fishing.
- Inspector Bertram..... Dates vary; generally about 15th or 20th May, though sometimes, owing to drift ice is as late as 10th June. At Isle Madame, 1st May to 15th. From St. Peter's Island east, 20th to 25th May.
- Inspector Hockin..... No reply.
- Inspector Kinney..... 15th February.
- Inspector Pratt 1st January—the commencement of the open season.
- Inspector Chapman..... Usually, in Restigouche and Gloucester Counties from 1st to 10th May. In Northumberland and Kent Counties from 10th to 15th May, and in Westmoreland County from 15th to 20th May.

QUESTION No. 8.—*What is the quality and quantity of catch at that date, and when is the catch at its best ?*

ANSWERS :

- Fishery Officer Wakeham. The catch is at its best soon after the fishery begins—say 23rd May—and continues good until 15th June, best both as to quality and quantity. Up to this date but few small lobsters (under 9½ inches) are taken; after this date the run is smaller and the meat inferior in quality. As soon as traps can be put out safely lobsters are taken. It takes nearly a week to get all the traps out, and by this time the fishery is at its best.
- Inspector Hackett..... No catch.
- Inspector Bertram..... In Inverness County, quality good; catch best during month of June. In Cape Breton County, quality good, catch fair; catch at best about latter part of June. In Victoria County, quality good, but quantity proportionately less; catch at best from middle of June until close of season. In Richmond County, quality and quantity good; best catch from 1st May to last of June.
- Inspector Hockin..... Cumberland County,—Overseer Mills reports catch at its best in June; Overseer Murphy in May. Guysboro' County—Overseer McQuarrie reports catch at its best between 10th and 30th June. Halifax County—Overseer Fitzgerald reports fish larger in May, but more plentiful in June. Overseer Rowlings reports catch at its best in month of May; Overseer Leslie, from 1st May to 10th June.

ANSWERS :

- Inspector Kinney At its best 25th April.
 Inspector Pratt..... Lobsters are of the best quality at the opening of season, and in this district (No. 1, New Brunswick) the quantity taken then is about six tons per week. In the beginning of February it increases to ten tons per week, when it is at its best.
 Inspector Chapman..... Sometimes very good at the commencement, but the fishing is usually at its best from 1st to 20th June, though this varies in different localities. Last year there was a fine run, especially in Kent and Westmoreland Counties, and now especially in Westmoreland at the very last of the fishing. The fish seem to strike in north first, and gradually work down the Straits.

QUESTION No. 9.—*Give earliest dates of opening of factories in your division—say for the last three years.*

ANSWERS :

- Fishery Officer Wakeham.. Magdalen Islands—1888, 25th May; 1889, 23rd May; 1890, 16th May.
 Mainland—1888, 18th May; 1889, 12th May; 1890, 9th May.
 Inspector Hackett..... From 1st to 15th May.
 Inspector Bertram..... Inverness County—1888, 27th May; 1889, 9th May; 1890, 17th May.
 Cape Breton County—15th May earliest date for last three years.
 Victoria County—1888, 25th May; 1889, 20th May; 1890, 3rd June.
 Richmond County—Seasons vary. Isle Madame first week in May; from St. Peter's Island east from 20th to 25th May.
 Inspector Hockin..... Straits of Northumberland—3rd May.
 South shore from Canso—15th April.
 Inspector Kinney..... Ordinarily about 15th April; exceptionally, 23rd March.
 Inspector Pratt..... The lobster factory formerly working in this district opened always about 1st May.
 Inspector Chapman..... 1st May in extreme northern part of the division.

QUESTION No. 10.—*Give earliest date in spring at which it would be possible for canneries in your division to profitably commence operations.*

ANSWERS :

- Fishery Officer Wakeham. (*See reply to Question No. 7*). A fair average date would be 15th May.
 Inspector Hackett..... On south side from 5th to 10th May; On north side from 10th to 20th May.
 Inspector Bertram..... In Inverness County—The first week in May, provided the coast would be clear of ice, but drift ice generally prevents successful operations until about 15th May, and some years later.

ANSWERS :

- In Cape Breton County—About second or third week in May; as drift ice on the coast until the middle of May, and some seasons later, prevents operations.
- In Victoria County—From 20th to 25th May.
- In Richmond County—On Isle Madame factories can commence first week in May.
- Other districts from 20th to 25th May.
- Inspector Hockin..... Straits of Northumberland,—1st May.
Canso West—15th April.
- Inspector Kinney..... 20th April.
- Inspector Pratt..... In the middle of February.
- Inspector Chapman..... From 1st of May in northern to middle of May in southern portion of division.

QUESTION No. 11.—*Give (average) comparative number of lobsters caught daily at opening of the fishery and later on in the season.*

ANSWERS :

- Fishery Officer Wakeham. At opening about 17,000 ; towards the close of the season about 6,000.
- Inspector Hackett..... On whole coast about 400,000 daily for first twenty-days, fishing, and about 200,000 daily for last twenty-five days' fishing.
- Inspector Bertram..... Inverness County—Impossible; seasons vary, but catch best generally in June.
Cape Breton County—This impossible; some factories begin after middle of May, others not till first week in June. Lobsters found plentiful from second week in June until middle of July. Seasons vary.
Victoria County—Impossible; several factories in this county did not operate this season.
Richmond districts—Catch varies in districts; average, about 4,000 lobsters daily each factory.
- Inspector Hockin..... Overseer Wills, Cumberland County—At opening 8,000 to 10,000; later on 12,000 to 14,000.
Overseer Murphy, Cumberland County—At opening 9,000; later on 13,000.
Overseer Pritchard, Pictou County—At opening 40,000; later on 45,600.
Overseer Tory, Guysboro' County—At opening 4,000; later 9,000.
Overseer McQuarrie, Guysboro' County—About half catch before 10th May.
Overseer Leslie, Halifax County—At opening 20,000; later 70,000.
- Inspector Kinney..... Makes no reply to this question.
- Inspector Pratt. 1,000 lobsters daily, increasing to 1,500 daily during February, and then decreasing during the remainder of open season.
- Inspector Chapman..... This varies in different places in the division, as stated before.

QUESTION No. 12.—*State what length of season is necessary to enable canneries to run profitably.*

ANSWERS :

- Fishery Officer Wakeham. Under the conditions now in force, the fishery season is as short as it can be with any profit.
- Inspector Hackett..... About forty-five working days.
- Inspector Bertram..... For Counties of Inverness, Cape Breton, and Victoria—From opening of season until 31st July. For Isle Madame, Richmond County—From opening of season to 15th July ; from L'Ardoise east, from opening of season until 25th July.
- Inspector Hockin..... Overseer Wills, Cumberland Co.—To 1st August. Overseer Murphy, Cumberland Co.—Present time, or to 10th July. Overseer Pritchard, Pictou Co.—1st May to 15th July. Overseer Tory, Guysboro' Co.—To 15th July. Overseer McQuarrie, Guysboro' Co.—Not less than two months. Overseer Leslie, Halifax Co.—To 10th July, if fine weather. Overseer Rowlings, Halifax Co.—To 1st July, and also month of October. Overseer Fitzgerald, Halifax Co.—To 1st July and also from 1st September to 1st November.
- Inspector Kinney..... Sixty days under present regulations.
- Inspector Pratt..... As the season is at present, canneries could run profitably.
- Inspector Chapman. The canners and fishermen vary, from 1st May to 15th July.

QUESTION No. 13.—*State smallest and largest size of lobsters caught in your division during the season of 1890, as compared with previous years.*

ANSWERS :

- Fishery officer Wakeham.. Opinion of Overseers and disinterested parties is, that for last three years there has been no falling off in size. In the Bay Chaleur the average size has increased since 1888. Largest lobsters taken off Anticosti (new ground) average two to 1lb tin ; biggest lobster taken weighed 14 lbs.
- Inspector Hackett..... Generally the smallest size in 1890 would be about 8 inches in length and the largest about 11 inches. As compared with three years ago, this would show an increase of about 1 inch on the smallest and largest sizes.
- Inspector Bertram..... In Inverness County the size for 1890 was about 10 per cent. above the average as compared with the three preceding years, *i.e.*, for the largest and smallest lobsters above an average for that period. In Cape Breton County—Smallest 9½ inches ; largest 12 inches. Size and quality compare favourably with previous years.

ANSWERS :

- In Victoria County— $9\frac{1}{2}$ inches smallest lobsters taken ; 11 inches about largest. No noticeable change in size as compared with previous years.
- In Richmond County—Smallest lobsters taken at factories $9\frac{1}{2}$ inches ; largest 12 inches.
- Inspector Hockin..... Smallest 7 inches ; largest 14 inches.
- Inspector Kinney..... The average during 1890 seems to be larger than in other years.
- Inspector Pratt..... None smaller than $9\frac{1}{2}$ inches are taken from traps, although thousands are met with under that size, and run up to 15 and 16 inches in length ; but run smaller than in past years.
- Inspector Chapman..... The average was generally larger than in 1889, and considerably larger than in 1888.

QUESTION No. 14.—*Also state average size, as compared with previous years.*

ANSWERS :

- Fishery Officer Wakeham. See his answer to Question 13.
- Inspector Hackett..... The average size has increased about 1 inch last three years, being then about 7 inches for the smallest and ten for the largest ; now about 8 and 11 inches, respectively.
- Inspector Bertram... .. In Inverness County—10 per cent. above average. In Cape Breton County—Size same ; average as former years.
- In Victoria County—Apparently the same.
- In Richmond County—No noticeable change in size of lobsters as compared with previous years.
- Inspector Hockin..... Overseers Wills and Murphy, Cumberland County, report average size larger this year.
- Overseer Pritchard, Pictou County—Better than last four years.
- Overseer Tory, Guysboro' County, reports average size about the same.
- Overseer McQuarrie, Guysboro' County, reports somewhat smaller.
- Overseer Fitzgerald, Halifax County, reports average size about the same.
- Inspector Kinney..... The average size during 1890 seems to be larger than in other years.
- Inspector Pratt..... Average about 10 inches in length, and numbers and size decreasing annually.
- Inspector Chapman..... A general improvement in past two years, especially in 1890.

QUESTION No. 15.—*How many lobsters did it take to fill a pound can in 1890 ?*

ANSWERS :

- Fishery Officer Wakeham. At Magdalens average was $4\frac{7}{8}$; during first four weeks of season average $3\frac{1}{2}$; towards close of season, this falls to 5. On the mainland average is better, say, for whole season, 4, and from Port Daniel west, say, average is about 3.

ANSWERS :

- Inspector Hackett..... On an average, about 6 lobsters. In some factories 4 lobsters filled a 1-pound can, while in others 7 were required.
- Inspector Bertram..... Inverness County—5 on an average. Some days as low as $4\frac{1}{2}$ lobsters, taking the whole catch for the day, on an average, would fill a can. Other days it would take $5\frac{1}{2}$ lobsters to fill a 1-pound can.
- Cape Breton County—Size, season and localities vary. Some districts, 4 to 1-pound can; other districts, from 5 to 6.
- Victoria County—Districts vary; average from 4 to 6 to fill a can.
- Richmond County,—From 4 to 6.
- Inspector, Hockin..... From $4\frac{1}{2}$ to 5.
- Inspector Kinney..... About $4\frac{1}{2}$ fish.
- Inspector Pratt..... Canning not carried on in this division.
- Inspector Chapman..... About 5 on an average.

QUESTION No. 16.—*Is the regulation fixing the minimum length at $9\frac{1}{2}$ inches well observed; and are all lobsters under the size returned to the water?*

ANSWERS :

- Fishery Officer Wakeham. It is not well observed. Many lobsters are canned between 9 and $9\frac{1}{2}$ inches; not many under 9 inches.
- Inspector Hackett..... The regulation fixing the minimum length is not very well observed, as the fishermen kill large numbers of short lobsters at the traps and throw them overboard.
- Inspector Bertram..... Inverness County—Fairly well. Lobsters under that size are, as far as practicable, returned to the water alive; all fines imposed were for having undersized lobsters.
- Cape Breton County—Yes; where factories are closely watched by officers.
- Victoria County—Yes; fairly well, as far as officers can ascertain, but factories require to be closely watched.
- Richmond County—Fairly well; as far as officers can ascertain, the majority of fishermen are disposed to return small lobsters to the water.
- Inspector Hockin..... Overseer Wills, Cumberland County, says: As far as he could observe—Yes.
- Overseer Murphy, Cumberland County, says: Are reported to secrete small ones from officers.
- Overseer Pritchard, Pictou County—Not by fishermen, unless compelled to.
- Overseer McPhie, Pictou County—Not well observed.
- Overseer Tory, Guysboro' County—I don't think it is; some are, if Inspector is expected.
- Overseer McQuarrie, Guysboro' County—No; avoided as much as possible.
- Overseer Leslie, Halifax County—No; a great many fishermen do not.

ANSWERS :

	Overseer Rowlings, Halifax County—No; about one-eight returned to water.
	Overseer Fitzgerald, Halifax County—No; if they can evade the law they will.
Inspector Kinney.....	No.
Inspector Pratt.....	The regulation is well observed, and undersized lobsters are returned to the water.
Inspector Chapman.....	Fairly well; do not return all under 9½ inches, especially when officers are not on hand.

QUESTION No. 17.—*Are fishermen, as a rule, careful to liberate berried and soft-shell lobsters?*

ANSWERS :

Fishery Officer Wakeham.	Soft-shelled lobsters are always returned to the water. Many fishermen have a practice of knocking off the berries by slapping the extended tail of the lobster smartly on the water. A man with the knack can do this very quickly and completely.
Inspector Hackett.....	Not as a rule. Some are very particular in liberating them <i>alive</i> , while others, on account of the trouble they give in getting back into the traps and destroying the bait, kill them; but generally, if the Wardens are not energetic in visiting the factories, they are landed and canned.
Inspector Bertram.....	Inverness County—No; required to be watched. Cape Breton County—In some cases, but many fishermen will remove berries and sell to packers who cannot detect real condition of the fish. Victoria County—No; many fishermen are known to take spawn lobsters and remove berries before bringing them to factory. Richmond County—The majority of them are, but they require to be watched.
Inspector Hockin... ..	Overseer Wills, Cumberland County—Yes. Overseer Murphy, Cumberland County—Fears not, but cannot say for certain. Overseer Pritchard, Pictou County—No; they brush off the spawn. Overseer McPhie, Pictou County—Yes. Overseer Tory, Guysboro' County—No; the berries are brushed off. Overseer McQuarrie, Guysboro' County—Yes, as a rule; many exceptions. Overseer Leslie, Halifax County—Yes, generally. A great many taken by some. Overseer Rowlings, Halifax County—No. Overseer Fitzgerald, Halifax County—No.
Inspector Kinney.....	Yes.
Inspector Pratt.....	They are, as a rule, very careful.
Inspector Chapman.....	As a general rule, I believe they are.

QUESTION No. 18.—*What is the proportion in the catch of lobsters measuring; (a) Over 9½ inches in length; (b) Nine and a half inches in length; (c) Less than 9½ inches in length?*

ANSWERS:

- Fishery Officer Wakeham. On Magdalen Islands—(a) 60 per cent.; (b) 30 per cent.; (c) 10 per cent. On mainland—(a) 80 per cent.; (b) 10 per cent.; (c) 10 per cent.
- Inspector Hackett..... (a) 40 per cent.; (b) 45 per cent.; (c) 15 per cent. These figures may fluctuate, but after careful calculation I estimate them as being as near as possible to the correct proportions of the catch.
- Inspector Bertram Inverness County:—(a) 38 per cent.; (b) 40 per cent.; (c) 22 per cent.
Cape Breton County:—(a) At districts of Gabarous, Forchu and L'Archeveque, 50 per cent.; (b) From Garbarous to Cow Bay, 40 per cent.; (c) From Cow Bay to Point Aconi, 35 per cent.
Victoria County:—(a) 50 per cent.; (b) 20 per cent.; (c) 30 per cent.
Richmond County:—(a) 45 per cent.; (b) 40 per cent.; (c) 15 per cent.
- Inspector Hockin (a) About 50 per cent.; (b) About 22 per cent.; (c) About 28 per cent.
- Inspector Kinney..... (a) Say 30 per cent.; (b) Say 30 per cent.; (c) Say 40 per cent.
- Inspector Pratt (a) $\frac{2}{3}$ of catch over 9½ inches.; (b) $\frac{1}{3}$ of catch measures about the legal size.; (c) None are taken by our fishermen.
- Inspector Chapman It is impossible to answer this correctly, but I believe this season a large proportion were up to the standard.

QUESTION No. 19.—*What has been the range of prices for live lobsters and canning lobsters for 1890, and how do they compare with those of the past four seasons?*

ANSWERS:

- Fishery Officer Wakeham. From \$1 to \$1.25 per 100.
- Inspector Hackett. Lobsters for canning purposes are generally purchased by the hundred—the fishermen receiving 25 cents per 100 for them delivered at the factory—the owners of the factory supplying boats, traps, bait and board. The price has been the same last four seasons.
- Inspector Bertram Inverness County—From 70 to 90 cents per hundred pounds of live lobsters, an increase of 20 per cent. as compared with the past four seasons.
Cape Breton County—The rule in this county is: Packers furnish all gear to fishermen, and pay them from 75 cents to 90 cents per 100 lobsters. Average. about 15 cents over previous years.
Victoria County—Prices vary; some packers pay more than others. Average, about 75 cents per hundred.
Richmond County—From 80 cents to \$1.25 per hundred. Higher rate than paid for last four years.

ANSWERS :

- Inspector Hockin Overseer Wills, Cumberland County—40 cents per 100 lbs., all found, for canning lobsters; prices a little higher.
 Overseer Murphy, Cumberland County, 45 cents per 100 lbs.; same as for several seasons.
 Overseer Pritchard, Pictou County—Better prices.
 Overseer McPhie, Pictou County—From \$7 to \$8 per case of four dozen.
 Overseer Tory, Guys-boro' County—All must be alive; otherwise, not fit for canning. Prices from \$1 to \$1.30 per 100 lbs. Past four seasons from 60 cents to \$1.
 Overseer McQuarrie, Guysboro' County—\$1.30 per 100 lbs.; every year getting higher. Commenced at 40 cents per 100 lbs.; now \$1.30.
 Overseer Leslie, Halifax County—From \$1 to \$2. A gradual incline in past four years.
 Overseer Rowlings, Halifax County—\$1 to \$1.25 per 100 lbs., being about 15 per cent. higher.
 Overseer Fitzgerald, Halifax County—\$4 per 100 for live lobsters for export; \$2 for 100 fish for canning—highest price for years.
- Inspector Kinney.... For live lobsters, a slightly better price than for past years. For canned lobsters, 20 per cent. improvement in price.
- Inspector Pratt Prices have greatly advanced on former years, averaging from 5 to 14 cents each for those over 10½ inches, while beneath that size to 9½ inches \$1.50 per cwt. was the prevailing figure.
- Inspector Chapman..... Most all the canners employ their own men to fish, and do not buy from the fishermen. Prices for canned lobsters have been very much higher this season than usual, from 40 to 50 per cent. above the prices in 1887 and 1888.

QUESTION No. 20.—*How are lobster fishermen generally employed after the fishing season is over?*

ANSWERS.

- Fishery Officer Wakeham. Cod and mackerel fishing.
- Inspector Hackett. As a general rule they continue fishing mackerel, cod, &c., for the balance of the fishing season.
- Inspector Bertram. Inverness County—They prosecute other fishery, such as cod, hake, mackerel and herring; a small percentage attend to farming exclusively, after the fishery season is over.
 Cape Breton County—Some engage in cod, mackerel and herring fishery; others attend to farming.
 Victoria County—The majority prosecute other branches of the fishery, and some attend to farming.
 Richmond County—Engage in cod, herring and other fishing.

ANSWERS :

- Inspector Hockin. Overseer Wills, Cumberland County, says: Anything they can get to do.
 Overseer Murphy, Cumberland County—As they return to Halifax, where they belong, I cannot tell.
 Overseer Pritchard, Pictou County—Some haking; some farming.
 Overseer Tory, Guysboro' County—At other fisheries.
 Overseer McQuarrie, Guysboro' County—Those who still have nets go about fishing mackerel, herring and cod; many go to the United States to work at canning other goods.
 Overseer Leslie, Halifax County—One half at cod and other fisheries; part at illegal lobster fishing; part at various occupations.
 Overseer Rowlings, Halifax County—Majority at other fisheries; some at mines and mills, and some continue to catch lobsters illegally.
 Overseer Fitzgerald, Halifax County—At other fisheries.
- Inspector Kinney. Many finish the season at net fishing; nearly all are small farmers.
- Inspector Pratt. Hand-lining, trawling, weir, and net fishing.
- Inspector Chapman. Variously—some at deep-sea fishing; some farming; others lumbering, milling, &c.

QUESTION No. 21.—*Is the supervision at present in force sufficient to ensure a fairly good observance of the law? If not, what suggestions can you make to attain that end?*

ANSWERS :

- Fishery Officer Wakeham. It is not: we want more Overseers constantly at work. Fishermen and canners who are strict in the cull complain that their neighbours take and use small lobsters when they are not watched.
 N.B.—It is the very general opinion at the Magdalen Islands that fishing in the lagoons should be stopped. The lobsters go in late into the lagoons, and since the shortening of the season to the 15th July lagoon-fishing has been greatly curtailed. These lagoons, where the water is shoal and warm, would seem to be the natural breeding grounds of the fish.
- Inspector Hackett. The supervision at present in force ensures a fairly good observance of the law, but it could be improved by paying the Wardens a higher salary and compelling them to give more attention to their duties.
- Inspector Bertram. Inverness County—Yes; the officers are vigilant, but more are required where factories have been established in out-of-the-way places.
 Cape Breton County—Certain districts require more supervision, as some factories are situated in out-of-the-way places, and require special officers to make daily visits.

ANSWERS :

- Victoria County—Supervision sufficient, excepting district of north shore, where services of special officer are required.
- Richmond County—In some districts it is not sufficient. Would recommend special officer for certain factories during lobster-fishing season.
- Inspector Hockin..... Overseer Wills, Cumberland County, says: Yes.
- Overseer Murphy, Cumberland County—Should be a regulation trap, that would not retain small lobsters. Every cannery should pay a license and have its own ground laid off.
- Overseer Pritchard, Pictou County—Thinks not.
- Overseer McPhie, Pictou County. Recommends the placing of a Guardian at each factory during fishing season.
- Overseer Tory, Guysboro' County—Suggest all canneries should be licensed, and pay a fee for the same, and an officer to be stationed at each during the fishing season, and every case be branded by that officer before it leaves the cannery. All cases not so marked should be confiscated.
- Overseer McQuarrie, Guysboro' County—Thinks not. There should be a man at each factory to inspect fish as they are weighed out of boats when they are brought in. Every cannery to pay a license.
- Overseer Leslie, Halifax County—There are not enough officers appointed to guard against all illegal work.
- Overseer Rowlings, Halifax County—An Overseer, with the assistance of two good men, reliable and active, could have the law observed.
- Overseer Fitzgerald, Halifax County—As far as his district is concerned, it is.
- Inspector Kinney..... No.
- Inspector Pratt..... The supervision at present in force is sufficient to enforce the fishery laws.
- Inspector Chapman As good as can be had without a much larger expense, by placing a watchman in charge of each batch of canneries. This would require twenty-five or thirty special guardians for about ten weeks.

APPENDIX No. 9,

BEING AN APPENDIX TO MINUTE OF PRIVY COUNCIL, 22ND MAY, 1890, ON THE USE OF PURSE SEINES FOR THE CAPTURE OF MACKEREL.

Commander Lavoie, of the Government Fisheries Protection steamer "Lady Head," in his report for 1878, Supplement No. 4 to the Eleventh Annual Report of the Minister of Marine and Fisheries, 1878, p. 64, said:—

"It can easily be imagined what terrible havoc these 350 purse seines must make when engaged during two or three consecutive months in sweeping the same grounds. Nothing can escape them, and it is admitted by American fishermen themselves that a schooner making her catch with these fishing engines destroys an equal number of young herring and mackerel. These seines ought, in my opinion, to be forever banished from our waters, and their use especially prevented in the small bays where fish are wont to go for the purpose of depositing their eggs, and where they breed and grow." * * *

Dr. Wakeham, Commander of the Government Fisheries Protection steamer in the Lower River and Gulf, during the season of 1879, Supplement No. 2 to the Twelfth Annual Report of the Minister of Marine and Fisheries, 1879, p. 56, Appendix No. 3, said:—

"These seines, besides destroying wastefully an immense quantity of fish that is never saved, breaks up the schools and frightens the fish off the coast. Such, at all events, is the opinion of those best fitted to judge among our fishermen."

Fishery Inspector Duvar, for the Province of Prince Edward Island, for the year 1879, Supplement No. 2 to the Twelfth Annual Report of the Minister of Marine and Fisheries, 1879, p. 265, Appendix 15, said:—

"As regards the much vexed question of seining, it is historical that craft fitted out for fishing on the coasts of Massachusetts and Maine, as recently as 1863, used seines only for the purpose of taking 'porgies' for mackerel bait up to 1868, (or say 1870) when the practice was entered into on a large scale in American waters for the taking of mackerel. Up to that season, it is stated, vessels could each take 400 to 1,000 barrels per season with hook and line, but after seining had prevailed only up to 1873, 300 barrels per season would be all the hook-and-linemen could take, while the seiners, even in the face of the diminishing supply, would capture full cargoes of large mackerel, besides each vessel netting a surplus of 1,000 barrels of small fish which they made no use of. The supply of large fish becoming scanty the American fleet tried their fortune with seines in the Canadian waters of 'the bay.' Here it was their object to take only such first quality fish as would fetch a high price in the United States' markets, the smaller fish not leaving any margin for profit. Now, the established fact that in ordinary fishing weather, each long seine may, and usually does, draw to the vessel's side 20 to 100 barrels of small herring and mackerel, over and above large ones, affords a basis on which to make calculation of the value of the fishery in which foreigners share, and of the destruction done to such fishery. Thus, 300 sail set their seines twice a day during, say, forty fishing days, or 16,000 times; and, with even the proverbial fisherman's luck, take at each cast of the seine from the waters to perish, make no use of and throw overboard, only 15 barrels of fish of smaller size than they require—this is putting it at the lowest conceivable figure—the result shows at least 240,000 barrels of fish at, say, \$2 per barrel or \$480,000 of injury done to the Gulf fishery in six weeks of actual time. I am aware there are persons capable of judging who may even consider the estimate far too low.

"Advices, supposed to be reliable, state that the average number of 250 schooners, or more, fitted out, most of them with seine boats and seines, from Gloucester and other American ports for the Canadian waters this spring. When they arrived they found the fish, although schooling freely, were of small size, which fact, it may be imagined, did not lessen the number of those under 11 inches in length that would be thrown overboard before a cargo of prime fish fit to bring a high price could be secured."

Supplement No. 2 to the Eighteenth Annual Report of the Minister of Marine and Fisheries, "Fisheries Statements," 1880, Appendix No. 3—Fishery Officer Wakeham's report for 1880:—

"There is no doubt that some years ago the mackerel was so much disturbed by the hosts of American schooners, with their destructive purse seines, that this fish was driven off the coast. During the past three years we have seen fewer American vessels, and now the mackerel are frequenting their old haunts in greater numbers. This season they were seen schooling in great quantities, all the way from Cape Chatte to Maguasha Head."

Mr. W. H. Venning, late Inspector of Fisheries for New Brunswick, in his report for 1886, Third Annual Report of the Department of Fisheries, 1886, Appendix No. 4, says:—

"There seems good grounds for the fears expressed by many of the old fishermen that the general use of purse seines in Bay of Chaleurs will be very destructive to the mackerel and herring fisheries. There is no doubt that the destruction of young mackerel along the American coast from the use of these seines is enormous, and the same destruction will probably follow their general use by our fishermen. Mr. B. P. Chadwick, of Bradford, Mass., who has been investigating this matter with great care for many years, thus writes Professor Baird, head of the United States' Fish Commission:

"The present method of our fishermen in seining mackerel is such that while taking over 500,000 barrels of good, sizable fish, it causes a total destruction of over 1,000,000 barrels of young fish that have grown to one-third the usual size of fully matured fish. Could this number of fish be protected and caught when full grown the amount would be 3,000,000 barrels; and, at the present price of No. 1 mackerel (\$15 per barrel), the amount of \$45,000,000 worth of fish-food is no small item to our people. The hay crop of Maine, New Hampshire, Vermont and Massachusetts is 3,150,000 tons. The crop has a market value of \$37,800,000. Now, if the farmers should destroy the hay crop annually the effect upon agriculture in these States would be disastrous; and yet the present method of seining mackerel destroys \$45,000,000 worth of food-fish, and scarcely a voice is raised against it. Mackerel vessels carry from two to four seines each. I have known a single seine destroy 150 barrels of young mackerel in a day in the taking of 30 barrels of marketable fish. If one seine does injury to this amount in a single day, what must be the effect of using the seines of a mackerel fleet of 400 vessels for ninety days? The ocean is large and mackerel are prolific. The spawn of a single mackerel is nearly 500,000. Were it not for these two facts the end of mackerel fishing would soon be reached. As it is, the catch of No. 1 fish is small, there being scarcely any in the market, and these few selling at an exorbitant price. This condition is caused by the destruction of the young fish."

Inspector Bertram, Cape Breton, in his report for 1888, Fifth Annual Report of the Department of Fisheries, 1888, p. 49, says:

"Herring has proved the staple branch of the Cape Breton fisheries for the year 1888. With two or three minor exceptions, the herring fishery turned out remunerative to a degree that went far to compensate for the loss in other branches. Considering the value of herring as an article of profitable foreign commerce, and as a staple of food for home consumption, the wanton destruction of thousands of barrels of fish on the coasts of this island annually, thrown back in the sea by mackerel seiners, is a most serious matter in the economy of one of the most valuable natural resources of this country. This point will be found more fully referred to in this report under the heading of 'Destructive Methods of Fishing.'"

“DESTRUCTIVE METHODS OF FISHING AND WASTE OF FISH-FOOD.”

This is a subject which requires serious consideration and prompt action in the application of prohibitive measures, if our present coast fisheries are to be saved from extinction. The two principal agencies in this work of destruction and waste are:—

Purse seining and trawling.

Against these two agencies of mischief our boat fishermen send up a united and universal protest. With fishermen of the United States and those of the Provinces, hand line fishing is now superseded by the use of seines and trawls. Both are destructive to fish, and the numbers now engaged in these methods of fishing are greatly in excess of all reasonable demands on the utmost possible fish-producing powers of this or any other coast of equal extent.

Purse seining is liable to the following objections:—

1. When a seine is thrown amongst a school of mackerel or other fish the school is broken up and scared, so that what escapes from outside the seine enclosure is scared and makes off to deep water for a refuge. This effectually destroys all chances of boat fishermen, who depend on hand-lines and ordinary nets, for a share of the broken schools.

2. When, for instance a seine is thrown for mackerel, it encloses the fish of every kind within its great area, and the aggregate quantity of these varieties are frequently much greater than that of the fish sought to be entrapped, including the small, valueless fish as well as the large.

3. When the seine is closed, and the work of taking out commences, all kinds of fish, large and small, good and bad, which are not of the grade sought, are thrown dead into the sea, thus polluting the bottom to an extent which repels living fish from its proximity. By this method thousands of barrels of herring and hundreds of quintals of cod, including bait and other fish, are destroyed, and boat fishermen, who are depending on them for a supply, are deprived of all participation in the catch.

4. The large quantities thus destroyed in the seining process is far beyond the powers of nature to sustain by reproduction, consequently, the fishing grounds are being rapidly depleted of their tenants.

Mr. J. H. Duvar, late Inspector of Fisheries for Prince Edward Island, in his report for 1888, Fifth Annual Report of the Department of Fisheries, 1888, Appendix No. 4, says:—

“As to the outcry against seining, which has this year been particularly loud, there may be something in it. The effect of 250 fast-sailing vessels chasing the fish all day long can well be imagined. Without going into the doctrine of heredity that continual prosecution develops a new instinct in animals, even in fish, it would almost seem as if the mackerel of the Gulf are growing more wary and shy. Little else can be expected where the fish schools, wherever found, are instantly broken up and the alarmed fish that escape the meshes make off in wild alarm for miles before they become quiet again. Among these fugitives the hook-and-line fishermen have a poor chance. But the evil is not remediable.”

Mr. W. H. Venning, late Inspector of Fisheries for New Brunswick, in his report for 1888, Fifth Annual Report, Department of Fisheries, 1888, Appendix No. 3, said:—

“The failure recorded last year in the mackerel fishery has again occurred, and this year is more complete. In 1880 the catch was 19,650 barrels and 66,427 cans. In 1886 the catch was 17,868 barrels and 70,128 cans. In 1887 only 3,607 barrels and 44,278 cans were caught. After making all allowance for the alleged erratic and uncertain movements of mackerel, their pelagic wanderings and changing habitat, so great a decrease in a few years would indicate some general and hitherto unknown cause. In my opinion, based on many years observation, extensive reading and converse with old and experienced mackerel fishers, the causes are: 1st. The great destruction by purse seines of gravid parents and half-grown young fish; 2nd. The failing supply of food in Bay Chaleur and the Straits, consequent on the great destruc-

tion of smelts, frost fish and flounders in all the counties bordering these waters, where alone this fish is pursued by our fishermen. The myriads of young fry which formerly crowded all our estuaries and afforded the kinds of food that the mackerel seeks inshore, are no longer there. The waters are depleted of this food; consequently, the schools are no longer attracted to the in-shores. We see the same result in American waters, where purse seines have destroyed the gravid parents and immature young fish, and the porgies on which they feed. The scarcity of mackerel in American waters, continued with the continued demand for them, has led to the importation of large quantities from England, whence the future supply will probably come. While purse seines and bag-nets are allowed without restriction, I can see no reasonable hope of any improvement in the mackerel fishery. My present conviction is that there should be a close time to cover the spawning season, and that purse seines should be prohibited in Canadian waters. I have seen our salmon, shad, bass, alewives, oysters and lobsters all dwindling away for want of protective laws, and now the most valuable fish of all is being exterminated by the unrestricted use of destructive implements and the wanton waste of spawning fish."

Lieutenant A. R. Gordon, R.N., in his report for 1888, Fifth Annual Report, Department of Fisheries, 1888, Appendix "A," said:—

"The purse seine is a large fine mesh net, made out of tarred cotton twine. These nets were at first both clumsy and costly, but of late years not only has the net been made simply perfect, but the price has been put at such a figure that they have been adopted by Canadians more extensively, and entirely by United States fishermen. The basis of this fishery is a schooner carrying two seines and two seine boats; the seines are called the deep and shallow seines, the one being about 15 and the other about 10 fathoms deep.

"The relation between the reduced productiveness of our mackerel fishery and the adoption of the purse seine is one of the problems now most urgently presented for solution.

"In protecting a fishery the required conditions are: 1st. Proper means must be used for the capture of fish; 2nd. These means must only be used at a proper times, and the question then arises: is the purse seine a proper means of prosecuting the fishery, when used as it now is?

"In order to prevent the harassing of the schools of unspawned fish on the United States coast, a law was passed by Congress prohibiting the landing in the United states of mackerel caught with a purse seine before the 1st June in any year—thus in practice admitting that the use of the purse seine prior to that date was liable to injure the fishery. The condition of the fish which prevails on the United States coast up to 1st June is precisely that of the Gulf of St. Lawrence up to, say, 20th July, and therefore this date of prohibition, which may afford adequate protection to the fish on the United States coast, affords none to those on ours. But the point is none the less established that a Government, whose ruling principle of fishery legislation has been to interfere as little as possible with the liberty of the fishermen, has definitely concluded that the purse seine, used prior to the spawning season, is injurious to the fishery."

Again, having further reference to this subject, Lieutenant Gordon, R.N., in a special report in 1888, said:—

"It frequently happens that large numbers of undersized and unmerchantable fish are thus enclosed with a small percentage of good fish, so that in order to save the few the large numbers which might have grown into real value are uselessly and ruthlessly destroyed. In this way also quantities of herring have frequently been destroyed, as they are of no use to the fishermen.

"The most serious damage which the purse seine does to the fish is, however, not the capture of young and immature fish, but the killing of the parent fish by fishing at improper times, before spawning. If all the parent fish which come into the Gulf annually were allowed to spawn peacefully, the damage done to our fishery * * * would be greatly minimized. * * *

"I am myself of opinion that nearly half of the catch made by seines in the Gulf is that of unspawned fish, and this destruction of parent fish at improper times, together with the wholesale and useless destruction of immature fish is what has brought about the present depleted state of the mackerel fishery.

"That the use of the purse seine at improper times lies at the root of the evil is the belief of nine out of ten of those whom I have interviewed, and who have the means of judging; and this fishing, instead of being a steady working fishery, such as it used to be in the old hook-and-line days, has now become a sort of steeple chase and lottery business, in which there are few prizes and many blanks; and the feeling among these men was well expressed to me by the captain of one of our Nova Scotian vessels, who said: 'All I want, Sir, is one day at the fish with these prices; I ask no more.' The majority of those interested are in favour of the total abolition of the purse seine, but as long as some continue to use it others must, in self-defence, do the same. No remedy can be effectual which is limited in its operation to the three-mile limit, for mackerel spawn, like that of the codfish, floats on the surface, and the fish prior to spawning feed at all distances from the shore."

Inspector A. C. Bertram, in the Annual Report of the Department of Fisheries, 1889, Appendix No. 3, p. 50, says:—

"THE CHIEF AGENTS WHICH CAUSE SHORTAGE OF CATCH.

The first and principal of these causes, the fishermen are everywhere unanimous in agreeing upon—that is, the shore fisheries are being ruined by purse seine fishing, as well as by trawl or set-line fishing * * * *

"The consequence is, that the schools are broken, and such as escape the seines are scared away and lost to further capture by the boat fishermen. The mischief does not end here, for on being enclosed in seines at least 50 per cent. on an average of the fish are of kinds not wanted. This residue is taken out dead, thrown back into the water, and to this mass of dead, rotting matter are added the offals or cleanings from the fish retained, by which a large area of bottom is strewn, by aid of wind and tide, with tons upon tons of putrid matter, which repels all approaching schools for the remainder of the season. This process repeated upon the same grounds and within the same bays, year after year, destroys the fish beyond the powers of reproduction; and the condition of the waters, together with repeated scaring aways, leads the fish by degrees to abandon these places for other grounds. There is now no more firmly or accepted fact than that the fish shun filthy and polluted waters, just as graminivorous animals of land avoid filthy pastures whenever they can, by seeking out cleaner grounds. That fish will flee from tainted bait, in place of being attracted by it, is known to everyone, and is a great illustration of the aversion of fish to contact with putrid or even tainted matter. Out of a haul of 500 barrels by a purse seine, from 200 to 250 barrels will be rejected, and is thus lost to food and commerce, besides being thrown out dead, to pollute the waters and the bottom. This putrid mass will be largely increased by offals from the retained fish being thrown in after it * * * *"

Overseer Duncan Cameron, of St. Peter's, reports a decrease in very branch of deep-sea fishery excepting alewives. This falling off is not attributable to local causes or to a less vigorous prosecution of the industry, but to the fact that on the approach of fish inshore in the spring they are frightened away by American and Canadian seiners. This cause of the decrease in the fishery is also entertained by the most experienced fishermen of this district. A Regulation prohibiting the use of Purse seines and trawls inshore is much wanted * * *

Overseer Duncan McDonald, of Aspy Bay, says:—

"A great many mackerel were taken this year by hook-and-line, and it is a pity that this ancient and successful mode of fishing was not generally practised. It certainly would be more profitable for the local fisherman and far better for the fishery. Nothing is so calculated to destroy this fishery as the wholesale destruction

caused by seines. Had it not been for seining, the mackerel fishery would have been 50 per cent. better. The schools were broken up and the fish frightened away.”

* * * * *

Report of Lieut. A. R. Gordan, 1889. Report of the Department of Fisheries for the calendar year 1889. Part III, page 6.

THE MACKEREL FISHERY OF 1889.

The United States mackerel fleet which visited the Canadian waters during the season of 1889 consisted of sixty-two vessels, their catch being recorded in the table subjoined. In the cases when a vessel made two trips a double row of figures indicates the catch in each voyage:—

Name.	Port.	Catch.	Name.	Port.	Catch.
		Bbls.			Bbls.
Ambrose H. Knight	Gloucester	250	John W. Campbell	Gloucester	35
A. R. Crittenden	do	250	John M. Plummer	Portland	90
Augusta E. Herrick	Boston	231	Lizzie M. Center	Gloucester	110
Alice C. Jordan	Gloucester	50	do	do	40
Agnes	do	9	Lizzie W. Hannum	do	5
Bluejacket	do	168	Leona	do	425
do	do	280	Mayflower	do	40
Belle Nauss	do	47	Marion Grimes	do	290
Belle Franklin	do	7	M. L. Wetherell	do	190
Chas. Levi Woodbury	do	190	Moro Castle	do	14
do	do	80	Margie Smith	do	200
David F. Law	do	51	Northern Eagle	do	0
Davy Crockett	do	213	Orient	do	180
D. A. Wilson	do	34	Procyon	do	50
Edith Rowe	do	5	do	do	0
Ernest F. Norwood	do	50	Rushlight	do	180
Elsie M. Smith	Portland	150	Rapid Transit	do	50
Epes Tarr	Gloucester	330	do	do	0
Enola C.	do	105	do	do	180
Emma W. Brown	do	272	Rattler	do	50
Eastern Queen	do	114	Robin Hood	do	50
Electra A. Eaton	do	80	S. F. Maker	do	270
Ellen Lincoln	do	120	Senator Saulsbury	do	110
Flash	do	32	Senator Morgan	do	30
Flora Dilloway	do	140	do	do	140
do	do	60	Sterling	do	30
Geo. F. Edmonds	Portland	28	Star of the East	do	160
Governor Butler	Gloucester	48	W. H. Foye	do	23
G. P. Whitman	do	150	W. H. Wellington	do	95
Herald of the Morning	do	190	do	do	93
Henry Wilson	do	95	W. W. Rice	do	153
do	do	72	do	do	30
Harry G. French	do		Willie Irving	do	113
Isaac A. Chapman	do		W. D. Daisley	do	98
J. S. McQuinn	do		W. H. Oakes	do	
J. J. Clark	do		Wm. M. Gaffney	do	

Sixty-two schooners. Total take 6,775 bbls.

The following is the take of mackerel for the years 1888 and 1889, made by United States' fishing vessels off the Nova Scotian coast and in the Gulf of St. Lawrence:—

1888—83 vessels, take 10,418 bbls., average 126 bbls. per vessel.
 1889—62 do 6,755 do 109 do

So far as the New England fleet are concerned, both in the Gulf and on the Nova Scotian and New England coasts, the mackerel season has been an unprecedentedly

poor one, and the following table exhibits in a marked manner the continued decadence of the United States mackerel fishery. The returns not being yet available, the Canadian catch for 1889 is estimated, but that for the New England fleet is taken from the published returns of the Boston Fish Bureau, as stated in their circular of 13th December.

	1885.	1886.	1887.	1888.	1899.
Caught by U.S. vessel—Bbls.	330,000	80,000	78,000	40,000	17,794
do Canadians— do	148,400	152,292	131,653	65,777	65,000
Total product... ..	<u>478,450</u>	<u>232,292</u>	<u>209,653</u>	<u>105,777</u>	<u>82,974</u>

If from the above figures for United States vessels for 1888-89 we take the quantities quoted as being taken off the coasts of Canada, the remainder will represent the quantities obtained on the fishing grounds off the New England coasts. These remainders are: for 1888, 29,572 bbls., and for 1889 the minimum quantity of 11,219 bbls. Figures like these need no comment.

In Canada the fishing has remained about the same as last year, and the prospects are encouraging to this extent, that large quantities of small fish have been seen during the latter part of the season, which, if not destroyed in purse seines before reaching merchantable age, will go a long way towards restoring our fishery to its normal condition of late years, if not to its former degree of plenteousness.

Our Canadian fishery shows to great advantage when compared with the mackerel fishery of the United States, and it is safe to say that, without any great increase in the means of capture, our Canadian catch has been fully up to, if not in excess of, that of last year.

The habits of the fish seem to have changed completely; they no longer herd in large schools, and play about on the surface as they feed, but small quantities of fish are found almost everywhere. At one time this year fish could be raised at any point between Miscou Island and the Magdalens, making in the whole unquestionably a vast mass of fish, but far short of the multitudes which formerly frequented the waters of the Gulf.

I cannot help thinking that the apparent change in the habits of the fish is largely due to their diminished numbers, which would naturally make them more timid. The change, however, is not without its advantage, as it tells largely in favour of Canadian methods of fishing, the success of the hook-and-line fishing and the boat fishing inshore being quite marked during the past season.

In my report on the operations of the year 1888 I went very fully into the condition and prospects of the Canadian mackerel fishery, and subsequent experience has only tended to confirm and strengthen the views expressed therein, viz., that the depletion of the mackerel fishery was largely due, not only to the use of improper means of capture, but to the use of those means at improper seasons.

The United States' Government, recognizing the importance of this fishery, has legislated very effectively to prohibit the use of the purse seine in their southern waters during the season when the mackerel are about to spawn, the law being that no mackerel caught in a purse seine between the first day of January and the first day of June in each year shall be permitted to be landed in the United States, thus using the machinery of the Customs Department to enforce a law for the protection of deep-sea fish on the high seas.

The United States' fishermen, recognizing the fact that this law is a necessity, if there is to be any future for their mackerel fishery, loyally adhere to its provisions.

Owing, however, to the geographic position of our Canadian fishing grounds, a season which will protect spawning fish on the New England coasts will not protect them on those of Nova Scotia, and the season within the St. Lawrence is later still.

I would strongly urge upon your notice the advisability of endeavouring to make an arrangement with the Government of the United States for the preservation of the mackerel fishery. The best method of protecting the fishery would be the absolute

prohibition of the use of the purse seine, and this prohibition could be made quite effectual by the passage of a law in Canada similar to that in force in the United States, but to extend over the whole year, and the extension of the United States term of prohibition to the whole twelve months. If this were done experimentally, say for a period of five years, the beneficial effects of the legislation would, I am sure, justify its enactment. But if it is thought that this measure is too drastic, then let the following fishing areas and close times be agreed upon, and laws similar to that now in force in the United States be enacted for the protection of the areas:

First, the present close season, or prohibition of the purse seine, to extend to all the waters of the north-west Atlantic. Second, that no purse seine shall be used north of the parallel of Cape Sable until after the first day of July in each calendar year. Third, that no purse seine shall be used within the waters of the Gulf of St. Lawrence until after the first day of August in each calendar year—the boundaries of the Gulf of St. Lawrence for the purposes of this law to be the line joining Bear Island and Eddy Point, Straits of Canso, and the lines joining Money Point lighthouse, Cape Breton, with the lighthouse south end of St. Paul's Island, and thence to Cape Ray lighthouse, Newfoundland. If similar laws are passed by the United States and Canada for the protection of these areas, no costly or complicated police system will be necessary: the machinery of the Customs Department in each country can easily and effectually enforce the law.

The above-named limits may be described as (1) the New England mackerel grounds; (2) the Nova Scotia mackerel grounds; (3) the North Bay ground, the latter name being that applied by the mackerel fishermen to the whole Gulf of St. Lawrence. These separate limits are easily defined, and no difficulty could arise in administering the law on the ground of difficulty of defining a limit, and the divisions proposed are those which agree most nearly with the gradations of marine climate which govern the movements of these fish.

The destruction of these migratory fish before the spawning season must result in the depletion of the fishery, and if it is desired to prevent this destruction by wholesale, the abolition of the use of the purse seine in the above limits, and for the periods mentioned, is the minimum of protection that must be insisted on; for it is a fact, capable of demonstration quite simply, that spawning or gravid fish are taken on the Nova Scotian coast up till 1st July, and though the spawning season in the southern part of the Gulf is pretty well over by 20th July in an average year, we have in these waters so much fluctuation in marine climate that there is great variation in the period of spawning. I have therefore fixed on 1st August as the date of commencement of the purse seining, to allow for a late season and to cover the more northerly portions of these waters where the spawning season is later.

Many of the masters of United States fishing vessels admit that the unrestrained use of the purse seine has ruined the mackerel fishery, but some of them being part owners of vessels and gear are indisposed to support a measure, the passage of which would practically wipe out a portion of their capital for a time. In Canada the sum invested in these seines is comparatively small, and I do not think that there would be any real opposition from Canadians to the enactment of the proposed laws for the protection of the mackerel. In fact, I consider that continued comparative productiveness of the Canadian mackerel fishing grounds as compared with those on the New England coasts is largely due (1) to the protection afforded to fishermen, by securing the inshore fishing grounds from molestation and continual harassment by a large fleet of foreign fishermen, thus affording the fish an area in which to spawn comparatively undisturbed; and (2) to the fact that Canadian fishermen have not so extensively adopted the use of the purse seine as a means of capture.

One of the best arguments in favour of the abolition of the purse seine is that many of the most experienced fishermen are already discarding the use of it, and all are relegating it to a secondary place in their operations. In the past, the mackerel schooner stood off and on, with one, two, or even three men at the masthead, looking for fish, and when a school was sighted the seine boat was manned and the school surrounded; then, after the seine was pursed the schooner sailed up alongside the

boat. To-day the *modus operandi* is entirely changed. The vessel now carries many barrels of bait, herrings, porgies and clams; these are ground up in a mill and mixed with water to the consistency of thin porridge; the vessel still carries a man at the masthead, but instead of sailing to and fro, she is allowed to drift slowly over the surface of the sea and the toll bait is constantly thrown over, two or three men meanwhile have their lines over the side, and if the fish rise to the bait and are taken on the hooks, all hands immediately get their lines over, and if the fish show in any number, the bait is kept going over steadily, the seine boat is manned and the seine quietly swept round both vessel and fish, and when the net is pursed up those left on board run the head of the jib up, the vessel pays off and rides easily and harmlessly over the cork rope, the haul occasionally amounting to a few barrels; but all the fishermen seem to admit that after sweeping the seine they have to change their ground, whilst they might have continued hooking successfully for some time longer had they not made the haul of the seine.

This purse seine fishing is in one sense like prospecting for gold or boring for oil, it being purely a speculative business, in which there still certainly remain a few prizes, but in which there are very many blanks; but each crew looks forward to making a big haul, and not to the continuous work which the hook and line fishing imposes on the men. As an instance of the prizes made, one vessel, the "Emma W. Brown," of Gloucester, got one hundred and sixty barrels of sea-packed mackerel at a single haul of her seine, which, at the extraordinary prices which have prevailed, would mean a take worth nearly four thousand dollars, or, say, upwards of one hundred dollars per man.

Another vessel, the "Mayflower," of Gloucester, made a somewhat similar haul, but these were the only two fortunate schooners in the whole fleet; yet the effect of these two hauls was to keep many of the fleet down on our coasts for some weeks later than they otherwise would have been.

One marked and of late years somewhat unusual feature of this season's fishing was the run of fine mackerel which struck in on the Nova Scotia coasts during the earlier half of November. These were exceptionally large and fine fish, and would, in some instances that come under my notice, run from 130 to 160 fish to the packed barrel. I estimate that about three thousand barrels were taken of this fall run; and as many of them were marketed fresh in ice, this run was worth nearly sixty thousand dollars to the fishermen. In some parts of the coast this lot of fish when netted were considerably damaged by squid, which actually eat the fish after they are meshed in the nets, never totally consuming a whole fish, but eating a piece out of one and then testing the flavour of a second, till in some instances quite a serious proportion of the fish were damaged.

The Canadian mackerel net fishery by boats from the shore, and the net fishery by small schooners, requires regulation. This subject will be dealt with more fully in another part of the report. Suffice it to say, that the two great points which it is desirable to attain are, first, the marking with registered marks all nets or other fishing buoys, and second, the absolute prohibition of day fishing by drift nets, say between the hours of 8 a.m. and 5 p.m.

In concluding these remarks on the mackerel fishery, I would state again that the additional experience which I have acquired only confirms my opinion as to the desirability, almost the necessity, of the prohibition, or at any rate the limitation, of the use of the purse seine.

To be really effectual, any arrangement must be of an International character; and I am of opinion that the majority of both Canadian and United States' fishermen would be willing to accept some such arrangement as that suggested, at any rate tentatively, for a period of five years, and they would readily admit that, whilst it might in the first instance be the occasion of loss to those of them who owned their seines and vessels, some such regulation of the fishing is most desirable.

PART II.

REPORT

ON THE

FISHERIES PROTECTION SERVICE

OF

CANADA.

1890.

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REPORT
ON THE
FISHERIES PROTECTION SERVICE
OF
CANADA.
1890.

By Lieutenant ANDREW R. GORDON, R.N.

TORONTO, 30th December, 1890.

The Hon. CHARLES H. TUPPER,
Minister of Marine and Fisheries.

SIR,—I beg to report on the work of the Fisheries Protection Service under my command during the past season, as follows:—

The vessels forming the fleet were as shown in the table hereunder:—

Vessel.	Commanding Officer.	Date of Commission.	Date Paid Off.
The S. S. Acadia	Lieut. Gordon, R. N	June 20.....	November 4.
S. S. La Canadienne	Commr. Wakeham	do 14.....	do 12t
The S. S. Stanley	Capt. Finlayson	do 18.....	October 18.
The S. S. Dream.....	Capt. J. H. Pratt	January 1.....	December 31.
The Schr. Vigilant.....	Capt. Knowlton	May 28.....	do 15.
The Schr. Connaught	Capt. Kent	June 10	October 10.
The Schr. Critic	Capt. McKenzie	August 31	do 31.

The Customs steamer "Argus," stationed at Halifax, was also employed as occasion permitted in the Protection Service.

The S. S. "La Canadienne" was, as in former years, in the Labrador and Quebec districts, throughout the season, save that she took up the patrol station of the "Stanley" for a few days, while that ship was in port for fresh water and fuel.

The S. S. "Stanley" was at first stationed on the west end of Prince Edward Island and the New Brunswick shores up to the Bay of Chaleur, and afterwards, when the fishing fleet moved eastward to Cape Breton and the east end of Prince Edward Island, her headquarters were changed to Port Hood.

The S. S. "Dream" was employed in the Bay of Fundy and St. Mary's Bay for the protection of the herring and mackerel fisheries. The necessity for the strictest watchfulness on all parts of our coast was well exemplified on this station during the past season by the following incident. For a number of years past neither spring nor fall mackerel have been taken in the St. Mary's Bay nor the Bay of Fundy, but as will be seen by the report on the season's mackerel fishery, these fish appeared in considerable quantities, though of small size, in the bay during the past summer. No sooner was the report published by the press of the presence of mackerel in this region than a United States mackerel seiner appeared in the bay, but the prompt appearance of the "Dream" on the eastern side of the Bay of Fundy was the means of preventing any actual trespass by this vessel.

The "Acadia," and the schooners "Vigilant," "Connaught," and "Critic" were employed in the Gulf and on the Cape Breton and Nova Scotia shores in protecting the inshore fishery and in enforcing the various regulations established by the Department for the protection of the fisheries.

In speaking of the management of the vessels forming the fleet under my command, I may state that it is now regularly accepted as a marine police service, and the great difficulty we labour under is that just as the men are becoming accustomed to the necessary restraint of a wholesome discipline, and are becoming efficient in their work, they leave us, owing to the ships being paid off, and, with a few exceptions, we see no more of them. I think it would be possible to secure the desirable men year after year for a very small additional payment. If, for instance, able seamen in their first year's service with us get the wages we now pay, viz: \$18 per month, then those in a second year producing a good discharge from one of our vessels might be allowed \$19 and third and subsequent years a maximum of \$20 firemen and coal passers might, in a similar way, be augmented for three years. The wages we now pay are occasionally below the rate of wages of the port of Halifax, and we have to accept inferior men, but if this annual increment is allowed I think we should secure enough of the old hands to leaven up those that are new to the work in a very short time.

The remarks I have offered as to the desirability of retaining the services of good men among the crews of the vessels tell with much greater force when we consider them as applied to the officers of our ships.

It is most desirable, in view of the prospective permanence of the Fisheries Protection Service, to retain the services of reliable and experienced officers, who have acquired a knowledge of the routine work of the service and have a personal acquaintance with many of the fishermen, both Canadians and those of the United States.

The work of policing the shore fisheries, by which I mean the actual work of enforcing the fishery laws for the regulation of the fisheries, has this year assumed an importance second only to that of patrolling the limit against incursions by foreign fishermen; and the endeavour, during the past season, to enforce the laws relating to the lobster and other fisheries, has engaged the attention of the fleet whenever the work for which it was specially commissioned permitted its doing so. The attention which I have given to this part of our duties has convinced me of the complete inability of the fishery wardens, as at present constituted, to enforce the laws for the regulation of the several fisheries, and I am firmly of opinion that before any really effective work can be looked for the whole system of fishery wardens must be changed. Fewer men, with larger salaries and larger districts, would even if they only devoted a portion of the year to the work, be more efficient than the present system; and until some such alteration is made in the system much of the time of our ships will of necessity be devoted to this work. For the ships to do this work effectually the commanders must be men who have a thorough knowledge of the coast and the location of the factories, trap sites, &c.—in fact, the knowledge gained within the service is what makes them valuable officers. And as an inducement for desirable men to remain in the service, I would recommend that steps be taken, either to employ them for a longer time each year or to make the salaries

allowed them increase somewhat with length of service; and if arrangements could be made with the Imperial Government to allow some of the masters and officers of our service to serve once, for the sake of instruction, in some of the small vessels in the West India squadron for a few months of the winter, the experience in the habits of discipline and customs of a naval service and the knowledge of drill which they would gain would fully recompense our Government for keeping them on pay during the period of their service on board of the naval vessel; and if, say, two or three officers each year were given a course of four or five months on board a man-of-war, we would soon see the benefit of it in the increased smartness and efficiency of our service.

I desire to acknowledge here the faithful and energetic manner in which the work of the force has been carried out by both officers and men, the masters of the various cruisers having, with one exception, displayed both zeal and discretion in the discharge of duties that are certainly monotonous, but which occasionally require the display of both tact and good sense for their effectual performance.

The only seizure made of a foreign fishing vessel during the season was that of the "Davy Crockett," of Gloucester, Nelson Cantelo, master, seized in Souris for fishing from dories within the three mile limit and held in bail for the sum of \$2,500 pending the decision of the Admiralty Court. On the bail being given the vessel was released, and proceeded on her fishing voyage. The crew were allowed to remain on board their vessel during the time she was in custody, and as an instance of the good will and respect for law which characterizes all the proceedings on the part of the crews of the United States vessels, it is worthy of notice that the crew of the seized vessel assisted in navigating their vessel to Charlottetown, and on arrival there in dismantling her to such an extent as to render her safe in the custody of the constables placed in charge by the marshal of the Vice-Admiralty Court.

It is a fair evidence of the efficiency of the service that, with the exception of the vessel seized, no instance of trespass was reported to me throughout the season.

The Collector of Customs at Souris detained the schooner "Willie Irving," of Gloucester, for infraction of the Customs laws; but she was subsequently released by the Government and permitted to engage men to navigate her home, her own crew having mutinied and left her, declaring the vessel to be unseaworthy, though a survey held on the order of the United States Consul declared her seaworthy and fit for the work in which she was engaged.

FISHING LICENSES FOR FOREIGN FISHING VESSELS.

The period during which licenses were obtainable by United States fishing vessels under the so-called *Modus vivendi* expired on the 14th of February, 1890, and the Canadian Government, as an expression of good will, have, by authority of Parliament, continued the system up to the close of the current calendar year. This privilege has been largely taken advantage of, and the following is the list of vessels which have taken out licenses, together with the amounts paid by each.

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 1890.

Name of Vessels.	Port of Registry.	Tonnage	Port of Issue.	Fee.
				\$ cts.
Annie C. Hall.....	Gloucester, Mass.....	84	Liverpool.....	126 00
A. M. Burnham.....	do.....	60	Pubnico.....	90 00
Amy Hanson.....	Boston, Mass.....	103	Yarmouth.....	154 50
A. T. Gifford.....	Gloucester, Mass.....	81	Canso.....	121 50
Abby F. Morine.....	do.....	77	do.....	115 50
Admiral.....	do.....	73	do.....	109 50
Alice L. Hawkes.....	do.....	60	Shelburne.....	90 00
Abbie M. Deering.....	do.....	96	Yarmouth.....	144 00
A. R. Crittenden.....	do.....	81	Souris.....	121 50
Anna H. Frye.....	do.....	64	do.....	96 00
Agnes E. Downs.....	do.....	81	do.....	121 50
Ada M. Hall.....	do.....	95	Canso.....	142 50
Bessie M. Wells.....	do.....	92	Halifax.....	138 00
Bertha May.....	do.....	75	North Sydney.....	112 50
Blanche.....	do.....	79	Liverpool.....	118 50
Bertha M. Miller.....	do.....	42	Shelburne.....	63 00
Carrie and Annie.....	Boston, Mass.....	90	Yarmouth.....	135 00
Carrie E. Parsons.....	Gloucester, Mass.....	80	Canso.....	120 00
Carrie W. Babson.....	do.....	86	Souris.....	129 00
Charles H. Boynton.....	do.....	71	Barrington.....	106 50
Carl Schurz.....	do.....	68	Port Hood.....	102 00
Charles Hashell.....	North Haven.....	62	Shelburne.....	93 00
Charles W. Parker.....	Gloucester, Mass.....	54	Yarmouth.....	81 00
Centennial.....	do.....	110	Canso.....	165 00
D. A. Wilson.....	Beverly.....	86	North Sydney.....	120 00
Dora A. Lawson.....	Gloucester, Mass.....	119	do.....	178 50
D. D. Winchester.....	do.....	79	Canso.....	118 50
Dido.....	do.....	77	Shelburne.....	115 50
David A. Osier.....	Mathinicus, Waldbore.....	24	do.....	36 00
Davy Crockett.....	Gloucester, Mass.....	81	Souris.....	151 50
Edward Grover.....	do.....	73	Port Mulgrave.....	109 50
Ellen Lincoln.....	Portland.....	92	Canso.....	138 00
Electa A. Eaton.....	Gloucester, Mass.....	73	do.....	109 50
Elsie M. Smith.....	do.....	106	Liverpool.....	159 00
Eliza B. Campbell.....	do.....	95	Souris.....	142 50
Emerald.....	do.....	40	Yarmouth.....	60 00
Emma E. Wetherell.....	Boston, Mass.....	109	do.....	163 50
Essex.....	Gloucester, Mass.....	111	Arichat.....	166 50
Edith L. Conley.....	Kennebunk.....	55	Shelburne.....	82 50
Ellen M. Adams.....	Gloucester, Mass.....	85	Canso.....	127 50
Fannie A. Sparling.....	do.....	81	Shelburne.....	121 50
Fannie W. Freeman.....	do.....	90	Liverpool.....	135 00
Frederic Gerring.....	do.....	67	Yarmouth, N.S.....	100 50
Flora Dilloway.....	do.....	76	Shelburne.....	114 00
Gertie May.....	Portland.....	97	Port Hawkesbury.....	145 50
Gardner W. Tarr.....	Gloucester, Mass.....	63	Digby, N.S.....	94 50
George W. Pierce.....	Portland.....	59	Canso.....	88 50
Gracie C. Young.....	Gloucester, Mass.....	83	Arichat.....	124 50
Gladstone.....	do.....	97	Canso.....	145 50
Gertie Evelyn.....	do.....	81	Arichat.....	121 50
Golden Hind.....	do.....	70	Canso.....	105 00
George S. Boutwell.....	do.....	63	Campobello.....	94 50
George B. McLelland.....	Portland.....	63	Liverpool.....	94 50
Grace L. Fears.....	Gloucester, Mass.....	84	Canso.....	126 00
Herbert M. Rogers.....	do.....	73	do.....	109 50
Howard Holbrook.....	do.....	92	North Sydney.....	138 00
Hustler.....	do.....	92	Yarmouth.....	138 00
Hattie E. Worcester.....	do.....	112	North Sydney.....	168 00
Henry Wilson.....	do.....	88	Canso.....	132 00
Horace B. Parker.....	do.....	93	Arichat.....	139 50
Henry L. Phillips.....	do.....	76	Port Mulgrave.....	114 00
Hattie Mand.....	Portland.....	86	Shelburne.....	129 00
Hattie L. Newman.....	Gloucester, Mass.....	93	Canso.....	139 50
Iolanthe.....	do.....	71	Liverpool.....	106 50
John W. Campbell.....	do.....	79	Arichat.....	118 50

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 1890.

Name of Vessel.	Port of Registry.	Tonnage	Port of Issue.	Fee.
				\$ cts.
John A. Matheson	Provincetown	146	St. Peter's	219 00
J. H. Carey	Gloucester, Mass.	95	Arichat	142 50
John D. Long	do	63	Shelburne	94 50
Knight Templar	do	69	Arichat	103 50
Kate and Ella	Bridgeport, Conn.	17	Charlottetown	25 50
Lotta Belle	Provincetown	91	St. Peter's	136 50
Lillian A. Allen	Portland, Maine	106	North Sydney, C.B.	159 00
Laura Sayward	Gloucester, Mass.	64	Canso, N.S.	96 00
Laura Nelson	do	85	North Sydney, C.B.	127 50
Lizzie Griffin	do	100	Canso, N.S.	150 00
Lizzie J. Greenleaf	do	88	do	132 00
Lizzie M. Stanwood	do	100	Arichat	150 00
Lizzie Smith	Provincetown	73	Port Hawkesbury	109 50
Lizzie W. Hannum	Gloucester, Mass.	71	Port Mulgrave	106 50
Mist	do	91	Canso, N.S.	136 50
Martha A. Bradley	do	72	do	108 00
Marion	do	78	Port Hawkesbury	117 00
Maud B. Wetherell	Provincetown	102	St. Peter's, N.S.	153 00
Marsala	Gloucester, Mass.	76	Shelburne	114 00
Mystic	do	78	Arichat	117 00
Masonomo	do	91	Canso, N.S.	136 50
Monitor	do	104	do	156 00
Margaret Mather	do	91	do	136 50
Mabel W. Woolford	do	104	Yarmouth, N.S.	156 00
Mary F. Wells	do	86	Canso, N.S.	129 00
Maggie E. Wells	do	80	do	120 00
M.S. Ayer	do	76	Shelburne	114 00
Nellie Dixon	Boston, Mass.	105	North Sydney	157 50
Nellie M. Davis	Gloucester, Mass.	89	Arichat	133 50
Nellie G. Thurston	do	81	Canso, N.S.	121 50
Nellie Burns	Portland, Maine	64	Georgetown	96 00
Orient	Gloucester, Mass.	89	Port Hawkesbury	133 50
Porter S. Roberts	do	72	Canso, N.S.	108 00
Procyon	do	107	Liverpool	160 50
Paul and Essie	do	64	Lunenburg	96 00
Reub. L. Richardson	do	92	North Sydney	138 00
Richard Lester	do	69	Canso, N.S.	103 50
Rigel	do	107	Barrington	160 50
Sarah B. Putnam	Beverly	76	Canso, N.S.	114 00
Sir Knight	Booth Bay	76	Shelburne	114 00
Samuel R. Crane	Gloucester, Mass.	74	Port Hood	111 00
Sea Fox	do	105	Yarmouth, N.S.	157 50
Susan L. Hodge	do	77	Canso, N.S.	115 50
Thetis	do	91	do	136 50
Triton	do	67	Liverpool	100 50
Tubal Cain	do	60	do	90 00
Thomas F. Bayard	do	95	Canso, N.S.	142 50
Unique	Boston, Mass.	75	Yarmouth, N.S.	112 50
Urania	North Haven	23	do	34 50
Velocipede	Gloucester, Mass.	64	Margaree	96 00
Wm. H. Jordan	do	86	Canso, N.S.	129 00
Wm. H. Wellington	do	81	do	121 50
Winona	do	103	Liverpool	154 50
Willie M. Stevens	do	76	Canso, N.S.	114 00

SUMMARY.

Total number of vessels	119
Average tonnage	81 tons.
Total amount received in fees	\$14,461 50

The foregoing table shows that the 119 United States vessels, averaging 81 tons each, took out licenses, paying a gross amount of \$14,461.50. These licenses were issued by authority of a special Act of Parliament, and they covered only the calendar year 1890. The privileges conferred were precisely those of the licenses issued under the *modus vivendi* of the "Treaty of Washington Act," 1888, and the fee payable was the same.

The question of the continuance or discontinuance of this system is one which has been much discussed by our fishing population during the past season, and it is certainly one on which there is room for great divergence of opinion. The actual effect of the system has been to enable the United States fishermen to continue certain lines of fishing which, were they effectually debarred the privileges of buying bait, ice and supplies, they would have been compelled to relinquish. They also at times, when bait is scarce, come in sharp competition with our own bankers as purchasers of bait from the trap-owners and fishermen.

In Newfoundland the system was discontinued at the close of the term of the *modus vivendi* but this action on the part of that Government has generally been regarded as due to the fact that some United States vessels were reported to have utilised the privileges of the *modus vivendi* license, not in the direct pursuit of their calling as deep-sea fishermen, but for the purpose of carrying on the business of supplying the French fleet on the banks with fresh bait, thus rendering the self-sacrifice involved in the Newfoundland Bait Act to a great extent nugatory.

On the side of those who argue for the continuance of the system, it is pointed out that the business of supplying bait to these vessels is of considerable value to a number of small-trap owners and fishermen, from the fact that these license holders, who are, as a rule, the pick of the fleet, compete with the Canadian bankers for the purchase of bait, and thus enhance the price; and should no provision be made for the issue of these licenses during the season of 1891 it will be necessary to increase the number of our police vessels, in order to maintain the efficiency of the service. On purely business lines the advantage lies perhaps with the United States fishermen, inasmuch as the license fee of \$1.50 per ton cannot be regarded as the full commercial equivalent of the privileges obtained by the payment; but if the fee were raised at all near the standard of such value far fewer licenses would be taken out, and we should experience difficulty in enforcing the law with strictness.

The table already given shows the actual number of United States' fishing schooners which took out licenses during the past season; and in order to give some idea of the extent to which the privileges under the licenses have been availed of, I have obtained the returns from the Custom house at Canso. These returns show that as early as 7th April a license was applied for at this port, and later in the month farther applications were made, but withdrawn, on finding that they did not include Newfoundland, only, however, in most cases, to be renewed later in the season.

An examination of the returns above quoted, which are printed as Appendix "A" to this report, shows that United States fishing vessels paid 289 visits to this port between the 1st of January and the 25th November, as compared with 252 visits paid in 1889. These visits were paid by a 146 vessels, 82 holding licenses issued by the Dominion Government. The 82 licensed vessels paid 206 visits, whilst the 64 unlicensed ones only paid 89. Few of the mackerel fleet visited Canso this year and the diminution in the number of unlicensed vessels is due to this cause. The number of licensed visitors was the same as last year; but, as a consequence of Newfoundland's action, they used our ports to a greater extent than last year, paying at this port alone 37 more visits than in 1889. The conclusion to be drawn from the returns is, that little if any change has taken place in the distribution of the United States fleet among the various fisheries, but that owing to the more liberal policy of our Government, in contrast with that of Newfoundland, the cod and halibut men have taken their licenses out and purchased bait in the Dominion which they formerly obtained in Newfoundland.

The returns have been carefully kept by the collector at Canso at my request, and I would respectfully suggest that blank forms, foolscap size, similar to those in

Appendix, "A" be printed for the Fisheries Department and supplied to the Collectors of Customs at the following ports, to be by them sent to the Department at the close of the season, viz: St. Andrews, Grand Manan, Westport, Yarmouth, Sandy Point, Shelburne, Barrington, Lockeport, Liverpool, Halifax, Liscomb, Whitehaven, Canso, Crow Harbour, Port Mulgrave, Port Hawkesbury, Port Hood, Cheticamp, Aspy Bay, Ingonish, North Sydney, Louisburg, Arichat, Georgetown, Souris, Malpeque, Cascumpeque, P.E.I., and Gaspé Basin, in Quebec. Returns obtained from these ports would render it possible to form a very accurate estimate of the effect and use now made of our ports as a base of operation for foreign fishing vessels.

I have never met a master of any United States fishing vessel who denied the propriety of the grounds taken by Canada in claiming payment, by way of license fee, for the privileges granted, and the only reason that so many of the mackerel fleet have abstained from taking out these licenses is that their catch of fish has been so poor for the last year or two that they could not profitably do so.

CUSTOMS.

At many of the principal ports to which the fishing fleet resort in the course of a season the Customs authorities have now arranged for the system of stamping the clearance papers when the vessel makes a report, instead of taking up the form and issuing a fresh clearance. This is a great boon to the fishermen, and in no way militates against the efficient working of the ordinary customs regulations.

The Collectors of Customs at many of the various ports are charged with the collection of pilotage fees, and the question has occasionally arisen as to the liability of fishing vessels to pay these dues. The Pilotage Act, 49 Vic., chap. 86, exempts all vessels of not more than 80 tons, registered tonnage, and authorises local pilotage authorities to exempt vessels up to 250 tons, but the only pilotage authorities, so far as I am aware, who have availed themselves of this power, are (1) Pictou, where vessels not exceeding 150 tons register are exempted from outward compulsory pilotage; (2) Halifax, which exempts Canadian fishing vessels not coming from a port outside of the Dominion up to 120 tons registered tonnage. A few years ago the limit of exemption under the Act itself (80 tons register) would have covered all the vessels engaged in the fisheries, and during the currency of the old treaty of Washington, in as much as neither United States nor Canadian fishing vessels used to report at the Customs, no claims for pilotage were ever made on these vessels, and the practice reported to me by the various pilotage authorities is, that fishing vessels, both Canadian and Foreign, are apparently by custom exempted from payment of pilotage. To this almost uniform custom Halifax is the only exception; for at that port all United States fishing vessels over 80 tons are charged full pilotage rates when spoken, whether pilots' services are accepted or not. The improvement and enlargement of the fishing vessels, both Canadian and United States, which has taken place of late years, has brought many of them over the exemption limit, all the modern vessels exceeding 80 tons, and the average of the 119 vessels which took out licenses this year is 81 tons.

It is most desirable that the practice on all these matters should be uniform throughout the whole coast; and as the limit selected by the Halifax Commissioners for exempting Canadian vessels seems to be a reasonable one, I would respectfully suggest that the pilotage Acts should be amended by extending the exemption from compulsory pilotage to vessels of 120 tons. This would cover almost the entire fishing fleet, and would not in any way affect the tariffs laid down by the pilotage authorities in the cases where pilots' services were sought or accepted.

THE MACKEREL FISHERY OF 1890.

The mackerel fishery of 1890 within the territorial waters of Canada was very much more productive than in the season of 1889.

In the early part of the season, the Intelligence Bureau not being in operation, I have no report available as to the exact date of the first appearance and condition

of the mackerel on our coasts, but the following is a synopsis of the report by Mr. A. Fraser, who had charge of the Intelligence Bureau, on the movements of the mackerel.

The most northerly station on the shore which reported the capture of mackerel was Escuminac, N.B. Here they struck in on 25th June and remained until the middle of September. Some catches were made by netters up the coast as far as Shippigan, but the fishery on the shore was intermittent.

In Prince Edward Island, on the north and west sides, the fishery was good; one red letter day, 25th August, many of the boats getting nearly 2,000 fine mackerel each.

On the Cape Breton coast the fishery was only fair, though some fine hauls were made in Chedabucto Bay; and had the fall weather not been so boisterous, boats, and nets would have done well.

In Nova Scotia the fish showed on the western shore throughout the summer, and the fishery was more successful than for some years, and gives evidence of at least a partial recovery which it is to be hoped may be permitted to continue.

The United States mackerel fleet which visited Canadian waters during the season of 1890 consisted of sixty-four vessels; their catch is recorded in the sub-joined table, double rows of figures indicating, in the case of vessels making two trips, the result of each, the letter "L" signifies that the vessel had purchased a license from the Dominion Government to enable her to ship crew or purchase bait and supplies:

Name.	Port.	Tons.	If Licensed.	Catch.	Remarks.
Agnes E. Downs	Gloucester	81	L.	116	
Alice C. Jordan	do	71	No.	Clean.	
Ada R. Terry	do	82	No.	do	
Ambrose H. Knight	Booth Bay	87	No.	113	
A. R. Crittenden	Gloucester	81	L.	52	
Anna H. Frye	do	64	L.	60	
Canopus	do	68	L.	180	
Caroline Vooght	Booth Bay	79	No.	Clean.	Stranded on P. E. Island
Carl Schurz	Gloucester	68	L.	do	
Charles Tappan	do	68	No.	31	
Davy Crockett	do	81	L.	76	
David Sherman	do	67	No.	40	
Delia Maria	do	54	No.	60	
Enola C.	do	62	No.	106	
2nd Trip				25	
3rd Trip				15	
Edith Rowe	Gloucester	80	No.	260	
2nd Trip				12	
3rd Trip				30	
E. A. Williams	Boston	32	No.	51	Netter.
Emma W. Brown	Gloucester	75	No.	330	
2nd Trip				70	
Electa A. Eaton	Gloucester	73	L.	Not given.	Only fished in the fall.
Ellen Lincoln	Portland	92	L.	105	
Flash	Gloucester	99	No.	23	
Fredonia	do	109	No.	460	
2nd Trip				70	
Geneva Mertis	Gloucester	79	No.	160	
Governor Butler	do	87	No.	280	
2nd Trip				100	
Gerty Evelyn	Gloucester	81	L.	Clean.	
Grace C. Hoadley	do	86	No.	160	
Geo. F. Edmonds	do	141	No.	Not given.	
2nd Trip				30	
Harry G. French	Gloucester	95	No.	173	
2nd Trip				60	
Herald of the Morning	Gloucester	65	No.	23	
Henry L. Phillips	do	76	L.	Clean.	
2nd Trip				73	

LIST of Seiners.—Continued.

Name.	Port.	Tons.	If Licensed.	Catch.	Remarks.
Henrietta Francis	Gloucester	73	No.	37	
Hattie Evelyn	do	66	No.	73	
Jeannie Seaverns	do	106	No.	150	
2nd Trip				120	
John S. McQuin	Gloucester	77	No.	40	
J. G. Craig	Portland	73	No.	140	Our reports 80.
James Dyer	do	81	No.	110	
Lizzie M. Center	Gloucester	78	No.	310	
2nd Trip				140	
Lottie M. Haskins	Gloucester	55		171	Spring trip.
Lilla B. Fernald	Portland	73		12	
Louis and Rosie	Booth Bay	73		8	
Laura Belle	Portland	77		70	
Lizzie W. Hannum	Gloucester	71	L.	Clean.	
2nd Trip				237	
3rd Trip				4	
Laura Nelson	Gloucester	85	L.	52	
Louise Pollys	do	70	No.	Clean.	
2nd Trip				155	
Lizzie Maud	Gloucester	79	No.	Clean.	
M. L. Wetherell	do	73	No.	240	
2nd Trip				180	
Mary Fernald	Gloucester	76	No.	130	
2nd Trip				120	
Mayflower	Gloucester	95	No.	Clean.	
Marion Grimes	do	61	No.	148	
Norumbega	do	120	No.	182	
Notice	do	66	No.	160	
Nellie N. Rowe	do	79	No.	142	
Northern Eagle	do	35	No.	30	
Orient	do	89	L.	78	Master died.
2nd Trip				60	
Rapid Transit	Gloucester	80	No.	100	
Ralph E. Eaton	do	65	No.	63	
Roulette	do	63	No.	Clean.	
Rushlight	do	62	No.	45	
S. F. Maker	do	104	No.	330	
2nd Trip				230	
Senator Morgan	Gloucester	86	No.	447	
2nd Trip				145	
Star of the East	Gloucester	62	No.	131	
Sunshine	do		No.	80	
Senator Saulsbury	do	104	No.	90	
W. D. Daisley	do	95	No.	150	
Willie Irving	do	70	No.	Clean.	

Twelve licensed and fifty-two unlicensed seiners, making in all sixty-four vessels, total take, 8,443 barrels.

The catch by the United States' fishermen north of Cape Sable and outside of the territorial waters of Canada is, on the whole, one thousand barrels greater than that of last year, but an examination of the records shows that this does not indicate for them any improvement in the general fishery. The increase is due to the fact that the fish were rather later than last year in coming into the shore; and whilst still in large schools, the early spring fleet succeeded in capturing 2,566 barrels this year, as against 337 barrels taken last year.

The season's fishing from 1st July onwards shows that only 5,168 barrels were taken this year, as compared with 6,438 in the same time of 1889.

The following is the catch of mackerel for the years 1888, 1889, 1890 by United States fishing vessels, made in the waters off the Nova Scotian coast and in the Gulf of St. Lawrence:—

1888—83 vessels	take	10,418	brls.,	average	126	brls. per vessel.
1889—62	do	6,755	do	109	do	
1890—64	do	8,443	do	132	do	

So far as the United States mackerel fishermen are concerned, the season's total catch will be even less than that of 1889, which was unprecedentedly low, and the following table exhibits the relative positions of the United States and Canadian fishermen. In the case of the United States' fishing grounds, the fishery has still declined, whilst the inshore Canadian waters have exhibited a marked improvement. The returns not being yet available, the Canadian catch is estimated, but that for the New England fleet is based on report made to our police vessels by the United States fishermen, and on the reports of the New England catch as published:—

	1885.	1886.	1887.	1888.	1889.	1890.
Canadian catch. Brls.	148,450	152,292	13,1653	65,777	65,849	90,000
United States catch. do	330,000	80,000	78,000	40,000	17,794	16,140
Total.....	<u>478,450</u>	<u>232,292</u>	<u>209,653</u>	<u>105,777</u>	<u>83,643</u>	<u>106,140</u>

These figures exhibit in a startling light the differences between the United States and Canadian mackerel fishery, and give some measure of the value of the retention of the inshore fisheries for the sole use of our own people.

The year 1885 was the last season in which the United States fishermen were free to fish within our territorial waters, and in that year their total catch was 330,000 barrels, of which about one-third may be estimated as having been taken north of Cape Sable, making the total catch in the northern waters about 250,000 barrels; against a total catch in 1890 of about, in round numbers, 100,000 barrels, taken in the same waters; but, where in 1885 the United States fishermen took fully 40 per cent. of all mackerel captured in northern waters, the closure of the inshore fisheries has reduced their share down to a little over 8 per cent. Hence, though from over-fishing and improper fishing, the product of this fishery has greatly fallen off, our own people now secure a much larger share than they formerly did.

The fishery in Canadian waters has this year improved somewhat, and if not destroyed will, I think, continue to do so. Large masses of small fish were seen this year and bodies of adult fish appeared at places where for some seasons none have been taken. This is notably the case in St. Mary's Bay, where considerable quantities of the fish were taken, and, but for lack of preparation the fishery would probably have been even more successful at that place.

I have in former reports urged on your notice the desirability of making an international arrangement for the total suppression of the use of the purse seine, or at least for its prohibition, until after the spawning season for mackerel. I have also dealt with the question of the season and areas for prohibition, and I now show on the annexed map the three great areas into which the mackerel fishery naturally arranges itself, in accordance with the gradations of marine climate, due to geographical position, the trend of the coast line, and the physical characteristics of the ocean and the bottom.

The first or most southerly area is that marked on the chart as the New England mackerel fishery, and lies to the southward of the parallel of latitude passing through the south point of Cape Sable Island. This area is already protected against the injurious effect of the purse seine, when used at improper times, by Act of Congress, which prohibits the landing in the United States of all mackerel caught in a purse seine prior to 1st June in any calendar year, because in this region the spawning season is practically over before this date.

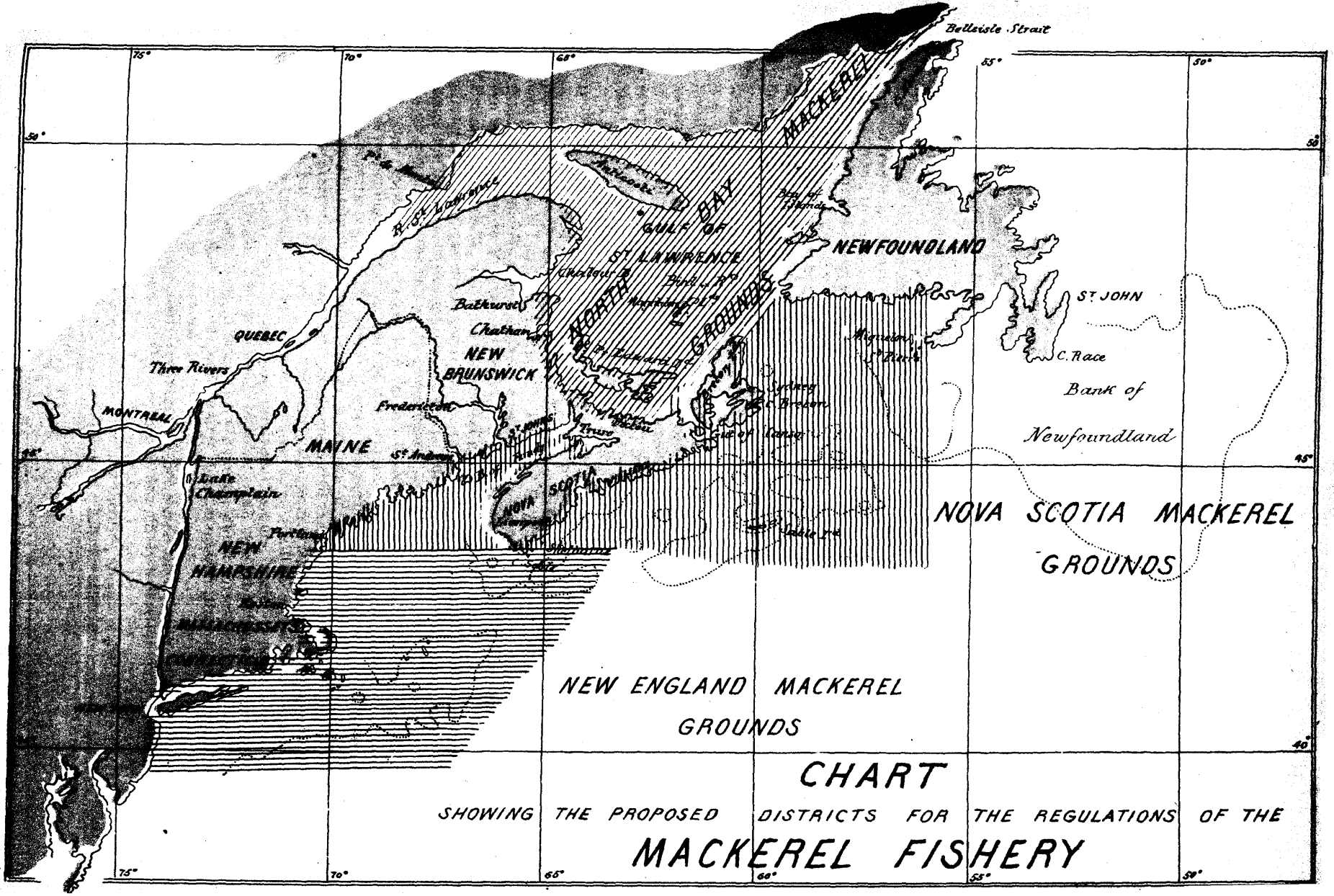


CHART
 SHOWING THE PROPOSED DISTRICTS FOR THE REGULATIONS OF THE
 MACKEREL FISHERY

The second or middle area, called on the chart the Nova Scotian mackerel ground, is farther north, and hence the spawning season, as might be expected, is later. In this region it would be necessary to prohibit the use of the purse seine up to 1st July, in order to give the fish the same measure of protection that those to the south receive under the Act of Congress above quoted. In this region, during the season just closed, United States fishermen captured during the month of June about 2,500 barrels of gravid fish, which ran about 200 or more to the barrel, and if these half million of unspawned-fish had been left free for another month we should have had many millions of fry which were then destroyed.

The third area is the Gulf of St. Lawrence, and in this no purseseine should be shot prior to 23rd July, unspawned fish being occasionally taken as late as 1st August.

Public opinion among the fishermen, as a whole, is decidedly hostile to the use of the purse seine, and many of the seiners this year discarded its use almost entirely and relied for their summer's catch on hook and line work. To this is due the fact that no less than twelve United States mackerel catchers this year took out Dominion licenses, to enable them to purchase bait and to ship expert hookers. The system of purse seining, so long followed by the Gloucester men, having caused the disappearance from the United States fleet of the skilful hook-and-line hands of which they formerly boasted, whilst in Canada the system has never been abandoned altogether, though considerable numbers of our fishermen were tempted to embark in the purse seine fishing, as a rule with unprofitable results to themselves.

I heard of a case this year, and have had the story since confirmed, which illustrates well the condition of the fishery. A seiner belonging to the United States was drifting hooking, having the fish raised nicely to the bait, though not biting keenly, when a small school was seen playing near by; the crew insisted, against the advice of the master, on giving up the hooks and going in the seine boat in pursuit of the school, which they chased unsuccessfully for several hours, and when they returned to the ship, tired out, were bitterly disappointed to find that the cook and the other hand left on board had caught upwards of a wash barrel of fish while they had been toiling for nothing. Had they stuck ploddingly to their hooks they would probably have had seven or eight barrels for their day's work.

All the United States vessels that came north this year were using bait, and nearly all made the greater part of their catch with the hooks; there were, however, two vessels, the "Lizzie W. Hannum" and the "E. A. Williams," which came down fitted as drift netters, a new departure entirely in the mackerel fishery of our northern waters, though it is the system which has been commonly followed in Great Britain. These nets, which are deep and of great length, are in gangs or fleets on one strong head rope, and when put over, the ship rides to her nets and drifting slowly keeps the line of nets straight out. This is purely a night fishery, and is therefore not so injurious to the fish as the purse seine.

Our mackerel fishery has been largely saved from extinction by the protection given to our inshore waters, but the restoration of its former profitable condition will be a work of years, if indeed it ever happens, unless steps are taken actively and immediately for the further preservation of the fish. It is quite true that without international agreement we cannot forbid the use of the purse seine on the high seas, but we can forbid its use within the territorial waters of Canada; and further, if a regulation is made that no purse seine shall be carried in a seine boat during the close time in the said territorial waters, under a penalty of \$100 for the first offence, and the same, together with the forfeiture of the seine on the second offence being proved, this regulation would involve so much handling of the seine and such trouble and anxiety to the masters that it would greatly discourage the use of the seine.

Theorists may talk about the rise and decadence of deep-sea fisheries being beyond the control of man, but the mackerel is not purely a deep-sea fish; it spends a great portion of its existence near the shores, and the facts already known and stated in previous reports speak louder than any theories, and show that the mackerel

fishery has been ruined on the United States coasts and greatly injured on our own by the use of the purse seine, especially by its use at improper times.

If timely action is now taken the restoration of the mackerel fishery may reasonably be looked for. International arrangement is most desirable, but failing that I am strongly of opinion that action should be taken at once within the proper limits of Canadian jurisdiction, and a regulation such as I have described would do a great deal to discourage the use of the purse seine. A fisherman particularly dislikes anything that savours of extra or unprofitable labour, and the fact that the seine boat would have to be hauled up alongside and the seine handed out of her on to the ship's deck every time a vessel wanted to go into port, or even to pass through Canadian territorial waters, would prevent many a fisherman from taking to purse seining. The net and trap fishing also needs regulation, but this will be dealt with more particularly in another part of my report.

In concluding these remarks on the mackerel fishery, I may point out that at no period in the history of the fishery has there been a time when a measure forbidding the use of the purse seine would have been received with less disfavour than now. Many of the old seiners are thoroughly disheartened, and I have not heard of any new seines being ordered this season, so that the injury to invested capital would be very much less than formerly. I am strongly of opinion that the limitation of the use of the purse seine in the three areas as set forth in the map herewith would meet with the approval of a large portion of our own fishermen, and with but little objection from those of the United States. If, therefore, international co-operation can be arranged for this measure of protection it will be a matter of congratulation and, in the long run, of great service to the fishermen of both countries; but failing to obtain such co-operation I would urge on your notice the advisability, or in fact almost the necessity, of taking action in respect to the territorial waters over which our powers are undisputed.

THE LOBSTER FISHERY.

The lobster fishery of 1890 was, speaking generally, a great improvement over that of 1889. On the Atlantic coasts of Nova Scotia the weather was somewhat stormy during the season, and as a consequence the catch was smaller there than in 1889; but the extraordinary advance in price has made the business a very profitable one to the packer, though I am not aware of any case in which the fishermen have been permitted to share in the increased profit. In the Gulf of St. Lawrence, the total pack will be found to have exceeded considerably that of 1889, and it is satisfactory again to be able to say that, at any rate, in the early part of the season, the size of the lobsters showed considerable improvement.

The force under my command was again employed for the enforcement of the regulations in regard to the lobster fishery; and the additional experience which I have this year acquired has only confirmed my previous opinion that the force at the command of the Department is inadequate for the purpose of ensuring a strict compliance with the regulations during the open season. I state it as an opinion founded on my own observation and on the admissions made by those connected with the industry, that in the Gulf of St. Lawrence, along the Nova Scotian and New Brunswick shores and on Prince Edward Island, no single day's pack was ever put up during the past four years on which the packers might not have been fined for undersized or "berried" lobsters. To such an extent is the destruction of the female lobsters carried on that at one time I was informed that for several days fully one-third of the entire pack of a factory consisted of "berried" lobsters, and it is quite true to state, that there has been no general attempt on the part of the packers to carry out the law in regard to the limitations of sex and size of the lobsters.

On the outer coast the unfavourable weather reduced the catch, and acted as a measure of protection during the regular season; and the illegal packing in September and early October was this year put a stop to by seizing the traps which had been set illegally, rather more than one thousand traps having been seized and destroyed between Wedge Island and Halifax harbour. These traps were all the pro-

perty of individual fishermen and could not be replaced under 80 or 90 cents each, so that the seizure and destruction of these traps was equivalent to collecting fines to the extent of between \$800 and \$900, and I am of opinion that if a police vessel be kept on the coast from 15th August to 15th October it will be quite possible to put a stop to this illegal fishery in the close season.

It is a question deserving much consideration as to what measures for the protection of the fishery can be framed which will be capable of being readily enforced, and will at the same time not seriously hamper the legitimate prosecution of the business.

In considering this, let us take the case of a good factory, putting up from 1,600 to 2,400 cases, this establishment would probably be running receiving lobsters on thirty or thirty-five working days in the present season; on each of these days a fine of, say \$20, could be collected, which would amount to about \$600, an amount which, at the present price of lobsters, would rather be regarded as an excessive license fee than as a prohibitory fine. If the present regulations are retained in force I regard it as most important that the penalties should be such that it would be possible to render the illegal prosecution of the business unprofitable.

The system in the State of Maine is that the fine imposed, is without discretion of the convicting officer or justice, fixed at a definite sum per lobster found in possession of the accused illegally, and I would strongly urge upon your notice the advisability of amending the Fishery Act so that the fine shall be, say, \$2 per lobster found illegally in possession.

I would especially urge upon your notice the point that the present condition and prospects of the lobster market render the time most opportune for the strict enforcement of the law. Canned lobsters have been sold during the past season as high as \$7 per case of 48 lbs., which formerly sold for \$4; and if we allow that \$6 is the ruling price, a much smaller pack can be put up profitably at this figure, whilst the improvement in the quality would tend to enhance the price still further.

To those packers then, who hold that the present regulations are all-sufficient, the reply is simply that the Department is also of opinion that these regulations are sufficient if enforced by adequate penalties.

There is, however, another view to this whole question, and one which commends itself to many; but before discussing the propositions involved, it may be well to discuss the different means adopted for the protection of this fishery.

They may be divided into two classes, the one to be classed as restrictive enactments and the others as reproductive measures.

The restrictive enactments now on the Statute Book are :

- (1). In regard to close time;
- (2). In regard to size of crustacean to be taken;
- (3). In regard to condition and sex.
- (4). A fourth restrictive enactment might well be added, to establish closed areas or nurseries for the development of the young. In these closed areas no traps should be allowed to be set.

The reproductive measures have already been inaugurated by the Department, and the central hatchery at Bay View N.S. will doubtless do good work in its immediate vicinity. The artificial propagation of fish has now been proved commercially successful; but, like many other commercial ventures, in order to derive the fullest benefit from the system, the undertaking must be on the largest possible scale. Nor need the fear of expense deter from the undertaking, for the increased capacity of the works is obtainable at a greatly reduced cost. In the case under consideration, however, the propagation of the lobster, a central establishment, though absolutely necessary for the study of the question, can do but little for the fishery at large. Nor can those interested in the fishery expect the Department to undertake the artificial propagation on such a scale as would be necessary without some direct contribution or aid from the packers themselves. Fortunately, the path has been already cleared by the enterprise of the Newfoundland Government and the skill of Mr. Nielsen, their Superintendent of Fish Culture.

This gentleman has devised a hatching trough or box which can be utilised at the canneries for the purpose of hatching out the ova or the "berried" lobsters now illegally captured; and thus the packers and fishermen can be enlisted on the side of the Department for the saving of the ova, the destruction of which now, perhaps, more than anything else, militates against the speedy restoration of the fishery.

To show that this is no idle statement I will take the case of a cannery putting up 2,000 cases, or 96,000 lbs.; these require say half a million lobsters to put up, and my enquiries show that probably 1 in 5 are "berried" lobsters—say 100,000. Now, take even one-half of this, and say that 50,000 "berried" lobsters, each carrying about 20,000 exuded ova, were destroyed in putting up the 2,000 cases, we have no less than 1,000,000,000 ova destroyed; and if this rule be applied to the 220,000 cases which constituted the product of the fishery for the year 1889 we have a number of 110,000,000,000 as the wanton destruction of ova which it is possible by the use of this simple means, to save—at any rate, in some small measure; for even a saving of 1 per cent. of such a total represents a number the magnitude of which figures fail to bring home to the mind.

If we pass now to the consideration of the restrictive enactments we find that in regard to the close time the regulation has been, on the whole, well observed within the Gulf of St. Lawrence, and the illegal fishing was this year stopped on the Nova Scotia coasts and can be absolutely prevented for the future. (2). This regulation in regard to size has not been generally observed, except by those fishing for the purpose of selling the lobsters for use fresh in the markets. I know of no cannery which culls the lobsters as they come out of the boats. (3). Soft shell lobsters are never taken to any extent, but the regulation as to the female lobsters carrying exuded ova meets with no more general observance than that in regard to size.

As a part of the remedial legislation proposed in my report of last year, I invited your attention to the establishment of closed areas or nurseries for lobsters, in which no trap was to be allowed to be set. I then proposed in detail that two miles out of every ten should be set apart as a closed area, and I still think such an arrangement would be fraught with the greatest benefit to the fishery; but if the difficulties in the way of establishing any such rigid plan seem too great, then an almost equally effective system would be the establishment of somewhat larger areas or nurseries, and the identification of the boundaries of such closed areas by existing landmarks, headlands, churches, &c.; the object of this is to permit of the natural reproduction of these valuable crustaceans. All artificial work takes time, and is only a partial success after all, when compared with nature's methods when here we have a potent remedy capable of being applied immediately and under circumstances ensuring a high percentage of success.

I would therefore respectfully suggest that the Inspectors of Fisheries be requested to locate certain closed areas, approximating five miles of closed area, to say, twenty miles of open, without regard to absolute fidelity to these distances, which are given rather as a guide to the relative proportions of open and closed areas, which I consider it desirable to establish; and given the establishment of these undisturbed areas the benefit would speedily be found by the re-stocking of the comparatively depleted waters along the coast; because the young fry, when first hatched out and in their free swimming state, would not continue residents of the closed area, but would be carried along the shores by the tidal currents, and finally become a denizen of the locality where he first assumed his shell jacket.

The adult lobster is, in my opinion, far less migratory than is generally supposed by fishermen, and packers and fishermen should both have faith that, if by reason of size or time limit they are prohibited from capturing a lobster, it is only a postponement and not a final prohibition, for the same lobster will be on the ground next spring and will be worth more than if captured either undersized or after the close season.

I have now spent four complete seasons in command of the Fisheries Protection Service, and have given much time and thought to the question of the restoration of

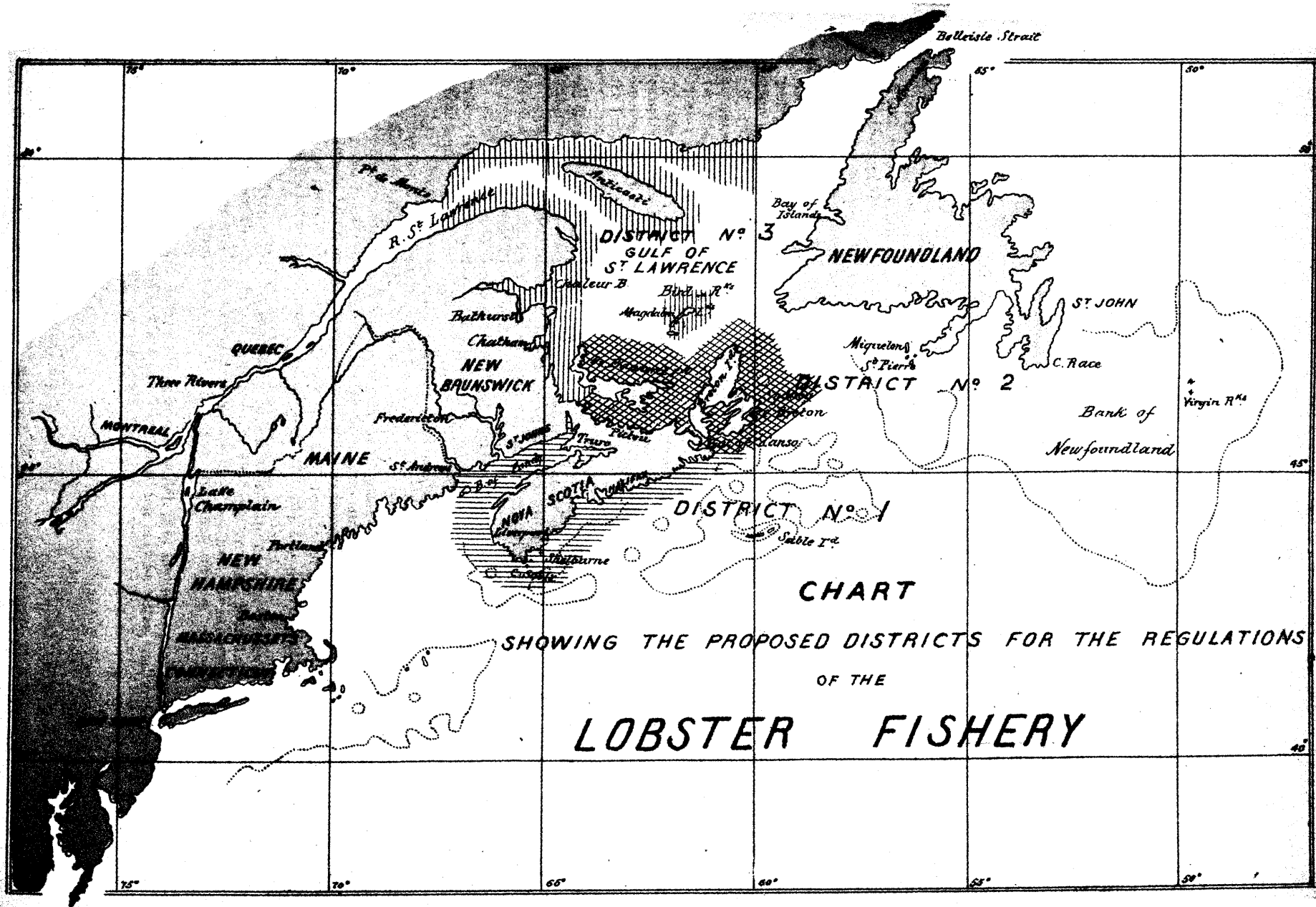


CHART
 SHOWING THE PROPOSED DISTRICTS FOR THE REGULATIONS
 OF THE
LOBSTER FISHERY

the lobsters fishery, and respectfully offer the following suggestions as embodying what I believe to be in the best interests of the maintenance of this most important fishery industry. I annex hereto a map, on which the districts referred to in the following proposed regulations are marked as "No. 1" "No. 2" and "No. 3."

PROPOSED REGULATIONS FOR THE TAKING OF LOBSTERS IN THE DOMINION OF CANADA.

The following shall constitute the District No. 1 for the purpose of these regulations, namely all the territorial waters of the Bay of Fundy, and islands thereof, and of all the islands and coasts of Nova Scotia on the Atlantic Ocean, lying westward of Cranberry island Light house, near Cape Canso.

District No. 2 shall consist of the territorial waters around the coasts and islands of Cape Breton, and the coasts of Nova Scotia not included in District No 1, and the coasts of New Brunswick facing on Northumberland Straits, as far west as Cape Jourimain lighthouse, and the coasts of Prince Edward Island, from Cape Traverse pier eastward around Cape Bear to East Point, and hence westward to North Point lighthouse.

District No. 3 shall consist of the coasts and islands of the Gulf of St. Lawrence not included in District No. 2.

(a.) No person to be permitted to fish for lobsters without first taking out a license stating the maximum number of traps or other devices which he intends to use in the prosecution of the fishery, which license shall be obtained from the nearest fishery officer or officer of Customs on payment of a fee of 2 cents for each trap or other device which the applicant intends to use.

(b.) No person or persons or body corporate shall be permitted to pack, can, preserve or cure lobsters without first taking out a license, the fee for which shall be \$50, and an additional charge of 10 cents for every 48 pounds of lobster meat packed or canned by the licensee in excess of 24,000 pounds weight; and where there are separate boiling houses in connection with any canning or packing establishment, and more than a mile distant therefrom, the license fee for every such boiling house shall be \$50 in addition to the above fee for the central establishment.

(c.) All boats and trawl buoys used in connection with the lobster fishery and all cars for keeping of lobsters alive, shall have a mark for identification, indelibly cut or branded thereupon, which mark shall be described in the license.

(d.) Every licensee shall, when called on by a fishery officer, or other officer of the law, to produce his license, shall do so, forthwith and failure to do so shall be *prima facie* evidence that a breach of the Fishery Act has been committed.

(e.) Licenses to fish shall be transferable by the local fishery officer on application being made to him, or a license may be issued in the joint names of any two fishermen.

(f.) The close season for lobsters shall be from the 15th day of July to the 31st day of December in each year. Penalty for fishing during close season to be \$50 for each offence and \$2 for each lobster, and in default of payment of the fine, imprisonment up to two months may be inflicted.

(g.) No lobster less than 9 inches in length and no female lobster carrying exuded ova to be taken, under similar penalties to those above mentioned.

(h.) In District No. 1 it shall only be lawful to can or pack or otherwise preserve lobsters between the 29th day of May and the 2nd day of July, both days inclusive.

(i.) In District No. 2 it shall only be lawful to can, pack or otherwise preserve lobsters between the 5th day of June and the 10th day of July, both days inclusive.

(k.) In District No. 3 it shall only be lawful to can pack, or otherwise preserve lobsters between the 10th day of June and the 15th day of July, both days inclusive.

(l.) In each district, during the season in which it is lawful to pack or can lobsters, the regulation limiting the size of lobster which may be taken shall not apply to lobsters delivered at any licensed cannery.

(m.) In each district, during the season in which it is lawful to pack, can or otherwise preserve lobsters, the regulation prohibiting the capture of female lobsters carrying exuded ova shall not apply to any lobsters delivered at a licensed cannery, when the proprietors of such cannery have fitted up boxes for the hatching out of such ova as may be taken from the female lobsters delivered at the cannery—such boxes to be of the pattern approved of by the Superintendent of Fish Culture for the Dominion; and the Minister may, on receipt of a certificate from the fishery officer that such approved hatching boxes have been in successful operation throughout season, allow towards the expenses of saving the said exuded ova a sum of $3\frac{1}{2}$ cents per case of 48 pounds on the output of the cannery.

The adoption and rigid adherence to these regulations during a period of, say three years, would, I am convinced, not only vastly improve the fishery, but would, by improving the quality of the pack retain, for our Canadian product that reputation for superior excellence which it formerly had.

Under the present methods of conducting the business many canneries are owned and worked by citizens of the United States and lobsters caught and packed in the Gulf of St. Lawrence are labelled in our Canadian factories as product of the United States; and thus in the markets of the world the States of Maine and Massachusetts get credit for goods which are the production of Canada, though the capital and energy employed may both be the property of the citizens of the United States. I would urge on your notice, in this respect, the advantage which a license system would have—that it could be forbidden to label the products of our factories with foreign labels. A very considerable proportion of the goods are sold unlabeled, and if they are so sold, and the consignee in the United States wishes to label the goods, he can of course do so; but this would involve unpacking and re-handling, all of which means expense and the packers would rather label the goods in the place of production than incur this expense; and I am strongly of opinion that Canada should insist on, as far as possible, obtaining credit in the world's markets for the goods produced within her borders.

THE SHORE FISHERY AND THE BAIT QUESTION.

I have in previous reports discussed at length the question of the interdependence of the anadromous and coast or shore fishery, and the added experience of passing years only confirms my conviction that the welfare of the shore fishery is largely dependent on the supply of so-called anadromous bait. A general view of the rivers flowing into the Atlantic and Gulf of St. Lawrence shows that the quantity of anadromous fishes is reduced, from the vast crowds which formerly thronged the streams and lakes, to proportions the most attenuated. The causes are well known and some of them are irremediable, though their effects may eventually be minimised, but those causes that can be removed it is the highest duty of the Department to continue to attack. I allude in this particular to the continued blocking and defilement of the streams, and to the illegal fishing which goes on. Much may be done by the application of existing remedies, and though we cannot hope to restore the fishery to its former condition, proper fish-passes, no defilement and rigid adherence to close seasons will, with the aid of artificial propagation, do much to attain the desired ends and every step taken in the direction of improving these anadromous fisheries must be regarded as of benefit to the shore fishery. The numbers actually engaged in the deep-sea and shore fishery remain almost constant.

The figures for the Maritime Provinces in 1889 given by the Inspectors being:—

	In Vessels.	In Boats.
Nova Scotia.....	6,814	20,520
New Brunswick.....	637	9,890
P. E. Island.....	559	3,686
Total.....	<u>8,010</u>	<u>34,096</u>

The welfare of these 34,000 men who fish in boats is so entirely dependent on the harvest which they gather from the deep that in the Province of Nova Scotia, at any rate, it is true to say that their prosperity or adversity is almost that of the people.

The means of capture used by these people are hook and line, hand line fishing and trawling. They also use large quantities of net for the capture of herring and mackerel, and along the shore there are at various places traps and weirs, as well as shore haul seines.

In my report of last year I drew special attention to the enormous amount of net used by the fishermen of the Maritime Provinces, and also to the desirability of regulating the fishery within the territorial waters of the Dominion. The nets used in Nova Scotia have been considerably diminished, but those of New Brunswick and Prince Edward Island have been increased; so that the figures, though they show some forty miles less than in 1888, are still the enormous total of 1,110 miles of net, 5 fathoms deep, with all the seines to be added to this already great total.

Continually meeting and conversing with these fishermen, I find that their perilous and arduous labours are but poorly repaid, though in this as in every other business there are those who, whether it be due to superior energy and pluck or to greater skill are much more successful than their fellows. As an instance, I know in one port in the Province of Nova Scotia of a fisherman, owner of a good boat, who, during the season just closed, grossed, as the proceeds of the catch in his boat, upwards of \$600 out of which his sharesman would take \$150. But a high average take seems to run very much as follows:—

About 60 quintals cod.....	\$240 00
do 2 barrels mackerel.....	28 00
do 11 do herring.....	44 00
do 20 quintals hake and haddock.....	57 50
	<hr/>
Total.....	69 50
The sharesman takes $\frac{1}{4}$ hook and line and every fifth barrel netted fish.....	88 67
	<hr/>
Balance for owner of boat.....	\$280 83
	<hr/>

Many will fall short of this catch, but I think in one way or another the pushing and energetic fisherman has had the opportunity this year of earning about the above amount, which has, of course, to be charged with depreciation of material, loss of nets, &c; so that, if he has something over \$200 left for his family maintenance it is all that can be looked for. All fishermen agree in the statement that the shore fishery has of late years fallen off and become uncertain to a degree, but as the statistics of catch do not distinguish between fish taken in the decked vessels and those taken in boats it is impossible to say definitely to what extent the falling off is real. There is, however, a saying among the fishermen, which tends to prove the correctness of their assertion, viz., "That it takes a great deal more twine (*i.e.* net) to get the fish now than formerly."

The question for discussion is, then what measures, if any, is it in the power of or desirable for the Department to take for the purpose of improving this great industry.

I have already spoken of the anadromous fisheries, and whatever can be done in that way should be kept in view constantly. But there is one point, aside from any question of restrictive legislation, which can be taken up and worked to advantage of both the shore and deep-sea fisheries, viz., the question of the supply of bait. Much of the fine weather in summer is lost to fishermen of both vessels and boats by reason of the difficulty experienced in getting a supply of bait. I have known vessels to lie in port for weeks waiting for squid to strike in, and unable to get any other bait.

The baits used are gaspereaux, herring, mackerel, squid, and on the Quebec shores launce and caplin: and the reserve bait, when all others fail, is the clam; but it takes a day to dig the clams for a day's fishing at many places, so that the time of the boat fishermen is reduced one half when the weather is best.

I would point out that much might be done by the erection of cheap freezing houses and cold stores, so that when the spring herring struck in, a large quantity might be preserved by freezing, to use as bait when the regular bait got scarce. The principle is largely adopted for handling the products of the fisheries of the great lakes. The ice houses are inexpensive structures, and the covering used as a non-conductor is hay. The fish, when first taken, are put in the room called the "freezer," which contains, according to its size, a number of hollow cylinders, which reach from the floor to the room above and terminate beneath the freezer in a conical point and drainage tube, passing into an under-drain. The cylinders are filled from the room above with ground ice and salt, and lower the temperature of the freezer considerably below the freezing point, so that even large fish freeze rapidly. When frozen, they can be removed into adjoining compartment, which contains fewer cylinders of ice and salt, and is used simply as a cold store, in which the fish are stacked up. A building 40 x 20, with a 12 feet post, would be ample for the storage of a large quantity of herring, and at many places would be a great value to the fishermen. On a larger scale, if the spring herring at the Magdalen Islands were put up in this way they could be readily sold to both boat fishermen and bankers; for at present, owing to the high price and scarcity of mackerel, there is a period between the spring herring bait and the squid baiting in which all bankers are, per force, idle, and when the squid first come in there is such a demand that the price is doubled or even trebled.

The erection of these ice-houses must be left to private enterprise, but plans and specifications might be prepared by the Department, showing in detail the methods so successfully used on the Great Lakes, and copies thereof, with full information, given to any one making application.

This question of the bait is the key to the successful operation of the entire fishery, and if by means of frozen herring bait we can give back the two or three weeks lost cod fishery due to the destruction of the mackerel, the gain would be immense, because it is the latter part of June and early July, and the very finest weather of the season, that is lost.

The question of restrictive measures is a very delicate and difficult one, but I unhesitatingly condemn any method of fishery which tends to waste the product. In the North Sea herring fishery and in the Irish mackerel fishery the fishing boat stays by her nets and if the weather becomes ugly the nets are hauled; but in our waters, since the cheap American nets have been introduced, many fishermen will take all the net they can get on credit, or by means of small payments, and the result is that it is quite a common thing for a boat to have more nets than it can handle daily, and the nets are left in the water day after day and night after night, and if a spell of bad weather comes the fish that are meshed rot in the nets. I have known beautiful mackerel utterly destroyed in this way.

Restrictive measures are abhorrent to the uneducated fishermen; and though many of the better educated among them may appreciate the motive underlying the measure, they are such fatalists that they are almost certain to oppose it, and great mischief may be done before any large proportion of the fishermen could be brought to believe that it was any use for man to interfere in the sea fisheries.

I am, however, firmly of opinion that some thing must be done in the way of restrictive enactment to deal with the literal wall of net which surrounds our coast day and night. These nets do not mesh the fish in the day time; they only wall them out and keep them from their natural spawning grounds.

In the Atlantic, on the west coast of Scotland, the law is that no net shall be set or shot between sunrise and one hour before sunset on any day between the 1st day of June and the 1st day of October, nor between sunrise on Saturday morning and one hour before sunset on Monday evening.

This law has been declared necessary by the Scottish Fishery Commission, has been enacted by the Parliament of Great Britain, and is now enforced by armed fishery police cruisers.

In Canada we require some such measure. I would propose that in order to regulate the fishery an annual license fee of one-fifth of one cent. for every square fathom of net be charged to the fishermen, which would, on the ordinary nets, be equivalent to one cent per running fathom, and that no license be granted to any individual boat for more nets than the owners can lift and set daily; and that throughout the season no net other than licensed trap nets shall be allowed to be kept set between seven in the morning and five in the afternoon; all net buoys to be branded with the name of the owner, or with a mark registered with the nearest Collector of Customs or fishery officer. The enactment of the regulation prohibiting the setting of nets during the day, as above, would have the effect of reducing the quantity at once, because the nets being illegally set would be liable to seizure, consequently the boat's crews would not set more nets than they could attend to.

The fall herring fishery was at one time one of the great fisheries of eastern Nova Scotia; it was from these fish that the food of the people was taken; but of late years this fishery has failed. One reason of the failure is, I believe, the excessive fishery on one spot or spawning ground. In the Bay of Fundy the fishermen now recognise the benefit accruing to them from the preservation of the spawning beds on Grand Manan. And I would strongly urge on your notice the advisability of protecting what I believe to be a similar spawning ground for the fall school of herring near the mouth of the St. Mary's River, Guysboro'. This ground has for several years past been visited each fall by a regular fleet of vessels, some carrying as many as a hundred nets, and not only have they injured, not to say ruined, the fishery, but this mass of nets, brought from all parts of the coast, has prevented the local resident fishermen from getting a reasonable share in the catch.

I would recommend that the area which can be swept by a radius of seven miles from Wedge Island lighthouse be set apart as a spawning ground for herring, and that between the 15th day of September and the 15th day of November no net shall be allowed to be set in the waters of said area, save by those holding licenses therefor, such licenses only to be issued to local resident fishermen and quantity licensed not to exceed 1,000 square fathoms of net to each boat owned in the coast of the district so set apart. This amount of net will not interfere with the fish coming in, but will be sufficient to enable these local resident fishermen to get the food supply which they require for themselves and their families. I feel that I cannot too strongly urge on your notice the advisability of adopting, with the least possible delay, this measure of protection for a much depleted fishery.

I cannot do better than close this part of my report with a quotation from the report of the Fisheries Commissioners of Newfoundland, who say: "It is useless for mere theorists to tell us that fish are so prolific that they cannot be exterminated; that for some unknown causes fish come in plentiful some years, then become scarce, and after years of absence return in abundance; that we cannot calculate their erratic pelagic movements; that man cannot exhaust the great ocean. These specious, but utterly baseless theories, are confuted by the undeniable fact that, in all our great bays the supply of cod has been steadily diminishing, never increasing, and that several of them are almost depleted, so that the fishermen are driven to other distant places in search of fish. For such a decline there must be causes. It is our part to search out and remove these causes and use remedial measures."

These words are as fully as applicable to Canada as they are to Newfoundland. I have endeavoured in my work to find out the causes, and I have placed before you what I deem to be remedial measures.

FISHERY STATISTICS.

The subject of fishery statistics lies at the root of the whole question of the scientific and practical successful administration of our fisheries. Legislation based

on incorrect or misleading information would bring discredit on the whole system, and the individual fisherman must be made to feel that all restrictive or other enactments are in pursuance of an enlightened policy, and that he himself is helping to shape that policy. To this end it is most desirable, from every point of view, to enlist in the work of the collection of fishery statistics the brightest and most intelligent of the fishermen in every port along the coast.

What we require is a report of the takes by individual boats on each fishing ground throughout the season; and thus to watch the increase or depletion, as the case may be, or the change in the kind or dimensions of the fish. One very common complaint this year among the fishermen was the small average size of the fish taken; and as diminution in average size is a sure forerunner of depletion of a fishery, we may accept the reported falling off in the shore fisheries as being very real. But in seeking the remedy our statistics, which are doubtless accurate enough in a commercial sense, fail to convey to us the kind of information required for the laying down of lines of policy in regard to the fisheries.

For the purpose of illustrating the scheme for obtaining fishery statistics which I propose I append hereto a miniature copy of a chart, somewhat such as would be given to a deep-sea fisherman or banker. It will be seen that the chart is all ruled off in squares, and that each square has a number by which it is identified. A copy of the chart would be given to each master of a fishing vessel who applied for it, and accompanying the chart would be a journal, giving a record of the ship's voyage and the amount, kind and description of fish taken each day, also the position of the ship described thus; *e.g.*: "24th June N. E. $\frac{1}{4}$ of 216-1,200 lbs. cod, large; 200 lbs. small; bait, used "herring." Such entries from day to day, when finally plotted on the chart, and with reports received from a large number of schooners, for many United States bankers would willingly act as volunteer reporters, as well as members our own Canadian fleet, would illustrate, month by month, the positions of the fish on the banks and would give subject matter for study in regard to their movements and life history.

For the shore fishery charts on a larger scale of smaller portions of the coast would be constructed on a similar plan, and then we should be able to follow each particular fishery on each individual ground, and would be able to deal intelligently with many matters which are now dealt with on assumptions, which continued investigation in the manner I have described may prove to have been either correct or erroneous.

There is one point to which I wish to give particular prominence, *viz.*, that neither statistics of fisheries, meteorology, nor any other subject are of public usefulness unless placed in competent hands for examination and discussion. And I would urge upon your notice the advisability of forming some Board of specially qualified persons who could meet occasionally and discuss matters pertaining to the fisheries. On the Atlantic coast we have now eight Inspectors of Fisheries, some of them specially qualified to speak authoritatively on the subject of the fisheries, and I am of opinion that it would be very advantageous to the working of the Department if these gentlemen were to meet annually, or oftener, if required, to discuss matters relating to the fisheries; and if nothing further was gained than a mere exchange of views, such exchange would ensure uniformity of procedure in regard to the administration of the Fisheries Act. In these eight gentlemen we have, however, men who have taken up this work as a specialty, and their accumulated experience can best be made use of by causing them to meet and discuss what lines of policy it is desirable to adopt in reference to the fisheries.

Among the subjects which might be discussed advantageously are:—

- (1). The lobster regulations.
- (2). Shall net fishing be regulated;
- (3). Under what circumstances may trap-net licenses be granted, and should the fee be uniform for all trap-nets;
- (4). The question of the prices by which the values of the fisheries product should be determined in the statistics as at present collected.

(5). The best method of obtaining fisheries statistics:

These and kindred subjects would take up a meeting extending over, probably about a week, and the knowledge that they were to be called on to take part in a discussion on such subjects would lead them to devote time to the special study of the points raised, would elevate them above the level of routine officers, and develop a spirit of painstaking investigation which could not be otherwise than of value to the Department. To these men, too, the summarised results of the proposed special statistics, and of the matter gathered by the Intelligence Bureau, should be submitted for discussion; and final reports (both majority and minority reports on all subjects, when opinion was not unanimous) should be submitted to the Minister.

FINANCIAL AID TO FISHERMEN.

In Canada the aid granted to fishermen is by way of direct payment of money to those who have been engaged a certain time in each year in the capture of deep-sea fish; but owing to the smallness of the sum, which each individual fisherman receives, the benefit to the men and their families is not great.

In the discussion of the shore fishery I have shown that the high average among the boatmen hardly reaches \$200 for the support of the men and their families. As they say: "The fish are off shore now, and we lose much fishing, owing to bad weather. " What is required is to relieve the shore fishery of the great pressure on it, by assisting those desirous of so doing to engage in the deep-sea or off shore fishery in small bankers. In Great Britain authority has been granted to the Commissioners of the Scottish fisheries to loan money to fishermen in certain districts for the purchase of boats, gear, &c., and to take a lien or mortgage thereon for the repayment of the money advanced. This Act was passed in 1886, and in the three seasons—1887, 1888 and 1889—upwards of \$100,000 has been so loaned to the fishermen and a very considerable sum has already been repaid.

In the counties of Cape Breton, Inverness, Richmond, Victoria, Guysboro' and Halifax, in Prince Edward Island, and generally in the counties fronting on the Gulf of St. Lawrence, there are many boat fishermen who would club together if money could be advanced to them for the purchase of small staunch-decked vessels up to 25 tons burden, the money so advanced to form a lien on the vessel and the owner to keep the vessel insured and refund the purchase money in four equal annual instalments.

These small bankers are for fishing the banks near shore and in the Gulf of St. Lawrence, which are just too far off for the boat fishery; but inasmuch as these small vessels would be in, every week the fish could still be made, so as to class as "hard shore" instead of "bank" fish, and none should ever be salt burnt. The money might be placed at the disposal of Commissioners for the purpose of making the loans; and, without costing the country one cent beyond the expense of administering the scheme, the greatest possible good would be done to our people, and the shore fishery very considerably relieved; for not only would the benefit be to the fishermen in the summer's work, but the stimulus to ship-building would be quite marked, as I am convinced that if the plan was considered by the Government worthy of adoption applications for loans for a number of vessels would speedily be filed. Under existing circumstances, our people have to compete in the world's markets against the heavily subsidised French fishermen, and against the United States fishermen, backed by unlimited capital, and with a protected home market for their entire catch. I would therefore urge on your notice this plan of assisting them to purchase a certain number of vessels to take the place of the boats now used.

THE FISHERIES INTELLIGENCE BUREAU.

Proposals for establishing a Fisheries Intelligence Bureau having been approved of and the permission to utilize telegraphic communication for the purpose of gathering and disseminating information in regard to the fisheries, granted; the services of the following staff was secured:—Mr. Alex. Fraser, B.A., was appointed to act as clerk

in charge at Halifax, his duties being to receive all the messages, interpret them and enter the facts given on the map. He then had to prepare two synopses, one for publication in the press and a second somewhat abbreviated for transmission by telegraph to various stations where the bulletin was posted up for the use of fishermen.

Reporters.

E. D. Tremaine	Port Hood.
Wm. Grant.....	Mabou.
W. A. Dunn.....	Margaree.
S. AuCoin.....	Cheticamp.
J. A. Feltmate	White Head.
Capt. S. R. Griffin.....	Isaac's Harbour.
Geo. Rowlings, Fishery Officer.....	Musquodoboit.
W. M. Solomon, Fishery Officer.....	Lunenburg.
E. E. Letson.....	Port Medway.
John H. Dunlop.....	Liverpool.
Geo. Stalker.....	Lockeport.
Charles H. Bolman.....	Sand Point.
J. W. Taylor.....	Port La Tour.
J. A. D'Entremont.....	Pubnico.
Isaiah Thurber.....	Freeport.
J. M. Viet.....	Digby.
M. J. Foley.....	Souris.
Charles Owen.....	Georgetown.
D. McCaulay.....	St. Ann's.
A. J. Hamilton.....	North Sydney.
Wm. Brymer.....	L'Ardoise.
Remi Benoit.....	Arichat
D. Urquhart.....	St. Peter's
C. P. LeLacheur.....	West Arichat
J. C. Bourinot.....	Port Hawkesbury
P. O. Toole.....	Louisburg
David Murray.....	Port Mulgrave.
J. W. Young.....	Canso.
Miss A. Beck.....	Percé.
M. A. Carberry.....	Grand River.
Miss Laura Young.....	Paspebiac.
Miss Louise Blackhall.....	Caraquette.
W. Phillips	Escuminac
A. Hamon	Shippegan
John Hughes.....	Bloomfield
Wm. McDonald	Meat Cove.
E. B. Burke.....	Ingonish.
A. J. Clark.....	North Head Grand Manan.
Wellington Parker.....	Campobello.
J. Labourdais.....	Magdalen Islands.
E. M. Cross.....	Beaver Harbour.
W. C. Henly.....	Spry Bay.
F. L. Hatfield	Yarmouth.

In all forty-four reporters stationed along the coast line in actual touch with the fishermen and reporting daily by wire and some of them weekly by mail as well. These reporters received as an honorarium in recognition of their services, the sum of \$15 each, and I desire to place on record my acknowledgements to these ladies and gentlemen for the careful and accurate reports which were sent in with such faithful regularity in most instances.

The instructions issued to the reporters were that each day a message was to be prepared and enciphered and handed in to the telegraph office about 6 p.m. and they thus reached the clerk in charge at Halifax between 8 and 9 in the evening and were at once discussed and the bulletin for the day issued.

As for the publication of the bulletins, they were posted at the telegraph offices at the following places: Canso, North Sydney, Lunenburg, Lockeport, Liverpool, Yarmouth, Shelburne, Escuminac, Shippegan, Caraquette, Paspebiac and Percé. Besides this they were furnished to the Halifax daily press and to the associated press for publication. The Halifax papers published the bulletins regularly, and so highly was the information prized by those interested in the fisheries, that I have been told of persons living in remote parts of New Brunswick subscribing to the Halifax papers in order to get the information. One of the first questions asked by a fishing captain when he lands is, "What does the bulletin say"? And I believe that no step ever taken by the Department has met more generally with the approval of the fishing community than has this establishment of the Fisheries Intelligence Bureau. It is, however, one of those systems which takes time and experience to obtain the best results, and one of the points which was not considered very important at first, proves to be one of the leading features of the scheme, viz., the distribution by telegraph of the information and the posting up of the Bulletins in a public place so that the fishermen can see it for themselves. Take for instance, the case of a vessel cruising off the west end of Prince Edward Island, she can run into Escuminac Light, send a boat ashore and see the bulletin, and in a quarter of an hour she has the whole story of yesterday's fishing throughout the coast. That I have been able to carry out this scheme at so small a cost has been due to the policy of enlightened liberality pursued by the managers of the Western Union and Great North-West Telegraph Companies and the Anglo-American Cable Company, who gave such a reduction in their rates as enabled the work to be done within the limits of the expenditure sanctioned.

The following are the amounts expended on this service during the past season:—

Salaries of 44 reporters	\$630 00
Salary of clerk in charge.....	248 33
Telegraphy	437 79
Postage and sundry expenses.....	13 92

Total cost of Intelligence Bureau..... \$1,330 04

I should like, next year, to utilize the Government telegraph lines over which our messages are carried gratis, as Government business, for the dissemination as well as the collection of information, and to this end would have the daily bulletins sent to Anticosti, Magdalen Islands, Meat Cove and Ingonish, and if possible also to Georgetown, Souris, Alberton and Tignish, on Prince Edward Island, and Port Hood, C.B. These few additional stations would be of great value to the fishing community, as the information would always be fresh, and instead of going in and telegraphing to Halifax and waiting for reply, the bulletin would then be posted up for the fisherman to read.

In order to give these bulletins a distinctive character, I should like to have regular bulletin blanks printed and supplied to the telegraph offices were the bulletin is posted; suitable cheap frames might also be supplied, just as the Meteorological Office now supplies its stations with blanks and frames.

The full usefulness of the bureau during the past summer was somewhat marred by the late date at which its operations were commenced, inasmuch as it was July before the work got into full swing. I would respectfully suggest that operations should be commenced next spring on 1st May, and in order to do this the clerk in charge should be appointed about 15th April. The early part of the month of May is the time when the banking fleet are seeking herring bait, and of late years there has been frequently much

disappointment in the search for bait among both the Canadians and Americans, which the establishment of the bureau would have averted. To such an extent is this the case, that I regard the month of May as perhaps the month of the season in which the beneficial effects of the working of this system would be best exemplified.

It cannot be denied that in the working of the bureau, occasional disappointments have occurred owing to change in the conditions at a place between time of the issue of the report and the arrival of a fisherman who has perhaps sailed a couple of hundred miles on the strength of a bureau report. Such disappointments are occasionally unavoidable, and the only thing to do is to have the bureau news as recent as possible, trusting more to the telegraph than to the daily press for disseminating the information.

I attach hereto the report of Mr. A. Fraser on each separate fishery. It forms Appendix "B" to this report, and shows for the time the bureau was in operation, the movement of the various fishes and the character of the fishery as reported to the bureau.

Before closing this subject of my report, I would point out to you that in other countries money is spent freely for the purpose of giving information in regard to the fisheries by telegraph.

In Great Britain, for instance, the Scottish Fishery Commission have entered into arrangements with the Postmaster General whereby telegraphic communication has been extended to many remote points, the commission agreeing to make good any loss which may arise from the extensions, and during the season of 1889 they paid to the Postmaster General, on behalf of the fishermen, no less a sum than \$11,169.71, nearly nine times over the total amount which our bureau has cost.

For the coming year I estimate the cost of the bureau as follows:—

Seven months' salary of clerk in charge.....	\$ 350 00
Fifty reporters.	750 00
Telegraphy.....	1,200 00
Unforeseen contingencies	200 00

Total expenditure proposed \$2,500 00

The expenditure on this bureau must not alone be regarded as valuable from the point of view of the fisherman; it is also of great value to me in directing the movements of the fishery protection cruisers. As the reporters keep the Central Bureau advised of the movements of foreign fishing vessels thus rendering the police patrol of our territorial waters much more efficient than it would be if dependent on the reports from our own vessels,

I think that this service may now be considered to have established itself in public favour, and as it is also of value as a police measure I would respectfully recommend that its operations be continued during the season of 1891.

STORM SIGNALS FOR THE FISHERMEN.

During the past season storm signals have been erected for the benefit of fishermen at Shippegan and Caraquette, on the New Brunswick coast. The masts have been erected at a minimum cost, and will be of great service to the fishermen at these places next season. As these storm signals are the only means by which the benefit of all our meteorological work can be conferred on the fishing community they should be erected at every port on the coast where there are a sufficient number of fishermen to warrant the expenditure.

For the coming season I would strongly recommend the following stations as places where storm signals would be of great benefit to fishermen.

Louisburg:—At this station there has been a storm signal in operation for years, but it had to be discontinued owing to the removal of the telegraph line; as this is now in the hands of the Telephone Company and in regular operation, the mast at this place, which I inspected this year and found in good condition, can be again used, and the only cost will be the renewal of the equipment and the payment of the salary to the agent, the same as formerly.

Tignish, P.E.I.:—This is the greatest boat harbour perhaps in the whole Gulf of St. Lawrence. Large numbers of the Tracadie and Caraquette fleet, who fish off the North Point, make this their shelter port during the week. Hence a storm signal would be of great value. This point can now be reached by telephone from Alberton.

Port Hood and Liscomb are also ports from which large fleets of boats go out to fish at great distances from land, and where storm signals would be of great value to fishermen; and at Paspébiac, in the Bay Chaleurs, those interested in the fisheries have asked me to secure for them the benefit of the system.

These four masts would cost about \$300 to erect, and the subsequent charge on the Meteorological Service would be about \$50 per station per annum, and I would respectfully urge on your notice the desirability of giving this aid to the fishermen at these ports.

METEOROLOGICAL WORK.

In my report of last year I pointed out that my experience on the coast had convinced me that the very greatest differences existed between the velocities of the wind on land and over the sea, and suggested that three wind stations should be established at points on the coast where the velocities observed would approximate more closely to those over the water.

This proposal was approved, and during the season now closed, Inspector Payne, of the Meteorological Service, erected anemographs on Sambro Island, near Halifax, and at Low Point, near Sydney, C. B. An instrument was also put up on Sable Island, and in order to show the serious nature of the difference between the velocities I quote the following cases, comparing the coast stations with those which we previously had.

On 6th October, Sydney, old station 8 to 9 p.m.	20 miles per hour.
do Low Point, new station, 8-9 p.m.	48 do
On 17th October, at 10 a.m. warnings issued from the Meteorological Office for a heavy gale.	
Halifax, old station only records.....	22 miles per hour.
Sable Island, New Station records.....	38 do
Sambro Island, new station, records	42 do
On 28th October at Halifax, Old Station from 5 a.m. to 11 a.m., highest velocity is	15 do
Sambro, new station, velocity all the time from 47-49	do
Sable Island, new station, do do 51-35	do
On 1st December, Halifax, old station, highest velocity	30 do
On 1st December, Sambro, new station, highest velocity	72 do

This was a very heavy gale, almost a hurricane, warned 10 a.m. 30th November, but Halifax, old station, showed little more than a strong breeze.

These new stations show the wind velocities which the sailor and the fisherman have to meet, and their value is already appreciated by the officers engaged in the issue of the forecasts. And as the position of the three stations is such that they form the angles of approximately an equilateral triangle, they are very advantageously situated for the purpose of making a determination of the wind velocities at sea in relation to barometric gradient.

CANADIAN FISHING VESSELS.

I would again draw your attention to the difficulty which our police vessels continue to find in distinguishing, at any little distance, the difference between Canadian and United States fishing vessels.

In previous reports I have dealt with the subject fully, and can only add that increased experience confirms my opinion that it is in the highest degree advisable to adopt some specific mark or device visible at a distance, which will enable our force to readily distinguish between domestic and foreign fishing vessels.

I have the honour to be, Sir,

Your obedient servant,

ANDREW R. GORDON.

APPENDIX A.

BEING List of United States Fishing Vessels which visited the Port of Canso, N.S., during the Year 1890.

Dates of Arrivals.	Names of Vessels.	Ports of Registry.	Tons.	Men.	Whence Arrived.	If Licensed "L"; Unlicensed "U."	What in Port for.
1890.							
Jan. 16.	Lucy M. Dyer.....	Portland....	78	7	Portland....	U	Shelter, bound Nfid.
do 16.	Alice C. Jordan.....	Gloucester..	81	7	Gloucester..	U	do do
do 20.	Hereward.....	do	85	7	do	U	do do
do 23.	Herbert M. Rogers.....	do	74	6	do	U	do do
April 7.	Louise J. Kenny.....	do	155	18	Banks.....	U	Came in for license, left for Nfid
do 17.	Edward S. Eveleth.....	do	84	14	do	U	Repairs.
do 18.	Huntress.....	Eastport....	74	4	Eastport....	U	Shelter, bound Magdalens.
do 21.	Fanny W. Freeman.....	Gloucester..	90	14	Gloucester..	U	do dc
do 21.	Abbie M. Deering.....	do	96	18	Banks.....	U	Came in for license, left for Nfid
do 22.	Eclipse.....	Eastport....	44	3	Eastport....	U	Shelter, bound Magdalens.
do 23.	William H. Wellington..	Gloucester..	81	16	Banks.....	U	Came in for license, left for Nfid
do 23.	Triton.....	do	67	14	do	U	do do
do 24.	H. B. Griffin.....	do	117	16	do	U	do do
do 24.	Laura Sayward.....	do	64	12	do	U	do do
do 24.	Lillian A. Allen.....	Portland....	106	16	do	U	do do
do 24.	Willie M. Stevens.....	Gloucester..	71	16	do	U	do do
do 24.	M. H. Perkins.....	do	72	14	do	U	do do
do 24.	Edith B. Coombs.....	Lamoine....	114	18	Lamoine....	U	do do
do 24.	Veata.....	Gloucester..	75	14	Gloucester..	U	do do
do 26.	Mist.....	do	68	14	Banks.....	U	do and obt'd license
do 26.	Wm. H. Jordan.....	do	86	15	do	U	Came in for license but refused because not inc. Nfid.
do 28.	Susie Hooper.....	do	73	14	Gloucester..	U	do do
do 28.	Samuel R. Crane.....	do	74	14	do	U	do do
do 30.	Thetis.....	do	91	16	Banks.....	U	In for and obtained license.
May 1.	Herbert M. Rogers.....	do	73	13	do	U	do do
do 1.	John W. Campbell.....	do	79	14	Gloucester..	U	Shelter and repairs.
do 1.	Martha A. Bradley.....	do	72	14	do	U	In for and obtained license.
do 2.	Joseph B. Maguire.....	do	88	16	do	U	Shelter.
do 3.	Ellen Lincoln.....	Portland....	92	16	Banks.....	U	In for and obtained license.
do 5.	William M. Gaffney.....	Gloucester..	70	14	Gloucester..	U	Shelter.
do 8.	Ohve Robinson.....	Portland....	61	9	Portland....	U	do
do 9.	Laura Sayward.....	Gloucester..	64	9	Banks.....	U	In for and obtained license.
do 10.	Edith Whalen.....	do	78	16	do	U	Wood and water.
do 10.	Electa A. Eaton.....	do	73	14	Gloucester..	U	In for and obtained license.
do 10.	Marguerite.....	do	103	18	Banks.....	U	Looking for men astray on Bks
do 10.	Centennial.....	do	110	18	Gloucester..	U	Shelter
do 10.	Emma M. Dyer.....	do	77	16	do	U	do
do 10.	Carrie E. Parsons.....	do	80	10	do	U	In for and obtained license.
do 10.	David A. Story.....	do	86	16	Banks.....	U	Shelter.
do 10.	Edgar S. Foster.....	Beverly....	94	16	do	U	do
do 10.	John L. Nickerson.....	Gloucester..	118	18	do	U	do
do 10.	Dora A. Lawson.....	do	119	18	do	U	do
do 10.	George W. Pierce.....	Portland....	59	14	Portland....	U	In for and obtained license.
do 10.	Bertha May.....	do	75	14	Banks.....	U	Wood, water and repairs.
May 13.	Grace L. Fears.....	Gloucester..	84	16	do	U	Wood, water and repairs.
do 13.	Louise J. Kenny.....	do	155	13	do	U	do do
do 15.	Margaret Mather.....	do	91	16	do	U	In for and obtained license.
do 15.	Julia E. Whalen.....	Boston.....	96	18	do	U	Shelter.

APPENDIX A.—Being List of United States Fishing Vessels, &c.—Continued.

Dates of Arrivals.	Names of Vessels.	Ports of Registry.			Whence Arrived.	If Licensed, "L," Unlicensed, "U."	What in Port for.
			Tons.	Men.			
1890.							
May 15.	John S. Predden.....	Gloucester..	88	16	Banks.....	U	Wood and water.
do 16.	Reporter.....	do	79	16	do	U	Wood, water and repairs.
do 16.	A. T. Gifford.....	do	81	14	Gloucester..	U	In for and obtained license.
do 16.	Golden Hind.....	do	70	14	do	U	Shelter.
do 19.	Thomas F. Bayard.....	do	95	16	Banks.....	U	Look'g for men astray on B'ks.
do 20.	H. B. Griffin.....	do	111	16	do	U	do do
do 20.	Gertie E. Foster.....	do	83	16	do	U	Shelter.
do 20.	William H. Jordan.....	do	86	16	do	U	In for and obtained license.
do 20.	Carrie and Annie.....	Boston.....	90	16	Gloucester..	L	Bait and ice.
do 20.	Monitor.....	Gloucester..	104	16	do	U	In for and obtained license.
do 20.	Lizzie J. Greenleaf.....	do	88	16	do	U	do do
do 21.	Gladstone.....	do	97	16	do	U	do do
do 22.	A. T. Gifford.....	do	81	14	Souris, P. E. I	L	To land one of crew sick.
do 22.	Mist.....	do	68	14	Banks.....	L	Bait and ice.
do 24.	Eclipse.....	Eastport....	44	4	Magdalens..	U	Medical treatment to one of crew.
do 29.	Fredonia.....	Gloucester..	109	18	Gloucester..	U	Shelter, mackerel seining.
do 30.	Laura Sayward.....	do	64	12	Banks.....	L	Bait and ice.
do 30.	Herbert M. Rogers.....	do	73	14	do	L	do
do 30.	Lizzie Griffin.....	do	100	16	Gloucester..	U	In for and obtained license.
June 2.	Masconomo.....	do	91	16	do	U	do do
do 2.	Richard Lester.....	do	69	14	do	U	do do
do 2.	Electa A. Eaton.....	do	73	12	Banks.....	L	Bait and ice.
do 2.	Nellie G. Thurston.....	do	81	14	Gloucester..	U	In for and obtained license.
do 2.	Porter S. Roberts.....	do	72	14	do	U	do do
do 2.	Blanche.....	do	79	12	do	L	Bait and ice, and ship men.
do 2.	Marsala.....	do	76	14	do	L	do
do 3.	Nellie M. Stevens.....	do	76	16	Banks.....	U	In for and obtained license.
do 4.	Procyon.....	do	107	16	do	U	Shelter.
do 4.	D. D. Winchester.....	do	79	14	do	U	In for and obtained license.
do 5.	Sarah B. Putnam.....	Beverley....	76	12	do	L	Bait and ice.
do 5.	Henry Wilson.....	Gloucester..	88	16	do	U	In for and obtained license.
do 5.	Ambrose H. Knight.....	do	87	14	Mack. fish'g.	U	Shelter.
do 5.	Laura Belle.....	Portland....	77	15	do	U	do
do 7.	Herald of the Morning.....	Gloucester..	68	14	do	U	do
do 7.	Alice C. Jordan.....	do	81	15	do	U	do
do 9.	Lillian A. Allen.....	Portland....	106	16	Banks.....	L	Bait and ice.
do 9.	Maggie E. Wells.....	Gloucester..	80	14	Gloucester..	U	In for and obtained license.
do 9.	Edith Rowe.....	do	80	17	Mack. fish'g.	U	Shelter.
do 9.	Julia E. Whalen.....	Boston.....	96	18	Banks.....	U	do
do 9.	William M. Gaffney.....	Gloucester..	70	12	do	U	do
do 9.	Caroline Vooght.....	do	79	16	Mack. fish'g.	U	do
do 14.	Lottie S. Haskins.....	do	55	13	do	U	do
do 16.	Lizzie M. Centre.....	do	89	14	do	U	do
do 16.	Marsala.....	do	76	14	Banks.....	L	Bait and ice.
do 17.	William H. Wellington.....	do	81	17	do	U	In for and obtained license.
do 17.	Laura Belle.....	Portland....	78	15	Mack. fish'g.	U	Shelter.
do 17.	M. L. Wetherell.....	Gloucester..	65	15	do	U	do
do 18.	Davy Crockett.....	do	80	15	do	U	do
do 18.	E. A. Williams.....	Boston.....	35	5	do	U	do
do 20.	Mabel W. Woolford.....	Gloucester..	104	18	Gloucester..	U	Shelter.
do 20.	Davy Crockett.....	do	80	16	Mack. fish'g.	U	do
do 20.	Dora A. Lawson.....	do	119	18	Banks.....	U	do
do 20.	Ambrose H. Knight.....	do	87	16	Mack. fish'g.	U	do
do 20.	Herbert M. Rogers.....	do	73	14	Banks.....	U	Bait and ice.
do 20.	Admiral.....	do	73	13	Gloucester..	U	In for and obtained license.
do 20.	Mary J. Wells.....	do	86	14	do	U	do do
do 20.	Abby F. Morine.....	do	77	14	do	U	do do
do 20.	A. T. Gifford.....	do	81	14	do	L	Bait and ice.
do 20.	Lizzie J. Greenleaf.....	do	88	16	do	L	do
do 21.	Porter S. Roberts.....	do	72	14	Banks.....	L	do

APPENDIX A.—Being List of United States Fishing Vessels, &c.—Continued.

Dates of Arrivals.	Names of Vessels.	Port of Registry.			Whence Arrived.	If Licensed "L," Unlicensed "U."	What in Port for.
			Tons.	Men.			
1890.							
June 24.	Amy Hanson.....	Boston.....	108	16	Banks.....	L	Bait and ice.
do 24.	Golden Hind.....	Gloucester.....	70	14	Gloucester.....	U	In for and obtained license.
do 24.	Hattie L. Newman.....	do.....	93	16	Banks.....	U	do do
do 25.	Henry Wilson.....	do.....	88	14	do.....	U	Bait and ice.
do 26.	Procyon.....	do.....	107	16	Gloucester.....	L	do
do 26.	Carrie W. Babson.....	do.....	85	18	do.....	L	do
do 27.	Monitor.....	do.....	104	14	do.....	L	do
do 27.	Ada M. Hall.....	do.....	95	14	do.....	U	In for and obtained license.
do 30.	Ellen M. Adams.....	do.....	85	16	do.....	U	do do
do 30.	Grace L. Fears.....	do.....	84	16	do.....	U	do do
July 4.	Gladstone.....	do.....	97	16	do.....	L	Bait and ice.
do 5.	Henry Wilson.....	do.....	88	15	Banks.....	L	Seeking bait.
do 7.	Hustler.....	do.....	92	16	do.....	L	Bait and ice.
do 10.	Willie M. Stevens.....	do.....	76	16	Gloucester.....	L	do
do 10.	Blanche.....	do.....	79	14	do.....	L	do
do 10.	Gov. Butler.....	do.....	87	17	Mack. fish'g.....	U	Shelter.
do 12.	Nellie N. Rowe.....	do.....	79	16	do.....	U	do
do 12.	Nellie G. Thurston.....	do.....	81	14	Banks.....	L	Bait and ice.
do 12.	Ellen Lincoln.....	Portland.....	92	15	Mack. fish'g.....	L	Shelter.
do 12.	Lizzie Griffin.....	Gloucester.....	100	16	Gloucester.....	L	Bait and ice.
do 12.	Sarah B. Putnam.....	Beverly.....	76	12	Banks.....	L	do
do 14.	Nellie N. Rowe.....	Gloucester.....	79	16	Mack. fish'g.....	U	Shelter.
do 14.	Dora A. Lawson.....	do.....	119	18	Banks.....	L	Bait and ice.
do 15.	Laura H. Sayward.....	do.....	64	12	Gloucester.....	L	do
do 15.	D. D. Winchester.....	do.....	79	14	do.....	L	do
do 15.	Abby M. Deering.....	do.....	96	16	do.....	U	Shelter.
do 16.	Horace B. Parker.....	do.....	93	18	do.....	L	Bait and ice.
do 16.	Herbert M. Rogers.....	do.....	73	14	Banks.....	L	Shelter.
do 16.	Mystic.....	do.....	79	16	Gloucester.....	L	Bait and ice.
do 16.	Bessie M. Wells.....	do.....	95	16	do.....	L	do
do 16.	Lizzie M. Stanwood.....	do.....	100	16	do.....	L	do
do 17.	Willie M. Stevens.....	do.....	76	14	Banks.....	L	do
do 17.	Henry Wilson.....	do.....	88	16	do.....	L	do
do 18.	Carrie E. Parsons.....	do.....	80	12	Gloucester.....	L	do
do 18.	Rushlight.....	do.....	63	13	do.....	U	Shelter.
do 19.	Susan L. Hodge.....	do.....	77	16	do.....	U	In for and obtained license.
do 19.	Lillian A. Allen.....	Portland.....	106	16	Portland.....	L	Coming Bay struck and became wreck.
do 19.	Marguerite.....	Gloucester.....	103	18	Gloucester.....	U	Shelter.
do 19.	Lizzie J. Greenleaf.....	do.....	88	16	do.....	L	Bait and ice.
do 21.	Edward Trevoxy.....	do.....	88	16	Mack. fish'g.....	U	Shelter.
do 22.	Admiral.....	do.....	73	13	Banks.....	U	Bait and ice.
do 22.	Hustler.....	do.....	90	14	do.....	L	do
July 22.	Triton.....	do.....	67	14	Banks.....	L	do
do 23.	Hustler.....	do.....	90	16	Seeking bait.....	L	Shelter, bound to Banks.
do 23.	Mist.....	do.....	68	14	Gloucester.....	L	Bait and ice, and to ship man.
do 23.	Winona.....	do.....	103	16	do.....	L	Bait and ice.
do 23.	Reub. L. Nickerson.....	do.....	92	14	Banks.....	U	Shelter.
do 23.	Fanny W. Freeman.....	do.....	90	14	Gloucester.....	L	Bait and ice.
do 24.	Thomas F. Bayard.....	do.....	95	16	do.....	U	In for and obtained license.
do 25.	Reporter.....	do.....	79	16	Banks.....	U	In for shelter.
do 26.	A. T. Gifford.....	do.....	81	14	Gloucester.....	L	In for bait and ice.
do 26.	Caroline Vooght.....	Booth Bay.....	79	5	Pictou.....	U	Shelter.
do 28.	Emma E. Wetherell.....	Gloucester.....	101	16	Gloucester.....	L	Bait and ice.
do 31.	Andrew Burnham.....	do.....	86	15	Mack. fish'g.....	U	Shelter.
do 31.	Laura Belle.....	do.....	77	16	do.....	U	do
do 31.	Gertie Evelyn.....	do.....	81	14	Gloucester.....	L	Bait and ice.
do 31.	Gracie C. Young.....	do.....	83	16	do.....	L	do
do 31.	Minnesota.....	do.....	90	16	Banks.....	U	Shelter and water.
do 31.	Emma W. Brown.....	do.....	74	16	Gloucester.....	U	do
Aug. 1.	Grace L. Fears.....	do.....	84	16	do.....	L	Bait and ice.

APPENDIX A.—Being List of United States Fishing Vessels, &c.—Continued.

Dates of Arrivals.	Names of Vessels.	Ports of Registry.			Whence Arrived.	If		What in Port for.
			Tons.	Men.		Licensed "L."	Unlicensed "U."	
1890.								
Aug. 1.	Flora Dilloway	Gloucester	77	12	Gloucester	L		Bait and ice.
do 2.	Mystic	do	79	14	Banks	L		Ice.
do 4.	Procyon	do	107	16	do	L		Bait and ice.
do 4.	Flora Dilloway	do	77	14	Seeking bait.	L		Shelter, bound to Banks.
do 4.	Monitor	do	104	16	Gloucester	L		Bait and ice.
do 4.	Porter S. Roberts	do	72	14	Banks	L		do
do 4.	Samuel R. Crane	do	74	14	do	L		do
do 6.	Hustler	do	92	16	do	L		do
do 6.	Sea Fox	do	105	18	do	L		do
do 7.	Mary J. Wells	do	86	14	Gloucester	L		do
do 7.	Herbert M. Rogers	do	73	14	Seeking bait.	L		Shelter, bound to Banks.
do 7.	Golden Hind	do	70	13	Gloucester	L		Bait and ice.
do 7.	Masconomo	do	91	16	do	L		do
do 8.	Admiral	do	81	14	Banks	L		do
do 8.	Marsala	do	76	14	do	L		do
do 9.	Carl Schurz	do	69	14	do	U		Shelter, bound home.
do 11.	Sarah B. Putnam	Beverly	76	14	do	L		Bait and ice.
do 11.	John D. Long	Gloucester	63	13	Gloucester	L		do
do 13.	Gladstone	do	97	16	do	L		do
do 13.	Emma E. Wetherell	Boston	101	16	Banks	L		do
do 14.	Reub. L. Nickerson	Gloucester	92	14	do	U		Shelter.
do 14.	Amy Hanson	Boston	108	16	do	L		Bait and ice.
do 14.	Lizzie Smith	Gloucester	73	14	Gloucester	L		do
do 15.	Grace L. Fears	do	84	16	Banks	L		do
do 16.	William H. Wellington	do	81	16	do	L		do
do 18.	Triton	do	67	14	do	L		do
do 18.	Mystic	do	78	16	Gloucester	L		do
do 19.	M. H. Perkins	do	72	14	do	U		Shelter.
do 19.	Carrie W. Babson	do	86	18	Banks	L		Bait and ice.
do 20.	Carrie and Annie	Boston	90	16	do	L		Anchor and ship stores.
Aug. 20.	J. H. Carey	Gloucester	95	16	Banks	L		Bait and ice.
do 20.	Hattie Mand	do	86	16	do	U		Shelter.
do 20.	Henry Wilson	do	88	16	Seeking bait	L		Shelter, bound to Banks.
do 20.	Mary J. Wells	do	80	16	Gloucester	L		Bait and ice.
do 20.	Flora Dilloway	do	77	14	Banks	L		do
do 21.	Mascot	do	77	14	North Bay	U		Shelter.
do 22.	Hustler	do	92	14	Banks	L		Bait and ice.
do 22.	Gertie E. Foster	do	83	14	Gloucester	U		In for shelter.
do 22.	Centennial	do	110	16	do	U		Shelter.
do 22.	Northern Eagle	do	65	12	Mack. fish'g.	U		do
do 23.	Gracie C. Young	do	83	16	Gloucester	L		Bait and ice.
do 24.	Northern Eagle	do	65	12	Mack. fish'g.	U		Shelter.
do 24.	Eliza B. Campbell	do	95	16	Gloucester	L		Bait and ice.
do 25.	Lizzie B. Griffin	do	100	16	do	L		do
do 25.	Mystic	do	78	16	do	L		do
do 25.	Fanny Freeman	do	90	15	do	L		do
do 25.	Lizzie J. Greenleaf	do	88	16	do	L		do
do 25.	A. T. Gifford	do	81	14	do	L		do
do 25.	Saml. R. Crane	do	74	14	do	L		do
do 25.	D. D. Winchester	do	79	14	do	L		do
do 27.	Nellie M. Davis	do	89	14	do	L		do
do 27.	Fannie A. Sparling	do	81	14	do	L		do
do 27.	Chas. H. Boynton	do	71	14	do	L		do
do 29.	Centennial	do	110	16	do	L		In for and obtained license.
do 29.	Thetis	do	91	16	do	L		Bait and ice.
do 29.	John W. Plummer	Portland	95	16	do	U		Shelter.
Sept. 1.	Amy Hanson	Boston	108	16	do	L		Stores, water; bound home.
do 8.	Centennial	Gloucester	110	16	Seeking bait	L		Ice.
do 9.	Rigel	do	107	16	Banks	U		Bait and ice.
do 10.	H. B. Griffin	do	107	14	do	U		Repairs, water
do 10.	M. S. Ayer	do	76	14	do	L		Bait and ice.
do 13.	Dido	do	77	14	do	L		do

APPENDIX A.—Being List of United States Fishing Vessels, &c.—*Concluded.*

Dates of Arrivals.	Names of Vessels.	Ports of Registry.			Whence Arrived.	If Licensed "L," Unlicensed "U."	What in Port for
			Tons.	Men.			
1890.							
Sept. 13.	Henry Wilson	Gloucester..	88	14	Banks.....	L	Bait and ice.
do 13.	William H. Wellington..	do ..	81	14	Gloucester..	L	do
do 15.	Joseph B. Maguire.....	do ..	88	16	do ..	U	Shelter.
do 16.	Gertie May	Portland ..	97	14	Banks.....	U	Repairs and wait spare suit sails from home.
do 16.	J. H. Carey	Gloucester..	95	16	Gloucester..	L	Bait and ice.
do 22.	Abby M. Deering	do ..	96	14	Banks.....	L	do
do 22.	Hattie Maud	Portland ..	86	16	do ..	L	do
do 22.	Grace L. Fears	Gloucester..	84	16	do ..	L	Repairs and wait spare suit sails from home.
do 23.	Maggie E. Wells	do ..	80	14	Gloucester..	L	Bait and ice.
do 24.	Everett Pierce	do ..	64	10	Banks.....	U	Shelter and repairs.
do 24.	Hattie L. Newman.....	do ..	93	16	Gloucester..	L	Bait and ice.
do 24.	Procyon	do ..	107	18	do ..	L	do
do 25.	Lizzie M. Stanwood.....	do ..	100	16	do ..	L	do
do 25.	Winona	do ..	103	16	do ..	L	do
do 26.	Chas. H. Boynton.....	do ..	71	14	Banks.....	L	do
do 27.	Ellen Lincoln.....	Portland ..	92	17	Mack. fish'g.	L	Shelter.
do 27.	Blanche	Gloucester..	79	14	Gloucester..	L	Bait and ice.
do 29.	Triton	do ..	67	14	Banks.....	L	do
Oct. 1.	Epes Tarr	do ..	66	14	do ..	U	Shelter.
do 1.	Bessie M. Wells.....	do ..	92	16	Gloucester..	L	Bait and ice.
do 2.	Enola C.	do ..	62	16	Mack. fish'g.	U	Shelter.
do 6.	Ralph E. Eaton.....	do ..	65	13	do ..	U	do
do 6.	Chas. S. Tappan.....	do ..	68	12	do ..	U	do
do 6.	Hustler	do ..	92	15	Banks.....	L	Bait and ice.
do 6.	Arthur Clifford.....	Provincet'n	80	13	do ..	U	Wood and water.
do 7.	Dido	Gloucester..	77	15	do ..	L	Bait and ice.
do 13.	A. T. Gifford	do ..	81	14	Gloucester..	L	do
do 13.	D. A. Wilson.....	Beverly....	86	14	Banks.....	L	do
do 13.	Procyon	Gloucester..	107	18	Gloucester..	L	do
do 13.	John W. Plummer.....	Portland..	95	16	Banks.....	U	Shelter.
do 17.	Grace L. Fears.....	Gloucester..	84	16	do ..	L	Bait and ice.
do 20.	Golden Hind.....	do ..	70	14	Gloucester..	L	do
do 20.	William H. Foye.....	do ..	67	12	do ..	U	Shelter.
do 22.	Sunshine	do ..	63	12	Mack. fish'g.	U	do
do 23.	Mabel W. Woolford.....	do ..	104	18	Banks.....	L	Bait and ice.
do 24.	Ambrose H. Knight.....	do ..	87	12	Mack. fish'g.	U	Shelter.
do 25.	Golden Hind.....	do ..	70	13	Seeking bait	L	do
do 25.	W. L. Wetherell.....	do ..	65	15	Mack. fish'g.	U	do
do 27.	Golden Hind.....	do ..	70	13	Banks.....	L	do
do 31.	Annie C. Hall.....	do ..	84	13	do ..	L	Bait and ice.
Nov. 1.	Senator Morgan.....	do ..	86	17	Mack. fish'g.	U	Shelter.
do 3.	Martha and Susan.....	do ..	67	13	Banks.....	U	Wood and water.
do 5.	Maggie E. Wells.....	do ..	80	14	Gloucester..	L	Bait and ice.
do 5.	Hustler	do ..	92	16	Banks.....	L	do
do 6.	John S. McQuin.....	do ..	77	14	Mack. fish'g.	U	Shelter.
do 7.	Minnesota	do ..	90	16	Banks.....	U	Shelter and repairs.
do 7.	Dora A. Lawson.....	do ..	119	18	do ..	L	Shelter and supplies.
do 7.	Marion Grimes.....	do ..	58	15	Mack. fish'g.	U	do
do 8.	Flora Dilloway.....	do ..	77	14	Banks.....	L	Bait and ice.
do 8.	Centennial.....	do ..	110	16	do ..	L	do
do 8.	Carrie and Annie.....	Boston ..	90	16	do ..	L	do
do 13.	Golden Hind.....	Gloucester..	70	14	do ..	L	do
do 13.	Henry Wilson.....	do ..	88	16	do ..	L	do
do 13.	Mabel W. Woolford.....	do ..	104	18	do ..	L	Bait & ice, repairs & stores.
do 17.	Alert	do ..	87	16	do ..	U	Shelter and repairs.
do 17.	Lizzie M. Centre.....	do ..	77	16	Mack. fish'g.	U	Shelter.
do 17.	John W. Plumer.....	Portland..	75	16	Banks.....	U	do
do 24.	Carrie and Annie.....	Boston ..	90	16	do ..	L	Shelter, bound home.
do 25.	A. E. Whyland.....	Gloucester..	123	8	Gloucester..	U	Shelter, bound Nfld. for herring

APPENDIX "B."

REPORT BY MR. ALEX. FRASER, B. A., CLERK IN CHARGE OF THE
FISHERIES INTELLIGENCE BUREAU, WITH HEADQUARTERS AT
HALIFAX, N. S., FOR THE SEASON OF 1890.

FISHERIES FROM 24TH JUNE TO 31ST OCTOBER, 1890.

HERRING.

Quebec.

Percé, P. Q.—Very plentiful outside from 14th to 27th August, and good catches occasionally. No reports since.

Grand River.—Fair catches 23rd to 28th July and 1st to 7th August.

Paspébiac.—Fair 1st to 2nd August, and good 7th to 14th.

Prince Edward Island.

Malpeque.—Schooling 5th July.

Panmure Island.—Struck in 30th June.

Cape Breton.

Port Hood and Mabou.—None at the former in June, but a few good catches at the latter. Fair at both places during the first part of July, none at either in August, but fair at both about 17th to 20th Sept. A very good haul at the former 3rd and 7th October, 150 barrels each day. Margaree averaged about the same as Mabou.

Cheticamp.—Very few reports.

Meat Cove and Ingonish.—A few good catches last part of June but no others reported.

St. Ann's.—Good catches from June 24th to July 18th.

North Sydney.—Struck in four miles off on 27th June and on 2nd July. Struck in all along the shore. 22nd July struck in at Mira Bay. Until the end of the month good catches were made at Sydney. After this no reports.

L'Ardoise.—Catch poor all June, average catch fair all July. From 28th July to 7th August the catch was very good. No reports from that date till 6th September, which said that during that week herring struck in, but few taken as they were not looked for, it being very unusual at that time of the year.

Arichat.—Good catches during June and July and first and last weeks of August. Fair 1st to 22nd September, when they struck off. Struck in again on the 29th and continued fair until about the 8th of October.

St. Peter's.—Fair June and first part of July. 29th July very good but no reports again until 3rd September, when the catch was good. 4th to 11th September poor, none since.

Nova Scotia.

Canso.—Very poor until August, when the catch was fair from the 1st to 7th. The average catch was very good from 1st to 22nd September, the best of the season being made in the vicinity of the 15th. In October the scarcity has been unprecedented.

White Head.—Fair last of June and nearly all of July, and 1st to 18th August, also catch very good 1st to 11th September. Good about the last of October.

Spry Bay.—Good 1st to 4th September. None 4th to 8th. Fair 8th to 11th.

Musquodoboit Harbour.—Reports very few.

Lunenburg.—Very scarce until 3rd September when they struck in all along the shore from the 4th to 11th; the catch was very good. On the 12th they struck off, but struck in at Mud Island; a few remained, however, until the 20th, when they all disappeared. They returned on 29th and continued very plentiful until 11th October.

Port Medway.—Few good catches made during the season. The dates of the strikes were 11th July, 24th September.

Lockeport.—Fair 24th June to 1st July. The average catch during the whole month of August was good, and 1st to 8th September very good; no reports worthy of mention since.

Sandy Point.—Good catches of fat herring during the latter part of June. Slacked off then but struck in again 4th July, they then were interfered with by dogfish and were kept off until 1st August, when the dogfish struck off. The herring then struck in, and for some time about 900 per boat were taken. They seemed to continue plentiful until the 24th September.

Port LaTour.—Good in June, very good about 24th July, and good 7th August to 11th September, when they slacked off. Struck in again 29th September, and fair catches were made off and on until 25th October.

Yarmouth.—Struck in 26th July. No other report.

John's Island and Pubnico.—Struck in on 1st September, and very good catches were made until the 10th.

Freeport:—Struck in 17th of July and struck off the 19th.

New Brunswick.

Grand Manan.—Sardine herring reported abundant during the whole season, especially in July. Net herring fair.

Campobello.—Sardines very plentiful, and net herring fair on the average during the whole season. The strikes were: 1st July, sardines; 28th July, sardines; 16th August, net. In September, from the 4th to the 11th, fishing of all kinds was the best known for years. The fisheries at Beaver Harbour have done much the same as Campobello. Large herring struck in there on 7th October. After this the fisheries began to decline.

. SQUID.

Quebec.

Percé.—Struck in 3rd September. Fair quantity 8th and 9th September, and very plentiful 13th; also very plentiful 3rd October.

Grand River.—Very plentiful 3rd October.

Paspebiac.—Small quantity 3rd October.

Cape Breton.

Port Hood.—Good supply 20th September and 25th October.

Margaree.—Fair supply 21st July.

Meat Cove.—Schooling north 21st July, fair supply 24th September.

Ingonish.—Struck in the 8th July. Good supply on 28th August. Struck in 11th October.

Arichat.—Struck in 18th July.

Sydney.—Struck in 13th October.

Nova Scotia.

Crow Harbour.—Good supply from 30th June to 1st August.

Canso.—Fair 1st July. Good 24th July, better 30th July. 1st to 15th September good supply.

Spry Bay.—Very good quantity 22nd July.

Lunenburg.—Fair 21st July, large schools 29th July.

Campbello.—Fair supply 21st and 29th July.

MACKEREL.

The most northern stations at which mackerel of any note have been reported during the season is Point Escuminac, N. B. Here mackerel struck in on 25th June, when about 100 were hooked. A few were taken each day until 8th July, when the catch was good. On the following day they struck off, but returned on the 10th, and a few were taken pretty much every day until 13th September, when the fishing season there closed. The best catches of the season were made from 4th to 11th September.

Prince Edward Island.

About the first reports received indicated that the mackerel fishery was doing well on the north of the Island from Egmont Bay round to Alberton the mackerel being of good size. Towards the latter end of July and up to the 14th August, the best catches of the season were made in this vicinity (the north), 500 and 1,000 per boat being hooked, excepting on the 25th August, when the hookers averaged 2,000 per boat at Miminegash, Nail Pond, Tignish, Kildare and Alberton. From this time until the end of the season the fishery was poor. The reports from Malpeque show that the catch in that vicinity was on the average fair.

On the south side of the Island no mackerel reported at Souris in June, reported schooling there 5th July, after which the catch was good for a few days, but again slacked off. On 21st July reported schooling again after which the catch was better and continued very good until about 10th August, after which it was very poor during the greater part of the remainder of the season. At Lakeville the catch was good from 9th to 15th September. In the vicinity of Georgetown the state of the mackerel fishery has been about the same as that at Souris. A few struck in at Boughton Island on 30th June, and good catches were being made quite regularly up to the 10th August. Schools reported there 7th, 21st and 31st July. hookers did well at Grand River, P. E. I., from 20th September to 3rd October, after which time very few mackerel were taken on the south of the Island.

The mackerel on the south kept well inshore all season, and gave the seiners no chance. Some late reports say that no schools appeared on the south until 29th July, and that those reported before were small herring and mackerel mixed together

Cape Breton.

First reports of mackerel at Port Hood and Mabou were about the 1st of July, about which time fair catches were being made. Very few reported at either of those places since that. About 20th September, fair catches were made at Port Hood and a few large fat ones struck in 29th October, which was no doubt the beginning of the fall school. At Margaree the first school reported was 31st July, the since then it is reported that they were plentiful, but yet the catch was on the average small.

Very few reports from Cheticamp.

Meat Cove.—A few were taken here during the first half of August and 5th to 20th September.

Ingonish.—A few tinkers, August best about the 11th.

St. Ann's.—None reported.

North Sydney.—Began to show 14th August, but few reported after that. Struck in again on 18th October.

L'Ardois.—A few taken now and then in June, July and August. Schooling 9th. August

Arichat.—Catch on the average fair, best reports being for the week ending 25th July, schooling 9th August, good catch about 22nd September, and fair last week of October.

St. Peters.—Some mackerel mixed with herring last part of June, struck in alone 31st July. The best catches were made last part of September, the catches being good almost every day from the 15th to the 29th.

Nova Scotia.

Bayfield.—1,000 taken in nets 25th June, and fair catches from that on to the 30th, when 5,000 were taken. In July the catch was fair.

Canso.—Few reports; a few taken about 19th September; a few large fat ones struck in 24th October, which likely was the first appearance of the fall school.

Spry Bay.—None reported.

Musquodoboit Harbour.—None reported.

Lunenburg—A few taken from 24th June until the first week of July, when they became very plentiful and continued so until the 29th, when they struck off. They struck in again the 8th August, and were schooling in the harbour until the 14th, when they became much scattered by the large schools of squid, and again struck off. They appeared again on the 26th, but struck off again on the 27th. A few remained and were taken in small quantities until 20th September, when all struck off. They appeared again schooling on the 24th, and good catches were made until the end of the month. The catch was reported fair during the first week of October, but after that none reported.

Port Medway.—Mackerel struck in four miles off on 25th June, and a few were taken during the remainder of the month and up to 11th July, when they struck in in larger quantities, schooling on the 19th, and continued very plentiful until about the end of the first week in August. After this reports were few until the first week of October during which a few were taken.

Sand Point.—Very few reports, reported schooling 9th August.

Port La Tour.—Very few reports, schooling 11th and 12th July.

Lobster Bay.—Schooling and good catches pretty much all the time from 12th July to the end of the season.

St. Mary's Bay.—Very plentiful during the whole month of September, after that tinkers were still plentiful but were very wild, being very much frightened by the seines. A great many were seined in September.

Digby.—None reported by regular correspondent but I heard from other sources that some good catches were made in Digby Neck.

Pubnico and St. John Island.—Very good catches made during July, August and September.

New Brunswick.

Campobello, N.B.—Mackerel (small) taken in good quantities in this vicinity from middle of August to middle of September, the best takes for years having been made from 4th to 11th September.

COD, HAKE AND HADDOCK

Quebec.

Percé.—From the 25th of July to the 30th the catch of cod was on the average poor. Very good on the 30th. During the month of August when there was any fishing it was poor. About the 5th September, there was a fair catch of cod and haddock; on the 8th and 9th cod fair and good to the 13th; from that out the catch averaged fair. The fishermen reported cod plentiful, but bait was, as a rule, very scarce, and the weather very rough.

Grand River.—Here very little was done inshore during the season, but the bankers, as a rule, made fairly remunerative trips.

Paspebiac.—This was the best station in the north for cod. When bait could be got and the weather any ways favourable, a very good catch could be made. Very good hauls were made here and there in July, August, September and October.

Caraquette and Shippegan.—The fisheries here this season are reported a total failure. In September the fishermen got discouraged and left their own shores for those of Prince Edward Island, where they did much better.

Escuminac.—A few cod were being taken from day to day during the season from 1st July to 13th September. The best fishing of the season was done from 4th to the 11th September.

Prince Edward Island.

Miminegash.—Hake fishing good about the 13th and 14th of August.

Malpeque.—Hake struck in the 14th August, and fair catches of cod were being made during the first week of September and about the first two or three days of October.

Souris.—A few fair catches of cod in June, but none noted since. Hake struck in all along the shore from Souris to East Point, on 24th July, and continued plentiful until 3rd October, very good hauls having been made about 25th July, 1st to 7th August, and 20th September to 3rd October.

Georgetown. A few fair catches made in June and about the 1st July.

Cape Breton.

Port Hood.—During the month of June the cod and haddock fisheries were on the average good. Also during July, until the 17th, when they fell to poor. On that date hake struck in and continued very good, while cod and haddock continued poor until the 25th, when all three became fair and remained so until about the 11th August, when all the fisheries became very dull and remained so until 16th September. Both bait and fish greatly improved, and cod, hake and haddock were taken in good quantities pretty much every day during the remainder of the month. The last week of the month, however, was poor and continued so until 25th October, from which date up to the end of October, the best fishing of the season in cod, hake and haddock was done.

Mabou.—Average of cod and haddock was fair June to July, but very poor during the whole of August. Cod and hake were good from 18th September until 14th October.

Magaree.—During the months of June and July the average catch of cod was very good, but in August, September and October very few were caught, though the fish were still plentiful. The obstacle reported being as a rule scarcity of squid and rough weather.

Cheticamp.—June and July, average catch good, but from that time till the 24th October, the fisheries were much the same as at Magaree 24th October and 25th, the catch of cod was very good, squid bait having been obtained.

Meat Cove.—Just about the same as Cheticamp.

Ingonish.—Catch of cod only fair on the average in June and July; some improvement from 2nd August to 22nd August. Also fair catches 9th and 2th October.

St. Ann's.—Catch of cod on the average good from 24th June up to 25th August, also a few good catches of hake and haddock during the month of August. From the 25th August to 9th October, very little fishing of any kind was done. Then some improvement was reported on St. Anns Bank.

North Sydney.—A few poor catches here and there through August and July.

Louisburg.—Fair catches of cod from the time first report was received in August until the close of the season. Fish as a rule, were plentiful, but strong currents prevented good catches.

L'Ardoise.—Cod very good from 23rd July till the end of the first week in August.

Arichat.—Good cod pretty much all July and first week in August. Since that time very little done until 22nd September, when the catch was good. Also some fair catches made in about the 8th, 17th and 31st October.

St. Peters.—Fair cod 28th July to 5th August, and 9th to 16th October.

Nova Scotia.

Canso.—Some very good catches of cod in the first part of July and the first week of August. Also during first week of September, but in last part of September and October the scarcity of fish has been unprecedented at White Head and Ignace Harbour. About the same as Canso. Cod good at White Head 27th October, and fair at Canso on the 31st.

Spry Bay.—Catch of cod ranging from fair to good in July, one or two good catches in August; one very good on 27th August. Good catches of cod on 1st to 4th September; fair 8th to 11th.

Musquodoboit Harbour.—A few very good catches of cod in June, July and September (reports not good).

Lunenburg.—Cod fishing good all June. Cod and haddock very good the first few days of July; slackened off until the 5th August, when cod became plentiful off shore, and continued during September.

Port Medway.—Cod good 24th June, but after that owing to the presence of dogfish were scarce until about the middle of July, when cod and haddock became plentiful and continued so for a few days. The cod were again very plentiful about 27th August. Good takes were made again on 4th to 11th September. A few taken the first few days of October.

Lockport.—Cod fair to good in June, but very scarce in July owing to dogfish. 5th August. The catch was very good and good from the 16th to 27th. 1st to 10th September, the catch was fair.

Sand Point.—Cod and haddock good in June, but very scarce in July until the first of August owing to dogfish. On the 1st of August the dogfish struck off and then the cod, haddock and herring struck in and fair catches were made for some few days.

Port La Tour.—Cod and haddock very plentiful in deep water some miles off from 23rd of July until 4th of August, when dogfish interfered with them and prevented fishing. Good catches were made some miles off the latter half of August and former half of September. Also very good catch of cod on 4th October.

Pubnico.—During the last few days of July, the first half of August and the first half of September the catch of cod was very good.

Digby.—Cod and haddock good in June. First part of July poor fishing. On 22nd July hake struck in and continued very plentiful until 4th August, when the dogfish struck in and drove them off. None appeared since.

New Brunswick.

Grand Manan.—About 22nd of July hake struck in at Grand Manan as well as at Digby, and continued plentiful until the 4th of August, when the whole bay became infested with dogfish which drove them off. From last few days in August to the end of the season there was good fishing in cod and pollock.

Campobello.—Cod hake and haddock fisheries did well here from 23rd of July until the end of the season, the best fishing in the three years having been done from 4th to 11th September.

Beaver Harbour.—Reports much the same as Campobello.

Reports from Banks not regular enough to enable me to make a synopsis, but the general tenor seems to be that with squid bait and fair weather the bankers were successful.

ALEX. FRASER,

Clerk in charge F. G. Bureau.