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FIFTY YEARS OF FISHERY ADMINISTRATION IN CANADA

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The Dominion fisheries have been for over fifty years administered by a department, or bureau, of the federal service under a minister, who is an elected Member of Parliament, a member of the cabinet, and holds the portfolio of marine and fisheries.

Federal administration was established by virtue of an act passed by the Imperial Parliament in London, and dated March 29, 1867, and naming "Sea-Coast and Inland Fisheries," as among the subjects within the exclusive legislative authority of the Parliament of Canada, along with twenty-eight other matters coming under that authority. The four Provinces, Nova Scotia, New Brunswick, Ontario and Quebec, had been separate colonies before coming into confederation, and had their separate jurisdictions. As other Provinces, like Prince Edward Island, and British Columbia, came in (until there were at least eleven divisions, nine Provinces and two Territories included in the Dominion) it is easy to understand that rights of property, and of jurisdiction, which had not been fully defined, readily became subjects of legal dispute. From time to time test cases have been tried, and the highest Imperial Court, the Privy Council Judicial Committee in London, has been appealed to and has given many important decisions.

FISHERIES DEPARTMENT CREATED.—The first Minister of Marine and Fisheries was the Hon. Peter Mitchell, a native of New Brunswick, and long a prominent figure in Canadian politics. In his first report^x addressed to His Excellency the Right Hon. Sir John Young, Baronet, Governor General of Canada,

x) For 1868 (publ. 1869; Sessional Papers v^{No. 12.})

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he says: "No such department had previously existed in any of the Provinces which now form the Dominion, but when the extensive and varied interests, connected with these branches of the public service, were duly considered, it was deemed advisable to create a separate department for their administration, with a member of the Government at its head; but the Canadian act, specifying its organization and scope, passed during the first session of the new Federal Parliament, did not receive His Excellency's assent until May 22nd, and the department did not begin its legal existence until July 1, 1868."

SUCCESSIVE HEADS OF THE DEPARTMENT.—During the period, over fifty years, which has elapsed since that date no less than a dozen distinguished Canadian statesmen have held the fisheries portfolio. Including the present minister, these are and have been: Hon. Peter Mitchell, Hon. Sir Albert Smith, Hon. A. W. MacLellan, Hon. J. C. Pope, Right Hon. Sir George E. Foster, Hon. Sir Charles Hibbert Tupper, Hon. John Costigan, Hon. Sir Louis H. Davies, Hon. J. Sutherland, Hon. Raymond Prefontaine, Hon. L. P. Brodeur, Hon. Rodolphe Lemieux, Hon. J. D. Hazen and Hon. C. C. Ballantyne, the last-named being the present head of the department. Five of these received from the hands of the Sovereign the high honor of knighthood, and in every case it was in recognition of services rendered in connection with the Canadian fisheries. The fisheries have been recognized by the King, as the fathers of confederation recognized them, to be of supreme importance and involving interests of the greatest national and international moment.

EARLY CONSERVATION EFFORTS IN NOVA SCOTIA AND NEW BRUNSWICK.—Prior to confederation in 1867 the supervision of the fisheries, in the respective areas named, had been in the hands of the United Provinces of Upper and Lower Canada, and administered by the Crown Lands Department, but in Nova Scotia and New Brunswick, a fisheries committee

existed which relied much upon advice from outside bodies such as the Provincial Association for the Protection of Inland Fisheries and Game in Nova Scotia (founded in Halifax in 1853), and largely owing its efficiency to officers in the Imperial Forces (army and navy) stationed in Canada, among whom Captain William Chearnley was most prominent and for some years acted as supervisor of fisheries. He had a number of wardens under him, who received 25 pounds per annum under authority of chapter 17 of the Nova Scotia act of 1853. The scheme to frame a complete set of regulations, based on Captain Chearnley's report after an inspection tour in 1853, fell through. The Nova Scotia fisheries act, passed in 1853, providing close seasons, rigorous penalties for violations, appointment of wardens in every county, etc., had proved a failure, and the fisheries committee in 1855 decided to vote no more grants from the public treasury for fishery protection. New Brunswick, as early as 1845, authorized stringent salmon laws in Restigouche County by an act of assembly (8 Victoria, cap. 65), but Dr. M. H. Perley, in a report on the New Brunswick Fisheries (1852), remarked that "these very stringent and salutary provisions * * * are not enforced. In practice the act seems almost a dead letter," he said "and a close time, prohibition of taking and sale of grilse and immature salmon, prevention of the use of the fish spear, and the enforcement of uniform laws in the Province generally are necessary." It is interesting to note that, while salmon and trout claimed first attention, the protection of oysters was also included in early fishery legislation in Prince Edward Island and New Brunswick.

It was realized in New Brunswick that, unless backed up by public opinion, the enforcement of fish and game laws is almost impossible, and in 1851 a series of local fishery societies was started with the aid of a vote of five hundred pounds (\$2,500) from the Legislature in Fredericton. Three of these proved most successful in Charlotte County, opposite the coast of Maine, and an annual fishery fair held on Campobello

Island—one of which I attended a few years ago—is the survival of the old fishery society of southern New Brunswick, founded seventy years ago.

EARLY FISHERY PROTECTION IN QUEBEC PROVINCE.—In the Province of Quebec, or Lower Canada as it was called, a bill for protecting salmon fisheries was introduced by the Hon. David Price, member for Chicoutimi, and passed by the lower house in Quebec, in 1855 or 1856, but after being approved by the upper house it never proceeded further. Probably the clauses requiring owners of dams to provide fish-passes proved fatal, lumbering being the leading industry in Canada at that time.

Fine salmon waters were very ruthlessly treated by the lumberers, and Mr. Richard Nettle, a venerable and strenuous advocate of fishery protection, whom I remember in the Dominion service twenty years ago in his old age, recorded in 1857 that Mr. Boswell, of Quebec, bought the Seigniorship of Jacques Cartier, with the old French rights in order to restore the Jacques Cartier River by salmon culture; but as no protection could be guaranteed by the Government he abandoned the project.

RICHARD NETTLE FIRST HATCHES SALMON.—It was the first scheme to hatch salmon artificially in Canada, but Mr. Nettle did not drop the idea of fish culture, and later he procured eggs and hatched salmon in a small hatchery devised by him in Quebec City, after his appointment as Superintendent of Fisheries for Lower Canada, under the Crown Lands Department. Mr. Nettle, who was thus the first man to hatch fish in Canada, had a staff of ten overseers, stationed on the Saguenay, the Godbout, and some Gaspé rivers, and many reports were published by him, the last in 1859, which are still of very great interest. His little work on the salmon fisheries of the St. Lawrence and its tributaries, published in Montreal in 1857, is an interesting but pathetic record, for it shows the barbarous treatment of salmon and trout waters generally, in early days.

Almost every river and stream from Niagara to Labrador abounded with salmon in 1825, he tells us, and while he criticises the Hudson Bay Company for not appreciating the salmon resources, he candidly admits that a "prohibition by the company affords the only present safeguard for the existence of the salmon; * * * were that protection withdrawn," he says, "for one season, without effective means substituted, salmon would be exterminated from our country." Mr. Nettle was himself an energetic and fearless officer, and inflicted fines, under the act of 1855, for violations detected by him during his lengthy tours.

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FIRST FISHERY CRUISER IN CANADA.—A vessel was found to be necessary for proper patrol, and as early as the period with which I am dealing a fishery protection schooner, *La Canadienne*, in command of Dr. Pierre Fortin, made inspection trips down the St. Lawrence shores, and even visited the Magdalen Islands, and the waters from the Bay of Chaleurs to New Brunswick and Nova Scotia. Dr. Fortin's reports, and his description of the condition of the salmon, cod, herring, mackerel, seal, and whale fisheries are extremely interesting. In his 1859 reports he tells of ten whaling vessels fitted out at Gaspé, and operating with 200 local whaling men for black whale, i. e., the great Arctic right whale, which has long been extinct, excepting in remote polar waters. He speaks of humpback, sulphur-bottom, and finner whales as plentiful. He was succeeded by Inspector Theophile Tetu in September, 1867.

In the old and rather rare printed reports, issued at this time, the name of Mr. W. F. Whitcher appears as an officer of the Quebec Crown Lands Department, who early paid attention to the fisheries, and was afterwards appointed the first Commissioner of Fisheries at Ottawa. Mr. Whitcher did great service for the fisheries, and was regarded as an able authority and a courageous administrator.

ONTARIO LAWS AND ADMINISTRATION 60 YEARS AGO.—
The Ontario waters or Great Lakes fisheries were also the ob-

X) "Alliance" in 1852 (see Session. Papers for 1852-53, App. IIII.)

ject of attention in these early times, 70 years ago. The first Superintendent of Fisheries in Upper Canada was Mr. John McCuaig, and he seemed to have only one officer under him, Mr. William Gibbard, of Collingwood, who looked after the more westerly waters, Lakes Huron and Superior; they found great difficulty in enforcing what is called in the printed reports the "New fisheries act of 1859."

A system of leases for fishing locations along the Great Lakes was introduced, but in carrying it out much trouble was experienced. Some fishermen occupied the locations without making the required payments, in the hope, the officer reported, that after twenty-one years' possession they would have a title even against the Crown; but many claimed that they had already paid rents to alleged owners, who were supposed to be lessees of the Crown Lands Department, Toronto. Ten families, for example, at Point Pelee, Lake Erie, paid rent for seven years (from 1852) to James Paxton, Amherstburg, who himself rented land at \$50 per annum, with the alleged fishing rights. The officer reported that Paxton had not paid the rent and owed the Crown Lands Department \$350, or seven years' dues. The officer favored fishery leases to responsible men, because it would have the effect, he thought, "of ridding certain localities of a reckless and lawless class of men who are doing their best to depopulate our waters." Reckless overfishing seemed to have already begun, even when the country was still sparsely settled and virgin forests extended everywhere. We see how lacking in uniformity, and how incomplete was the fishery administration in eastern Canada, now formed of the five Provinces from Ontario to the Atlantic coast.

FEDERAL FISHERIES ACT, 1868.—A new era commenced at confederation, and on the same day upon which the act received the Vice-Regal signature (May 22, 1868) whereby the Department of Marine and Fisheries was created, the fisheries act also received the necessary assent of the Governor Gen-

eral. The Federal act is entitled "An Act for the Regulation of Fishing and the Protection of Fisheries." Section 24, the last section of chapter 60 in the 31st year of the reign of Her Majesty Queen Victoria, declared that it should be known and cited as the fisheries act. With it was associated chapter 61, 31 Victoria, "An Act respecting Fishing by Foreign Vessels."

FEDERAL ACT INCORPORATED EXISTING LAWS.—The various Provinces had anticipated that federal fishery legislation would probably be based upon much of the existing legislation in Upper and Lower Canada, and in New Brunswick and Nova Scotia. One Nova Scotia authority, Mr. T. F. Knight, in a report on the fisheries approved by the provincial government, said that "Under the act of confederation, the Canadas, New Brunswick and Nova Scotia, the fisheries are consigned to a special bureau, and * * * the assimilation of the laws relating to them will be one of the most delicate tasks the Government will undertake." As a matter of fact, the first federal fisheries act was largely such an assimilation of existing laws, and whole clauses were bodily transferred, and remained there unchanged for nearly twenty years. Many of these local provisions, no doubt suitable enough in early days of colonial settlement, seemed too petty and detailed to stand in a federal act; but most of them still remained in the well-known act of 1886, known as chapter 95, though modified in part by Orders in Council, passed from time to time down to 1906, when chapter 45, revised statutes, supplanted chapter 95 (1886). The statutes of 1910, 1911 and 1912, referring to fisheries need not be dwelt upon, but further changes were embodied in chapter 8, 4-5 King George V (act of 1914), and amending acts of 1917 (chapter 16) and 1918 (chapter 22).

SOME FEATURES IN FIRST ACT.—The twenty-two clauses of the first fishery act contained much that was unwieldy, of an unnecessarily detailed character, and, as already stated, mainly transferred from the early provincial acts. But some parts of the act are so important that a brief reference seems necessary to certain of them: (1) A staff of federal fishery

officers, invested with magistrate's powers for the purposes of the fishery act; (2) Federal fishery licenses and leases; (3) close seasons for salmon, whitefish, lake trout, and other important species; (4) provisions for requiring fish-passes, and clear passage for any fish named in the act; (5) prohibition of the capture of the young of any fish named in the act; (6) free passage of fish on Sundays, and prohibition of Sunday fishing; (7) prohibition of pollutions in waters frequented by fish; (8) provision of fish-sanctuaries or fish-reserves; (9) oyster and shellfish fisheries embraced in the act; and (10) Orders in Council amending the act to have the same force as the act itself.

There were some anomalies, such as the provisions which repealed ten existing provincial acts, viz., 29 Victoria cap. 11 (1866), which amended chap. 62 (1859) of Upper and Lower Canada acts; 23 Victoria, cap. 52 (1860), and 26 Victoria, cap. 6 (1863); and Victoria 30 cap. 14 (1867), of the Province of New Brunswick acts, while other provincial acts were to continue in force, viz., 16 Victoria cap. 69 (1853) New Brunswick, and chapters 94 and 95 of the Nova Scotia acts, 28 Vict. cap. 35 (1865), 29 Vict. cap. 35, and cap. 36 (1866), and it was also provided that commissioners or overseers of river fisheries in Nova Scotia, under chapter 103 of the provincial statutes, should continue to exercise authority. One curious clause in the first federal fishery act is rather a conundrum, viz., sub-sec. 3 of Sec. 14 which forbids any one between June 1 and September 30 making a fire in or near any forest or bush, or on any uncultivated land, on the north shore of the St. Lawrence or Gulf from the Saguenay River to Red Island, within the said gulf, whereby the fire spreads to a distance of one arpent. The fine should not exceed \$50, and included the responsibility for all damages occasioned by such fire, but licensees or proprietors might burn or cut wood, if not doing any injury to their neighbors. Such a forestry enactment seems out of place in a fishery act. But if incongruous clauses and superfluous and cumbersome sections appear, there are also notable omissions.

LOBSTER INDUSTRY AND OTHER OMISSIONS.—No mention of the lobster is made at all, no prohibition of the use of edible fish for fertilizer purposes, and only a bare reference to whale fishing, in which industry explosives were forbidden; and there is no reference to the great salmon and lobster canning enterprises, which have formed the subject of much necessary later regulation. After I became Commissioner of Fisheries in 1893, the necessity of establishing licenses for lobster fishing and salmon canning seemed to me urgent in order to protect and regulate them; but I found that most of the older departmental officers opposed my suggestions, because canning was not a fishing operation, and lobstering was not "a fishery in law." My reply was: "Make lobstering a fishery in law, demand a lobster fishing permit or license, and bring salmon canning under the act." Many years later, it is hardly necessary for me to say, both these early proposals of mine were embodied in the Canadian fishery laws. During the last twenty-five or thirty years the oyster, lobster, Pacific salmon, and other fisheries, have been the subject of innumerable regulations, chiefly in the form of Orders in Council.

ADVANTAGE AND DANGER OF ORDERS IN COUNCIL.—An Order in Council is a law passed by the Canadian cabinet without recourse to Parliament, and having the force of an act of Parliament as already pointed out. It is a ready and speedy method of accomplishing legislation, and the fishery act provides that Orders in Council amending parts of the act shall have the force of the statute or act itself. There is a danger perhaps in this procedure, for hasty legislation is not always good legislation, and a statute of Parliament has greater weight and importance in popular estimation, but legislation sanctioned by "The Governor General in Council," to use the correct phrase, saves the time of Parliament and on the whole is a great advantage to the country.

LOBSTER REGULATION STARTED 1873.—Lobster legislation has been prominent during the last 40 years, the first

lobster regulations being enacted by Order in Council in 1873, when three provisions were authorized: viz., (1) Prohibition of spawn lobsters; (2) lobsters under 1½ lbs. weight forbidden; and (3) soft-shell lobsters illegal. The following year (1874) a close time, July and August, was specified, and a nine-inch size limit introduced.

SPECIAL DOMINION REGULATIONS FOR PROVINCES.—Subsequently special codes of fishery regulations for the several Provinces were framed modifying the general provisions of the act to meet local and special conditions, and these have been found more handy and convenient in each Province in the work of enforcing fishery regulations. The first clause (with the exception of the Nova Scotia regulations) always required that a license shall be obtained by any person desiring to fish in such Province.

TOO MANY REGULATIONS.—It must be admitted that this accumulation of legislative enactments, fishery acts, provincial codes of laws, authorized by Dominion special Orders in Council, to meet conditions arising from time to time, forms a rather confusing body of legal provisions; but on the whole these Canadian laws have worked beneficially, and accomplished great things for the fishery resources of the Dominion.

DISPUTED FISHERY RIGHTS, FEDERAL AND PROVINCIAL.—After confederation was accomplished, and especially after British Columbia in 1871, and Prince Edward Island in 1873, and Alberta and Saskatchewan in 1905, were admitted to confederation*, it was felt that the exact limits of fishery rights and prerogatives remained in many respects ill-defined. Some friction was caused, and important cases, such as that of "The Queen *versus* Robertson" on the famous salmon river Miramichi demonstrated the desirability of some authoritative decision on these disputed rights.† In 1892 the

* Manitoba was a Territory incorporated in 1870 in the Dominion.

† According to this decision of the Supreme Court of Canada (in 1882) the Dominion can legislate in regard to all fisheries, but has no power to interfere with or control or grant exclusive fishery leases in any non-navigable river whether the bed or soil be vested in the Crown in right of a Province, or in a private owner holding a title from the Crown.

Quebec Government questioned Dominion rights in respect to inland fisheries, and denied the validity of an eel-fishing lease on the Richelieu River which had been issued from Ottawa. The Dominion Government invited the Quebec Government to agree to a reference to the highest legal tribunal in the British Empire, the Privy Council in London, and to allow the Dominion to issue leases and licenses pending a final decision; but Quebec refused. Various other cases arose, and in 1894 Ontario passed a code of fishery regulations, followed by similar action in British Columbia in 1897, so that the authority of the Dominion was being directly impugned. A reference was made to the Imperial Privy Council in the form of an appeal against the judgment of the Supreme Court of Canada on seventeen points in controversy, which judgment was not acceptable either to the several Provinces, or to the Federal Government, and was not indeed a unanimous decision of the Bench.

IMPORTANT FISHERIES DECISION, 1898.—Setting aside a number of minor points the Imperial Fisheries Judgment, dated July 18, 1898, decided these four important questions:

1. That fisheries jurisdiction, the making of fishery laws in Canada, is vested in the federal government.
2. That property rights in fisheries, and in consequence the issue of leases and licenses, is vested in the several Provinces.
3. That the federal government can impose a tax for revenue purposes on every license fishery issued by the Provinces. (This power might be so exercised as to make provincial licensing a practical impossibility.)
4. That all public harbors, and the fisheries therein, are vested in the Dominion.

DOMINION RETAINS GREAT PROPERTY RIGHTS.—It was admitted, before the Imperial Tribunal, that in such a Province as Nova Scotia all the existing harbors are public harbors,* and as all the mouths of salmon rivers, and probably

*Hon. Mr. Longley declared "Every harbor in Nova Scotia is a public harbor." p. 227; Official Report of Imperial Privy Council Appeal, London, 1899.

every important oyster bed, is in a public harbor, the Dominion possesses vast property rights in the fisheries, and the day may come when wise counsels will prevail, and the present state of uncertainty be removed by the entire fisheries jurisdiction and property rights being finally vested in one authority, viz., the Federal Government. This will do away with all conflict and uncertainty, and be a benefit to the fisheries in every way. The single aim of protection, conservation, and wise regulation (in the interest not of Provinces, or sections of the country, but of the whole Dominion) could then be carried out. The Provinces held the opinion that they could get considerable revenue out of their fisheries, but this is an error, though in British Columbia the license fees did amount to a large sum annually, and as the valuable salmon fisheries were mainly carried on within the limits of rivers rather than in the open sea, the situation was somewhat complicated. A *modus vivendi* was for a time adopted, until a further legal decision was obtained.

FULL DOMINION CONTROL DESIRABLE IN FISHERIES.—Whatever uncertainty may exist as to Provincial and Dominion rights, the most desirable consummation is the Federal assumption of all such rights. All friction, and injurious conflict and misunderstanding would disappear, and the sole effort of the Dominion would be to exert every effort to make the fisheries everywhere productive and prosperous. No fair-minded critic, looking dispassionately at the history of fisheries administration in Canada, will deny that the Federal Government did great things for the fisheries for a long period of years. What would have been the fate of the resources of our waters in Canada had no protective efforts been made, is unquestionable. Their extent and value today are due to the federal measures, but they are capable of vast extension, and even decaying fisheries like the oyster industry can be restored if a proper Dominion conservation policy be adopted.

THE SERVICES OF PROMINENT OFFICIALS REFERRED TO.—Who are the men to whom the preservation of Canada's

fisheries are mainly due? I have mentioned the names of the cabinet ministers at the head of the department in successive Governments, most of them deeply interested in the welfare of the fisheries; but the deputy ministers must not be forgotten, though in most instances they were chiefly concerned with marine and shipping matters. William Smith, the first Deputy Minister, was a sturdy and assiduous Scotsman, born in Leith, Scotland, and an imperial customs officer at St. John, N. B., but for nearly thirty years known as "Fishery Smith," or more irreverently as "Fishery Bill," during which long period he was the official head of the Department. Honest John Hardie, who was connected by marriage with the first appointed Minister, Hon. Peter Mitchell, acted for a time on Mr. Smith's retirement. Col. F. F. Gourdeau, Mr. Alexander Johnston, and Mr. G. J. Desbarats, also performed the duties of deputy or executive head, but I must not omit Col. John Tilton, who was Deputy Minister of Fisheries from 1884 to 1892, when the marine branch had its own deputy, and fisheries had a separate deputy, a condition changed when the title of Commissioner of Fisheries was revived, and when I was given the position in October, 1892. Deputy Minister Smith on resuming the title of Deputy Minister of Marine and Fisheries, shared with me much of the administrative work in the Department.

THE FIRST COMMISSIONER OF FISHERIES: W. F. WHITCHER.—It is simply mere justice to refer to the great services rendered by such men as Mr. W. F. Whitcher, who held high office for nine years (from 1869 to 1877), and who signed the annual fisheries reports, which also bore the signature of the Minister himself. Mr. Whitcher did an enormous amount of work, and was most untiring in the task of inspecting the fisheries, so that his published reports are of great interest; but his conspectus of the fishery articles in fishery treaties between Britain and the United States concerning Canadian fisheries, printed in 1870, is one of the best summaries available, and is a masterly synopsis of the points

in international law involved, and the bearings thereof, and it only covers thirty-one pages. For several years the annual fisheries report was called the "Report of the Commissioner of Fisheries," and signed by him, but there has always appeared an ineradicable tendency for the marine branch to assume precedence over the fisheries in departmental routine, not always to the advantage of the fisheries of the country.

SAMUEL WILMOT—HATCHERY PIONEER.—One prominent Canadian fishery officer merits in this connection very special reference, viz., Mr. Samuel Wilmot, a pioneer fish culturist and fish conservator. He was full of courage and enthusiasm, and even when he was wrong would still fight for his opinions. He had no technical training, but had erected a fish hatchery on his farm near Newcastle, Ontario, and in a report dated December 31, 1878, he speaks of his first hatching efforts as begun in 1865. In 1866 he was appointed an Upper Canada fishery officer, and in 1868, the year after confederation, became an official of the Federal Government. For his early services to fish culture he was paid \$2,000. In 1876, eight years after his first federal appointment, he became the first superintendent of fish breeding in Ottawa, but numerous other fishery duties were given him, and he attended to departmental correspondence, inspected fisheries in various parts of Canada, drafted fishery laws, and was chairman of several fishery commissions, the principal ones being the British Columbia Commission (1892), and the Great Lakes Commission (1893), each of which embodied its evidence and conclusions in bulky blue books, prepared and edited by Mr. Wilmot himself. He represented Canada on important public occasions, such as the Great Fisheries Exhibition in London, 1883, and the Chicago World's Fair in 1893. Many of Mr. Wilmot's reports are of very great interest, such as his Lake Winnipeg and Fraser River (British Columbia) reports, made after his visits of inspection in 1890. The original Lake Ontario hatchery, which was transferred from Mr. Wilmot to the Dominion Government, was followed by others, so that there

were in 1875, a series of five equipped and in operation, viz., the Restigouche, Miramichi (in New Brunswick), and the Tadousac (on the Saguenay), and the York (Gaspé) hatcheries in Quebec Province. These had increased, thirty years later to twenty-eight, with eleven subsidiary establishments, which were turning out 1,000,000,000 fry (in 1905), more than half being whitefish and yellow pickerel or wall-eyed pike.

W. H. VENNING—AN ABLE PIONEER INSPECTOR.—Of equal importance among these early fishery officials was Mr. W. H. Venning, acting at first as inspector for all the maritime provinces, but later limited to New Brunswick. It is impossible to overestimate the services of Mr. Venning, whose official reports, the first dated October 10, 1867, are full of wise recommendations and reliable information. His son, R. N. Venning was long chief clerk, and later Superintendent of Fisheries, a position he held when he retired some years ago. His services in the Bering Sea negotiations were notable, and he did a variety of work during his forty years in the Government employment.

J. C. KIRKWOOD AND S. P. BAUSET.—When the officials of the Crown Lands Department, Quebec and Toronto, moved to Ottawa at confederation, there were included two men who deserve honorable mention, one Mr. J. C. Kirkwood, and the other Mr. Samuel Pierre Buset. The former was transferred back to Toronto on accepting a provincial government post, but Mr. Buset remained for a long period as chief clerk of fisheries in Ottawa. He was a perfect encyclopedia of information on fisheries administration and regulation in Canada, was infallible on official precedent and procedure, and possessed of the characteristic vigor and zeal of the typical French Canadian.

DR. WILLIAM WAKEHAM.—It is impossible to mention many who deserve to be recalled in any review of fisheries administration in Canada, but Dr. William Wakeham, the successor of Pierre Fortin and Napoleon Lavoie, ranks among the most efficient and well-informed officers in the service.

and he may be said to have given its deserved repute to the old outside fisheries service. He entered on his official work in 1879, and for 35 years had charge of the most difficult inspector's district in the Dominion, namely, the Gulf of St. Lawrence and Labrador area. He combined patrol duty with a Government physician's work, and the remote fishing communities of Laborador, north Gaspé, and the Magdalen Islands, looked upon the gulf inspector as a benefactor, as much as an arm of the law. He was one of the ablest and most esteemed officers the Canadian Government Service ever possessed. With Dr. Richard Rathbun, of Washington, Dr. Wakeham made a complete survey of the fisheries of the boundary waters from the Bay of Fundy to Puget Sound during the years 1893-1896, under the International Fisheries Convention, and the results were a code of joint regulations and an exceedingly valuable detailed report. I had the honor of acting as expert adviser with Dr. Wakeham on this international survey, and Dr. Hugh M. Smith, U. S. Commissioner of Fisheries, also joined the Commissioners for a time as expert adviser for the United States. It is worthy of mention that Dr. Wakeham had command of the *Diana* on the well-known Hudson Bay cruise in 1897, and presented a most valuable report on the fisheries, etc., in peri-Arctic waters.

RECENT OFFICIAL WORK—CODES OF REGULATIONS.—Of my own twenty-eight years' work, as Commissioner of Fisheries for Canada, and of the work of more recently appointed officers I cannot speak, but it fell to me to frame the early drafts of the fishery regulations for British Columbia, to draw up a more complete set of lobster fishery regulations, as well as oyster regulations, and new codes of Manitoba, and Northwest Territory laws, all of which were, in the main, embodied in regulations passed by the Government at Ottawa, and most of which were carried out for a long period, until amended in recent years by new codes. The lobster regulations framed by me remained in force with little activities, and I have omitted all reference to a most important

Ministers of the Department to revise the fisheries act, and as International Fisheries Commissioner, appointed under the Fishery Treaty of April 11, 1908, I framed conjointly with my United States colleague, Dr. David Starr Jordan, a system of international regulations, sixty-two in number, which received the sanction of the Parliament of Canada, pending similar action by the United States Congress as called for by the Treaty. The regulations were never conjointly promulgated, and a new international commission has been authorized, which it may be hoped will succeed in securing concurrent action in the fisheries administration of contiguous waters along the international boundary between the United States and Canada.

THE WORK OF OUTSIDE INSPECTORS AND OTHERS.—INSPECTORS CHAPMAN, HOCKIN, GILCHRIST, MCNAB, ETC.—If the inside fisheries staff are responsible largely for the conservation and development of the fishing industries by a wise central administration system, it remained with the outside service, the inspectors, fishery overseers, and others, as their essential duty, to enforce the laws and encourage expansion and conservation. Mention should be made of men like Inspector R. A. Chapman, of Moncton, N. B., for over twenty years a zealous and conscientious officer in New Brunswick; also Inspector Robert Hockin, of Pictou, N. S., an officer of rare knowledge and courage, with a combined scientific instinct and legal acumen which made him a valuable aid to the service for nearly thirty years. He invented the Hockin Fish-Pass which twenty-five years ago was approved by the Government, and many have been constructed on various rivers. Inspector F. C. Gilchrist, Qu'Appelle, had the gigantic task of supervising the vast western area between Manitoba and the Rocky Mountains, and did it marvelously well. In my possession I have a mass of letters and communications of much scientific merit, for he not only enforced the observance by Indians and white men alike, but during his tours made scientific observations and tests in remote lakes and rivers of

the west that are of incalculable value. He sacrificed his life when making tests with a new form of net, suitable he thought for the requirements of the Indians, and less wasteful than the devices they used. Exposure in inclement weather, during this work, brought about his death, but from 1885 to 1896 he did splendid service. I should like to mention Inspector Bertram, the able officer who had charge of the Cape Breton fisheries from 1884 until his death in 1909; and I cannot omit Inspector John McNab, New Westminster, British Columbia, under whom in the early "nineties" the vast fisheries of the Pacific Province progressed from small beginnings. He was the only officer who knew the northern waters. I had the privilege of visiting with him in 1894 the Nass River and its tributaries, Work Canal, Prince Rupert, then called Tux Inlet, Metlakahtla, Rivers Inlet, and some of the upper Fraser waters, where I saw vast schools of salmon spawning. John McNab was the only fisheries official (excepting Officer William Roxburgh, a native of Glasgow, Scotland, who knew the Skeena and interior waters), to whom the whole coast, and most of the headwaters, were familiar. McNab was born in Nova Scotia, and was one of the "Forty-Niners" who prospected for gold in the wild northern regions, where his knowledge proved of inestimable value later to the fisheries service. It is impossible to estimate too highly the great work such officers did in the early days of fishery development.

CAPTAIN J. T. WALBRAN.—In much of this valuable work Capt. J. T. Walbran, of the cruiser *Quadra*, gave his skilled aid for many years. Never was there an abler, more scholarly, and enthusiastic departmental official than Walbran. I made several cruises with him along little-visited parts of the Pacific coast, making plankton and bottom catches with naturalist's nets and accumulating much valuable biological and fishery material, and in all my work Captain Walbran was assiduous in his help and advice. He had a distinguished brother, Canon Walbran, of Ripon Cathedral, England. Both brothers had antiquarian and historical tastes of uncommon character,

for one wrote on the antiquities of the ancient city of Ripon, and Captain Walbran himself wrote the very best work on Pacific place-names in existence. Dr. G. M. Dawson had done some B. C. plankton work before mine, and that famous scientist generously placed his collection in my hands to describe with my own large collection, but all perished in a fire which devastated the west parliamentary building in 1897.

INSPECTOR LATOUCHE TUPPER.—Inspector R. LaTouche Tupper deserves mention for his splendid work as inspector on Lake Winnipeg and Manitoba waters. In his hospitable home on the Red River, at Selkirk, he had a fine library of works on fish and fisheries, and had remarkable scientific and literary tastes. Captain Dunn, who for many years cruised the Great Lakes, also did courageous and effective work in fisheries conservation. All the officers I have just referred to are now dead; but the Department has on its staff some men of special ability, one of whom I must mention, viz., Mr. John J. Cowie, recognized by all who have any knowledge of Canadian fisheries, as an eminent expert with unrivalled experience and knowledge of fish-curing methods and products. The oyster fisheries owe much to the skill and labor, for nearly thirty years, of Mr. Ernest Kemp, a member of a family prominent in English oyster culture on the famed Whitstable beds for two hundred years. No government service ever possessed abler and more indefatigable men than the officers I have referred to. The fisheries owe more than can be estimated to the valuable work they did in the special lines to which they devoted their lives.

GENERAL SUMMARY OF FEDERAL FISHERY ADMINISTRATION.—Of various branches of activity, such as publicity work, improvement of cured and pickled fish, better government-assisted fish transportation and other efforts, many now in progress, I cannot speak. It must suffice to quote a summarized statement of such activities from a lengthy article of mine, recently published by the *London Times*, in the "Times Book of Canada," which is an expansion of the article

Messrs. Appleton, of New York, asked me to prepare a few years ago for the *Encyclopedia Americana*. This summary gives a slight idea of the varied work, administrative and otherwise, performed by the Fisheries Department, now part of the Marine and Fisheries Department, Ottawa, of which Mr. W. A. Found is Assistant Fisheries Deputy. The more salient features are:

1. The maintenance of a system of leases and licenses, which until the fisheries decision of 1898 the federal government claimed to have the sole right to issue. Certain Provinces now issue licenses, and much doubt exists as to the limits of Dominion and Provincial rights regarding certain licensing and leasing powers, which the judgments of 1898 did not remove.

2. Enforcement of conditions concerning fishing, amount, mesh, etc., of nets and gear, close seasons, dams and other obstructions, pollutions, etc.

3. Fish culture by means of hatcheries, and propagation of fish of commercial importance chiefly, though salmon and game fish are not excluded.

4. Fisheries intelligence bureau, established in 1889, and reporting movements of fish schools off the coast, supplies of bait, etc.

5. Bounties to fishermen derived from an annual Parliamentary vote of \$160,000, representing the interest on \$4,500,000 paid to Canada by the United States, under the Halifax Award of November 23, 1877.

6. Publicity operations, really a development of the old system of issuing special reports, which afforded information upon leading fishery topics, and the spreading of information among the fishermen and public by lectures and addresses. I have myself in twenty-five years delivered over three hundred addresses and illustrated lectures to Canadian clubs, Empire clubs, boards of trade, fishery conventions, and other public gatherings, in every part of the Dominion from Halifax to Vancouver, and have published numberless articles in vari-

ous journals, including the Canadian Fisherman, New York Fishing Gazette, Pacific Fisherman, Montreal Star, Toronto Globe, American Fisheries Society Transactions, etc. Further development of this propaganda is in progress, and must bring important results. A special publicity branch is now at work.

7. Technical fishery education scheme. This has embraced lectures to fishermen, and practical instruction, the first step being taken at Little River, N. S., in 1913, and the last being courses in 1919-20 under Professor A. P. Knight on "Lobster Life and Conservation," and by Professor A. G. Huntsman and myself in the Maritime Provinces in the spring and fall of 1920 on "Habits and Life-History of Fishes."

8. Fishery exhibits at expositions in Canada and abroad, including Government fish-dinners, as at the Toronto annual exhibition, the issue of fish cook books, circulation of Biological Board fish bulletins on new food fish and other topics of great public interest.

9. Fish-curing and packing instruction by qualified officers, including improvement of methods, barrels, and packages, and general standardization of the packed products.*

10. Commissions of fishery inquiry which, during the last quarter of a century, have numbered more than twenty. The commissioners, usually men prominent in the industry, or well-informed locally, visited the fishing centres, took evidence, and published reports and recommendations for the guidance of the Government. A fishery committee of the House of Commons, and an advisory fishery council, have from time to time aided in a similar way. The published reports of commissions and various committees are a mine of valuable information on the fishing industries.

11. Bait freezers have been established under Government auspices, and fish refrigerators have been subsidized, while a fish-drying house was for a time operated, as an ob-

* Legal authorization of standards, and official inspection, etc., are provided under the recent fish inspection act (1914) and canneries act.

ject lesson, at Souris, Prince Edward Island, and it was demonstrated that curers might be made independent of foggy and damp weather in the dried fish industry.

12. Fish offal and dogfish reduction works have also been operated, but the cost of collecting material over wide areas proved serious, though the grinding and preparation of fertilizers, and the extraction of oil yielded satisfactory products. Loss however resulted each season and the scheme was abandoned.

13. Oyster culture, the restoration of destroyed beds, and the planting of barren areas, have been carried on under an expert, while scientific experiments by the Biological Board have been continued for some years under such recognized authorities as Prof. R. Ramsey Wright, Dr. J. Stafford, Prof. E. W. MacBride, and Prof. A. D. Robertson, London, Ontario. Lobster culture has also been vigorously pursued by Professor Knight with a view of rearing young lobsters on natural resorts, or recently discovered nurseries, rather than by artificial methods in hatcheries.

14. A service of fishery cruisers and patrol boats, enforcing the fishery regulations, has always formed an important part of the work of administration in Canada.

15. A system of state-aided transportation services was inaugurated in 1907. From Canso and Halifax, N. S., a fish car ran to Montreal and Toronto, the earnings for the shippers being guaranteed up to 2,000 lbs., and also the cost of icing. Three cars also were run weekly on which the Government paid one-third express charges for fish. A corresponding service has also been tried from the Pacific coast to the prairies.

16. Last but not least the Federal Government has encouraged scientific fishery research in various ways, notably by establishing, in 1898, the Biological Board of Canada, which has charge of laboratories or research stations, one being at St. Andrews, on the Bay of Fundy, and another, the Pacific station at Departure Bay near Nanaimo, British Columbia. A station on the Great Lakes ceased operations after

some years of useful work. The Board, of which for twenty-one years I have acted in the capacity of chairman, consists of representatives from the principal universities of the Dominion, with some departmental nominees of the Minister, and it has fortunately such independence and freedom that technical researches can be conducted, unhampered by the red-tape of officialdom which is fatal to all enthusiastic and fruitful scientific work.

ARCTIC AND BIOLOGICAL EXPEDITIONS.—Other scientific investigations have from time to time been authorized, from the date of the celebrated researches in the Gulf of St. Lawrence by the late Dr. J. F. Whiteaves, within four or five years after confederation. During the years 1914-15 a remarkable series of fishery investigations was carried out under the direction of Dr. Johan Hjort, formerly Director of Fisheries for Norway. With the aid of two fishery cruisers, *Princess* and *Acadia*, and some subsidiary vessels, and with the help of a fine staff of scientists, Dr. Hjort was able to present a volume of reports at the close of his two years' work on the fish-life, plankton, hydrographic, physical, and dynamical features of the Gulf of St. Lawrence waters, of the highest scientific value. There have been various expeditions to Hudson Bay, the first under Capt. A. R. Gordon, R. N., in 1884, and later expeditions such as Commander Low's in the *Neptune* in 1884 and 1886, and Dr. Wakeham's expedition and Captain Bernier's in 1906 and 1908-09; all have had most interesting results to report. A Canadian Arctic expedition 1913-18, planned by Mr. Vilhjalmur Stefansson, an Icelandic Canadian born in Manitoba, has been very successful and between sixty and seventy reports on the biology, hydrography, geology, ethnology, etc., of the regions north of the Mackenzie River and Coronation Gulf are in course of publication at the present time.

CONCLUSION.—Looking over this elaborate program of activities, and I have omitted all reference to a most important branch, viz., statistics of the fisheries, because this work, car-

ried on for fifty-two years by the department, has been recently transferred to the Census Bureau of the Dominion, it is impossible to question the incalculable benefit to the Canadian fisheries which this far-reaching system of protection and conservation has accomplished during more than half a century. Professor G. Brown Goode did simple justice to the wonderful organization inaugurated by the fathers of confederation, when he said at the Great Fisheries Exhibition in London, in 1883, of the Fisheries Department in Ottawa, that "there was nothing elsewhere to be compared to it."

Discussion

PRESIDENT AVERY: We are certainly very much indebted to Professor Prince for this very valuable historical paper. I feel that we do not realize the importance of the fisheries of Canada in their relation to the United States. We obtain a great portion of our fish supply from Canada; we are, therefore, directly interested in the development of Canada's fish resources.

PROFESSOR PRINCE: Mr. President and gentlemen, I cannot rise on this occasion without expressing extreme gratification—and I am sure that in this sentiment I am joined by all other Canadians present—at the fact that the American Fisheries Society at last meets in Ottawa. The occasion is all the more interesting because this is the jubilee meeting of the Society, which is now celebrating in the Canadian capital fifty years of valuable and useful existence. I think that this is a unique historic event and one which calls for special reference, particularly on the part of Canadians. I thought that it might interest you to hear something of the succession of events which has led up to the federal system of fisheries administration in Canada,—a system much in contrast with that obtaining in the United States.