



350
pam
4
Harris, Edward W.

**Our Great Lake Fisheries
A Vanishing Heritage**



BY
EDWARD HARRIS

PRICE, 25 CENTS
FOR SALE BY ALL BOOKSELLERS

Toronto:
WILLIAM BRIGGS
1905

SH 224

OS

H3

185649



Our Great Lake Fisheries A Vanishing Heritage



I.

INTRODUCTION

The late Government left the fisheries in a condition of depletion and confusion which will test the capacity of its successors in office to the utmost to rectify.

The province secured possession of the Great Lake fisheries in 1898.

The first report, issued in 1899, says: "The fisheries as a national possession are inestimable. As a field for industry and enterprise they are inexhaustible. They are perhaps unsurpassed in any country on the globe, not only in extent, but for their great economic value. The fisheries are destined in the near future to afford a livelihood for thousands of our population and become an important and continuous source of food supply and revenue. There may soon be a large increase in the supply of fish and a perceptible improvement in the fishing industry, a matter which concerns not the present generation only, but which is of vital importance to succeeding generations also."

At the date the above was given to the public, six years ago, the catch of fish was 31,488,479 pounds, valued at \$1,333,293.

AN ALARMING DECREASE.

The fishery report, issued in 1903, shows a decrease of 10,294,274 pounds. For some reason this catch of fish was valued at nearly double the price of the catch of 1899. This decrease is truly alarming.

In 1899 there were 1,893,000 yards of gill nets licensed and 471 pound nets, while in 1903 there were 4,005,420 yards of gill nets fished, 488 pound nets, 523 hoop nets, 32 dip nets and 17,200 hooks and night lines. New waters, hitherto reserved, had also been opened for fishing.

In those five years, notwithstanding this great increase in nets, and new waters, instead of the fisheries becoming "a continuous source of food supply," they have become impoverished to a point to cause alarm. Instead of our lake fish being within the reach of every household, they have become a luxury for the rich. The products of the sea, which a few years ago were regarded as high-priced, are now the cheaper fish. Instead of the fisheries being a source of revenue there is no revenue beyond expenditure. Every phrase in the "inauguration address" of 1899 has been put to shame.

RISE, AMERICANS, SLAY AND EAT.

The late Government practically permitted the Americans to own and run our fisheries. The fishing has been done by or for the Americans. It is stated in all the recent reports that 95 per cent. of the catch is exported to the United States and only 5 per cent. remains in Ontario. To send this 95 per cent. of our fish to the States, and by so doing impoverishing our fisheries and denuding our own people of their rights, we have an expensive organization of clerks, 127 overseers, guardians, cruisers, patrol boats, and hatcheries distributing fry. With all this staff, outfit and the accompanying expenditure the people of Ontario cannot place a full grown fresh water lake fish on their tables except as an occasional luxury.

TO THE VICTORS THE SPOILS.

It is alleged that a very considerable member of Parliament, when these fisheries became the property of the pro-

vince, said: "These fisheries have always been managed to get votes, and we are not going to be the first to stop it." It looks like it when one regards the army of overseers and guardians and the financial as well as other disastrous results. The proposition is now plain. A thorough investigation of this fishery question is in order. It has been reported for some time that the Government has some such intention.

WORK FOR AN EXPERT.

Many men are well informed, all have some general knowledge on various subjects, but when it comes to fisheries and commercial fishing most men's minds are a blank. The time has come when the public must have a report and statement of the past, present and possibilities of the fisheries so clear that "he who runs may read."

The delusion that these fisheries belong to a few who happen to live on the water's edge at fishing points must now end. Hereafter they must be managed as a National possession for the people.

A GREAT PUBLIC QUESTION.

This has become a great public question, quite equal to "street car services" and "electric energy," or the "habits of good society." We were told in 1899 that these fisheries "were unsurpassed in any country"; "of great economic value"; "a continuous supply of fish food and revenue"; "that there would soon be a large increase and perceptible improvement," with something about "generations yet unborn." This was believed by the whole country, because it was true, or should have been true; but all has vanished "like the shadowy vision of a dream."

"GOVERNMENT OWNERSHIP."

There seems to be no future for our fisheries other than to wipe out the present system, with its army of overseers and guardians and conduct the fisheries under "Government ownership." The first consideration should be a supply of fish to Ontario at rates within the reach of the people. That can never be done under the present licensing system.

The innumerable license-holders, overcrowding and over-fishing the waters (too frequently waters which should not be fished), working under restrictions and conditions making it all but impossible to live at any time, would starve unless they obtained enormous American prices.

LICENSING SYSTEM WASTEFUL.

The licensing system is wasteful and has outlived itself. It was a reasonable system when our entire catch of fish was for home consumption. The great increase of population and wealth in the States and the depletion of their fisheries now imperils the existence of ours and compels a change. Under Government ownership and economic management, fishing with judgment, a limited export to the States of the coarse and mixed fish not marketable in Ontario, would be ample to finance the industry. That export should be reduced to the minimum point. Nothing but a shortage in supply will ever bring the States to joint action in preserving the fisheries.

Our fish dealers and peddlers should get their supply for Ontario with certainty, and a better quality, at less than half the present rates. The fish we are now permitted to eat are a sample not fit for export. As a consequence the fish diet of Ontario has been reduced to one-half that of Quebec. A reduction in the price of fish, together with a better quality supplied, would result in increased consumption. At present Ontario takes one-fifth of the fish caught. Obviously, the "Government ownership" problem is easy of solution if once seriously considered.

"FISH ARE CASH."

Government management of the fisheries would be easily feasible, nor is it possible to imagine a case where it would be more justifiable. Every license is held on condition of cancellation at any time, and all expire at the end of each year. It is also known that a large number of licenses to fish are held, under Canadian names, for American capitalists; usually the American "Fish Trust."

Fish are cash, and always have been; wholesale buyers and peddlers all pay cash. The supply is never equal to the

demand. If it were so, our fisheries would indeed be worth millions.

LIKE THE RUSSIAN NAVY.

The fishery report of 1903, in explaining the diminished catch, says: "that many of the fishermen had gone into more remunerative employment." Like the Russian navy, they were largely landmen. Under Government control many competent fishermen would have steady employment and be more content.

A SAFE BUSINESS.

The small catch of 1903 produced \$1,535,144. A good deal can be done with that sum of money. With good management half the catch should be net profit, but say one-third, \$500,000.

Financial details need not be dwelt upon here. Some plant would, no doubt, be taken from present license-holders at a valuation. The \$25,000 now paid annually to overseers and guardians would be saved; their usefulness would be gone; every fisherman in the employ of the department would, *de facto*, be a guardian. Export of fish would cease, except through the department. The fishing would be confined to strictly fishing and remunerative localities—in other words, concentrated as far as practicable, and be based upon the requirements of the Province without export.

FEDERAL INTERFERENCE.

That the Federal Government had "rights reserved," enabling it to interfere with our fisheries, is to be regretted. Under "Government ownership" that interference would practically cease, a feature in which there is much room for thought at the present time. It is a question whether Federal interference with Ontario fishery license-holders has not already made "Government ownership" a necessity.

Looking at this matter in the light of a purchase, the fisheries and the plant would in two or three years be a free asset to the Government, producing a revenue so large that the people of Ontario might again have the cheap and wholesome fish of former days.

II.

A FISH DIET

The eminent physician, Sir Henry Thompson, in lecturing before the International Fisheries Exhibition, London, said:—

“For a large and increasing class of the community who are emphatically brain workers, fish furnishes an appropriate food. When we reflect that the tendency of civilization here and elsewhere is slowly but surely to develop mental activity, and to dispense with laborious handicraft requiring a strong meat diet, this fish food, which has hitherto for the most part been an agreeable appendage to the daily table of a few, ought, I think, to be more generally recognized as peculiarly adapted to the wants of a very large influential, and increasing part of our population.”

FISH FOR WOMEN.

“For the sedentary man, whatever his calling in life may be, whose engagements permit him only to take just what moderate amount of muscular exercise, which in all circumstances is essential to health; for the great proportion of women, whose habits mostly are not, and often cannot be active, the nutritive elements afforded by fish admirably supply an important part of the wants of the body. The moderate amount of flesh-forming material present in fish, and in a form which entails little labor on the digestive organs—for most persons certainly less than meat—and the facility with which fish may be assimilated with other elements, place it in the front rank of foods.”

LAKE ONTARIO'S WHITEFISH.

This, from so high an authority, will be some justification for what follows on the subject of the depletion of the Ontario fisheries.

About thirteen years ago evidence was taken under oath by commissioners appointed under the direction of Sir Charles Hibbert Tupper, then Minister of Fisheries at Ottawa.

Lake Ontario as a fish-producing lake, was fully investigated.

Albert Hutchins, Midland, Georgian Bay, said: "Before coming here, I fished in Lake Ontario, about thirty years ago, for whitefish and salmon trout. The great majority were whitefish, and were caught at Wellington Beach with seines, as many as 5,000 to 10,000 at one haul. This was in June and July. Even more than this number were caught in the fall during the spawning season. I have known as many as 90,000 being taken in one haul. I was present and saw them counted. The net was a 175-rod seine, called the sou'wester. When I left Lake Ontario in 1878 there were no whitefish to be had by the fishermen where those great hauls had been made. In fact, the whitefish fishery had ceased to exist. I left to fish here (Midland) with a number of other fishermen, who left for the same cause."

FISH ROTTED ON THE SHORE.

James A. Smith, Midland, said: "Have seen 20,000 whitefish on Consecon beach, Lake Ontario, being one evening's catch, not one in twenty of which would weigh two pounds. This was in June. Some were salted, others rotted on the shore and were made into manure. They were so plentiful that one hundred could be bought for twenty-five cents. Whitefish were so plentiful in Lake Ontario that with one seine (I owned half of it) a 50-rod seine, put up in one month 180 barrels for our net's share; the other men—eight of them would get the equivalent to 180 barrels amongst them. This was in June, 1869 or 1870. There were other seines fishing also. The same year, in November, during the spawning season, the fish were very numerous, and all larger fish than usual. As many as we could barrel we salted, but a great many were lost. Whitefish were so numerous that they were hauled away for manure for use upon the farms. Whitefish were so plentiful that in hauling the seine they could not pull it on the shore; they had to dip out what they wanted with small nets and let the rest go. When I left Lake Ontario, in 1877, whitefish were almost exterminated.

"Salmon trout and whitefish were vastly more numerous in Lake Ontario than they have ever been in the Georgian Bay."

BETTER THAN GEORGIAN BAY.

Captain S. Whartman, Midland:—"Fished in Lake Ontario, in 1874, at Presque Isle and Brighton, principally for salmon trout of large size. They were quite plentiful then. I left there in 1878 to come to Georgian Bay to fish and better myself."

William I. Hodgins, Midland:—"Fished in Lake Ontario from 1875 to 1877, and caught salmon trout and whitefish. In 1856 and 1857 they were caught in great numbers. Whitefish were more plentiful in Lake Ontario than ever in Georgian Bay."

GREAT SEINE FISHING.

W. W. Church, Midland:—"In Lake Ontario whitefish were caught by the thousands in October and November, along the beach at Weller's Bay and the Consecon at Presque Isle, along the shore. Every forty rods in five miles had a seine; a seine would get 1,000 to 6,000 whitefish at a haul. Seine-owners would have as many as fifteen persons cleaning and salting. They were taken so numerously that many spoiled; 40,000 were caught in one seine in July. When I left it was not worth while going out in a boat, fish were so scarce."

Other Georgian Bay fishermen who had left Lake Ontario gave similar evidence.

HAMILTON'S STORY.

Sworn evidence taken at Hamilton was to this effect:—

"Thousands of salmon trout and whitefish were at times piled on Burlington Beach, left there to spoil. The pigs came down to eat what they wanted. These were mostly caught at the spawning time.

"Whitefish and salmon trout were in plenty in 1860. None at all now, destroyed. The yellow pickerel also."

"Large and small fish were taken. The whitefish and trout were so numerous they were thrown away in piles on the beach. The fishing was destroyed by catching in spawning time, over-fishing and killing too many small fish."

John Davis, a man of high standing at Hamilton, said:—

TORONTO'S FISHING TRADE.

"In 1875 the trout and whitefish were so numerous in Lake Ontario, all the way down to Cobourg, you could not put a net in the wrong place to catch fish."

The late Michael Doyle may be described as the father of the fish trade in Ontario. He was also a man of excellent reputation. He said:—"I came to Toronto in 1862. The fishermen on Toronto Island would bring in boats loaded down to the gunwale with salmon trout and whitefish. Now (1892) they are only catching the small whitefish put in from the hatcheries. Formerly they brought in so many whitefish and salmon trout we could not get room in the market for them; we used to pile them up outside; they glutted the market; there were piles outside on the sidewalk; we had so many to sell here at one time that we had liberty to sell till Sunday morning at ten o'clock. The whitefish weighed four, five and six pounds, and sold at half a dollar a dozen. The salmon trout weighed eight, ten and twelve pounds, and were very plentiful. There are none of these fish to be had now; they have emigrated or something has happened to them; should like to see Lake Ontario get a chance to see if these fish would not accumulate again. They catch small whitefish off the Island—the small, immature fish are Mr. Wilmot's hatchery fish. They won't stand; are young, delicate, and small; they won't keep."

Other witnesses said Lake Ontario principally supplied the Toronto market and the east in years past with whitefish and salmon trout; now we depend wholly on the Western lakes.

GIVE LAKE ONTARIO A CHANCE.

All who read the above will sympathize with good old Michael Doyle, and "would like to see Lake Ontario get a chance and see if those fish would not accumulate again." And why not? Two blades of grass have been made to grow where one grew before. Many a wilderness has been made to blossom like the rose. The Mormons converted the Salt Lake desert into a land flowing with milk, honey and babies. Nature can always be assisted and expects it.

IT CAN BE DONE.

It would not be a serious problem to make Lake Ontario what it once was, although the entire catch of whitefish has been so reduced that it barely equals one haul of a seine in 1876, and the salmon trout are practically exterminated. The catch of those fish is not now larger than what the pigs ate in former years. The fishery frontage of Lake Ontario belonging to the province is quite double that of the State of New York and incomparably more valuable. All the old conditions are there; the beautiful, clean, deep, cold water; the food and the breeding places.

To re-establish these fisheries, nature can be assisted at both ends. We now have hatcheries to supply young fish. Hatcheries should have been a marked success in all our waters. These have been a failure in results for two reasons. The fishery experts claimed at first to supersede nature by artificial reproduction, whereas nature can only be assisted. Fishery license-holders believed that with artificial reproduction they could "go as they pleased," and have regarded close seasons as an imposition. The hatchery whitefish were caught and marketed when not larger than herring, and before they had reproduced their species. It is well known in fishery circles that no whitefish or salmon trout under three pounds should be marketed, and that would only give them two seasons for reproduction. All the best writers say, "that, from an economic standpoint, that the average size of fish sent to market should be as near the maximum as possible." Four to eight pounds in weight for whitefish would be correct. Salmon trout should exceed eight pounds—the larger the better. They are now caught, small and soft, and are wasted.

PREDACEOUS FISH.

Although the most helpless and easily preyed upon by other fish, whitefish not only held their own when the lake was in a primeval state, but they predominated over all other fish in our waters. Predaceous fish which prey upon young whitefish are now caught by man in large quantities. In other words, we can replenish the waters from the hatcheries

and assist nature and protect the young fish of the finer kinds by marketing their enemies. But there can be no satisfactory results so long as that destroying angel, the fishery license-holder, has a right to put a net in the water.

A MIRACLE PROMISED IN TEN YEARS.

In less than ten years under Government ownership the greater part of the province might be supplied from Lake Ontario with the finer kinds of fish, and have a large revenue from the export of that surplus called "coarse, mixed fish and carp."

While every report issued by the Fishery Department attributes the depletion of our fisheries to the Americans, the facts are that we have destroyed our own fisheries and are still destroying them.

III.

LAKE ERIE

The physical geography of Lake Erie is most interesting. Its area is 3,300 square miles greater than Lake Ontario. In 1812, and at a recent date when British gunboats were on the lake, the salt water sailors noticed a strong resemblance to the sea, not perceptible in the other Great Lakes. While Lakes Ontario, Huron, and Superior have a depth varying from 600 feet to 1,000 feet, Lake Erie has an average of 45 feet. Shallow at the west end, it gradually reaches a depth of 200 feet in a circle east of Long Point. Narrow and shallow, it has many of the characteristics of a river. The beautiful and picturesque Detroit River emptying into it, there continues throughout the lake a current of three or four miles an hour, resembling in this respect the Mediterranean Sea.

FINEST FISHERY IN THE WORLD.

The lake abounded in whitefish and salmon trout. The habitat of the trout was in the deep water at the east end. This fine fish has been exterminated. The whitefish made yearly pilgrimages to the spawning grounds at the west end and in the Detroit River. The water being warmer than in the other Great Lakes, fish of all kinds reached a larger size. Twenty-pound whitefish have been taken, and trout and maskinonge from 50 pounds to 60 pounds. Long Point Bay has recently become a sort of provincial hatchery. Black bass are taken from there in thousands to stock the exhausted Ontario lakes and rivers frequented by holiday-seekers.

Lake Erie, in a commercial fishing sense and as fish-producing water, had no equal in the world. There was a mine of wealth in it; the Cities of Dunkirk, Erie and Sandusky have been largely built up by the wealth taken from the waters.

THE FIRST WHITEFISH.

The first whitefish taken was in 1852. Captain Nash, a Mackinac fisherman, came to Erie, Pa., with gill nets as an experiment. His catch was a large one of whitefish. It was

mentioned in the newspapers of the day. Net fishing soon became general throughout the lake. Until then all fishing had been done in the bays and rivers—whitefish being a deep water fish and not taken with hook and line, were not then known. The process of destruction which followed was entirely similar to what took place in Lake Ontario. The fishermen on the Lake Erie shore, however, bear a record for unique methods in the destruction of the most valuable fishery on this continent.

In November the whitefish swarmed to the Detroit River from the lake to spawn. In the spring the young fish were carried by the current to the deep water at the east end of the lake, there to mature, awaiting their turn to reproduce their species by a similar migration.

HORRIBLE DESTRUCTION.

Some account of what took place will be interesting, although the particulars are horrible. On this subject sworn evidence was taken at Sandwich, in 1892, as follows:—

“The spawning time for whitefish in Lake Erie commences about November 13th or 20th in the the Detroit River. That is the only time whitefish come into the river. The fish, after spawning, return to the lake. Caught in such quantities at that spawning run, it became impossible to ship the fish or handle them for commercial purposes. Pens were constructed in the water on the Canadian side of the river. The fish, as soon as taken, were put in those pens alive, for subsequent shipment. Some of the pens would cover half an acre, and were made of plank, so handy that people could walk around them. Other pens were only one hundred feet square. From 40,000 to 80,000 whitefish were put in a pen, as many as 500,000 were taken on the west side of Lightning Island, on five stations, filled with spawn. Seines were so close together in some places on the river that there was not room for more. Seven seines in a mile was the thickest. On the American side of the river they were not quite so thick.

A PISCATORIAL BLACKHOLE.

“In 1870 most whitefish were caught. Sometimes 2,000 fish would die in a pen. One year we lost one-half. Warm

water and sickness killed them. Fungoid growth showed on them. They would come to the top. We would sell them along with the rest. Some were healthy, some were sick. The very bad ones we buried. Some of the fishermen converted the sick fish into oil and threw the dead fish into the river. In some of the pens they were crowded so close together they got mossy and had red spots. They died in such numbers that days were occupied in scooping dead ones out and throwing them into the river. The river was made foul with the quantity of rotten fish. November is the only month that will pay to fish the Detroit River."

THE KILLING OF THE GOOSE!!

"All these fish came into the river to spawn, and at no other time. They would jump out of the water, and we could see them spawning." "The fisheries of the Detroit River became worthless about 1888 and 1889." "It is a great calamity. They were worth \$50,000 a year." "Close seasons were never obeyed, and we fished the whole month of November." One of the principal fishermen gave evidence that "for thirteen years, from 1876 to 1889, the close season in the Detroit River was suspended, and several Ministers of Fisheries would not enforce it because it was unreasonable."

If the history of close seasons and their suspension by orders-in-Council is ever written it will be found that they were seldom, if ever, enforced where there was anything to destroy.

THE ROSS GOVERNMENT'S LAST RESORT.

In the autumn of 1904, when the late Government was in extremis, the fishery license "vote and influence" was a factor in Ontario politics. The Federal Government suspended the close seasons in four counties fronting on Lake Erie. The Detroit River was made "wide open." It is not probable the late Ontario Government objected. The two Governments at that date were like:

"Two souls with but a single thought,
Two hearts that beat as one."

Such sympathetic sensations, however pleasant and proper in real and domestic life, are fatal to the preservation of the fisheries. This is an "up-to-date" instance of an ever-present defect in the fishery license system. Under Government ownership the temptations to promulgate such "orders" would cease. That order is still in force, and justifies the assertion that "we are still destroying the fisheries." The present Ontario Government are helpless to prevent it except by cancellation of licenses.

A FISHERIES CONFERENCE.

In 1892 the depleted condition of Lake Erie caused alarm. An international conference was held at Detroit to discuss the question. At that conference every proper resolution was passed for the joint protection of the fisheries. Every States Legislature, fronting on Lake Erie, refused to make those resolutions legally effective. Four States have a Lake Erie frontage, two other States are interested as fish consumers. Those six States have a population of 26,500,000; when the American fishermen explained to the State Legislatures that they fished nearly the entire lake and supplied those 26,000,000 of people with as many fish caught in Canadian waters as they caught in their own; that nearly the entire catch of the Canadians was also shipped to the States, and that the Americans got all the fish of Lake Erie by fair means or foul; obviously it was an arrangement not to be disturbed.

ROBBED BY AMERICANS.

This matter was brought before the House of Commons in 1894, and the following statistics produced, the correctness of which have never been questioned:—"The American catch of fish in Lake Erie in 1880, 1885 and 1891—three years—amounted to 154,669,541 pounds to Canada's 18,766,367 pounds." It was further stated "that the Americans sweep the lake from end to end and from side to side with gill nets and powerful steam tugs, regardless of the national boundary line, the value of their gill nets being \$79,507 to Canada's \$2,028."

The increase in American nets since that date has been

enormous, and ours trifling. They had in 1901, gill nets valued at \$229,182, and their catch of fish \$1,150,895 to our \$248,159. It is said, even at this date, that Lake Erie fishermen have not one tug seaworthy, except for short runs in fine weather.

FRONTAGE SYSTEM IS ABSURD.

The control or administration of the fisheries fluctuating from one political party to another made this industry too risky and uncertain to warrant an investment in tugs and plant similar to that in use by the Americans. The Lake Erie system of limited frontage to license-holders would be unsuited to any shallow lake with a current. It has been a direct encouragement to that American poaching, now notorious, but which has been in full operation for over thirty years.

In deep water lakes the fish migrate to the shores. In Lake Erie the fish, in the spring, move up the lake from the deep water to the shallower and warmer water. In July and August they return. Later on, when the shallower water cools they begin their spawning run, and make for the head of the lake and the Detroit River. At the end of November and in December they return to their in the deep water. On these migrations the fish run to their feeding grounds regardless of the national boundary line. The Americans follow the fish from point to point.

FISH HUNTERS.

The following description of American lake fishermen will be especially interesting at the present time. It is taken from a report of the Pennsylvania State Commissioners:—

“There are no brighter men than the fishermen along the lakes; although these men may not be educated they are of unusual intelligence and know the ways of the fish as well as the fish themselves. Note the way they follow the fish from day to day and from point to point. The fish driven from their favorite grounds by the gill nets seek other points. The fish are no sooner there than the fishermen have the same nets ready for them. It is not instinct; it is knowledge. They

know every foot of the bottom of the lake, and can find their nets in the dark or in a fog if necessary. They go outside in all kinds of weather, and when the large steamers are storm-stayed the fisherman is on his ground pulling his nets. He is fearless as well as cautious, a man to excite the greatest admiration."

GOVERNMENT OWNERSHIP THE CURE.

The licensing system of Ontario has not fostered this class of fisherman on the Canadian side of Lake Erie; not many of them go the distance of a rifle shot from the shore. Practically Lake Erie is abandoned to the Americans. Captain Dunn's services with the *Vigilant* would indeed be valuable were the fisheries conducted under Government ownership, and the fish followed and caught on the American plan. Our tugs would then be where the fish are instead of where they are not. The very fish we now endeavor to protect, and not catch, if here to-day are gone to-morrow.

IV.

OFFICIAL IGNORANCE

Until 1898, when the "judicial decision" gave the fisheries to Ontario, the various Ministers of Fisheries had been appointed from the Lower Provinces. An incident occurred in the late '80's which gives an insight into the limited knowledge a Lower Province Minister then had of our fresh water. A close season had been put upon black bass, some influential persons petitioned the Minister to have this close season suspended, and the request was granted on condition that the female bass, when taken, should be returned to the water uninjured. That year the waters were filled with grass widows. The Minister was not aware that the bass mated like robins, and that it took two to make a nest.

CREDIT DUE TO SIR HIBBERT TUPPER.

Sir Charles Hibbert Tupper was the first Minister to become active in an effort to understand and save the Great Lake fisheries. In 1892 he appointed a commission to report and to take evidence on oath at all the principal fishing stations. At the same time he secured in Scotland the valuable services of Professor Prince as adviser in chief to the Department in all matters connected with the fisheries. This appointment was an exceptionally good one. The report made by the commission called "The Fisheries of the Province of Ontario, 1893," placed Professor Prince, on his appointment, in immediate reach of valuable information. His "special pamphlets," issued from time to time, beginning in 1894, relating to the fish of the Great Lakes, leave nothing to be desired.

HANDED OVER TO AMERICANS.

When the late Ontario Government in 1898 took control of the fisheries, the foresight of Sir Charles Hibbert Tupper had thus placed within their reach all the necessary informa-

tion to guide it in the administration of the great heritage. The opportunity was lost, as the game laws gave the game to the sportsmen—or rather to the market shooters, the poachers and the idle—ending in destruction, so were the fisheries given to the fishermen, and the fish to the Americans, regardless of the interests of a great and growing fish consuming public in Ontario.

THE CURSE OF THE CARP.

The Americans were in advance in depleting the fisheries on their side of the Great Lakes. There the "foreign element" were the first to take alarm. Observing the spirit of destruction rampant in all fishing waters "in their generation they were wiser than the children of light." A foreigner, a Monsieur Poffe, a man of the same stamp of mind as he who gave us what we now call "the Canadian thistle," and that other, who inflicted us with English sparrows, imported the first German carp. This "foreign element" always large fish consumers (their religion requires it), saw that all the finer kinds of fish were going to destruction or reaching prohibitive values. In their native European countries they had been accustomed to the carp. The transplanting of this abnormally reproductive fish into our waters insured a continuous supply of cheap fish.

HOW THE CARP MULTIPLIES.

A whitefish deposits 35,000 eggs, a carp 500,000; a carp will reach 6 pounds in weight in two years, and grows a foot in length in nine months; when well fed to 23 pounds in weight in three years. They are especially subject to parasites and contagious diseases and have a fungoid growth called "fish leprosy." Frank Buckland, the naturalist, who made a study of the German carp, claims to have seen specimens with the smallpox. A tape-worm 45 feet in length, has been taken from a 16 pound carp. They are in fact a pig in the waters, and hunt for coarse and loathsome food. Fifteen years ago the carp was almost unknown on this side of the Atlantic. In 1904, 20,000,000 pounds of carp were marketed in the United States, taken almost wholly from the Great Lakes; over 6,000,000 pounds were taken from Lake Erie.

Lake St. Clair, is now a carp lake and Lake Ontario is rapidly approaching it. Already many of our fishermen look to the "carp catch" to give them a profitable season. The employes in the great manufacturing centres in the United States, mostly foreigners, are satisfied with the carp.

The native Americans and Canadians, accustomed to the luscious whitefish, the superb salmon trout, and the excellent yellow pickerel, have never ceased to denounce the introduction of German carp into our waters. But it was American and Canadian improvidence and wastefulness that led to it.

HOW TO COOK A CARP.

Not many Canadians have tasted a German carp. Various descriptions have been given of the fish. It requires the exaggerated descriptive talent, or hyperbole, peculiar to the Americans to understand carp as a table luxury. The following recipe conveys a lasting impression:—

"When fishing, if you catch a German carp, clean it and hang it out in the sun six weeks to dry. Then nail it to a pine board and cover it thoroughly with salt and mud. Let it stand two months longer and then bake it two days. Remove the nails, throw the carp over the back fence and eat the board."

Notwithstanding the above recipe a baked carp heavily stuffed with onions and garlic, and eaten with sauer kraut makes a good meal.

This is the substitute the "foreign element wise in their generation," have given to the people who have destroyed and are still destroying what once were the finest fresh water fisheries in the world.

GREAT PICKEREL FISHERY.

Lake Huron and the Georgian Bay have an area of 21,000 square miles. Beginning at Point Edward, where Lake Huron enters the St. Clair River, there was in the late '80's the finest yellow pickerel fishery on this continent. There were so many applicants for it that it was put up at auction, and \$1,000 a year paid for it. After four or five years seine

fishing it was described, under oath, as not worth fishing. The pickerel came to that point from the St. Clair River and the deep waters of Lake Huron to spawn.

An equally good whitefish fishery had been previously destroyed in the same way. The splendid whitefish fishery at Au Sauble beach was also destroyed. To describe the destruction of the Lake Huron fisheries would be but a repetition of what took place in Lakes Erie and Ontario. The fishermen were permitted to fish with suspended close seasons in all those lakes for the wholly unsound reason that the Americans were fishing without any restrictions.

DESTROYING GEORGIAN BAY FISH.

The Georgian Bay, one hundred and twenty miles long and fifty miles wide, separated from Lake Huron by the peninsula of Cabot's Head and the Manitoulin Islands, is wholly Canadian water. Notwithstanding this the late Government not only made no effort to check the wasteful and reckless fishing which had been conspicuous in those waters, but opened up for destruction "reserved waters" which the late Samuel Wilmot had succeeded in protecting.

In 1892 evidence was given that "no man applying for a gill net license was ever refused" and that there were merchants and fishery supply houses "who would start any man fishing."

KILLING SIX-INCH WHITEFISH.

Pound nets were permitted to be fished with an "inch bar" mesh, which destroys six-inch whitefish and trout, a four and one-half-inch gill net mesh (extension) has been habitually used which takes fish too immature to have ever spawned.

That this should have been permitted in the Georgian Bay waters, which we absolutely control free from American intrusion, can only be explained by the influence of the merchant and supply houses who would "start any man fishing," and rather than suffer a loss of the advances of money and supplies they had made would willingly see the fisheries drift to destruction with the gambler's hope of a "lucky year."

THE AMERICANS AND OUR FISH.

The introduction into our waters of a disgusting fish—the carp—has brought this question most vividly before the public, and soon, if not already at the door, there will be a bitter cry, “WHAT HAS BECOME OF OUR FISH?” There can be but one reply, “The Americans have eaten them, the fisheries are depleted, the carp introduced, and nothing to show but an impoverished fishing industry.” Had “the great heritage,” the Georgian Bay and the Great Lakes, been a joint stock company, with shareholders, managed by a directorate, this miserable showing of the present time would be a subject for investigation before the courts.

CLOSE SEASON NEEDED.

It is reported that the Federal Government has appointed a commission to take evidence and advise as to close seasons and size of mesh for the Georgian Bay.

This was done twelve years ago, but some pestilent influence prevented any action being taken to save those waters. If a proper mesh were *now* introduced, the Georgian Bay would “be fallow” for three years. Salmon trout and whitefish would require three years additional growth to be large enough to gill in a proper mesh, or be fit for the market. The waters also can only be fructified by giving fish time and age to spawn.

Under these circumstances it is not probable a Federal commission will seriously take in hand the unfinished business left it as a legacy by the late Ontario Government in connection with the fisheries. It is more than probable the Ontario Government will be forced to take “control,” abolish the fishery license system and give the fisheries a rest.

V.

"He gathered the waters together as an heap; He layeth up the depth in storehouses."

The fishes stored in our Great Lakes and rivers ready for the settlement of the country were arranged by nature for distribution in wholesome and edible form and pleasing variety during every month in the year. The three fishes which consumers have placed in the front rank are whitefish, salmon trout, and speckled trout. The herring has also been a favorite fish in both town and country. The speckled brook trout—a gem among fishes—were at one time abundant in every river, brook, creek, and rivulet in old Ontario. These were all autumn spawning fishes, in condition for food from April until September or October.

SPRING SPAWNING FISH.

The spring and summer spawning fish, in condition for food after the harvest, are pickerel, maskinonge, pike, perch, bass, catfish, and sturgeon, one or other of them being excellent edible fish from harvest to the late fall and through the winter, the catfish *par excellence* being a late fall and winter fish.

Nature's plan with the fishes in our waters is worthy of deep thought and deserved a better fate. Predaceous fishes, spawn-eating fishes, and the fish they preyed upon abounded in the same waters, and still nature's balance was kept perfect. The luscious whitefish, the most helpless of all our fishes, predominated over all others. It is not the heavens only that declare the glory of God.

THE WAY OUT.

Having decimated all these fishes in our lakes, and, in many cases, destroyed them in our streams, we are confronted with the serious problem how to rehabilitate them. The time has now come for a rigorous and courageous system of close

seasons and the abolition of all nets and meshes destructive to immature fish. Every farmer knows that were he to cut his crop before ripening he would have neither grain nor seed; to kill his cows before they calved or to market his poultry while nesting would be ruin. And that has been "man's plan" with the fishes in our waters for fifty years.

Up to a very recent date, close seasons, fishery regulations, and omissions to make regulations have been compromises or concessions to the holders of licenses to fish with nets. They became experts in every device for the persuasion or intimidation of legislation.

DESTRUCTION HAS BEEN UNIVERSAL.

Fish congregate before spawning, and it is at that time that the great hauls are made. Writers on this subject, whose word should have been as law, have reiterated again and again "that destruction of the breeding fish at the very time they are congregated for spawning means extinction, and is the surest step to the extermination of the future supply." Yet this destruction has in past times been almost universal, and those engaged in fishing for a living, those to whom a continuous supply is of chief importance, are often the most impatient of restrictive laws, and frequently complain that the law stops them just when fish are running or schooling to accessible places, and when, therefore, the greatest hauls could be made.

The nerve of our past legislators has never been equal to a proper administration of the fisheries.

All fishing for autumn spawning fish should cease on October 15th, and spring spawning fish marketed beginning in July.

THE PICKEREL SEASON.

The close season for pickerel is now from April 15th to May 15th; it should be extended to July 1st, and none taken under four pounds. All fish taken under weight means waste. A pickerel weighing from five to eight pounds is a perfect table fish, and preferred by many to the salmon trout. They

are now sent to market young and soft, spawned out and tasteless. All fish require a rest after spawning to recover their condition. Fish cease to feed at that period. Every fresh water spawning fish is "unclean" and the public should be protected from them. The autumn spawning fish—white-fish, trout and herrings—have, as a rule, a climatically enforced rest of five months after spawning before being caught for the market in the spring.

The close season for maskinonge should be extended to July 1st. Prior to that date they taste weedy and are soft. All game fish require some extra protection.

PIKE HAVE NO PROTECTION.

Pike, having no close season, have for years been marketed flabby and tasteless, caught in the height of the spawning run. Children often grow up with a distaste for all fish, having tasted one caught while spawning; their instinct is frequently a better guide than the matured intellect of their parents.

Pike are a clean-feeding fish, taking only live food. When they reach five pounds in weight they go to the lake or deeper water to feed upon herrings and perch. There is not much choice between a ten-pound pike and a maskinonge. Many connoisseurs prefer a large lake pike. The young pike, until about four pounds in weight, frequent the shallows and weedy places, living upon frogs, minnows and small fish of all kinds. Young carp are a suitable food for them. This alone should make imperative a close season for pike.

THE YELLOW PERCH A VALUABLE FISH.

Perch are ravenous feeders upon live food, and may now be regarded as a providential fish for the destruction of young carp. Boys and girls, women and children delight in perch fishing, but they should be in plenty to make it interesting. Perch are so minute or transparent for nine or ten days after they leave the egg as not to be visible to the naked eye. From July until November they are a delicious pan fish, and when full grown reach one pound in weight. The carp infliction

makes a close season for perch a necessity. At present there is no close season. It should be until July 1st.

THE BASS FAMILY.

Bass are a numerous family. Black bass and rock bass, pumpkin seed or sunfish, long-eared sunfish, blue sunfish, striped bass, calico bass, white bass, and there are others.

Black bass, being a sportsman's fish, have a close season, enforced, until 15th June. It should be until 15th July; even at that date they are often caught filled with spawn. Nor is this fish in really prime condition until September.

The numerous family of small bass are all delicious pan-fish, bringing the highest prices in city restaurants. Apparently they have a close season, but being simply "good food" without sport it has never been enforced.

All bass should be fully protected from 15th April to 15th July, or still better, the 1st of August. That may be done when our streams and suitable waters have been again stocked with speckled trout—a fish in prime condition in June, July and August.

THE DELICIOUS CATFISH.

The commissioners who reported upon the fisheries in 1893, said, in reference to catfish, mud-cats, and bullpouts, all one and the same family:—

"This class of fish has not hitherto received any protection during spawning times. The opinion of the fishermen was that a close season should be established between the 1st of May and the 31st of August. During that period those fish are either nesting, laying their eggs, or guarding their broods of young. It was agreed by all who gave evidence that these fish at this time were unwholesome and unfit for human food." No close season was ever established. The catfish family is now approaching extinction. The principal supply comes from waters recently opened up. Catfish are carp destroyers, beginning with carps' eggs and ending with a ten-inch carp. They are a delicious, nourishing fish. A close season should be established ending 31st of August.

STURGEON AND CAVIARE.

Sturgeon, now a valuable fish, are caught in the spawning season and for export only. It will take some years to recover from the present depletion. With the rapidly increasing population and wealth of the country, sturgeon and caviare will soon be in demand in Ontario. Prohibiting the taking of sturgeon would result in accumulated wealth in our waters for distribution later on. Scientific enquiry has proved that this fish is not a spawn-eater, nor predaceous in any form.

RIVER AND LAKE FISH.

All the spring and summer spawning fish—pickerel, maskinonge, pike, perch, catfish, and sturgeon ran up the rivers and creeks to spawn.

To the early settlers fish at any time and in any condition were frequently a necessity, and wasteful fishing could not be checked. These fishes spawned in the lakes as well as the rivers, but the various families or runs frequenting the rivers to spawn were soon exterminated, not only by the settlers in the interior, but by seines drawn at the mouths of rivers and creeks and in the bays—invariably spawning places and shelters for immature fish. To reproduce those rich runs of spring-spawning fish which formerly supplied the interior of the country is possible by enforcing close seasons and by the total abolition of seine fishing.

If a proper close season were placed upon these fishes and enforced, there would be rod and line fishing in our waters for millions of people. The present generation know little or nothing of them, either for sport or the table, although at one time they were in sufficient quantity to have flooded the country.

THE "GREAT HERITAGE."

This rapid wholesale destruction of our fisheries is all but incredible when it is known that of the 3,500,000 square miles of superficial area of Canada, 627,530 square miles are water and that it includes half the fresh water of the globe; and that even forty years ago the waters of Ontario abounded with fish.

THE CURSE OF NETS.

Gill nets, pound nets, trap nets, fyke nets, hoop nets, and seines are now in use for the destruction of our fish. All combined these engines reach every nook and corner and every depth of water from six hundred feet to two feet, and it is admitted that 95 per cent. of the catch goes to the States.

Quebec, the Lower Provinces, and the Pacific coast have their sea fisheries, but even that supply is heavily drawn upon and liable to depletion. Public opinion has now to be formed in Ontario that her lakes and rivers are not producing, and in the future may not produce more mature fishes than requisite for home consumption. If the same conditions existed in the adjoining States, fish would not be permitted to be exported from one State to another State.

AN ABSURD REGULATION.

The operations of the late Government for the protection of the fisheries may be summed up in the childish regulations made for "public waters," of the greatest extent in the world. That men and women fishing with rod and line should have a pair of scales, a ten-inch rule and a basket to hold ten pounds, and be subject to the shadowing of a sneaking informer, while one draw of a seine did more damage, and destroyed more fish than every rod and line in the country. Could there be a greater condemnation of past methods?

SEINES.

In reference to seines, Professor Prince rightly says: "The fishermen when using the seine can hardly know the extent of the injury they inflict; for when very young our valuable food fishes are transparent, minute, and almost invisible. The seine is far the most injurious of all nets, and absolutely destructive to minute and small fish driven from their shelter."

Notwithstanding this, the late Government not only encouraged seine fishing, largely carried on at the entrance to rivers, and in rivers and bays, but an M.P.P., one of its principal supporters, resigned because the Government refused to

abolish seine fishing in a river, where the practice was directly injurious to his constituency. When we contemplate "nature's plan" with the fisheries, so transcendently perfect, and contrast it with "man's plan," one might well enquire: What is man that Thou art mindful of him?

THE RED MULLET.

Aristotle, with extraordinary assiduity, and with the assistance of Alexander the Great, recognized in Grecian waters of the Mediterranean one hundred and seventeen species of fishes. He dwelt upon their mode of life, their peregrinations, their likings and dislikings, their cunning, amours and fecundity, the mode in which they are captured, the time they are most in season, and many other details. That was B.C. 384. That work and research made by Aristotle, no doubt, saved the fish of Greece and the Mediterrean Sea. Plutarch mentions a fish which sold for more than an ox when Rome was at her height of luxury and splendor. That fish was the "red mullet." It is plentiful to this day; it is even shipped to the London market from the Italian coast. Any fish permitted to spawn will last for all time. In Ontario waters the red mullet would have run its course in about fifteen years. It would have gone the way of our speckled brook trout, or the delicious ciscoe, which, when discovered in Lake Ontario, was caught when congregated for spawning, and when spawning, and in a few years exterminated.

THE ALARM UNHEEDED.

We have had no Aristotle in Ontario. No interesting book or one that would be generally read has been written on "our fishes." Some great names, however, are connected with our fisheries. Dr. Wakeham, Mr. Whitcher, Mr. Samuel Wilnot, Professor Prince, Professor Ramsay Wright, of Toronto University, all sounded the alarm, and fruitlessly. Their writings were embalmed in "blue books," and no attempt made to form public opinion. It may even be doubted whether some of our past legislators desired it. Under the short licensing system the Minister of Fisheries for

the time being became a despot who could at any moment make or ruin any fisherman.

A STARTLING REPORT.

The report of the Department of Fisheries for 1904, says:—

“With increasing number of fishermen operating in the lakes, and with the improved means of handling the nets, it is more than evident that if something is not immediately done to meet the effect of this increased attack, our lakes will soon be exhausted of their riches.”

“But no sane man can expect the Canadians to enforce measures to prevent such a calamity which are not adopted by the Americans.”

Unless this was written solely with the hope of influencing the Americans “on the side of right,” it must be read in Ontario with misgivings, not to say alarm.

But what sane man can believe that the Americans—so-called—but who are in fact the “Fish Trust,” would be influenced by such a pronouncement? The religion of a trust is “to live,” not “live and let live.” That threatened contingency, in the above extract, is in fact what the American Fish Trust wants done. It would insure them a continuous supply of 95 per cent. of our catch of fish so long as our fish lasted and we continued to export. It means “a give away” of our fisheries.

If the Department saw destruction in sight from American methods of fishing, why was the Georgian Bay, (and other waters wholly our own, and waters that had been preserved), opened up for fishing and depleted, and the entire catch down to six-inch and eight-inch whitefish exported to the States? The Fishery Report of 1904 cannot be read without anxiety as to the future.

THE CONTENTION UNSOUND.

The contention is by no means sound that we cannot preserve and allow the fishes on our side of the lakes and rivers to grow to maturity and accumulate again.

Professor Prince is, no doubt, the greatest living authority on this subject. He has made our lakes, rivers and fishes a special study. He says "the American methods of fishing without restriction and at all available seasons have been *disastrous to their fisheries and upon strict inquiry of very little injury to ours.*"

"That this has been demonstrated very clearly in Lake Erie and the Detroit River; that our side has been the chief resort for spawners, partly consequent upon the pollution of the waters on the American side. The numerous factories, the sewage, and other deleterious matters cause the whitefish at all times to seek the purer waters on the Canadian side."

This applies to the whole American coast of Lake Erie and Lake St. Clair, the connecting rivers, and one may truthfully say to our entire fishery frontage. From Port Huron to Detroit, Toledo, Sandusky, Cleveland and on to Buffalo, it is now one long succession of large cities and towns, with constant disturbance and pollution of the waters, and unrestricted fishing. The corresponding frontage on the Canadian side is, comparatively, in an all but primeval state.

The fatal policy of endeavoring to emulate the Americans in the destruction of fish is all that has prevented the fisheries in all the Ontario lakes and rivers from maintaining their pristine wealth.

Some great writer has said, "In difficult cases no argument is more effective than examples, the impression is more quick and penetrating than that of words, the possibilities and advantages of performance are made clear."

The Americans being surely our equals in intelligence, the future of the fisheries of the Great Lakes will always be largely influenced by the adoption of well considered regulations by the Canadians. There is in the States at the present time a large and influential party battling, as we should be battling, to put an end to all improper and wasteful methods of commercial fishing.

EDWARD HARRIS,

61 Prince Arthur Avenue, Toronto.