HON. J. D. HAZEN TELLS ST. JOHN AUDIENCE OF GREAT DEVELOPMENT IN CANADA'S FISHERIES

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of operations are being adopted. As an illustration it may be pointed out that it is only a few years since motor boats began to be used in the fishery. Now there are more than 11,000 in use.

Herring Fishery and Possibilities.

While the herring that abound along our coasts are the equal of those caught anywhere, owing to inferior methods of curing and packing, and the use of cheap shaky barrels, the demand for them has been small. Notwithstanding our proximity to the United States, the pickled herring markets of that country and to an important extent, those of Canada, have been largely supplied from Europe. Instead of following the schools of fish out into deep water, and capturing them when they are in the best condition, their capture has been limited to the time when they come inshore to spawn, and when they are in inferior condition. Before the war, while our best large split herring were selling in New York for from $6.00 to $7.00 per barrel, Scotch "Large-Full" herring were bringing from $12.00 to $15.00.

To remedy this state of affairs, the Fish Inspection Act was adopted two years ago. It came into operation on May 1st last year. Its aim is to bring into use strong well made barrels of a standard size, and to raise the standard of curing and grading the fish, so that the finished article will command the confidence of dealers and consumers and so secure the highest ruling prices. In brief, to bring our pickled fish industry up to the standard of excellence and importance of that of Europe. Our geographical position should make it impossible for suppliers from Europe to successfully compete with us in the market of this continent. If we do not secure these markets, it will be on account of the failure of our fishermen and packers to carry out their operations in accordance with improved methods. Every effort is being made to impress this fact on them, and every reasonable assistance is being given them towards the production of a perfect article. A staff of competent inspectors has been appointed, whose duty it is not only to inspect all packages submitted to them and to brand such as are in accordance with the regulations free of charge, but to act as instructors to the packers and coopers as well.

These efforts are meeting with marked success. Last year, the initial one of the operation of the Act, 1,328 barrels were presented for inspection, of which 1,211 were branded, and this year, to the end of last month, 5,307 barrels of herring, alewives and mackerel were presented for inspection, of which 4,441 received the brand. Sixty different packers put up goods for the brand this year, and many others received instructions from the inspectors, and put up their fish in accordance with the regulations, thus producing a better and higher priced article, though they did not receive the brand. Thirty packfrom the inspectors, put up herring according to the Scotch method this season, and about 5,000 barrels of herring were put up in this style, about half of which were branded.

At the present time Canadian Scotch cured branded herring are selling in New York at from $13 to $16 per barrel, while our unbranded large split herring are bringing but from $8 to $8.50 per barrel. These facts should in themselves be a sufficient argument to our packers in favor of adopting the improved methods.

With a view to endeavoring to locate the schools of herring offshore in the Atlantic, my department last season fitted up a steam herring drifter and kept her prospecting through the season. While such a task for one boat, is a difficult one, and no great results could be expected in one short season, a reasonable amount of success was met with, and much valuable information was secured concerning the size and quality of the fish on different grounds worked. A detailed report of the quantity and quality of fish caught on the different grounds is being prepared for general distribution for the guidance of those interested in the industry.

When once the offshore schools of herring are located, the quantities that can be caught will, for all practical purposes, be limitless, the value that this fishery alone may become will be realized from the fact that in normal times, the herring fishery of the British Isles is worth from twenty to thirty million dollars annually,—upwards of two-thirds the present value of all our fisheries.

Fish For the Soldiers.

Added interest has been directed to the fisheries by the fact that they are forming such an important portion of the food of our soldiers, not only in several camps in Canada, but overseas as well. During the past summer about 300,000 lbs. of fish per month have been forwarded to Great Britain for the use of our soldiers, and such have been received with so much satisfaction by them that the Imperial authorities have decided to try supplying fish to the British troops. To that end it has already ordered over one million pounds of frozen fresh fish from Canada, which are now being got ready for shipment. There is every reason to anticipate that the experiment will prove successful, and that during the coming summer, when our fisheries will be in full swing, large quantities will be continuously needed for the British troops.

Fisheries Exhibit.

During the past four years a thoroughly representative fisheries exhibit has been given at the Toronto exhibition. A fisheries restaurant has been operated as an adjunct to the exhibit during the past two years. Both have been highly successful and have admittedly done much to expand the demand for fish in interior centres. The exhibit has each year been one of the most attractive features at the fair, and has been awarded a gold medal on each occasion. Last year over 25,000 fish dinners were served at the restaurant, and this year over 35,000.

Also an attractive booklet, entitled "Fish and How to Cook It," containing comprehensive information regarding fish, and numerous recipes for cooking it in tasty and inexpensive ways, has been issued and distributed freely throughout the country. The demand for this booklet has been quite extraordinary, and it is undoubtedly doing much to expand the demand for fish.

Indeed the time has already come when the problem of the producers has been changed from one of finding paying markets for their fish, to one of supplying the ever growing demand. The need for increased production in our fisheries is therefore paramount, and it is hoped that the fishermen who have found it impossible to undertake military services, will do their full part by exercising every energy to make the harvest of the sea one of ever increasing abundance.

While the sea fisheries are, generally speaking, inexhaustible, such cannot be said for our river fisheries and those of our inland waters, owing to the restricted natural conditions for reproduction. To maintain the supply of such fish and to replenish depleted areas, Canada has now what is probably the largest and most important fish breeding service conducted by any one government.

Arguments in favor of fish breeding are no longer necessary, in the light of the fact that in our Maritime Province rivers, where salmon hatching is going on, the fishery is not only being maintained, but is continually improving, and such is also the case with our inland fisheries. For instance, in Lakes Erie and Ontario, the Canadian white fish fisheries twenty-five years ago were regarded as nearly depleted. At that time these lakes produced less than half a million pounds annually between them. Now, the Canadian whitefish fishery of Lake Erie alone is nearly two million pounds per year, and that of Lake Ontario nearly one million. Fish breeding has been conducted in Lake Ontario in a limited way, as compared with Lake Erie.

This service has been largely expanded in recent years. In 1911 there were forty-one hatcheries, while now, exclusive of numerous egg collecting stations, there are fifty-one main hatcheries and nine subsidiary ones, in addition to which there are five salmon retaining ponds. The increase is more favorable, when it is explained that last year an arrangement was entered into with Quebec, whereby it has taken over the four hatcheries which existed there in 1911 for the propagation of fish for its inland waters.

Amongst the new hatcheries built, is the thoroughly modern establishment at the Little River Reservoir near this city. Previous to the building of this hatchery the old establishment at Grand Falls had to be relied on for the stocking of all the streams in the southern portion of the province. The St. John hatchery is 54 feet long, and 31 feet high, is fitted with thirty hatching troughs, grouped in clusters of five, and has capacity of five million salmon eggs. In connection with it there is a modern dwelling house for the officer in charge. The water from the reservoir, while adequate for hatching purposes, is too high in temperature during the summer for the rearing of fry to the fingerling state. As it is desirable to rear as many fry as possible to this stage, two ponds have been built for the rearing and retaining of trout. The ground adjoining the larger pond has been graded and prepared for the installation of fry rearing tanks, and the water supply is so arranged that the tanks can be filled from the surface of the larger pond, or from the bottom of it, or directly from springs, as conditions may require, so that a satisfactory temperature can always be assured.

This hatchery is doing excellent work. The final returns of the distribution of fingerlings for the present season are not yet all in, but the following table shows the rivers that have been stocked and the quantities of fry placed in them each year since the establishment of the hatchery in 1914:

Rivers	1914	Salmon 1915	1916
Jemseg River	100,000	.....	80,000
Kennebeccasis	500,000	550,000	320,000
Washedemoak	300,000	600,000	80,000
Musquash	250,000	300,000	50,000
Mispec	45,750	.....	.....
Tynemouth Creek	100,000	100,000	25,000
Oromocto	50,000	.....	.....
St. Croix	100,000	200,000	50,000
Cranberry Lake	.....	40,000	.....
Black River	.....	100,000	50,000
Nerepis Lake	.....	50,000	.....
Salmon	100,000	100,000	40,000
Little Salmon	100,000	100,000	40,000
Quoddy	100,000	.....	.....
Salmon, Queens County	100,000	100,000	50,000
Belleisle	100,000	150,000	80,000
Pocologan	100,000	150,000	30,000
Shogomoc	75,000	75,000	40,000
Skiff Lake	75,000	75,000	40,000
Blind Man's Lake	10,000	.....	.....
*Lake Lomond	20,000	.....	40,000
Weldon Creek	.....	10,000	.....
Palfry Lake	.....	.....	50,000

*10,000 fingerlings in 1915.

The following quantities of speckled trout were also distributed in the waters named, from this hatchery:

Rivers	1914	Speckled Trout 1915	1916
Shogomoc Lake	10,000	20,000	See note
Skiff Lake	10,000	20,000	"
Lake Lomond	75,000	10,000	(fingigs)
Crescent Lake	10,000		
Fisher Lake	15,000		
Fenton Pond	10,000		
Magaguadavic Lake	20,000		
Walsley Lake	10,000		
Alward Lake	10,000		
Nashwaaksis	20,000		
Salt Spring Brook	10,000		
McDougal Lake	20,000		
Shillington Pond	2,000		
Weldon Creek		10,000	
Bolton Lake		10,000	
Mackin's Lake		10,000	
Roulson's Lake		10,000	
Minote and Casey Lakes		20,000	
Disappointment Lake			10,000
McCormick Lake			10,000
Puddington Lake			20,000
Glen Severn Lake			10,000

All the speckled trout were distributed as fingerlings in 1916. The final returns of this distribution are not yet available.

Amongst the trout distributed was a small quantity of the rare variety of Red Canadian Trout, found in a few lakes in Quebec, which were distributed in Rockwood Park, and it is anticipated that further limited numbers of this variety can be brought here from time to time, and so add to the interest of angling in the Park.

Arrangements have also been made to stock Loch Lomond with the famous Ouninache of the Lake St. John region, Quebec. The eggs for this purpose are now being collected and will be transferred to the St. John hatchery when they reach the eyed stage. Also, in the hope of doing something towards restoring our shad fishery, a shad hatchery was established in 1912 on the St. John river. Shad hatching is surrounded with serious difficulties and limitations, owing to the highly delicate nature of the fish, and to the impossibility of retaining the parent fish in crates until they will ripen and yield their eggs, as is done with the salmon and other fish. This hatchery has been reasonably successful, and all the eggs handled have been just that many saved from destruction as they were procured from the commercial catches of the fishermen. In 1912 750,000 fry were liberated; in 1913, 1,200,000; in 1914, 1,025,000; in 1915, 1,100,000, and in 1916, 261,000, the number of fish that were taken in the vicinity of the hatchery this year having been very limited.

This hatchery is a floating structure, and so can be moved to the places that may be found most advantageous. The good results that it has achieved should begin to show themselves from now on, as it has now been in operation four years.

While much has been done in aiding in the development of our markets for fish, and a good start has been made in certain lines towards educating our fishermen in the adoption of better methods, much, particularly in the latter direction, remains to be done. Obviously some definite system of technical training in lines connected with their calling, is urgently needed. I have arranged that preparation for such should now receive the attention of my department, in order that as far as possible, everything may be in readiness to actively take it up, immediately following the time when peace will be restored.

Fishermen have not had sufficient pride in their calling. Too frequently their sons have been encouraged to take up other professions. There is consequently a serious shortage of skilled fishermen, and the war has increased this shortage, as the fishermen have done their full part in undertaking military services. More vessels would have been to sea during the past few years if suitable fishermen had been available to man them.

When the war is ended, it will be a good thing if fishermen from desirable European countries desiring to emigrate, will turn their faces towards Canada. They will find excellent opportunities awaiting them, and the country needs them.

The contrast between the yield of the sea and of the land is rather aptly expressed in the old sea song,—

"The husbandman has rent to pay,
Blow winds, blow!
And seed to purchase every day,
Row boys, row!
But he who farms the rolling deeps,
Though never sowing, always reaps;
The ocean's fields are fair and free,
There are no rent days on the sea."

He dealt also with some of the international phases of the fisheries in connection with the seal catch in the Behring Sea and the fisheries in the Great Lakes and other waters along the boundary line. The matter of the seal catch had been satisfactorily disposed of and Canada would soon be receiving a goodly sum from that industry, as under the terms of settlement between the various countries she was to get 15 per cent. of the American catch, 10 per cent. of the Japanese catch, and 15 per cent. of the Russian. With respect to the regulation of the fisheries in waters on the boundary line the negotiations had not as yet resulted in any definite action. In the year 1910 a treaty had been entered into between the United States and Great Britain on behalf of Canada looking toward a settlement of the questions at issue, and uniform fishing laws on both sides of the border. Two experts, Prof. E. E. Prince, for Canada, and Prof. Starr Jordan, for the United States were appointed to investigate conditions and draft the proposed regulations and the governments of the two countries gave assurance that laws would be passed in accordance with the findings of the commission. After an exhaustive study of conditions the two gentlemen referred to brought in a report and the Canadian parliament as in duty bound passed a law along the lines indicated. The United States legislators on the other hand refused to take any action and after waiting for some few years the Canadian parliament were compelled to notify the authorities at Washington that they would resume their freedom of action on this question and withdraw from the agreement.

He also dealt with the lobster fishery and said the catch in New Brunswick this year had been greater than for forty years and this was largely due to the very efficient manner in which the law had been carried out.

At the close of the address a vote of thanks to Mr. Hazen for his kindness in coming to the meeting and for his splendid address was moved by A. H. Wetmore and seconded by H. C. Schofield. This was carried unanimously.