Herring Fisheries of Eastern Canada

Although the herring fishery falls below some others in money value, it is in some respects the most important of all the Eastern Canadian fisheries, inasmuch as the success or failure of the great hook-and-line fisheries depends to a great extent on the abundance or scarcity of the supply of herring for baiting purposes.

In the spring of each year, without fail, large masses of herring move close in to the shore, and are literally washed on to the beaches, in many parts of the gulf of St. Lawrence, especially. The mode of capture is by fixed trap and gill nets set close to the shore, and so long as the mass of fish remains inshore, large quantities are taken. The spring herring is poor in quality; but it provides an abundant supply of fresh bait for the cod fishing fleet in its first voyage to the "banks," while much of it is salted and stored for baiting lobster traps throughout the lobster fishing season.

In the summer and fall, herring of an extremely fine quality abound; but they do not come so near the shore as in the spring, and as a consequence of the use of the same fixed fishing gear, the summer catch is a small one. Thus, not only are the operations of the great cod fishing fleet seriously hampered for want of a steady supply of bait when most needed, but an insignificant quantity only of this summer herring of unsurpassed quality is prepared for consumption as food.

Practically Undeveloped

It has been demonstrated by an experiment conducted by myself, that by the use of what are known as drift nets such as are used in the British herring fisheries, abundant supplies can be secured through all the summer months, ten, twenty or thirty miles from shore; and if our fishermen could only be prevailed upon to generally adopt similar methods, a great increase in the value of this fishery would be insured.

The total value of the herring fishery of Eastern Canada in 1910 amounted to $1,702,493; but it has to be recorded that twenty-five years earlier the value obtained from this fishery by the four eastern provinces amounted to $2,016,019.

In the light of the extreme abundance of herring on the Atlantic coasts, it is to be deplored that this branch of the fisheries is as yet practically undeveloped. Of the comparatively small proportion of the annual herring catch that is smoked and cured in pickle, part is consumed in Canada and part exported to the United States and the West Indies; but owing to careless packing and badly made barrels, the price obtained is not such as to induce those engaged in the business to increase the output.

Plan to Raise the Standard

I have placed in the hands of the Honourable, the Minister, a scheme with all the necessary details, for raising the standard of curing and packing by a system of inspection and branding, on the model of the Scottish one, and for introducing a more substantial barrel for transporting the cured article to market.

The scheme is at present under consideration, but it may be permissible to say here that its salient features are:

(1) The payment of a bounty to fishermen or other packers, on all barrels made in accordance with requirements, and filled with pickled herring, mackerel, alewives or salmon; in order to bring into common use a strong standard barrel.

(2) The branding of such barrels with a particular mark as a guarantee of the quality of their contents, provided the fish are, as a result of careful examination, deemed worthy of such brand or mark.

(3) The creation of a sufficiently qualified staff to undertake the work of inspection and branding.

Should the scheme be adopted and the necessary legislation secured for its operation, I am confident that it will give to the pickled fish industries a much needed and long overdue fillip.—*From an address by J. J. Cowie, of the Dept. of Marine and Fisheries, before the Committee on Fisheries of the Commission of Conservation, June, 1912.*

Electric Smelting In Canada

Experiments Would Seem to Have Been Successful

A report demonstrating that electric smelting of Canadian ores is now a commercial possibility will be issued early in the year by the Mines Branch of the Department of Mines. It will cover the results obtained from the use of the 100 ton electric furnace that was installed at Sault Ste. Marie, in 1906, for experimental purposes. In addition, the perfecting of the process as carried out in Sweden will be dealt with.

Such an announcement is of great importance to Canada, and especially to Ontario. Hitherto, the extensive iron deposits in Ontario have been scarcely touched, for two reasons: first, Ontario has to import all its coal; second, Ontario iron ores contain a relatively high percentage of sulphur, which could not be removed by the blast furnace. The new process will eliminate both these objections. Electricity will not only smelt the ore, but, by means of the greater heat that it will provide, it will volatilize and drive off practically every particle of the sulphur. The country surrounding the important iron deposits possesses valuable water-power resources, which, for the most part, have not yet been developed. It is thus easily seen that the introduction of an economical electric smelter will make possible an industry of vast importance to Canada.

Practical Conservation Through Litigation

The orange growers in a certain district in Southern California complained of the dust thrown out from the rotary kilns of a large cement plant operating in the vicinity.

The company was very desirous of abating the nuisance and installed the Cottrell process* on one of the kilns. The process proved to be so satisfactory that the remaining nine kilns are being equipped with similar installations.

An interesting result of this installation has been the finding in the collected dust of considerable amounts of potash-salts soluble in water. This suggests the possibility of definitely seeking high-potash raw materials for cement manufacture, for the sake of the by-products.

In this connection the following points are to be noted:—

1. The Cottrell process would not have been developed to the extent it has been except from the pressure which was brought upon it to avoid litigation.

2. Fear of litigation forced the company to install this process in order to prevent the dust nuisance complained of by the orange growers.

3. Valuable potash-salts are being recovered from the dust collected.

4. Selling potash-salts to the orange growers who claimed the original dust was a nuisance, will now assist the company to make an additional profit on its operations.

*This process is briefly described in another article in this issue, entitled "The Smoke and Fume Nuisance."

Brush Disposal in Ontario

An excellent start toward better methods of forest fire prevention has been made in Ontario through the fundamental requirement in two timber licenses recently issued, that the lessors must remove or destroy all limbs, brush and other debris arising from lumbering operations, under the direction, and to the satisfaction of, the Minister of Lands, Forests and Mines. Since it is well known that old slashings are the most prolific source of fire danger, this is attacking the forest fire problem at its source. The adoption of this policy will greatly decrease the danger of forest fires, it will facilitate the permanent utilization of non-agricultural lands for the growing of timber crops and will furnish a large source of future revenue which would otherwise be largely destroyed. Since the additional work was taken into consideration in making the tenders to the Provincial Government, the requirement is no hardship upon the lessors.

"It is within the power of man to rid himself of every parasitic disease."

Utilization of Flax Fibre in Canada

During a recent visit to Ottawa Mr. W. J. Robinson, a British subject resident at Chicago, and an authority on the growth and manipulation of flax, was good enough to furnish this Office for publication in the Census and Statistics Monthly with a statement respecting a newly-discovered process, which, it is claimed, renders possible the utilization of the flax straw now annually wasted and the establishment in Canada of an important linen manufacturing industry.

"The only obstacle," Mr. Robinson said, "in the way of producing good spinning and weaving fibre from the flax grown in Canada and the United States for seed alone lies in the question of a proper method of retting the flax, in order to get away from the deleterious gums, which make it impossible of use by the cordage and linen manufacturer. Many attempts have been made at different periods of history to accomplish this result by other than the water or dew retting methods in use; but every succeeding attempt has proved more discouraging than the last. It has remained for a prominent American chemist, viz., Dr. R. R. Roberts, of Washington, D.C., who has devoted over 30 years of his life to the solution of this problem, to invent a very simple, chemical process and one that is reasonably inexpensive, by which the flax straw grown in America and Canada can be converted into a commercially spinnable and weavable fibre, and by which is put within the pale of certainty the development of the linen business in Canada and the United States. The time consumed under the water or dew retting process varies from ten days to several weeks according to temperature and weather conditions, and frequently the entire crop is lost; but this chemical retting process does the entire work in a little less than five hours and is under such control that it is impossible for the flax fibre to suffer during its manipulation.

"The process has been under investigation for two years at enormous outlay by some of the most prominent financial and business interests in the United States. The fibre has been shipped to Ireland and spun into yarns and woven into cloth with the result that Irish spinners have pronounced this fibre, produced from Canadian flax grown in the Province of Ontario, to be as good as the best Russian flax that they have been able to obtain and to be capable of being manufactured into table linens, napkins, towels, dress goods, underwear and all forms of linen textile and cordage. They are not only anxious to have the fibre shipped to Europe for their use there, but are looking to Canada to find locations for linen mills where they can come out and found an industry which is probably more important from an agricultural and commercial standpoint than any other