

Port Dover, Ont., Oct. 5, 1893.

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Arrived here in the evening of October 4. Spent the 5th with the fishermen at the mouth of the creek at this place. There are two gangs working here now. One under Jas. Lowe (6 men altogether), the other under Capt. Geo. F. Allen (3 men altogether). They fish chiefly for herring with gill nets.

They are the only men now fishing in this immediate neighborhood except the Long Point Co., a large concern, explained farther on.

We were down at the wharf when the two boats came in in the morning, between 9 and 10, and examined their fish. Paid special attention to those brought in by Capt. Allen and the notes which immediately follow apply chiefly to this examination.

His catch this morning was a medium one, containing probably about 900 or 1,000 fish.

They were nearly exclusively herring (blue backs), with about 1 1/2 dozen blue pickerel, 2 yellow pickerel, about 1 dozen yellow perch and a very few common suckers.

(Mr. Lowe's catch was much the same, but he had also 1 or 2 small mullet and 1 green bass.)

The herring nets are supposed to have a mesh not less than 3 inches stretched. I measured one of Capt. Allen's nets and found the mesh to vary from 2 3/4 to 2 7/8 inches. In conversation he said he thought the twine did not shrink in use, and that the meshing of the fish would, if anything, tend to stretch it.

The majority of the herring ran in length from 11 to 12 inches. None were longer than 12 inches. A few were somewhat less than 11 inches, but found only one as small as 10 inches. Saw no others less than 10 1/2 inches.

The 10 inch herring had a greatest height of  $2 \frac{1}{4}$  inches. Specimens from 11 to 12 inches long were between  $2 \frac{1}{2}$  and  $3 \frac{1}{4}$  inches high. The greatest height is at or just in front of line connecting front ends of dorsal and ventral fins.

These fish are rather plump, however, and their height does not give a good idea of their relation to the mesh of the nets. The herring were all meshed well forward, mainly from the back end of the head to half way to the line connecting front ends of dorsal and ventral fins. That is it appeared as though they would all have meshed in a net having a somewhat larger mesh.

Six of the herring were cut open at once. 5 were between 11 and 12 inches long; 1 was 10 inches long; 4 were females, 2 were males. The ovaries were all far advanced, some a little farther than others. Two afforded eggs by slight pressure on abdomen before cutting

open. The ovaries are quite large and extend well through abdominal cavity. The eggs are rather larger, though much smaller than in the whitefish; light yellow in color. It looked as though these fish would have spawned in 2 to 4 weeks.

Later in the day a large number of herring were split in Capt. Allen's place. The females predominated, and all of both sexes were far advanced toward spawning. In some specimens it looked as though the spawn would run in a week or two. The eggs seemed quite separated from each other in the ovaries. A light *on the abdomen before cutting* pressure <sup>^</sup>would undoubtedly have forced them out. The milt was in the same relative condition. In some specimens after cutting the spermaries the milt ran out freely.

Two specimens of the common sucker were opened; one male, 12 inches long, one female 16 inches long. Both seemed very nearly ready

to pass eggs and milt, though it might have required a month yet. The eggs were considerably smaller than those of the herring. The ovaries were very large, filling up large part of body cavity.

One mullet about 13 inches long, a male, had no indications of ripening of milt.

The fish were mostly taken by the Long Point Co., and placed in cold storage. They have buildings here for that purpose. A few herring later in the day were split and salted. They were becoming soft. This fish will not last long, especially if the weather is at all warm, as it was to-day. They were getting soft rapidly. The heads were taken off. Then the bodies were split along the back like mackerel. The entrails were entirely cleaned out, and the fish were thrown in a brine strong enough to float a potato. They are left here a day to allow the blood to wash off and out,

when they are taken out, and packed in salt. This is the practice if the weather is at all warm.

In cold weather the herring are simply gibbed and salted.

To-day the males seemed to soften faster than the females. The first and greatest decay occurs around the anal opening, which is as might be expected. A few of the fish had decayed by 4 o'clock P. M. so much that they had to be thrown away. They were softest through the lower or ventral parts of the sides. The ribs would work out as they were cut open, and stick out, *on the inside of body.*

The herring are now very fat, and the sides of the bellies are very thick, where they are thin in the mackerel during the period when carrying such ripe spawn. Capt. Allen says they remain fat through the fall, but become thin in the winter (sometimes taken

through the ice) and are also thin in the spring. These herring are therefore in best condition in the spawning season.

One hundred herring at this season will average about 75 pounds in weight. The larger ones will weigh up to 1 pound apiece.

The herring nets are supposed to have a 3 inch mesh. They hang about 3 1/2 feet deep. They are made generally in two sizes; 3 pounds of netting equal to about 200 yards; and 1 1/2 pounds equal to about 100 yards. The latter are called short nets and cost about \$10. when rigged. The nets last about 2 seasons. They require a good deal of repairing the second season.

The pickerel are very hard on the nets, much more so than the herring.

They use a somewhat heavier twine here for the nets than in Lake Ontario, Use here a No. 60 twine. Capt. Allen thought they used No. 62 twine in Lake Ontario.

The nets have to be carefully used and cared for. When taken up they are hauled fish and all into large wooden trays or boxes. They seldom have time to take more than a few of the fish out on the way home.

Each party sets its nets in a continuous string, tied together. They go out now about 4 in the morning. A gang is set and the old one taken up. At this season they can safely be left out only one night, on account of the fish dying and decaying. When the water gets colder they may sometimes be left out over 2 nights. The nets are all set on the bottom.

When the boats arrived this morning the fish were mostly all in the nets, and this is the customary way. The first thing is to disentangle the fish, which is a slow and laborious operation, as they are tightly fastened generally, and sometimes meshed more than once. If quite small, they may be forced forwards through the mesh. Generally, however,

the mesh has to be worked off over the head. The net is much twisted and entangled.

When the fish are out they must first be cared for. To-day they were placed in the cold storage of the Long Point Co., which takes most of their fish. Two barrels were iced round and shipped to some Canadian town.

Next the nets were wound onto a small reel, one person turning the reel, one managing the lead line, another the float line, and a fourth taking it out of the box, and untwisting it. The reel and net are then hung in a tank of lime water, about 2 quarts unslacked lime to the amount of water required to fill a tank, somewhat larger than the reel, the axle of which fits into slots at the ends of the tank. It is turned around in the tank for 2 or 3 minutes. The lime water cuts the slime on the nets, and causes the nets to dry more quickly.

Before liming, however, the reel with the

net is placed on the wharf and is thoroughly drenched with water from buckets to remove as much dirt as possible.

After liming the net is reeled from the small to a very large reel suspended in the open air, for drying.

To-day the sun was shining and the nets dried quickly. When this occurs the nets may be ready for use again the next morning. There seemed, however, to be quite a surplus of nets on the reels.

Dr. Wakeham suggested to them that they try using a solution of sugar <sup>of</sup> ~~and~~ lead and alum for preserving their nets. Thought if the nets were soaked in it twice a year it would save them the trouble they have every day.

1/2 pound each of sugar of lead and alum dissolved in half a barrel of water, and soak the nets in it over night, then hanging up to dry. This solution is used for cotton sails

in places, and also for rendering certain kinds of cloth water proof.

The reason for taking so much care of the nets is to prevent mildew and decay of nets, which takes place very rapidly.

Each of these boats uses about 10 or 12 nets at a setting, but I could not ascertain what the length of the nets was, whether 200 or 100 yards. The question was evaded.

Yellow pickerel are occasionally taken in these nets, contrary to what we heard at Port Colborne.

The blue pickerel are worth a little more now than the herring. The former bring to the fishermen (wholesale) an average of about 1 1/4 cents a pound, the pickerel 1 1/2 to 2 cents. Yellow pickerel are better eating than blue pickerel.

The information we obtained here related entirely to the gill nets. Saw no one who could instruct us about the pound nets.

Expected to see Mr. Harris, Pres. of the Long Point Co. He was at the Point, but did not come over while we were at Port Dover.

No seines are used about here now, and the fishing about this place is represented by the gill netting of Lowe and Allen, and the nets and pounds of the Long Point Co.

James Lowe, Port Dover, Ont.

Oct. 5, 1893.

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Has been in the business here 13 years, and principally engaged in gill net fishing during that time. A few years ago used 2 boats; now only one. Has a license, however, for two boats (1,000 rods net for each) and uses more than 1000 rods to the one boat. His crew consists of 5 men besides himself.

The nets used chiefly for herring and pickerel, have a 3 inch mesh (stretched). The thread does not shrink so far as he knows. If anything, the mesh should get larger by use.

Starts fishing in the spring as soon as possible after the ice gets out, about April.1 The fishing then lasts from 4 to 6 weeks. They fish 4 to 5 miles off shore in depths of 5 to 6 fathoms. Take chiefly herring.

After this time the herring leave. He

does not know where they go, but supposes into deep water. Their boats are not large enough to follow them, and they give up fishing.

The tugs from Erie, however, follow them out into the middle of the lake and fish for them all summer.

The Americans also make use of more kinds of fish than on this side. Their tugs enable them to market fish rapidly in warm weather, and this gives them a great advantage over the fishermen on this side.

During the summer Mr. Lowe may set a net once in a while if fish are required for any purpose, but does this seldom, as the nets will mildew in one day's time, and give them much trouble.

From Erie they fish to a depth of 13 fathoms in summer.

The fall fishing off Port Dover begins generally about October 1. This year it began

a week earlier. It is not until this time that the herring can be found. This fishing has then been continued through October and November, and a week or ten days into December. In October they catch very few pickerel. In November about half the fish taken are pickerel.

Very little fishing is ever done here in the winter with gill nets. The ice does not generally serve well here for that purpose.

Never saw any spawn running from the herring, although he had seen it running from whitefish. In the latter the eggs will sometimes stream out when they are held up. When herring have been lying piled in boxes after catching, he has sometimes seen eggs among them when they were overhauled. He could not tell the dates. Had not paid any attention to the matter.

There has been better fishing this year, both spring and fall (up to date) than ever

before in his experience (13 years).

To-day made a catch of about 750 pounds herring with 1500 yards gill nets. Would regard this as a fair catch. Yesterday took about 2500 pounds herring with the same amount of nets. That was, however, an extraordinary catch.

Considers that the herring are just as abundant now as ever. This applies to the entire region inside of and about Long Point. The catch varies from year to year, periods of 2 or 3 years poor fishing being followed by 1, 2 or more years good fishing.

(Capt. Allen states, however, that the herring fishery is of very recent date in this region, as an extensive business. See his remarks further on).

During the springs of 1890 and 1891 a sort of slime was very common on the herring grounds and attached itself to the nets, making

the twine look many times larger than it was. It had the appearance of mustard when it dried. Never saw it before and it did not occur in the fall of the same years. It came upon the nets every time they were set, and rendered the fishing very poor.

The proper mesh for the herring gill nets throughout Lake Erie is 3 inches (ext.). It should be allowed neither smaller nor larger. A 2  $\frac{3}{4}$  inch mesh would not catch any more herring, but would take many small ones.

There should be no close season for herring.

The herring fishery here with gill nets is conducted chiefly in a depth of about 6 fathoms. Sometimes go into depths of 7 or 8 fathoms. The depths are the same both spring and fall.

Gill net fishing for herring does not interfere with any other species of fish to an

appreciable extent.

In the spring, during the close season for pickerel, do not catch more than a dozen pickerel a week in the gill nets among the herring. The pickerel enter the bags to spawn. Port Rowan Bay is an important spawning ground for them.

Before the close season begins, in case the ice opens early enough to permit, they will fish out large quantities of pickerel in these places. Find there both the blue and yellow pickerel, and also the pike and maskinonge.

The herring spoil very quickly, especially if the weather is the least bit warm. From this fact they are at a disadvantage compared with the Americans who have better facilities for disposing quickly of their catch.

Yellow perch are sometimes taken quite plentifully, during the spring fishery for herring with gill nets. Last spring, however,

they did not get many. They are not of much value here.

No black bass at all are taken in the gill nets, but once in a while a green bass (saw one this morning; greenish yellow in color).

Get a small number of suckers in the gill nets, ~~but~~

Mr. Lowe has a drag seine something over 100 yards long, which he sometimes hauls on the outer beach to the west of the entrance to the creek. It is only hauled in the spring as soon as the ice is out; during the month of April is the proper time. No good after the end of April. Take with it suckers, mullet, bullheads and a few pike. At this time of the year, other and better fish being scarce or not obtainable, these fish find a ready sale.

The use of gill nets and of the single seine is all the fishing done by Mr. Lowe. Has about 5 men to help him altogether. Only 3 or 4 go out in the boat.

Perhaps 20 years ago, and previous to that time, about 1000 yards of gill nets used to be fished from this place for whitefish. Some farmers also used to own and fish with gill nets. This fishery, however, never amounted to anything at this place. This was before pound nets came into use, and before a close season had been enacted. The fishery was entirely confined to the shallow, rocky bottoms near shore. The season began about the middle of October, continued through November and somewhat into December.

He thinks that the whitefish still occur in those places at the same season. The close season act, however, has stopped the fishery. It could begin only a short time before November and could extend only a little while into December, so that it would not pay to set nets for this species (They simply came into the shallow water to spawn).

The whitefish now enter the pound nets to some extent in November, but those taken during this month are supposed to be turned loose, and he has no reason to think the law is disregarded in this respect.

The pound nets in this region take principally herring. Some whitefish are caught in the fall. Also take more or less of pike, pickerel, green bass (spring), maskinonge, broad mullet, and sturgeon (June, July and August.)

They begin to put down the pound nets in May. They are kept down continuously until December, and have fished all the time. They are obliged to throw out the black bass during the close season for them in the spring, and the whitefish and salmon trout in November. He thinks they are pretty careful about obeying the laws.

During the fall of 1892, for the first

time, they were obliged to drop the tunnels to the pound nets during about 2 weeks in November and at the same time they were obliged to stop the use of the herring gill nets.

This fall they have been notified that they must discontinue fishing with pound nets and herring gill nets through the entire month of November.

As the November close season was made for the benefit of the whitefish and salmon trout, of which they take none here, they consider it very unjust that they should be obliged to stop gill netting during November. (In stopping the use of these nets in November at this place, <sup>were</sup> ~~when~~ not the herring the fish which the Government had in mind to protect?).

Mr. Lowe knows that the tugs from Erie come way over on to the north side of the lake to fish with gill nets. Has seen them lift their nets on the north or inner side of Long Point. Thinks that this intrusion in Canadian

grounds has been carried on to a very large extent. The Long Point Co. complained of the matter to the Government. This is the only season when the Canadian authorities have taken any action looking toward stopping their coming over. Mr. Harris, President of the Long Point Company, was instrumental in bringing this about.

The Long Point Co. is running about 14 pounds, which are mostly in Long Point Bay. 2 or 3 are on the outer side of Long Point and 2 are ~~last of~~ Port Dover.

Besides these, there are 3 pounds at Nanticoke, and some at Selkirk. Some pounds also used to be fished about Grand River, Maitland, and may be now.

The Long Point Co. have only about 6 men to tend their pounds. They constitute also the crew of the steam tug which fishes the pounds.

As at present, only 2 parties have been continuously fishing with gill nets from Port Dover, at any time in the past. Sometimes other persons have gone into the business on a small scale, but they have never continued for more than a short time.

Capt. Geo. F. Allen, Port Dover, Ont.

Oct. 5, 1893.

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Came over to this country from Scotland in 1850, when he was 22 years old. Had fished in Scotland. Has been fishing steadily from Port Dover 15 years. Previous to that had fished here off and on.

In this place has only used gill net, mainly for herring and pickerel, but also to some extent for whitefish.

Fished for whitefish with gill nets between 10 and 15 years ago. Did not make a regular business of it, but fished only a little in the fall. It did not continue to be a paying business.

The season for whitefish then was the latter part of October and all of November, but never fished in December. That was before the fishery was regulated by law. No license was

required, and there was no close season.

They used 4 1/2 and 5 inch mesh gill nets, not because of any law to that effect, but because that seemed to be the best size for taking the fish.

The fishing was carried on off Port Dover, and 7 miles below there, on reefs, having 8 to 10 or 12 feet of water, about 1/2 mile off the beach. The white fish used to be very abundant in these places. After 5 years' time noticed much decrease in their number, and after 5 years more they had become much less abundant. The season for taking them on these reefs being chiefly the spawning and close season of November, no one fishes there now and he has had no way of telling what their comparative numbers may be now, but he thinks they would not be found abundant, although some would undoubtedly occur.

Salmon trout would not come into such

shallow water and were not taken in that fishery.

30 years ago the people about here used to go out at night with a torch and spear whitefish on these reefs. They were very abundant, but were taken only for domestic use or small sales. There were no markets for them in those times.

(A cousin of Capt. Allen who was present said that some time before Capt. Allen began fishing here he used to use gill nets for white fish on the same shallow reefs above described, in the fall. Would take 100 whitefish in a night, using not over 400 or 500 yards of net, having a 4 1/2 inch mesh. At that time this species was 10 times more abundant than when Capt. Allen began fishing).

The best catch of herring which Capt. Allen ever made was 1800 lbs., 2 years ago. Had 16 gill nets out, about 1800 yards.

Yesterday he took 1600 pounds herring with 12 nets of about same size as above.

Could not say whether as a whole herring have decreased or not.

The herring fishery has begun here within about 12 years, and did not become extensive until about 8 years ago. Before that time not much attention was paid to herring, and this species has not, therefore, been under observation very many years.

Do not now get them as plentiful right along as they did in the beginning. Night before last, when he took 1600 pounds, was a dark, stormy night, well adapted to gill netting, and even under those circumstances the catch was an extraordinary one.

Get a good many smaller herring in the pounds hereabouts than in the gill nets. They run down to 6 and 7 inches.

The pounds used to have only 2 inch

mesh (~~net~~<sup>net</sup>). (This seems to be all they have now).

The pounds have done much harm in taking so many small herring. Great quantities have been thrown away, and they also used to sell some.

Pickereel are not so plenty now as they used to be.

Pretty much all of the herring taken to-day would mesh in 3  $\frac{1}{8}$  inch gill nets. Those now taken in the 3 inch nets are all meshed pretty well forward.

Herring are taken in depths of 5 to 8 fathoms, both spring and fall, principally on mud bottom, some sand. Could not say whether the herring would spawn on such bottom or not; the whitefish would not.

Many young fish occur in the stream here in June, July and August. Could not say whether they were young herring or not. (Prof.

Prince caught a few specimens. They look as though they might be herring).

Thinks that the fry of the whitefish and salmon trout are planted here in too shallow water, too near the shore, where pickerel are abundant, and where they are likely to fall prey to other fishes. The storms which beat upon these beaches could also destroy them.

Does not know whether whitefish are more abundant now than they were before the planting began. Has no way of finding out, as they do not fish for them here with gill nets. Don't get the same amount of whitefish in the pounds now that they used to.

Southwest and west winds are the best for fishing gill nets here. Get very few fish during east winds.

From  $1/2$  to  $3/4$  of a mile out from the pier there is a reef where they fish as a sport for black bass and perch during summer. This

furnishes employment as guides and boatmen to some of the men who go fishing regularly in the spring and fall.

There is good <sup>tz</sup> ~~poll~~ fishing at Long Point.  
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