

Lake of the Woods,

1894.

Interviews and Field Notes.

Investigations by

Joint International Commission.

Lake of the Woods, Aug. 5-10, 1894

RICHARD RATHBUN.

tion of
water.

The condition of the water in Lake of the Woods, in the summer, is something remarkable for so large a sheet of water, and makes it resemble more a small shallow mill pond. The upper stratum of water becomes charged with microscopic algae to such an extent, as to give it a dense bright green color. This,

however, is the case to any degree only in the southern part of the lake, in the Big Traverse, where the water is relatively shallow, and where there are probably no strong currents. This body must be regarded as to a large extent stagnant. The greenness was most intense, so far as we saw toward the southern shore, but it reached pretty well across to Garden Island, and about Garden Island there was more or less of the green stuff. No where through the lake where we went was the water clear and colorless, but we could not stop to examine its character. As it was thrown up by the prow of our steamer, as we passed up from Garden Island to Rat Portage, it had a slightly yellowish appearance (light yellowish olive). In the Big Traverse it was green, very green, especially in the southern part.

These algae seem distributed through the

water as deep as we could see, but furthermore they formed a green scum on the surface everywhere, in irregular patches of all sizes from very small up to the size of our steamer and bigger. We passed through them all the way from Ricklefs place to Asmus's at Long Point, and along the line across the Big Traverse but as we approached the northern side of the Traverse, the intensity became much less. *could not say. A fisherman told*

Prof. Macmillan, of the University of Minnesota, who has been camped on Garden Island all summer studying the botany of the region, has also made a study of this subject, and proposes to publish upon it. He says that the material consists of a mixture of unicellular and filamentous algae. There is considerable blue green algae belonging in the group of Nostoc^c and in the genus Oscellaria^h. Also of the bright green algae there

is considerable Ulothrix. The principal forms appear to belong to Nostoc and Ulothrix but he has had no means for microscopical examination with him, and cannot say positively what they are until he has examined them in the laboratory. The spores rest upon the bottom during the colder part of the year. The surface appearances began between July 2 and 10 this year. How long they may continue he could not say. A fisherman told us that they went with the first frost and he gave the date, which will be found in one of the interviews. Prof. Mcmillan says that they occupy a belt of water at the surface about 8 or 10 feet thick. We had no means of determining. The water was rendered opaque by them. The green stuff could be seen all through, and the crest of water thrown up by the prow of our boat and of the barge towed alongside was intensely green, a

beautiful bright color. One man said he had used the substance for making a green paint. The patches on the surface are dense and very bright, and very numerous. They succeed one another in close succession, and may be more or less touching. I imagine that their size and distribution may be more or less influenced by the wind and waves, the latter tending to break them up in regular sized patches. I suppose also that a heavy sea and wind would tend to dissipate them from the surface temporarily, but I had no chance of observing that.

The impression one has with regard to this rich growth of algae is that it must form the basis for rich food for fishes. The Big Traverse would seem to constitute a nursery for such species as prefer this character of water, and there is much other vegetation around the sides of the lake, such as the

pickerel and pike might like to breed in. This is noticeably so in the bay inside of the point at the mouth of Rainy River. The same features occur inside of the islands at Ricklefs, in the neighborhood of Windy Point; at the mouth of Grassy River and War Road River, and, in fact, at numerous places all about the lake. One would expect to find a rich fauna here, and it undoubtedly exists. Woolman's seining was not continued long enough to bring out all the fishes. Crayfishes are very abundant, and form a large part of the food of the sturgeon. We took several very small bivalves, and at least two species of snails from sturgeon stomachs, and I also saw the broken valves of Unios on the shore. A thorough natural history survey of the lake would undoubtedly repay the labor.

I could not get track of any papers bear-

ing upon the Lake of the Woods than I was already acquainted with.

U.S. Engineers Report of Boundary Survey.

Lawson's Geology.

Possibly the mine reports of the Canadian Government.

*to Fish Co.
made in
netting*

The Buffalo Fish Company takes some fish from the Lake of the Woods. The gill netters, Bilodeau and Giguere, of Norman, sell their fish to that company. The American consul at Rat Portage, G.C. Frisbie, says that today (Aug. 10), that firm shipped 9,200 lbs. of whitefish, pickerel and jackfish to that company. They filled 72 boxes and were iced. At this rate their catch must be considerable in the course of a year.

*✓
to Lake
count of*

In the course of our expedition on the Lake of the Woods, we saw practically all of

the pounds; except Huggins, those of the Baltimore Packing Company on the mainland near Garden Island and some of those about Oak Island.

Huggins pounds on Skiff Island number only two. Ricklefs & Co., have 6 and Budreau has 6, making only 14 in all in Canada waters.

In American waters we have the following beginning at the mouth of Rainy River:

Sandusky Fish Co.	1	string	3
Baltimore Packing Co.,	1	"	2
Sandusky	1	"	3
Balto.	1	"	3
S.	1	"	5
B.	1	"	3
B.	4	" (Each 2)	8
Bostedt	1	"	2
Balto.	1	"	2
Bostedt	7	" (Each 2)	14
S.	2	" (Each 3)	6
S.	1	"	2
Unknown	1	"	2
"	1	"	1
Wm. Zippel	5	"	7
C. Zippel	3	"	7
Haas	4	"	7
Sandusky	4	"	10
Asmus	7	"	9

	Number forward,	96
Garden or Cornfield Id.		
Balto. Packing Co.,	5 strings	7
Mainland near by, same		
Company,	11 "	13
Oak Island, Sandusky		
Fish Co. Island and		
Mainland,	13 "	30

Total American pounds.....		146
Canadian pounds.....		14

Total pounds in Lake.....		160

WILLIAM ZIPPEL, ZIPPEL'S HARBOR, MINNESOTA.

LAKE OF THE WOODS.

INTERVIEWED BY

WM. WAKEHAM AND RICHARD RATHBUN.

He began to put in pound nets in 1887 in

(Mr. Zippel was the pioneer pound-net fisherman on the Lake of the Woods. He has located there in the place where we saw him, and desires to remain there permanently. Expects to purchase a homestead when the land is opened for sale. It is to his interest, as he stated, to have the fisheries maintained and protected).

He has been on the Lake of the Woods 11 years. On the Canadian side 3 years and 8 months. He commenced fishing here in 1886 and fished during the first winter through the ice with gill nets for whitefish, pike and pickerel. Took

part of the fish to Rat Portage and part was
teamed to the Great Northern Railroad in
Minnesota. This was the first fishing done
on the Lake of the Woods by a white man.

He began to put in pound nets in 1887 in
the last part of August. Fished 2 nets that
fall. That was the first sturgeon he got to
speak of, but caught once in a while one
before that in the gill nets. His fish went
to Rat Portage at that time. He was in com-
pany with D.F.Reid then. In August 1887,
the first pound net was set by Mr.Zippel on
the east side of the creek at his present
place. Had 2 pots in a string. The lead-
ers were from 50 to 60 rods long. The first
pot was 4-inch mesh (ext.) and the hearts the
same, and the lead 7 inches. The pot was
24 feet square. That was all that was
fished in 1887. fished most of the open season

In 1888 Mr.Zippel set the same number of

pots as in the fall of 1887 and fished them the whole season from the time the ice was out until it made again. Mr.D.F.Reid set in 1888 on Garden Island, but only fished from 2 to 2 1-2 months in the fall. He had 2 pounds in a string on Garden Island. No one else fished in 1888. I did not keep up the winter fishing in the winter of 1887-88 and have done no winter fishing since 1886-87.

In 1889 he had 2 nets just the same as before, and Mr.Reid had 6 on Garden Island. In 1889 he fished in the spring about 2 months and in the fall about 2 months. In 1889 the Baltimore Packing Co. from Minneapolis bought in a share of Reid, so that it was the Baltimore Packing Company and Reid together, but they called it the Reid Fish Company. They fished most of the open season. No one else was fishing that year.

In 1890 there was the Reid Fish Company, who, I understood had 12 nets, all on Garden Island. I fished 2 nets and my brother-in-law, W.M.H. Gibson, had one net about half a mile west of Zippel Harbor. No one else fished that year.

In 1891 I fished 2 nets again. Mr. Gibson fished 2. As I understand it the Baltimore Packing Company bought Reid out entirely in 1891, and they fished more than 12 nets. Their nets were partly around Garden Island and partly on the south shore near where Haas is now. They had 6 nets on the south shore, and I do not know how many they had on Garden Island. (This year the Baltimore Packing Company is not fishing these nets near Haas' house).

In 1892 Mr. Zippel had 2 nets in a string the same as before, and one net about half a mile east of them. The Baltimore Packing

Company fished on Garden Island and about 5 miles west from Long Point on the south shore. They had 4 nets in to the west of Cormorant Rock on the south shore. They fished only about 2 months that year in the fall at that place. Asmus began fishing at Long Point in the fall and fished 2 nets. H. Penske fished on the shore of the lake just to the west of the mouth of Rainy River. He had 6 nets. He fished in the spring and fall. Ole Johnson & Co. fished at Bostedt's place. They fished 8 nets in the spring and fall. There was no one else fishing that year.

In 1893 Mr. Zippel had 4 nets, the same 2 in the old string and 2 single nets further west, half a mile apart and half a mile from the string. Penske had 10 nets at the mouth of the Rainy River. He had 4 strings and some he fished 3 nets on and some 2. He fished spring and fall. Ole Johnson had

10 nets in the location of Bostedt's place, probably in 5 strings. Mr. Zippel's nets were next in order. The next to the west was Asmus, with 4 nets. No one else fished along the south shore to the west. At Garden Island the Reid Fish Company was fishing.

In 1892 H. Fenske began fishing on Oak Island, and he sold out to the Sandusky Fish Company in 1893. The Sandusky Fish Company bought out H. Fenske on Oak Island and Fenske and Brydges at the mouth of the River in 1893, and began fishing in 1894. In the winter of 1893-4 Bostedt bought out Ole Johnson.

Mr. Zippel fishes 8 nets now.

They have fished a very few gill nets in the south part of the lake, but not enough to amount to anything. I tried them for sturgeon once but did not catch anything. Had 2 nets with 10 and 11-inch mesh.

Between here and Garden Island you will not find any water over 35 feet deep. The bottom is mostly of mud and clay, and in some places sand and gravel. On the south side the shores are most all sand.

Never fished fyke nets here. One year 2 men fished a fyke net here in the winter, but it did not amount to anything. They caught bull-heads and lawyers.

Has never fished with seines. Two men started in with a seine the spring of 1892, but did not make a success of it.

We are fishing now with hook and line just to catch fish for eating. We caught 2 sturgeon yesterday. There has been no commercial fishing with hook and line. The most of the hook and line fishing has been done at Asmus' place. They used baited hooks.

The leaders of the pounds run pretty close to the shore, generally in 5 feet of water.

May 20 is the earliest they put in pound nets. They keep them in until about July 15, then take them out, and set them again about August 20, and keep them in until it freezes up, about November 5. I have fished during the summer, but it does not pay on account of the nets rotting so quickly, but can catch the fish all right. But the caviar is not good, and it will not pay to fish unless you can get the caviar.

When I first put the nets in in the spring, get yellow pike, whitefish, jackfish, and all other kinds of scale fish which occur here. The sturgeon are the most plentiful during the month of June. The best month in the fall for sturgeon is in September. Get the most whitefish in the fall in October. When the cold weather comes the fish leave the shore. He has fished until November 15, but the fish leave the shore when the

water gets cold.

Have no herring here. Have the common whitefish and the tullibee. Get a very few tullibee. Used to catch them on the Canada side and they were plentiful about 12 miles south of Rat Portage. Get the yellow pike. Get no saugers. Do not get many yellow perch; perhaps not over half a dozen in a year. No cat fishes. Get a few bullheads. Plenty of sturgeon. Get no sunfish. No sheepshead. Get the lawyer, which are quite common. The jackfish are quite common. Never got any maskinonge, but they occur here and south of here, and get them on the Canada side. Catches about a half dozen or a dozen lake trout every year. The largest one he has caught weighed 17 lbs., and they run from 4 lbs. up. They are in good condition. We always eat them ourselves; do not ship them. Get suckers, but do not

catch such a great many in the nets. Get plenty of buffalo. The moon-eye are quite common.

Has had leaders as long as 75 rods. Now they average about 55 or 60 rods. He uses both long and short tunnel, but likes the short tunnel the better so far. The size of the mesh in the leaders now is 7 inch, and it was the same in the beginning, but one year he had 6 inch. It makes no difference about the size of the leader. In the tunnel he uses 3 and 4-inch mesh, and 4-inch in the heart. In the crib uses some 3-inch and some 4-inch. The last he bought, however, was 4-inch, as he wants to do away with the 3-inch. They will shrink quite a little in tarring, and in 2 seasons a 4-inch mesh will be 3-inch. The fish will gill in a 4-inch mesh. The first year I commenced I had small twine, 18 thread cotton, in the crib,

and they gilled very badly, and then I got 21 thread, 3 1-2-inch, and they did not gill so badly, and then I got 3-inch and they did not gill at all, and what we did not want we could let go. With 3-inch mesh he gets a thicker twine, and they will not gill so much. Through a 3-inch mesh a 1-2 lb. whitefish will go, but a 1 1-2 lb. fish will not.

The young whitefish become abundant the latter part of June and the first part of July and they will be from 1-2-inch up to 2 and 3 inches. They all run through the nets. We get very few 8 and 10 inches, but get a great many of the very young ones. They do not catch the small whitefish until they get up to 2 1-2 and 3 lbs. Perhaps in a ton of whitefish would not have half a dozen fish that would weigh under 2 lbs. In the spring get more small ones than they do in the fall. That is the latter part of

June and July. They can throw those small ones out alive without any trouble. They throw the small whitefish and small sturgeon away. If a man is careful he can throw them out all right. It is a sin to kill the small fish if you can help it.

The proper size of mesh in a pot should be not less than 4 inches, and he thinks he will get 4 1-2-inch. I shall perhaps buy 5-inch mesh and have thicker twine. If it is thin twine, and a sturgeon gets his bill in it, he is liable to go right through. The proper size of whitefish for market should not be less than 2 or 2 1-2 lbs., and the yellow pike the same. That is dressed for the whitefish and round for the pike. Their whitefish are all shipped dressed, and the pike also this year. I sell to the Reid Fish Company. The Sandusky Company take a great deal of whitefish round. The eastern

market calls for round fish, but the western market wants them dressed.

The fish are getting scarcer. When I have 2 or 3 pounds set in a string the inner one generally fishes best in the spring, and in the fall the outside ones fish the best. But get the sturgeon better in the inner ones.

There is a sort of stuff in the water that rots the nets. It is not the green stuff but the red stuff. The middle part of the net rots the worst. It simply becomes rotten and you do not know it until you take it out, as you cannot tell by the looks of it. I generally fish a pound out in one year's fishing, spring and fall. If I use it the next year it is simply on the ends. I have fished the same pounds on Green Bay, Wis., as long as 9 seasons. I have used up nets enough here to buy a good farm. I was going

to try galvanized wire for a leader, but it costs too much. I do not think it would be much of a success because the slime gets so thick it would catch in it and make a regular wall, and if the lead gets so full and dirty the fish will not lead.

For working 8 pounds I had 9 men this spring. It would take just about as many for 6 pounds. If they would all fish only 2 or 3 pounds a piece they could make it pay. I never would put in more than 3 or 4, but others come driving around me so that I have to have more nets and put them in for my protection. But if the nets were further apart and fewer of them they would do better fishing.

The sturgeon are not half as abundant as they used to be. They begun to get so scarce last year and this year. Before that they kept up pretty well. The sturgeon run as

high sometimes as 200 lbs. round. We had them weighing that much. A sturgeon weighing that much would be 5 1-2 or 6 feet long. The average weight of our catch would be about 30 lbs. apiece, but this year they run smaller. That is dressed meat. This is the first year I have noticed the decrease in the size. I do not think they will go any more than 20 or 22 lbs. this year. In the spring it takes about 12 sturgeon to a keg of 150 lbs. of caviar. In the fall it takes about 16 sturgeon to a keg. In the spring get all No.1 caviar, and in the fall it is No. 1. In the summer get hardly any, and it would be No.2 and 3. The difference between No. 1 and No. 2 is in the size of the eggs.

The sturgeon spawn from about the 10th of June to the 10th of July. The caviar eggs are very nearly ripe sometimes. If you catch them from June 20th to 25th they will

be nearly ripe. The spawn found in them in the fall lasts through the winter and grows. Some of the caviar eggs are black and some grey. When the eggs are ripe and running they are about the same color. Find them with yellow eggs in them, but they are not ripe. When a sturgeon is very fat it makes the eggs yellow. In the spring just about half the sturgeon have the caviar. Get the males and females together. They are all mixed up. In June get the most females and the most males in the fall, but early in the spring get them all mixed together. They go pretty close in shore here to spawn, and they go up the rivers also. Rainy River is the only river I know of where they go up. No one but the Indians fishes up Rainy River. As I understand it, one man went up there to get caviar but did not make a success of it. Along the south shore generally get the stur-

geen a little later than at the mouth of the River. The sturgeon run up the river just as soon as the ice is out. The first of May they commence running up the river, and they come back about in June or July. He gets his sturgeon later than they do at the mouth of the river. They are moving from the east to the west along the shore. That is in June. In the fall cannot tell anything about it. They do not occur around the War Road River that he knows of. They spawn mostly on soft gravelly bottom. They spawn in depths of from 4 to 10 feet on this shore here. Never saw eggs lying on the shore. Lawyers will eat the sturgeon eggs and sturgeon will suck up their own spawn. Does not think suckers eat the sturgeon spawn, but some kinds of suckers may. In opening the stomach of sturgeon has seen the eggs in the stomachs. Can take caviar from about a 15 to

20 lb. sturgeon, which is the smallest. They are about 4 feet long. They do not come to maturity until they are about 4 feet long. They will sometimes market sturgeon as small as 3 feet round, but do not want them any smaller. I have seen sturgeon here 1 1-2 feet long. Sometimes get as many as 8 or 10 of these small ones, in one pound net. Never saw any real small sturgeon, however, or fry.

The whitefish have not decreased as the sturgeon have, but are just about the same as ever.

The pike is about the same also, and have not decreased. None of the fishes have decreased except the sturgeon.

Get most of the whitefish when we set in the first part of May, until the sturgeon come in, and when the sturgeon come in they drive the whitefish off. But will get white-

fish all the spring more or less. And then again in the last part of September get them, and get them until the last part of October. They commence to spawn about October 10, and they will spawn in November some. They spawn close in shore. Whitefish do not go in schools here. I understand they come in schools on Oak Island, but never had them in schools here. Do not go in bodies as they do in Green Bay, Lake Michigan.

The yellow pike spawn in the spring and commence in April and spawn through May. The jackfish spawn the same time. The jackfish spawn close in shore and at the mouth of the Rainy River in the shallow places.

The fishermen do not put any offal into the water. I think it spoils the fishing ground to put offal back on it. Some have a habit when they take out the nets, if some fishes are gilled and dead, they throw them

into the water, but I take them ashore.

Logs troubled us one year only. Have a little trouble with the bark sometimes when the water is high, but it does not amount to much.

In order to preserve the sturgeon he would make them fish less nets. If they put in about 25 nets from the mouth of Rainy River up to Long Point it would be enough. As near as he can figure there are 81 nets now in this same area.

He has always thrown the small sturgeon overboard. A close season would do good. Would have a close season from the first of May to the first of August for the sturgeon and an open season the rest of the year. The pickerel and pike fishing does not pay very well. They could catch them in the fall. By having the above close season they would get more fish during the time they

fished than they do now. By limiting the number of nets and having a close season would be sufficient regulations. The sturgeon should not be caught out until after they have spawned. Would not get so much caviar of course in the spring.

The first 3 years I do not know about the catch of caviar, but one spring we had 2 nets in and took out 133 kegs of caviar. Two years ago they averaged about 6 kegs to a net, through the spring and fall. Two years ago Fenske got about 150 kegs from 6 nets. With the same number of nets fished spring and fall you would get about 1-3 of your caviar in the fall and 2-3 in the spring, the quality being the same in the fall that it is in the spring.

Is sure the sturgeon are not half as abundant now as formerly. With 16 nets now they will not catch as many sturgeon as they could

with 6 nets 3 or 4 years ago. Thinks they are catching fewer sturgeon altogether than they did 3 or 4 years ago. The caviar was higher 5 years ago than it is at present, but 2 years ago it was low. But it is just the same as speculating in wheat--they corner the market. The caviar all goes to Germany.

H.P.ASMUS, SR. AND JR., LONG POINT, MINN.

LAKE OF THE WOODS.

INTERVIEWED BY

WM. WAKEHAM AND RICHARD RATHBUN,

AUGUST 7, 1894.

He has been living here 4 years. He began fishing here the first of August 4 years ago. In 1890 had 2 nets here. In 1891 had 4 in the spring and 5 in the fall. In 1892 they had 6 nets. In 1893 they had 6 nets, and now they have 8 nets. The leaders are from 600 to 800 feet. The pot is 30 feet square, with short tunnel. The mesh in the leaders is 6 inches; in the heart 5 inches; in the tunnel 4 1-2 inches, and in the pot 4 1-2 inches. The first year we used 3-inch mesh in the pot, 4 for the heart and 5 for the leads. We used to have a great many fish gill in the 4 1-2-inch mesh. The pike

gill less in a 4 1-2-inch mesh than they do in a 3 1-2-inch mesh. They gave up the 3 1-2-inch mesh because the fish gilled in it so much. (By pike he means wall-eyed pike). They do not fish in the summer at all. Do not put in a net until about August 25, and keep it in until October 25. Has never fished in November. The ice comes on about the first of November and they have to take the nets out. on and chase the scale fish

In the fall they get sturgeon, pike, whitefish and pickerel. Get about as many sturgeon in the fall as in the spring, but they do not at the mouth of Rainy River. They have better fishing for sturgeon in the fall here than they do there. In the spring we do not get as good fishing as at the mouth of the River. We have better scale fishing here in the spring. We begin fishing in the spring as soon as the ice leaves. This year

it was about May 15 or 20 and last year we made the first lift the first of June. We keep the nets in generally until the first of July, but this year we took them out June 25. Has never fished through the summer, but there are lots of fish here, as we have tried it with hooks.

The first thing in the spring we get pike, mostly the first one or two lifts, then the sturgeon come on and chase the scale fish out. When they get many sturgeon get very few scale fish. They pull out as soon as the sturgeon slack up. Do not catch much of any whitefish in the spring, principally sturgeon and pike. In the fall the main fish is whitefish and pike. The best part of the fall is the first of October, and from then on until we stop. The best run of whitefish is when they have to take up the nets, just before it freezes up. They start

to spawn the latter part of October. Thinks they spawn on the sand beaches.

Do not take any herring here. Get lots of yellow perch up here, but do not take many in the nets. When we first came here we had a 4-inch gill net, and would get it full of perch. No catfishes here. We get bull-heads. Get a few in the pound nets. Do not fish any fyke nets. Get a very few rock bass. Get the lawyers here and the red horse and suckers and buffalo. The buffalo are a common fish and they do not use them at all. Have not caught any maskinonge. Got one lake trout last year, the first one we ever got. There are lots of moon eyes, but we cannot use them. Get lots of tullibee. They are so small they go through the mesh of the pot. Never saw them over 4 inches long here. It was on the sand beach here to the

The fish do not mesh in the leaders now

with the present size mesh, except occasionally a large pickerel. He prefers the 4 1-2 inch mesh for the pot, and catches just as many whitefish. We have some 7-inch leads and the small whitefish will go right through. We will take about 3 lb. whitefish, but no smaller ones. The whitefish here average from 5 to 6 lbs. They caught one as large as 11 lbs. dressed; 13 lbs. round.

The inner pots fish best in the spring for sturgeon and the outside in the fall for walleyed pike. The inside pot is the best for whitefish both spring and fall. Has seen whitefish here in November and just at night they would be just as thick as they could lay on the water. That was about November 5 or 10, 1892. We had 2 or 3 days that there was not a breath of wind and they came in to spawn. It was on the sand beach here to the west. Thinks they spawn on these sand

beaches in shallow water.

Has seen the ice 52 inches thick year ago last winter, and last winter it was 35 inches thick.

The water does not injure the pounds in the spring and fall as much as it does now. Thinks it is little red worms. It occurs about half way up in the leads and in the pot, but it is not so much in the pot, and has more trouble with the lead and heart than with the pot because the fish keep the pot clear. Does not think the green stuff does any particular harm. They begin to see the green stuff the latter part of June and it is thickest about the middle of August. As quick as the frost comes on it settles down. We have frost here about the latter part of September. The frost seems to kill it and it settles to the bottom.

We have fished gill nets in the winter, but

at no other time. It was about in December when we fished. We had out about 3,000 feet. Last winter we fished about to the first of January and then it gets too cold to fish. We fished all through December. Had 5 1-2-inch mesh. We would get whitefish, pike, pickerel and a few buffalo and suckers. Would get no sturgeon. The fish are plenty then under the ice. We catch a few to sell. Only tried that one year, excepting the first year we tried it for a week or two. The first time they tried it in December also. Thinks the water rots the linen nets so quick is one reason that they do not use gill nets here in the spring and summer. They have one sturgeon net out now with 10-inch mesh. They had them out one night last week and caught 2 sturgeon. We simply catch them to eat.

There was one seine used at Garden Island

4 years ago. We used to use one on the sand bar here and used to catch lots of pike--little Green Bay pike as we called them. We had 600 feet of seine and would go out about 1-4 of a mile. The mesh would be about 4 and 5 inch; 4 in the bunt and 5 for the wings; but it did not pay. A Swede fished one for a long while on Garden Island and he did pretty well. He caught 8 or 9 sturgeon that spring and caught 700 pike with it. The shore was too rocky for it. That was in 1890.

No fyke nets have been used around here. They tried one and it rotted in about 3 weeks and it was tarred also. The outer piece was all right, but the piece that set in the water was all rotted out.

We have tried hook and line fishing and it works very well, with the sturgeon hooks. We set them along in a string. Our neighbor

here fished this spring about 10,000 hooks. They started to fish about the first of June and fished 2 weeks, and one party caught 1,800 lbs. and the other 2,000 lbs. Their boat was not large enough to run them well. We had hooks out this summer about the first of July. Altogether they have not been used very much. We are about the only ones who used them about here. We took about 1,300 lbs. in 2 lifts of sturgeon on 1,800 hooks. That was about the first of July this year.

There has been no decrease in the white-fish here, and last year they had the best fishing they ever had. The size keeps about the same also. Last fall we had the best small fish fishing we have had here, and also sturgeon fishing. This year it was not so good in the spring because we had too much south wind. For fishing here we want about 2 days of south wind and then several days of

north wind. Do not notice that the sturgeon are decreasing in the lake, and has not heard that they are decreasing. At the mouth of the river you cannot tell much about it, for there are more nets being used. Now there are 30 or 35 nets used there. Thinks there will be a decrease in time if they keep on fishing. Down home where they came from there has been fishing for the last 30 or 40 years; one year might be good and the next year not so good, and so on. Thinks it is a good idea to protect them some way so as not to catch them all off at once, but does not know hardly what to do.

The largest sturgeon they ever took weighed 158 lbs. round and 98 lbs. dressed, and they took it last summer. It was about 6 or 7 feet long. The average size would be about 35 lbs. dressed. The smallest sturgeon we market, live weight, would be about

6 to 8 lbs. dressed, and about 3 or 3 1-2 feet long, round. Would not use anything smaller than that.

Get caviar in no smaller fish than 4 or 4 1-2 feet. From a sturgeon 4 feet long would get about 8 lbs. of caviar, cleaned. From one weighing 30 lbs. would get about 10 lbs. of caviar. The caviar will run up as high as 20 lbs. to a fish. It will average about 12 lbs. to a fish in the spring, but not over 8 in the fall. Sturgeon spawn about the middle of June. Thinks sturgeon spawn some in the fall and some in the spring. The most of them spawn in the spring. The caviar they get in the fall, if it was left in would stay there until the next spring, as the water gets cold and it grows very slow. The month of June is the main part of the spawning. About the latter part of June and the first part of July you can see the spawn

is gone out of the sturgeon. In the spring about 1-2 of the sturgeon have caviar and in the fall about 1-4 have caviar. We do not catch many males in the spring. Will catch more females in the spring than males. In the spring sometimes we get quite a good many large females without caviar, showing that they are empty of the spawn. They save the sounds as well as caviar of the sturgeon and dry them.

Thinks Rainy River would be a nice place for a sturgeon hatchery. Thinks they could get enough spawn there for a hatchery.

Thinks at the mouth of the river the most of the spawning is done. About 40 miles up Rainy River to the Sault there are a great many sturgeon go up in the spring to spawn.

They have settled here with the intention of living here. They have nothing else but the fisheries to depend upon. The old

gentleman was 50 years old when he came to this country. His home was near Hamburg, and he was interested in the sturgeon fishery there. It was a great fishery there. Has caught sturgeon there where the head weighed 93 lbs.

Would not have any fishing in the lake from June 20 to September 1, for sturgeon. About June 25 the caviar is ready to drop and they get most of their caviar then. But let them fish all the hooks they please during that season. In the sturgeon we have taken with hooks have had only 3 or 4 with caviar. They have probably caught on hooks here 300 to 400 sturgeon.

The old gentleman thinks companies along the shore fish too many nets each. They ought to be a certain distance apart and not too close together. One of the sons of Mr. Asmus will put in a couple of pound nets this

fall about 12 miles west of Long Point. Mr. Asmus thinks it would be better not to have the pound nets nearer together than a mile. Thinks there should be a law that will help the fishermen as well as the fish.

CHARLES W. SEARLES ---- JOHN McINTYRE.
SANDUSKY FISH COMPANY.

MOUTH OF RAINY RIVER, LAKE OF THE WOODS.

INTERVIEWED BY
WM. WAKEHAM AND RICHARD RATHBUN,
AUGUST 6, 1894.

(Mr. Searles is in charge of the nets of the Sandusky Fish Company at this point, and is the chief man here in the absence of Peter Ditchy. He is from Sandusky and is an experienced Lake Erie fisherman. Has been here only this season. Mr. McIntyre, one of the fishermen, has been here now two years).

There are just a few herring in the lake, and they call them tullibeas here. They are a fish about 6 or 7 inches long, the largest being not over 8 inches. Last year there were quite a lot of them. They are

white and about 2 1-2 inches wide. They never make any use of them.

The whitefish here are a darker colored fish and not as long in proportion as the Lake Erie whitefish. They are more of a pumpkin seed shape. They are not as good as Lake Erie whitefish.

They have lots of yellow pike. Never saw any blue pike here.

There are no saugers here. There are a few yellow perch. No black bass here. No catfishes. No white bass. There are a few rock bass. There is a black sunfish here. They are the same shape as the common sunfish only they are darker. On Lake Erie they call them the black sunfish. No sheepshead here. There are plenty of lawyers. In the fall get lots of them in the pound nets, and they are very fat. Do nothing with them, however. Get quite a

good many jackfish in the pound nets. Get a very few maskinonge. They caught 2 at Oak Island this year.

I caught 2 lake trout last fall at Kelley's Island, Lake Erie, and that is the first 2 he has caught there in years. One weighed about 4 lbs. and the other 2 1-2 lbs. The larger one was taken on Gull Island Reef and the other in West Bay in the pounds.

German carp will root up the food of all the other fishes. There are none here, and should not be any, because they are good for nothing.

There are suckers and mullet here. The suckers are quite common; as much so as they are in Lake Erie.

There are red horse here, and lots of buffalo. There are also sturgeon--nosed suckers--with a sturgeon's head and sucker's body.

Get the golden eye here.

Did not have many whitefish here last spring and suppose the fall is the best run. The forepart of October is the best run, but get more or less of them until ~~we~~ close up. October 28 is the latest Mr. McIntyre has ever fished here. We were catching a few whitefish when we were pulling our twine out this spring. We commenced to set the nets about May 12, and had them all set but one by June 10. We were all through pulling out nets by July 4. They fished 20 nets at Oak Island and drove, set and pulled them in a month. We made the second last shipment June 24. They (Oak Island) were done pulling by the last of June. Pulled the last net the last day of June. We will commence to set about the last week in this month, providing it keeps cool, but if it keeps hot we will not commence quite so soon.

In 1893 they fished until about July 10.

When the water gets warm and the fish begin to decrease, out comes the twine. The fish deteriorate and it does not pay to handle the pounds in warm weather.

Thinks there would be no pound nets in this lake if it were not for the sturgeon.

The whitefish run a very large size. The average would be about 3 1-2 lbs. We weighed 100 last year and they averaged 3 1-2 lbs. a piece. They will run as large as 8 or 9 lbs. sometimes. Get a few small ones, about 1 1-2 lbs. Cannot use anything less than 2 1-2 lbs. round. Generally throw the little ones back into the water. Do not consider fish weighing less than 2 1-2 lbs. fit for market. The first few shipments in the spring we do not gut and gill, but afterwards we gut and gill both whitefish and pickerel. (yellow pike).

The pound nets fish best when the wind is blowing on the shore. All fishing is better then.

Do not get many sturgeon at first (Early in the spring).

The whitefish occur in schools the same as in Lake Erie, only they get a few all the time. They are as abundant here, if not more so, than in Lake Erie. We had a pretty large run of whitefish in Lake Erie 6 or 8 years ago, and then they dropped off, and about 14 or 15 years ago there was a large run and they dropped off. Seems to be about every 7 or 8 years there comes a pretty good run. You take the fish and put them in the same number of pounds that were fished 15 or 18 years ago, and there would be just as many fish caught, only it takes more twine to catch them now. They caught more fish off Dunkirk 4 years ago than they

ever did before. They fish there entirely with gill nets, and caught the most of the whitefish close inshore. Not over 2 miles out, in about 130 feet.

The reefs about here are probably the places where whitefish spawn, and there are reefs all over the lake. They spawn here very late according to all accounts. It is after the fishing season is over. Never remember of catching any with spawn. (In 1893 only caught a very few spawning fish on Lake Erie). See young whitefish around here about 8 or 10 inches long. They catch them up the shore here about 7 miles on rocky bottom in the pound nets. Never saw any very small ones.

The yellow pickerel are here the year around. Get the best run first in the spring, and get them last in the fall also; and catch more or less of them all the time

the nets are in . They range a pretty fair size. Cannot say that they run any larger than they did in Lake Erie. The common run here will average larger than they will at the upper end, but there are no such large individual specimens here as there are up there. Got more pike here this year than whitefish. But last year the whitefish were more abundant. The yellow pike seem to run about even and do not school the way the whitefish do, and are a more steady traveler. Never saw any with ripe spawn in the spring. They may spawn before they get here. They find some with the spawn in them after they begin fishing, but never saw any with ripe spawn, and it is possible the bulk of the spawning may be done before the fishing begins. In Lake Erie they begin to spawn in the early spring, late in March, and spawn from then into April.

April 15 was the height of the spawning season in Sandusky Bay this year. In Sandusky they spawn mostly at the head of the bay on the reefs from Gull Island in Lake Erie, and they spawn around Kelley's Island. Caught them during the spawning season on hard bottom and mud bottom both. At Eagle Island Reef it is sandy bottom (Lake Erie).

They have all characters of bottom here where the fish can spawn. They drive stakes sometimes on soft bottoms 7 or 8 feet down.

Sturgeon are still abundant in the lake. Does not see much difference in their numbers. When the wind is off shore the fish are also off-shore. The sturgeon occur all along the shores of the lake, as far up as he knows of. Has seen sturgeon jump all the way from here to Rat Portage. Does not believe sturgeon frequent very deep wa-

ters. The sturgeon spawn in Lake Erie in May, and they spawn at the same time here. The first spawn sturgeon I ever saw in my life was here. That was the first of June this year. Thinks they spawn here in May and early in June. They spawn here all the year. You will not find ripe spawn here in the fall, and they take the caviar before the eggs are ripe. A fish that has spawn good for caviar in the fall will spawn in the spring.

I think sturgeon spawn only once in 2 years--bystander.

I think they spawn twice in one year -- McIntyre.

When the sturgeon spawn is ripe it is a dark color. They can make caviar from the ripe spawn when it is running from the fish. Thinks to make good caviar the spawn should be nearly ripe--bystander. This company

got No.1 caviar during all the time they fished this spring. Begin to get the No.2 caviar the first part of July and until the first of September, and then get No.1 caviar again. It is all No.2 during the summer.

Get no No.2 in the spring or late in the fall. In the lower part of Lake Erie they spawn where there are big boulders mixed in, but more frequently on the fine gravel. Can get caviar from fish measuring 4 feet long. Cannot get it from fish measuring 3 1-2 feet.

In Lake Erie they do not take them from a whole sturgeon unless they are 4 feet long. And it is about the same here. They do not intend to take any unless they will dress about 20 lbs. Sometimes we catch lots of small sturgeon from 2 feet up. Has seen them here as small as 8 inches. Then they are all backbone and side fins and look

like a corncob. Along the last of the fishing we get quite a lot of them. The females come first and the males come on after the run falls off. In the last 4 or 5 lifts they made they caught more male fish than they did all the rest of the spring. The last few runs of herring on Lake Erie after the first run, will be all males. I have seen them caught where there would not be half a ton of males out of a boat load. The females were always in excess of the males, and would be a few males mixed in.

Our last run of herring in Lake Erie would be all males. In the first catch of the herring early in the fall get quite a good many males. The above relates to the fall herring fishery on Lake Erie.

This spring while hauling a seine in the last of April inside of the fish house at the mouth of the Rainy River, they got jack-

fish, buffalo, one whitefish, and yellow pickerel.

Seth Green claims that a sturgeon attains its growth in 3 years.

Mr. McIntyre thinks the German carp are driving the other fish away in Lake Erie. Mr. Searles would rather have hogs than carp. Mr. McIntyre says that in Cattaraugus Creek and the creeks off it the black bass used to be very abundant and the carp have been running in there about 3 years and the bass are getting very scarce. If the carp are transferred to clear water it will take the muddy taste out, and in Germany they are in the habit of doing that before eating them.

There are nice large bull-heads in the lake here and they are taken with the hooks and lines, and occasionally take them in the pounds.

Does not know of their fishing any gill

nets in this part of the lake. They do not use any fyke nets here. The Indians in the fall put in a few gill nets to catch fish for their own use. They do no seine fishing about here that he knows of. They do not fish with hook and line for commercial purposes. (I tried a hook and line here and could not catch anything.--McIntyre)

The frost got out of the ground here about the first of June this year.

They have but one kind of sturgeon here. These rock sturgeon are simply young sturgeon. (They get smaller eggs from the salt water sturgeon and they are as black as tar-Anon.)

Their pound nets are all in shallow water. In one string they have 27 feet on the outside. The lake has raised 3 feet higher than it was when they drove the twine in the spring. It was just about the same

last year, and 2 years ago it was higher yet. About the middle of June it begins to raise and in the fall it goes back again.

There is no fishery carried on in the Rainy River. A man came down about a week ago from Rainy Lake and said that lake had lowered about 3 feet within a short time. They get 27 feet of water about 300 rods from shore and it is less than that nearer shore. It goes out gradually for 300 rods to 27 feet.

They have 5 pots in one string. Have 50 rod leaders. Only have one string with 5 pots, and the rest are 3. They go out with 50 rod leaders, and start 15 or 20 rods from shore. The Company has 10 strings of twine, one has 2 pounds in one string; and at Assmus' Point there are 10 pots, 3 each in 3 strings and one by itself. Their pounds begin just west of the river and go as far

as Long Point, and in that distance the first one has 3 pots in a string; the second, 3; the third, 5; fourth, 5; fifth, 3; sixth, 2; seventh, 2; eighth, 3; ninth, 3; and tenth, 1. The Reid Company have 18 pounds, he thinks in 8 strings.

The other persons fishing between the mouth of the river and Long Point are: Bosstedt, with 14 pounds; Charles Zippel, 7, and Wm. Zippel, 8 pounds; Haas, with probably 6; and Asmus, 9.

The first fishing here began 4 years ago. Wm. Zippel is the oldest fisherman on the lake. When they came here 4 years ago there was no one fishing between here and Zippel's. Finskey was the first man who fished near the river with pound nets.

(Thinks Zippel could give us any information we want if you give him about 3 inches of "shittiwauboo" in a wash tub, and then

if you see he is running down give him an odd pail full occasionally).

There is some kind of stuff that eats their nets. It started about the middle of June, and it rots the nets. I brought up some old twine from home that had a thick coat of tar on and in about 3 weeks it ate the tar off clean. In 3 weeks time it will eat the tar about all off. Thinks it must be an alkali of some kind. It is not the green stuff in the water, but a red animal substance. It strikes the nets about half way down and at the surface they are not injured much. The green slime does not do any harm. There seems to be a streak through the nets at a certain distance down that is the worst. The net seems to be rotten, as the mesh looks perfectly sound, but you can take hold of it and pull it right apart. Does not think it is here at

all when the water gets very cold. It comes with the warm water and goes with it. Zippel will not set in the fall at all without he knows the slime is gone. Does not see any of it in the river.

The Indians set a few gill nets in the edge of the river near the mouth.

The land here has not been opened up for settlement, although they understand it has been purchased of the Indians.

In the pound nets they take sturgeon, whitefish, wall-eyed pike and jackfish. Once in a great while they ship some buffalo fish in order to make out a carload. They generally throw the jackfish overboard. They are a bad fish to ship as they get soft very soon. They get very few yellow perch. Last spring he tried to get a mess of them to eat, but could not get enough for a mess. The perch that they get here are nice

large ones, but there are very few of them. The bull-heads are fat and large also. They get a few lawyers. The buffalo is the commonest of the waste fish. The suckers are a waste fish. They get a few moon eyes. The tullibee are very rare. Got some the last of June.

Their pots are 30 feet square. The length of the leader is 50 rods. They use a long tunnel. Use 3 1-2-inch mesh in the pot. In the tunnel the mesh was 5 inches when it was new. In the hearts they use 5, and 6-inch mesh. In the leaders they use 6, 7 and 8-inch mesh. Thinks all fish lead into the pounds. Sometimes I suppose they work through the leaders, and through the hearts also. Would rather have his leaders, tunnels and hearts large enough so they can get through if they want to than to have them gill. Very few gill in the crib

when they lift it. The moon-eyes are the worst fish to gill. The jackfish are too large as a rule to gill, but they will get fast by the teeth sometimes. With a 3 1-2-inch mesh a whitefish weighing 1 lb. would go through all right. They do not market those small whitefish. If the pot was larger there would be more fish gill in it. Thinks if they enlarge the size of the mesh in the pots too much, too many fish would gill. If anything, it would be better to have a finer mesh pot so the fish could not gill. They can throw out the small whitefish without injuring them much if they are careful about handling them. He gives his men orders to be careful about handling them.

Sometimes the inside pots fish the best and sometimes the outside ones, according to the wind and according to how the fish run,

but as a generally thing the inside pots are the best in the spring, but later in the season the outside ones are the best. Generally the inside pot is the best for sturgeon in the first part of the season. Thinks the reason they do not put the strings out any further is that they have formed a combine not to put them out any further.

Thinks the gill-net fish are not fit to eat. He has seen gill-net fish that when you cut them open the meat was so soft it would follow a sharp knife right along. There are a pile of gill nets lost every year and they are floating around in the lake. That is Lake Erie. One trouble with the herring fishery on Lake Erie, every fall for the last 4 years, every time the fall run comes on there is a big gale of wind, and out goes their twine.

Rafting does no particular damage to their pound nets here.

MR. CHARLES LOISEAU,
MOUTH OF RAINY RIVER, MINNESOTA.
LAKE OF THE WOODS.

INTERVIEWED BY
WM. WAKEHAM AND RICHARD RATHBUN.
AUGUST 6, 1894.

(Mr. Loiseau was the principal man of the Baltimore Packing Co. at the mouth of Rainy River at the time of our visit. He does not speak with any authority for the Company).

He has been here three summers. Came here from Wisconsin. He has been here ever since the fishery was started at the Point. Between here and Long Point there were but few pound nets when he came here. Zippel used to have his pound nets about 9 miles from here, right in front of his place on this side of Long Point.

We tried to fish 3 gill nets one summer but could do nothing. The fish do not seem to gill. We did not leave them in but a few nights. Fyke nets have never

been used about here. We tried a seine and fish from then until about the first of once, but got nothing at all. They did some hook and line fishing at Long Point, but not to amount to much.

They are now fishing pound nets between here and Long Point. There are none between Long Point and War Road River, but between the latter and the Canadian boundary there may be some. Their Company (Baltimore Packing Co.) fishes those from Garden Island. They did fish between Asmus (Long Point) and War Road River for about a couple of months in the fall 2 years ago. Thinks they had 6 nets in there and only fished that one fall. It was good fishing, but the stakes would not hold on account of too much rock.

They fish here as soon as the ice goes out. Do not fish in the summer. They are laid up from about July 15 until Aug. 15,

and fish from then until about the first of Nov. Last year we had ice about the 20th of Nov. Cannot fish into Nov. because they would not have time to get their stakes out before the ice formed. The ice would break the stakes. They do not fish them during the summer on account of hot weather and the fish are not of much account, and it would also rot their nets. Does not rot their nets in the spring or fall.

In the spring the first fish they get are pike, whitefish and pickerel or jack fish. The sturgeon come in between June 1 and 10. The sturgeon remain about 3 weeks at the longest in abundance. Would get them through the summer if they fished for them. In the fall they get a little run of sturgeon about the first of Sept., and they last perhaps 15 or 20 days, and then they get whitefish.

We had nets in one summer and got a few pike, pickerel and whitefish. The waste fishes they get are the buffaloes, gold eye, suckers, and lawyers, in the pounds. Only caught one lake trout this spring, and they are very rare.

They run their leaders from 44 to 72 rods long. When they run a string their inner pot will be 16 or 18 feet deep and the outer pot 24 feet. Their pots are 30 feet square. They use a short tunnel. The mesh in the pots is 3 1-2, the heart 4, and the leaders 6 inches. Does not know the size of the tunnel. All fish will lead, but the small fish will go through the leaders. They will lead all right, however. Hardly ever find the fish meshing in the leaders, except the jackfish occasionally.

Yellow pike will mesh in the pot some-

times, but not very often, and that is only when they lift the net. Their inner pots fish the best in the spring, and in the fall there is not much difference in them. In the spring the inside is the best for all the fish they catch. They fish best with winds blowing on the shore, principally north winds.

They have no trouble with fish offal here. They generally dump it back in the marsh. It would be bad for the fishing if they put it back in the lake. They have no trouble with log rafting to amount to anything. The first summer they were here there was a boom broke up on the river and the logs bothered them some. Have no trouble with bark here.

There has been a big decrease in the sturgeon. They have decreased about 1/4 since he has been here. The cause is from over fishing.

Supposes all the eggs are taken out of the lake.

They get caviar in the spring and fall, and could get it in the summer, but it is not good then as it is too young. The spring caviar is the best. It is the best when it is the ripest. The smallest sturgeon they send to market would be about 3 1/2 or 4 feet long (alive]. They have taken them 7 feet long and weighing 150 lbs. The average size of the sturgeon would be about 5 1/2 feet. In the fall they are shorter. Do not see many young sturgeon. Might occasionally get a few. Sturgeon occur all through the lake. Does not know where they spawn, but has heard them say they go up the river to spawn. I went up the Rainy River this spring to Big Forks, and saw any amount of sturgeon.

up there. I started from here the 13th of May.

There is not much difference in the abundance of whitefish. The fishery does not amount to so much for whitefish as for sturgeon. The whitefish average from 4 to 5 lbs. in weight. Do not get any very small ones. A 3 1/2 inch mesh will let through quite a good sized whitefish. Do not market anything under a lb. dressed. Will not get many much smaller than 1 lb. dressed. In a 3 1/2 inch mesh a whitefish weighing 3/4 lb. would go through all right. In a 4 inch mesh they would gill too much. Almost the biggest whitefish will gill in a 4 inch mesh. The jackfish gill the worst, and they get caught by the teeth. The whitefish move in schools. The sturgeon must come in schools the way they get

them, as they get them by jerks, get a big run, and then they are scattered, and then get another big run, and whitefish the same way. Does not know where the whitefish spawn. Thinks they go among the islands to spawn.

There has been no difference in the abundance of yellow pickerel. They spawn in the spring long before we get them, as soon as the river opens up, which is about 2 weeks before the lake opens up. They go in the marshes and grassy places to spawn, and the jackfish will do the same.

They do not do any fishing in Rainy River. The whitefish run up the river. They tried to fish up in Rainy Lake this spring, but did not get anything. Were fishing for sturgeon with trap nets. The trap net is similar to a short tunnel net,

only there is a cover to the top of it and it is sunk under water. This one we used was 12 feet square. There was a lot of sturgeon up there but they said the water was too high this spring. There is no way of getting fish out of there very well.

MR. JOSEPH BUDREAU,
STEVENSON'S OR WINDY POINT, ONTARIO.

LAKE OF THE WOODS.

INTERVIEWED BY

WM. WAKEHAM AND RICHARD RATHBUN,
AUGUST 6, 1894.

(This fishery is between Windy Point and the mouth of Rainy River. They have six pounds licensed to 6 persons, but all operated by Mr. Budreau, who sells to the Baltimore Packing Co.)

Our principal fishery is sturgeon in the spring and summer and in the fall it is whitefish, say from the first of October to the first of November. We also get quite a number of wall-eyed pike. Get them principally in the spring. We also get what we call the jackfish (*Lucius*). Do not sell any buffaloes but throw them right back in the lake. Do not sell the gold eye. They get

a few tullibee. Generally get them in the fall with the whitefish. They will grow from 1 1-2 to 2 lbs. We put them in with the whitefish. Never caught any herring. Get a few rock bass. They are something like the black bass only they are smaller.

There are yellow perch here but they never catch any. Do not get any black bass. Get no catfish. Get what we call bull-heads, and they are quite common. They generally keep in weedy water. Do not get any sheeps-head. Get lawyers. Down home we used to call jackfish pickerel, and what we call the pickerel here we call pike down home in the States. Do not get any maskinonge, but there are lots of them in the lake. They generally get quite a few of them at Oak Island. There are some lake trout, but do not get any here. Get suckers and mullet here in abundance. Get what we call the red horse, black suckers and red-fin suckers.

He began fishing here last fall. Had no experience fishing before that but was running a tug. In what we call the spring run we generally figure on about 1,000 lbs. a day of sturgeon to each net. It generally lasts about four weeks, and begins just as soon as the ice goes out. They get the sturgeon as soon as they put their nets in, and put their nets in as soon as the ice will let them, and the good run continues about 4 weeks. The good run wound up this year about the 18th of June. I keep my pound nets in the whole season. We have got on an average 4,000 lbs. a week out of six nets. In the fall the run does not last near as long. Last year I got my nets in September 18, and only got 2 good lifts, which were as soon as I got my nets in. This year I expect to get a good run of sturgeon the latter part of this month, and until the

first of October. I rather think the sturgeon have decreased according to the catch this spring. Last year we made 234 kegs of caviar and this year we only made 147 kegs. That is the Baltimore Packing Company. They have just the same number of nets in, and I think one more. Last year was better than the year before, however. This spring's fishing the winds were very unfavorable. We did not get any west winds at all while the run was on. We want west, southwest or northwest winds; a wind blowing on the shore. This spring our sturgeon averaged 35 lbs. apiece. We averaged 389 sturgeon. That is after they were dressed. We do not take any sturgeon out less than 3 1-2 feet before they are dressed. Probably 2 1-2 feet dressed. We weighed some here that weighed 140 lbs., and they were about 5 1-2 feet long. The smallest one I have seen was about 1 1-2

feet long. There were quite a few of those small ones and I throw them back in the lake. They call the small ones rock sturgeon, but they are only the young sturgeon. Do not find any other small sturgeon except the rock sturgeon. Does not know of any cause for the decrease this spring except on account of the wind. But thinks, however, they have the nets in a little too thick.

Sturgeon generally spawn around rocky, shallow and reefy places. The old settlers around here claim they spawn in shallow reefy places. They spawn pretty near all the season, but do the most of it in the spring, as soon as the ice goes out, and until about June 20 or 25. In the spring the spawn is very nearly ripe. All the caviar is about the same ripeness. They generally take it all in the spring when it is the ripest, and they claim it is the best.

The caviar is small in the summer, and it is good again in the fall. There are 2 grades, No.1 and No.2. No. 1 is the large and No 2 is the small. There is no other difference except the size.

They do not take sturgeon up among the islands in the winter, but take them at other times. There is a man fishing at Skiff Island. I have seen sturgeon jumping through the summer among the islands all along the the channel. There are sturgeon all through the lake. The water is too deep and the bottom is not suitable for driving stakes in some places, is the principal reason why they do not fish for them among the islands.

A man set a gillnet here last fall just before I set my pound nets and he caught 238 sturgeon in one night.

They are generally in schools in the spring and fall, and in the summer they

generally go singly. In the spring sometimes you go out and lift a net one day and you will not get over a dozen or two, and probably the next day you will get 150 out of the same net. We got as high as 279 in one net this spring.

During the spring the female fish are much more abundant than the males. Generally they are about 2-3 caviar sturgeon in the spring and about 1-2 in the fall. In the summer there are not very many caviar sturgeon, and generally get principally male sturgeon. Get the males from the 25th of June until about the 1st of September. The milt in the male is the most ripe in the spring, and also in the fall. Never saw eggs or milt running from the sturgeon, except occasionally when you happen to gaff them and tear them when taking them out of the pound nets.

Sturgeon feed on some kind of vegetation and little shells along the beach. Never saw any cray fishes in them, but they will take in mud and gravel, &c. It seems as though when the wind is playing inshore and stirring up the bottom they come in and feed. Never saw any spawn of other fishes in them.

We have been getting whitefish right along now. Last week we got a few pounds of whitefish, but it is something I never saw before here. We get very few in the spring. Ordinarily do not get many until fall, from the 1st of October to the first of November. November is the best time to catch them, if we could fish for them then. Last fall I caught out of one net on an average of 1,000 lbs. a day for about 2 weeks, the last two weeks in October. They were nearly ripe. Do not know where they spawn here. Does not seem

to have been any decrease of the white fish.

They occur up among the islands and that is where they go in the summer; into the deep water. There are only a few gill net fishermen who fish for them up there; down from Rat Portage about 30 miles. It is the best gill net fishing ground, and very deep water.

The whitefish will average about 4 lbs. We caught one last fall weighing 11 1/2 lbs. But the large ones are very scarce. We got one yesterday weighing 8 1/2 lbs. Do not take anything under 2 lbs. round. Our nets will not hold the small ones. But sometimes when we are lifting the net we will see a whole school of little ones about 8 inches long. They are not so abundant in the spring and see them mostly in the summer and fall. Our mesh will not hold a smaller fish than 2 1/2 lbs. round.

We use 4 1-2-inch mesh in the pots. That is the regulation mesh. It is an awful bad thing in the spring for it takes about an hour to ungill the fish. I have seen as much as 100 of them gilled in it, weighing about 2 lbs. I would call 3 1-2-inch mesh about right. That would let the small fish go through and keep the bigger ones from gilling. A whitefish weighing 1 1-2 lbs. round, would go through a 3 1-2-inch mesh.

The whitefish come in here in schools, but in the fall we generally get them right along every day, and they are massed right on the shore. The wind does not affect the catch of whitefish on this shore. Will catch as many with a south wind as with a north wind. They are on the bottom principally. Does not know where they spawn. I know several different places where the Indians go and fish with gill nets in the winter when

On the south shore they have had them & they are running, and they generally go off the reefy points somewhere, like the little island directly off this place. Thinks there is a spawning ground right off Stevenson's Point. The whitefish begin to spawn about the first of Nov., and it is running pretty freely then; at least it was last fall. The smallest whitefish I ever saw with ripe spawn would be not over 2 lbs.

We get the yellow pickerel principally in the spring, but get some in the fall, although not as many as we do in the spring. Get them as soon as the nets are in. Get the biggest run from about May 10 until June 1. Get very few in the summer; perhaps 1 or 2 at a time in the net. They are just as abundant as they ever were.

They have had pound nets in on the American side around Garden Island about 6 years.

On the south shore they have had them 4 seasons.

Yellow pickerel run on an average of about 2 1/2 lbs. See some little ones about 8 inches long. They spawn in the fall. Find them with ripe spawn in the spring, however. In the fall they spawn about the same time as the whitefish. Could not say whether they spawn in the spring or not, but there is spawn in them.

They do not get very many jack fish (Lucius). They generally stay in shallow weedy water. I do not suppose we get over 2000 or 3000 lbs. in a season. The following figures taken from his bills of sales show some of the catches:

May 28, 1894, 8,800 lbs. of sturgeon, the result of 2 days' fishing with 6 pound nets.

May 31, 1894, 1,429 lbs. of sturgeon, 2,250 lbs. of yellow pickerel, 125 lbs. of whitefish.

June 3, 4, 230 lbs. of sturgeon, 1, 250 lbs. of pickerel.

June 5, 9, 427 lbs. of sturgeon.

June 7, 1, 405 lbs. of sturgeon, 1, 250 lbs. of pickerel, 625 lbs. of jackfish.

June 10, 5, 650 lbs. of sturgeon.

June 13, 1, 120 lbs. of sturgeon,

June 15, 900 lbs. of sturgeon, 1, 210 lbs. of pickerel.

June 18, 3, 970 lbs. of sturgeon.

June 25, 430 lbs. of sturgeon.

June 28, 1, 295 lbs. of sturgeon, 125 lbs. of pickerel, 165 lbs. of jackfish.

June 23, 3, 617 lbs. of sturgeon, 590 lbs.

of pickerel, 125 lbs. of jackfish.

July 4, 1, 050 lbs. of sturgeon, 105 lbs. of

pickerel, 35 lbs. of jackfish, 135 lbs. of

whitefish.

July 13, 4, 761 lbs. of sturgeon, 24 lbs. of

whitefish.

and have 6 this year. I run my loaders into

July 17, 1,840 lbs. of sturgeon, 85 lbs. of whitefish.

July 26, 2,712 lbs. of sturgeon, 315 lbs. of whitefish.

(These do not show all of his sales for that period, but they serve to indicate the relative abundance of the different kinds of fish).

Does not know of any gill nets being used in the southern part of the lake.

They used fyke nets 6 years ago near Rat Portage, but not in the southern part.

Never used seines. There has been no hook and line fishing around here since he has been here, except what the Indians might fish for their own use.

I fished pound nets the first time they were ever fished on this Canadian side in the fall of 1893. Had 2 pound nets that fall and have 6 this year. I run my leaders into

about 5 feet of water. Some places that would not be very far off shore. The shortest would probably be 4 and the longest 6 rods from shore. I make my leads 50 rods long. Some claim that a longer lead is better and others claim that 10 rods is plenty long enough. The water will be 17 or 18 feet at the pot and the pots 2 feet deeper. He uses a short tunnel. The crib is 30 feet square. All the nets we have ordered for this place are 4 1-2 inch. In the tunnel the mesh is about 2 1-2 inch and the heart about 5-inch mesh, and the leads 6-inch mesh. I do not fancy such a large lead; a whitefish in the fall will go right through it. All the fish generally lead and a great many go right through the leader, for when we lift the lead in the fall we will find them gilled all over it. Never see many whitefish gill, mostly pickerel and jackfish.

Have seen a few whitefish gill. He has one string of 2 pounds; the outer leader is the same length as the inner one; the outer pot is the same depth as the inner pot. You can go out here 3 miles and the water will not vary over 2 feet in depth.

We had a few of our pounds blown out by storms in the fall. Never fish in the winter. There has been no legal fishing here in the winter on the Canadian side. They fish some on the other side, but principally gill nets.

The water here is very hard on the nets. They will only last about one season, and in order to have them last one season you have got to take them out about the first day of July and have them out until about August 15, and wash and tar them. The damage is done during the summer months. Something in the water rots the nets. Thinks it

must be the green in the water that causes it, as it forms a slime on the nets. This green has just come on within the last week, and it will last until about the 1st of October. Thinks it is a vegetation that comes up from the bottom. You will find it clear across the lake until you get to Clearwater Bay and Whitefish Bay, where you do not get it. Never saw any insects on the nets. Thinks it is a sort of alkali. We had a gill net in under the ice last winter and it only lasted about a month when it was all rotten. The net was taken proper care of and it was due to something in the water that rotted it. They get their water for drinking out around Stevenson's Point, not depending upon wells. He has been on the lake for the last 7 years, and drank the water, and it is not injurious at all. Has seen it on the water here just like a thick

proper thing if they let them fish on the

cream and it is very green. We have often painted paddles with it without mixing it with anything. He takes his offal back in the woods about 3-4 of a mile. They are not as careful as that everywhere, however, and it is a thing that should be stopped. There are lots of places where they go into a marsh and dump it right into the water. Does not know of their dumping any back of the fishing grounds. The offal will rise to the top of the water in the marshes and float out. They do this considerably up around the mouth of Rainy River.

There is no spearing done about here.

Explosives have never been used that he knows of.

They sometimes have trouble from saw logs getting in the nets and tearing them. Have no trouble from the bark.

Does not think a close season is the proper thing if they let them fish on the

other side and not on this. Thinks it is a good thing providing they did not put in hatcheries, but if they put in hatcheries does not think there should be any close season at all, for they would not need it then. Thinks they could supply enough. Gets his idea from Lake Winnipeg. There there are more whitefish than there were 8 or 10 years ago. Does not think there should be any protection in this lake for a while yet, because there are hundreds of miles of grounds that have never been fished yet at all.

Thinks that 3 1-2-inch would be the right mesh for a pound net, after it is tarred. Whitefish weighing 1 1-2 lbs. round, would go through that size net.

My opinion is that the sturgeon will not last over 3 or 4 years more in this lake. The caviar business is what is using them

up. If you stop the sturgeon fishing you would stop the biggest fishing that is done in this lake. Does not think there would be any big fisheries here if there were no sturgeon here, because the scale fish that are caught here in the spring do not amount to much. There would be only a few weeks in the fall that would amount to anything. Thinks the small sturgeon should be thrown back into the lake, say up to 3 or 3 1-2 feet. Does not know of any way to preserve the sturgeon unless they had only a certain time to fish for them. They are a fish that do not travel very much. You have got to go where they are. If you fish them out of one place you have got to go somewhere else. At Garden Island 4 or 5 years ago they were taking immense quantities of sturgeon out of there, and now they do not get any at all to amount to anything. They

have not caught any to amount to anything for the last 2 years. Thinks it would be a good scheme to allow one place to be fished only for a certain time. Nets should not be set closer than half a mile apart. I would not care about fishing any more than 2 nets in a string. In the spring fishery you do not get many in the outside net, but in the fall get the most in the outside net. That is sturgeon.

Thinks a license system would be a good thing to apply on this side of the line, as it would be a restriction in the number of nets.

He sells to the Reid Fish Company in Winnipeg.

CHARLES RICKLEFS, (RICKLEFS BROS.)
WINDY POINT-OR STEVENSON'S POINT, ONTARIO.
LAKE OF THE WOODS.

INTERVIEWED BY
WM. WAKEHAM AND RICHARD RATHBUN,
AUGUST 6, 1894.

(This is the most eastern fishery on the southern shore of Lake of the Woods. They have six pounds, the licenses for which are issued to six different persons, but they are all worked together, and this Mr. Ricklefs seems to have most to do with their running. They sell to the Sandusky Fish Co.).

He has been on this lake 2 years. Previous to that he was fishing in Lake Michigan and Lake Erie. Also fished in Canada on Lake Huron, between Stony and Blue Points. He has been engaged in the fishing business for 9 years.

Never knew of any herring being taken in

Lake of the Woods. He knows the herring. Get the whitefish here. Do not get the tullibee at this end of the lake, nor in any part of the lake that he knows of. Never heard of its being taken here.

(According to all others the tullibee does occur in the lake and we have specimens said to be of that species. They have not yet been identified.--Rathbun).

Does not know of but the one kind of whitefish.

The wall-eyed pike are pretty abundant in the spring throughout the lake. Never saw the sauger here. The yellow perch occur here, but not very many; at least they do not catch many. Hardly ever catch many perch in the pound nets because the mesh is too large. On Lake Erie the mesh is small and they catch perch. Probably if they had the right size mesh here they would catch a

good many more. Does not know of any black bass in the lake, and has never seen one here. Has seen one catfish weighing about 2 lbs. taken in the pound nets. They are not a common fish so far as the pounds are concerned. (No one else had seen catfishes in Lake of the Woods, and Mr. Ricklefs may have had the bull-head in mind.-- Rathbun). They get the sturgeon, which is their principal fish. Never saw the sunfish here, including such fishes as the rock bass, calico bass, and the like. No white bass here. No sheepshead here. There are quite a good many lawyers here at certain times of the year. They take them in about 18 or 20 feet of water, and would probably get them in deeper water if they fished in deeper water, but it is not a shallow water fish. They take them in the pound nets but do not sell them. Get the

jackfish in abundance. The jackfish resembles the maskinonge a good deal only they are smaller. There are some maskinonge, but they are very scarce. Has seen but one lake trout since he has been here. They occur in the deeper water of the lake, however. No German carp here. There are suckers and mullets here, and they are quite abundant. No speckled trout here.

Their only important fishes are sturgeon, whitefish and wall-eyed pike. The sturgeon is the most important fish as a whole here, and the whitefish next. The sturgeon occur all through the lake, but they seem to be more abundant on Big Traverse than elsewhere as it is shallow water.

Jos. Budreau began fishing in the fall of 1893 and that was the first fishing on the Canadian shore with pound nets. Mr. Ricklefs began this spring. Huggins began

fishing early this summer on Skiff Island. That covers all the pound-net fishing in Canadian waters.

They are doing better fishing here than any of the others according to the amount of net. Their spring's catch of sturgeon was 55,000 lbs. (dressed) beginning about May 20 and ending about the last of June.

Their best fishing was about June 1 to about June 22. They had 6 pounds in and the above is the catch of the 6 pounds.

They market sturgeon from 4 to 6 1-2 and 7 feet long from tip to tip. Do not get them much larger than that. There are not many smaller than 4 feet. They seem to run in schools; some weeks you get quite a few small ones and then again perhaps for 2 weeks or so you will not get any. Has seen them as small as 6 inches, tangled up in the gill nets in the Great Lakes, but has not seen any such small ones on this lake.

Probably 1 1-2 feet has been the smallest he has seen here, and they were taken in the pounds. Does not see any small ones in the bay here. (That is the small bay just inside of his Station). They will average between 5 and 6 feet. The sturgeon here are fatter than the ones they get down in Lake Erie.

Thinks they have fished for sturgeon too extensively on the American side of Lake of the Woods for the good of the fishing. There has been too many nets. There are at least 94 pound nets on the American side from the mouth of the Rainy River to and including Long Point. The old fishermen say there has been a decrease in the fishing and that the nets are too thick along the shore. The big firms try to crowd the little ones out and the little ones kick.

Thinks the sturgeon go up Rainy River to

spawn. Does not know of their taking them along Rainy River. Does not know much about the Big Grassy River. The mouth is all grown over with grass.

The bottom in front of the shore here is all sand as far as he knows, and that is the only bottom on which he has seen sturgeon. The Indians take them up among the islands with spears, but has never seen them caught there to make a business of it. The Indians just take them for their own use.

They set their nets as early for sturgeon here as the ice will permit--from May 25 to June 1. The pike are generally the first run, and about a week after that the sturgeon come on. The sturgeon stay here through the entire season. They stop fishing not because the sturgeon are less abundant the first of July, but on account of the rotting of the nets, and because the

caviar is of second quality after that time and it is a more difficult matter to ship the sturgeon after that. During the summer, with favorable winds, might catch an abundance of sturgeon. The favorable winds are those blowing on to the shore. Do not get as many sturgeon in the fall as in the spring. Some of the fishermen say they go into deeper water, and he thinks so himself. It is not their nature to be in cold water and when the water gets cold they strike for deeper. Some years ago he heard they had pound nets in here all winter and did not seem to catch very many sturgeon. The nets were frozen in the ice and they fished them under the ice.

The outside nets of some of the strings are very near the middle of the lake, as they sometimes set 5 or 6 nets in a string. When they have 5 or 6 pots as a rule the

inside one fishes the best in the spring, and the outside one in the fall, making them think that the sturgeon go into deeper water then, as the water gets colder. On an average, however, the inside net catches the most fish.

The sturgeon he thinks are on the bottom. There are times of the year that they seem to come to the top; that is in the summer about Aug.1, and especially on calm days, you see them jumping. They do not seem to lead into the pound nets then. They jump all around the nets and do not seem to get any in the nets to speak of. That is between the first of July and Aug.25 or Sept.1.

Budreau sells his fish to the Baltimore Packing Co., and they fish the whole season through.

The sturgeon are in schools at certain times. Has taken out of one net as high as

230 sturgeon, the net being out 3 days.

That was about June 6. The average weight of the sturgeon is about 30 lbs. dressed, based upon this spring's catch.

They spawn, he thinks, in the rivers in the summer about the last of June. The caviar wants to be black in order to be good. They put the eggs through a sieve in order to get them separated. Once in a while they get a sturgeon with the spawn running from it, but not very often. This occurs generally in June. The summer caviar is called No. 2 because it is a very small class of eggs. The caviar is good during the entire fishing season. In the season during which he fishes they get very few sturgeon with No. 2 caviar in them. During the fall it is all first class caviar. They get the caviar from about 2-5 of the sturgeon they catch in the spring, suitable for

sale, and in the fall about 1-2, but they do not catch as many fish in the fall. They get the bulk of the males from June 15 to 30. Do not get many males before that. In the fall they get the males and females mixed together, and about equal parts of each. In the spring they are separate. The smallest fish he has taken caviar from would be ordinarily about 5 feet. Once in a great while get it from 4-foot fish.

In the stomachs of the sturgeon they have found mud, gravel and crayfishes. The gravel is sometimes as big as No.5 shot; and smaller. Thinks they feed all along here. Thinks, sometimes after a blow, when the bottom is stirred up, they will come in very near shore a good deal more, and thinks it is on account of their feeding. Never saw the spawn of other fishes in the stomachs of sturgeon. They do not seem to follow

the whitefish in the fall.

The whitefish spawn around the islands and rocky bottoms. In the fall the fish are pretty well mixed up. The whitefish occur through all the shallow part of the lake in the southern part, and over about Garden Island and Oak Island. Thinks whitefish are more abundant among the islands than they are in the southern part of the lake. His catch for this last spring was 7,000 lbs. of pike and whitefish, probably about half of each species. In the fall the whitefish would be much more abundant than in the spring. The whitefish have decreased on the American shore. Should judge they had decreased about 1-3. The whitefish average about 3 $\frac{3}{4}$ to 4 lbs. The whitefish here seem to be all of a size in this part of the lake. Has seen one weighing 7 lbs. but they are very rare. Hardly

ever see one below 3 lbs., but knows there are smaller ones, as they catch them in the gill nets. Has seen them weighing 1 1-4 to 1 1-2 lbs. in the gill nets. They go in schools; will catch a good many at one time and then will get hardly any for a while. They are on the bottom. Does not know of any places where they spawn, but it is on the shallows among the islands on gravelly bottom. Does not know when they spawn here, but thinks it is in the fall.

The wall-eyed pike will average about 1 1-2 to 2 feet in length. The average weight undressed would be about 6 lbs., and dressed about 3 1-2 lbs. They ship them both dressed and undressed according as the market requires it. The best season is early in the spring when the season first opens. They get them abundant for about a week, and get them scattering all the rest

of the season. In the fall for a week or two, about the middle of September, they are more abundant, but not near as abundant as they are in the spring. Thinks they spawn in the fall about the middle of September. Thinks they spawn twice a year, in the spring and fall both. They have always marketed the pike as long as he knows of from here. Pike live on all classes of small fishes. You will find fish inside of them about 3-4 lb. in weight, in a pike weighing 5 lbs., and sometimes they will have a perch in them and the perch will have some minnows inside of it.

They also market their jackfish and the buffaloes. They get the jackfish in all the pounds, but not all of them send them to market. The Baltimore Packing Company handle the jackfish. That company gets about half as many jackfish as they do white-

fish. They ship them to Minneapolis via Winnipeg. They catch most of the jackfish early in the spring, and get scattering ones all the season through. They run about the same as the pike; get them as early in the spring as the pike; and buffalo the same way. The stomach of the buffalo seems to be always empty. The buffalo looks a good deal like the sheep'shead, with a long fin on the back.

Does not know of their catching any lake trout in the northern part of the lake for market. Knows of no other fish but the above that they catch for market. They are not using gill nets about here. They use them in the northern part of the lake among the islands. Does not think there are any fish caught in gill nets about here for market. They occasionally use gill nets over in the southern part for catching them

for their own use. The Baltimore Packing Co. receive all the gill-net fish for market. (This is not correct).

Has never seen any fyke nets used here, but has heard of their being used. The Davis Fish Company were trying them this spring to see how they would work, but as near as he knows they did not work very good.

Never knew of their using any seines on the lake.

Thinks they have used hooks and lines around here some in the southern part, but does not know whether they made a business of it or not. That is for sturgeon only. Zippel used them. There is no sport fishing in this part of the lake.

In the southern part of the lake pound nets are the only apparatus used. His pound nets were not set until this spring, but Budreau set 2 pounds last year and this

year 6. Budreau's 2 pound nets last year were not set until fall, but this year he has 6 that were set early in the spring.

Ricklefs pounds are all single. Budreau has one string of 2 pounds. Some of my leaders come close into the shore, and some do not. I am not particular whether I have them in less than 6 feet or not. The leaders are 50 rods long and the inner end of the leader is about 15 rods from shore, making the pot about 65 rods from shore.

In their pound nets they get sturgeon, whitefish, wall-eyed pike, jackfish, buffalo suckers, mullet, moon eyes, (gold eyes) which are very abundant, especially in the summer; perch, and a few lawyers. Last year they got quite a good many lawyers, but this year very few.

The size of his pots is 30 feet square,

and the depth of water 18 and 16: 4 nets 16 and 2 nets 18 feet. The pots are 3 feet deeper than the depth of the water. The middle of the pot is on the bottom. They use the long tunnel. The size of the mesh in the pot is 3 3-4 inches (ext.) after it is tarred. The tunnel is 4-inch mesh, the heart 5 and the leader 8-inch mesh. The mesh will shrink in tarring about 3-4 of a foot in 30 feet of net, in the pot, and the rest of the net about the same.

Does not think a fish will lead over 50 rods. Thinks the perch will not lead. They will get in the pot sometimes, but does not think they are a leading fish; and does not think the black or white bass will lead either. Has no trouble from fish meshing in the nets.

I expect to make my nets last 1 1-2 years. That is, a season and a half. After that they

begin to get rotten so that you cannot depend upon them. There seems to be a live insect in the water that eats them. I have seen them on the nets and they are a red looking insect. The best time to see it is after they take the twine out and it gets dry. When I take my nets ashore I dry them and wash them off clean and lay them on the shore and let the sand scour them, that is if I intend to use them. I intend to tar them every summer. Have to go a good deal according to the weather. If I could get good enough weather in the fall I might tar them. The tar costs about \$10. a barrel. Tarring nets is a very disagreeable job.

If gill nets are properly taken care of, I think you are doing pretty well if you make them last through July and August. I do not know how they clean them on the upper part of the lake. I used to boil them in

the other lakes, and wash them every few days, and get the insects off, but never tanned them as I did not believe in it, as I think a white net fishes better than a tanned one. You can spoil a net in a couple of hours by bunching them up and leaving them out in the hot sun.

They do not fish gill nets down at this end of the lake because they cannot make it pay as well as the pound nets. They can catch more fish in the pound nets. In the fall you could catch quite a few sturgeon with gill nets around here. But as a whole it would not pay for gill nets to compete with pound nets in this end of the lake. You could not make them last as long as pound nets. You would wear out 2 or 3 gangs of gill nets before you would one pound net. Regulations for sturgeon is all

The Indians do not spear fish to any ex-

tent. Will perhaps spear a few sturgeon to keep from starving. There are 600 or 700 Indians living around the lake.

Regarding regulations, I think there are too many nets fished. Think it should be limited to a certain number of nets. About 50 nets would be a plenty to fish on this south shore, from the mouth of Rainy River to Long Point. That would put their nets about half a mile apart, and they should be at least that much. There should be about 50 rods of lead and only one pot. In regard to sturgeon fishing, thinks it would be a pretty good idea not to fish for 2 months, from the first of July to the first of September. That would give the caviar a chance to mature. Also not take any sturgeon under 4 feet. Would recommend the above regulations for sturgeon in all the lakes. Thinks 3 3-4-inch mesh is about

the right size, and will not take any small fish. You can squeeze a 2 or 2 1-2 lb. whitefish through a 3 3-4 inch mesh very easy, and the pike about the same. They gill easier than the whitefish, but go through the mesh easier.

I believe in a license system for limiting the number of nets.

If there was good fishing a rich firm could afford to pay for as many licenses as they have nets. I think the license system protects the poor man. As it is at the present time I think a poor man can make his living with one net. A person can fish 2 or 3 pounds a good deal cheaper according than one, because he has to have his boat and crew just the same, unless two or more fishermen doubled up on the work. I think there should be a limit to the number of nets one man can fish. It takes 2 men to

fish a pound net after it has been set, and one man might do it if he was a good man. But they count on about 6 men to operate their 6 nets.

Their fish offal they take up in the marsh. Does not think it is advisable to put fish offal in the water as it is harmful to the fishing.

Knows of no explosives used around here.

Have some trouble from logs, as the rafts break up sometimes and if the wind happens to be just right they will blow into the twine and sometimes carry away part of the pounds. They are never troubled by the bark here.

(They have mosquitoes here as soon as the snow goes off and sometimes get them before the snow leaves. Has known them the first of April. They leave about the last of July. They also have the bull flies.

They do not stay quite as long as the mosquitoes.)

MR. JOSEPH LANDREE, GARDEN ISLAND,
OR CORNFIELD ISLAND; LAKE OF THE WOODS.

INTERVIEWED BY
WM. WAKEHAM AND RICHARD RATHBUN,
AUGUST 8, 1894.

He has been here 4 years, and the fishery was started on this island 5 years ago by D.A.Reid. Has had no experience around the lake elsewhere except at Grassy Narrows, War Road and along the main shore here. The pound net is the only fishing they have carried on. The only gill netting he knows of was one summer the manager tried 2 or 3 nets, but did not catch anything but a sucker and a small whitefish. The boys who staid on the island one winter tried with a small mesh gill net for whitefish. There was a couple of men tried with a set line, but they did not do anything to speak of. We tried seines, but only got buffaloes, and we cut the seine up

and used it for other purposes, after 1 or 2 trials.

Their pounds are all on the south side of the island and the adjacent mainland this year. They have 7 pounds on the island. He uses the same mesh they use over at the mouth of Rainy River. They use about 50 or 60 rod leaders. The pots are 3, hearts 5, and leaders 6 inch mesh. We fish the summer through, and have about the same number of nets in the summer except for a short time. The nets are put in in the spring we take up just long enough to clean them, and set them back again. The reason the other parties give for taking up their nets in the summer is to save their twine. The nets we are fishing now will be in poor condition for the fall fishing, by keeping them in through the summer.

One season with another, the fishery is

about an even thing. We begin to set as soon as the ice is out, practically. We never fished on the mainland until this season. In the spring we generally get about half and half scale fish and sturgeon. We begin to get the most of our sturgeon here the latter part of August and in September. We do the best of our fishing here in the fall. The sturgeon go on the south shore to spawn in the spring is the reason we do not get them here then. They go to the streams to spawn. We get the biggest share of our caviar in the fall, but we have done better this year with caviar than we have ever done before, but then we have fished on the mainland more this year. We do better on the island in the fall than we do on the mainland adjacent. We get bigger lifts on the mainland, but here we get them more steady. This spring up to now, we have done better

with the nets on the island here than we have with those on the mainland. Thinks the sturgeon vary in size and that there are more small ones now. All the sturgeon that are spawning go for the river mostly, and that leaves these that are not spawners, and they do not care where they go, and so we get that kind. Perhaps out of a couple of hundred sturgeon in the spring we would not get over 2 or 3 packages of caviar, while at the river they might put up 15 or 20 packages from the same number. The caviar is the principal part of the fishery and what they make their money on.

We ship sturgeon to Mr. Neilson as well as to Minneapolis. We only ship one car load a week to Minneapolis, mixed sturgeon and small fish, and the rest goes to Neilson. (All the caviar goes to Neilson whether direct or through Minneapolis).

The whitefish come next to the sturgeon in importance and we get them quite plenty in the fall, and also for a few lifts in the spring. We generally break up fishing about the first of November. Sometimes we may fish until the 10th and one year we fished until the 17th, which is the latest we ever saw boats running here. They spawn pretty early in the fall, just about the time we leave them. Has seen them with the spawn running. The boats get them sometimes with spawn running from them. He fished on the west shore of Lake Michigan for 20 years.

I know one thing--sturgeon are not as plenty now as when we first came here, although we get good lifts yet. The first summer we were here we caught 288 sturgeon out of one net.

The wall-eyed pike are quite abundant here. We have caught as high as 9,000 or 10,000

lbs. a week of them. usually about 10 or 11

The whitefish are all dressed before we send them away. We ship some pike round, however. The Sandusky firm ship all their whitefish round. But as a general rule he dresses the fish unless he gets an order to ship round. Now we freeze simply the surplus fish, and that would be taken to Rat Portage and stored there until called for. We simply use an ice freezer.

Never get any herring here. We get a few tullibees, but not many. Never saw a tullibee in Lake Michigan. It is a different fish from anything we get there. Never get the menominee whitefish here. Last winter while we were fishing on Rainy Lake we got quite a few tullibees. Got more there than we do here. The biggest tullibee we have caught on this lake would not weigh 2 lbs., and there are very few as large as

that. They are generally about 10 or 11 inches long here. In Rainy Lake we got them weighing about 2 or 2 1-2 lbs. We were fishing gill nets in Rainy Lake and could not tell whether we got any small ones or not. We got a few whitefish in Rainy Lake, but did not get very much of anything as we simply went to make a trial and see what we could do. Thinks the fishery in Rainy Lake would pay all right in the summer. Has heard the natives say that there were places where there were lots of sturgeon in Rainy Lake.

He has eaten the tullibee and does not think they are as good a fish as the whitefish. They are flatter and more sharp on the bottom than the whitefish. We have a gold eye which is a good deal the color of the herring. The yellow perch are very rare around here. Once in a while we get a bull-

head. We have caught 2 lake trout this season. Do not get any sheepshead. Get the buffalo, lawyer and jackfish. Jackfish are pretty common around here. Once in a while we get a maskinonge, but very rarely. Get a few suckers. In the spring they are quite thick.

The average weight of the sturgeon here is about 17 lbs. dressed. We do not use the very small ones. Anything under 3 feet long alive we throw back into the lake.

We carry all our offal back into the woods and have no trouble with it in the water.

We have no trouble here with log rafting to speak of.

LAKE OF THE WOODS.

H.P. STEENSEN (OF SANDUSKY, OHIO).

GARDEN ISLAND.

(INTERVIEWED BY

WM. WAKEHAM AND RICHARD RATHBUN,
August 8, 1894. The former took
his own notes).

Mr. Steensen is from Schleswig. Came to this country about 1869. Was at one time boss in one of the fish houses in Sandusky. Nelsen as a boy came to work in the same house, and was under Steensen. He was industrious, went to school, etc. Came also from Schleswig.

Steensen prepares the caviar and sounds on Garden Island (fishery of the Baltimore Packing Co.), and is quite an intelligent German.

The sturgeon spawn mostly the latter part of June and first part of July in Lake of the Woods. Occasionally find a spawner at other times during the entire open season. Ripe

spawn is not good for caviar. It must be hard enough to rub through the sieve, in extricating the eggs from the fat, which occurs in greater or less quantities, dependent upon the ripeness of the ovaries.

Taking all the year through (spring, summer and fall) not over 1-10 of the sturgeon brought in at Garden Island furnish caviar. At some seasons the percentage will be much less than this; at others it may be fully 1-2. In the spring they get the largest percent; the least generally from the middle of July to the last of August; after which until October 1 it gets better again. After October 1 the sturgeon go out into deeper water.

The caviar all goes to Nelsen, in Sandusky, by whom it is shipped to Europe, and the most of it comes back to this country again.

The caviar in a keg weighs from 120 to 150 lbs. The keg weighs about 30 lbs.

All of the sturgeon sounds also go to Germany, where it is used for clarifying beer, wine, &c., and is made into fine gelatine.

There should be a close season to protect the sturgeon from July 1 to September 1. This would cover a part of the spawning.

No sturgeon should be taken under 4 feet long. They are now taken down as small as 2 feet. A 4-foot sturgeon is about 7 or 8 years old. Must be over 4 feet long, and from 10 to 12 years old before they will begin to yield their first caviar.

The way the thing is carried on now, the fishery will be ruined in this lake in 5 years.

The largest sturgeon taken in the Lake measure about 6 feet long and weigh about 150 lbs.

The sturgeon travel long distances. They return to the same spawning grounds to spawn

where they were born. In different parts of the lake they get sturgeon of somewhat different variety, and certain amount of localization.

They spawn on reefs on clay bottom.

Doesn't think they spawn much up Rainy River.

Whitefish, suckers and buffalo go after sturgeon eggs, and you will always find them abundant in the places where the eggs occur. The sturgeon roots in the bottom like a hog, and takes into his stomach whatever he can get in that manner. He feeds on eggs of whitefish.

At the mouth of Rainy River they begin to take sturgeon as soon as they can get their pounds in in the spring--May 10 to 15. Here at Garden Island they do not begin to take them until later--the last of May, and they reach Oak Island still later. They catch them a week later in the fall at Garden and

Oak Islands than at the mouth of Rainy River.

Only a part of the sturgeon in the lake go up Rainy River. Those taken at the mouth of the river he thinks must come down from Rainy Lake. They come down from the lake as soon as the ice is out sufficiently so that they can get over the falls.

Fenske went up to Rainy Lake this spring to fish sturgeon. Does not know what he did there. He had previously tried in Rainy River, but without success. From Rainy Lake sturgeon would have to be shipped via Towers, Minn.

Sturgeon go in droves. Catch large numbers at a time, and then many have scarcely any.

MR. F. A. RICE,

OAK ISLAND, MINN.

LAKE OF THE WOODS.

INTERVIEWED BY

WM. WAKEHAM AND RICHARD RATHBUN.

AUGUST 10, 1894.

[Mr. Rice is in charge at Oak Island during the absence of Peter Ditchy, the fishery here being owned by the Sandusky Fish Co. He has been on the lake only since the beginning of the fishery this spring--1894. His experience here has therefore been very short, but he has been a Lake Erie fisherman.--Rathbun.)]

He has fished here (at Oak Island) 3 weeks.

Has had some experience at the mouth of Rainy River. Has been on the lake just this spring.

All the fishing apparatus we are using is pound nets. Knows of no gill netting except

a little by the Indians. Has not seen a gill net since he has been here. Never heard of fyke nets being used, nor seines. Never saw a fish caught with hook and line. Cannot catch any here with hook and line. They tried it with troll hook and still fishing with a pole. The Indians catch some with trot lines.

He runs his leaders as close to the shore as they can drive the stakes, say from 10 to 15 rods according to the bottom, which is rock.

Ten pounds were fished here last fall. This station has been here about 4 years. Finsky and Brydges run the place then.

Their leaders are 50 rods, and the pot 30 feet square. The water in which they are set, the depth runs from 25 to 28 feet--the inner pot would be 25 and the outer one 28 feet. One string runs from 23 to 26 feet.

The Indians claim they have sounded 900 feet and did not reach bottom in some places in the lake. He uses a long tunnel. On Lake Erie they use mostly the long tunnel. We used short tunnels altogether years ago on Lake Erie, but they abandoned them. The short tunnel is the older form. In the leaders he uses 6 and 7-inch mesh. Their twine is about all old Lake Erie twine except the crib. If I were going to get up new twine for this place I would make it 8-inch for the leaders. There are no small fish here, and anyway they will lead just as well with 8-inch as with a smaller twine.

Do not get black bass here. They will lead in Lake Erie.

The mesh of the heart is generally 5-inch, and some 6-inch. The tunnel is 5, and the pot is the same as they have at the river, and thinks it is 3 1-2-inch.

They fish here in the spring and fall. We fish from the time ~~when~~ we can get the twine in after the ice goes out until about June 20 or 25, according to the weather. We expect to remain out until about the first of September. Can fish here until about October 25, which is as late as they dare fish, as they are liable to get blown out (frozen up?) after that time.

In this lake in the pound nets they take sturgeon, whitefish, and once in a while get a fish here that looks like a Lake Erie her-ring only they are a little thicker. They are a little deeper through up and down. I caught one here that I think would weigh 4 lbs.

They have the yellow pike, or pickerel as they call them in Lake Erie. What we call Pike in Lake Erie they call jackfish up here. They have the jackfish and the yellow pick-

erel. Never saw any blue pickerel here. Caught 2 suckers this spring--genuine Lake Erie suckers. The last lift I made when I was taking up my twine I caught one. Catch a very few yellow perch. They grow just as large as they do in Lake Erie, but has not caught over a dozen all the spring. The perch leads well. We used to catch tons of them in Lake Erie with the same size nets that we have here. I have taken as high as ten tons out of a net in Lake Erie.

Never saw a black bass here yet. No catfish. Catch a few bull-heads. No white bass here. Catch a few rock bass, the same thing we get in Lake Erie. Catch a few what we call silver sides here, or calico bass. We catch a few lake trout, just once in a while one. Caught 4 here this spring; and caught 4 maskinonge. Caught one weighing 33 lbs. after his inwards and gills were out.

Get no sheepshead. Get the lawyers, and buffalo. We catch a few red horse and suckers. The red horse is the same as we get in Lake Erie. And then we catch what we call the white suckers in Lake Erie; get a few of those here. We get what some people call the mullet here. We catch 3 kinds of suckers here besides the buffalo. There is what we call the black or shoal sucker, but they never make any use of them. They get millions of the moon eyes. In Lake Erie get the lawyers in 4 feet of water, sometimes in fyke nets, especially in the winter. In the winter the lawyers go into the marsh and they catch them in fyke nets in Lake Erie.

The fishes they are market are the sturgeon, whitefish, pickerel, pike, and we market buffaloes sometimes; send them to Sandusky. We made 2 shipments this spring of buffalo. We send about everything to

market that we catch except the gold eyes. We would not ship the yellow perch so far nor the rock bass. Do not catch enough of them to pay. Would not send the lawyers nor gold eyes. When we ship buffalo would put the suckers right in with them. It hardly pays to ship suckers and buffaloes except to make out a car load.

I would use small mesh in the pots here for our own convenience on account of the gold eyes meshing in the size they use--3 1-2 inch. They would mesh in a 4-inch net. Would save the marketable fish in a 4-inch mesh, but the pickerel would mesh a good deal, as they mesh quite a good deal in the mesh we are using now. It would not be well to fish pots in which the fish would mesh at all as they can let the small ones go without injuring them a particle. We hardly ever would get any small ones in the pot. Would

not find more than 1 or 2 in a day that got in that were too small for market. They can sort them out just as well when they are taking them into the boat as to wait until they get them ashore, and better. Whitefish do not gill very badly. Take little whitefish that could go through these meshes we are using and they will stay there until we pull them out. But the gold eyes are a regular nuisance by gilling so much.

When the sturgeon season is on the Indians come around for the sturgeon offal, and they appear to prefer that to anything else. They prefer sturgeon heads and the large inwards to the best scale fish. They like the long inward that runs the whole length of the sturgeon in preference to anything else.

Thinks on an average the inside pots are a little the best for all kinds of fish. There is not so much difference up here as there is

at the mouth of Rainy River.

Have no trouble from storms here. Nothing bothers them unless it is drift wood occasionally.

I think it will take a good many years to thin out the sturgeon on this lake, for we are only fishing just in one corner for them and they are all around these islands. You can see them jumping all around the islands. They are very abundant in the lake. I have seen sturgeon jumping all over the lake wherever I have been. The Canadians do not allow them to fish only a little and so far apart, and there are lots of places where you cannot drive stakes here. On part of this island we cannot drive stakes as it is all rock, and cannot drive around the little islands here on account of the rocks. The sturgeon are not as abundant here as at the mouth of the river, but we have steadier

fishing here, but no such hauls as they do down there. We catch a different class of sturgeon here; they are a fatter sturgeon and heavier for the length of them. We catch sturgeon as soon as we get our nets in here, but do not know how the fishing would be early in the spring, as we did not get our nets in until June to make a lift. I think the best fishing was over before we commenced this spring.

A sturgeon weighing 100 lbs. is a pretty large one, but would get once in a while one weighing more than that. They run about the same as Lake Erie sturgeon. A sturgeon weighing 100 lbs. would measure about 5 1-2 or 6 feet. Get very few small ones about here. We do not save anything under 4 feet round. The sturgeon to furnish caviar has got to be about 5 feet. We get very little caviar for the amount of sturgeon we take

here. They had about all spawned when we came here. Along toward the last end of our fishing we might get a boat load of sturgeon and only get 2 or 3 caviar sturgeon out of them perhaps have 50 or 60 sturgeon in the boat. The sturgeon do not seem to get here until after they spawn. I think they spawn on the sand banks in the lake. Does not know whether they go up Rainy River to spawn or not, but they go up there early in the spring. Does not know when they come down. Never saw but one sturgeon here or at the river with ripe spawn, running from them. Does not think they spawn right around this island. Never caught any here that were ripe, but caught one at the mouth of the river once. Does not think they spawn with any regularity. They caught sturgeon in May that the eggs were not large enough for caviar, and caught others at the same time that

had spawned. We catch caviar sturgeon on Lake Erie in the fall and in the spring, and the same here. The caviar is No. 1 in the spring here, and they say it is in the fall. It is No. 2 in the summer months. But will get some No. 2 here in the spring, and it is the same on Lake Erie.

We will get a run of sturgeon sometimes for a while and then it will slack off, but will catch a few all the time. There are no regular runs of fish here like we get in Lake Erie. There does not seem to be any regular run of scale fish. But the sturgeon generally go with the wind. They seem to work onto a lee shore every time. And it is the same way in Lake Erie, a north wind was always better for them than anything else; and it is the same with other fishes. Last fall we got our nets all torn to pieces on Lake Erie just as we got them in and began fishing. He

used to fish at Lakeside opposite Kelley's Island.

Does not think sturgeon stay right on the bottom here because you see them jumping. They jump at any time after the water begins to get warm, but see none jumping in ice water.

We have never been troubled with the green in the water around here yet.

Sturgeon feed on water bugs, insects and worms. They feed on the bottom he thinks. We would find these worms that hatch into what we call June flies in Ohio, and sometimes there would be a pint of those flies in the throat of one sturgeon. They have those June flies in July. They are just the same as the June flies on Lake Erie. They come about 2 weeks later than they do on Lake Erie. Never saw a fish egg in a sturgeon. Here they are so full of feed at times that

when they cut them open it would run right out of them, and those worms would be alive yet. Has also found snails and little clams in them. And would find the same thing in them in Lake Erie. Has found perch spawn in them in Lake Erie. Knows of nothing that feeds on the sturgeon eggs.

Never saw a sturgeon here under 2 feet. I have seen more small ones in Lake Erie than here. I never caught but one sturgeon in Sandusky Bay and have fished there 3 springs.

Thinks the German carp are of about as much use as the English sparrow. They are just about the same as the buffalo here. Generally you ship a man a barrel of German carp and he does not want any more of them.

They do not freeze their fish here. We did not catch very many whitefish here. Out of all our nets we only got 700 or 800 lbs. in one lift this spring. The last of

september and fore part of October is the best time for whitefish here. Sturgeon are the most abundant in the spring, and whitefish in the fall. They did their biggest fishing at the River before we came here, for pick-erel. Did not catch very many after I left there. And we did not catch many here. Do not ship jackfish usually only to make out a car load, occasionally. They do not sell very well when there are other fish in the market. They are more of a winter fish. Our sturgeon are always dressed before shipping them. We gill and gut about all our scale fish after the water gets warm. We shipped one or two batches of pickerel round. Thinks they shipped 2 car loads. This fall we will have to dress them probably until the first of October, and then will ship round again. Thinks Neilson takes the sounds as well as the caviar.

They will have to quit gill netting for herring on Lake Erie or kill the fishery entirely. His opinion is that the gill nets hurt the fishing because they are chasing the fish and stay right with them all the time. A pound net is stationary and you only catch them when a school comes along. He never gill netted for herring. Gill nets are not used so much now for herring, but they were a few years ago. The whitefish gill nets used about the islands of Lake Erie are mainly owned by residents of those islands. The whitefish gill nets are generally fished with sail boats; and it is only within the last 4 or 5 years that they have gone to using tugs for gill nets; it was all done with sail boats. Thinks there should be a regulation not to allow them to go too far from shore with any apparatus, or on the spawning grounds with any kind of a net. Thinks the

pound nets should be reduced in numbers, as it would be a benefit to the fishermen as well as the fish, but as long as gill nets are allowed to roam all over the lake it would not be much use. But still they are cutting down the number of other nets now. This company has cut down pretty near half on Lake Erie. Where I fished from Marble Head to Mouse Island we cut down pretty near half last year. There was not much difference in the fishing in Lake Erie until they started the gill netting, and it is only about 5 years ago we caught more herring than we knew what to do with, but there were very poor years before that. The whitefish have decreased very much in Lake Erie. Thinks there has been a decrease right along on an average. Thinks as a general thing there is a decrease in the pickerel, but some years they will do the best fishing they ever did.

In the early years when I began to fish we never caught any blue pickerel to amount to anything where I fished. Never got many west of Marble Head. These yellow pickerel have always been marketed, but there was very little sale for the blue pickerel. They have used the yellow pickerel ever since I have been fishing, about 25 years. They never catch the blue pickerel only in warm water, and they will not stand shipping like the yellow pickerel, as they are a softer fish. Does not think the blue and yellow pickerel mix together at all. The menominee whitefish on Lake Erie are something like the herring we catch in this lake.

MR. EDWARD KIPLING, Sr. RAT PORTAGE, ONTARIO.

LAKE OF THE WOODS.

INTERVIEWED BY WM. WAKEHAM AND RICHARD RATH-
BUN, AUGUST 11, 1894.

He belongs on Lake Winnipeg. Was formerly in the employ of the Hudson Bay Co. He was on the McKenzie River and in the Arctic along with Anderson & Stewart, about 41 years ago. I have seen the northwest when you could see the tracks of animals just as thick as they could possibly be, a regular beaten track. Has seen thousands and thousands of caribou deer up in the Arctic, an immense body of them covering the whole country. The musk ox are very thick there also.

He has been fishing on this lake (Lake of the Woods) since 1888, more or less.

Used to fish on Silver Lake (Branch of Lake of the Woods) for trout. They will weigh up to 4 lbs. there. Then I went to Yellow Girl and got some trout there weighing from 16 to 20 lbs. They were the lake trout.

In Lake of the Woods they use gill nets mainly in Big Stone Bay, Clearwater Bay, Yellow Girl and Whitefish Bay, and that is about all. They fish in other places to the mouth of Rainy River with gill nets, but only for their own use and on a small scale. They get from 12 to 14 and 20 fathoms of water in these places. But 20 fathoms is deep water where I have been fishing. They have that depth in Big Stone Bay. It is 20 to 25 fathoms at the Big Narrows. The bottom is soft mud. In some places will find rocks, but not often. The sinkers will sink into the bottom. He uses lead sinkers. (All do.) When he first came

here he used stone sinkers.

In fishing gill nets, they try to fish them in as deep water as they can get in the middle of the summer. In the spring and fall generally go out where it is shallow, about 1 or 2 fathoms. Always fish on the bottom. Some were trying to float their nets this summer, but could not get any at all. He used to fish for moon eyes on Lake Winnipeg, and would put his net on top of the water.

He uses 5, 5 1-2, 5 3-4 and 6-inch mesh in the gill nets. His nets are from 200 to 500 and 600 feet long each. Would fish from 8 to 20 nets and would haul them twice a day sometimes, and sometimes once a day. The fish here spoil very quickly if they are not taken out.

He fishes all summer until November. Begin to fish just as soon as the ice is out,

but do not get many then. In some places in the spring they get yellow pickerel mostly (wall-eyed pike) and also get suckers early in the spring. Do not get but a few whitefish during the spring; not until the water begins to get warm; in June and July, and catch them through the summer. Get the best whitefish fishing about August. He gets some in October. We got more this month than we get altogether before.

They begin to spawn about the first of October. They do not spawn all at one time, but will keep spawning for 2 months. Most of them spawn the latter end of October. The water here gets pretty cold the latter part of October, or the first of November. They mainly begin to spawn about October 20, but a few stragglers will spawn as early as October 1.

The salmon trout here spawn the latter

part of September. The height of the spawning, however, would be about the first of October. The Indians go for the spawning lake trout about October 18. They come out of the small lakes around the Lake of the Woods onto their spawning grounds in shallow water and at that time the Indians spear them. Thinks that the lake trout keep rather to the one lake in which they occur, and do not travel much. Do not get many salmon trout here, perhaps 3 or 4 in a month. They get the most of the salmon trout in Whitefish Bay, and in Crow Lake.

They do not occur abundantly in the main part of Lake of the Woods. In Whitefish Bay some people are fishing 39 fathoms, where they get trout.

The marketable fish he takes are whitefish, yellow perch, jackfish, pickerel and trout. Also gets suckers; lawyers, lots of

them. No yellow perch. No moon-eyes. No black bass.

The whitefish he gets will average in weight about from 2 1-2 to 6 or 7 lbs. Get very few smaller than 2 1-2 lbs. Will get some as small as 6 or 8 inches long. Will get those now. They get caught in the net by the mouth, and entangle themselves sometimes. He does not catch many whitefish under 2 lbs. We could get more fish with a smaller mesh, but the small ones would die in the water before we could bring them up. You will get more fish from a 5 1-2-inch mesh than from a 6-inch mesh.

Do not get any sturgeon in the gill nets. There are some sturgeon in the northern part of the lake. See them jumping in Clearwater Bay. Does not think they are as abundant in the northern part of the bay as in the southern part. They are mostly in shallow

water. They are always around near the mouth of Rainy River where the fresh water is coming down. In Rainy River the sturgeon used to spawn about the first of June. They run up the river in the latter end of May, and they come down as soon as they are done spawning, about June 10. They come down in a rush then and will keep on that way until about June 20, and then the run is out. They go up the Rainy River to spawn, and also Pine River to where the falls are and spawn there; and they would go up American River about 60 miles to the falls there and spawn. Some spawn in the lake also. I have seen them along some of the rocky islands the first part of June where they were spawning.

Whitefish are (?) as common in this lake as in Winnipeg Lake. I believe there are more sturgeon in Lake Winnipeg than here.

I have seen Lake Winnipeg when it was just boiling with sturgeon. It beats all the lakes I ever knew for fish. I think they will kill all the fish out of this lake if they keep on as they are doing. They used to be abundant up around here, but of late years they are failing, and they do not see them as they used to.

The Indian gill netting is on a very small scale here.

Whitefish are the principal fish I take, then pickerel and then jackfish; take but a few lake trout. Gill netting has only been carried on here about 3 years to any extent.

Never fished on Great Slave Lake, but has seen the fish from there. They get principally whitefish there, and I saw nothing else. On Lake Athabasca they get whitefish and trout. That is where the trout are and it beats all the trout I ever saw.

The whitefish on this lake (Lake of the Woods) are smaller than in Lake Winnipeg. The average in Lake Winnipeg would be about 4 or 5 lbs.dressed. I have seen them 10 or 12 lbs.

Used to get whitefish on the McKenzie River also. There is a fish in the McKenzie River that is like a whitefish, and the meat is like a whitefish, but it is not a whitefish.

There are about 8 or 10 (on Lake of the Woods) fishing in the winter under the ice and they catch about the same kind of fish they do in the summer. Will fish mostly in the same places in the winter as in the summer, and in shallow water. We only use about 5 or 6 nets in the winter. Would haul them once a day in the winter. We could leave them 2 days if we wished, however, as the water is cold.

For lifting nets in the summer he uses a small clinker-built sloop about 14 to 20 feet long, and about 18 inches draft.

There is not much open water in the lake in winter, but there are lots of places where there are narrows and a strong current, and it does not freeze, but nearly all the lake freezes over. In the winter the ice will get from 2 to 3 feet thick. The ice generally gets out about May 15 and it freezes up in the fall about Nov. 15 or 20. He brings his fish up with dogs, and ponies sometimes.

The height of the water in the lake will vary about 4 feet. It is the highest in the summer and lowest in the spring. When there is ice on the lake it is lower, and it begins to get high as soon as the rivers begin to run. It gets the highest in August, and gets lower again in the fall, and

continues to lower during the winter, being lower at the close of winter than when the ice first forms.

The ice is generally smooth here.

Do not get more than 2 1-2 feet of snow here generally.

MR. AMOS MCKINNON,

RAT PORTAGE, ONTARIO.

LAKE OF THE WOODS.

(INTERVIEWED BY WM. WAKEHAM AND RICHARD RATHBUN,

AUGUST 11, 1894.

(Mr. McKinnon is in the office of the Baltimore Packing Co., (Reid Fish Co.) at Rat Portage, and attends to the receipt of fish at that place, their freezing, storage, shipment, etc. He formerly had more to do with fishing in Lake of the Woods, but not having a good memory, he failed to give us much information of value).

He was in with Mr. Reid the first season he began fishing but it was under the name of the Reid Fish Company. The Reid Company started in about 6 years ago, in the spring of 1888. Wm. Zippel was fishing a little then, but only a short time, on the Canadian side.

The first fishery of the Reid Company was located at Garden Island. We fished just around the island (and not on the mainland nearby). Later on the present company (Baltimore Packing Co.) located at the mouth of Rainy River. This company bought Reid out in the spring of 1889. This company had intended to locate on Lake Winnipeg first, but Reid happened to catch on to them and induced them to locate here. Reid started in with about 4 pounds in 1888 on Garden Island, and the next year had in 6 on Garden Island, and then when the Baltimore Packing Co. went in they put in 4 or 5 more, and they have been increasing every year.

The first year of the gill netting there were 6 men engaged in it. That was in 1889. Licenses were not issued by the Canadian Government, however, until about 3 years ago, and between 1889 and 3 years ago there

were no gill netting to amount to anything. There was only a local market then. In the beginning they would use on an average 5 or 6 nets apiece, and the nets were about 600 feet along. Their nets now are 3 lb. nets, with from 63 to 65 sinkers to a net, and the sinkers are 9 feet apart. They use from 5 1-4 to 6-inch mesh, and they all want 6-inch now. They do not want the small mesh as they claim they catch too many suckers. They catch a great many suckers in the gill nets, and a great many lawyers. They catch no catfish. They catch whitefish, wall-eyed pike, jackfish, and trout occasionally. They are bringing in some trout now, and they are quite numerous in Whitefish Bay. There are some people fishing in Whitefish Bay now. They are setting in 39 fathoms there. The fishermen set their nets in different depths of water. They set now in deep wa-

ter and later on quite near the shore in shallow water. The catch of the gill nets is very small as compared to the pound nets. About 1-4 of the catch of whitefish might be taken in the gill nets. There are a smaller proportion of the wall-eyed pike caught with the gill nets than with the pounds. There are more of them toward the shallow end of the lake.

They have not used fyke nets here, nor seines,--nothing but pound nets and gill nets. They do some hook and line fishing for sturgeon and trout, but it does not amount to much. The Indians use them principally. They put a number of hooks on a big line and lay it on the bottom, but they do not make a business of it and there are only certain times of the year when they can catch them.

In the beginning the pots of the pounds

were about the same size as now, and the leaders were about the same in length. They keep enough nets in during the summer to make a shipment a week.

We had 5,000 lbs. of whitefish here from 3 days catch this week. They came from the gill-net fishermen at this end of the lake. These fish would average about 4 lbs. dressed. In the gill nets they catch fish weighing as small as 2 or 2 1-2 lbs. Sometimes get a few weighing about 1-2 lb., but none to speak of. In the pound nets the whitefish run about the same size as they do in the gill nets. This time of year the nets are better out of water, because they will rot. A net will not last out a year if they keep it in steady.

They ship the most sturgeon in the spring. This year our first shipment of fish was May 18.

The following is a list of their shipments of fish for a year, with the dates of shipment, given in lbs.:

Shipments of Fish
by the
Reid Fish Company.

	Sturgeon.	Pike	White-fish.	Jack-fish.	Buffalo.
	lbs.	lbs.	lbs.	lbs.	
1893					
Aug. 5	14,810	1,155	1,510		
Oct. 17		640			
Canadian			Canadian (caught on Canada side)		
Oct. 20		259	594		
" 18		476	9,497	134	
" 23	14,320	3,865	1,170	2,105	1,500
Canadian		108	5,610	44	
Aug. 29	1,150	2,795	2,285	1,585	
Sept. 1		384	3,968	128	
Nov. 1			(large)		
" 5	23,440		3,840		
" 8	17,805	2,230	1,635	1,815	
" 13	17,925	445	785	270	
" 15			4,536		
" 18	19,065	2,420	3,400	2,455	
Canadian		128	5,560		
Sept. 18			16 pkgs.	39 pkgs.	
(Averaging 125 lbs. to the pkgs.)			113 " (13 pkgs) Gold-eye.		
			(Canada.)		

	Stur- geon.	Pike.	White- fish.	Jack- fish.	Trout
	lbs.	lbs.	lbs.	lbs.	lbs.
Sept. 22	9,540	3,215	1,140	2,290	
Canadian	2,832	512	8,223	25	
Sept. 28		6,680	3,000	3,330	
" "	22,275		2,680		
Canadian			8,308		
Oct. 2	7,766	112	5,888	72	
Canadian			2,690		
Oct. 5			2,640		
" 6	6,240	3,015	10,130	3,100	
" 9	4,780		8,660		
Canadian	50	500	5,014		256
Oct. 13		1,180	8,990		
(L)		Picker- el			
" "	6,140	1,157			
Canadian		1,113	3,235	300	2,480
Oct. 17	2,035		13,275		
Canadian		579	2,089		2,366
			375		
Oct. 20	700	3,010	13,080	1,905	
Canadian	195	480	3,060	445	
Oct. 25	1,070	1,435	18,305		
		3,500			
Canadian			4,233		
			6,350		
Nov. 2	1,145	2,275	18,000	2,120	
" 8		700	14,610	3,675	

They were shipping frozen whitefish all last winter. About 1 or 2 cars a month, running about 30,000 lbs. to a car, of frozen fish.

1894.	Sturgeon.	Pike	White-fish.	Jack-fish.	Buffalo.
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	lbs.	lbs.	lbs.	lbs.	lbs.
May 18	40,042	1,110	2,817		
Canada	14,075	780	190	238	
		split	split		
May 25	5,187	9 300	2,095	955	
		(red pike or pickerel, round.)			
		5,450			
" 29	15,940	(This was from all the pounds belonging to the Company, including Asmus and Zippel).			
June 1	21,418	30,329	18,232	2,877	
Canadian	1,474	2,250	125		
June 4	14,000	800	40	75	
Canadian	4,230	1,250			
June 6	30,650				
" 7	23,757	6,100	8,647	2,150	(They made one shipment of buffaloes but did not make any- thing on them.
		pick- erel.			
" 8		2,170		1,305	17,175
" 14	18,617				
		pickerel			
" 16	13,116	4,015	595	1,185	
		pickerel round			
		3,650			
		pickerel			
Canada	900	1,210	1,030		

	Stur- geon.	Pike)	White- fish.	Jack- fish.	Buffa- lo.
	lbs.	lbs.	lbs.	lbs.	lbs.
June 19	21,827				
" 22	5,000	4,660	1,765	1,720	
		round			
		3,110			
" 26	19,000				
" 30	7,745	4,235	385	2,614	
Canada	1,285	186	759	205	
July 4	8,655	4,298	2,915	1,582	
" 14	18,270		1,875		
	13,531	875	325	95	
Canada	9,192	305	1,108	95	
July 20	24,073	508	2,492	616	
" 27	23,677	325	5,215	917	

On the Canada side they take the fish from Budreau and the Sandusky Co. take the fish from Ricklefs. On the American shore, besides their own nets, they take from Asmus, Zippel and Haas. The Sandusky Co. take Bastedts'. Their Company take the fish from Huggins and Thomas. This year

we took fish from about 8 gill netters.

Sturgeon have always been abundant and they are catching them just about the same. Does not know that they are taking too many of them. Our Company would not have gone in so strong this year, had it not been for the Sandusky Company. They came in this spring and reported that they were going to have 100 pound nets in.

J. W. COLCLEUGH, RAT PORTAGE, ONTARIO.

LAKE OF THE WOODS.

INTERVIEWED BY WM. WAKEHAM AND RICHARD
RATHBUN, AUGUST 11, 1894.

(Mr. Colcleugh is the Canadian Collector of Customs at Rat Portage. He was also fishery overseer until a year ago, when a new one was appointed, owing to Mr. Colcleugh's connection with the fishing, &c. He is practically the business representative at this place of both the Baltimore Packing Co., and the Sandusky Fish Co. He keeps track of their shipments, both for them and as collector. A very upright and intelligent man, whose statements should be reliable).

The Canada fish are shipped the same way as the American. It all goes to one market practically.

He has been here since 1883. The first

company that ever fished here was Kalmbach (of Duluth). He was the king of the fishing at Green Bay, Wis. He came here in August, 1883, and fished on the Canadian side, but did not make it pay. He brought a lot of caviar kegs with him, but did not know how to handle it. He did not get any sturgeon, just shipped a few whitefish, but bought them of the Indians, and would get the little silver lake trout. He brought a few nets and attempted fishing, but I guess it was a failure. He left here in March, 1884. Their fishing was just gill nets. There was no one fishing on the American side then. There was no settlement around the lake except at Hungry Hall. It was dubbed Hungry Hall by the first expedition of people who came through here, because they found it a hungry place I guess. There is a Hudson's Bay trading place there now.

Then Wm. Zippel came next, and he fished at the Little Traverse, in Canadian waters. He used ordinary gill nets, but no pound nets. And then he went to Rainy River. Then Reid and McKinnon came, I think, about 1889. They did not fish any pound nets. They fished in Canadian waters, and only fished gill nets. This, of course, is just the best of my knowledge as I remember it.

(Mr. Colcleugh is mixed in some of these statements. He can be corrected by those of others, however).

Then in 1891, they formed the Reid Fish Company. That was the first year they fished pound nets on the American side. They located at the mouth of the river, and that was the only place where they fished. There were a few fishermen near here bringing in fishing and selling them. It was at Grand Island instead of the mouth of the river that the Reid Fish Co. began to put in

pound nets in 1889, and they went to the river in 1891. Asmus began in 1891, and Zippel was fishing at that time. Oak Island was not opened up until 1892. The firm was Brydges & McClain then at Oak Island. Ole Johnson & Co. were fishing at Rainy River last year, on the inside of the point. They were fishing 2-pound nets. Johnson is fishing now for the Sandusky Company. Thinks he is located at Oak Island.

Never heard of their having any fyke nets set in the lake. Heard they were going to put in a seine this year at Grassy River, but does not think it was ever put there.

In 1883 four of us went out to the second falls here; we got there about 3 o'clock and got home here about 7; and had 229 yellow pickerel. They fished all the year or not.

There has been no hook and line commercial fishing here. There is a colored man down the lake here who is about the blackest man

I ever saw, and he has married a squaw, and fishes down there.

I fancy there is a migration of the fish from the Winnipeg River up to this lake.

In the river connecting the two lakes the sturgeon occur. There is a fishway there.

The passage between Lake of the Woods and Lake Winnipeg was clear for fishes, it was just a rapid until they dammed it up. It has a small fishway.

In the past the mesh of the pound nets has been 4 inches on the Canadian side. Thinks they have been using a 5-inch mesh on the American side in the past. In their leaders this year I think they have 7-inch. Until last year they never seemed to care whether they fished all the year or not. That is they did not take their nets out at all, but fished all the season through. This is the earliest season for 4 or 5 years

and they began fishing earlier. About May 5th they began to drive and get their nets in. This is the first season that they have broken off entirely during the summer. The Reid Company is about the only one that is fishing now. The life of a net is only about a season here I think.

They ship the most sturgeon in the spring and that is the principal run. There would hardly be twice as many in the spring as in the fall, however. But last year there was a tremendous run in the spring. The first in 1893 was June 3. There were a good many sturgeon last year. In the summer the run would be much smaller. They knock off about July 5th and from then up to Aug. 20. The last haul of the pound nets on the American side would be about Nov. 5. So far as a close season is concerned, in the fall there is a natural one. In Lake Winnipeg

they have a close season from Oct. 20 to Nov. 20.

The shipment of whitefish as compared to sturgeon would be about 1-3. But of course they have not been fishing for scale fish until this last year or 2. That is, the sturgeon has been the principal fishery. In 1833 they shipped small quantities of whitefish, and they have always shipped some scale fish. In 1839 the Reid Company shipped the first car load lot. Kalmbach and Dunn did not ship many from Zippel. They generally ship the sturgeon in bulk and the whitefish and pickerel in boxes. They have shipped them in bulk, but it is not very satisfactory for such small fish. We used to ship whitefish here in the round, but now do not, except frozen fish.

The best fisherman we have here for gill-net fishing is a man named Joseph Jettie, and

he is more familiar with the lake than anyone else I know of.

There are a lot of jackfish shipped from here. In the spring this bay is just alive with jackfish, and they ship them extensively. They ship about everything. They ship suckers and you can get them by the millions here in the spring. They ship them to the United States. They ship fish from here to Montreal; just commenced this spring. All whitefish and pickerel that they ship there. Does not think there is any demand for sturgeon in the Montreal market. They smoke small quantities of sturgeon here. They smoke them principally in Minneapolis and Sandusky.

There are not many lake trout here in the lake. The best fishing grounds for trout have never been opened up for licenses. I think the best places are in Whitefish Bay.

I saw a trout dipped up underneath the falls here in the river weighing 14 lbs. after it was cleaned. They do not take many in the gill nets. They would be shipped away. But there would not be more than 200 or 300 lbs. altogether this season. They are classed as whitefish. The Reid Fish Company buy the fish here, and they are sold in town some, and are also shipped to Manitoba. Some are shipped accross the line. There is no Canada market for fish in quantities such as they get here. They claim that the regular Manitoba fish are the most perfect fish they can get, and they average about 2 1-2 lbs. dressed. That size answers for a small family.

The sturgeon he thinks are as abundant as they used to be, if not more so. There may be a decrease sometime, but the fishermen say not, however. The sturgeon he has been

told are not growing any less in size or getting any fewer. I understand it is only a few years ago since the sturgeon became valuable. I few years ago they used to catch the fish and take the eggs and bury the flesh, but of course sturgeon are the most valuable fish in Canadian waters today. The Canadians are not much interested in the sturgeon fishery, except that it gives employment to our men. As far as sturgeon are concerned, I think a close season would be a benefit. It stands to reason that in the course of a very few years they will kill out the sturgeon if they keep on fishing as they are doing. There are little lakes and such places around this country that are just full of sturgeon yet and that have never been fished. The fishermen call the spring sturgeon eggs No.1, and if you notice, there is quite a difference between the eggs today the first day of November to the first of

and the eggs taken 2 months ago. Thinks probably the close season for sturgeon should be the month of June. The spring season is from the opening of navigation, until July 5, and so if you will make a close season in the month of June there would not be much use in putting in nets. If the close season was in May it would not affect the fishing so much. Thinks that would be about the proper month. If it was in June it would destroy the spring fishing. It seems to me that on the American side every available foot is taken up with nets, or soon will be. I think they ought to lease grounds on the American side the same as we do on the Canadian side, or similar, so a firm would probably lease 1 or 2 miles, and then they would not fish them as close.

There are no whitefish taken here from the first day of November to the first of

May. They have been agitating the granting of winter licenses. In Hamilton on Lake Ontario, he caught bass and jackfish in the winter fishing through the ice.

Only take maskinonge by trolling. There are any quantity of them here at certain seasons. Would find them all through here to some extent, but there is one place up here called Ash Rapids, where they get them in abundance. I saw one brought from there weighing 35 lbs.

There are no brook trout here anywhere. On Silver Lake there are trout weighing about 2 1-2 lbs. They are speckled, but their head is a little different shape--sharper--than the lake trout. The spots are very red and bright. They may be a variety of lake trout, but are different. They are dark on the back and light on the belly, with the red spots. They get them at Silver

Lake. That is why they call them the Silver Lake trout, and not from their color. They get the same trout down the river between here and Lake Winnipeg.

They get lots of yellow perch here now. Saw some yesterday that must weigh about 2 lbs. Before they put the electric light works over here there were a lot of them right below the falls, and I have seen them catch jackfish, pickerel, gold eye, sunfish and perch right out of that little hole.

There is a minnow here that looks just like a sardine, in a little lake here. Do not see them much in summer, but in the winter it is practically full of them.

The height of land is at Summit, a station east of here. There are no trout between Summit and the Rockies, and east of Summit the first place is on the Nipigon River.

They get a very nice black bass here in

one lake connected with Lake of the Woods, about 50 miles from Rat Portage.

They get the ordinary bull-heads around the docks, and they are common about here.

There are rock bass here around the islands, and around the river here.

Get the lawyer principally around the Big Traverse. Lake Winnipeg is full of the lawyers.

When they were building the line through here they occasionally put down cartridges and exploded them to kill fish, but there is nothing of that sort now. At a place called Boomer's Mill they put in an explosive and brought up a lot of fish, but they were only stunned.

The fish offal is not put back into the lake that he knows of. There is one thing that should be looked after and that is sawdust. They are allowing it to go into the

lake. They pretend not to let it go in, but it does all the same. You will find the blowers coming up from the saws and they pile it in a heap and it gradually slides off into the waters. There is quite a current in this end of the lake. At Devil's Gap it is almost like a river. There is a place near here that never freezes in the winter. It is a hard matter to say how far sawdust would be carried. They burn the edgings and cuttings, but thinks a large percentage of the sawdust is put in the lake. It would not get down to the fisheries at the south end of the lake, however. On the lake there are 6 sawmills in active operation, and they are all on this end of the lake. Two of them are in Keewatin Channel, however.

They got plenty of sturgeon right below the falls where they put in the water power

here. They have a whitefish at Selkirk weighing 22 lbs.

Thinks it is a god-send for the place to allow fishing here.

At the point right off Rat Portage, at Coney Island, there is a depth of 200 feet of water.

LAKE SUPERIOR - CANADIAN SHORE.

NOTES BY RICHARD RATHBUN,
PORT ARTHUR, ONTARIO.
AUGUST 14, 1894.

On the north shore of Lake Superior fishing is carried on from the boundary line between Minnesota and Ontario, as far east as Pic River. Thence to Otter Head there is no fishing. The line of coast from Otter Head to the Soo has been discussed in another connection.

We spent only 1 1-2 days at Port Arthur, as the fishing from that place had previously been worked up by A.J. Woolman, but I have not yet seen his notes. He has placed the pounds, and has full information regarding the pound nets. The following persons were interviewed by him:

Peter Tromby, Old fisherman.
W. A. Beebe,
Capt. H. Servais, tug Georgina.

Capt. John Maloney, tug Mocking Bird.
 Capt. A. Murray, " Minot.
 Capt. Booth's tug Kekabeka.
 W. Davis, of the Albion Hotel.
 Booth's Agent.

We saw and interviewed

Mr. McDonnell, Fishery Overseer.
 Thos. Marks, Business Man
 Capt. Servais,
 Capt. Beebe,
 Peter Twombly,

Mr. McDonnell stated that each of the annual reports would show the amount of nets licensed and the catch of fish for that year.

Mr. Marks is an old resident, a successful merchant, and a man of means. Used to be interested in the fisheries, first on Lake Huron, and later at Port Arthur. He was a member of the international Congress which discussed fishery regulations a couple of years ago.

Peter Twombly was about the oldest (earliest) fisherman at Port Arthur. Servais and

Beebe have been two of the most active fishing captains.

On the north shore there are 4 fishing centers, Port Arthur, Rossport, Jackfish and Caldwell. They are all on the line of the C.P.R. Port Arthur is by far the most important, and practically all of the catch landed there leaves by boat, the A. Booth Packing Company taking the greater part of the catch, which is carried to Duluth in the steamer "Dixon". From Rossport, Jackfish and Caldwell the shipments are made east by rail.

The Port Arthur fishermen fish from the U.S. boundary line to about the middle of St. Ignace Island. Some of them will reside along the coast during the fishing season, but they are practically all residents of Port Arthur.

From each of the other 3 stations they

fish east and west, about midway between.

The fishing is done entirely with pounds and gill nets. There is practically no sport fishing in the big lake, and that subject does not need to be considered in this region.

Pound nets are used in the spring, summer, and early part of the fall, but not later. They say they get no fish in them in October. The fish do not appear to run along the shores at that season, or at any rate to lead into the pounds. Then gill netting becomes the only means of fishing.

Fish are now so scarce relatively that the pound nets do not pay well. The catch is so small that some who would like to set pounds cannot afford to pay for the licenses. Some pounds are said to be owned which are not now put in the water on that account.

There seems to be no question of a decrease

in the abundance of fish in this region, which amounts to a good deal. Capt. Servais says that 1 pound ten years ago would take as much as 3 pounds do now. In the beginning of the fishery here, the fishing used to be done entirely in Thunder Bay. Now little can be caught there, and most all of the nets are set farther to the eastward.

No cause can be assigned to the absence of fish from Thunder Bay except overfishing. The Government breakwater in front of Port Arthur necessitated some blasting, but that could not have had a lasting effect upon the fishes. The bay is large and deep and has clear water.

Black Bay seems to be better adapted to fish, and they are doing much of their fishing there now. The greater abundance in it of sturgeon, wall-eyed pike, etc., would indicate shallower and warmer water.

The greater proportion of the pound nets are in the region fished from Port Arthur, and there are said to be none east of Little Pic Island. The shore is not generally well adapted to pounds, and the places where they can be set are limited.

Servais and Beebe think the mesh in the pots should not be above 3 1-2 inches. They describe the fish (whitefish and trout) as smaller here than elsewhere and also slimmer. Four and 4 1-2-inch meshes have been tried, but not profitably.