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LAKE HURON

Investigations by

WILLIAM WAKEHAM AND RICHARD RATHBUN

JOINT FISHERIES COMMISSION

1894.

Arranged by Subjects.

R.

SEINES.

SEINES; LOCALITY; EXTENT OF FISHING; HISTORY.
LAKE HURON.

Detour.- Seine fishing was never practiced here.- (Butterfield).

Mackinaw City.- There are no seining grounds here as the bottom is too rough. The water is also very shallow, and runs out 60 or 80 rods before it drops off the bank.- (Robinson).

Mackinaw Island.- Seines were never used about here, but they used one over at St. Ignace the first year I came here. About 1841 or 1842 a man from Detroit went into Seiner's Point and hauled a seine, taking over 400 bbls. of whitefish. He put a big net out as far as he could, and then put a small one inside of it, the result being there were no barrels and salt to take care of the fish, so he had to let them go. There was an old half-breed who used to seine here at St. Ignace Point, and I have seen him haul in 400 or 500 lbs. of whitefish in one lift. They would be both small and large, but mostly large ones.

Seines were not used enough to make any difference in the abundance of the fish.- (Wilmot).

Cheboygan.- We used to employ seines for catching suckers in the river, but never used them for anything else.- (C. Corlett).

They have never used any seines here since I came here.- (Gill).

Alpena.- I do not think there is a seine anywhere except in the bay and at the foot of the lake, at Port Huron. I do not remember of ever hearing the old fishermen tell about doing any seining here.- (Tulian).

They do not do any seining or drag netting here, as we have no shore for it.- (Alpern).

Mr. Daniel Carter, one of the oldest settlers here, used to do some seining in Thunder Bay, just to the west of the mouth of Alpena River, where sawdust land has since been made. In 1853 he remembers seining altogether during a short season, about 100 bbls of pickerel.- (Case).

Saginaw Bay.- Of course in Saginaw Bay they used to fish nearly altogether with

seines. Do not think there is a seine anywhere now except here, and at the foot of the lake.- (Tulian).

Bay City.- Has been about 8 years since there has been any seining on Saginaw River or Bay. They used to seine at Tobico, Saganin, and Pine rivers and Point Lookout. The seining was done for pickerel in the spring, I never knew of any seining being done in the fall. They seined when the pickerel were spawning on the shore. We would also catch sturgeon, pike, and occasionally a whitefish when seining, but the principal thing was the pickerel. On the shore we used very shallow seines, but very long, so we used a grocer's barrel for a capstan. The seines used to be from 40 to 80 rods long. For the bay we generally used about 3 1/2 inch mesh, but for the river there was a smaller mesh used. I think probably the bay was a smaller mesh. I never did any bay seining, but ran some pretty large seines in the mouth of the river for a good many years.- (Penniman).

There are no seines fished in the bay.-
(Beutel).

Bay Port.- The seining was before my
time and I have never seen a seine drawn since
I have been fishing. I have been fishing about
12 years.- (James Gillingham).

There have not been any seines used here
since I have been here. I think the fish are
too scattered for seining.- (John Gillingham).

They have not used any seines here to
amount to anything for about 12 or 15 years.
Previously, they used them all along the shore
of the bay. They used to employ them on the
outside of the point here, and would catch
a good many whitefish. They formerly used
them up towards the mouth of the river, and
in the river. The water here is about 3 feet,
shallower than when I began fishing. They
used to seine at Green's Point about 5 miles
west of Point aux Greis, between Point aux
Greis and Pine River. All those places used
to be good seining grounds, but they have not
seined there for 10 or 12 years. They gave
up the seines on account of driving stakes for

trap nets. They would not take their stakes out and would fill their seining grounds full of stakes, and I guess they can fish the trap nets cheaper than the seines, for the trap net is always fishing and the seine only when the men are at work. Before they got the traps in Saginaw Bay they used to fish chiefly with seines.

They would get in their seines, whitefish from 3 to 10 lbs., all shallow water whitefish. They would seine for them in the spring. Never seined in the fall as it would not pay. The whitefish would not come up here at all late.--(Dubey).

Port Huron.-- I do not think there is a seine anywhere in the lake except in the bay and at the foot of the lake, Port Huron, where they use them more for sturgeon than anything else. I do not believe they get very many whitefish down there any more, but they seine a good many pickerel, I think, because they commence seining pretty early in the spring.--(Tulian).

Seines are used on the American side of

the river now, and they have been used on the Canadian side, but not now.

There is but one seine down in the river belonging to Craig and Lang, until you get way down the river to Algonac. That is the only seine that has been used since I have been here. It is right opposite the Grand Trunk Depot, about a mile north of here. I think there are only 2 or 3 seines fished around Algonac.

They take herring, pickerel and quite a good many wullet and sturgeon in the seines. A good many sturgeon are taken in the seines.

They always use the same ground. They have this ground cleared and they cannot change very well.

On the Canadian side seines have been used before, and quite extensively. But they are entirely prohibited there now, beginning this spring. They were used last fall. The seining there would be about the same as here, but they are a better grade of fish on that side.

The Canadian Government has passed laws

prohibiting seine fishing down this shore and our river is less than a mile in width; now at the same time they have cut off these Canadians from fishing, and just across the river they can fish seines wherever they can make it practicable, simply to pick up what the Canadians have thrown away.

Hitchcock and Stead have been operating seines up here for years and years, and another man had seines in right close alongside of them, and they are allowed to fish there, while Hitchcock and Stead are not.-(Selkirk).

Sarnia.- From the mouth of the river up there used to be 7 seines fished. It took about 8 men to a seine; they were all hired men. We had to employ divers to clear the bottom before we began seining. We have to clear the ground every year, more or less, as there is always drift coming in. Some years we will pay a diver \$40. or \$50. We are always put to a good deal of expense keeping our grounds clear.

The current is towards the river and the rate would be about 3 miles an hour off here,

and it increases as you go down. I never noticed any difference in the current in different seasons, seems to be as rapid in fall as in spring. Before a blow there will be a rapid current. The current seems to set straight for the river, and in here it is right along shore. I notice the current out as far as we have been, and I think the further you go out the more current there will be.

The water increases gradually in depth as you go off shore. A mile off shore the water would not be over 22 feet deep. We would go out about 100 rods with the seines and that was the general average distance.

From the mouth of the river to the upper limit of the seining was about 8 miles. There were eight seining grounds in that distance and we were all about the same distance apart, except that up above they were a little farther apart and down in the bay they would be a little nearer.-(Wees).

Goderich.- I do not know of any seines being used on this shore now. We used to use

them 15 or 16 years ago when they fished them down the Sable River.

Seining was never done along this shore here for whitefish. I think it was done at Upper Sable, however, 65 miles above here. This has never been a seining region.

Fishing Islands.- There have been seines used at the Fishing Islands some years ago. (Checheto or Fishing Islands). There is an Island just off Chiefs Point that used to be used for a seining ground a number of years. The water, however, is very shallow up there, and there has been no herring fishing of any consequence.- (Cragie).

Goderich.- I never fished seines very much, only one fall.

I fished right inside of Burke Island. Seines have been used all the way from the river right up to Lake View. There have been none used between Rocky Point and Kettle Point. There is a seining ground just in to the eastward of Kettle Point. There has been some seining around Bayfield. There has been no seining north of here until you get up

above Southampton, up by Sable River. There is seining for herring just inside the Fishing Islands. The main part of the seining has been done between the foot of the lake and Port Harris. The seining was for pickerel, sturgeon, whitefish, and herring. They used to catch herring and put them in ponds to keep them until they sold them.

I have seen them use 3 inch mesh in the seines; most of them use the same mesh. They generally use the same size mesh for sturgeon as for other fish. Some of those seines would be 30 rods long, and some of them 45 feet deep. This 3 inch mesh would be in the bunt of the seine, and the wings would have a large mesh, about 4 inches, and some 5 inches. The seines never shrink; they are tanned, and there is so much pressure on them all the time that they cannot shrink. The large seines are generally made of 18 thread cotton; and they will not shrink any.

These seines are used on sandy bottom. I have seen them run a regular seine out a half a mile, but when they are run out a mile

they have to use capstans, so a horse can turn them back again. Some haul them by hand. There are some seines made so you can work them on stony bottom, and they have been catching as many fish as the others. They have an arrangement that keeps the net off the bottom. There is a line that runs over the bottom with a stone to it, and floats to buoy the sinkers up, the stones keeping it in place. If you build a seine to fish on stony bottom, you do not have to clear the ground.

The seines were used down below here all the time from May to August. They fished seines in the river in the fall for herring, and up as far as the current runs, perhaps 1 1/2 miles above the rapids. They did not fish them up above that in the fall. The wind was strong and the fish did not come on the beach.

Between Point Harris and the river there were about 5 different people who had seines there. Their seining grounds run quite a ways. Wees' grounds run from about 3 miles

up, clear down to the Grand Trunk Depot.

The seines caught mostly herring, but the most valuable fish we caught were pickerel. They also caught sturgeon and some whitefish. When I first came here they used to get whitefish in abundance, but they always caught more herring than anything else.

The seines did not catch near the amount of sturgeon that they are catching with the pound nets now. Probably got half as many sturgeon in the seines as they do in the pound nets.

I do not think they ever got a great many small whitefish in the seines. If they ever got whitefish there, they would be the big ones, because the whitefish there are all large size. You have to come up around this way off Stony Point before you can get small whitefish; they used seines there at Stony Point until this summer, with the pickerel they would catch a good many small ones. (McClellan).

Southampton.- Seines have been used here. Up at the Fishing Islands they were

catching a great deal of herring the first year I was here; on a number of islands there. They used to fish a great deal at the mouth of Sable River. They have been fishing seines there until last year, both Indians and whites. The first work that was done in this country was fishing with seines at the Fishing Islands. I do not think they have fished any seines there in the last 3 or 4 years.

They used pretty good sized seines. The mesh was bigger in the wings than in the bag. I think the size in the bag was about 2 1/2. It would be a good deal bigger in the wings.

They caught herring in the seines. On the Sable Islands they caught whitefish. They caught no whitefish to speak of among the islands. They would catch suckers also, but when the herring would come in, there would hardly be any other fish among them.

They fished late in the fall about September 25, and would fish until November 10 or 12. I never saw it tried in the spring. On the Sable Sands they were taking a good many hauls of whitefish. Those whitefish would be

all sizes, big and small. They took them in the fall in the herring season.

They were seining for herring and took whitefish with them. Sometimes got good hauls of whitefish without any herring, and sometimes there might be two schools come in the seines at once, but mostly it was either whitefish or herring. I never was there but two days.

They were taking a good many little whitefish one year, too small to send to market.

I fished a couple of years with seines the first year I was in this country.-(D. McCauley).

I saw a seine tried around the islands but they did not catch much. They have used seines extensively here at times. They have used them up at Sable Beach and Whitefish Island. We used to fish there ourselves for herring; the seining was all for herring. They have used seines at Burke Island also. That is the only place they have been used from Kincardine to Cape Hurd in my time. The shore is not fit to haul the seine, it is too

rocky. I do not think they have seined any for the last 4 years. The water got so low at Whitefish Islands that the herring did not seem to come in; they all stopped outside of the island. The water has lowered here two feet I guess, it has been lowering for 7 years. I have noticed it all along the shore here. I do not know the reason.

I have seen them catch lots of whitefish on Sable Beach. They were large whitefish, there were some small ones, just before they quit.

They used to take fish in the summer season, but they would not allow them so they dropped it. They prohibited the seines in the summer on account of destroying these small whitefish I suppose. I think they stopped them about 4 years ago. If seines were permitted now, they would be used.

They destroy a good many young whitefish during the summer, but in the fall of the year they do not destroy them, because those young whitefish are not on the beach then. They come in only during the summer.

The seines then were about 600 feet long, and about 30 feet deep in the bunt. They used 2 1/2 inch mesh in the bunt, and in the wings they used as high as 5 inches. They had them tapering from 2 inches out to 5.

The seines were licensed then. We used to pay as high as \$125. for a license for a seine for 1 1/2 months, that was from October 1 to middle of November.

We had this seine on an island. The island was small and you could drag it from one point along and there was only one side we could drag it. The license gave us the sole right to fish there. They would seine about 1/4 mile from the beach probably. The water would be 20 or 30 feet deep. It is pretty shallow on Sable Beach, and sandy.-
(G. S. McCauley).

There is no seine fishing here now, but there used to be. They used to fish seines on Sable Beach and catch an immense lot of herring at one time.

They seined here up to last year.

The fishing place north of us used to be

an Indian Reservation and the Government put the whites off it 2 years ago, and the Indians bought all their outfits and starved to death at it. The whites caught a lot of herring in the fall before that. They have seined since I came here and before that.

Each man had a seine and I think $1/4$ mile of beach was his allowance, and the beach was about 5 miles long. That is from Sable River south for 5 miles. They also fished seines on a couple of islands north of Chiefs Point in the southern part of the Fishing Islands, the first island you come to, which they call Whitefish Island.

The bag of the seine was two inches I think. The wings would be larger; there are two or three sizes of the wings. They will be large at the end and get smaller as they come to the bag. It took 5 or 6 men to pull one seine in.

The place where they fished them was sandy bottom. If seines could be used up above the island it would be a mint for a person, but it is all rock there so they cannot

haul them.

They fished the seines only in the fall for herring. They used to fish a little in the spring but not very much. They would get herring in the spring and some large whitefish. They would not take small whitefish in the spring. In fall they used to start seines in September, about the middle, and fish through October and up to November, but there was not very much done after October. (Cosley).

Seines were used on the Sable Beach up here until the last two years. I recollect of seines being used as long as I can remember, both for herring and whitefish.

They would use a larger mesh seine for whitefish; would use a larger mesh in the wings, but the bag would be the same for both.

The would seine in the same place for both herring and whitefish. The herring and whitefish run together.

The net would be 2 1/4 and 2 1/2 in the bunt, and in the wings it might be 5 inches. All the small herring would go right through

the wings. They make it so they will, as they would be no use to them.

The Indians used to have seines at the Fishing Islands, and they would catch fish to sell. They are just making a living out of it.

I have seen lots of the whitefish they took from the seines, and they would take some small ones. I do not think the seining did the whitefish any good. I think they have destroyed a lot of small fish and been a great injury to us. You cannot draw a seine for trout as they are on the rocks where you cannot haul the seine.--(Dobson).

Seines were formerly used on the sand beach at the mouth of Sable River, just south of Chiefs Point, and also on two islands just to the north of Chiefs Point. It is said they were stopped using them 2, 3 or 4 years ago during a part of the year on account of their taking too many young whitefish at that season. The fishing being thereby made too short, they stopped using them voluntarily. Since the last fall the use of seines has been

entirely prohibited by the Government. The seines were employed for herring. Our informants say they took many young whitefish, but they were unwilling to acknowledge that this had been responsible to any extent for the great decrease of whitefish. It might be, but the seining was limited in scope, and the number of whitefish so taken was probably not sufficiently great to make much of an impression.- (Rathbun).

Soo.- There are no seines allowed to be used. They used to fish them some, but not very many.

They caught principally whitefish. The men I caught seining last year, caught whitefish from 4 inches long up to 3 lbs. There were a good many of those small ones. That was on Burnt Island in Georgian Bay. Has seen piles of those little fish about as big as a half bushel that they had hauled in. These seines will make some terrible hauls.

Samuel Knisely of French River, Georgian Bay, told him that on the 17th of July, 1856, at Wellers Bay, his father pulled in at one

haul, 55,565 whitefish in a seine; they used a team and capstan. That is in Prince Edward County, Lake Ontario. The biggest fishing that has been done in this division was near Killarney, on Georgian Bay; they took about 70 tons of whitefish in 10 days.-(Maj. Elliott).

Remarks: Features - I would like to see the seine fishing stopped on the St. Clair River as long as they have stopped it on the Canadian side. The reason is that the seines take too many small fish and they kill too many fish. On the Canadian shore if they were allowed to haul a seine after the month of May there is a class of small pickerel which does not come about No. 1, and if they were allowed to haul a seine they would catch the largest of these small pickerel. They are also abundant so that the pound nets will not catch them. The deeper the water the larger the fish are got.-(Maj. Elliott).

SARONIA

Remarks - They have a few seines and they catch a few fish. They also catch a few pickerel.

SEINES --- LAKE HURON.

ALPENA.

The seining in his time was a small business.- (Case).

PORT HURON.

Harmful features.- I would like to see the seine fishing stopped on the St. Clair River as long as they have stopped it on the Canadian side. The reason is that the seines take too many small fish and they kill too many fish. On the Canadian shore if they were allowed to haul a seine after the month of May there is a class of small pickerel comes down here, about No. 4, and if they were allowed to haul a seine they would catch any amount of those small pickerel. They are close inshore so that the pound nets will not catch them. The deeper the water the larger the fish we get.- (Selkirk).

SARNIA.

History.- They began to fish with seines about 34 years ago and have used them steadily

up to this spring.

Description.- Their seines run from 75 to 80 rods long. In the center they would fish 20 feet of water. In the wings they have 5 inch mesh and in the bunt 2 1/2 inch.

Seasons.- We commenced seining in the spring about May 15 and in the fall about September 15. In the olden times we used to commence about April 15. The spring seining lasts until about the 1st of July, so that the spring season would be from May 15 to July 1. Then we begin again about September 15 or 20, and continue until cold weather comes on, until sometime in November.

Catch.- In the spring fishery we take pickerel, sturgeon and some herring, but not very many herring in the spring. Once in a while we would get an odd whitefish and used to get more a few years ago. I think we got only 2 this spring. In the Detroit river they have been trapping them and I think it cut them off so that they didn't come up here. When they began pound net fishing on Lake Erie our whitefish dropped off.

In the seines we would get suckers, perch and a few catfish. Also a few bullheads, but not many. We also got a few sheepshead. Never got any German carp. It was a very rare thing to get any black bass here. We used to get the whitebass, but not many of late years.

We used to get quite a few trout also. We do not get many trout now, but until this season we have always got a few. The pound nets did not seem to take trout like our seines would. This is a pickerel and sturgeon ground.

In the fall our principal fishery was herring. Our principal fishery here was always sturgeon and pickerel and herring in the fall.

Seasons.- In the summer we always knock off fishing.

Mesh and fish.- We do not catch any more small fish in the seines than we do in the pound nets. Of course the pot in the pound is the same size as the center in the seine, 2 1/2 inches. I think if it was 2 inches it would be better for the fish as they would not gill so bad. We never caught

any quantity of small fish, the smallest pick-
erel we used to get would weigh a little under
a lb. That is yellow pickerel and what we
would call No. 2. No. 1 would go 1 lb. and
over. Anything under 1 lb. was No. 2. The
No. 2 would be all cast out and let go. They
could be thrown out all right as they were a
very hardy fish.

Description.- A seining outfit would
cost about \$300. The wings of a seine
would last about 5 years and the center about
2 years.

Miscellaneous.- When fishing with seines
we would make from 4 to 6 hauls a day. In the
spring we would haul for pickerel and stur-
geon. We have hauled in 60 baskets of herring
in one haul in October.-(Wees).

GODERICH.

Harmful features.- I think the govern-
ment did wrong in the first place to allow
seining. I do not believe in seining at all.
They are all right enough in the river for
herring, etc., but I do not believe in them
for whitefish. Seines are used at the pre-

sent time up in Georgian Bay. There is a seine that used to take in tons of fish at Rattle Snake Harbor. The damage done here by seines was done in times past.--(Cragie).

GODERICH.

I fished herring 12 years ago with a seine, but they are so cheap they do not pay us now.--(McClellan).

GODERICH.

Seines were formerly employed somewhat extensively, but mainly in the lower part of the lake. This year they have been entirely prohibited by the government. They took many small fish and may be regarded as destructive in proportion to the extent they were used. They had a small mesh, being designed for pickerel, herring, etc, and also took many sturgeon.--(Rathbun).

SEINES --- LAKE HURON.

Mackinaw Island.- Seines are doing no
harm, such as are employed.- (Wilmot).

SEINES --- LAKE HURON.

Alpena.- Before I came here they used seines right here in the river and used to catch a good many fish, mostly whitefish, good big fish.- (Case).

They used to seine for whitefish in the spring, never seined in the fall as it would not pay. The whitefish would not come up here at all late.- (Daboy).

Port Huron.- I do not believe they catch very many whitefish in the fall with the seines here. They commence seining the pickeral pretty early in the spring.- (Tallen).

The season for seines is the same as our round netting. They will commence and haul occasionally about the middle of this month, but will not follow it steadily until about the first or 10th of October. In the seines they catch herring, pickeral, mulllet and star-gob. They catch them in the spring and also in the fall.- (Daboy).

Detroit.- I never notice any difference in the current in the different sections here.

SEINES; SEASONS -- LAKE HURON.

Bay City.- The seining is done for pickerel in the spring. I never knew of any seining being done in the fall.- (Penniman).

Bay Port.- Have not seined around here for 10 or 12 years. They used to seine for whitefish in the spring, never seined in the fall as it would not pay. The whitefish would not come up here at all late.- (Dubey). (?)

Port Huron.- I do not believe they catch very many whitefish in the fall with the seines here. They commence seining the pickerel pretty early in the spring.- (Tulian).

The season for seines is the same as our pound netting. They will commence and haul occasionally about the middle of this month, but will not follow it steadily until about the first or 10th of October. In the seines they take herring, pickerel, mullet and sturgeon. They catch them in the spring and also in the fall.- (Selkirk).

Sarnia.- I never notice any difference in the current in the different seasons here .

It seems to be as rapid in the fall as in the spring.

Grounds below us when the herring were coming up in the fall would catch more than we would, and take it along later in the fall they seem to work in out of the lake and we would hold our own, but they would be small herring. We always thought the first run of large herring came up the river, as they always got them below a few days before we did.

We get our best run of sturgeon generally during the full moon in June. They would slack off in July, and they would not come on again to amount to anything. We do not count on sturgeon after they once slack off.

A year ago this last spring we had a good run of pickerel, as good as we ever had, and finer pickerel I never saw. It was the best run we had for a number of years.-(Wees).

Goderich.- Seines were used down below here all the time from May until August. They fished seines in the river in the fall for herring and up as far as the current runs, perhaps 1 1/2 miles above the rapids. They did

not fish up above that in the fall. The wind was strong and the fish did not come on the beach.- (McClellan).

Southampton.- They fished seines on Sable Beach until last year. I do not think they have fished at the Fishing Islands in the last 3 or 4 years. They fished late in the fall about the 25th of September and would fish until November 10 or 12. I never saw it tried in the spring. They ^{took} whitefish all sizes, big and small, during the fall in the herring season.- (D. McCauley).

On Sable Beach I have seen them take lots of whitefish. They used to take fish in the summer season, but seines have been prohibited in the summer on account of destroying these small whitefish I suppose. A good many young ones are destroyed in the summer, but not in the fall because they are not on the beach then. They come in only during the summer. Before prohibited we use to pay as high as \$125. for a license for a seine 1 1/2 months, that is, from 1st of October to the middle of November.- (G. S. McCauley).

Southampton.- They seined here up to last year. They fished the seines only in the fall for herring. They used to fish a little in the spring, but not very much. They would get herring in the spring and some large whitefish. They would not take small whitefish in the spring. In the fall they used to start seining in September, about the middle, and fish through October and up to November, but there was not very much done after October.- (Cosley).

Fishing is the most extensive fish-
ing there is.- (Penniman).

Sarnia. The seines that were fished in the river were a smaller seine than ours, and they had a very small mesh so they caught very small pickeral, mostly No. 2 fish.- (Woon).

Goderich.- The main part of the seining has been done between the foot of the lake and Fort Harris. Some of these seines would be 30 rods long, and some about 45 feet deep. These seines are used on sandy bottoms. I have seen them run a regular seine net half a mile, but when they are run out a mile, say-

SEINES; DESCRIPTION -- LAKE HURON.

Bay City.- It has been about 8 years since any seining was done in the bay or river, but before that we used, on the shore, very shallow and very long seines, and a grocer's barrel for a capstan. The seines used to be from 40 to 80 rods long. I used some pretty large seines in the mouth of the river for a good many years.

Seine fishing is the most expensive fishing there is.- (Penniman).

Sarnia.- The seines that were fished in the river were a smaller seine than ours, and they had a very small mesh so they caught very small pickerel, mostly No. 2 fish.- (Wees).

Goderich.- The main part of the seining has been done between the foot of the lake and Port Harris. Some of those seines would be 30 rods long, and some about 45 feet deep. These seines are used on sandy bottom. I have seen them run a regular seine out half a mile, but when they are run out a mile, cap-

stans must be used to turn them back again. Some seines are fished that can be worked on Stony bottom and they have been catching as many fish as the others. They have an arrangement that keeps them off the bottom. They have a line that runs over the bottom with a stone to it. They have floats to buoy the sinkers up, and the stones keep it in place. In fishing with this kind of seine the ground does not have to be cleared.

A pound net is more expensive than a seine. You can buy those seines for \$75., and you would use about 2 seines in a season. A pound nets costs about \$275. Including the pounds, leaders and everything, there is twice as much twine in a pound net as in a seine.- (McClellan).

Southampton.- Up at the Fishing Islands and the mouth of Sable River they used pretty good sized seines.- (D. McCauley).

I do not think they have seined any for the last 4 years, but they used to seine around the islands and at Sable Beach. The seines then were about 600 feet long and about 30 feet

deep in the bunt.--(G. S. McCauley).

They seined here up to last year. It took 5 or 6 men to pull one seine in.--(Cosley).

has been any seining on the river or bay. We generally used $3\frac{1}{2}$ inch mesh in the bag, but for the river, a smaller mesh was used. I think probably the back was a smaller mesh.--(Penniman).

Port Harp.-- Seines are operated with a small mesh, usually smaller than we use in pound nets. In ordering a mesh from the factory, they will order exactly $2\frac{1}{2}$ inch, and by the time it is in the water it has shrunken down, because they are a class of nets that will not tar and do not hold. When we order a mesh, after it is tarred it stays right there at the same place.--(Belkirk).

Sprain.-- The seines that were fished in the river were a smaller seine than ours, and they had a very small mesh so that they caught very small pickeral.--(Wesel).

Soderlich.-- I have seen them use 3 inch mesh in the seines. Most of them use the same size mesh. They generally use the same

SEINES; MESH --- LAKE HURON.

Bay City.- About 8 years since there has been any seining on the river or bay. We generally used 3 1/2 inch mesh in the bag^y, but for the river, a smaller mesh was used. I think probably the back was a smaller mesh.- (Penniman).

Port Huron.- Seines are operated with a small mesh, usually smaller than we use in pound nets. In ordering a mesh from the factory, they will order exactly 2 1/2 inch, and by the time it is in the water it has shrunken down, because they are a class of nets that will not tar and do not hold. When we order a mesh, after it is tarred it stays right there at the same size.- (Selkirk).

Sarnia.- The seines that were fished in the river were a smaller seine than ours, and they had a very small mesh so that they caught very small pickerel.- (Wees).

Goderich.- I have seen them use 3 inch mesh in the seines. Most of them use the same size mesh. They generally use the same

size mesh for sturgeon as for other fish. This 3 inch mesh would be in the bunt of the seine, and the wings would be larger mesh, about 4 inch mesh, and some 5 inch mesh. The seines never shrink. They are tanned and there is so much pressure on them all the time that they cannot shrink. The large seines are generally made of 18 thread cotton and they will not shrink.--(McClellan).

Southampton.-- They have been fishing seines at the Sable River until last year. I do not think they have fished any at the Fishing Islands in the last 3 or 4 years. They used pretty big seines and the mesh was bigger in the wings than in the bag. I think the size in the bag was about 2 1/2 inches. It would be a good deal bigger in the wings.-- (D. McCauley).

They have used seines here up at Sable Beach and Whitefish Island, etc., but I do not think they have seined any for the last 4 years. They used 2 1/2 inch mesh in the bunt, and in the wings they run up as high as 5 inches. They had them tapering from 2 inches out to 5.-- (G. S. McCauley).

They seined here up to last year. The bag of the seine was 2 inches I think, the wings would be larger. There are 2 or 3 sizes of the wings. They will be large at the end and get smaller as they come to the bag.--(Cosley).

I recollect seines being used as long as I can remember, both for herring and whitefish. They would use a larger mesh seine for whitefish; would use a larger mesh on the wings, but the bag would be the same for both. The net would be 2 1/4 and 2 1/2 in the bunt, and in the wings it might be 5 inches.--(Dobson).

SEINES; MESH AND FISH ---- LAKE HURON.

Mackinaw Island.- An old half-breed used to seine here at St. Ignace Point. I have seen him haul in 400 or 500 lbs. of whitefish in one lift. They would be both small and large ones, but mostly large.--(Wilmot).

Bay City.- If there are only a few fish in a coarse mesh net, those few will be a very nice size, but if there is a large quantity in, there will be a good many small ones, and if you dip them up with a dip net you will get some.--(Penniman).

Port Huron.- I think the seine fishery is a harmful one because seines are operated with too small a mesh. I think it has been a good thing to shut off the seine fishing and protect the small fish.--(Selkirk).

Sarnia.- Our whitefish would run from 2 1/2 lbs. up to 10 lbs., and would average about 3 lbs. We have got a few whitefish under a lb. but not many. We never notice any very small ones. We never draw the small fish in with the seine.

The seines that were fished in the river were a smaller seine than ours and they had a very small mesh so that they caught very small pickerel. It was mostly all No. 2 fish they caught.-(Wees).

Goderich.- I have seen them use 3 inch mesh in the seines. They generally use the same size mesh for sturgeon as for other fish. I do not think they ever got a great many small whitefish in the seines. If they ever got whitefish they would be large, because the whitefish between Point Harris and the river are all large size. You have got to come up here off Stony Point before you get small whitefish. They used to use seines there until this summer. With the pickerel they would catch a good many small ones. Seines take anything that comes along. I have seen little pickerel come in 3 inches long. The seines are worse than pound nets in that respect. The seines fished down the river in the summer time caught a large amount of those small pickerel. I have seen them when they had a couple of tons of those No. 2 pickerel. The No. 2

would sometimes be as small as 6 or 8 inches long.-(McClellan).

Southampton.- They fished seines at the Sable Sands until last year. The whitefish they would get would be all sizes, big and small. They were taking a good many little whitefish one year, too small to send to market.-(D. McCauley).

I have seen them take lots of whitefish in the seines on Sable Beach. They were large whitefish. There were some small ones, just before they quit. I think they stopped them seining about 4 years ago on account of destroying small whitefish. They destroy a good many during the summer.-(G. S. McCauley).

Seines were used on the Sable Beach until 2 years ago. All the herring would go right through the 5 inch mesh in the wings. They make it so they will, as they would be of no use to them. I have seen lots of whitefish they took from the seines. There would be some small ones.-(Dobson).

Our informants say the seines took many young whitefish, but they were unwilling to

acknowledge that this had been responsible to any extent for the great decrease of whitefish. The seining was limited in scope, and the number of young whitefish so taken was probably not sufficiently great to make much of an impression.- (Rathbun).

Soo.- The men I caught seining last year caught whitefish from 4 inches long up to 3 lbs. There were a good many of those small ones. That was on Burnt Island in Georgian Bay. Has seen piles of those little fish about as big as a half-bushel that they had hauled in. These seines will make some terrible hauls. Seines are not allowed now.- (Maj. Elliott).

SEINES; METHODS OF USE --- LAKE HURON.

Mackinaw Island.- In 1841 or 1842 a man from Detroit went into Seiner's Point and made a haul of over 400 bbls. of whitefish by putting one big seine out as far as he could, and then putting a small one inside of it.- (Wilmot).

Bay City.- It has been about 8 years since there was any seining in the river or bay. We used very shallow and very long seines on the shore, so we used a grocer's barrel for a capstan. If there are only a few fish in a coarse mesh net, those few will be a very nice size, but if there is a large quantity in, there will be a good many small ones, and if you dip them up with a dip net you will get some.- (Penniman).

Port Huron.- In using seines they always fish the same ground. They have the ground cleared and cannot change very well.- (Selkirk).

Sarnia.- From the mouth of the river up here there used to be 7 seines fished and it took about 8 men to a seine. We had to employ divers to clear the bottom before we

began seining. We have to clear the ground every year, more or less, as there is always drift coming in. We are always put to a good deal of expense keeping our grounds clear, some years paying a diver \$40. or \$50.

The current seems to set straight for the river, and the rate is about 3 miles an hour off here, but increases as you go down. We always seine with the current, and sometimes it would go down so fast we could hardly keep up with it, and other times it would go down slow. Before a blow there will be a rapid current.

The water increases gradually in depth as you go off shore. A mile off shore there would not be over 22 feet of water. We would go about 100 rods with the seines and that was the general average distance. I think the farther out you go there will be more current.

We never draw in the small fish with the seine. We have got a few whitefish under a lb., but not many.-(Wees).

Goderich.- The main part of the seining has been done between the foot of the lake and

Port Harris. These seines are used on sandy bottom. I have seen them run a regular seine out a half a mile, but when they are run out a mile, they must use capstans so that a horse can turn them back again. Some haul them by hand. Some seines are constructed so they can be fished on stony bottom, in which case the ground does not have to be cleared.

Seines take anything that comes along; I have seen little pickerel come in 3 inches long. After you pull fish ashore in a seine they are no good to throw back, you cannot save them. They getsand in their gills and all over them.- (McClean).

Southampton.- We used to license a seine and fish it on an island. The island was small and you could drag it from one point along and there was only one side we could drag it. They would seine out about $1/4$ mile from the beach probably, when the water would be 20 or 30 feet deep. It is sandy bottom and pretty shallow on the Sable Beach.- (G. S. McCauley).

They seined here up to last year. Each man had a seine, and I think $1/4$ miles of beach

was his allowance, and the beach was about 5 miles long. That is from Sable River south for 5 miles. It took 5 or 6 men to pull one seine in. The place where they fished them was sandy bottom.-(Cosley).

Seines were used on Sable Beach until the last 2 years. All the small herring would go right through the wings. They make it so they will, as they would be no use to them.-(Dobson).

Alcona.- In 1833, Mr. Daniel Carter, who used to seine in Trumbler Bay, remembers seining altogether in a short season 100 bbls. of pickeral.-(Case).

Bay City.- Been about 3 years since there has been any seining in Saginaw Bay or River. The seining is done for pickeral in the spring. We would also catch sturgeon, pike and occasionally a whitefish when seining, but the principal thing was the pickeral.

Bay Point.- Used to fish seines on the outside of the point here, and would catch a good many whitefish, whitefish weighing from 5 to 15 lbs., all smaller water fish.-(Quoy).

SEINES; CATCH --- LAKE HURON.

Mackinaw Island.- About 1841 or 1842 a man from Detroit hauled a seine at Seiners Point and got over 400 bbls. of whitefish. I have seen an old half-breed who used to seine at St. Ignace Point haul in 400 or 500 lbs. of whitefish in one lift. They were both small and large, but mostly large fish.- (Wilmot).

Alpena.- In 1853, Mr. Daniel Carter, who used to seine in Thunder Bay, remembers seining altogether in a short season 100 bbls. of pickerel.- (Case).

Bay City.- Been about 8 years since there has been any seining in Saginaw Bay or River. The seining is done for pickerel in the spring. We would also catch sturgeon, pike and occasionally a whitefish when seining, but the principal thing was the pickerel.

Bay Port.- Used to fish seines on the outside of the point here, and would catch a good many whitefish, whitefish weighing from 3 to 10 lbs., all shallow water fish.- (Dubey).

Port Huron.- In the seines they take herring, pickerel, and quite a good many mullet and sturgeon, that is all. They get a good many sturgeon in the seines. On the Canada side the seining would be about the same as here, but they are a better grade of fish on that side. They got that up run of herring there, and they are a better class of herring entirely. On this side they get lots of herring in their seines.--(Selkirk).

At Port Huron they use seines more for sturgeon than anything else. I do not believe they get very many whitefish down that way any more. They seine a good many pickerel down there I think, because they commence seining pretty early in the spring.--(Tulian).

Sarnia.- When the herring were coming up in the fall, ground below us would catch more than we would, but later in the fall they seem to work in out of the lake and we would hold our own, but they would be small herring. We always thought the first run of larger herring came up the river, as they always got them below a few days before we did.

We get our best run of sturgeon generally during the full moon in June. They would slack off in July and would not come on again to amount to anything. We do not count on sturgeon after they once slack off.

We get a few ling and a very few sheeps-head. No menominees and no long-jaw. Only get the ordinary herring and ordinary whitefish. Our whitefish would run from 2 1/2 lbs. up to 10 lbs., and would average about 3 lbs. We have got a few whitefish under a lb. but not many. We never notice any very small ones. The small fish we never draw in with the seine. I have seen young herring swimming along the beach here in July; at least I am pretty sure they were herring. We only got 1 or 2 whitefish here this spring, and we lay it entirely to the nets in Lake Erie.

The small seines in the river caught very small pickerel. It was mostly all No. 2 fish they caught. A year ago this last spring, we had a good run of pickerel, as good as we ever had, and finer pickerel I never saw. It was the best run we had for a number of years.

But on the whole the pickerel have decreased very much since we began fishing. I think they have decreased easily one-half from what they were 20 years ago.- (Wees).

Goderich.- Seines were used at the Fishing Islands some years ago. The water, however, is very shallow up there and there has been no herring fishing of any consequence.- (Cragie).

There is seining for herring just inside the Fishing Islands. The main part of the seining has been done between the foot of the lake and Port Harris. The seining was for pickerel, sturgeon, whitefish and herring. They used to catch herring and put them in ponds to keep until they sold them.

They fished seines in the river in the fall for herring, up as far as the current runs, perhaps 1 1/2 miles above the rapids. They did not fish them up above that in the fall as the wind was strong and the fish did not come on the beach.

Between Port Harris and the river the seines caught mostly herring, but the most

valuable fish we caught were pickerel. They also caught sturgeon and some whitefish. When I first came here, they used to get whitefish in abundance, but they always caught more herring than anything else. The seines did not catch near the amount of sturgeon that they are catching with the pound nets now, probably about half as many.

I do not think they ever got a great many small whitefish in the seines. If they ever got whitefish they would be large ones, because the whitefish there are all large size. You have to come up this way off Stony Point before you get small whitefish. They used to use seines at Stony Point until this summer. They would catch a good many small pickerel.

Seines take anything that comes along. I have seen little pickerel come in 3 inches long. The seines are worse than the pound nets in that respect. The seines fished down the river in the summer time caught a large amount of those small pickerel. I have seen them where they had a couple of tons of those No. 2 pickerel. The No. 2 some times

would be as small as 6 or 8 inches long.-
(McClellan).

Southampton.- Around the islands they caught herring in the seines; they caught no whitefish to speak of among the islands. They would catch suckers also, but when the herring would come in, there would not be hardly any other fish among them. On the Sable Sands they caught whitefish. There would be all sizes, big and small. They took them in the fall during the herring season. They were fishing for herring and took whitefish with them. Some times got good hauls of whitefish without any herring and sometimes there might be two schools come in the seines at once, but mostly it was either whitefish or herring. They were taking a good many little whitefish one year, too small to send to market.- (D. McCauley).

We used to fish at Sable Beach and Whitefish Island for herring; the seining was all for herring. The water got so low at Whitefish Island that the herring did not seem to come in, they all stopped outside the islands.

The water has lowered here 2 feet I guess. I have noticed it all along the beach here for about 7 years. I have seen them catch lots of whitefish on the Sable Beach. They were large whitefish. There were some small ones just before they quit. They destroy a good many young whitefish in the summer, but not in the fall, because the whitefish are not on the beach then; they come in only during the summer.-(G. S. McCauley).

They used to fish seines on the Sable Beach and catch an immense lot of herring at one time. They have caught a lot of herring in the fall on this fishing place north of us.

They fish the seines only in the fall for herring. They used to fish a little in the spring, but not very much. They would get herring in the spring and some large whitefish. They would not take small whitefish in the spring. They would not get many trout in the seines. They would get no perch, but accidentally get some pickerel.-(Cosley).

I recollect seines being used as long as

I can remember, both for herring and whitefish. The herring and whitefish run together and they would seine in the same places for both.

The Indians used to have seines at the Fishing Islands, and I have seen lots of whitefish they took. They would take some small ones.

You cannot draw a seine for trout, as they are on the rocks where you cannot haul the seine.- (Dobson).

Before seines were prohibited by the Government last fall they were used for herring on the Sable Beach and two islands just north of Chiefs Point. Our informants say they took many young whitefish.- (Rathbun).

Soo.- No seines allowed now. They used to use them some, but not very many. They caught principally whitefish. The men I caught seining last year caught whitefish from 4 inches long up to 3 lbs. There were a good many of those small ones. That was on Burnt Island in Georgian Bay. Has seen piles of those little fish as big as a half-bushel that they had hauled in. These seines will

make some terrible hauls. The biggest fishing that has been done in the division was near Killarney, in Georgian Bay; they took out 70 tons of whitefish in 10 days.-

(Maj. Elliott).

... to seine here at St. Ignace
... 400 or 500 lbs. of whitefish in
... They would be both small and large
... but mostly large. That did not have
... anything to do with the decrease, seines were
... not used enough to make any difference.-(Wilson).

Mr. Hill - If there are only a few fish
in a coarse mesh net, those few will be a very
nice size, but if there is a large quantity in
there will be a good many small ones, and if
you dip them up with a dip net you will get
some.-(Fenniman).

Port Huron - I think the seine fishery
is a harmful one for this reason:

In the first place seines are operated
with a small mesh, usually smaller than used
in the pound nets. They will order exactly
a 1/2 inch mesh and by the time it is in the
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a class of nets that will catch the small

SEINES; DESTRUCTIVENESS BY CATCHING SMALL FISH.

LAKE HURON.

Mackinaw Island.- I have seen an old half-breed, who used to seine here at St. Ignace Point, haul in 400 or 500 lbs. of whitefish in one lift. They would be both small and large ones, but mostly large. That did not have anything to do with the decrease, seines were not used enough to make any difference.- (Wilmot).

Bay City.- If there are only a few fish in a coarse mesh net, those few will be a very nice size, but if there is a large quantity in, there will be a good many small ones, and if you dip them up with a dip net you will get some.- (Penniman).

Port Huron.- I think the seine fishery is a harmful one for this reason:

In the first place seines are operated with a small mesh, usually smaller than we use in the pound nets. They will order exactly 2 1/2 inch mesh and by the time it is in the water it has shrunken down, because they are a class of nets that will not tar and do not

hold. When we order a mesh, after it is tarred it stays right there at the same size. I think it has been a good thing to shut off the seine fishing and protect the small fish. We have been purchasers of fish as well as catchers, and we find in looking back over our books that we caught more small fish through the seines and lost more money through the seines than any other class of fish we get. (Selkirk).

Sarnia.- We have got a few whitefish under a lb.; but not many. We never notice any very small ones. We never draw in the small fish with the seine. The seines that were fished in the river had a very small mesh, so they caught very small pickerel. It was mostly all No. 2 fish they caught. The pickerel have decreased very much since we began fishing. They have decreased easily one-half from what they were 20 years ago I think. (Wees).

Goderich.- Principal seining has been done between Port Harris and the foot of the lake. I do not think they ever got a great

many small whitefish in their seines. They would catch a good many small pickerel. You cannot save fish that have once been hauled ashore in a seine. They get sand in their gills and all over them. Seines take anything that comes along. I have seen little pickerel come in 3 inches long. The seines are worse than the pound nets in that respect. The seines fished down the river in the summer time caught a large amount of those small pickerel. I have seen them when they had a couple of tons of those No. 2 pickerel. The No. 2 would sometimes be as small as 6 or 8 inches long. The seine is more destructive than the pound nets and pound nets more so than gill nets.- (McClellan).

Southampton.- They have been fishing seines on the Sable Beach until last year. They were taking a good many hauls of whitefish in the fall. The whitefish would be all sizes, big and small. They were taking a good many little whitefish one year, too small to send to market.- (D. McCauley).

At the Sable Beach with the seines they destroy a good many young whitefish during the summer, but not in the fall because they do not come on the beach then.--(G. S. McCauley).

I have heard many complaints of the decrease of whitefish being caused by the seines, but I could not say for myself whether they did or not.--(Cosley).

I have seen lots of whitefish the Indians took with seines at the Fishing Islands. They would take some small ones. I do not think the seining did the whitefish any good. I think they have been a big injury to us. I think they have destroyed a lot of small fish.--(Dobson).

It is said they stopped them from using seines 2, 3, or 4 years ago, around the Sable Beach and island near Chiefs Point, during a part of the year on account of their taking too many young whitefish at that season. Our informants say they took many young whitefish, but they were unwilling to acknowledge that this had been responsible to any extent for the great decrease of whitefish. It might be,

but the seining was limited in scope, and the number of young whitefish so taken was probably not sufficiently great to make much of an impression.- (Rathbun).

Soo.- The men I caught seining last year, caught whitefish from 4 inches long up to 3 lbs. There were a good many of those small ones. That was on Burnt Island in Georgian Bay. Has seen piles of those little fish about as big as a half-bushel, that they hauled in. These seines will make some terrible hauls.- (Maj. Elliott).

as the fish have deposited it. Pickeral and surgeon both spawn when they seine. If it is practicable to run the seines late enough they will catch the herring when they are spawning, and I cannot see why seines should be allowed in the river.- (Selkirk).

Canada prohibits seining on the river or lake except at the mouth of the Duress River, where it is allowed, except during the spawning season.- (Dr. Vaker).

SEINES; FISHING IN SPAWNING SEASON-LAKE HURON.

Bay City.- The seining is done for pickerel in the spring. They seine when the pickerel are spawning on the shore.- (Penniman).

Port Huron.- I do not believe they catch very many whitefish in the fall with seines here. I do not know of any spawning grounds around Port Huron.- (Tulian).

If the seine is operated at the time the fish are spawning, how can it help but destroy the spawn if it is pulled over the spawn just as the fish have deposited it. Pickerel and sturgeon both spawn when they seine. If it is practicable to run the seines late enough they will catch the herring when they are spawning, and I cannot see why seines should be allowed in the river.- (Selkirk).

Canada prohibits seining on the river or lake except at the mouth of the Thames River, where it is allowed, except during the spawning season.- (Dr. Wakeham).

SEINE DRIFTING --- LAKE HURON.

Petoskey.- The law against hauling a seine with boats was to prevent taking the two ends of a seine and making a long haul. It requires that when a seine is drawn one end must be stationary and the seine simply carried out around.- (Hampton).

HOOKS AND LINES.

SPORT FISHING.

HOOKS AND LINES -- LAKE HURON.

General.- Very little hook and line fishing done for commercial purposes in this lake.--(Tulian. ~~For big catfish here, have to~~
~~get~~ Hook and line fishing is carried on more extensively in Lake Michigan than on Lake Huron. They use set lines for it. It is a very small business compared with gill nets. It is mostly done on Lake Huron and on that side of Saginaw Bay, and they take mainly lake trout, and also some sturgeon at Port Huron in the winter. There is no place along the west shore of Lake Huron where they can do any winter fishing at all.--(Wires).

Detour.- No hook and line fishing ever practiced here.--(Butterfield).

Mackinaw City.- Never has been any hook and line fishing for commercial purposes in this region. A number of years ago they caught a few perch off the dock here, but that is all.--(Robinson).

Cheboygan.- Hooks and lines not used for commercial fishing at all.--(C. Corlett).

No commercial fishing with hooks and lines.-
(Gill).

Alpena.- There is no hook and line fishing here for commercial purposes that I know of. Get very few big catfish here, have to get down in warmer water for them.- (Tulian).

Bay City.- There has been no commercial hook and line fishing, except during the hard times last fall, when a good many were out catching them for the table.- (Penniman).

No commercial hook and line fishing to speak of, no winter hook and line fishing.- (Beutel).

There is a little hook and line fishing done in Saginaw Bay in the spring, and I think about the only thing they fish for is catfish. They get the big catfish.- (Tulian).

Bay Port.- Hook and line fishing has not been carried on for commercial purposes.- (James Gillingham).

There is no hook and line fishing here to amount to much. Has been some catfish hook and line fishing here. Get them in around the islands generally in shallow water.- (John Gillingham).

There is no commercial hook and line fishing except there are catfish lines set in the spring, but it hardly pays them to fish. They set long lines and put hooks every 7 or 8 feet. I used to set about 1,500 hooks. Would get nothing much but catfish, and occasionally a perch or pickerel, but not many.- (Dubey).

Port Huron.- There is commercial hook and line fishing in the river wherever they can catch them; it is simply pickerel fishing.- (Selkirk).

Goderich.- They do not do any commercial hook and line fishing except a little winter fishing, but there has not been any here for a number of years as there has been no ice.

Fishing Islands.- Never been any commercial fishing here with hook and line. There were a few men who used to fish hooks for trout when he first came here. There is no hook fishing now except in the winter, if they happen to get good ice the boys will go out. The fishing around the piers here for bass does not amount to anything. They get

some bass and herring around the breakwater here, but not to amount to anything.--(Cragie).

Southampton.-- There has been no hook and line fishing about here. They do it up north around the Manitoulins.--(D. McCauley).

No hook and line fishing been carried on for trout. There are no fishermen here who try to make a living at that on this shore.--(G. S. McCauley).

There is no hook and line fishing of any quantity. They catch a few little herring about 6 inches long in the winter. It is very seldom they get any trout then.--(Cosley).

There is no commercial hook and line fishing. They fish a little just to eat, but you cannot catch anything to amount to anything.--(Dobson).

HOOKS AND LINES --- LAKE HURON.

Alpena.- During his time there was no hook and line fishing for commercial purposes here. They used to do a good deal of it on Lake Michigan at South Haven and used to set hooks for sturgeon. They would buy the hooks but they never did a great deal with them, he thinks.- (Case).

Goderich.- Hook and line fishing about here is on a very small scale, not to be considered.- (Rathbun).

TROLLING --- GEORGIAN BAY.

Georgian Bay.- The Indians catch a great many lake trout by trolling down in Georgian Bay. They catch them for sale.- (Maj. Elliott).

They begin to troll about the middle of the month of October when they are on their spawning grounds.- (Hobbs).

Washago Island.- People go to Washago Island for fishing, and they take their gear to the house for fishing.- (Hobbs).

Michigan.- There is no sport fishing here to speak of.- (C. Corlett).

They fish quite a good deal with the hook and line just for sport. They get bass, pickerel, and pike.- (Hill).

Algonk.- There is a little spawning done for these shallow waters in the fall up at French Lake, French Bay and Middle Islands, just for sport. They would take regular spawning fish just as the gill nets would catch.

There is a little spawning done for salmon here for sport and sometimes also

SPORT FISHING -- LAKE HURON.

Mackinaw City.-- In October on the shoals they generally catch a few trout with spoon hooks, but there is no sport fishing here to speak of. Never heard of their catching any outside of October when they are on their spawning grounds.--(Robinson).

Mackinaw Island.-- People go to Mackinaw Island for fishing, and they take them over to the Snows for fishing.--(Robinson).

Cheboygan.-- There is no sport fishing here to speak of.--(C. Corlett).

They fish quite a good deal with the hook and line just for sport. They get bass, pickerel, and pike.--(Gill).

Alpena.-- There is a little spearing done for these shallow trout in the fall up at Presque Isle, Thunder Bay and Middle Islands, just for sport. They would take regular spawning fish just as the gill nets would catch.

There is a little spearing done for sturgeon more for sport than anything else.

There is no particular sport fishing to be protected in this immediate neighborhood. They used to catch black bass down here at South Point in good quantities.--(Tulian).

There is no sport fishing here in the lake.--(Alpern).

Bay City.-- There is considerable sport fishing; they fish for black bass, strawberry bass, calico and rock-bass -- all kinds of bass. They are generally caught around where there is sawdust on the bottom, except the black bass. We catch the sunfish and those kinds of bass around these mills when there is sawdust on the bottom and they like it.--(Penniman).

Port Huron.-- There is a good deal of sport fishing with hook and line in the river, and they sell their fish also. They fish for pickerel.

Up Black River they get considerable black bass with hook and line.

There is no sport fishing here.--(Selkirk).

Southampton.-- No fishermen try to make a living here by hook and line fishing for

SPORT FISHING---LAXE HUPON.

trout, but it is done a little for sport.-

(G. S. McCauley).

There is a little fishing done about here in the winter for sport (Alpern).

Georgian Bay.---There is no fishing done by sportsmen before May 10, and there is a chance of catching black bass in the trap nets, and they might as well be protected (Billett).

SPORT FISHING---LAKE HURON.

Alpena.---There is a little fishing done about here in the winter for sport (Alpern).

Georgian Bay.---There is no fishing done by sportsmen before May 10, and there is a chance of catching black bass in the trap nets, and they might as well be protected (Elliott).

TRAP NETS.

TRAP NETS --- LAKE HURON.

General.- Blind, or trap, nets are fished on Lake St. Clair, and there are quite a lot of them. I tried to make one here about 20 years ago, and I believe I was the first man that tried to fish them here, but mine was a little different from those they have now, but the pot and tunnel were about the same, but I had one pot on each end and had 100 rods of lead between them, and after I had it all done, I sent the men out with a little tug to set it, and a gale of wind came up just as we got one set, and we had to skip out and dip the twine right overboard, and when I came back for my twine and lifted the pot up it had whitefish in it.

I understand they are fishing them on the Canadian Shore, and some on Lake St. Clair, but on Lake St. Clair all they catch is pickerel, perch and suckers.

There need be no buoy at all for them. I have never fished them here, still I think they would be a great net if they could catch

trout. They would be a great net to catch trout in September in the places where you can set them where it is stony and you cannot set any other net. But there are none of them on Lake Huron I know. I call them blind nets. You can use them in any depth of water. They have never been used in deeper than 35 or 40 feet here.-(Alpern, Alpena).

They have them from 8 to 14 feet deep. They are just the same as a pound net -- have a lead, 2 wings, a tunnel and a pot. Made on 2 1/2 inch mesh, some 3 inch. They can set them in about an hour and they are a great net.

Those traps have to be set in sheltered places, where whitefish do not go. But there is one man who has 27 of those nets in Jackson's division, and he has some way of setting them in deep water just like the pound nets. They have tried them on the shoals and when they have a storm they would roll right up as there is nothing to support them, but this man has a way of keeping them in.

TRAP NETS --- GEORGIAN BAY.

Description.- Trap nets are set with floats and sinkers in Georgian Bay. They are on the same principle as the pound nets, only they are under water with a cover over the pot. The top of the pot is from one to two feet below the surface. They are set on the bottom always. They have them from 8 to 14 feet deep. They are just the same as a pound net -- have a lead, 2 wings, a tunnel and a pot. Made on 2 1/2 inch mesh, some 2 inch. They can set them in about an hour and they are a great net.

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Catch.- They are a great net to fish for pickerel and bass and that sort of fish. They do not set them for lake trout and whitefish at all; it is pickerel they are after.

Wall-eye, decrease.- There are not half the pickerel on the north shore of Georgian Bay that there were 5 years ago.

Just imagine one man having 15 or 20 of those nets. A fisherman told me at last week, that a month ago they would bring in as high as 500 lbs. of whitefish a day, and these fellows would walk in with 2,000 or 2,200 lbs. of pickerel from these nets.-
(Maj. Elliott).

CATCH OF TRAP NETS -- GEORGIAN BAY.

There are quite a number of bass all through the channels on the north shore of Georgian Bay. I got 500 lbs. in one trap net this spring.-(Elliott).

FYKE NETS.

FYKES --- LAKE HURON.

Detour.- No fyke net fishing was ever practiced here.--(Butterfield).

Mackinaw City.- Does not think they ever used any fyke nets here.--(Robinson).

Cheboygan.- They use no fyke nets here.--(C. Corlett).

They do not use any fyke nets here except in the rivers they use them, once in a while.

They do not get much of anything but suckers in the fyke nets. The pickerel will not run into them, and the bull-heads are gone now.--(Gill).

Alpena.- They do not use fyke nets here.--(Alpern).

SAGINAW BAY.

Location.- There are quite a lot of fyke nets around the bay. A good many of them are set right in the mouths of the rivers, and then there are others set right in the bay. Some places in the bay are quite marshy. In such places they get the grass pike.

Catch.- Do not think they get very many

pickerel in the fyke nets.

Of course they catch a few of all kinds of fish, but they claim the principal catch is herring, suckers, perch, and that sort. In some places where they set them on purpose to get the black bass they get quite a number of them.

At Saginaw Bay there are certain localities where they caught the black bass in fyke nets. They do not take many. They have little fyke nets they use and catch quite a number of black bass around the bay at Bay Port and anywhere from Sebewing down the bay.

They also get perch and suckers in the fyke nets.- (Tulian).

BAY CITY.

Description.- They use fyke nets in the bay, but not with wings. They are set with hearts and leaders the same as pound nets, and also in the river they are the same. I do not know of a single fyke net that is fished with wings, and I brought the first fyke net in this country that was ever seen here.

The way they do it they have an outside

tunnel that comes up to the top of the water, and they can take a fyke net that is not over 5 feet in diameter and fish it in 5 feet of water, by having this tunnel that comes up to the top of the water and goes down to the first hoop. The fish cannot escape it after they are once in the heart, unless they back out. We have always found that the more tunnels the more fish. The leaders are from 5 to 15 rods long. They set them in a string. The tunnel has to be as long as the water is deep.

Location.- In the bayous and mouths of rivers and creeks they fish a good many of them. In the bay they fish probably 100 of these nets.

Season.- This fishing is only in the winter under the ice, but occasionally you will find a pound net man with one on his pound net under the lead. The fyke nets are not fished in the summer.

Catch.- In the fyke nets in winter the catch is principally perch, suckers, mullet, and shovel-nosed pickerel. They only take the cheap class of fish.--(Penniman).

Location.- The hoop nets are fished in the river and very few in the bay. They would not be in over 4 feet of water and within 50 rods of the shore. They are fished around Neamcon and at Rifle River and Pine River, but probably there are not 10 nets altogether. They fish some at Quanicasse River, just to the east of Bay City. Those 10 nets do not include those in the river.

Catch.- The fykes catch bull-heads, perch, sunfish, suckers and pike. Do not take any yellow pickerel. They catch what they call the mud bass, which is a species of the black bass. Their mouth is a little larger than that of the black bass, and it is probably the big mouthed black bass.

Sale.- They get a good price for them, can wholesale them for from 8 to 10 cents.- (Beutel).

Catch.- They are most all soft fish caught in the fyke nets. Catch hardly any pickerel. Do not think the fyke nets do any harm. They take only bull-heads, suckers, rock bass, etc. I think they do good because

they catch fish that destroy whitefish and pickerel spawn.--(Benson).

BAY PORT.

Location.-- There are a few hoop nets used around in the shoals up at Midlands as we call them. The Midlands are south of Stony Islands. They use them all through the shallow water, but mostly inside of the island where there is a shallow channel of about 4 feet of water.

Catch.-- They catch mostly perch in the fyke nets, and get some pike, sunfish, etc.--(James Gillingham).

Number.-- There are a few fyke nets used on the shores here, but we are not using any.

Description.-- Some use them with just a wing and others use a heart. They have a regular leader. They run from the shore just the same as the other nets.--(John Gillingham).

Number.-- A few hoop nets are fished. They fish probably 150 fyke nets around the shore in the bay. They have been fishing them for the last 8 or 10 years, but never

used to fish them. (They are fished by men from here mostly, but I think some of the men come from Lake Erie).

Location.- They are fished mostly in the bayous and such places as the Middle Grounds. Will set in from 3 to 8 feet.

Description.- The hoop is 4 or 5 feet round.

Season.- They fish them early in the fall, along about the first of October and in November. They fish them most in the winter, just cut a hole in the ice to get at them. I used to fish them myself.

Catch.- They catch rock bass, sunfish, pike, and fish that go in the harbor for the winter. They do not catch many herring.

They take bull heads and a few mud bass. The fyke net does not catch many yellow pickereel. It takes mostly perch and such fish as that.

I do not think the fyke nets hurt the fish any.-(Dubey).

Catch.- All say that the fykes, being set in very shallow water, take no important fishes, but this subject is worthy of investi-

gation.--(Rathbun).

PORT HURON.

There are no fyke nets used here, we have no little creeks running into the lake here for fyke nets.

They do not set hoop nets in the St. Clair River that I know of.--(Selkirk).

Goderich.-- I do not know of any fyke nets at all.--(Cragie).

There are no fyke nets used about here. I think the fyke nets would be a good thing to catch herring with. You could fix them with a lead the same as you do pound nets.--(McClellan).

Southampton.-- Fyke nets were never used here.--(D. McCauley).

Fykes have never been used along this coast.--(G. S. McCauley).

They do not fish fyke nets here.--(Cosley).

I have never heard of fyke nets around here.--(Dobson).

There is practically no pound net or fyke net fishing between Kincardine and Cape Hurd. That is, no one can give us any inform-

ation about the use of such nets, although mention has been made of one or two, which have been tried unsuccessfully.- (Rathbun).

Soo.- They do not use the hoop nets at all here. I would not allow them. A man at Killarney said there was no objection to them, but they should be set back in the channel to catch bull-heads and suckers, but they say there are no bull-heads around there, and they do not want any suckers; and they are simply for pickerel. There is no use fishing for suckers when there is no market for them, and there are not many bullheads.- (Maj. Elliott).

FYKES---LAKE HURON.

Bay City.---They use a good many fyke nets in Saginaw River (Penniman).

Goderich.---There are no fyke nets along the coast (Rathbun).

DESCRIPTION.

Disposition.---Nearly all the fyke nets in Saginaw Bay proper, were disposed in strings of from 2 to 3 nets. There are no notes regarding the disposition of the nets in the river tributary to Saginaw Bay.

FYKE NETS OR GOBELERS.

(From report, J. T. Scovell).

Location and Number.--- All the fyke nets employed in the Lake Huron fishery are located in Saginaw Bay, and mostly in the eastern and southern part of the bay, with the exception of one little net which was fished in Sand Beach Harbor. In Saginaw Bay, there were from 34 to 37 fykes fished in a small inlet on the east side known as Wild Fowl Bay, there were several fished in the Quannakissee River near its mouth, from 120 to 150 in Saginaw River, and 10 or 15 operated in the winter season at and near the mouth of Penconning River, in all between 170 and 200 nets.

DESCRIPTION.

Disposition.---Nearly all the fyke nets in Saginaw Bay proper, were disposed in strings of from 3 to 6 nets. There are no notes regarding the disposition of the nets in the river tributary to Saginaw Bay.

Distance offshore.---Varies according to depth of water and character of bottom, from a few rods to $3/4$ mile.

Depth of water.---The nets are fished in from $2\ 1/2$ to 6 feet of water, generally 3 or 4 feet.

Length of leads.---Varies from 6 to 30 rods, generally from 8 to 12 rods. There was 1 string of 6 nets in Wild Fowl Bay with leads 20 rods long.

Length of hearts.---Varies from 15 to 50 feet, generally from 15 to 20.

Length of net proper or pot.---15 to 20 feet, generally 15 or 16 feet.

Total length of strings.---The longest strings are those of 6 nets in Wild Fowl Bay, the longest of which was about 130 rods. The other strings of 6 nets were not over 75 or 80 rods in length.

Size of mesh.---In leads 4, 5 and 6 inches. In hearts 3 and 4 inches. In pots 2 to $3\ 1/2$ inches, generally $2\ 1/2$ and 3 inches.

SPEARS.

SPEARS --- LAKE HURON.

General.-- Spearing is not carried on very much in the lake.

There is a little of it done for those shallow water trout in the fall up at Presque Isle, Thunder Bay, and Middle Islands, just for sport, and I think those fellows up at Presque Isle used to make a little money out of it. They would take regular spawning fish, just the same as the gill nets would catch.

There is a little spearing done for sturgeon, but not a great deal. They do it for sport more than anything else.

Long Lake.-- Before spearing was stopped in Long Lake, I knew one man who went out there and speared for 3 nights and caught 60 odd one night, 70 odd one night, and 70 or 90 one night, of whitefish.--(Tulian).

Cheboygan.-- They spear trout in the winter by putting a decoy in. There might be 15 or 20 men engaged in that. They get all large fish practically.--(C. Corlett).

There is not much spearing here in the

winter. They take only trout and they are large ones.--(D. Corlett).

Some do a little spearing. They spear in about 60 or 70 feet of water. They have a decoy to bring the fish up to the top.

These are all trout, whitefish will not come up at all. Would get trout weighing from 2 to 18 or 20 lbs. that way.

There are a good many people spearing in the winter and they get enough to keep the town with eating. But they cannot harm anything in the winter, because they are all fish that have grown up.--(Gill).

Alpena.-- There is a little spearing done here for trout in the winter, but not a great deal.

Do not think I ever saw a whitefish speared here.

Do not know of any spearing done along here by the Indians.--(Tulian).

Saginaw Bay.-- There is a little spearing done in Saginaw Bay. They get trout and some pickerel. There is not enough of it done to amount to anything.--(Tulian).

Bay City.- I have seen pickerel speared in two feet of water here in the spring. They come up to spawn in the spring.-(Penniman).

They used to spear a good deal in the winter, but now there is very little done, and last winter there was practically no spearing.

They would take pickerel and trout with the spears -- large ones weighing 20 or 25 lbs.-(Beutel).

Bay Port.- There is some spearing in the winter, but now they do not get heavy winters enough to get out much. There is a change in the winters now, for about 10 or 11 years. The heavy winters are scattering now. We will get 3 or 4 light winters and then get a heavy one. These light winters we do not make over 6 inches of ice and they cannot get out much. Last winter there was not much over a foot of ice.

They would spear for trout down below the Charities. They do very little spearing for trout in the winter, but they spear for pickerel. They get the large pickerel mostly,

about like we catch in the nets.- (James Gillingham).

They do a little spearing about here, but it does not amount to much. Years ago there were quite a few men went out on the ice, about 300; and I do not believe they caught 3 tons of pickerel. They would be from 2 lbs. up to 7; all big fish.- (Dubey).

Port Huron.- They do no spearing here at all.- (Selkirk).

Goderich.- There is no spearing done about here.- (Cragie).

There is no spearing here.- (Eingster).

Southampton.- There is no spearing done here, and I do not think it was ever done here.- (Cosley).

SPEARS---LAKE HURON.

Alpena.---Some people go out here in the bay and spear trout through the ice. They get the regular large shallow trout (Alpern).

Alpena.---They used to spear any amount of the large whitefish near the shore here (Case).

DIP NETS.



DIP NETS --- LAKE HURON.

Alpena.- There is no chance for dip netting on Lake Huron. They dip in the river here a little in the spring when the suckers are going up, but that is the only dip netting I know of. That is altogether hand dip netting.- (Tulian).

EXPLOSIVES.

EXPLOSIVES --- LAKE HURON. Little
distance.-(Selkirk).

General.- I do not know of any attempt being made to kill fish by explosives. Some man told me that the Soo River was a great black bass ground and that when they first commenced blasting there they could pick up a bushel of them at a time.-(Tulian).

Mackinaw City.- No explosives have been used around here.-(Robinson).

Cheboygan.- There has been no trouble from explosives about here.-(C. Corlett).

Bay City.- Have never been troubled with explosives here.-(Penniman).

Bay Port.- I never heard of any explosives being used around here.-(Dubey).

Port Huron.- Explosives are never used for fishing but they use them sometimes for wrecking vessels, and it affects the fish. It kills the fish and stuns them, both. They will come to the surface and float on the top wherever the explosives are used. I do not know that it hurts the fish particularly, but it kills a good many. I think, however,

it simply stuns the fish that are off a little distance.--(Selkirk).

Goderich.- No explosives are used.-
(Eingster).

WHITEFISH; DISTRIBUTION.

NOVELTIES.

SEASONS.

WHITEFISH; DISTRIBUTION.

MOVEMENTS.

SEASONS.

WHITEFISH; DISTRIBUTION; ABUNDANCE--LAKE HURON

(See also under Decrease).

Georgian Bay.---Thinks there are more whitefish taken out of Georgian Bay than any other place in the lakes. Used to get big fishing there when he first came here; the nets would all float (Butterfield).

Cheboygan.---We caught nearly all whitefish this spring, but that was not many. We fish in the spring at Waubeshank Light House. That is up the Straits here about 36 miles. It is on the south shore about 18 miles beyond Manistique. There are not generally any whitefish here at any time of the year, but a fellow here this summer got a couple of tons along in June with a sail boat. In the spring we get a good many whitefish in our gill nets, but do not catch them in Lake Huron. We set out here this spring and made 3 lifts and only got 1 fish (D. Corlett).

Saginaw Bay.---The whitefish do not now get up Saginaw Bay any further than the Charity Islands. I do not think the gill netters set quite as far up as that, but in the fall there

are some pound nets fished off Big Charity Island and some off Little Charity (Tulian).

General.---The whitefish are taken on sand, mud and rock bottom (Wires).

Bay City.---There are not enough whitefish taken in Saginaw Bay to supply the home markets. They will not be taken within 5 miles of the mouth of the river. Sometimes a man will get 100 lbs. and sometimes not any. They get some nice lifts late at the mouth of the bay.

The fishermen in this bay could not live for a year if they could not catch herring, and there are not whitefish enough caught here to amount to anything, and this bay has never been an important whitefish ground. I used to catch whitefish with seines 15 years ago at the mouth of the river, and now you cannot get one within 5 miles of it (Penniman).

Bay City.---I have known them to catch whitefish as far up the river as Saginaw. We do not get many whitefish now, but what we do get we get at the Charity Islands, Long Point, Point Lookout and Tawas. From the 1st to the 15th of November if a man gets 100 lbs. he is getting a big lift, and he may fish the next day and not get any (Benson).

Saginaw Bay.---Inside of Saginaw Bay they catch no whitefish, but as you get toward the mouth you begin to catch them, and around Perch Island you get a great many (Edson, Cleveland).

Bay Port.---There are very few whitefish in the bay here because if there were we would be able to catch more than we do. We do not get any in the spring to speak of, probably not over 300 or 400 lbs. out of our whole rig. In the fall they commence to come on scattering about October 20, and then we get them right along, some days may be getting 100 lbs., and then may not get any again for quite a while, and if we have a spell of rough cold weather we get a few again.

We get hardly any in the shore rig on the outside edge of the bar; we get the most whitefish in depths of 12 or 13 feet. They catch more across on the other side of the bay around Point Lookout and the Charities. The per cent of whitefish to herring is very small, not over one per cent.

We used to get more inside than we do now, but there has never been but very few whitefish caught here since I can remember. As far as

the whitefish catch is concerned, it would be hard for me to tell just what it is, but I do not think it would go over 4,000 or 5,000 lbs. a year in all the twine owned by my brother and myself (James Gillingham).

Bay Port.---I have never seen any very large amount of whitefish here (John Gillingham)

Port Austin.---They are getting some very nice whitefish off Port Austin, weighing 6 or 7 lbs.(John Gillingham).

Bay Port.---They catch more whitefish up north in a week than all the fishermen around Saginaw Bay will destroy in a month. The white fish do not seem to stay around Saginaw Bay.

I used to fish in Saginaw River when we could catch whitefish all summer, 2 or 3 miles up (Dubey).

Bay Port.---The fishermen are not much interested in whitefish here (Rathbun).

Port Huron.---We get the whitefish right out here abreast of Sanilac. Whitefish are more profitable than any other class of fish, but we do not make them a specialty because we know we cannot get enough of them.

They caught a few whitefish on the Canada

shore this spring, and we do not know what they will do in the fall, but we do not look for any whitefish then (Selkirk).

I have heard old fishermen say that this used to be a great place for whitefish on the Canada shore (Dubey, Port Huron).

Goderich.---We get a good quantity of whitefish in the pound nets about the last of May and the first of June. I have seen them catch 5 $1/2$ tons in one lift.

The best whitefish ground is up around Drysdale, but take it right inside of Blue Point on the bend there is a small class of fish running from 1 $1/2$ up to 3 lbs. I have also seen them weighing about $3/4$ lb. They come on in June when the water is getting pretty warm (McClellan).

Southampton.---We used to get the whitefish in from 30 to 15 fathoms, and would get them all up and down the coast unless there was rock bottom. We fish on sand or mud bottom (D. McCauley).

Southampton.---In the spring you cannot get any whitefish in places around this coast without you go to 16 or 18 fathoms, and you can

hardly get any at all even then, but that is where we used to catch them years ago, and they get a few there now. We used to fish for them here to the north of Sable. In the summer there are no whitefish caught here in any quantity. We do not fish for them at all in the fall. We get some large whitefish here weighing 10 or 12 lbs. in the trout nets, but only an odd one. The old whitefish grounds were from 18 to 20 fathoms about 5 or 6 miles from here and up as far as Stoke's Bay on the outside ground, and up to Big Island. The best season for them used to be June and July (Cosley).

Southampton.---There are very few whitefish to be had. We used to get them in about 15 fathoms. Never got them out in the middle of the lake, but always along the shore. Would get them on mud bottom. Would not get them on hard bottom at all until they spawned late in the season, and then we could not fish for them. The whitefish are not $1/4$ of the catch of fish. I have seen the time when I would get all whitefish and not any trout. Anything outside of 30 fathoms would not get any whitefish

at all. I do not think the catch of whitefish now is more than 1/10 of the total catch. I guess the biggest lift that was caught here this year I got myself, and I got about 900 lbs. The whitefish have certainly decreased, but I do not know the cause. They seemed to light out in one season. That is 10 or 11 years ago. There would be splendid fishing before that. They seemed to go all at once. In Georgian Bay it is just the same. The boats used to catch from 25 to 30 tons, and this year some of the boats have not caught 3 tons.

Whitefish used to play all around the Islands between Chief's Point and Cape Hurd (Dobson).

Bay Port.---Only relatively few whitefish are said to be taken and it is claimed that they are mostly of good size. This could be proved only after an inspection (Rathbun).

WHITEFISH; DISTRIBUTION -- LAKE HURON.

Detour.- Saw fish brought in from gill nets about 25 miles south of Detour in depths of 40 to 60 fathoms. No whitefish are taken in those depths.--(Rathbun).

Detour.- Saw fish delivered at Detour from 2 pound nets located near Hay point about 12 miles up the river from Detour. In the spring and fall they catch some whitefish in these pounds, but the owners of these pounds have other pounds outside in or near Lake Huron, on which they depend for their catch of whitefish.--(Rathbun).

Harbor Springs.- Whitefish do not work in any deeper water at all than 40 or 50 fathoms.--(Wilson).

Cheboygan.- They catch whitefish in the spring in 12 feet sometimes.--(D. Corlett).

Alpena.- What we call the North Ground here is a shoal bay north of Thunder Bay Island. It used to be the greatest whitefish ground we had in the fall in the spawning time, and there have been years we could not

catch any fish there at all. Last fall, for instance, there was no fishing there, but perhaps this fall there may be good fishing. If we happen to get a few pretty good hard blows just before the spawning time comes on and clean that ground off of bark and dirt, we will get fish there sure in the spawning time.--(Cleary).

Saginaw Bay.-- They used to catch lots of whitefish around the Charity Islands.--(Wires).

Bay Port.-- The whitefish are a very small item in our catch.--(John Gillingham).

Bay Port.-- We get some whitefish.--(R. Gillingham).

Bay Port.-- The whitefish we get up in the bay do not amount to anything. I would probably get 100 lbs. a day out of 12 or 14 nets.--(Dubey).

Sarnia.-- At Kincardine I think they get more whitefish than we do here.--(Wees).

Goderich.-- 18 or 20 years ago you would not get a trout at all inside of 15 fathoms. Would get all whitefish, and now on the same

ground you will get all trout.--(Eingster).

Southampton.-- The whitefish generally stay in about 10 or 20 fathoms of water.

Whitefish were the principal fish the sail boats used to catch.--(G. S. McCauley).

Southampton.-- In the catch brought in today from a depth of 20 to 35 fathoms, there were 6 or 8 whitefish, the most of which weighed from 1 to 2 lbs. each.--(Rathbun).

WHITEFISH; DISTRIBUTION --- LAKE HURON.

Alpena.- If we set on the north ground and the fish came on the spawning ground we would get nothing but whitefish; but where we fish what we call the Big Reef there is nothing but trout on it. I never saw any whitefish on that ground, but the inside ground is all whitefish and when they come on to spawn you get nothing but whitefish.- (Cleary).

Alpena.- In 1845 to 1848 there were about 200 fishermen using small sail boats with gill nets from Thunder Bay Island, Sugar Island. They fished near the shore, right in sight of land, and caught almost entirely whitefish, very few trout.- (Case).

General.- His opinion is that if they could fish on the Big Reef in December they would catch an awful lot of whitefish. Thinks they would catch the same class of whitefish on the reef after the trout leave, that they catch around Beaver Island in Lake Michigan. The trout there leave the ground entirely after they are through spawning in November

and the whitefish come on after the trout fishing is practically over and they catch some enormous lifts of very large whitefish.- (Wires).

Goderich.- When I first started fishing here it was fully 1/2 whitefish. We used to get our whitefish on the inside ground. We never get many outside of 25 fathoms. You would get none to the north or west of here of any quantity.

We used to get a good half of the catch whitefish. We would get them from about 17 fathoms out to 30 fathoms, and the outside part of the gang would not get as many whitefish if we got over 25 fathoms out. We were fishing both for whitefish and trout. We never caught them separately, but the trout and whitefish were always together.- (Cragie).

Southampton.- We get some whitefish in May, June and July now, but not many. Get them in from 10 to 20 fathoms. We get them all along the shore, but not in deep water. We get an odd one on the bank in the middle of the lake.- (G. S. McCauley).

WHITEFISH; DISTRIBUTION -- LAKE HURON.

Mackinaw Island.- I used to fish mostly for whitefish. Used to fish in from 25 to 30 and 40 fathoms running out from 4 to 8 miles.- (Wilmot).

Alpena.- About 8 or 9 years ago I saw one of the tugs come in with 7 tons of whitefish from 1 trap.- (Case).

WHITEFISH; DEPTH---LAKE HURON.

Detour.---Whitefish are in about 30 to 40 feet of water (Sims).

Alpena.---For whitefish would go into 25 feet, which is about as deep water as we can catch whitefish in this country (Cleary).

General.---Knows of the whitefish being taken in depths of something like 35 or 40 fathoms. They are taken most abundantly in from 5 to 10 fathoms. I suppose that occasionally a specimen might be taken in very deep water, possibly to 100 fathoms, but there is no evidence to show that they are at all abundant in the deep water. The fishermen are not apparently justified in fishing for them in the deep water, and do not do so (Wires).

Goderich.---We used to get the whitefish in from 15 to 30 fathoms, and would get them all up and down the coast unless there was rocky bottom. We fished on sand or mud bottom

(D. M. Bailey)

WHITEFISH; DISTRIBUTION; ABUNDANCE---

LAKE ST. CLAIR.

I do not think they get many whitefish in Lake St.Clair. I never heard anybody speak about the whitefish being very plentiful there (Tulian).

WHITEFISH; DISTRIBUTION---DETROIT RIVER.

I forget how many thousand fish the Michigan Fish Commission caught and penned on the Detroit River last fall. There used to be a fishery at Belle Isle, one at Rocky Island, one at Grass Island and one at Grassy Island (Tulian).

WHITEFISH; DISTRIBUTION; ABUNDANCE--DETROIT
RIVER.

They have an inland lake here called
Tulian. They get the whitefish in the Detroit
River. That used to be a good spawning ground
and I think it is yet (Tulian).

There is no stream running to it. They do not
do any fishing there, only the inhabitants
spear them in the fall during their spawning
time. It is strange that where the whitefish
spawn rushes grow to within 3 or 4 feet of the
top and they go with their heads over there
and they tell me the whitefish use just as
much right on these rushes, and there is a
seed that they live on. They used to bring
them in here and they tell me that 2 men could
spear a pork barrel full in an hour (if here).

There is an inland lake 24 miles northwest
of here called Bushard Lake and there are very
many whitefish in it. I was in there
examining the lake and a man told me he could
spear a barrel in a night during the spawning
season. But the curious part of it was, there
were some long weeds that would grow up probably
only about 2 feet or 3 feet and they

WHITEFISH IN HURLBURT LAKE, MICH.

We have an inland lake here called Hurlburt Lake that has considerable whitefish in it. They have been there as long as I know of. It does not connect with Lake Huron and there is no stream running to it. They do not do any fishing there, only the inhabitants spear them in the fall during their spawning time. It is strange that where the whitefish spawn rushes grow to within 3 or 4 feet of the top and they go with their boats over there and they tell me the whitefish are just as thick right on those rushes, and there is a seed that they live on. They used to bring them in here and they tell me that 2 men could spear a pork barrel full in an hour (Alpern).

There is an inland lake 24 miles southwest of here called Hubbard Lake and there are any amount of whitefish in it. I was up there examining the lake and a man told me he could spear a barrel in a night during the spawning season. But the curious part of it was, there were those long weeds that would grow up probably within 4 feet of the surface and they

would spear those fish right on top of the weeds. They would set their nets right on top of those weeds so that the corks would rest on top of them. They put whitefish in at Long Lake and they spear quite a lot of them. They did first rate there. The fish in Hubbard Lake were poor and they undoubtedly went up the river before the dam was in (Case)

(Note:---Mr. Alpern called the lake Hurlburt Lake and Mr. Case Hubbard Lake).

Delour.---Does notice a movement of the whitefish up and down the shore. We catch them right here at first in the spring and then follow them right down to Drummond Island and to the eastward of that, and we catch them later there than here. Of the nets set on the north side of Drummond Island we would take the first whitefish from the ones set closer this way.

Delour.---The whitefish work into Georgian Bay in the spring from this region or through by these channels, and Mr. Butterfield thinks that they go right up the lake to give

WHITEFISH; MOVEMENTS; HABITS; SEASONS---LAKE
HURON.

Detour.---Does not think the fish go very far. The whitefish in the spring are in here, and just as soon as the water gets warm they move off and keep in the same temperature of water. They seem to work that way. When the water gets warm they will work off into Georgian Bay. We can tell this by the pound nets, for after they leave here we get them in the pound nets in Georgian Bay (Butterfield).

Detour.---Does notice a movement of the whitefish up and down the shore. We catch them right here at first in the spring and then follow them right down to Drummond Island and to the eastward of that, and we catch them later there than here. Of the nets set on the north side of Drummond Island we would take the first whitefish from the ones set closer this way (Sims)

Detour.---The whitefish work into Georgian Bay in the spring from this region or through by these channels, and Mr. Butterfield thinks that they go when the ice begins to move.

Canada, therefore, derives greater benefits from the planting of whitefish in this region than the Americans do (Rathbun).

Mackinaw City.---I hardly think there is any migration of the whitefish from one of these lakes to the other. In the fall they seem to catch them all over about the same. They move into the shallows in the fall for spawning. They are pretty well distributed around the lake during the rest of the year. They go in schools more or less (Robinson).

Harbor Springs.---They get very nice fish in the Straits, but they get very small ones. The small fish work in more shallow water than the large fish, and the Straits being shallow the small fish work in there more (Wilson).

Alpena.---In the spawning season the fish go in big bodies and they school more or less at other seasons. There are certain grounds where they go at certain times during the summer and go in schools. I have seen it always where you get a catch of fish you will find them bunched together and where you find a bunch of whitefish you will not find a bunch of trout. On the ground down in Saginaw Bay where they

fish in the summer they catch the whitefish through the summer and they are in schools.

I do not know where the whitefish go in the summer, and can find no one who can tell me. That run I spoke of in Saginaw Bay is not very early in the season. It comes in along about the last of June or first of July, and it is through about this time, as the captain told me yesterday they were moving their nets out(Tulian)

General.---Is of the opinion that whitefish do not school very much. You set a gang of nets or several gangs, and you will find the whitefish strung from one end of it to the other. At times you will find parts of the net much fuller than others, but he has laid this to the fact that the bottom being of a different character in such places was more attractive to the fish. They were there in larger quantities simply on that account. Does not think there is any evidence of whitefish schooling. Thinks they have no natural tendency that way (Wires).

Port Huron.---They seem to travel north late in the fall. These fish seem to follow right in north and south of Goderich in shallow water, both fall and spring.

You probably have noticed in your travels that you will find more whitefish caught in pound nets, for they seek shallow water at certain times, and why would they not seek shallow water here as well as anywhere else? (Selkirk).

Sarnia.---Our reason for thinking whitefish come from Lake Erie was because before they put their nets in there we used to get them. That was about 14 years ago. We used to get quite a fair catch of whitefish in those days. We got the most whitefish in the spring then. Up at Grand Bend they always got more whitefish than we got (Wees).

Southampton.---They were very plenty here at one time, but sometimes the grounds would be empty and then they would come in again and would be moving from place to place. The whitefish go in bodies, but not in schools as herring do (D. McCauley).

General.---You will catch whitefish the entire length of the American shore of Lake Huron, being more abundant in some places than in others (Wires).

WHITEFISH; MOVEMENTS---ST. MARY'S RIVER.

Mr. Butterfield thinks that the whitefish which the Indians take at the Soo in dip nets have gone up stream. It is their habit to work against the current. The pound nets fished about Detour, however, give no evidence of these fish passing up from Lake Huron by the Detour channel. They may pass up in deeper water or in the winter under the ice. Many whitefish are caught in the North Channel (from Georgian Bay), especially in September. There are some whitefish in St. Mary's River all the time. At the bend in that river about 15 miles below the Soo they use small pieces of gill net and catch some whitefish during all the season (Rathbun).

WHITEFISH; MOVEMENTS --- ST. MARY'S RIVER.

Detour.- We do not go up the river for whitefish. Fish do not work up the river much except in the winter and we have no pound nets up there. We go out around the islands in the direction of Georgian Bay.-(Butterfield).

WHITEFISH; MOVEMENTS --- LAKE HURON.

Alpena.- Scarecrow Island was the last place in Thunder Bay to take whitefish each season. They came in first at the North Gate and reached Scarecrow Island about 2 weeks later.- (Case).

and they must rise right up.- (Eingster).

Bushampton.- I have seen the time when they could get whitefish, big ones, on the Sable Beach, fishing with the seine, and obtain 100 barrels at a drag, and I have seen them set the gill nets along that beach and not get a single fish. That was in the fall, in October.- (S. G. McCauley).

WHITEFISH; MOVEMENTS - LAKE HURON.

Goderich.- The whitefish used to travel north as a rule here in the spring, April and May. In Georgian Bay the whitefish are caught anywhere in the Bay sometimes and all at once there will be good fishing all over, and they must rise right up.- (Eingster).

Southampton.- I have seen the time when they could get whitefish, big ones, on the Sable Beach, fishing with the seines, and obtain 100 barrels at a drag, and I have seen them set the gill nets along that beach and not get a single fish. That was in the fall, in October.- (G. S. McCauley).

Alpena.---We never had any spring fishing here. In older times we used to get them in August and sometimes in June. That was as late as 1880 and 1881. We had very big June fishing here, but we did not get them on the same ground. We used to get them right off Thunder Bay Island (Alpena).

Bay City.---We get the biggest catches in the fall (Eingster).

WHITEFISH; SEASONS---LAKE HURON.

Detour.---Whitefish winter in the bay here because some fish here in the winter through the ice, but they are not so common.

It is a small run of whitefish we get in the fall (Sims).

Mackinac Island.---We used to get the best whitefishing from November 15 to December, and they get the best fishing at the same time now. They let their pound nets stay out as long as the wind will not tear them, but they generally ^{pull} blow out along in October (Wilmot).

Cheboygan.---In the spring we get a good many whitefish in our gill nets, but do not catch them in Lake Huron (D. Corlett).

Alpena.---We never had any spring fishing here. In olden times we used to get them in August and sometimes in June. That was as late as 1880 and 1881. We had very big June fishing here, but we did not get them on the same ground. We used to get them right off Thunder Bay Island (Alpern).

Bay City.---We get the biggest catches in the fall (Penniman).

Bay City.---According to our books we get the most of the whitefish in October (Beutel).

Bay City.---From the 1st to the 15th of November, if we get dry weather and the water is clear, the whitefish will run up around here, but if a man gets 100 lbs. he is getting a big lift.

We used to catch them in the spring more than at any other time. This year they did not get them at all. They got a few, but not many (Benson).

Bay Port.---We get the whitefish late in the fall generally. Do not get any in the spring to speak of. In the fall they commence to come on scattering about October 20, and then we get them right along (James Gillingham).

Port Huron.---We get the whitefish through July, August, September, October and November. If we were making a special fishing for whitefish, and barring we did not get any gales of wind, we would get more whitefish in October (Selkirk).

Goderich.---The best season around Goderich used to be in the fall, but for the last 15 years the best season is in the spring (Selkirk)

Sarnia.---We used to get them mostly in May and the first of June. We used to get a few in the fall, but no great quantity (Wees).

Goderich.---They used to haul them in during June and July (Cragie).

Goderich.---They catch whitefish in the pound nets now in the spring. Get quite a good quantity of them. That will be about the last of May and the first of June. Up around Drysdale they come on in June when the water is getting pretty warm (McCleane).

Southampton.---We fish for them from May to September. In the old times we would not get any in October and November here. We would fish for them all during the spring and summer, but not in the fall (D. McCauley).

Southampton.---When the whitefish were plentiful here we got more in the summer than any other time (Dobson).

WHITEFISH; SEASONS --- LAKE HURON.

Mackinaw City.- My whitefish season with the pound nets is immediately after the herring leave in the spring. They follow the herring. They catch a run of trout and herring and then the trout leave most altogether and then the whitefish come. The whitefish come on about May 20 and run up to about the middle of July, depending a good deal upon the season. They vary from 2 to 3 weeks in different seasons. They begin catching a few whitefish again along about the middle of

October. They get a run of trout in the latter part of September and in October and in the latter part of October they catch a few whitefish, but on these shores the whitefish are pretty well done. They do not catch many in the fall. June is their best month.-
(Robinson).

Bay Port.- We get a few whitefish in the spring, but the most of them are taken in the fall in October and November, principally. Probably would not get a dozen in September. I do not think there are a great

many taken anywhere around here, at any time. The whitefish are a very small item in our catch.- (John Gillingham).

Bay Port.- We get some whitefish. Some in the spring, but principally in the fall.- (R. Gillingham).

WHITEFISH; VARIETIES.

WHITEFISH; HUMPBACKS---LAKE HURON.

Mackinaw City.---We have the bow-back whitefish. They are a regular sand fish and seem to be a different species altogether from the deep water whitefish. We get them in shallow water most altogether and in the fall mostly, but get a very few in the spring. We seldom ever get one weighing under 8 lbs. They run from 8 to 10 lbs. Get the most of them in Lake Michigan, but there are a few taken off Mackinac Island. They go into the shallows to spawn; on the shoals out in deep water, probably about 25 to 30 feet. They catch them mostly in 6 inch mesh gill nets (Robinson).

Alpena.---We also used to fish at Manistique. We had all kinds of fish there. At one place they caught the largest whitefish I ever saw. We got any amount over 18 lbs. and they seemed to be very old fish. We got them in the spring. This was with big mesh gill nets. We got them off on the rocks. It was the middle of April when we left here and we got them in 2 or 3 weeks after we got there, but

there was only one place where we got those large ones. They had a hump on their back and they were very thick through. We tried every way to cure them but salt would not cure them at all. We threw away a ton a day for several days. In fact we had too many nets in. We also caught a very large trout there (Case).

Of course there are different kinds of white fish. There are some whitefish you cannot catch with gill nets as they will not gill. They are big ones, and others which you can only take with the seine.-(S. S. McCuller).

Southern part:- There are no different kinds of whitefish.-(Deason).

WHITEFISH; VARIETIES -- LAKE HURON.

Southampton.- When we first fished gill nets we got a small run of whitefish that we do not get now. The whitefish generally stay in from about 10 to 20 fathoms of water. Of course there are different kinds of whitefish. There are some whitefish you cannot catch with gill nets as they will not gill, They are big ones, and others which you can only take with the seine.- (G. S. McCauley).

Southampton.- There are no different kinds of whitefish.- (Dobson).

Port Huron.- They are a good deal like the large Lake Superior whitefish (Solbirk).

WHITEFISH; QUALITY---LAKE HURON.

Manistique---The fish taken in the fall that are full of spawn are of the same value as the fish taken at any other time of the year. The flesh is firm and just as good. We have no trouble about keeping them (Robinson).

Mackinac Island.---The best whitefish we get now are from Lake Superior (Wilmot).

Bay City.---The whitefish taken in Saginaw Bay are not a good firm fish like the upper lakes fish, but seem to be soft and cannot stand transportation. Our whitefish here are very light colored and the meat is not hard and firm (Penniman).

Port Huron.---They are a good deal like the large Lake Superior whitefish (Selkirk).

WHITEFISH; SIZE, YOUNG.

WHITEFISH; SIZE---LAKE HURON.

Detour.---I never saw any whitefish smaller than what would go in the pound nets. The smallest whitefish I see would weigh about $\frac{1}{4}$ lb., and from that up to $\frac{1}{2}$ lb. We had a whitefish weighing 13 lbs. this summer, which is the largest I have seen (Butterfield).

Detour.---The average size of the whitefish is not as large as when we began fishing here. Years ago we would get a run of little fish, but at that time our mesh was smaller. On the whole I think the fish are about the same size. The average weight of the whitefish would be about 1 $\frac{1}{2}$ lbs. (Sims).

Mackinaw City.---We seldom ever get bow-backs weighing under 8 lbs. They run from 8 to 10 lbs.

The ordinary whitefish run about 2 lbs. in size. 4 lbs. would be a good sized fish. From 2 to 4 lbs. is a good average. We consider a 2 lb. fish strictly a No. 1 fish (Robinson).

Mackinac Island.---The whitefish are smaller than they used to be because I believe it is the fish that have been planted that we are catching now (Wilmot).

Harbor Springs.---The average size of the whitefish taken about here would be about 2 lbs.; would not get very many smaller ones. They get very nice fish in the Straits, but they get very small ones. The small fish work in more shallow water than the large fish, and the Straits being shallow the small fish work in there more (Wilson).

Cheboygan.---I do not know as there is any difference in the size now from what it was (C. Corlett).

Cheboygan.---The average size of the whitefish when I started in would be from 3 to 8 lbs. Now it is only once in a while that you will get one weighing 7 or 8 lbs., and they get down about 2 lbs. They will not average over 2 1/2 lbs. When I first came here they would average at least 4 lbs. (Gill).

Alpena.---The whitefish average smaller than they did. I do not know of a fishery but what the fish average smaller than they did

formerly. Of course they catch some just as large fish as ever, but will get a larger proportion of small fish (Tulian).

Alpena.---The whitefish we get now run pretty good size (Alpern).

General.---Has noticed no particular decrease in the average size of the whitefish (Wires).

Bay City.---No. 1 whitefish are all above 1 lb. dressed, but it depends upon the average size. If we get a good sized run it would be 1 1/4 lbs. (Penniman).

Bay Port.---The whitefish are generally pretty fair size, from 3 to 5 lbs. We do not get very many small ones. We can market very small whitefish. Of course we do not try to sell anything less than 1 lb. dressed, but it is hard to tell what the market will take. Our whitefish for the last 8 or 9 years have not changed very much in size (James Gillingham).

Bay Port.---They are getting some very nice whitefish off Port Austin, weighing 6 or 7 lbs. (John Gillingham).

Bay Port.---On these grounds the whitefish do not come inshore, and all we catch are big whitefish (Dubey).

Bay Port.---It is stated that while they take only comparatively few whitefish in this region, they are mostly all good size. This could be proved only after an inspection (Rathbun).

Port Huron.---The whitefish run very large. It is a hard matter to find a whitefish that will run less than 4 or 5 lbs. and the average is 7 or 8 lbs. They will run up to 10 and 15 lbs. One trouble with the whitefish at this end of the lake, they are so large we cannot sell them for family use (Selkirk).

Goderich.---I caught a whitefish yesterday which I suppose will weigh 10 lbs., which is the biggest whitefish I have seen on this ground for a number of years (Cragie).

Goderich.---I have seen them catch 5 1/2 tons of whitefish in one pull, and would hardly get an 8 lb. whitefish in the lot. They were all larger than that (McClellan).

Southampton.---The whitefish that we got in 35 fathoms and less were medium size fish, averaging from 3 to 4 lbs. Sometimes they would be smaller than at others, but they would average about 3 or 4 lbs. at that time. This was some years ago.

It is very seldom we get any whitefish too small to market; about 2 lbs. is the smallest we get (D. McCauley).

Georgian Bay.---There are lots of whitefish in Georgian Bay that weigh only 2 lbs. on an average, and they never grow any larger than that. They are all the one size (G. S. McCauley Southampton).

Southampton.---I do not think the whitefish run smaller in size than formerly (Cosley).

Southampton.---We never get whitefish under 2 lbs. (Dobson).

WHITEFISH; SIZE ---- LAKE HURON.

Detour.- The average weight of whitefish taken here now would not be over 1 1/2 lbs. A good many small fish are taken in the pound nets.--(Butterfield).

Mackinaw City.- No. 1 whitefish are from 1 1/4 lbs. and upward, dressed. No. 2 between 3/4 lb. and 1 1/4 lbs., dressed. No. 3 are under 3/4 lb.--(Robinson).

Harbor Springs.- The males are a smaller class than the females. They do not grow as large as the females.--(Wilson).

Alpena.- The whitefish are somewhat smaller than they used to be.--(Lincoln).

Bay Port.- The whitefish they would get generally run pretty fair size. I would call 3 lbs. a good sized whitefish here, but they go as high as 6 or 7 lbs, and we do not get many small ones.--(John Gillingham).

Goderich.- My hauls of fish will average 3 or 4 lbs.--(Eingster).

Southampton.- The whitefish are very large in size. We do not get any small ones

in the gill nets.--(G. S. McCauley).

Cheboygan.-- The most of the whitefish
taken at this season weigh only a fraction
of a lb.--(Bathman).

WHITEFISH; SIZE --- LAKE HURON.

Cheboygan.- The most of the whitefish taken at this season weigh only a fraction of a lb.- (Rathbun).

WHITEFISH; SIZE --- LAKE HURON.

Goderich.- It is not very often that we see a whitefish as small as 1 1/2 lbs.- (Cragie).

Thinks that at the age of 2 years they would probably weigh from 1 to 1 1/2 lbs. (Wheat).

Bay City.---I have always had an idea that after pickerel and whitefish were a year old they gained about 1 lb. a year (Pensmann).

Bay City.---Whitefish at a year old will run from 5 to 7 inches in confinement, and at 2 years old they will run from 7 to 14 inches, and probably weigh about 2 or 3 ounces, and the fall before they are 3 years old you will get some fine ones, but not before they are 2 years old. A 2 year old fish will weigh from 1 to 1 1/2 lbs. (W. S. Clark).

WHITEFISH; RATE OF GROWTH---LAKE HURON.

General.---A whitefish to weigh a lb. would have to be at least 2 years old, and thinks very few of them weight a lb. at the age of 2 years. Thinks that at the age of 3 years they would probably weigh from 1 to 1 1/2 lbs. (Wires).

Bay City.---I have always had an idea that after pickerel and whitefish were a year old they gained about 1 lb. a year (Penniman).

Bay City.---Whitefish at a year old will run from 5 to 7 inches in confinement, and at 2 years old they will run from 7 to 14 inches, and probably weigh about 8 or 10 ounces, and the fall before they are 3 years old you will get eggs from them, but not before they are 2 years old. A 3 year old fish will weigh from 1 to 1 1/2 lbs. (F. N. Clark).

WHITEFISH; RELATIONS OF SIZE TO SIZE OF MESH,
LAKE HURON.

Detour.---The average size of the whitefish is not as large as when we began fishing here. Years ago we would get a run of little fish, but at that time our mesh was smaller. Used 3 inch mesh in the pound nets, but the gill nets are just the same. On the whole I think the fish are about the same size (Sims).

Southampton.---We never get whitefish under 2 lbs. You take a whitefish that weighs 1 1/2 lbs. and he will go right through a 4 1/2 inch mesh. A whitefish weighing 2 lbs. will stick in it, but a 1 1/2 lb. will go right through (Dobson).

General.---Often in a 3 1/2 inch pound mesh you catch immense quantities of whitefish in the northern part of Lake Huron. Of course the mesh there is 3 1/2 inches when it is new. The gill nets are larger, 4 1/2, and up to 6 inches for trout (Edson, Cleveland).

Bay Port.---On the bars they fish small mesh. They fish 4 inch leaders and 3 1/2 inch pound (Dubey).

Southampton.---I never saw any whitefish caught in the gill nets too small to keep, they will weigh not less than 2 lbs. Anything smaller than that will not stay in the gill nets. They fish the same size mesh in Georgian Bay and they catch some 2 lb. fish in them. We get 2 lb. fish here and that is just about the size that will stay in the 4 1/2 inch mesh. Anything smaller than that will go through (G. S. McCauley).

Bay Port.--- I would say throw away all whitefish under 1 lb., and I would not buy if the limit on whitefish were made 1 1/4 lbs. (James Gillingham).

Port Huron.--- A whitefish should not be marketed less than 1 lb. dressed. It is a hard matter to get a whitefish in the lake less size than 1 or 1 1/2 lbs. and bring it in and not have it soft. If we can get them from 1 1/3 lbs. up, they come in in excellent shape. (Selkirk).

Georgian Bay.--- The smallest size whitefish

WHITEFISH; MINIMUM SIZE --- LAKE HURON.

Detour.- Fish weighing 2 or 2 1/2 lbs. are marketable fish.- (Sims).

Mackinaw City.- I would not market whitefish under 1 1/4 lbs., dressed. That is the smallest size we market fresh. Anything smaller than that goes into the salt barrel. The reason we cannot market those small fish fresh is that they are too soft and will not stand handling.- (Robinson).

Alpena.- I do not think they ought to take anything much less than 2 lbs. for whitefish.- (Tulian).

Bay Port.- I would say throw away all whitefish under 1 lb., and I would not kick if the limit on whitefish were made 1 1/4 lbs.- (James Gillingham).

Port Huron.- A whitefish should not be marketed less than 1 lb. dressed. It is a hard matter to get a whitefish in the lake less size than 1 or 1 1/2 lbs. and bring it in and not have it soft. If we can get them from 1 1/2 lbs. up, they come in in excellent shape.- (Selkirk).

Goderich.- The smallest size whitefish

that should be marketed would be about 1 1/2 lbs. round, and 1 1/4 lbs. dressed. I think nothing smaller than that ought to be taken.-(Cragie).

Goderich.- 1 3/4 lbs., round, would be small enough whitefish to market.-(Eingster).

smallest size at 1 1/2 lbs. If you place it at that they might be more particular about catching them (Perriman).

Bay City.---The smallest whitefish that should be marketed should not be less than 1 lb. after they are dressed, and 1 1/4 lbs. might be small enough. In the spring we get quite a few No. 2 whitefish (Beutel).

Bay City.---To protect the whitefish, they should not allow them to catch anything under 1 1/2 lbs. round or 1 3/4 lbs. dressed (Benson).

Bay Port.---I think about 1 lb. fish is as small as should go into the market, either pickerel or whitefish (James Gillingham).

Bay Port.---The smallest size whitefish taken should not be less than 1 1/2 lbs. (John Gillingham).

WHITEFISH; MINIMUM SIZE---LAKE HURON.

General.---If a minimum size of whitefish were fixed it should be not above $\frac{3}{4}$ lb. A 1 lb. whitefish is considered to be a very fair size (Wires).

Bay City.---It would be better to place the smallest size at 1 $\frac{1}{2}$ lbs. If you place it at that they might be more particular about catching them (Penniman).

Bay City.---The smallest whitefish that should be marketed should not be less than 1 lb. after they are dressed, and 1 $\frac{1}{4}$ lbs. might be small enough. In the spring we get quite a few No. 2 whitefish (Beutel).

Bay City.---To protect the whitefish, they should not allow them to catch anything under 1 $\frac{1}{2}$ lbs. round or 1 $\frac{1}{4}$ lbs. dressed (Benson).

Bay Port.---I think about 1 lb. fish is as small as should go into the market, either pickerel or whitefish (James Gillingham).

Bay Port.---The smallest size whitefish taken should not be less than 1 $\frac{1}{2}$ lbs. (John Gillingham).

Bay Port.---For the whitefish I suppose about $1 \frac{1}{2}$ lbs. would be small enough to catch (R. Gillingham).

Bay Port.---I think a man ought not to catch a whitefish under 1 lb. dressed (Dubey).

Bay Port.---Most of the fishermen would place the lowest size at 1 lb. dressed, but give way to the argument that $1 \frac{1}{4}$ lbs. dressed and $1 \frac{1}{2}$ lbs. round would be better and would give more thorough protection (Rathbun).

Goderich.---A good marketable whitefish should be about $2 \frac{1}{2}$ or 3 lbs.,,but we would market them weighing only $1 \frac{1}{2}$ lbs. dressed (McCleane).

Southampton.---We do not want any whitefish under 2 lbs. (G. S. McCauley).

Georgian Bay.---In Georgian Bay they would want to throw out everything less than $1 \frac{1}{2}$ lbs., the average size of the fish taken there being smaller than here (G. S. McCauley).

Southampton.---A 2 lb. whitefish is a fair fish up in Georgian Bay, but you do not get any small ones here. A whitefish weighing $1 \frac{1}{3}$ lbs dressed would be a nice lump of a fish for market (Cosley).

WHITEFISH; MINIMUM SIZE --- LAKE HURON.

Cheboygan.- I sell whitefish as small as $1/2$ lb. fresh. I would rather have $2 \frac{1}{2}$ lbs., and the smallest I would want would be not less than 1 lb. They are the best to smoke and the best to sell fresh and we can sell them either way then.-(Gill).

General.- The minimum size of the whitefish marketable should be 1 or $1 \frac{1}{2}$ lbs. A man would be forced to throw away sometimes half his lift if he threw away fish that weighed a lb. or anything over that.-(Wires).

Georgian Bay.- I do not think there should be any whitefish taken that would weigh under $1 \frac{1}{2}$ lbs., dressed.-(Elliott).

WHITEFISH; MINIMUM SIZE ---- LAKE HURON.

Mackinaw Island.- I think everything
under 2 lbs. round should be allowed to go
free.- (Wilmot).

WHITEFISH; MINIMUM SIZE --- LAKE HURON.

Alpena.- I do not want to handle whitefish less than 1 1/2 lbs., dressed. Just so long as they fish pound nets, so long will they catch small fish.- (Lincoln).

space in the fall the latter part of October, but you would never catch any small fish there, while at the east end where the water is deep they catch tons and tons of these small fish. You never see the small fish go up in shallow water in the west end of the lake as somebody would catch them if they did. They certainly do not stay around the rocks in the spawning ground. If you catch small fish you catch them on the mud bottom and in the deeper water (Tullian).

Alpena.---Has occasionally seen whitefish taken in the pound nets in Lake Huron not over 8 inches long. Is of the opinion that the young whitefish keep in pretty deep water. The whitefish from the time it is hatched until it is old enough to spawn holds frequent water

WHITEFISH; NOTES ON YOUNG---LAKE HURON.

General.---I think the whitefish are in deeper water when they are small. They show that in Lake Erie. I used to fish at the west end of Lake Erie and fish would come up there to spawn in the fall the latter part of October, but you would never catch any small fish there, while at the east end where the water is deep they catch tons and tons of those small fish. You never see the small fish go up in shallow water in the west end of the lake as somebody would catch them if they did. They certainly do not stay around the rocks on the spawning ground. If you catch small fish you catch them on the mud bottoms and in the deeper water (Tulian).

Alpena.---Has occasionally seen whitefish taken in the pound nets in Lake Huron not over 8 inches long. Is of the opinion that the young whitefish keep in pretty deep water. The whitefish from the time it is hatched until it is old enough to spawn seldom frequents water

less than 4 or 5 fathoms (Wires).

Bay Port.---I have seen little whitefish in the water outside, but I never saw them near the shores and never saw them in warm weather. I have seen them under the ice in the winter. Those little fellows do not mix with the herring at all (James Gillingham).

Bay Port.---The small whitefish do not go very far, but stay around the Charities and around Tawas (Dubey).

Port Huron.---I have never seen any little whitefish 3 or 4 inches long. I think the little whitefish go to the deeper waters of the lake (Selkirk).

Southampton.---We never get the small white fish here. You can get them along sandy beaches, but we never get them in the herring nets. We never used to get them in the old times (Dobson).

WHITEFISH; NOTES ON YOUNG --- LAKE HURON.

Bay Port.- I have seen just a few whitefish run through the back of the pound net that would not be any longer than 6 inches. I have seen droves of little ones in which I could see nothing but the eyes and they would be about 2 inches long. I saw more little whitefish this spring than ever before.--(R. Gillingham).

WHITEFISH; CATCH OF SMALL --- LAKE HURON.

Detour.- There are a good many small whitefish taken in the pound nets.- (Butterfield).

Detour.- While here I saw a small lot of fish landed, consisting chiefly of wall-eyed pike, grass pike, etc., taken from a pound net near by. I had only a minute to speak to the man in charge of the boat, and the only important information derived from him was to the effect that he caught very large numbers of small whitefish in his pound net, weighing from 1/2 lb. to 1 lb. apiece.- (Rathbun).

Detour.- While here I saw a lot of fish delivered to Mr. Sims. They were from 8 pound nets at Thessalon on the Canada side, I tallied off a number as they were weighed and packed in cars for shipment to Chicago. The whitefish, which were dressed, gave the following results, viz:-

100 lbs. equal 65 fish.

100 " " 74 "

100 " " 74 "

60 " " 59 "

The 360 lbs. of whitefish therefore contained 272 fish. The first 300 lbs. were mostly graded as No. 1. The last 60 lbs. mostly as No. 2, but in the latter there were 6 or 8 specimens that weighed at least 3 or 4 lbs. apiece, and the greater part of that lot did not weigh over $1/2$ to $3/4$ lb. apiece. In the first 300 fish counted there were also many fish just as small as those. Taking the average right through it was only about $1\ 1/3$ lbs. apiece. Taking out a few rather large fish and this average would have been reduced to 1 lb. apiece or less. All of these fish were being shipped fresh to Chicago. They obtain more small fish at this season than at other times, and owing to the general scarcity of large whitefish these small ones find a ready sale. It shows conclusively that large quantities of small or undersized whitefish are being taken from the water, a fact of great significance in view of the claim that fish of these sizes will not remain in a pot having a $3\ 1/2$ inch mesh.-(Rathbun).
Mackinaw City.- The quantity of small

whitefish brought into Mackinaw City by the fishermen of the adjacent region may be judged by the following figures, from a statement made by D. A. Trumpour & Co., showing the catch during the past 3 years:-

1891.

Whitefish No. 1 & 2.....210,920 lbs.

1892.

Whitefish No. 1.....207,310 "
Whitefish No. 2.....104,415 "

1893.

Whitefish No. 1.....288,810 "
Whitefish (small).....135,960 "

(Robinson).

Mackinaw City.- Mr. Robinson says that the greatest fault to be found with the fishery about here is that too many smallwhitefish, under 1 1/4 lbs. dressed, are being captured and that, too, in very great numbers. They would rather not take them at the market. It would be much better for them not to handle No. 2 fish and No. 3 fish and nothing except what they can sell fresh.

The small whitefish are all taken in the pound nets, except a few in the herring

gill nets which are mentioned in Mr. Robinson's testimony.--(Rathbun).

Cheboygan.I saw 13 whitefish this spring which just weighed 1 lb. after they were dressed.--(D. Corlett).

Alpena.-- Of course we do not catch many small fish in our gill nets, but the trap nets do.--(Cleary).

Alpena.-- One year, I think it was the last year we had good fishing, we obtained over 40 barrels of those small whitefish.--(Case).

General.-- They do not catch many small whitefish in the nets on Lake Huron; occasionally they will get a lift of small whitefish when fishing out in deep water. Sometimes around Detour they will get a lot of them, but they generally are pretty good about turning them back into the water again.--(Wires).

Bay Port.-- There are quite a few small whitefish running about 2 lbs. and sometimes we get smaller than that, but I do not think we take anything much smaller.--(R. Gillingham).

Southampton.-- We never get little whitefish in our gill nets.--(Cosley).

WHITEFISH; CATCH OF SMALL ONES---LAKE HURON.

Detour.---I never saw any whitefish smaller than what we get in the pound nets. The smallest whitefish I see would weigh about 1/4 lb. and from that up to 1/2 lb. (Butterfield).

Mackinac Island.---I have seen George Atwood throw away 14 lbs. of little whitefish. He would pick out the big ones and throw them in the boat and throw away the little ones. Now they salt every little fish they can catch (Wilmot).

Harbor Springs.---Would not get very many small ones. They get very nice ones in the Straits, but very small ones (Wilson).

Alpena.---They tell me they get lots of little fish and sell them in the market, but in the fall when we are after spawn they do not catch those small fish. In the summer when they catch them I do not know so much about the fish except what they tell me (Tulian).

Alpena.---The most fish I ever saw destroyed was on the north shore of Lake Michigan, and that is the most outrageous thing I ever

saw. You take it west of there, clear up to Manistique, I have seen millions of little whitefish come out so small that they could not dress them, and others that they did dress they had to sell for 3's and 4's, and I presume it is going on today just the same as it ever was. That was at Swishwan Point.

The pound nets destroy the small whitefish by the millions. The pound nets are to a large extent, more so than the gill nets, responsible for the decrease (Lincoln).

Bay City.---In the spring we get quite a few No. 2 whitefish (Beutel).

Bay City.---They brought 2 or 3 tons in here 2 years ago, and I could not do anything with them and lost money on them. We tried to sell them to the smokers, and finally had to throw them away. They caught them out around Point Lookout and Tawas (Benson).

Bay Port.---One fall 4 or 5 years ago a man wanted me to put him up $1/4$ bbl. of little whitefish, and I tried all the fall, but could not get but 2 or 3 dozen. I think there is more hurt where they capture the little whitefish (Dubey).

Bay Port.---The whitefish are taken in a 2 inch mesh, which would catch very small ones, and it is in just such places as this that a strict outlook would have to be kept to prevent their capture (Rathbun).

Port Huron.---Two years ago we had our pound nets constructed as they are now and we caught about 3 tons of little whitefish, from 8 to 12 inches long, and we have not caught a one from that time to this. This was in May and June. This catching No. 3 whitefish should be stopped (Selkirk).

Goderich.---I think the seines have killed off enormous quantities of small fish (Cragie).

Goderich.---If you allow them to use 2 1/2 inch mesh for whitefish you cannot very well save the whitefish. I have seen lots of No. 2 whitefish caught off Cockburn Island (McClellan).

Southampton.---The seines did some harm in taking ashore the spawn and small whitefish and in dragging the grounds.

We never used to take any small whitefish in the gill nets; sometimes one might get tangled up (D. McCauley).

Southampton.---They never took any small whitefish here in the gill nets and I do not think the seines caught them enough to cause the decrease entirely (Cosley).

Georgian Bay.---We used to buy our fish from the Buffalo Fish Company from Georgian Bay, and used to get little whitefish for 3 cents a lb., and now we cannot get them for 7 cents a lb. (Lay Bros., Sandusky).

WHITEFISH; CATCH OF SMALL --- LAKE HURON.

Alpena.- Of course we do not catch many small whitefish in our gill nets, but the trap nets do. There is no mistake, but it is just ruining the whitefish. You catch a fish weighing 1/2 lb. or less and if that fish was left for a couple of years more he would probably weigh 6 or 8 lbs.-(Cleary).

WHITEFISH; SPAWNING.

WHITEFISH; SPAWNING GROUNDS---LAKE HURON.

Detour.---The main spawning ground for whitefish is on the north shore of Georgian Bay. The only spawning ground we had here was on St. Joseph Island. They used to spawn there on the shoals, but that is played out almost entirely (Butterfield).

Detour.---The whitefish spawn all among the islands between here and Canada (Sims).

Mackinaw City.---The bow-back whitefish go onto the shallows to spawn---on the shoals out in deep water, probably 25 to 30 feet. They catch them mostly in 6 inch mesh gill nets.

The following apparently applies to the ordinary run of whitefish: He states, we do not find them on the shoals at any other time except during the spawning season (Robinson).

Mackinac Island.---They catch the whitefish just as they come on the sands early, and do not give them a chance to spawn. Used to get a good many fish with the eggs running from them. I saw a man here who was gathering up eggs and he claimed he did not get enough to pay for his wages (Wilmot).

Cheboygan.---There is only one spawning ground around here and that is so damned hard you cannot drive anything into it (C. Corlett).

Alpena.---At Miller's Point down this side of Au Sable (There are lots of mills at Au Sable and the water is very dirty), this spawning ground is a sort of bank that runs out from shore, and on each side of it is deep water. I think the current keeps the water pretty clear and they go in there in pretty good shape, and that has always been a good fishing ground.

In the pound nets I should judge that 25 feet would be the average depth in which the whitefish spawn, and for the gill nets I do not think it would average much over 15 feet. I know of whitefish that come up into 4 or 5 feet of water to spawn, and that is one reason that a blow knocks them off this spawning ground out here, as the fish have to leave the ground.

We get some spawn just inside of North point here. They are fishing nets there now about a mile from the point, which is the farthest this way, and Alpern has some at Scare-Crow Island from which he expects to get some spawning fish. Scare-Crow Island used to be

one of the best spawning grounds around here, and also North Point. We got a few eggs at Nine Mile Point last fall, and we got a few eggs in gill nets at Middle Island last year. On the other spawning grounds in depths of 25 feet, where the pound nets are, the bottom is rocky there (Tulian).

Alpena.---The north ground is a whitefish spawning ground (Cleary).

General.---Does not know that spawning whitefish have been taken on Big Reef, and it is probable that they would not associate there with the lake trout. If they go there at all to spawn it would probably be after the lake trout were through spawning, and fishing is entirely over by that time.

There are several good whitefish spawning grounds in the vicinity of Detour. They have sand and rock bottom there, and it is always from 40 rods to a mile offshore, off the islands; perhaps a little farther in some places.

In Prentiss Bay at the extreme northwestern corner of Lake Huron, Michigan, shore a small amount of spawning is done, and there is a small amount of spawning through the Straits of

Mackinac on the Michigan shore of Lake Huron. The first spawning ground going south in Lake Huron is Hammond's Bay, which is possibly 20 or 25 miles south of Cheboygan. The bottom there is rocky for a mile offshore. If they could keep their pounds in there in the fall they would catch immense amounts of whitefish during the spawning season, but the bottom is not suitable for holding the stakes in stormy weather and they are soon forced out by the fall winds. Do not strike any more whitefish spawning grounds until you get to the shoals north of Thunder Bay Island; then whitefish spawn in Thunder Bay at North Point, and South Point, within a mile or half mile of the shore, sandy and rocky bottom.

Off Black ^{River} ~~Reef~~ and Alcona are the next spawning grounds. Sturgeon Point follows, and then Miller's Point, about 8 or 9 miles north of the Au Sable River. There used to be places around the Charity Islands. They spawn on the west side of Saginaw Bay as far down as Alabaster. The fishing is carried on in a very small way at this last place, and at Tawas. Further on in Saginaw Bay not many whitefish are taken. South of Saginaw Bay the only place that he

knows of where the whitefish spawn is off Port Sanilac, and there the fishing is conducted on a very small scale.

On the shoals off north of Thunder Bay Island the spawning grounds would extend from 2 to 12 miles off the island and from 5 to 7 miles off the adjacent mainland. In the other places south of Thunder Bay which have been mentioned above the spawning grounds would not be more than $1/2$ or $3/4$ of a mile offshore. No spawning grounds for whitefish, so far as he knows, occur out in Lake Huron. In Lake Huron whitefish would spawn in depths all the way from 3 to 10 fathoms (Wires).

Bay City.---I have never fished much around the mouth of the bay and cannot say whether they spawn there or not (Penniman).

Bay City.---The whitefish spawn around the Charities (Beutel).

They spawn all over the bay, but that is their principal spawning ground (Beutel).

Bay Port.---I have never seen any ripe spawn in the whitefish. I have seen the ripe spawn in herring (James Gillingham).

Bay Port.---We do not catch any spawning whitefish in this bay. I have fished on the Charity Islands and it was very seldom we would find one ripe enough to spawn. We always played out about November 15 there (Dubey).

Sarnia.---Our bottom is sandy and gravelly, but there is such a current that the whitefish could not spawn here. At Blue Point the bottom is rocky and would be a good spawning ground (Wees).

Goderich.---Whitefish will spawn only on rocky or stony bottom. The honeycomb stone we have here in the yards in town is taken from the shores, but they have it on the bottom, only it is a lighter color. There are probably large rocks of it on the bottom, but pound nets do not bring it up. Our quarries here are limestone. You pick up a piece of that honeycomb stone in the nets and you will find little rocks in it, and the action of the water on the softer parts eventually makes the honeycomb rock. I have fished until November 10 on those grounds and I think I have taken up that rock that had fish eggs in it, but I am not sure.

When the whitefish used to be abundant

about here I never knew of any spawning places here, but it is said they spawn down at Kettle Island, and they spawn up the lake around the Islands. There were no spawning grounds along this shore as there is too much clay here which makes the water roily (Cragie).

Goderich.---They go to Georgian Bay some times to get spawn (Eingster).

Southampton.---We fish for the big whitefish in shallow water. Could not get them here, but get them up off the Fishing Islands and at Cape Hurd. I do not know whether any whitefish come in there now or not, as we do not try for them. There was no close season at that time.

The whitefish spawn on gravelly and stony honeycomb bottom (D. McCauley).

Southampton.---I do not know as there are any spawning grounds for whitefish here. A few have been caught around the Fishing Islands in the fall, but not many (Cosley).

WHITEFISH; SPAWNING GROUNDS - LAKE HURON.

Mackinaw City.- For whitefish the closest spawning grounds we have is on the reefs just off Waubeshanks, just off White Shoals. They have a good spawning ground there. To the east in Lake Huron I do not know of any whitefish spawning grounds. We get no fish down there to speak of in the fall. Spectacle Reef is a good spawning ground for trout, but very few whitefish are taken there. Last fall we had a very large catch of whitefish off Waubeshank light.- (Robinson).

Cheboygan.- They do not get any whitefish in November. There are no whitefish spawning grounds around here except at Hammond's Bay.- (C. Corlett).

Alpena.- The whitefish spawn on the reef near Manistique in Lake Michigan and we have taken spawners there from about December 5 to 10. Up at Marquette on Lake Superior they spawn right around the beach and around Granite Rock.- (Lincoln).

Bay Port.- I have never seen any white-

fish spawn in the boats. I do not think the whitefish spawn enough so that the spawn comes from them in the boats.-(John Gillingham).

Southampton.- You could not get whitefish spawn here in the fall. You might get a few whitefish on the back of the islands, but it is so late in the fall that you would hardly ever get weather to do it.-(Cosley).

WHITEFISH; SPAWNING GROUNDS -- LAKE HURON.

Harbor Springs.- There are spawning grounds down at Cross Village, Lake Michigan, 25 miles down from here. It is north of here towards the Shanks.-(Wilson). I use gill nets, but it is shallow water and a hard place. The depth is from 5 to 30 feet. That is just on this side of Hammond's Bay quite close to the shore. Wherever they spawn it is generally pretty hard driving. I went there in the Bay one fall and put in 2 nets, but just as soon as I got them in, they were blown out. There were lots of fish there.-(G. Corlett).

WHITEFISH; SPAWNING PLACES -- LAKE HURON.

Cheboygan.- You could get spawn of the whitefish at Hammond's Bay, but it is pretty costly work as the nets are always in danger of being blown out. You could use gill nets, but it is shallow water and a hard place. The depth is from 5 to 30 feet. That is just on this side of Hammond's Bay quite close to the shore. Wherever they spawn it is generally pretty hard driving. I went there in the Bay one fall and put in 2 nets, but just as soon as I got them in, they were blown out. There were lots of fish there.-(C. Corlett).

WHITEFISH SPAWNING GROUNDS--DETROIT RIVER

WHITEFISH; SPAWNING -- LAKE HURON.

They get whitefish in the Detroit River.

That General.- Whitefish occasionally spawn
on the Big Reef.-(Wires).

Michigan Fish Commis-
sion get the most of their fish is right down
opposite the Port (Tullia).

WHITEFISH SPAWNING GROUNDS--DETROIT RIVER

They get whitefish in the Detroit River. That used to be a great spawning ground and is yet. I think where the Michigan Fish Commission get the most of their fish is right down opposite the Fort (Tulian).

November 7 was the first catch we had from the shallows last year. It was the first lift we made and we got about 2,500 lbs. of large whitefish (Robinson).

Mackinac Island.---They catch the large fish just as they come on the sands early and do not give them a chance to spawn (Widset).

Harbor Springs.---The whitefish begin to spawn about November 12 or 15. From the 15th to the 20th is the heaviest part of their spawning. A very few spawn up to December, but the heft of it is done in about a week (Wilson).

Cheboygan.---The whitefish begin to spawn about the first of November, and continue to the 20th. Some years they will come on later. The most of the spawning is done from November 10 to 15 (C. Corlett).

WHITEFISH; SPAWNING SEASON---LAKE HURON.

Detour.---They spawn about the first of November, but it depends a good deal upon the weather (Sims).

Mackinaw City.---They spawn in November. November 7 was the first catch we had from the shallows last year. It was the first lift we made and we got about 2,600 lbs. of large whitefish (Robinson).

Mackinac Island.---They catch the large fish just as they come on the sands early and do not give them a chance to spawn (Wilmot).

Harbor Springs.---The whitefish begin to spawn about November 12 or 15. From the 15th to the 20th is the heaviest part of their spawning. A very few spawn up to December, but the heft of it is done in about a week (Wilson).

Cheboygan.---The whitefish begin to spawn about the first of November, and continue to the 20th. Some years they will come on later. The most of the spawning is done from November 10 to 15 (C. Corlett).

Cheboygan.---The whitefish begin spawning about November 1, and sometimes a little later and sometimes a little earlier. The bulk of the spawning is the fore part of November (D. Corlett).

General.---The trap net whitefish all along this shore spawn from about the first of November until the 25th, I think, and then I have known them to begin as early as October 25, but as a rule we figure on getting our men on the grounds about the first of November. The gill netters out here on this north ground do not figure that the fish will commence very much before November 15, but this last year I think they began a little earlier than that. Last year they commenced about November 8. If they commence spawning by the 15th they are usually done by the last of the month, but as a rule the wind drives them off before they are done spawning. There are no December spawning whitefish here that I know of. On the Fox Island shoals and the shoals in the vicinity of the Manitou Islands the latest they ever got eggs was about December 15. Last year we did not get any as late as that, but there were some

eggs brought to me last year on the 15th which were taken 2 or 3 days before. The trap net crews are located, one at Miller's Point, and the next place where we get any spawn is at Sturgeon Point. They fish at Oscoda in 20 to 30 feet right on the spawning grounds (Tulian).

Bay City.---The whitefish spawn in November (Beutel).

Bay Port.---I think the whitefish spawn after the herring, for we never see any spawn that is ripe (James Gillingham).

Sarnia.---I think the whitefish spawn quite late in the fall (Wees).

Goderich.---I never knew of any whitefish spawning until November. When there was no close season we used to catch them on the shoals but would not set for them until November 5 or 10 (Cragie).

Goderich.---Whitefish we used to catch years ago between November 5 and 10 with spawn in them (Eingster).

Southampton.---Whitefish were coming in to spawn in the olden times after the trout quit spawning in November. We could fish for them when I first came here, and I fished for them a

little at that time. They were big whitefish weighing from 5 to 10 lbs. (D. McCauley).

Southampton.---The whitefish spawn in November (Dobson).

Georgian Bay.---At the upper end of Georgian Bay they commence about November 5, and they will run up to about the 15th, and at the lower end there is about 7 days' difference. At Killarney the men will begin to fish about November 6 or 7, and about the 10th they will move down to French River. About 4 days later they will go down to Point au Baril, which is about half way down Georgian Bay (Elliott)

WHITEFISH; SPAWNING SEASON -- LAKE HURON.

Detour.- Whitefish are not around during the spawning time over 10 days.- (Butterfield).

Mackinaw City.- Do not know of whitefish spawning in October. They spawn in November.- (Robinson).

Alpena.- Whitefish spawn very quickly and leave at once. Trout may remain on their spawning ground for sometime after they are done spawning.- (Alpern).

Alpena.- Along about the 5th of December until about the 10th, the whitefish spawn on Lake Michigan on the reef near Manistique. Nobody had ever caught on to it before and we slaughtered them. But they are a different class of fish. Our fish here are all through spawning before they begin spawning up there at all.- (Lincoln).

Bay Port.- We get good herring fishing in November as long as we can fish. The whitefish we get up in the bay do not amount to anything. I would probably get 100 lbs.

a day out of 12 or 14 nets, and none of them are ready to spawn.--(Dubey).

Southampton.-- The whitefish spawn here. There is one kind spawn late in the fall about November 20, and I think those outside whitefish spawn in July. I have seen the spawn running from the latter in that month.--(G. S. McCauley).

WHITEFISH; SPAWNING SEASON -- LAKE HURON.

Cheboygan.- When the trout begin to go away the whitefish come on, but it is very late in the fall and they cannot fish there late in the fall.-(Gill).

WHITEFISH; SPAWNING SEASON - LAKE HURON.

Southampton.- Examined a number of whitefish caught in gill nets off this place September 7, 1894. Most of the whitefish contained spawn, but of rather small size, not nearly mature.--(Rathbun).

At Miller's Point and Murphy's Point the fish average quite large, probably 2 or 3 lbs., or a little larger. They would be larger than that. That is for the trap net grounds where we used to go for many at Sigeon and those islands at North Point, but the fish they caught later in November with the gill nets are a very small run of fish and always have been. I do not think they would average over 2 lbs. weight. I do not think you would find any round net fish that would spawn under 2 lbs. You might find one once in a while in this small run that would weigh under 2 lbs. (Rathbun).

Sigeon.--I have seen the spawn in whitefish weighing only 1 lb. round, but not many of them (Rathbun).

WHITEFISH; SIZE OF SPAWNERS---LAKE HURON.

Harbor Springs.---I have seen spawn in whitefish where they would weigh 1/2 lb., but I do not think they spawn until they weigh at least 1 1/2 lbs. (Wilson).

Alpena.---In the different localities we get different sizes of whitefish that we take the spawn from. At Miller's Point and Sturgeon Point the fish average quite large, probably 5 or 6 lbs., or a little larger. Formerly it would be larger than that. That is for the trap net grounds where we used to go for spawn at Alpena and these islands at North Point, but the fish they caught later in November with the gill nets are a very small run of fish and always have been. I do not think they would average over 2 lbs. apiece. I do not think you would find any pound net fish that would spawn under 2 lbs. You might find one once in a while in this small run that would spawn under 2 lbs. (Tulian).

Alpena.---I have seen the spawn in whitefish weighing only 1 lb. round, but not many of them (Case).

General.---Has stripped spawning whitefish weighing not over 1 lb., but this was in the vicinity of Detroit Island. Nowhere else has he found spawning whitefish so small. On the shoal north of Thunder Bay Island the range of spawning whitefish is from 1 1/2 to 3 lbs. Very seldom catch a larger one than 3 lbs. In the pound nets at Hammond's Bay and in Thunder Bay off Alcona and Black River and Au Sable they will run from 3 to 10 lbs.; occasionally one smaller, but the majority will weigh about 3 lbs. These are taken in the pound nets (Wires).

Bay City.---A 3-year old fish will weigh from 1 to 1 1/2 lbs. We get spawn from the whitefish the fall before they are 3 years old. I think the age of the whitefish has more to do with the spawning than the size. I have taken eggs from wild whitefish that would not weigh over 1 lb. I do not think confinement would make any difference in regard to their spawning. I do not think the whitefish spawn before they are 3 years old. I do not think the size has anything to do with the spawning. A 3-year old fish, wild, may not weigh over 1 lb. and will

have ripe spawn in it. We get eggs from the brook trout the fall before they are 2 years old. From the Loch Leven we get eggs the fall before they are 3 years old, and the Von Behr the same (F. N. Clark).

WHITEFISH; SPAWNING SIZE -- LAKE HURON.

Goderich.- I never saw whitefish so small that there was not spawn in them in the spawning season.- (Eingster).

They do not get any eggs about here now for the hatchery, but I understand they are going to do so at Cross Village. In Mackinac Straits they could get spawn as they fish around there considerably in the fall. But here there is no fall fishing done. In the region about here in November there is not a great deal of pound netting done. Get scarcely any whitefish here in November.- (Wilson).

Essex- They catch very few whitefish in November. Out of 12 or 15 pound nets might not have more than a dozen whitefish. Last year there was no whitefish spawn to be had. You could get spawn at Hammond's Bay but it is pretty costly work as the nets are always in danger of being blown out.- (C. Carlett).

Bay Point.- In the fall we set principally for herring. A man could not fish for

WHITEFISH; CATCH OF SPAWNERS -- LAKE HURON.

Detour.- We do not get 1 ton of whitefish altogether in November.--(Butterfield).

Harbor Springs.- They do not get any eggs about here now for the hatchery, but I understand they are going to down at Cross Village. In Mackinaw Straits they could get spawn as they fish around there considerably in the fall. But here there is no fall fishing done. In the region about here in November there is not a great deal of pound netting done. Get scarcely any whitefish here in November.--(Wilson).

Cheboygan.- They catch very few whitefish in November. Out of 12 or 15 pound nets might not have more than a dozen whitefish. Last year there was no whitefish spawn to be had. You could get spawn at Hammond's Bay but it is pretty costly work as the nets are always in danger of being blown out.--(C. Corlett).

Bay Port.- In the fall we set principally for herring. A man could not fish for what whitefish there are here now.--(James G'm).

Bay Port.- The most of our whitefish are taken in the fall, in October and November principally. The whitefish are a very small item in our catch.--(John Gillingham).

Bay Port.- We do not get many whitefish in the pounds in November.--(R. Gillingham).

Michigan.---We used to get the best whitefish fishing from November 15 to December and they get the best fishing at the same season now. They let their seine nets stay out as long as the wind will not tear them, but they generally pull out about in October.

They catch the whitefish just as they get on the seine every day and give them a chance to swim. There is not a great many fish with the eggs coming from them. The eggs would lay in your face while you were taking them out of the water. I was a boy here who was gathering for eggs, and he thought he did not get enough to pay for his wages. There were no fish you see (laugh).

Canada.---They live at Quebec in 20 to 25 feet, right on the spawning ground (laugh).

WHITEFISH; CATCH OF SPAWNERS---LAKE HURON.

Detour.---We catch very few whitefish here during the spawning season unless it is an open season, as the weather will not permit. It is a small run of whitefish we get in the fall (Sims).

Mackinac Island.---We used to get the best whitefish fishing from November 15 to December and they get the best fishing at the same season now. They let their pound nets stay out as long as the wind will not tear them, but they generally pull out along in October.

They catch the whitefish just as they get on the sands early and do not give them a chance to spawn. Used to get a great many fish with the eggs running from them. The eggs would fly in your face while you were taking them out of the nets. I saw a man here who was gathering up eggs, and he claimed he did not get enough to pay for his wages. There were no fish you see (Wilmot).

Oscoda.---They fish at Oscoda in 20 to 30 feet, right on the spawning ground (Tulian).

General.---Does not know that spawning whitefish have been taken on Big Reef, and it is probable that they would not associate there with the lake trout. (See under spawning grounds).

Bay Port.---We do not catch any spawning whitefish in this bay. I have fished at the Charity Islands and it was very seldom we would find one ripe enough to spawn. We always pull out about November 15 there. There are not many in this bay who catch spawning whitefish in November to hurt the fishery (Dubey).

Southampton.---When we fished here in November we were not able to do much fishing as the weather was too rough (Cosley).

Southampton.---We could not catch them on the spawning grounds as we could in the summer because we could not use as many nets on account of the weather. All the whitefish we caught on the rocks did not amount to much (Dobson).

WHITEFISH; CATCH OF SPAWNERS -- LAKE HURON.

Cheboygan.- We get most of the whitefish in November. There is bigger fishing in November for whitefish than at any other time of the year.-(D. Corlett).

Alpena.- If we set on the north ground and the fish came on the spawning ground we would get nothing but whitefish. The inside ground is all whitefish and when they come on to spawn you get nothing but whitefish.-(Cleary).

like trout. They were just the same with that exception. I saw 2 or 3 one season and do not remember noticing any last season.

If they would only allow us to fish a little on the Canadian side in the fall we could get all the eggs we want. It is hard to get eggs here now, and we did not get but few last fall. Elliott is pretty strict and is the best overseer they ever had (Butterfield).

Labour.--We save the spawn here for the hatcheries and send it up to them. They come up here and gather spawn to take to New York. They hatch trout at the dam, but not so exten-

WHITEFISH; PROPAGATION---LAKE HURON.

Detour.---The whitefish are kept up by putting fry in the lakes, and they are thicker this last year than I ever saw them here. Our fry have mostly been obtained from fish taken from here, but last year they were taken down below. Some were taken from Detroit last year and we could tell them very easily from the whitefish here. We caught a few whitefish from 1 or 2 nets in which the meat would be red just like trout. They were just the same with that exception. I saw 2 or 3 one season and do not remember noticing any last season.

If they would only allow us to fish a little on the Canadian side in the fall we could get all the eggs we want. It is hard to get eggs here now, and we did not get but few last fall. Elliott is pretty strict and is the best overseer they ever had (Butterfield).

Detour.---We save the spawn here for the hatcheries and send it up to them. They come up here and gather spawn to take to New York. They hatch trout at the Soo, but not so exten-

sively as whitefish. I have deposited a considerable quantity of fry here this year and last. I think I brought about 8 million from the Soo (Sims).

Detour.---The putting in of whitefish fry in this region has, according to Mr. Butterfield done much good. It was begun about 8 years ago.

As the whitefish work into Georgian Bay in the spring from this region, Mr. Butterfield thinks Canada derives greater benefit from the planting of whitefish in this region than do the Americans. They can get no whitefish eggs on the American side about here in the fall now (Rathbun).

Mackinaw City.---Collecting Eggs:---There are no whitefish eggs collected here, although they attempted to do so last fall at E'Poufette, but they were too late for it. They are making arrangements this year to get the eggs from one of our fishermen named Wilson, off Waubeshanks, who catches very nice whitefish (Robinson).

Mackinac Island.---The whitefish are smaller than they used to be because I believe it is the fish that have been planted that we are catching now (Wilmot).

Petosky.---Mr. Hampton told me of a firm named Smithurst & Thompson, at Warren, Huntington County, Indiana, which is raising whitefish and other species in a gravel pit at the place named, getting the water from an artesian well. They have raised whitefish to a good size (Rathbun).

Cheboygan; Collecting eggs.---There is no very good place for getting whitefish eggs about here. The best place I know of is Detour There were no fish planted here this summer at all. I do not think it would pay for a man to come around here in the fall for what whitefish eggs he could get. There might be some around Hammond's Bay, but I do not think it would pay (D. Corlett).

Alpena; Number of Eggs.---Last winter I took different lots of eggs from the whitefish and washed them and counted up an ounce of each lot. At Put-in-Bay they claim they average about 40,000 to the quart, and I found here they averaged about 35,000. Eggs taken from fish caught in the gill nets in Lake Michigan at Manistique, the late run, went 1115 to the ounce, and eggs taken November 25 from fish

caught in pound nets in Lake Huron near Miller's Point went 1097 to the ounce. Eggs taken from gill nets on the shoals north of Thunder Bay Island went 1235 to the ounce. That would be 35,000 to the quart in the first 2 lots and 39,520 in the last lot. If the spawn is running freely I have taken fully a quart of eggs from one of those fish on Lake Michigan. The fish would probably average that if they were running freely so that you could get all the eggs. The fish would weigh probably 8 lbs. on an average. Of the little fish, we put the spawn of half a dozen in at once, and then probably do not have over 2 quarts of eggs (Tulian).

Size of Eggs.---The eggs are much smaller ~~than~~ in the small fish than in the large ones. The smallest number of eggs was from the small fish and the largest number from the large fish (Tulian).

Time of Hatching.---Ordinarily the whitefish eggs in the hatchery commence to hatch about April 10 or 20. Formerly when we had those hard winters here and the bay staid frozen until late, it has been sometimes the first of May before they would begin to hatch. We commence putting them out as soon as we have

enough in the tanks to make a shipment (Tulian).

Collecting Eggs.---The State Fish Commission controls the best fishery along the Detroit River. I hardly think they got more eggs than they could handle last year, however, because they had men out on Lake Michigan gathering eggs during the late run. I think they use all the eggs they get.(Tulian).

Alpena; Number of Eggs.---Mr. Wires spoke of one large whitefish weighing about 14 lbs. taken off Alpena in the fall of 1891 from which he took 5 quarts of eggs. The number of eggs to a quart was between 30,000 and 36,000. This was an unusual specimen and had an enormous belly.

The quantity of eggs from whitefish will probably range from 1 to 2 quarts; generally there are more from which you will get less than a quart than more than a quart (Wires).

Port Huron.---Planting Fry.---I think if you would plant your whitefish right down around at the foot of the lake here it would be better than planting them further up. A planting was made out here about 5 years ago, and eventually

we got a good many of those fish.

I think it would be a good plan to let the little fry through a tube into the bottom on the lake in deep water, if it can be done without killing them. Of course my theory was that as we caught them in shallow water it would be a good place to plant them (Selkirk).

Goderich.---Planting Fry.---I have taken the fry from the Michigan hatchery and put it overboard around here and those whitefish came in among the pound nets and they caught them about the size of herring (McClean).

Southampton.---I do not know how the whitefish could be kept here if they were put back (Cosley).

WHITEFISH AND TROUT; PROPAGATION - LAKE HURON.

Detour.--- About 12 years ago the whitefish were played out entirely in the pound nets, until they began to put this fry in, and since then the fishing has been improving until this year, when it slacked up a little. The worst time was about 10 years ago and whitefish then gave out nearly altogether and they gave up fishing for them. Since the artificial culture of whitefish our pound nets have increased every year until this year, and he thinks it was on account of the rough weather they had this spring. They plant fry here nearly every year.--(Butterfield).

Fishing here would have been played out entirely if it had not been for the hatcheries. It seems to have done us more good here than any other place I know of. We get the fry from Alpena mostly. Got some from the Soo year before last. In the other places it does not seem as though they had increased the fish as much as they have around here. A year or 2 after they began putting the fry

in here we used to have to scoop the small fish out of the net. I took 5,500 lbs. out of a net 2 years ago that I packed in ice, besides the small ones.- (Butterfield).

Detour.- They first began to plant fish here from the Michigan hatcheries about 5 or 6 years ago. They used to bring them up from Alpena.- (Sims).

Harbor Springs.- They claim that planting the fish increased them, but I cannot say positively that it does, for there is no way of proving it, because you cannot mark them.

They do not get any eggs about here now for the hatchery, but I understand they are going to set down at Cross Village. Down in the Straits they could get spawn as they fish around there considerable in the fall. You could gather the trout spawn over at Petoskey from Connable. In the region about here in November there is not a great deal of pound netting done.- (Wilson).

Cheboygan.- There were 2 men getting trout spawn here last year from Davis. There was no whitefish spawn to be had.- (C. Corlett).

Alpena.- If you take the trout as soon as he is out of his shell, the whitefish will stand more than the trout, but if you take the trout after he has gotten rid of his food-sack and he will stand the most.

I do not believe the close season is necessary. I think if you would let the fish hatcheries go ahead and collect all the eggs they can get hold of and stop the wholesale destruction of the small fish, that fish will be all right, and you will increase their number.- (Tulian).

Alpena.- Here there is no spawn wasted and never has been since I have been on a tug. The hatcheries save all spawn there was to save, both whitefish and trout.- (Cleary).

Alpena.- I do not think that the amount of fish they put in this region from the hatcheries will amount to a great deal, although undoubtedly it helps Lake Erie, because a great many go down there. There are a great many put in on the Canada side and I think $2/3$ of the fish put in go down the river.- (Case).

Alpena.- Thinks there has been too much money spent on Brook trout and that sort of thing to suit the masses. His idea about the Station at Duluth is to handle the lake trout and put them right into Lake Superior. Thinks they would do as much good as any station in the commission if they had the room for it. Thinks the best work could be done by hatching lake trout because they are a harder fish and the dealers prefer them, of course they like some whitefish. Thinks that in both Lake Superior and Lake Huron lake trout hatching is preferable to whitefish. That is to say more results can be obtained from lake trout than from whitefish, although they should not neglect either. As a general rule people pay a little more for whitefish, but during the summer months the prices of the 2 will be about the same.--(Wires).

Sarnia.- They planted lots of both whitefish and pickerel here. There used to be men here in the spring getting the spawn. Parker used to come up here every spring from Sandwich. They would plant the young

whitefish right out here in the lake. I have seen little minnows about an inch long, working right up against a strong current.- (Wees).

Goderich.- I never knew of their planting any whitefish fry about here. I think they planted some trout here one year. I do not know of any reason why they could not plant whitefish here.- (Cragie).

Southampton.- They have planted fish here, but not very many. Only once to my knowledge. I think it was trout. I forget whether it was this summer or last summer. They just went outside here a piece. I think they have planted quite a few in Georgian Bay. It is the general opinion among fishermen that the planting of artificially hatched fish is a good idea and should be continued on a larger scale.- (Cosley).

WHITEFISH; DECREASE, CAUSE.

WHITEFISH; DECREASE---LAKE HURON.

Detour.---Fishing for whitefish is better now than it was some years ago. Our fishing was slacker in the spring 10 years ago than it is now (Sims).

Cheboygan.---The whitefish fishing was pretty good last summer, but it is nothing in comparison to what it was when I began. We used to fish then with 2 nets and make as much money as we do now with 8 or 9 (C. Corlett).

Cheboygan.---I think whitefish will play out on these lakes before long anyway, there is so much dirt around (D. Corlett).

Alpena.---When I came here in certain localities the whitefish were more abundant than they are now, and since I do not know that they were. Take it for instance at Algona, they used to get large catches of whitefish and they do not get any to speak of now. At one time at Miller's Point and Sturgeon Point they had very good fishing, and for 2 or 3 years previous to that at Miller's Point it was probably as good as when I first came here. There is no question but that there has been a great

decrease, but not in my time. The decrease was before that. Here 4 or 5 years ago they had a big catch, and often when whitefish were plentiful in the lake we had years that were almost failures, according to the fishermen, so that now within the last 4 or 5 years, and especially 2 years ago, the fish came on the shoals in pretty good shape; just as they came on when there was big fishing, and more than I ever knew them to catch since I have been here, but they got a terrible gale that blew their nets all out and they found nets and fish way up here on the shore. It was a number of years ago that the nets were frozen up and the fish rotted on the grounds.

Thunder Bay used to be an excellent whitefish ground, but there are no whitefish here now to speak of. They do not take as many whitefish as they did and they average smaller (Tulian).

Alpena.---Comparatively we get no whitefish at all now; that is along this part of the lake. They have been getting a few whitefish of late years off Au Sable in pound nets, but around here as far as Cheboygan they did not get many. In 1882 was the last catch of the pound nets we

have had to any amount. They commenced to drop off from then and they dropped off very fast. From 1885 to 1888 my catch of whitefish was not over 10 per cent of my total catch. In 1889 the whitefish all at once came back on our gill net grounds and the fall of 1889 there were just as many whitefish as I ever saw on our spawning grounds. They came early and all at once. They came about the last week in October and staid until about November 20. The last lift we had was 3,650 lbs. We had as much as 5 tons to a lift off that ground in 1889, but since that time they have not come back there, and I think the cause has been that there has not been a single fall since then when the weather has been such that they could come back.

We used to get them right off Thunder Bay Island. Before that time the whitefish were very abundant about here sometimes, but that is way back 30 or 40 years ago (Alpern).

Alpena.---There is not one per cent of the whitefish caught that there used to be. You take a sail boat with the little short gangs we used to employ in the summer months and we would go out and average from 8 to 10 barrels of fish

at a lift. Now you can fish for a month and not get that many whitefish, and if you put the same amount of twine we formerly used and the same men, and stretch it out in the lake where we used to get good fishing, you would not get enough to eat. In all the fishing done this last week I do not think there were 1,000 lbs. of whitefish caught. They are almost extinct.

It is only a question of time when the whitefish will play out, and I want to get my share while they are going. That fishing will probably last as long as I will and my children can look out for themselves (Lincoln).

Alpena.---The whitefish first began to show a marked decrease about 12 years ago. At one time I know we had 3 or 4 bad fishing years, hardly paying expenses. Then one year after that we got big fishing, and since then it must be 11 or 12 years ago that they had the last fishing in the bay of any account. I know one summer we took over 100 tons out of 4 nets. We never got anything of any account after that. It dropped off suddenly.

Whitefish are not half as abundant now as they used to be.

Whitefish fishing began to show a serious falling off about 1874 or 1875 (Case).

General.---Whitefish do not appear to be as abundant as they used to be. Mr. Bowers, of the Detroit hatchery, said that last fall's run in the Detroit River was a large one. Mr. Tulian, of the Alpena station, states that from the great numbers which were taken in the fore part of the fall season he judges that had the weather remained good they might have been able to have filled the station with eggs last fall, but the weather was stormy and the fishing was seriously interfered with. The catch was good last fall on the north shore of Lake Michigan.

He does not think, as a whole, that there has been a very great decrease of whitefish. Thinks there are a lot of fishing grounds which have been fished out, but that there is still a lot of fish in the lake if the fishermen would find them. Thinks that the statements generally made about the decrease have been exaggerated. Thinks that the catch of the north shore of Lake Michigan, Lake Huron and Lake Superior during the past 3 years will compare favorably with the preceding 3 years. He thinks it

probable that the decrease may have been far more extensive on Lake Erie where the fishing has been prosecuted far more vigorously, and has been carried on to such an extent that it was impossible for the fish to escape the fishermen (Wires).

Bay City.---The whitefish are getting very scarce. They were plentiful when I first came here. Their decrease has been gradual. It seems to be a general decrease, but I do not know as they are any smaller in size.

I used to catch whitefish with seines 15 years ago at the mouth of the river here, and now you cannot get one within 5 miles of it (Penniman).

Bay City.---We do not get many whitefish now, but what we do get we get at the Charity Islands, Long Point, Point Lookout and Tawas (Benson).

Bay Port.---We used to get more whitefish inside than we do now, but there has never been but very few whitefish caught here since I can remember. I have heard the old folks tell what great fishing there used to be here about war times. As far as the whitefish catch is

concerned, it would be hard for me to tell just what it is, but I do not think it will go over 4000 or 5,000 lbs. a year in all the twine owned by my brother and myself (James Gillingham).

Bay Port.---I have understood that whitefish used to be abundant, but I have never seen any very large amount here. We came here first in 1861, but did not do any fishing then. We did not fish much before 1878(John Gillingham).

Bay Port.---I think the whitefish have decreased a little in abundance since I started in, but am not sure. When I began fishing I used to fish by the month, and of course a man does not pay much attention then(R. Gillingham).

Port Huron.---Whitefish I think have decreased more especially than other kinds, at least outside of Georgian Bay. They have decreased greatly in Lake Erie for the last 3 years (Selkirk).

Sarnia.---The whitefish have decreased down to nothing. 25 years ago we used to get very nice hauls (Wees).

Goderich.---Whitefish have never been so abundant along that shore as they used to be since they hauled them in in such quantities with the seines (Cragie).

Goderich.---Whitefish are getting scarce all the time (McClean).

Southampton.---The whitefish are not as abundant as they used to be. There are very few of them left on the shore now (D. McCauley).

Southampton.---We do not get $\frac{1}{4}$ of the whitefish we used to (Cosley).

Southampton.---There are very few whitefish to be had. They are not $\frac{1}{4}$ of the catch of fish. I have seen the time when I would get all whitefish and not any trout. I do not think the catch of whitefish now is more than $\frac{1}{10}$ of the total catch. The whitefish have certainly decreased, but I do not know the cause. It seems in one season they seemed just to light right out. That was 10 or 11 years ago. There used to be splendid fishing before that. They seemed to go all at once. On Georgian Bay it is just the same. The boats used to catch from 25 to 50 tons and this year some of the boats have not caught 3 tons.

I do not believe you will ever kill out the trout, but the whitefish, we seem to have kind of killed them out (Dobson).

WHITEFISH; DECREASE -- LAKE HURON.

Detour.- There were plenty of fish here when he first came here. Plenty of trout and whitefish both. Others had been fishing here before, although not very extensively, but there has always been some fishing here. There are not the fish to-day there were when he began fishing. It has fallen away more than half. I used to use nothing but 5 inch gill mesh when I first began fishing for whitefish. In fact there are no whitefish now and they do not pretend to fish for them with gill nets. About 12 years ago whitefish were played out entirely in the pound nets; until they began to put the fry in and since then the fishing has been improving until last year when they slacked up a little. The worst time was about 10 years ago and whitefish then gave out nearly altogether and they gave up fishing for them. Since the artificial culture of whitefish, our pound nets have increased every year until this year.- (Butterfield).

Detour.- Both whitefish and trout were

abundant when he began fishing here, but whitefish were not so much more abundant than now, but last longer. They catch about the same amount of whitefish to a net as formerly. Possibly do not get quite as many now per net as we did years ago on account of there being so many nets. The whitefish are about holding their own.-(Sims).

Detour.- Ten or 12 years ago, with gill nets, used to obtain about 1/2 whitefish in their catch in depth of 25 to 40 feet. They do not get whitefish in those depths now. In those days the fishing with pounds was not as good as at present.-(Rathbun).

Mackinaw City.- On these shores the whitefish are pretty well done.-(Robinson).

Mackinaw Island.- Wilmot says the fishery is nothing now to what it was. The falling off has been immense, mainly with the whitefish which have decreased fully 2/3.-(Rathbun).

Harbor Springs.- The decrease around here has been 80 per cent. We cannot see any decrease in the last 3 or 4 years. It keeps about the same. There never has been very

very good fishing right here with our pound nets, only 3 or 4 years after we came here.- (Wilson). (?)

Alpena.- Our best whitefish fishing we used to have in 1878. I had a small tug fished out on the reef here and she took as her record 54,000 lbs., dressed, of whitefish in one week off that shoal, and there was not a single trout in the lot.- (Alpern).

Alpena.- Whitefish at one time were very abundant here. At certain times of the year we would get them in here in the bay, but with gill nets we would get them outside in certain depths of water and on certain grounds. In former years we did not take the trout, but now we go for anything we can get and we take the trout because they are more plentiful. At one time there were plenty of whitefish and we did not bother about catching trout as whitefish brought more money. At that time we could get all the trout we wanted at any time.- (Lincoln).

Alpena.- The whitefish used to be very abundant and they have almost entirely gone.

For 3 years previous to 1880 fishing was poor in Thunder Bay. In the year named, however, there was a great run of whitefish, but that was the last and since then there has been no good fishing in the Bay. Mr. Case allowed me to copy from his papers the catch made by him in his 5 pounds in 1880. He had the memorandum only for September and a part of October, but he stated that the fishing continued good (not as good as in October) up to about the middle of November when the stormy weather came on. That his pounds were located partly between the island and the mainland, but more off the island, the pots being in depths of 24 to 40 feet. It was a good spawning ground for whitefish about here. Since 1880 there hasn't been enough fish in that region for any fishing to pay expenses. S. H. Davis has tried at that place and C. Alpern has pounds on the north side of the Bay. The force of these remarks applies to all parts of Thunder Bay. There has been practically no whitefish fishing since 1880.--(Case).

Alpena.- The record of the catch made in the 5 pound nets on Sulphur Island during a part of September and October, 1880, was furnished, as follows, by Mr. Case:

Sept.	15,	-	2,568 lbs.	whitefish,	dressed.
"	16,	-	3,255 lbs.	"	"
"	16,	-	2,037 lbs.	"	round.
"	17,	-	1,226 lbs.	"	dressed.
"	22,	-	1,515 lbs.	"	round.
"	22,	-	1,510 lbs.	"	dressed.
"	23,	-	3,171 lbs.	"	round.
"	23,	-	2,550 lbs.	"	dressed.
"	24,	-	2,121 lbs.	"	"
"	24,	-	2,042 lbs.	"	round.
"	25,	-	3,355 lbs.	"	dressed.
"	25,	-	4,765 lbs.	"	round.
"	27,	-	2,000 lbs.	"	"
"	28,	-	3,575 lbs.	"	"
"	28,	-	5,000 lbs.	"	dressed.

(Mr. Case says that on September 28, they might have taken 10 tons of fish from the pounds had they the means of caring for them).

Sept.	30,	-	2,160 lbs.	whitefish,	round.
"	30,	-	1,960 lbs.	"	dressed.
Oct.	1,	-	1,175 lbs.	"	round.
"	2,	-	590 lbs.	"	dressed.
"	2,	-	1,355 lbs.	"	round.
"	4,	-	1,665 lbs.	"	dressed.
"	4,	-	1,050 lbs.	"	round.
"	6				
	to 10,	-	10,200 lbs.	"	
"	11,	-	1,242 lbs.	"	round.
"	11,	-	682 lbs.	"	dressed.
"	13,	-	2,000 lbs.	"	"
"	13,	-	3,761 lbs.	"	round.
"	15,	-	2,800 lbs.	"	dressed.
"	15,	-	3,900 lbs.	"	round.
"	18,	-	1,525 lbs.	"	"
"	19,	-	3,080 lbs.	"	"
"	19,	-	3,700 lbs.	"	dressed.

Oct.	20,	-	1,145	lbs.	whitefish,	round.
"	21,	-	2,600	lbs.	"	dressed.
"	21,	-	2,100	lbs.	"	round.
"	22,	-	1,035	lbs.	"	dressed.
"	22,	-	1,845	lbs.	"	round.

(Case).

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Alpena.- There is no question of the great decrease of whitefish in this region, especially in Thunder Bay which used to furnish a very extensive fishery. This decrease has also occurred on the grounds north and south of Thunder Bay.- (Rathbun).

Bay City.- Whitefish have fallen off very much.- (Beutel).

Bay Port.- We have not caught any whitefish this spring to amount to anything. They used to catch lots of whitefish and few pickerel. Now they catch the pickerel and hardly any whitefish.- (John Gillingham).

Port Huron.- It used to be years ago that the whitefish were more abundant than the trout, and my opinion is that the trout and whitefish in the lake are antagonistic and the trout eat up the small fry and do not give the little whitefish a chance to grow.- (Selkirk).

Southampton.- The whitefish have decreased or gone somewhere where we cannot find them. We do not get 1/4 as many as we used to.- (G. S. McCauley).

Southampton.- Whitefish are now comparatively rare and form but a small proportion of the catch. They were once very abundant.- (Rathbun).

They used to get about even quantities of trout and whitefish, but now they get very few of the latter.- (Rathbun).

Georgian Bay.- Whitefish are the principal ones that are decreasing.- (Elliott).

WHITEFISH; DECREASE --- LAKE HURON.

Cheboygan.- When Mr. Gill came here the fishing was good, but now it is hard to get fish and especially whitefish of any size. - (Rathbun).

Goderich.- Whitefish are pretty thoroughly cleaned out. They used to get about even quantities of trout and whitefish, but now they get very few of the latter. - (Rathbun).

Georgian Bay.- Whitefish are the principal ones that are decreasing. - (Elliott).

to get good fishing. We would catch mostly whitefish. When we went out to deep water we would get trout. There are trout catch many fish in these places, the whitefish have been caught out there. Now the trout fishermen could not live with all the whitefish they get. - (D. McFarley).

Southampton.- The reason of the decrease in the boats I suppose is because the whitefish are scarce. - (D. McFarley).

WHITEFISH; DECREASE --- LAKE HURON.

Goderich.- When I first started fishing here it was fully 1/2 whitefish. If I set my nets in some places where we used to get the whitefish so abundantly we might get an odd one and might not get any at all.- (Cragie).

Goderich.- The whitefish began to decrease about 16 years ago and that is the last they have been caught here in any quantity.- (Cragie).

Southampton.- When we started fishing first we never went out over 12 miles and used to get good fishing. We would catch mostly whitefish. When we went out to deep water we would get trout. Now we cannot catch many fish in those places, the whitefish have been caught out there. Now the trout fishermen could not live with all the whitefish they get .- (D. McCauley).

Southampton.- The reason of the decrease in the boats I suppose is because the whitefish are scarcer.- (G. S. McCauley).

WHITEFISH; CAUSE OF DECREASE---LAKE HURON.

Cheboygan.---I think whitefish will play out on these lakes before long anyway, there is so much dirt (D. Corlett).

Alpena.---The fishermen find more fault with the mill men and the saw dust than they do with catching the small fish. I presume over-fishing in the way they did had as much to do with it as anything, although it is a question in my mind even if the whitefish were as plentiful as they used to be whether they would come up in this bay, but if they were out in the lake they would come up somewhere (Tulian).

Alpena.---I think the cause of the decrease has been that there has not been a single fall since 1889 that the weather has been such that they could come back (Alpern).

Alpena.---I suppose these mills and the refuse out of the river, etc., was the cause of it. There were lots of mills here when we got the last fishing, but preceding that one year there was no fishing of any account.

The whitefish have been caught off and driven off their spawning grounds (Case).

Southampton.---The whitefish are not as common as they used to be for 2 reasons; the ground is dirtier and there are too many fishermen after them. There are so many men living by fishing and one has just as much right to fish as another, and there are too many making their living at it is another cause of the decrease (D. McCauley).

Southampton.---The decrease in the whitefish has been caused by their being caught off. They never took any small whitefish here in the gill nets and I do not think the seines caught them enough to cause the decrease entirely (Cosley).

WHITEFISH; RELATIVE HARMFULNESS OF POUND AND
GILL NETS---LAKE HURON.

Alepna.---The pound nets destroy the small whitefish by the millions. The pound nets are to a large extent, more so than the gill nets, responsible for the decrease. In the gill nets we would not get any much less than 1 1/2 or 2 lbs., but the pound nets sweep everything that comes along. I think the pound nets should not be allowed to fish if you want to keep the fish in the lake (Lincoln).

(D. McCauley).

Southampton.---They never took any small whitefish here in the gill nets (Gosley).

WHITEFISH; CATCH BY GILL NETS CAUSE OF DECREASE,
ETC.---LAKE HURON.

Port Huron.---The gill nets catch them all off before they can get ashore. The gill nets are ruining the fishing in Lake Erie, as they follow the fish right up until they catch them off (Selkirk).

Southampton.---We never used to take any small whitefish in the gill nets. Sometimes one might get tangled up, but as a general thing we would not get any less than 1 1/2 or 2 lbs. (D. McCauley).

Southampton.---They never took any small whitefish here in the gill nets (Cosley).

WHITEFISH; CATCH BY SEINES CAUSE OF DECREASE---
LAKE HURON.

Bay City.---They used to have big seining grounds around here for whitefish (Benson).

Goderich.---Whitefish have never been so abundant along that shore as they used to since they hauled them in in such quantities with the seines. I have seen boat loads of them coming from the seines. That was down around Sable River, which used to be a splendid seining ground. I think the seines have killed off enormous quantities of the small whitefish (Cragie).

Southampton.---The seines did some harm in taking ashore the spawn and small fish and in dragging the grounds (D. McCauley).

Southampton.---I do not think the seines caught them enough to cause the decrease entirely (Cosley).

Southampton.---The seines took enormous quantities of whitefish when they were at it. They have destroyed a large amount of whitefish. I know there was a man here by the name of McKenzie, and the year before that he caught

about 45 tons and the next year he ran in debt and went out. That was about 10 or 11 years ago.

The seines used to scoop them in on the sandy beaches. They get them in the seine because they drag them in (Dobson).

WHITEFISH; ENEMIES---LAKE HURON.

Alpena.---Almost anything feeds on whitefish. Suckers, especially, will eat the spawn, and sturgeon also. The trout do not eat spawn; they want something stronger (Alpern).

WHITEFISH; RELEASING ALIVE.

WHITEFISH; RELEASING ALIVE---LAKE HURON.

Cheboygan.---Small whitefish cannot be thrown out of the net as they will die. You pull them out of the mesh and they will die. If you take them out with a dip net the most of them would die (C. Corlett).

Bay City.---If we catch whitefish under 1 lb. we will put them back. They can put them back if they are careful (Penniman).

Bay City.---In our ponds at Northville when we take whitefish up in our fish net, $\frac{1}{4}$ inch mesh, and take them up just as careful as possible and drop them over into another pond and not handle them or anything, and out of 500 I will guarantee that there will be from 5 to 10 dead fish (Frank N. Clark).

Bay City.---The small whitefish could be thrown out alive if they are not handled (Benson)

Bay Port.---We generally throw the small whitefish out. We can dummy whitefish and they will live, as we have tried it. We used to dummy all our fish until about 8 years ago, and all the other fishermen around here dummy the

whitefish now. You can keep whitefish for 3 weeks in a dummy if you want to. We never had very many of them together, but we have had them where there were lots of pickerel and they seemed to stand it better than the pickerel. I have seen small whitefish brought into Bay City from Point Lookout that had been held in dummies for a week or ten days, and they were alive (James Gillingham).

Bay Port.---I am sure we could throw small whitefish over without injuring them. Years ago when I first started fishing we used to dummy whitefish and they would live as long as the pickerel. I do not use the dummy now. We bring the whitefish right ashore now and put them on ice and ship them right out. In those days we did not have so many nets and did not have so many fish to ship, and would have to keep them a few days before we could get enough to ship out. I think the fish were not of as good quality when they were kept in a dummy for several days (R. Gillingham).

Bay Port.---I think they could throw the small whitefish out if they tried and were willing to do it. It takes a little more time to do it. I would rather throw the small whitefish away.

They can throw them out if they are careful. A man can handle them with scoop nets all right. I do not think handling them with a scoop net would kill them and they are not obliged to handle them with their hands (Dubey).

Port Huron.---You can turn the small whitefish out of the pound nets without injuring them. The way we do, we generally have a scoop net and scoop them right out into the water (Selkirk)

Goderich.---I never saw but that the small whitefish would live just as long as the big whitefish. The small whitefish will not keep as long for shipping as the meat is tenderer.

You catch fish in a pound net or anywhere else and they are apt to die after you let them go. If you are dipping them out of a pound net the dip net catches them, and it does not take much of a rap to stun the fish, and the young fish are a very tender fish.

The fishermen as a rule are pretty honest

and could be trusted to throw the small whitefish out (Cragie).

Southampton.---Can sometimes throw the whitefish out alive (D. McCauley).

WHITEFISH; ASSOCIATION WITH

HERRING AND TROUT.

WHITEFISH; ASSOCIATION WITH HERRING - LAKE
HURON.

Cheboygan.- You cannot catch herring on the whitefish grounds when the whitefish are there. They set the fine mesh nets on the whitefish grounds. I saw 13 whitefish this spring that just weighed 1 lb. after they were dressed. It is all right to use 2 1/2 inch mesh if you use it in the proper place and at the proper time and you will not get any whitefish at all. In the fall is the time for herring, October and November. You can generally catch them on the same grounds the whitefish are on in the spring, but there will not be any whitefish there in the fall. I think they should not be allowed to put those small pound nets in at all in the spring. They do not want to put a herring net in over 30 feet. They catch whitefish in the spring in 12 feet sometimes. You might get a few herring through the spring and summer here, but it would not pay to fish for them then.-
(D. Corlett).

Alpena.- The herring run with the whitefish in the fall. Last fall those fisheries I speak of having a small catch, claim that had it not been for the herring they would have had pretty slim picking.- (Tulian).

Bay City.- Small whitefish run with the big whitefish in the spring and not with the herring.- (Beutel).

Bay Port.- We do not get many whitefish in the pounds in November. We get whitefish all the fall mixed in with the herring, but it is only a very small proportion of the catch.- (R. Gillingham).

Bay City.--The small whitefish are generally caught in with the herring, but it is not so now as much as it used to be.

Outside (the bay) you could not discriminate between the whitefish and herring movements as they get them together there, and you cannot discriminate between the seasons either (Sensed)

Bay Port.--The whitefish generally follow the herring so pretty close. The herring and whitefish are generally mixed together.

With the herring there are a few whitefish

WHITEFISH; ASSOCIATION WITH HERRING--LAKE HURON

Bay City.---We always get a few whitefish with the herring. They run with the herring some. We get a few in June and the latter part of May. We get them in the fall in the latter part of October when the herring come in (Penniman).

Bay City.---We get the most whitefish in October, and when the herring come on they drive the whitefish away, so some say. We do not find schools of different fish running together (Beutel).

Bay City.---The small whitefish are generally caught in with the herring, but it is not so now as much as it used to be.

Outside (the bay) you could not discriminate between the whitefish and herring movements as they get them together there, and you cannot discriminate between the seasons either (Benson)

Bay Port.---The whitefish generally follow the herring up pretty close. The herring and whitefish are generally mixed together.

With the herring there are a few whitefish

and a few pickerel mixed. Generally when we are getting the most of our herring we will get 150 or 200 lbs. mixed in with them. We hardly ever get many of two kinds mixed together, however. When one kind is abundant on the shore there is no other kind abundant also unless it is perch and herring. The scale trash goes together more than anything else (James Gillingham).

Bay Port.---I do not catch any small whitefish with the herring, but where the Gillinghams fish they get small whitefish, and they get them at Tawas Point (Dubey).

Port Huron.---I think the reason of it is we are catching more herring down at this end of the lake now, and where the herring are abundant you will not find whitefish. Herring and white fish do not run together (Selkirk).

Goderich.---Where you get a big haul of herring you do not get many No. 2 whitefish. You might get a ton of herring and not get 50 lbs. of whitefish. Whitefish and herring do not run together. If you get a few whitefish in a large amount of herring you would not notice them until you take them out. Where the

whitefish run very thick along with the herring they would have to make them stop catching herring altogether so as not to catch the whitefish. The fishermen as a general rule are pretty honest and could be trusted to throw the small whitefish out. Wherever I have ever fished the small herring and get young whitefish among them I would rather have the herring as when we salt them we would have to split the whitefish on the back and the herring we would split on the belly, which is easier, and they bring the same price (McClellan).

Goderich.---We used to catch quite a good many small whitefish among the herring at Lake View, and we would dip them out and a good many would die (McClellan).

Southampton.---They do not get any young whitefish in herring nets here. They get a few small trout. I never saw a whitefish in the herring nets in my life, and I never heard of their being caught (G. S. McCauley).

Southampton.---They never take any small whitefish in the herring nets. Our herring fishery does not interfere with the whitefish. I do not think I ever saw 2 whitefish in a herring net in my life.

Whitefish and herring will run together. I have seen herring and whitefish run together (Dobson).

WHITEFISH AND HERRING; ASSOCIATION - LAKE HURON.

Alpena.- Speaking about the size of the mesh in pound nets, he says: In lots of places the objection to a large mesh would be that you would not catch the herring. In some localities you could catch the herring separately, because their run does not come on until after the whitefish and in some places they both come on together. Here we used to get the whitefish in the forepart of the season and get the herring late. There is no spring fishing in this particular locality. The herring are principally taken in the fall, but they get a good many in the spring. When the herring were taken in the pound nets it would be late in the fall after the whitefish run was over.- (Case).

WHITEFISH; ASSOCIATION WITH HERRING - LAKE HURON.

Cheboygan.- They fish some for herring here in the fall, but pretend to be fishing for herring mostly and not for whitefish. Lots of them are fishing for whitefish when they claim they are fishing for herring and they get a good many small whitefish in that way and just destroy them. When they bring me a lot of those small whitefish, I smoke them.- I would sell them as small as 1/2 lb. fresh.- (Gill).

Goderich.- The herring and whitefish do not clash on this side of the lake at all. On our side herring fishing and whitefish and trout fishing are 2 different trades. In the fall they take a different size of mesh and fish for herring.- (Cragie).

WHITEFISH; ASSOCIATION WITH HERRING--LAKE HURON.

Goderich.- When I fished for herring here they never got anything but herring. We never set a gill net inside of 10 or 12 miles of the shore here. Whitefish and trout do not come in and herring would not go out that far if you were fishing for them.- (Eingster).

HERRING; ASSOCIATION WITH WHITEFISH.

LAKE HURON.

Southampton.- We do not get any whitefish in the same places that we get the herring, but get an odd trout occasionally where you catch herring. You will set a herring net and not get anything in it but herring, except perhaps an odd trout, no whitefish, pickerel or any other kind of fish.- (Cosley).

RELATIVE IMPORTANCE OF TROUT AND WHITEFISH.

LAKE HURON.

General.- The lake trout rank way ahead of anything else in Lake Huron, more than the whitefish, and it is lake trout that the dealers want put into lakes Huron and Superior. The dealers can handle them better than they can the whitefish. Booth's agent at Duluth thinks 2,500,000 lake trout will put more lbs. of fish in the lakes than the same amount of whitefish and will be worth more to the dealers.-(Wires).

WHITEFISH; ASSOCIATION WITH TROUT - LAKE
HURON.

Alpena.- Trout and whitefish used to run together considerably, but do not now. I had gill nets in this bay in 1878 and 1879 and our fish would run all the way from $1/4$ to $2/3$ whitefish. We catch a few whitefish in the gill nets with the trout now, but not many, but at that time we did. We do not get them together in the pound nets much if we get good fishing.- (Alpern).

WHITEFISH; ASSOCIATION WITH TROUT---LAKE HURON.

Southampton.---We would catch the trout
at the same time if we went to deep water.
We would catch some trout with the whitefish.
The market was very poor then. Whitefish
were then worth more than the trout(D.McCauley).

WHITEFISH; MISCELLANEOUS.

WHITEFISH; FOOD---LAKE HURON.

Detour.---The principal food of the whitefish is a small bug on the bottom. Thinks that is the main thing they live on. Also find a very small snail in whitefish (Butterfield).

Southampton.---The whitefish feed on worms. These worms we do not find as abundant as we used to. In Georgian Bay we used to get our nets full of them, but now we do not get them. These worms are on muddy bottom (D. McCauley).

Southampton.---The whitefish feed chiefly on worms. We used to see the worms when we were fishing for whitefish, and we get them on the nets now. I do not think we bring up as many, however, as we used to. At one time it was so you could scoop the worms right off the boat. I have never seen that food as thick in Georgian Bay as here (Cosley).

WHITEFISH; MARKETS; PREPARATION, ETC.--LAKE HURON

WHITEFISH TAKEN ON HOOKS--LAKE HURON.

Alpena.---Of course there is an increase in the price now. If these tugs got the same price they did formerly they could not pay their men, but wages are as low now as they were then, but it is only within a year or two that they cut the wages. We used to pay a man \$75 to run a tug. During the war whitefish sold for \$20 a barrel. I know I paid \$18 up on the north shore and we got \$20 for them in Sandusky (Case).

Goderich.---When we salt the whitefish we have to split them on the back and the herring we can split on the belly, which is easier, and they bring the same price as whitefish. If herring are looked after well you can salt them better by splitting them on the belly than on the back (McClellan).

WHITEFISH TAKEN ON HOOKS---LAKE HURON.

Alpena.---I hardly believe whitefish will take a hook. I always considered it a fish story, but still a man did catch whitefish here with a hook and line, but I think he hooked them by playing them up. He was fishing for perch (Alpern).

Bay Port.---I have caught whitefish with hook and line using bait in the shape of angle worms and little fish, but would catch them just as quick on a bare hook as on a baited hook (Dubey).

Southampton.---The whitefish will eat bait. I caught a couple off the pier here once with hook and line (G. S. McCauley).

SEINING FOR WHITEFISH---DETROIT RIVER.

The great fishery in Detroit River for whitefish is with the seines. It would be hard to fish anything else there as they could not fish pound nets or gill nets on account of the current. The Michigan Fish Commission seines at Belle Isle, but they do not get near as many fish there as at the Fort (Tulian).

LAKE TROUT; DISTRIBUTION.

MOVEMENTS.

SEASONS.

LAKE TROUT; DISTRIBUTION ---- LAKE HURON.

Detour.- Saw the catch of lake trout made in 30 gill nets out in Lake Huron about 25 miles south of Detour, depth 40 to 60 fathoms. The catch consisted of 152 lake trout weighing 286 lbs., dressed.--(Rathbun).

Detour.- In a pound net catch of fish from Thessalon, Ontario, landed at Detour, there were 6 to 8 lake trout, weighing from 1 1/2 to 3 lbs., apiece.--(Rathbun).

Harbor Springs.- Trout will work in any depth of water, the deepest there is in the lake. Outside you will not find, anywhere around this Bay, over 30 feet.--(Wilson).

Saginaw Bay.- They catch any amount of trout between Port Austin and around Au Sable, but when you come down into the bay in the shallow water they do not get a great many trout.--(Wires).

Bay City.- I do not know as they ever got many trout in Saginaw Bay.--(Beutel).

Bay Port.- The whitefish are a very small item in our catch, and the lake trout are still

fewer yet. I do not suppose there were 20 caught last fall in our nets.- (John Gillingham). ✓

Bay Port.- Get a few trout. We take trout both fall and spring and about the same as the whitefish. Do not get as many trout as we do whitefish.- (R. Gillingham). ✓

Sarnia.- At Kincardine I think they get more whitefish and trout than we do here.- (Wees). ✓

Goderich.- The trout spawn out in the center of the lake and they can take care of themselves. You take it 18 or 20 years ago and you would not get a trout at all inside of 15 fathoms. Would get all whitefish and now on the same ground you will get all trout.- (Eingster). ✓

LAKE TROUT; DISTRIBUTION; ABUNDANCE; IMPORTANCE.

LAKE HURON.

Spectacle Reef.- Spectacle Reef was the main fishing place for our nets and it is a big shoal. In fact it is the only place a tug can fish nicely. There is not room enough in any other place for such big gangs of nets.--(Butterfield).

Alpena.- Our most important fishery here has been the trout.--(Alpern).

Alpena.- In the spring we fish in deeper water and get smaller fish and would get a different species.--(Alpern).

Alpena.- They fish the whole shore north of here for trout. East of Presque Isle and east of Fishers, and pretty much all along that shore, where the conditions are suitable they get trout. They do not work in much along the shore and between North Point and False Presque Isle. Never heard tell of their fishing for shoal water trout down shore.

South of Big Reef proper they do not seem

to get any trout. I have fished there in summer and got lots of trout, but in the fall I never fish there for them.

Our best quality of trout are around the largest of the reefs. They are a nice round hard fish and keep good.--(Cleary).

General.-- They fish for lake trout right at the mouth of Thunder Bay and all the way down to Charity Islands. The fish are on the same reefs the entire season, except that they work up on the reefs more in the fall during the spawning season, October and November, and during the balance of the year they are in the neighborhood of those reefs. They never go very far from them. Presumes you can set a net at almost any place on Lake Huron you have a mind to and at almost any season and you will find lake trout.

On the Big Reef where the bulk of the trout are caught in Lake Huron, there is but one place where there is less than 10 fathoms and that is Nine Fathom Bank.

They fish the same ground from year to year. The tugs fish in the same localities.

They start up in the spring and fish up the mouth of Thunder Bay and not very far out, right in sight of land all the time, and sometimes within 4 or 5 miles of Thunder Bay Island. You go to any of those tug captains of Alpena and ask him the different places where he sets his nets and they will all tell you the same story, that they set on those grounds in the spring and fall, and that all those that are sea-worthy and can make the time, run out to Big Reef in the summer and they run over across to Port Austin Point in the summer. That is what they call the North Ground and the South Ground and out in the Bay on the Big Reef.

Some seasons they will find excellent fishing on the south shore or east side of the lake. They will commence sometimes and set in the mouth of Thunder Bay and will probably get pretty fair lifts in the fall and early spring. The general course of the boats is along the shore until they get up to Au Sable. Has an idea that sometimes the bulk of the fish move over from one side of

the Bay to the other. During the summer they will lift in 100 fathoms of water sometimes, but in the fall, during the spawning season, they figure for the shallow water. Has seen them on Spectacle Reef. When it gets so there is no fishing near home they will go out to the Big Reef. Sometimes has known them to run from Alpena until they could see Cove Island Light on the Canadian side. There is good fishing for lake trout over about all of Lake Huron with some exceptions. Fishing for lake trout is carried on practically along the entire American side of Lake Huron from one end to the other.--(Wires).

Saginaw Bay.-- The lake trout do not come up into the Bay. What few are caught are taken around the mouth of the Bay at Sand Island and the Charities. Late in the fall they get quite a few there and there are quite a few speared in the winter out around the Charities. The trout were never abundant here that I know of.--(Penniman).

Saginaw Bay.-- I do not suppose we had 1000 lbs. of lake trout last fall. We catch

them at the Charities. Do not get them inside of the Charity Islands to speak of.- (Beutel).

Saginaw Bay.- We get a very small proportion of lake trout, not as much as whitefish within 1/2. They get more trout down at the Charities.--(James Gillingham).

Saginaw Bay.- There are hardly any trout here and years ago there used to be a good many.--(John Gillingham).

Saginaw Bay.- I think the trout are about the same as they used to be. There never have been very many trout here.--(R. Gillingham).

Goderich.- The reason they do not fish trout nets up here is that they get no fish. Three years ago an American firm fished here and dropped about \$600. There are no trout within 45 miles of here.--(Cragie).

Southampton.- We get the fall trout and we get another kind on the Middle Ground between the deep water and the Inside Ground on muddy bottom in 30 to 40 fathoms. They are something like the fall trout only a smaller size and stouter and different shaped. Then

we get the deep water fish and then we get the reef fish. The reef fish are like Lake Superior fish. They are fat and stout. On some reefs you will get this kind, what we call the fall trout like we had to-day we get in shallow water and they will get another kind about 2 to 4 lbs. on the Middle Ground from 30 to 50 fathoms. Then when we get past that again we get the deep water trout and then when we get on the reefs in the middle of the lake we will get another kind. The reef trout are fat and stout, have small heads and a very stout body. The deep water trout have a big belly and small body and are a smaller fish. On the Middle Ground we get very chunky trout, but a very good fish to eat and for the market. They are different from the fall fish, they differ in color and shape. The fall trout have plainer colors. The Middle Ground trout are spotted more than the fall trout. The deep water fish are dark. The black trout are the fall trout. The trout we got to-day are Sand trout and they are lighter colored. The fall trout are generally dark colored.-(D. McCauley).

Southampton.- The trout they catch on the Big Reef you cannot get until in the fall. The big fall trout we get in shallow water sometimes and in deep water sometimes, 18 or 19 fathoms.- (Cosley).

Good trout not deeper than 40 fathoms. Sometimes we fish in deeper water than that.- (Alpern).

Alpern.- If we set on the north ground and the fish came on the spawning ground we would get nothing but whitefish, but where we fish what we call the Big Reef there is nothing but trout on it.- (Cleary).

Southampton.- The deepest water we fish in is 100 fathoms. We get small trout in that depth, but they are very good to eat.- (J. McCauley).

LAKE TROUT; DISTRIBUTION -- LAKE HURON.

Alpena.- Once in a while we get into 100 fathoms, but get very poor quality of fish there. We get our good trout not deeper than 40 fathoms. Sometimes we fish in deeper water than that.- (Alpern).

Alpena.- If we set on the north ground and the fish came on the spawning ground we would get nothing but whitefish, but where we fish what we call the Big Reef there is nothing but trout on it.- (Cleary).

Southampton.- The deepest water we fish in is 100 fathoms. We get small trout in that depth, but they are very good to eat.- (D. McCauley).

LAKE TROUT; DEPTH --- LAKE HURON.

Alpena.- I would not fish in any deeper than 35 fathoms for trout.- (Cleary).

Port Huron.- We can get as high as 50 fathoms of water trout fishing.- (Selkirk).

Goderich.- We do not fish in less than 30 fathoms. I have fished in shallow water in September lots of times.- (Eingster).

Southampton.- The trout we got to-day we got in from 20 to 25 fathoms on stony bottom.- (D. McCauley).

In places on the reefs the Honey-comb rock occurs very extensively and this rock frequently becomes caught in the gill nets and may be hauled on board. It tears the nets very badly and the fishermen endeavor to avoid such places.- (Wires).

LAKE TROUT; CHARACTER OF BOTTOM-LAKE HURON.

Does not think they take very many lake trout on muddy bottom. It is most all sand and rock bottom. The mud bottom in Lake Huron is pretty scarce, it is mostly sand on top.

The bottom of Lake Huron consists mainly of sand and rock material, and he does not know that the lake trout will be found on muddy bottom, but there is not much mud bottom in Lake Huron, it is covered with sand.

In places on the reefs the Honey-comb rock occurs very extensively and this rock frequently becomes caught in the gill nets and may be hauled on board. It tears the nets very badly and the fishermen endeavor to avoid such places.--(Wires).

LAKE TROUT; MOVEMENTS; HABITS; SEASONS.

LAKE HURON.

Detour.- The trout come right close in shore in the fall. Will come into 3 feet of water. In the bays they come in very shallow water.- (Butterfield).

Mackinaw City.- The trout, I think, are more scattered than the whitefish. The trout will be scattered all through the net, while the whitefish will be all in a body. The latter seem to go in schools more than the trout do.- (Robinson).

Alpena.- The trout go in schools and when their spawning time comes they go together. We get them in spots in our nets. Some nets will fish very heavily and then may lift 2 or 3 nets and get only here and there a fish. We lift about 7 miles of nets a day and if they were pretty well distributed we would get a pretty good catch of fish.- (Alpern).

General.- These lake trout do not move around very much. Does not know that they make very long migrations. Knows they fish

the same ground from year to year. The tugs fish in the same localities.

The trout on the west side of Lake Huron might get on the east side occasionally, but no regular movement occurs. Has an idea that sometimes the bulk of the fish move over from one side of the Bay (Thunder?) to the other.

His general conclusions are that there are no regular movements of the lake trout except those connected with the spawning season.

Has never seen the trout in schools. So far as his experience goes and from the information he has, there is no evidence that the lake trout school. In shallow places, near Thunder Bay Island and Middle Island, where they can be plainly seen from the surface and where they are speared to some extent, they are seen scattered and not banded together.-(Wires).

Southampton.- They will come in in September to take a cruise to the grounds before they begin spawning. They will come in and go away before they spawn, like a bird will

build its nest. They will start building the nest before they lay the eggs and that is the nature of the fish. They will come in and go away again preparing for the hatchery.

The trout do not go together as much as the whitefish.

I am sure the trout we get on this side of the lake go to the other side. What is to hinder them? I believe the trout go from one place to another, just as cattle will when they are feeding.--(D. McCauley).

Southampton.-- When the trout come on the rocks they come on in a rush. I think the trout keep in bodies about the same as the whitefish. There is one thing about the fall fishing for trout, you cannot catch those fish at any other time of the year. They seem to live on top of the surface and live on nothing but flies, and in the fall they will go down. You can troll in the summer and catch those trout, but now you cannot catch them.--(Dobson).

LAKE TROUT; MOVEMENTS --- LAKE HURON.

Alpena.- I have never tried fishing midway between the bottom and the surface. The trout come up near the surface in the summer. If the water is still the trout swim high. Never saw them schooling at the surface, however.- (Alpern).

Goderich.- The black trout have certain movements. At the full of the moon they will gather on the hard bottom and the deep water fish are always below after a storm. We do the best fishing in the full of the moon. Trout will gill in the day time as well as at night. You set trout nets in deep water in the summer and you will see the trout jumping all around and you will catch a good many trout before the nets are clear down. I think if we could keep the nets nearer the surface we would catch a good many more fish.

The only way you can follow trout is this: If a boat is drifting to the south and one to the north and you get a lot of fish in the nets to the south and they are mostly dead,

and the nets to the north get live fish, you can tell that way. I think the trout rise up and play around and then settle down again.-
(Eingster).

LAKE TROUT; HABITS --- LAKE HURON.

Port Huron.- We find the trout work down here among the moss or grass, and if there is a little wind the water is not deep enough for them and they work back into deeper water.

The trout come up to feed on bugs in the summer, but it only takes a little ripple to drive them down, and especially in the night they go to the bottom any way. Our nets fish the best in the night. I think if we could run a drag seine in the deep water that there are times when we could catch a good many trout.- (Selkirk).

Goderich.- After very still weather here in June and July our fishing slacks off and it is on account of the trout coming up to the surface.- (Cragie).

General.- The fish are on the same reefs the entire season, except that they work up on the reefs more in the fall during the spawning season, October and November. During the balance of the year they are in the neighborhood of the reefs, they never go very far

LAKE TROUT; SEASONS --- LAKE HURON.

Mackinaw City.-- They catch lake trout all through the winter and then in the spring they come on in schools. They are the most abundant the forepart of June. That is, they are more abundant at that time than any other until the spawning season.--(Robinson).

Alpena.-- I think those large trout are always around the shores. We get them all through the season more or less. Do not get them much during the summer, but we get them during the spring.--(Alpern).

Alpena.-- We get more trout during November than any other one month. It is the best month in the season for trout with gill nets, but we get good fishing in March and April also.--(Cleary).

General.-- The fish are on the same reefs the entire season, except that they work up on the reefs more in the fall during the spawning season, October and November. During the balance of the year they are in the neighborhood of the reefs, they never go very far

from them. Presumes you can set a net at almost any place on Lake Huron you are a mind to and at almost any season, and you will find lake trout.--(Wires).

Bay Port.-- We get the trout about the same time as we do whitefish. We get them towards the last of October, but do not get any in September. We do not get any whitefish whitefish or trout until the cold weather comes on.--(James Gillingham).

Goderich.-- The big black trout are a fish of which we catch very few in the summer.--(Eingster).

Southampton.-- We never get those big trout in the summer.--(D. McCauley).

Southampton.-- The trout they catch on the Big Reef you cannot get until fall.--(Cosley).

LAKE TROUT; SEASON --- LAKE HURON.

Detour.- We do not get any trout in November at all.-(Butterfield).

Alpena.- About $1/5$ of the season's catch of trout is taken in November and it might be $1/4$.-(Lincoln).

LAKE TROUT; VARIETIES.

SISCOWET.

LAKE TROUT; VARIETIES - LAKE HURON.

Detour.- Deep water trout are smaller and are a different trout altogether. They differ in size, shape and fatness. They are a very fat fish. They are something the same as the siscowet, but not quite. They are not fat enough to go to pieces when they are fried.- (Butterfield).

Alpena.- I think there are 20 different varieties of trout. We have the shoal trout, common trout, and then we have the white trout, a big belly white trout, it is not like the siscowet, but its shape is like the siscowet, but it is not quite so fat. We have a little reef off Presque Isle and whenever we put nets there we always get some of that class of trout, they are short and thick and almost white, but they are a good fish. One or 2 years I caught lots of them in my trap nets.- (Alpern).

Alpena.- I fish sometimes in 75 feet of water and we get a kind of pot gutted trout of poor quality. They are not so very fat

but they are a very thick bellied and pot-gutted fish and do not keep very well.-(Cleary).

Goderich.- If you fish on the reefs you generally get a bigger trout and in deeper water they are not quite so large. I could tell whether the fish came from the top of the reefs or deep water, because the ones from deep water are a chunkier fish and those from the top of the reefs are a slimmer and harder fish and not so much bloated up.

When we get in deep water the fish are fatter on the belly and have more insides in them than the fish we catch on top of the reefs, as a rule, and I should judge they were a little fatter. I do not see as there is much difference in the quality, only in the shape. The deep water fish are a little more like the siscowet.-(Cragie).

Goderich.- We get very few lake trout in the pound nets. We get what we call sand trout. They are a big, heavy trout.-(McClean).

Goderich.- There is a certain kind we call red or yellow fin and they begin to spawn the latter part of August. They are a deep

water fish, spawning on the outside reefs. Then a smaller deep water fish comes next in October.- (Eingster).

Southampton.- Those big trout are what we call fall trout, they are like the ones we got to-day.

We get the fall trout and we get another kind on the Middle Ground between the deep water and the Inside Ground, on muddy bottom in 30 or 40 fathoms. They are something like the fall trout, only of smaller size and stouter and different shape. Then we get the deep water fish and we get the reef fish. The reef fish are like Lake Superior fish, they are fat and stout. On some reefs you will get this kind. What we call the fall trout like we had to-day, we get in shallow water, and they will get another kind about 2 to 4 lbs on the Middle Grounds from 30 to 50 fathoms. Then when we get past that again we get the deep water trout, and then when we get on the reefs in the middle of the lake we will get another kind. The reef trout are fat and stout with small head and a very stout

body. The deep water trout have a big belly and small body and are a smaller fish. On the Middle Grounds we get very chunky trout, but a very good fish to eat and for market, they are different from the fall fish, they differ in color and shape. The fall trout have plain-er colors. The Middle Ground trout are spotted more than the fall trout. The deep water fish are dark. The black trout are the fall trout. The trout we got today were sand trout and they are lighter colored. The fall trout are generally dark colored.-(D. McCauley).

Southampton.- The trout they catch on the big reef you cannot get until in the fall. They are a different kind of fish and are smaller and have a big belly and the others are hard and slim. These trout will run about 4 lbs and they do not get many small ones. The fall trout are big fellows running about 8 or 10 lbs. We get them in shallow water sometimes and in deep water sometimes, 18 or 19 fathoms.-(Cosley).

LAKE TROUT; VARIETIES --- LAKE HURON.

Alpena.-the "big skin" trout is what the fishermen call the small run of trout they get off the bay here.- (Tulian).

Southampton.- We do not catch the same kind of fish in the summer that we catch in the fall. They are a different species. I can pick out for you 2 or 3 different kinds of trout. Those we are catching now you cannot catch in the summer at all. The trout we catch now are more like the salt water salmon, and the other is kind of white in the flesh. There is not much difference in their shape. The salmon trout we catch now are black and the others are spotted.- (Dobson).

LAKE TROUT; VARIETY -- LAKE HURON.

Goderich.- I think there are 3 or 4 different breeds of trout. In the shallow water you get a bigger trout. In the deep water you get small ones weighing 2 1/2 or 3 lbs. and they are fatter.- (Eingster).

Southampton.- The fish in the deep water are a different fish altogether. They are a smaller fish, never growing any larger.- (Dobson).

LAKE TROUT; QUALITY --- LAKE HURON.

Alpena.- Our trout have the best reputation today in New York of any. In olden times it used to be the Mackinaw trout, but for the last 10 or 15 years it has been Alpena trout, and our frozen fish always bring a better price. The size commenced it. We have always caught medium sized fish. Once in a while we catch a trout 35 or 40 lbs., but will perhaps only catch 2 or 3 in a week. They are a hard thing to sell. All you can use is once in a while one for a large hotel.- (Alpena).

SISCOWET --- LAKE HURON.

Mackinaw City.- Once in a while they bring a siscowet in here, but very seldom. In Lake Huron, the other side of Bois Blanc Island, they get a few.- (Robinson).

Harbor Springs.- There are some siscowet but not a great many. You will get them more as you go out further in the Bay. They are a very fat fish with a small head. You will get them in the deepest water.- (Wilson).

Cheboygan.- We get the siscowet here sometimes, but not many.- (Gill).

Alpena.- Do not get any siscowet here except one once in a while.- (Alpern).

Alpena.- We do not get many siscowet here, but once in a while get one. Get more of them up in Lake Superior. They are an awful fat fish.- (Cleary).

Port Huron.- We do not get any siscowet up here and I am glad we do not get them as they are too fat for us.- (Selkirk).

Goderich.- I never get any siscowet.- (Cragie). (Under Varieties of Trout will be

found reference to certain fat trout which he catches in the deeper water).

The trout we get in the deep water are a different fish from what we get along the reefs. They are smaller and softer and more like the silverside. On the reefs we get all those long black trout - (Rainwater).

LAKE TROUT REGULATED WHITEFISH -- LAKE HURON.
SISCOWET -- LAKE HURON.

Goderich.- The trout we get in the deep water are a different fish from what we get along the reefs, they are smaller and softer and more like the siscowet. On the reefs you get all those long black trout.- (Eingster).
Former years we did not take the whitefish, but now we do for anything we can get and we take trout because they are more plentiful. At one time there were plenty of whitefish and we did not bother about catching trout as whitefish brought more money. At that time we could get all the trout we wanted any time.- (Lincoln).

LAKE TROUT REPLACING WHITEFISH - LAKE HURON.

Alpena.- Whitefish at one time were very abundant here. At certain times of the year you would get them only in the bay, but with gill nets we would get them outside in certain depths of water and on certain grounds. In former years we did not take the trout, but now we go for anything we can get and we take trout because they are more plentiful. At one time there were plenty of whitefish and we did not bother about catching trout as whitefish brought more money. At that time we could get all the trout we wanted at any time.- (Lincoln).

TROUT REPLACING WHITEFISH-- LAKE HURON.

TROUT REPLACING WHITEFISH-- LAKE HURON.

Alpena.- They used to take mostly whitefish when they first commenced. Mackinaw trout used to be rather a rare thing. Now it is right the other way and you will hardly see half a dozen whitefish in a lift. In the spring they will have a few and then again in the fall.- (Case).

TROUT REPLACING WHITEFISH -- LAKE HURON.

Alpena.- When I first came here the trout were not near as plenty, but there were more whitefish; but now it is right the other way. About all they catch is trout. Of course in the fall and early in the spring they get whitefish.- (Case).

LAKE TROUT; SIZE.

LAKE TROUT; SIZE -- LAKE HURON.

Detour.-- The average weight of the trout, the fall fish, will go about 4 lbs. apiece, but the summer fish will not go that much. Deep water trout are smaller and are a different trout altogether. The largest trout I got this year weighed 50 lbs. round. That is about as large a one as I ever saw.-- (Butterfield).

Detour.-- The average size of trout is about 5 or 6 lbs.

I do not know that they have diminished in size, but cannot tell that as our gill nets are the same size mesh as formerly and catch the same size.--(Sims).

Mackinaw City.-- The largest trout we have caught weighed 42 lbs. I have heard of their being taken weighing 75 lbs, but we have never seen any here that large.--(Robinson).

Alpena.-- I think out on this Big Reef they are catching smaller fish than they used to, but that is the only place I know of where there is any difference. In Lake Michigan I think they are catching about the same size

of trout. The shallow water trout would probably average 6 lbs. I do not think I have ever seen spawn in any trout that would weigh less than 3 or 4 lbs. Those Lake Michigan trout will average probably 12 or 15 lbs.-(Tulian).

Alpena.- The size is the same as it was. It depends upon where you are fishing your nets. If you go in deep water you will catch smaller trout. The depth regulates the size of the fish.

In the spring I think the trout average about 2 1/2 lbs, and this time of year we are fishing in shallow water and get the larger fish. In the fall our trout will average 3 lbs.-(Alpern).

General.- He has seen Lake trout weighing as much as 40 lbs, and the average size would be 2 1/2 to 3 lbs.

In some places the fish run small and at Detour 1/2 of the catch would be under 1 1/2 lbs.-(Wires).

Bay Port.- We get pretty good sized trout, generally about 6 to 8 lbs.-(James Gillingham).

Port Huron.- Our trout run from 2 to 5 lbs. Occasionally we will get one less than 2 lbs. but hardly ever.- (Selkirk).

Goderich.- The fish from the tops of the reefs will range from 3 1/2 to 4 lbs, and the deeper ones about 3 lbs. There has not been any difference in size these last 3 years from what they used to be, and I think this year they are fully as large as they were last.

The trout we get along the reefs, some of them run as high as 12 lbs., and I have caught them as big as 52 lbs right out on the edge of the reef. This year I have caught about 6 or 7 weighing from 25 to 30 lbs, and one weighing 40 lbs. We ship the big ones also. I think they cut them up and sell them in the market. I never ate any of those big trout.- (Cragie).

Southampton.- The market will take 1 lb. fish. Some would rather have those than 1 weighing 5 lbs. Have sent them down the country in Canada and into the states also. It is very seldom you will see any weighing

less than 2 lbs., however.-(D. McCauley).

Southampton.- The trout they catch on the big reef you cannot get until in the fall. They are a different kind of fish and are smaller and have a big belly on them and the others are hard and slim. Those trout will run about 4 lbs. They do not get many small ones. The fall trout are big fellows running about 8 and 10 lbs.-(Cosley).

(Cosley).

LAKE TROUT; SIZE ---- LAKE HURON.

Mackinaw Island.- You get trout in very deep water where you fish for whitefish and they go about 1 1/2 lbs., but there are very few of them.- (Wilmot).

Alpena.- On the Big Reef where we catch trout during the spawning time they are all big fish, weighing from 5 to 8 lbs. as a rule.- (Cleary).

Southern.- The small trout range from 2 1/3 to 3 lbs. in weight. We do not get any smaller than 2 lbs. as they go right through the nets.- (Deben).

Southern.- In the catch of small trout which we observed at this place, brought in from gill nets, taken in depths of 20 to 35 fathoms, there were about 10 trout weighing from 6 to 10 lbs. each, 15 to 20 of the trout weighed less than 3 lbs. each, and the greater part of these were not over 1/2 lb. each, some were as small as 1/4 lb. I have preserved the smallest in alcohol.- (Deben).

LAKE TROUT; SIZE --- LAKE HURON.

Alpena.- I do not think there is much difference in the size of the trout.- (Lincoln).

Bay Port.- The few trout we get run quite fair in size. Very seldom we get one smaller than 2 or 3 lbs.- (John Gillingham).

Southampton.- We get trout from 35 to 50 lbs. here. Get them on the 9 fathom bank that size.- (G. S. McCauley).

Southampton.- The small trout range from 2 1/2 to 3 lbs. in weight. We do not get many smaller than 2 lbs. as they go right through the nets.- (Dobson).

Southampton.- In the catch of small trout which we observed at this place, brought in from gill nets, taken in depths of 20 to 35 fathoms, there were about 10 trout weighing from 6 to 10 lbs. each. 15 to 20 of the trout weighed less than 1 lb. each, and the greater part of these were not over 1/2 lb. each, some were as small as 1/4 lb. I have preserved the smallest in alcohol.- (Rathbun).

LAKE TROUT--LAKE HURON.

AVERAGE SIZE AND RANGE OF SIZE TAKEN

BY EACH METHOD.

Detour. The average weight of the fall trout will go about 4 pounds apiece. Summer fish not so much. Deep water trout are smaller.

The largest trout I got this year weighed 50 pounds round. That is about as large a one as I ever saw. (S.Butterfield).

Detour. The average size of the trout would be about 5 or 6 pounds. (T.Sims).

Mackinaw City. The largest trout we have caught weighed 42 pounds. I have heard of their being taken weighing 75 pounds, but have never seen any here that large. (W.E. Robinson).

Alpena. I never knew of any very small trout being caught.

Would see them weighing probably one pound.

These shallow water trout would probably average 6 pounds. (E.A.Tulian).

Alpena. The size is owing to where you have your nets. In deep water you will catch smaller trout.

The depth regulates the size of the fish.

In the spring I think the trout average about 2 1/2 pounds.

At this time we are fishing in shallow water and get larger fish. In the fall our trout will average 3 pounds. (C.Alpern).

Alpena. A 2 pound trout will go through a gill net where it would not in a pound net. (Jas.Cleary).

Alpena. Has seen lake trout weighing as much as 40 pounds, and an average size would be 2 1/2 to 3 pounds.

Has never stripped a lake trout with ripe

spawn weighing less than 2 pounds.

It is possible that the smallest size which he has handled with ripe spawn was as small as a pound and a half.

At Detour one-half of the catch would be under 1 1/2 pounds and none would be ripe, and, therefore, mature fish, rather indicating a smaller range in size in that locality.

Never saw any lake trout under 8 inches long.

Rarely take any very small lake trout in the pound nets. (S.P.Wires).

Bayport. We get pretty good size trout, generally about 6 to 8 pounds. (James Gillingham).

Port Huron. Our trout run from 2 to 5 pounds. Occasionally we will get one less than 2 pounds, but hardly ever. In fact, our meshes will not catch a trout much smaller than 2 pounds. (A.W.Selkirk).

place. (C.S.McCauley).

Goderich. If you fish on the reefs, you generally get a bigger trout, and in the deeper water they are not quite so large.

The fish from the top of the reefs will range about from 3 1/2 to 4 pounds, and the deeper ones about 3 pounds.

Some that we get on the reefs run as high as 12 pounds and I have caught them as big as 52 pounds right on the edge of the reef. This year I have caught about 6 or 7 weighing from 25 to 30 pounds, and one weighing 40 pounds. (Jno.Cragie).

Southampton. Sometimes we would get a small trout in the gill nets by their getting meshed or their teeth getting tangled up.

It is very seldom you will see any trout weighing less than 2 pounds. (D.McCauley).

Southampton. We get probably from 20 to 40 pounds of small trout in a lift of the gill nets. They will weigh about 1 pound apiece. (G.S.McCauley).

Southampton. The trout they catch on the big reef you cannot get until the fall. They are smaller and have a big belly. Those trout will run about 4 pounds.

The fall trout are big fellows running about 8 and 10 pounds. (F. Cosley).

Port Huron. Our gill net mesh will not catch a trout much smaller than 2 lbs.--(Selkirk)

Southampton. The trout we caught today were caught in a small mesh. It is a good place to set for big trout in the fall.--(D. McCauley).

Southampton. We could not do anything with the mesh smaller than 4 1/2 inches. I think that size is about right.--(Cosley).

LAKE TROUT; SIZE AND SIZE OF GILL MESH.

LAKE HURON.

Alpena.- A 2 lb. trout will go through a gill net where it would not in a pound net.- (Cleary).

Port Huron.- Our gill net mesh will not catch a trout much smaller than 2 lbs.- (Selkirk).

Southampton.- The trout we caught today were caught in a small mesh. It is a good place to set for big trout in the fall.- (D. McCauley).

Southampton.- We could not do anything with the mesh smaller than 4 1/2 inches. I think that size is about right.- (Cosley).

He could get through easily. There is nothing in the small trout that we catch because they are not fit for market or anything else.- (Gragle)

Southampton.- Sometimes we would get a small trout in the gill nets by their teeth becoming caught or by getting tangled up.- (D. McCauley).

LAKE TROUT; CATCH OF SMALL FISH.

LAKE HURON.

Detour.- Mr. Connable came up here and fished with a small mesh and caught little trout that were no use. We do not believe in catching fish that are too small for market.- (Sims).

Cheboygan.- I never knew of any very small trout being caught. We see them weighing probably 1 lb.- (Gill).

Alpena.- Of little trout we will get perhaps only half a dozen at a lift.- (Cleary).

Goderich.- Some claim that when you catch the little trout you are using too small a mesh or else you would not catch those trout, but this trout gets caught with its mouth open. He could get through easily. There is nothing in the small trout that we catch because they are not fit for market or anything else.- (Cragie)

Southampton.- Sometimes we would get a small trout in the gill nets by their teeth becoming caught or by getting tangled up.- (D. McCauley).

Southampton.- We get probably from 20 to 40 lbs. of small trout in a lift of the gill nets. They will weigh about 1 lb. apiece.-(G. S. McCauley). They are a peculiar fish, somewhat like an eel and a small trout will go through a very small hole. We are not troubled with them under 1 1/4 lbs.-(Robinson).

Mackinaw City.- No small trout are taken about here and there is no question as to their size as brought in by the fishermen.-(Robinson).

LAKE TROUT; NOTES ON SMALL ----- LAKE HURON.

Mackinaw City.- We are not bothered so much with small trout. They are a peculiar fish, somewhat like an eel and a small trout will go through a very small hole. We are not troubled with them under 1 1/4 lbs.- (Robinson).

Mackinaw City.- No small trout are taken about here and there is no question as to their size as brought in by the fishermen.- (Rathbun).

LAKE TROUT; NOTES ON THE YOUNG---LAKE HURON.

MINIMUM SIZES TO BE MARKETED.

Alpena.- I think the young trout live in deep water. Sometimes we will catch trout of quite small size in gill nets and we catch more of them in deep water than in shallow water, but in the spring, when the fishing is abundant in deep water, we catch quite a few small trout. We catch them of all sizes.- (Alpern).

General.- Never saw any lake trout under 8 inches long, he was a year old at least. Thinks the young lake trout are distributed through the lake among the older ones, but apparently they do not come, at least not in abundance, into the shallow water where the pound nets are set, because they rarely take any very small lake trout in the pound nets.- (Wires).

Michigan. I would save about a 2 pound trout, round, for market, which would be the smallest. The markets do not care about taking smaller fish fresh. (John Craigie).

LAKE TROUT--LAKE HURON.

MINIMUM SIZES TO BE MARKETED.

Detour, Michigan. Mr. Connable came up here and fished with a small mesh and caught little trout that were no use. Do not believe in catching fish that are too small for market. (T.Sims).

Alpena, Michigan. Of little trout we get only 1/2 a dozen at a lift. We always drop them right overboard, as, if we brought them ashore, we could not sell them. (Jas. Cleary).

Alpena, Michigan. If a minimum size trout were to be fixed for throwing away, it should be placed under one pound. (S.P. Wires).

Goderich. I would save about a 2 pound trout, round, for market, which would be the smallest. The markets do not care about taking smaller fish fresh. (John Cragie).

Southampton. The smallest size trout that should be marketed would be about 1 pound. The market will take one pound fish. (D.McCauley).

We do not want to catch them under 2 1/2 pounds. It would be better to throw out all trout under 2 1/2 pounds that would live. (G.S.McCauley).

Southampton. The smallest size trout that should be marketed is about 2 pounds. (J.Dobson).

Port Huron. A trout less than 1 1/2 lbs., dressed, should not be marketed. (Selkirk)

Soderich. The smallest size trout that should be marketed would be about 1 1/2 lbs round, and 1 1/4 lbs., dressed. I think nothing smaller than that ought to be taken. (Gracie).

Soderich. Two lbs. would be small enough for trout to market. My hauls of fish will

LAKE TROUT; MINIMUM SIZE --- LAKE HURON.

Mackinaw City.- We are not troubled with trout under 1 1/4 lbs. I would not market trout under that size and the same with whitefish, that is, dressed. Those are the smallest size we market fresh. Anything smaller than that goes into the salt barrel. The reason we cannot market those small fish fresh is that they are too soft and will not stand the handling.-(Robinson).

Alpena.- I do not think they ought to take anything much less than 2 lbs for whitefish, and trout probably a little larger, say 3 lbs.-(Tulian).

Port Huron.- A trout less than 1 1/2 lbs., dressed, should not be marketed.-(Selkirk).

Goderich.- The smallest size trout that should be marketed would be about 1 1/2 lbs round, and 1 1/4 lbs., dressed. I think nothing smaller than that ought to be taken.-(Cragie).

Goderich.- Two lbs. would be small enough for trout to market. My hauls of fish will

average 3 or 4 lbs.--(Eingster). LAKES MURON.

Southampton.-- Anything smaller than 2 lbs. would be of no use to us.--(Dobson).

were to be fixed for throwing away it should be placed under 2 lb. Certainly the limit should not be above 1 lb.--(W. W.).

Edenrich.-- I would send about 2 lb. trout, round, to the market, which would be the smallest. The market do not care about taking smaller fish fresh.--(Craigie).

Southampton.-- The smallest size trout that should be marketed should be about 1 lb. The market will take 1 lb. fish.--(D. McCauley).

Southampton.-- We do not want to catch them under 2 1/2 lbs. It would be better to throw out all trout under 2 1/2 lbs. that would live.--(G. S. McCauley).

Southampton.-- The smallest size trout that should be marketed is about 2 lbs.--(Dobson).

Edenrich.-- The Buffalo Fish Company has refused to purchase salmon trout weighing less than 1 1/2 lbs. dressed, from the fishermen on the Canadian side of Lake Huron. These

LAKE TROUT; MINIMUM SIZE --- LAKE HURON.

Alpena.- If a minimum size of trout were to be fixed for throwing away it should be placed under 1 lb. Certainly the limit should not be above 1 lb.--(Wires).

Goderich.- I would send about 2 lb. trout, round, to the market, which would be the smallest. The markets do not care about taking smaller fish fresh.--(Cragie).

Southampton.- The smallest size trout that should be marketed should be about 1 lb. The market will take 1 lb. fish.--(D. McCauley).

Southampton.- We do not want to catch them under 2 1/2 lbs. It would be better to throw out all trout under 2 1/2 lbs. that would live.--(G. S. McCauley).

Southampton.- The smallest size trout that should be marketed is about 2 lbs.--(Dobson).

Detroit.- The Buffalo Fish Company has refused to purchase salmon trout weighing less than 1 1/2 lbs. dressed, from the fishermen on the Canadian side of Lake Huron. These

fishermen have been increasing their catch lately by the addition of many small trout which are not salable and are not received in good condition. When they have been taken to Detroit it has been necessary to throw many of them away.-(McDonald).
 pretty well for market. (E. J. ...)

LAKE TROUT; MINIMUM SIZE --- LAKE HURON.

Mackinaw Island.- I think everything under 2 lbs. should be allowed to go free.- (Wilmot).

Goderich.- Anything less than 2 lbs. is pretty small for market.- (Eingster).

LAKE TROUT; MINIMUM SIZE --- LAKE HURON.

General.- The minimum size of marketable trout should be 1 or 1 1/2 lbs. A man would be forced to throw away half his lift some-times if he threw away fish that weighed a lb. or anything over that.-(Wires).

LAKE TROUT; SPAWNING.

LAKE TROUT; SPAWNING GROUNDS -- LAKE HURON.

(See also under Spawning Seasons).

Detour.-- Their spawning grounds are wherever they find rocks. The main spawning ground is on the south side of Drummond Island.-(Butterfield).

They spawn outside on the shallows.-(Sims).

Mackinaw City.-- They spawn on the rocky reefs. The whitefish spawn on the reefs also but not on the same ones.-(Robinson).

Cheboygan.-- The trout spawn in October but not much in September. They come ashore then, but they are around shallow water quite a while before they spawn.-(D. Corlett).

Alpena.-- The shallow trout that come up in September to spawn, go up in shallow water sometimes not over 5 or 6 feet and they do not fish in deeper water than 15 or 20 feet for them. Out on the Big Reef the water runs from shallow water to a good depth. North of Thunder Cape between there and Little Island I think they catch more whitefish than they do trout, but south of there, in the ^(middle?)

direction of Can Buoy they catch those shallow trout during the spawning season.--(Tulian).

Alpena.-- Our shallow trout spawn the forepart of September. We call them shallow trout because they come on along the islands on the rocks to spawn, and they are a larger class of trout, much larger than the deep water trout. It is a black trout and a very handsome fish.

Their spawning ground is all the way from 12 to 16 fathoms of water, that is the Big Reef we have in the middle of Lake Huron. It is about 40 miles from the mouth of the river here.--(Alpern).

Alpena.-- The shallow water trout spawn around Thunder Bay Island, Middle Island, and close to shore. The spawning points are rocky ground mostly.--(Cleary).

General.-- They have in Lake Superior 2 runs of trout and they also have in Lake Huron what they call the "early" and "late" run. The early run comes in very close to shore. They spawn in very shallow water. There are certain grounds where those fish will run

right up into 3 or 4 or even 2 feet of water and spawn during the last days of September. They will come on as early as the 15th in some places and that run will last until about the first of October. (See letter of S. P. Wires to Mr. Ravenel, dated June 29, 1894).

Lake trout simply go into shallow water to spawn and when they are through spawning they drop off into deeper water.

The lake trout spawn upon reefs and sand banks and in depths of 8 or 9 fathoms to 40 fathoms, on the Big Reef in Lake Huron. On Spectacle and Garden City reefs they would come into depths of 2 to 20 fathoms. In the height of the spawning season they seem to seek the shallowest waters on these different reefs in the greatest numbers and the best fishing can be done in those shallow places.

In Lake Huron the fish spawn on the Big Reef, off the mouth of Saginaw Bay, on Spectacle Reef, on Garden City Reef, in the vicinity of Bois Blanc Island and in the vicinity of Thunder Bay Island and Middle Island. Middle Island is about 14 miles north of Thunder Bay

Island The early and late trout also spawn off Presque Isle. In places they occasionally find a spawner along the shore during the spawning months, but only rarely so far as he knows. A good spawning ground off Port Austin, which is occupied on the early run but not on the late run.-(Wires).

Bay Port.- I do not know of any spawning grounds for trout here.-(James Gillingham).

Port Huron.- I have never noticed spawning trout in the gill nets. They spawn on Saginaw Reef and our fishermen could tell you better than we about that because the fish are all dressed on the tug.-(Selkirk).

Goderich.- I have seen after a big blow where the trout come largely in on the rocks that the beach would be fairly scattered along with trout spawn.

The small trout must spawn on these reefs. We have no trout spawning here in October but they come in on the rocks then. Those places up around the Manitoulins, that is where they go in for black trout in October; but of course the trout is not fit to spawn

until November.--(Cragie).

Goderich.-- There is a certain kind we call red or yellow fin which begin to spawn the latter part of August and they spawn on the outside reefs. They are a deep water fish. Then the smaller deep water fish comes next in October.--(Eingster).

Southampton.-- The big trout come in along the shore for spawning.

There is one kind only of trout that spawn out on the reefs in the summer and the rest spawn in November.--(D. McCauley).

Southampton.-- It would be easy to get spawning trout here in the fall. You could get them on the back of the islands so, as well as here. Georgian Bay would be the best place, as it is the place where they catch them the most.--(Cooley).

LAKE TROUT; SPAWNING GROUNDS --- LAKE HURON.

Mackinaw City.- There are spawning grounds for trout just 4 miles across the straits on the Graham Shoals. Spectacle Reef is a good spawning ground for trout, but very few white-fish are taken there.- (Robinson).

Harbor Springs.- You can gather trout spawn over at Petoskey from Connable.- (Wilson).

Cheboygan.- There were two men getting trout spawn here last year from Davis.- (C. Corlett).

Southampton.- It would be easy to get spawning trout here in the fall. You could get them on the back of the islands to, as well as here. Georgian Bay would be the best place, as it is the place where they catch them the most.- (Cosley).

LAKE LAKE TROUT; SPAWNING -- LAKE HURON.

General.- Lake trout spawn on the Big Reef. The trout there leave the ground pretty entirely after they are through spawning in November.- (Wires). -- (Butterfield).

Mackinac City.- The trout are all through spawning before the whitefish begin, but will occasionally find trout where the whitefish are spawning.- (Robinson).

Harbor Springs.- The biggest share of the trout spawn here in October. They do not spawn here in September at all. They begin spawning here about October 8 or 9 and will continue about a month.- (Fleeson).

Cheboygan.- The trout spawn the latter part of September and October.- (C. Corlett).

Cheboygan.- The trout spawn in October. They do not spawn much in September, but they come ashore then.- (D. Corlett).

Alpena.- The smaller trout that come up in September to spawn, go up in shallow water.

Nobody here seems to know when the trout do spawn. There are trout right out in this

LAKE TROUT; SPAWNING SEASON -- LAKE HURON.

Detour.- Their spawning season is from October 1st to 15th. They stay around pretty nearly all of October. In Lake Superior they spawn in September.- (Butterfield).

Mackinaw City.- The trout are all through spawning before the whitefish begin, but will occasionally find trout where the whitefish are spawning.- (Robinson).

Harbor Springs.- The biggest share of the trout spawn here in October. They do not spawn here in September at all. They begin spawning here about October 8 or 9 and will continue about a month.- (Wilson).

Cheboygan.- The trout spawn the latter part of September and October.- (C. Corlett).

Cheboygan.- The trout spawn in October. They do not spawn much in September, but they come ashore then.- (D. Corlett).

Alpena.- The shallow trout that come up in September to spawn go up in shallow water.

Nobody here seems to know when the trout do spawn. There are trout right out in this

bay full of spawn, but they do not get spawning fish and my idea is that they spawn after they are through fishing, later in the winter.

The shallow trout begin to spawn about September 25 between then and the last of the month. They are all through spawning by October 15. The deep water trout spawn later. Last year we got spawn from fish caught on the shoals here in September and along probably up to October 10th. Then we got fish with spawn out around Spectacle Reef. They commence about October 10 and they are probably pretty well done by the 20. Then we move those same men over to Detour and they fish down towards Little Current and in that vicinity, and there the fish commence about October 20 and are done about November 1. Then we move right over on to Lake Michigan at Charlevoix, Manistique and those grounds and at Beaver Island. The trout do not commence to spawn until about the 1st of November. They continue their spawning longer than the runs that spawn early. They spawn nearly all through November. I do not know of any place where the trout spawn up into December, but I think there are places

where they do because they catch fish that are full of spawn, and they haven't got through spawning when they quit fishing here in the lake. You will always notice if the fall is mild the fish will not spawn as early, both trout and whitefish.-(Tulian).

Alpena.- Our shallow trout spawn the forepart of September.

There are no 2 years alike when fish spawn, but on an average we consider that the shallow water trout begin to spawn about the first week in September. Sometimes they do not spawn until the 20th, but they spawn some time during September. Our common lake trout spawn the forepart of October.-(Alpern).

Alpena.- In November here we get the most of our trout eggs. You would have to make your close season for trout all through October and November for the different localities around here. You can catch these fish in July and August and the spawn has not come to maturity and it is lost, but if you catch that fish in the fall and save the spawn you are not wasting as many fish as you are when you

catch them in the summer. Of course we get lots of fish that the spawn is not fit to save, but it is lost just the same if you catch them in July or August, only you do not get quite as many of them.-(Cleary).

General.- They have in Lake Superior 2 runs of lake trout and they also have in Lake Huron what we call the "early" and "late" run. The early run comes in very close to shore. They spawn in very shallow water. There are certain grounds where these fish will run right up into 3 or 4 or even 2 feet of water and spawn during the last days of September. They will come on as early as the 15th in some places and that run will last until about the first of October. Of course you will always get a few fish between the 2 runs, but they are the late fish of the early run and the early fish of the late run.-(Additional information has been forwarded in the letter to Mr. Ravenel, dated June 29, 1894).-(Wires).

Goderich.- The trout spawn in November as a general rule. They begin the first of November. We have no trout spawning here in

October, but they come on the rocks then. These places up around the Manitoulins, that is where they go for the black trout in October, but of course the trout is not really fit to spawn until November. As far as the deep water trout are concerned here I never see any in which the eggs are running, but those trout that they catch up here on hard bottom, you can catch them in October and you will hardly ever see any with the spawn running freely until November.

I think there are no trout spawn along here in October. It is mostly in November. I have never seen any trout spawning in October to my knowledge, but I have in November. All through November you can see the spawn running freely from them.-(Cragie).

Goderich.- The trout spawn all the way from August to November. There is a certain kind we call red or yellow fin and they begin to spawn the latter part of August. They spawn on the outside reefs and are a deep water fish. Then the smaller deep water fish comes next in October. I saw some of the

yellow fin ones with ripe spawn the other day.

The blue trout do not spawn in September in shore. The majority of the trout spawn in November. From the 10th to the 30th of November is the principal time. They are just coming on good to spawn when the close season comes in.-(Eingster).

Southampton.- As to the big trout which come in along shore I have seen spawn running from them in November. Very seldom see any running from them before November. There is one kind only of trout that spawns out on the reefs in the summer, the rest spawn in November.-(D. McCauley).

Southampton.- The trout spawn at all seasons of the year I believe. That is a thing you couldn't argue with Mr. Wilmot last year and he would call a man a liar if he said the trout spawn in any other month than November. But I can prove it by all the fishermen on this shore than they spawn in other months. I have found them spawning in July. They would be in deep water and I suppose they were deep water trout. They were a short fat fish.

The inshore trout spawn from about the 15th of November out. I never knew any to spawn in October. We never take the shore trout in October with the spawn running, but I may have seen an odd one occasionally. The main body of them does not spawn until November, for I have caught them here full of spawn in that month.-(G. S. McCauley).

Southampton.- I do not know when the trout spawn. I have caught them with the spawn running most any time after the last of October. I have seen the spawn in them pretty ripe about that time, and then again you will fish on up to the last thing and there will be some with spawn along in November. I never saw spawn running very well in October. I have taken them with the spawn running in November. That is what they call the fall trout. I have caught summer trout with spawn in also, out on the Big Reef. You will catch them most any time with spawn in them. Will sometimes catch them during the summer with the spawn running. I believe there are some trout spawning all the time. They would

be in 25 or 30 fathoms. You get some of that ripe spawn in the spring occasionally. Lots of times on the reefs when dressing the fish in the spring you will come across them with spawn loose in them. I never fish on the reefs after the last of August. The tugs run out there later than that, but I have heard them say they caught them with spawn in them at all times.--(Cosley).

Southampton.-- All trout do not spawn at the same time. They say they spawn sometimes in November. I think the large salmon trout spawn in November. Those trout on the reefs spawn at different times through the season. The tugs will get them sometimes about the first of August and in July with the spawn running right out of them.--(Dobson).

Southampton.-- I watched them cut open the trout taken in the gill net catch on September 7, 1894. All of the larger ones were nearly approaching ripeness. They were mostly females and the spawn was large and generally pretty well separated in the ovaries. I do not see how they could have been retained until

November. These trout belonged to the 2 kinds, the deep water and shoal water trout being mixed together.- (Rathbun).

General.- In Lake Huron and Georgian Bay the trout spawn about the 1st of October and by the first of November they are done spawning.- (Elliott).

General.- There is a species of trout in Lake Huron that I think is an outside deep water trout, and occasionally there is one caught by our fishermen with ripe spawn in the early summer, June and July, and one of the fishermen who had been disputed by some of the authorities sent one of these fish a couple of years ago to Canada, I think it was, to convince them he was correct.- (C. M. Clark, Cape Vincent).

LAKE TROUT; SPAWNING TIME ---- LAKE HURON.

Detour.- The trout spawning is done by October 25. The main time for trout spawning is the middle of October, if it is the dark of the moon. Some say the moon has nothing to do with it, but I say it does. They will not come into shallow water in the light of the moon, but just as soon as the moon gets dark they will come in as thick as hair on a dog. Trout are around for about 20 days.- (Butterfield)

Mackinaw City.- The trout come on in September, because it is their spawning season. It is probably the middle of September before they begin to come on. Then they come on in October more abundantly and we get a better run of trout then.- (Robinson).

Alpena.- The trout would spawn as late as the last of October. We figure on their beginning to spawn the forepart of October and finishing towards the last of the month. I think the spawning time is longer in the trout than it is in the whitefish. Whitefish spawn very quick and leave at once. Trout may remain on their spawning ground for some

time after they are done spawning. You will find the trout hanging around their spawning ground until sometime the middle of November.- (Alpern).

Alpena.- Trout begin spawning in September and spawn clear up to the first of December, and when the fish are right on the ground spawning thick they should not be disturbed. At different places trout spawn at different seasons. Around the island they spawn in September. Out on the big reef they will spawn later on. We make a distinction between the run of the shoal trout and deep water trout. There are different classes of trout just ~~xx~~ the same as there are of whitefish. In different localities they spawn different. You take on the reef near Manistique in Lake Michigan, we get a great many trout all through October and November.- (Lincoln).

Southampton.- The offshore, deep water and reef trout are said to spawn during the summer and they claim to have seen spawn running from them at that season. The big shore

trout are said to spawn in November, notwithstanding they come into the shore on September first. They all testify to these facts.-

Rathbun). The trout will go on to spawn about September 10, and they will run for a month or a month and a half.-(Gill).

LAKE TROUT; SIZE OF SPAWNERS.

TROUT; SPAWNING SEASON --- LAKE HURON.

Cheboygan.- The trout will go on to spawn about September 10, and they will run for a month or a month and a half.- (Gill).
weigh less than 3 or 4 lbs.- (Tullian).

Alcona.- Has never stripped a lake trout with ripe spawn, weighing less than 2 lbs. It is possible that the smallest size which he has handled with ripe spawn was as small as 1 1/2 lbs., but he has certainly had them as small as 2 lbs.- (Wires).

Detour.- In some places the fish run small and at Detour one-half the catch would be under 1 1/2 lbs. They have taken spawn at Detour although it was inconvenient on account of the small size of the fish, making it necessary for them to strip a very large number in order to get any quantity of spawn. These fish weighing 1 1/2 lbs. and more, are ripe and therefore mature fish, rather indicating a smaller range of size in that locality.- (Wires).

LAKE TROUT; SIZE OF SPAWNERS.

LAKE HURON.

Alpena.- These shallow water trout would probably average 6 lbs. I do not think I have ever seen spawn in any trout that would weigh less than 3 or 4 lbs.--(Tulian).

Alpena.- Has never stripped a lake trout with ripe spawn, weighing less than 2 lbs. It is possible that the smallest size which he has handled with ripe spawn was as small as 1 1/2 lbs, but he has certainly had them as small as 2 lbs.--(Wires).

Detour.- In some places the fish run small and at Detour one-half the catch would be under 1 1/2 lbs. They have taken spawn at Detour although it was inconvenient on account of the small size of the fish, making it necessary for them to strip a very large number in order to get any quantity of spawn. Those fish weighing 1 1/2 lbs. and more, are ripe and therefore mature fish, rather indicating a smaller range of size in that locality.--(Wires).

Goderich.- Most of the fish I ever saw spawning were the big fellows up the lake and you would never get them less than 4 or 5 lbs. Of course the deep water fish must spawn before they are that size, but the rock trout generally get about that size. The rock trout are the big ones that come into the shore in fall.-(Cragie).

Southampton, results of examination of Trout caught in gill nets.- In none of the trout except a lot weighing 6 lbs. and over, were there any distinct traces of ovaries or spermaries. Some of these fish certainly weighed above 2 lbs. Is it possible that they had spawned during the summer as the fishermen claim?-(Rathbun).

LAKE TROUT; SPAWNING SIZE ---- LAKE HURON.

LAKE HURON.

Goderich.- There is one thing about the fish, no matter how small they are there is always spawn in them. I have seen trout smaller than 2 lbs. containing spawn.- (Eingster).

Orillia.- We catch lots of trout here in the spawning time but do not catch many at other times.- (Will).

Alport.- Some of Hunter says in the direction of the Bay they catch the smallest trout during the spawning time.

Last year we got spawn from the fish caught on the shore here in September and along probably up to October 10. Then we got fish that spawned out around Esplanade Reef between October 10 and 20. Then we moved our trap over to Deiper and they fished down towards Little Current and in that vicinity up between October 20 and about the first of November. Then we moved over to Lake St. Ignace at Charlevoix, Manistigon and those grounds and at Pelee Island, from November first on. They spawned in that region nearly all through

November LAKE TROUT; CATCH OF SPAWNERS.

the trout spawn in LAKE HURON. Now, but I think

there are places where they do because they

catch Harbor Springs.- The biggest share of

the fishing done in this connection is done

on the trout spawning grounds.-(Wilson).

Cheboygan.- We catch lots of trout here

in the spawning time but do not catch many

at other times.-(Gill).

Alpena.- South of Thunder Cape in the

direction of Can Buoy they catch the shallow

trout during the spawning time.

Last year we got spawn from the fish

caught on the shoals here in September and

along probably up to October 10. Then we

got fish that spawned out around Spectacle

Reef between October 10 and 20. Then we

moved our men over to Detour and they fished

down towards Little Current and in that vicini-

ty between October 20 and about the first of

November. Then we moved over to Lake Michigan

at Charlevoix, Manistique and those grounds

and at Beaver Island, from November first on.

They spawn in that region nearly all through

November. I do not know of any place where the trout spawn up into December, but I think there are places where they do because they catch fish that are full of spawn and they have not got through spawning when they quit fishing here in the Lake.-(Tulian).

Alpena.- In the height of the spawning season the trout seem to seek the shallowest waters on the different reefs in the greatest numbers and best fishing can be done on those shallow places.

They have taken spawn at Detour although it was inconvenient on account of the small size of the fish.-(Wires).

LAKE TROUT; CATCH OF SPAWNERS -- LAKE HURON.

Detour.- The fall gill net fishing commences with the spawning season of the trout, and do not follow them back into deep water. They leave the shore about October 20 or 25 and by that time the weather is so stormy we cannot do anything with them.-(Sims).

Cheboygan.- We get more trout in October. We get the best fall fishing in October for trout.-(D. Corlett).

Alpena.- On the Big Reef we catch trout during the spawning time.-(Cleary).

LAKE TROUT; CATCH OF SPAWNERS -- LAKE HURON.

Cheboygan.- They are fishing for trout mostly in the fall. They catch some trout in November, but their biggest fishing is the latter part of September and October.-(C. Corlett). lot of trout fry from the sea was planted here 2 years ago, that was the only plant of lake trout about here that he knows of.-(Butterfield).

Alcona.- The spawn the hatchery men take here is all from the best class of trout. They generally go out in our tugs. Our lake trout on this reef are fully as good and fully as fine a fish as the smaller trout. They get some spawn from the smaller trout and some from the other.-(Alpern).

Alcona.- There had been only 2 tugs fishing out of here until Libeck started in. The hatchery had handled all the spawn they could get from those 2 tugs. Mr. Alpern will do anything he can to help the hatchery.-(Olney).

LAKE TROUT; PROPAGATION --- LAKE HURON.

Detour.- Thinks one reason why the trout are playing out so here is because they do not preserve the eggs. They have put no trout in here yet, only whitefish.- (Butterfield).

One lot of trout fry from the Soo was planted here 2 years ago, that was the only plant of lake trout about here that he knows of.- (Butterfield).

Alpena.- The spawn the hatchery men take here is all from the best class of trout. They generally go out in our tugs. Our lake trout on this reef are fully as good and fully as fine a fish as the shallow trout. They get some spawn from the shallow trout and some from the other.- (Alpern).

Alpena.- There had been only 2 tugs fishing out of here until Lincoln started in. The hatchery has handled all the spawn they could get from those 2 tugs. Mr. Alpern will do anything he can to help the hatcheries.- (Cleary).

Alpena.- You cannot put the trout back into the water after you strip them, as they would not live as a rule. The whitefish are worse still. If you could take them out and strip them they would probably be in as good condition as they ever were.- (Cleary).

Alpena.- Number and size of eggs.- The number of eggs from the lake trout will probably average about 4,000 or 5,000. There are about 5,000 to 6,000 eggs of lake trout to one quart. Mr. Morgan, of the Duluth Hatchery, has some notes on this subject and has made some careful counts of the number.

The eggs of the lake trout from Lake Superior average somewhat smaller than those from Lake Huron, in both the early and late runs. The eggs of the first run are smaller than those of the second run.- (Wires).

Georgian Bay.- Around Wiarton they have men go around looking for spawn.- (Eingster, Goderich).

Southampton.- I think a good hatchery is about as good a thing as we can have. There were about 5 million trout fry put in

here this summer. I do not think they ever
planted any before. Trout spawn was taken at
Wiarton last winter. They would fish in
November when we get more trout than we would
in October.-(Dobson). I think it grows
as fast as the whitefish. I think it makes
a difference in the kind of trout, however.
The trout they planted here last winter they
told me some of them were about 3 months old
and they were about 7 inches long and they
were just as lively fish as I ever saw.-(Alpern)

LAKE TROUT; RATE OF GROWTH --- LAKE HURON.

Alpena.- You cannot tell how old a trout, weighing 2 lbs, is, but I think a trout is a fast growing fish. I think it grows as fast as the whitefish. I think it makes a difference in the kind of trout, however. The trout they planted here last winter they told me some of them were about 6 months old and they were about 7 inches long and they were just as lively fish as I ever saw.-(Alpern).

LAKE TROUT; FOOD.

LAKE TROUT; FOOD --- LAKE HURON.

Detour.- The trout live on herring.

There is a deep water herring outside, what we call "bloats" and moon-eyes, that they live on. They are altogether different from the shallow water herring.- (Butterfield).

Mackinaw City.- I never heard of white-fish of any size being taken from the stomachs of trout. The trout generally feed on herring but they will eat anything they can get hold of. I have found them with jack-knives and big stones in their stomachs.- (Robinson).

Petoskey.- The lake trout is a Chicago man who eats up everything that comes his way.- (Hampton).

Cheboygan.- The trout live on herring and small fish.- (D. Corlett).

Alpena.- The trout eat everything. They live principally on other fish. I think they live principally on shiners, herring, etc. If we have lots of shiners around we have lots of trout. The shiners grow about 4 or 5 inches long and are a nuisance. The trout fol-

low them right up, but sometimes you get them pretty thick and they are a nuisance. I am perfectly satisfied to handle trout, but do not care about handling shiners. The trout destroy immense quantities of herring during the course of a year.--(Alpern).

Port Huron.-- I cannot solve the question why they want us to quit catching trout when they eat whitefish up.--(Selkirk).

Goderich.-- I think the trout have eaten the whitefish up. I have seen whitefish 1 1/2 or 2 lbs. weight in trout. Trout will eat anything. I do not think they will eat dead matter, but they will eat offal which is fresh.--(Eingster).

Southampton.-- The trout are more for feeding on small fish.--(D. McCauley).

Southampton.-- Watched them cut open trout taken in a gill net September 7, 1894. In one male trout the stomach was filled with the spawn of its own species. How did it get there? It showed signs of having been partly acted upon by the gastric juices and

yet was in fairly good preservation. There was no mistaking its character. It was partly clinging together, and certainly the season was too early for such spawn to have been deposited. As there were no traces of flesh or bones in the stomach, this spawn could not have resulted from the male fish eating a female. It is probable that the eggs were thrown over from the fishing boat as the result of cleaning of trout and that they were eaten by the specimen taken.

In the other trout stomachs there were plenty of fish, generally herring, but some very small fishes also, looking as though they might have been young yellow pickerel. They were all too much digested to be saved or to stand careful examination.

The trout examined belonged to the 2 kinds. Deep water and shoal water trout being mixed together.-(Rathbun).

LAKE TROUT; FOOD ---- LAKE TROUT.

Alpena.- I believe the more trout that are caught off the more whitefish we would have. I have found a good many young whitefish in the stomachs of trout.-(Case).

LAKE TROUT; FOOD ---- LAKE HURON.

Goderich.- In the still weather in June and July the trout come up to the surface after flies. At the present time you will find the inside of a trout full of grass-hoppers and flies of all description, and if it comes a nice sharp breeze you will get better fishing.- (Cragie).

LAKE TROUT; DECREASE, CAUSE.

LAKE TROUT; DECREASE --- LAKE HURON.

Detour.- The salmon trout have decreased more than the whitefish. Do not catch the trout here according to the whitefish. The last 3 falls they have been playing out on us, but had no scarcity before. We did not get as much trout here last fall in a month as we used to get in a week. Used to get the fish-house full. Our tug did not catch over 6 tons of trout last fall. They were running about 40 or 50 nets. They do not run many nets for trout because it tears them up so. The average number of nets is 120 all in the water.--(Butterfield).

Detour.- The trout have decreased very much.--(Sims).

Alpena.- There has been a decrease in the trout also. It is not the same as whitefish, but they are getting scarcer all the while. At this time 12 years ago, if we set out on the Big Reef where we are fishing now, we would get more fish in one day than we do now in a week. Furthermore when we first

struck the reefs we used to get them on the inside edge of it, but now you have got to go clear to the east side.--(Lincoln).

Alpena.-- The whitefish and the trout used to be very abundant. The whitefish have almost entirely gone and the trout have decreased very much.--(Case).

Alpena.-- There has also been a great decrease in the trout, but nothing to compare with the whitefish.--(Rathbun).

Southampton.-- The trout are as common as they used to be, and I do not see any difference in their abundance or size. If there were 20 sail boats fishing now and no tugs they would not get as many as they used to. We get the same quantity by going greater distances and fishing new grounds, but we would not get the same quantity on the same grounds. You can't kill the trout off, they are as thick as ever here.--(G. S. McCauley).

Southampton.-- There is a difference of opinion regarding the relative abundance of trout. Some say they are as common as ever and others that there has been a slight decrease. (Rathbun).

LAKE TROUT; DECREASE -- LAKE HURON.

Detour.- There is a great diminution in the salmon trout. They have diminished more than half.--(Sims).

Mackinaw Island.- There are more trout now than there used to be in proportion, but they have decreased.--(Wilmot).

Cheboygan.- I do not think the trout have decreased as much as the whitefish, as there is pretty good fishing out here yet. I think some of the tugs will be here this fall to fish for trout.--(C. Corlett).

Cheboygan.- They do not catch as many these last 2 or 3 years, as they are getting scarcer.--(Gill).

Alpena.- In some localities they claim that the trout are on the increase. I know here 4 or 5 years ago on this Big Reef they were played out so that the tugs left, and then they came back and they had pretty nearly as good fishing as they had before.

I think the trout are pretty nearly as abundant as ever in Lake Huron. Of course on

the Big Reef they have fished the grounds pretty well out, but if they let them alone for a year or 2 the fish would be as abundant there as ever.--(Tulian).

Alpena.-- I claim our trout are increasing steadily in abundance.--(Alpern).

Alpena.-- Some men will advance the most non sensical idea and tell you that there are more trout now than there ever were.--(Lincoln).

General.-- He is of the opinion that the lake trout are not as abundant on Lake Superior as they were a few years ago. The Lake herring are not so numerous either as they were. The only way to measure the amount of the decrease is to take the total catch. The decrease has been going on ever since they began to fish lakes Huron and Superior extensively. They started in somewhere between 1875 and 1880, that is, commenced to fish with steam tugs and that sort of thing.--(Wires).

Saginaw Bay.-- I do not think the trout are decreasing much on the trout grounds.--(Penniman).

Bay Port.-- There are hardly any trout

here and years ago there used to be a good many.--(John Gillingham).

Bay Port.-- I think the trout are about the same as they used to be. There never have been very many trout here.--(R. Gillingham).

Port Huron.-- I think the trout have been on the increase up to last fall, but this spring it was on the decrease owing to the fact that we had so many winds and could not get out to our nets, that is our catch was less, but the fishing was just as good. In July and August of this year our average catch has been 600 lbs daily, and that is more of an average than was ever known before for one tug.--(Selkirk).

Sarnia.-- Trout have decreased nearly as much as whitefish. We used to get a good many trout 25 years ago.--(Wees).

Goderich.-- The time that I started fishing here there was not much difference in the abundance of trout from what it is now. We are catching as many trout now as ever.--(Cragie).

Goderich.-- We have more trout than we

used to have.- (Eingster).

Southampton.- The big trout have decreased since then. They were plentiful until the rafts and the saw mills started.

The small deep water trout are keeping up better than any other fish. They are not quite so plentiful as they were at one time.

There has been some decrease in the trout but they hold their own better than any other fish.- (D. McCauley).

Southampton.- Trout are not as abundant as they used to be. There has been quite a decrease. You cannot catch as many now as you could. The most falling off has been in the shallow water trout. The spring and summer fishery is better in proportion than the fall fishery. I guess we have not done as well fishing for the last 6 or 7 years as we used to do. Sometimes one man will have a streak of luck and get good catches and the man next to him might not get any. Years ago everybody used to do pretty well. I do not think there has been any difference in size.- (Cosley).

Southampton.- The trout are as abundant as ever. They have been going out on the reefs for years. In the spring I do not see as there is any difference in the inside grounds here. Of course you fish them out but they come back again and next spring the fish will be as thick as ever. It would be pretty hard to fish this lake out of the trout.- (Dobson).

General.- I do not think trout are falling off much. The grounds where fishermen used to get trout in such large quantities a few years ago do not yield very good now, but they are all the time going further and getting new places, and the lakes are of such a vast extent that there has been no time when there were not too many trout. The great trouble with the dealers has been to keep the production within bounds, and our company has suffered from this depression in business, because the consumption has not been 50 per cent of former years, while the company has been reaching out more and more in different directions for fish and they got too many on their hands and had a

serious loss in consequence.- (C. M. Clark,
Cape Vincent).

General.- The trout have been on the in-
crease every year, if anything, and I cannot
say that they have decreased at all. There
might have been a little falling off this year,
but last year it was ahead of the other years,
and they are keeping up in size also.- (Davis,
Detroit).

LAKE TROUT; DECREASE -- LAKE HURON.

Alpena.- Trout have not decreased to the same extent as the whitefish, although they have decreased some.--(Case).

Goderich.- I do not see any difference in the fall trout, they are as plenty as they ever were.--(Cragie).

Goderich.- There are trout there still (on their fishing grounds) and there are just as many trout now as then, in fact more. Some claim that the fishing here is not so good. Well, I fished here 18 years ago with a boat, and the boats fishing here at the present time the same length of time, would catch just as many fish as I caught then with the same gear.--(Cragie).

Southampton.- When we started fishing first we never went out over 12 miles and used to get good fishing. We would catch mostly whitefish, when we went out to deep water we would get trout, now we cannot catch many fish in those places.

We get mostly small trout in deep water

now, you cannot get the big trout at all until September. There are not as many as there used to be, hardly 1/2 as many as when I first started here.- (D. McCauley).

There used to be any amount of them until they commenced hauling logs across.- (Craigie).

Redfish.- Lake trout, they claim, are practically as abundant as ever. They even said they were more abundant.- (Rathbun).

Springer Bay.- Lake trout do not fish decreasing as fast as whitefish.- (Elliott).

LAKE TROUT; DECREASE --- LAKE HURON.

Goderich.- There are just as many trout here as there ever were. In Georgian Bay there used to be any amount of them until they commenced hauling logs across.-(Cragie).

Goderich.- Lake trout, they claim, are practically as abundant as ever. They even said they were more abundant.-(Rathbun).

Georgian Bay.- Lake Trout we do not find decreasing as fast as whitefish.-(Elliott).

is what keeps our trout up.-(S. H. Davis, Detroit).

LAKE TROUT; CAUSE OF DECREASE --- LAKE HURON.

Southampton.-- The decrease in trout I think is caused by other fish destroying their spawn and it may be the same with whitefish.- (Cosley).

General.-- The reason why trout are on the increase, we catch them out in the lake 40 or 50 miles and they are all on this honey-comb bottom and when they spawn it drops down in that rock and nothing can injure it, that is what keeps our trout up.-(S. H. Davis, Detroit).

LAKE TROUT; EFFECTS OF CLOSE SEASON IN
NOVEMBER --- LAKE HURON.

Alpena.- A close season in November would be a hardship and would kill this big reef ground certainly, but if it increased the quantity of fish so that we could catch a larger amount at other times of the year it would make up for it. As far as I am concerned I would not care if they did not fish in November. For fishing that Big Reef in the fall is a dread to most of the fishermen. It certainly would help the fishing to have a close season in November. The Hatchery would have to have somebody to fish those spawning grounds thento supply them.-(Cleary).

LAKE TROUT; RELEASING ALIVE.

LAKE TROUT; RELEASING ALIVE --- LAKE HURON.

Alpena.- Of course if the small trout are real lively we throw them back in the water from the gill nets, otherwise we throw them in the offal barrel. I do not think young trout stay in shallow water, but I think young whitefish do.-(Alpern).

Alpena.- Of little trout perhaps we will only get half a dozen at a lift and we always drop them right overboard as, if we brought them ashore, we could not sell them.-(Cleary).

Goderich.- I throw the small trout back into the water. They will live all right and will swim off just as lively as can be. I have caught them in a 6 inch mesh when fishing for big trout. These are fish caught in gill nets. A good many of these small trout can be returned to the water alive if they had a law requiring it.-(Cragie).

Southampton.- We throw lots of small trout out alive from the gill nets. We do not want to catch them as they are a nuisance to us.-(G. S. McCauley).

Southampton.- We can throw out the small ones from the gill nets without any trouble.--(Dobson).

OR GILL NETS?

Alpena, Michigan. Sometimes we catch trout quite small in the gill nets. We catch them all sizes. Of course, if they are real lively, we throw them back in the water, otherwise we throw them in the offal barrel.

(G.Alpena).

Alpena, Michigan. We get only a 1/3 dozen small trout at a lift, and we always drop them right overboard, as, if we brought them ashore, we could not sell them. (Jas. Cleary).

Gederish. Some claim that when you catch the little trout you are using too small mesh or else you would not catch this trout, but this trout gets caught with his mouth open. He could get through easily enough. There is nothing in those small trout that

LAKE TROUT--LAKE HURON.

CAN SMALL ONES BE THROWN OUT OF POUNDS

OR GILL NETS?

Alpena, Michigan. Sometimes we catch trout quite small in the gill nets. We catch them all sizes. Of course, if they are real lively, we throw them back in the water, otherwise we throw them in the offal barrel.

(C.Alpern).

Alpena, Michigan. We get only a 1/2 dozen small trout at a lift, and we always drop them right overboard, as, if we brought them ashore, we could not sell them. (Jas.Cleary).

Goderich. Some claim that when you catch the little trout you are using too small mesh or else you would not catch this trout, but this trout gets caught with his mouth open. He could get through easily enough. There is nothing in those small trout that

we catch because they are not fit for market or anything else.

I throw them back into the water. They will live all right and will swim off just as lively as can be. I have caught them in a 6-inch mesh when fishing for big trout. (Jno.Cragie).

Goderich. There could be a good many of those small fish returned to the water alive if they had a law requiring. (Jno.Cragie).

Southampton. We get probably from 20 to 40 pounds of small trout in a lift of the gill nets. They will weigh about 1 pound apiece. We throw lots of them out alive. They are a nuisance to us. (G.S.McCauley).

Southampton. We can throw out the small ones without any trouble. (J.Dobson).

LAKE TROUT; MISCELLANEOUS.

LAKE TROUT; CATCH IN POUND --- LAKE HURON.

Alpena.- They do not catch many trout
in the pound nets around this vicinity.-

(Tulian).

LAKE TROUT; POUND NET CATCH - LAKE HURON.

Goderich.- We get very few lake trout in the pound nets. We get what we call the sand trout. They are a big heavy trout. I have seen 3000 trout come out of a pound net in one night on Lake Superior.- (McClellan).

I was going out to lift my nets in the morning they would bite good and in the evening also. They would pull very hard on the line when you caught them.- (G. S. McDouley).

LAKE TROUT; TROLLING -- LAKE HURON.

Southampton.- It is fine fun trolling for trout. You can troll for them in June as they are in shallow water then. I have seen them catch 400 lbs. of trout in a day's trolling. They would use a sail boat. When I was going out to lift my nets in the morning they would bite good and in the evening also. They would pull very hard on the line when you caught them.-(G. S. McCauley).

LAKE TROUT; SPEARING - LAKE HURON.

Alpena. - I do not think hardly anything
In the winter quite a few are speared
out around the Charity Islands.-(Penniman).
may live on trout eggs, however, but you take
it where trout are spawning and you do not
find any suckers and suckers live on spaw.
On the ground where trout are spawning you
will find hardly any other fish and I do not
think there is anything to disturb them. I
hardly think other fish come in and feed on
their spaw even after they leave the ground.
We have had nets on the spawning ground pretty
late after they were done spawning and we
never found any other fish there.-(Alpena).

LAKE TROUT; ENEMIES -- LAKE HURON.

Alpena.- I do not think hardly anything destroys the trout. I think the trout take pretty good care of themselves. Other fish may live on trout eggs, however, but you take it where trout are spawning and you do not find any suckers and suckers live on spawn. On the ground where trout are spawning you will find hardly any other fish and I do not think there is anything to disturb them. I hardly think other fish come in and feed on their spawn even after they leave the ground. We have had nets on the spawning ground pretty late after they were done spawning and we never found any other fish there.--(Alpern).

loss.--(Alpern).

Bay City.- The market has not been crying for lake trout since last summer.--(Peppin).

Soderick.- They do not take any smaller salt fish than they do fresh. We do not salt any excepting the ones that are too soft to ship fresh.--(Cragie).

LAKE TROUT; MARKET; PREPARATION; PRICES; ETC.

LAKE HURON.

Alpena.- I have 90,000 lbs. of trout that I froze this spring. A year ago last winter the Buffalo Fish Company had over 500 tons of blue fish, halibut and cod frozen, and they sold almost 50 per cent right in New York. Their fish did not average them in Buffalo after they were frozen over 4 cents a lb., and they sold some of those fish back to New York for 8 and 10 cents a lb. They did not make any money last winter, but lost very heavily. They claim they lost \$100,000., but they made so much money for 4 or 5 years before, that they can afford to stand that loss.- (Alpern).

Bay City.- The market has not been crying for lake trout since last summer.- (Penniman).

Goderich.- They do not take any smaller salt fish than they do fresh. We do not salt any excepting the ones that are too soft to ship fresh.- (Cragie).