

Original: FishDivision
cc: Education-Game
Dr. John Van Oosten
Dr. Roelofs

INSTITUTE FOR FISHERIES RESEARCH

DIVISION OF FISHERIES

MICHIGAN DEPARTMENT OF CONSERVATION

COOPERATING WITH THE

UNIVERSITY OF MICHIGAN

F. P. Furlong 3-16-42

(W)

ALBERT S. HAZZARD, PH.D.
DIRECTOR

February 9, 1942

ADDRESS
UNIVERSITY MUSEUMS ANNEX
ANN ARBOR, MICHIGAN

REPORT NO. 743

REPORT ON THE CREEL CENSUS IN THE CONNECTING WATERS
BETWEEN LAKE SUPERIOR AND LAKE HURON AND SOME
ADJOINING WATERS IN LAKE HURON, 1937-1941

by

Eugene W. Roelofs

Introduction

The creel census described by L. A. Krumholz in Institute Report No. 668 has been continued in 1941. The census was conducted and the data have been compiled in a manner similar to that used from 1937 to 1940 so that the results are comparable. As in previous years, Conservation Officer Haken took the great majority of the records.

The census was more intensive during 1941; 877 fishermen were contacted, as compared with 587 for the highest of any previous year. Of this total, 706 fishermen were fishing in waters closed to commercial fishing and 171 were fishing in open waters. The large difference between the numbers contacted on open and closed waters is due to the relative amounts of such waters; few waters are open to commercial fishing. There has been no change in the commercial fishing laws since Potagannissing Bay was closed on September 20, 1939, so the designation of open and closed waters remains the same as that used in Report No. 668.

Analysis of Data

The data are presented in tables 1 to 8, inclusive.

Fishing Failures.

The percentage of the fishermen taking no fish was larger in 1941 than in 1940 in waters both open and closed to commercial fishing (Table 1). In the closed waters the 1941 figure (31.0 per cent) is higher than the 5-year average, but in the open waters the percentage taking no fish in 1941 (20.5 per cent) is less than the 5-year average. Considering the entire region, more fishermen were "blanked" in 1941 than in the average of the five years. The investigation has not been in progress long enough to show definite trends.

It is interesting to note the percentage of failures when the waters are grouped on the basis of their location (Table 2). Lake Superior waters (composed of Waiska Bay and Bay Mills) bring success to the greatest percentage of fishermen, while the St. Mary's River waters "blanked" 38.4 per cent of the fishermen. The type of fishing varies considerably in the two regions and accounts for the difference in fishing failures.

Catch per Hour.

In 1941, the catch per hour of all fish (Table 1) was 2.5 in the waters open to commercial fishing as opposed to 1.2 in the closed waters. Both of these figures represent a decrease from those of 1940, the decrease in the closed waters being twice as large as in the open waters.

The catch per hour for the entire region dropped from 1.9 in 1940 to 1.4 in 1941.

The Lake Superior waters (Table 2) have yielded a catch of nearly 3 fish per hour for the last 5 years while during the same period the St. Mary's River produced less than one fish per hour. The rate of catch

in Potagannissing Bay decreased from 1940 to 1941. As pointed out by Krumholz, the large 1940 increase in Potagannissing Bay was coincident with a similar increase throughout Chippewa County, so probably was not due to closing the Bay to commercial fishing. The data for the entire County for 1941 have not been compiled, but it will be interesting to check the results with those of the Potagannissing Bay region.

Differences in the catch per hour in the various districts may be attributed in large part to the type of fishing done.

There seem to be no definite trends in the catch per hour of the individual species (Table 2).

Type of Fishing Done.

Table 3 shows the percentage of fishermen engaged in the various types of fishing during the last five years. There is more casting and trolling than still fishing in closed waters, while in open waters still fishing predominates. As pointed out previously, this accounts in part for the larger catch per hour in open waters.

In 1941, all types of fishermen in the open waters had better results than those fishing in closed waters, but the five-year averages show no appreciable differences between the open and closed waters.

For all waters, the average catch per hour for the different types of fishing are: still fishing--2.7, still fishing and casting--1.3, casting and/or trolling--0.6.

Composition of Catch.

Table 4 shows that smallmouth bass, northern pike and rock bass have made slight increases in percentage composition of the total catch. Perch have decreased slightly, and walleyes seem to vary considerably without a definite trend.

The percentage composition of the 1941 catch in the local areas is given in Table 5. Differences in the composition of the catch in the various areas are quite marked. In Lake Superior waters, for example, 97.5 per cent of the fish caught are perch; in the St. Mary's River, perch comprise only 27.4 per cent of the total catch while northern pike are taken to a much greater extent. It is important to note here that in Lake Superior waters, 88.7 per cent of the fishing is still fishing, while in the St. Mary's River over 60 per cent of the fishing is casting or trolling.

For all waters, nearly three fourths of the fish taken are perch; northern pike run a weak second, comprising 9.9 per cent of the total catch; rock bass, smallmouth bass and walleye pike follow in order.

Average Size of Fish Caught.

Fluctuations in the size of fish are shown in Table 6. These yearly variations are probably due to the predominance of a given age- or size-group in the population. Such cycles have been reported in other fisheries and are considered normal phenomena.

Time of Day When Fishing Was Done.

Table 7 shows the percentage of fishermen fishing at various periods of the day. For all waters, 41.7 per cent of the fishing was done between 1:00 and 5:00 P.M. The 9:00 A.M. - 1:00 P.M. and 5:00 - 9:00 P.M. periods were used by 23.2 per cent and 25.3 per cent, respectively, of the fishermen. The individual localities vary considerably. In Lake Superior waters, 57.8 per cent of the anglers fish from 1:00 - 5:00 P.M., while only a combined total of 11.2 per cent use the early morning and early evening hours, when fishing is presumably better. In St. Mary's River, 37.9 per cent use these better fishing periods and only 33.4 per cent use the afternoon period. The average catch per hour (Table 2) for 1937-1941 in Lake Superior

waters is 2.88, and in St. Mary's River is 0.79. This difference is expected, in spite of the fact that the St. Mary's River anglers use the more favorable fishing period, because the large majority of Lake Superior water fishermen are "still fishers", while casting and trolling predominate in St. Mary's River. Potagannissing Bay waters do not vary widely from the average for the entire region in respect to the time when fishing is done.

Residence of Fishermen.

The local anglers comprise the bulk of the fishermen in the region (Table 8). In 1938, 58.2 per cent of the anglers were local residents; in 1939 there was a sudden drop to 31.6 per cent. During the last three years there has been a steady increase in numbers of local fishermen and a corresponding decrease in numbers from other counties and other states. Increased employment may account for this trend. If so, the trend should continue in 1942. It is also interesting to note that the percentage of local residents fishing the closed waters is greater than the percentage fishing the open waters. The difference, however, was not as marked in 1941 as in previous years.

Analysis of Fishing.

Table 9 summarizes the catch per hour and the data having the most bearing on the catch for the last four years and for both open and closed waters.

In the closed waters, the 1939 catch was better than that of 1938 in spite of the decreases in the more productive types of fishing and the more productive time of day. At the same time, fewer local anglers went fishing; the effect of this is not definitely known but presumably local residents should have a slight advantage in fishing by being more familiar with the fishing grounds.

In 1940, still more fishing was done in the daytime; there was little change in the percentage of still fishermen, and the catch dropped 0.3 fish per hour. This drop is due entirely to a drop of 1.25 fish per hour in the catch of Lake Superior waters since all other regions showed slight increases. The addition of Potagamissing Bay to the list of closed waters had little effect on the figure because, while the average catch for 1937-1939 inclusive was 1.3 fish per hour, in 1940 it was 1.9, higher than the average of other closed waters.

The year 1941 found more trolling and casting done during the evening and a resultant drop in the catch. This indicates that the type of fishing done is an important factor in determining the catch per hour.

The waters open to commercial fishing are generally visited by fewer Chippewa County fishermen. The time of day during which fishing is done on open waters is very little different from the closed waters. There is relatively more still fishing done in open waters and the average catch for the four years is 0.3 fish per hour higher.

The marked increase in the catch per hour of 1940 over that of 1939 in the waters open to commercial fishing is explained both by better fishing in the Lake Huron waters and by transfer of the Potagamissing Bay data to the closed list. During the last 5 years, fishing in the Bay has been poorer than that in the open waters of Lake Huron, so the Bay data "held down" the average catch per hour for open waters. The transfer of the 1940 data to the closed group following closure of the Bay, coupled with better fishing in 1940 in Lake Huron open waters, resulted in an increased catch per hour from 1.2 in 1939 to 2.8 in 1940.

The catch per hour varies from year to year in the same direction as does the percentage of still fishermen. The residence of the angler and the time of day apparently have less effect on the catch.

Creel Census On the Potagannissing Bay, 1937-1941

As described in Report No. 668, the waters of the Potagannissing Bay region were closed on September 20, 1939.

The effect of this closure on sport fishing is being studied. Table 10 summarizes the available information to date.

Fishing failures have been less prominent since the closing of the Bay. However, there were many more "blanks" in 1941 than in 1940.

The catch per hour increased tremendously following the closure. This increase was accompanied by a similar increase in all non-trout waters of Chippewa County, as pointed out by Krumholz, and therefore cannot be considered a result of prohibiting commercial fishing.

The catch per hour in 1941 shows a decrease from 1940. Whether a similar decrease occurred in all of Chippewa County will not be known until data for the general census for 1941 are compiled.

Each fisherman has shortened his fishing time an average of 0.3 hour since the closure and has caught 1.1 more fish.

Summary

The data and discussion presented above may be summarized as follows:

1. The catch per hour for all waters was lower in 1941 than in any previous year during which the census was taken; the same is true of the catch per hour in the closed waters, while the waters open to commercial fishing yielded a catch per hour considerably higher than the five-year average.

2. The marked increase in the catch per hour in the open waters for 1940 was due both to better fishing in Lake Huron waters and to the transfer of Potagannissing Bay data to the closed group following September 20, 1939, when commercial fishing was prohibited.

3. The type of fishing largely determines differences in the catch per hour between localities.

4. While the five-year average catch per hour for the different types of fishing are nearly the same in open and closed waters, the 1941 catch per hour for all types was much higher in the open water than in the closed.

5. The time of day during which fishing was done seems to have less effect on the rate of catch than does the type of fishing.

6. There has been a consistent increase in the percentage of local residents among the anglers during the last three years.

7. Fishing has improved in Potagannissing Bay since its closure on September 20, 1939. The improvement cannot be considered the result of the closure, however, since a similar trend has occurred in nearly all waters between Lake Superior and Lake Huron as well as in the inland waters of Chippewa County.

8. There has been a noticeable decrease in the catch per hour for Potagannissing Bay in 1941. Similar decreases have occurred in the St. Mary's River waters and the open waters of Lake Huron, while fishing has improved in Lake Superior waters and other Lake Huron waters.

INSTITUTE FOR FISHERIES RESEARCH

By Eugene W. Roelofs

Report approved by: A. S. Hazzard

Report typed by: R. Bauch

Table 1
General Creel Census Data on the Connecting Waters Between Lake
Superior and Lake Huron, and Some Adjoining Waters, 1937-1941.

Year	Fishermen contacted	Fishermen taking no fish		Total hours fished	Number of legal fish	Catch per fisherman	Catch per hour	Hours per fisherman
		Number	Per cent					
<u>Waters Closed to Commercial Fishing</u>								
1937	158	34	21.5	602.0	1,092	6.9	1.8	3.8
1938	348	97	27.9	1,109.5	2,135	6.1	1.9	3.2
1939	140	31	22.1	424.75	874	6.2	2.1	3.0
1940	483	62	12.8	1,580.0	2,786	5.8	1.8	3.3
1941	706	219	31.0	2,118.75	2,532	3.6	1.2	3.0
Total or average	1,835	443	24.1	5,835.0	9,419	5.1	1.6	3.2
<u>Waters Open to Commercial Fishing</u>								
1937	82	31	37.8	240.0	352	4.3	1.5	2.9
1938	239	48	20.1	749.75	1,302	5.4	1.7	3.1
1939	172	76	44.2	585.25	718	4.2	1.2	3.4
1940	79	3	3.8	242.0	686	8.7	2.8	3.1
1941	171	35	20.5	506.25	1,261	7.4	2.5	3.0
Total or average	743	193	26.0	2,323.25	4,319	5.8	1.9	3.1
<u>All Waters</u>								
1937	240	65	27.1	842.0	1,444	6.0	1.7	3.5
1938	587	145	24.7	1,859.25	3,437	5.9	1.8	3.2
1939	312	107	34.3	1,010.0	1,592	5.1	1.6	3.2
1940	562	65	11.6	1,822.0	3,472	6.2	1.9	3.2
1941	877	254	29.0	2,625.0	3,793	4.3	1.4	3.0
Total or average	2,578	636	24.7	8,158.25	13,738	5.3	1.7	3.2

Table 2

General Creel Census Data on the Connecting Waters Between Lake Superior and Lake Huron, and Some Adjoining Waters, 1937-1941.

Year	Per cent failures	All fish	Catch per hour				Total hours
			Smallmouth bass	Yellow perch	Walleye pike	Northern pike	
<u>Lake Superior Waters (Closed)</u>							
1937	0.0	2.60	...	1.89	0.01	0.14	332.0
1938	13.1	3.00	...	2.82	Trace	0.07	443.0
1939	0.0	3.76	...	3.50	0.09	0.03	172.75
1940	3.8	2.51	...	2.40	...	0.03	241.0
1941	6.2	2.81	...	2.74	...	0.05	267.5
Average	6.0	2.88	...	2.60	0.01	0.14	1,465.25
<u>St. Mary's River Waters (Closed)</u>							
1937	60.0	0.26	...	0.09	0.09	0.06	170.0
1938	43.9	0.90	...	0.01	0.18	0.03	509.0
1939	33.3	0.80	0.10	0.31	0.02	0.23	103.5
1940	20.2	1.36	0.05	0.92	0.05	0.39	563.5
1941	43.0	0.55	0.09	0.15	0.05	0.23	1,161.5
Average	38.4	0.79	0.06	0.30	0.08	0.21	2,507.5
<u>Potagannissing Bay Waters</u>							
<u>(Open)</u>							
1937	30.4	1.39	0.16	1.20	...	0.02	170.5
1938	20.7	1.71	0.04	1.50	0.02	0.08	584.75
1939	58.1	0.70	0.07	0.52	...	0.06	386.0
<u>(Closed)</u>							
1940	10.1	1.94	0.24	1.17	...	0.27	633.5
1941	23.8	1.63	0.14	1.01	...	0.31	640.25
Average	24.8	1.57	0.13	1.11	Trace	0.18	2,415.00
<u>Lake Huron Waters (Open)</u>							
1937	53.8	1.65	...	1.57	...	0.09	69.5
1938	18.8	1.82	0.34	1.21	...	0.19	165.0
1939	25.0	2.25	0.01	2.13	...	0.05	199.25
1940	3.8	2.83	0.05	1.98	...	0.04	242.0
1941	21.5	2.61	0.09	2.10	...	0.15	478.25
Average	20.3	2.42	0.10	1.92	...	0.11	1,154.00
<u>Lake Huron Waters (Closed)</u>							
1937	18.9	1.84	...	0.69	...	0.19	100.0
1938	13.0	2.21	0.01	1.19	0.01	0.38	157.5
1939	39.6	0.96	...	0.41	...	0.14	148.5
1940	14.0	1.34	...	1.01	...	0.23	142.0
1941	11.1	1.45	...	0.98	...	0.27	77.5
Average	20.1	1.56	Trace	0.86	Trace	0.24	625.5
Grand Average	24.6	1.68	0.02	1.22	0.03	0.16	....

Table 3
 General Creel Census Data On the Connecting Waters Between Lake
 Superior and Lake Huron, and Some Adjoining Waters, Showing
 the Type of Fishing Done By the Anglers, 1938 to 1941.

Year	Number of fishermen	Still fishing			Still fishing and casting			Casting and/or trolling		
		Number	Per cent	Catch per hour	Number	Per cent	Catch per hour	Number	Per cent	Catch per hour
<u>Waters Closed to Commercial Fishing</u>										
1938	348	214	61.5	2.7	42	12.1	0.9	92	26.4	0.7
1939	140	60	42.9	3.3	49	35.0	1.6	31	22.1	0.7
1940	483	213	44.1	2.6	127	26.3	1.6	143	29.6	0.8
1941	699	214	30.3	2.4	168	23.8	1.1	317	44.9	0.5
Total or Average*	1,670	701	42.0	2.6	386	23.1	1.3	583	34.9	0.6
<u>Waters Open to Commercial Fishing</u>										
1938	239	140	58.6	2.3	46	19.2	1.3	53	22.2	0.7
1939	172	73	42.5	2.1	74	43.0	0.9	25	14.5	0.2
1940	79	69	87.4	3.1	5	6.3	1.6	5	6.3	0.7
1941	171	83	48.5	4.2	39	22.8	1.6	49	28.7	0.8
Total or Average*	661	365	55.2	2.8	164	24.8	1.2	132	20.0	0.6
<u>All Waters</u>										
1938	587	354	60.3	2.5	88	15.0	1.1	145	24.7	0.7
1939	312	133	42.5	2.6	123	39.4	1.2	56	17.9	0.4
1940	562	282	50.2	2.7	132	23.5	1.5	148	26.3	0.8
1941	870	297	34.1	2.9	207	23.8	1.2	366	42.1	0.5
Total or Average*	2,331	1,066	45.7	2.7	550	23.6	1.3	715	30.7	0.6

* Weighted.

Table 4
 General Creel Census Data For the Connecting Waters Between Lake
 Superior and Lake Huron, and Some Adjoining Waters, Indicating
 the Percentage Composition of the Total Catch by Species,
 1937 to 1941.

Year	Total catch	Smallmouth bass	Yellow perch	Northern pike	Rock bass	Walleye pike	Misc.
1937	1,444	1.9	71.1	12.8	4.0	1.2	9.0
1938	3,451	2.4	71.4	5.3	4.8	3.0	13.0
1939	1,580	1.8	83.5	5.4	5.4	1.8	2.1
1940	3,466	6.4	69.8	13.2	5.9	0.8	3.9
1941	3,793	6.4	69.4	15.6	6.2	1.4	1.0
Total or Average*	13,734	4.4	72.8	9.9	5.5	1.7	5.7

* Weighted.

Table 5
 General Creel Census Data For the Connecting Waters Between Lake
 Superior and Lake Huron, and Some Adjoining Waters, Indicating
 the Percentage Composition of the Total Catch, 1941.

Region	Number of fish	Per cent smallmouth	Per cent perch	Per cent northern pike	Per cent rock bass	Per cent walleye	Per cent bullhead	Per cent lake trout	Per cent muskellunge	Σ
<u>Lake Superior</u>										
Waiska Bay	751	...	97.5	1.7	...	...	0.8	...	...	100.0
<u>St. Mary's River</u>										
St. Mary's River	444	17.8	23.0	47.5	2.3	3.8	4.3	0.9	0.4	100.0
Hay Lake	112	10.6	43.7	16.9	2.1	25.3	1.4	...	...	100.0
Raber Bay	3	...	...	100.0	...	...	...	...	...	100.0
Lake George	36	22.2	30.6	41.7	...	5.5	...	...	...	100.0
Raynold Bay	14	21.4	...	78.6	...	...	...	...	...	100.0
Σ or Average*	639	16.4	27.4	41.3	2.0	8.3	3.7	0.6	0.3	100.0
<u>Potagannissing Bay</u>										
Potagannissing Bay	976	7.6	65.0	19.3	8.1	...	...	...	...	100.0
Maud Bay	43	37.2	...	62.8	...	...	...	...	...	100.0
Spring Bay Dock	25	8.0	48.0	44.0	...	...	...	...	...	100.0
Σ or Average*	1,044	8.8	62.0	21.6	7.6	...	...	...	...	100.0
<u>Lake Huron (closed)</u>										
Whitney Bay	112	...	67.8	18.8-	13.4	...	...	...	...	100.0
<u>Lake Huron (open)</u>										
Lake Huron	134	13.4	42.5	40.3	3.8	...	...	...	...	100.0
Scammon's Cove	985	2.6	83.5	1.2	12.7	...	...	...	...	100.0
Carlton Bay	128	...	97.7	2.3	...	...	...	...	...	100.0
Σ or Average*	1,247	3.5	80.5	5.6	10.4	...	...	...	...	100.0
<u>All Waters:</u>										
Σ or Average*	3,793	6.4	69.4	15.6	6.2	1.4	0.8	0.1	0.1	100.0

* Weighted.

Table 6
 General Creel Census Data For the Connecting Waters Between Lake Superior
 and Lake Huron, and Some Adjoining Waters, Indicating the Average Sizes
 of Different Species of Fish Taken in Creel Census, 1937 to 1941

Year	Smallmouth bass		Yellow perch		Northern pike		Rock bass		Walleye pike		Bullhead		Sunfish		Lake trout		Muskel-lunge	
	No.	Ave. size	No.	Ave. size	No.	Ave. size	No.	Ave. size	No.	Ave. size	No.	Ave. size	No.	Ave. size	No.	Ave. size	No.	Ave. size
1937	12	15.2	1,026	8.8	185	21.7	58	6.6	18	21.5	60	9.3	68	7.2	...	...	...	...
1938	84	12.1	2,465	8.1	184	18.6	166	7.2	102	19.9	72	8.6	12	7.0	...	...	...	...
1939	29	11.3	1,319	8.4	85	22.9	85	7.2	29	19.4	19	8.0	3	7.0	...	...	...	...
1940	220	13.4	2,419	8.7	459	22.9	202	7.5	26	17.6	17	11.6	18	7.6	...	...	...	...
1941	241	13.1	2,634	8.7	593	22.6	237	8.1	55	18.1	27	9.5	...	...	4	15.0	2	37.0
Total or Average*	586	13.0	9,863	8.5	1,506	22.1	748	7.5	230	19.3	195	9.1	101	7.2	4	15.0	2	37.0

* Weighted.

Table 7
 General Creel Census Data On the Connecting Waters Between Lake Superior and Lake Huron, and Some Adjoining Waters, Indicating the Time of Day During Which Fishing Was Done.
 1938-1941

Year	No. of fishermen	(Figures in percentage of fishermen)					
		1-5 A.M.	5-9 A.M.	9 A.M.-1 P.M.	1-5 P.M.	5-9 P.M.	9-1 P.M.
<u>Lake Superior Waters (closed)</u>							
1938	134	2.8	14.7	32.8	46.4	2.6	0.7
1939	61	...	3.3	18.2	73.4	5.1	...
1940	79	...	4.6	35.9	53.7	5.8	...
1941	97	...	...	21.6	67.0	5.2	6.2
Total or Average*	371	1.0	6.8	28.1	57.8	4.4	1.9
<u>St. Mary's River Waters (closed)</u>							
1938	160	2.3	5.0	17.0	14.0	40.8	20.9
1939	31	2.9	6.8	20.8	35.7	29.0	4.8
1940	185	...	2.5	28.2	44.7	22.3	2.3
1941	363	0.6	3.3	21.0	35.9	38.0	1.2
Total or Average*	739	0.9	3.6	21.9	33.4	34.3	5.9
<u>Potagannissing Bay Waters</u>							
(Open)							
1938	175	...	10.0	23.1	32.7	33.9	0.3
1939	96	...	5.2	21.8	42.1	30.9	...
(Closed)							
1940	175	...	5.2	25.7	50.7	18.0	0.4
1941	227	...	1.8	19.1	46.8	31.4	0.9
Total or Average*	673	...	5.3	22.2	43.5-	28.5	0.5
<u>Lake Huron Waters (open)</u>							
1938	64	...	9.3	27.3	43.5	16.5	3.4
1939	76	...	22.2	25.2	32.0	19.8	0.8
1940	79	...	10.6	28.4	43.7	17.3	...
1941	163	...	5.8	24.4	45.9	19.8	4.1
Total or Average*	382	...	10.6	25.9	42.3	18.7	2.5
<u>Lake Huron Waters (closed)</u>							
1938	54	...	17.2	20.9	36.7	24.1	1.1
1939	48	...	21.9	7.7	33.7	36.7	...
1940	44	...	14.1	21.8	24.3	39.8	...
1941	27	...	7.2	10.7	50.0	32.1	...
Total or Average*	173	...	16.2	15.9	34.8	32.8	0.3
Grand Total or Average*	2,338	0.4	6.7	23.2	41.7	25.3	2.7

* Weighted.

Table 8
 General Creel Census Data For the Connecting Waters Between Lake
 Superior and Lake Huron, and Some Adjoining Waters, Indicating
 the Residence of Fishermen, 1938 to 1941

Year	Number of Fishermen	Resident, Chippewa County	Residents outside Chippewa County	Non- resident	Unknown
<u>Waters Closed to Commercial Fishing</u>					
1938	348	60.2	22.0	12.5	5.3
1939	140	44.0	31.3	23.9	0.8
1940	483	52.2	28.9	18.1	0.8
1941	706	57.5	27.1	13.9	1.5
Total or Average*	1,677	55.4	26.9	15.7	2.0
<u>Waters Open to Commercial Fishing</u>					
1938	239	39.4	26.2	24.6	9.8
1939	172	22.3	48.6	29.1	...
1940	79	44.7	52.9	2.4	...
1941	171	55.5	34.5	10.0	...
Total or Average*	661	39.8	37.4	19.3	3.5
<u>All Waters</u>					
1938	587	58.2	22.4	13.7	5.7
1939	312	31.6	41.2	26.8	0.3
1940	562	51.1	32.6	15.7	0.6
1941	877	57.1	28.5	13.1	1.3
Total or Average*	2,338	52.5	29.7	15.7	2.1

* Weighted

Table 9
 General Creel Census Data On the Connecting Waters Between Lake Superior and Lake Huron, and Some Adjoining Waters, Summarizing Data Bearing On the Catch per Hour, 1938-1941

Year	(Figures in per cent of fishermen)							
	Residence		Time of day		Type of fishing			Catch per hour
	Chippewa County	Non-Chippewa County	Daytime	Morning or evening	Still fishing	Still fishing and casting	Casting and/or trolling	
<u>Waters Closed to Commercial Fishing</u>								
1938	60.2	39.8	53.7	46.3	61.5	12.1	26.4	1.9
1939	44.0	56.0	66.6	33.4	42.9	35.0	22.1	2.1
1940	52.2	47.8	74.5	25.5	44.1	26.2	29.6	1.8
1941	57.5	42.5	64.2	35.8	30.3	23.8	44.9	1.2
Average*	55.4	44.6	65.2	34.8	42.0	23.1	34.9	1.6
<u>Waters Open to Commercial Fishing</u>								
1938	39.4	60.6	59.8	40.2	58.6	19.2	22.2	1.7
1939	22.3	77.7	60.9	39.1	42.5	43.0	14.5	1.2
1940	44.7	55.3	72.1	27.9	87.4	6.3	6.3	2.8
1941	55.5	44.5	70.3	29.7	48.5	22.8	28.7	2.5
Average*	39.8	60.2	64.2	35.8	55.2	24.8	20.0	1.9
<u>All Waters</u>								
1938	58.2	41.8	56.2	43.8	60.3	15.0	24.7	1.8
1939	31.6	68.4	63.5	36.5	42.5	39.4	17.9	1.6
1940	51.1	48.9	74.2	25.8	50.2	23.5	26.3	1.9
1941	57.1	42.9	65.3	34.7	34.1	23.8	42.1	1.4
Average*	52.5	47.5	64.9	35.1	45.7	23.6	30.7	1.7

* Weighted

Table 10
General Creel Census Data On the Waters of the
Potagannissing Bay Region, 1937 to 1941

Year	Number of fishermen	Fishermen taking no fish		Total hours	Legal fish	Catch per fisherman	Catch per hour	Hours per fisherman
		Number	Per cent					
1937	56	17	30.4	170.5	237	4.2	1.4	3.0
1938	180	36	20.0	584.75	1,001	5.6	1.7	3.2
1939	96	54	56.3	386.0	269	2.8	0.7	4.0
Total or Average♣	332	107	32.2	1,151.25	1,507	4.5	1.3	3.5
<u>Closed to Commercial Fishing, September 20, 1939</u>								
1940	181	19	10.5	647.0	1,240	6.9	1.9	3.6
1941	227	54	23.8	640.25	1,044	4.6	1.6	2.8
Total or Average♣	408	73	17.9	1,287.25	2,284	5.6	1.8	3.2
Grand Total or Average♣	740	180	24.3	2,438.5	3,791	5.1	1.6	3.3

♣ Weighted.