

Prepared for
use in
Michigan Conservation

Original: Fish Division
cc: Education-Game
Mr. Krumholz

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INSTITUTE FOR FISHERIES RESEARCH
DIVISION OF FISHERIES
MICHIGAN DEPARTMENT OF CONSERVATION
COOPERATING WITH THE
UNIVERSITY OF MICHIGAN

ALBERT S. HAZZARD, PH.D.
DIRECTOR

ADDRESS
UNIVERSITY MUSEUMS ANNEX
ANN ARBOR, MICHIGAN

December 11, 1941

REPORT NO. 710

THE WINTER FISHING PROBLEM

by

Louis A. Krumholz

Does summer fishing suffer from the toll taken during the winter months by the ice fishermen? For the past seven years the Institute for Fisheries Research has been investigating this problem, and the data collected through creel censuses and population studies indicate that winter fishing has no appreciable effect on summer fishing.

The opponents of winter fishing, who are usually summer cottage owners, resort operators, boat liverymen and others whose incomes depend to a greater or lesser extent on the summer tourist fishermen, fear that the fish population of a lake may become so depleted through winter fishing as to be too small for a good summer's harvest the following year. These objectors, particularly if they are not year round residents, sometimes have occasion to drive past their favorite lake on a bright winter afternoon and become unduly alarmed at the numbers of shanties and fishermen on the ice. They do not stop to think that bright, sunny days are the exception rather than the rule and that such days are at a premium for those who like to get out-of-doors in the winter months. Again, the shanties are usually occupied only during week ends and not continuously throughout the winter. Nor do the opponents of winter fishing remember that the ~~kinds~~ of fish which are most sought after during

the summer, as the largemouth and smallmouth bass, trout and rock bass, are either completely protected during the winter months or are not easily taken through the ice. The pictures of their favorite lakes literally covered with fishermen and shanties, which appear in the papers, are often unusual, otherwise they wouldn't warrant publication. The long, cold hours waiting for the "gill" to take the bobber under are completely forgotten or not a part of their repertoire.

Conversely, those who go ice fishing are the main proponents of the sport. The winter fisherman avails himself of the opportunity of being out-of-doors at a time when such activity is highly desirable. A camp-fire made from dead falls gathered in the snow covered woods, a well-turned steak and a steaming cup of coffee, made with a minimum of utensils, add to the enjoyment of the ice fisherman. More practically, winter fishing furnishes a valuable source of food and recreation for those whose work does not permit them to fish much during the rest of the year.

The methods of fishing in the summertime are quite varied and familiar to most sportsmen. Winter fishing in Michigan, however, is carried on in three ways: spearing (for muskallunge, northern pike, herring, suckers and other coarse fish) during ~~the~~ January and February; tip-ups (for walleye, northern pike and perch); and pole and line fishing with a short, limber rod. Spearing is done usually from a shanty and with or without the use of decoy minnows. Tip-ups were quite popular until 1935, when the Conservation Commission lowered the number of lines available to each fisherman from five to two. Most fishermen using tip-ups agree that fishing with five tip-ups was slow, but with only two it is hardly worth while. The pole and line ice fishermen are more numerous than the other two types combined. In most of the southern Michigan lakes on which winter fishing

is done extensively, only a small percentage of the fishermen use the spear or tip-up. In the northern part of the Lower Peninsula the spear and tip-up are used more frequently, largely because the types of fish best taken by these methods are more abundant.

Usually only those lakes which are very close to the highway are used by the ice fisherman. It is often impossible for him to leave the main roads and seek out the lakes back in the woods because the trails are deep with snow. Thus we may realize that the fishing sites of the ice fisherman are far more restricted than those of the summer angler. In their analysis of the fish catch for one year in the Waterloo area, Hazzard and Eschmeyer* point out that of 28 lakes censused throughout the winter of 1935-1936, ice fishing of reasonable significance took place on only two lakes. In northern Michigan, the great majority of lakes popular with the summer tourist are only slightly used during the winter months.

The number of fishermen using lakes which are, by reputation, good winter fishing lakes is small in comparison with the number of summer fishermen using these same lakes. On Bear Lake, located about 5 miles southwest of Hillsdale in Hillsdale County, a creel census has been in progress since December 1937. The total number of ice fishermen during the four winters since the inception of this creel census, as shown in the accompanying table, has been 1,239, whereas there have been 10,014 fishermen on this same lake during the four summers. The ice fishermen fished for a shorter period each day but had a greater catch per hour. The summer fishermen, however, having spent a longer time per day in fishing had a larger catch per man than did the ice fishermen.

*Hazzard, A. S. and R. W. Eschmeyer. 1938. An Analysis of the Fish Catch for One Year in the Waterloo Project Area. Papers of the Michigan Academy of Science, Arts and Letters, 23: 633-643.

The total number of summer fishermen on six lakes in the northern part of Michigan[✓] in 1934 and 1935, as found by Hazzard and Eschmeyer^{✓**} of the Institute for Fisheries Research, was 13,077, whereas the winter fishermen for the corresponding winters numbered only 899. From these data we see that only 6.4 per cent of the fishermen on the lake fished during the winter months, whereas the great majority (93.6 per cent) fished during the summer months. The summer fishermen caught a total of 30,114 fish, whereas the ice fishermen caught only 733 fish. The figures for the winter censuses represent very nearly 100 per cent of the fishing on the lakes, whereas the census data for the summer months represents approximately 85 per cent of the fishermen. Thus the summer take was even higher than is shown by the figures, and record of the take through the ice is fairly accurate..

A creel census taken on five southern Michigan "bluegill lakes"^{****} under the supervision of O. H. Clark^{****} of the Institute for Fisheries Research from December 1938 to October 1940 showed that there were 21,869 ice fishermen and 41,356 summer fishermen. This indicates a two to one ratio for the summer and winter seasons and the figures were obtained from above average lakes with regard to winter fishing pressure with the exception of Bear Lake in Hillsdale County. On these same five lakes 121,666 fish were taken during the winter and 120,273 fish were taken during the summer. In other words, half the number of fishermen in the winter caught approximately the same number of fish as were taken in the summer.

^{✓*} Hazzard, A. S. and R. W. Eschmeyer. 1937. A Comparison of Summer and Winter Fishing in Michigan Lakes. Trans. Am. Fish. Soc., 66:87-97.

^{✓*} Fife Lake, Grand Traverse and Kalkaska counties; Budd Lake, Clare County; Clear Lake, Ogemaw County; Clear Lake, Montmorency County; Bear Lake, Otsego County; and Pleasant Lake, Oakland County.

^{✓***} Bear Lake, Hillsdale County; Craig Lake, Branch County; Christiana Lake, Cass County; Paw Paw Lake, Berrien County; and Stearns Bayou, Ottawa County.

^{✓****} Clark, O. H. Investigations of the Winter Fishing Problem on Several Southern Michigan "Bluegill Lakes." Manuscript unpublished.

The catch per hour during the winter months was 1.7 fish or about twice that of the summer months when the anglers caught 0.9 fish per hour. The general census, that is the census conducted by the conservation officers over the entire state of Michigan, shows an average catch per hour of 1.4 fish in 1938, 1.1 fish for 1939, and 1.0 for 1940. The average ice fisherman fished about twenty minutes longer each day than did the summer fishermen. Fewer ice fishermen (32 per cent) caught no fish than did the summer fishermen of whom 38 per cent were "blanked."

Another "bluegill lake" in southern Michigan on which the Institute for Fisheries Research has had a creel census in operation for several successive years is Craig Lake in Branch County. This lake is about 5 miles northwest of Coldwater and is easily accessible by a black top county road within a few hundred yards of the east shore. The creel census was started in December 1938 and was continued until September 1941. In this lake the total catch during each of the seasons as well as the catch per hour and the catch per acre are shown in the accompanying table. On this lake the ice fishermen enjoyed greater success than did the summer fishermen. They fished for a longer period of time each day than did the summer fishermen but the catch per hour was about four times as great each of the winters. The decline in the number of fish taken through the ice in the winter of 1940-1941 is probably due to the relative decrease in the number of ice fishermen due to the shorter season in 1940-1941. There was no ice on Craig Lake that was safe enough for the winter fishermen from December 17, 1940 until January 10, 1941. This period of over three weeks cut into the ice fishing activities and although it might not be accountable for the difference of about 10,000 fish between the last two years of the census, still it is a fact to be considered. The summer fishermen did not fare so well on Craig Lake. During the three ^{years} ~~summers~~ more fishermen

visited the lake in the summer but caught fewer fish. As indicated in the table, the population has remained fairly stable under the heavy winter fishing pressure.

To return to the figures from Bear Lake, Hillsdale County, the data from the creel census show that the fishing during the winter of 1940-1941 and the summer of 1941 is better than it was the first year of the census which began in December 1937. In addition to the creel census a population study has been run on this lake for the past two years. The figures for the estimated population of legal fish in the lake are shown in the accompanying table. During the summer season of 1940, 3,617 fish were taken from the lake by hook and line. In May 1941 another population study was made and the number of legal fish was estimated at 18,900. This was repeated in October 1941. During the summer of 1941 7,682 fish were taken from the lake by hook and line. Inasmuch as the population estimates are only of legal fish, we may assume that many small fish reach legal length between October and June and that they also continue to reach legal length throughout the summer. Also with the increase in numbers of legal-sized fish in the lake up to a certain point we can expect the fishing to be better.

Perhaps the most significant comparison between summer and winter fishing can be made on a basis of catch per acre. The area of Craig Lake is 122 acres and that of Bear Lake 104 acres. The figures showing the catch per acre are given in the accompanying table.

In conclusion there are several points which can be deduced from these data:

1. Relatively few lakes are utilized by the ice fisherman as compared with those used by the summer fisherman.

2. Lakes usually have a greater fishing pressure in the summer than in the winter although the winter catch may equal or even exceed the summer catch.

3. The species taken during the winter are usually large, predacious fish as northern pike, walleyes, etc. and some suckers and other coarse fish, with the exception of the southern "bluegill lakes" which are appropriately named.

4. The catch per hour is lower in the winter than in the summer in the northern lakes. There are exceptions to this in some of the southern lakes.

5. The winter fisherman usually spends a longer time on the lake than does the summer fisherman.

6. Ice fishing gives a type of out-of-door recreation at a time when it is desirable and provides a valuable source of food and recreation for those whose work does not permit them to fish at other times during the year.

On the basis of these facts, it can be concluded that ice fishing is not generally harmful to summer fishing in Michigan lakes. There are closed spawning seasons for all game fish which are ample for the propagation of all warm water species of fish. Ice fishing may furnish as valuable a form of recreation as does summer fishing and is deserving of equal consideration.

INSTITUTE FOR FISHERIES RESEARCH

Louis A. Krumholz
Junior Aquatic Biologist

Report approved by: A. S. Hazzard

Report typed by: V.A.

CREEL CENSUS DATA FOR CRAIG LAKE, BRANCH COUNTY

Season	Number of fishermen	Number of hours	Number of fish	Catch per hour	Catch per acre	Estimated population of legal fish
Winter 1938-39	2,478	8,427.0	22,215	2.6	182.1	...
Summer 1939	3,745	12,531.0	8,918	0.7	73.1	...
Winter 1939-40	2,687	8,998.0	23,049	2.6	188.9	48,500
Summer 1940	3,196	8,658.5	6,035	0.7	49.5	32,500
Winter 1940-41	1,709	5,770.5	13,370	2.3	109.6	54,900
Summer 1941	1,922	5,545.0	4,656	0.8	38.2	...

CREEL CENSUS DATA FOR BEAR LAKE, HILLSDALE COUNTY

Season	Number of fishermen	Number of hours	Number of fish	Catch per hour	Catch per acre	Estimated population of legal fish
Winter 1937-38	311	793.0	238	0.3	2.3	...
Summer 1938	3,342	13,875.0	8,301	0.6	79.8	...
Winter 1938-39	202	558.5	547	1.0	5.3	...
Summer 1939	2,698	8,153.5	6,409	0.8	61.6	...
Winter 1939-40	254	547.25	262	0.3	2.5	11,100
Summer 1940	1,834	5,063.25	3,617	0.7	34.8	8,200
Winter 1940-41	472	906.25	1,381	1.5	13.3	18,900
Summer 1941	2,140	7,385.25	7,682	1.0	73.9	15,000

CAPTIONS FOR ILLUSTRATIONS

Fig. 1. Creel census clerk at Craig Lake near Coldwater, Michigan.

Fig. 2. Ice fishermen on Craig Lake near Coldwater, Michigan.