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EXPERIMENTAL CHANGES IN FISHING REGULATIONS ON LAKES

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Experimental regulations allowing more fishing are now in effect, or will be by June 25, on 14 Michigan lakes, mostly in the southern half of the Lower Peninsula. These new regulations pertain especially to the warm-water species in most instances, but trout are involved in the case of one lake. The purpose of the liberalized regulations is to find out if these lakes will provide a greater harvest of fish, or if changes in certain fishing laws will make better fishing. The basis for assuming that liberalizing some of our present laws might provide more and better fishing is our belief that the warm-water species, especially the pan fishes, are producing a greater crop than is being harvested on most of our lakes.

The evidence of a large and unused crop of pan fishes is seen in the effect of periodic winterkills on our lakes, and in the results of special population studies by poisoning and netting. For example, following the extensive winterkills during 1935-36 and 1944-45, counts of dead fish on

ten of our heavily fished lakes revealed a minimum of from 100 to 400 legal-sized game and pan fishes (mostly the latter) per acre. Various creel census studies on Michigan lakes have shown that fishermen harvest, on the average, about 15 to 50 legal fish per acre per year, or probably not more than about 10 per cent of the standing crop of legal-sized pan fishes. Overpopulation of young fish and stunting--or put in other terms, the slow average growth--of pan fishes in many waters is to some degree a reflection of too many adults present during the breeding season--another indication that fishing is not overcropping the species.

In fact, hook-and-line fishing, although it is the accepted sporting method, appears to be a rather ineffective method of catching fish. Recent reports from Alabama, Indiana, and Illinois describe experiments where very intensive fishing removed only about half of the catchable fish. Perhaps the left-overs represent an uncatchable minimum population, with fishing restricted to the surplus population above this minimum. But it is difficult to imagine that an uncatchable remnant of a fish population must remain a fixed quantity. The more intensive or extensive the fishing, the greater should be the total yield. If fishing on Michigan lakes is as ineffective in cropping pan fishes as experiments and observations seem to indicate, there appears to be little justification for fishing restrictions on these species. Our goal should be for fishermen to crop each water to that limit which will leave just enough breeder fish for adequate natural reproduction and leave a desirable balance of the different species.

Opening of all non-trout lakes north of highway M-16 (the main east-west highway between Port Sanilac and Muskegon) by the legislature in 1945 to fishing throughout the year for species not protected by closed seasons

was a step in the direction of more liberalized fishing regulations. It provided additional fishing for perch, rock bass, crappies, and most of our non-game species in all lakes, plus additional fishing for pike, walleyes and trouts in lakes which had been in the "all other lake" classification and therefore did not open until June 25. It did not involve any change in fishing for largemouth and smallmouth bass, bluegills and sunfish. Nor did it change the status of lakes south of M-16, and our interest is largely concerned with these lakes at the present time. These southern lakes have large populations of pan fishes, presumably much more so than the northern lakes because the southern lakes are more fertile. Year-around fishing intensity on these southern lakes, if open to fishing, would be greater than on the northern lakes, and would provide a better test of the effect of reduced restrictions. Due to the concentration of fishermen in the southern third of the state, there is perhaps more justification for liberalizing regulations on southern waters, if these waters will hold up under the added fishing pressure.

A legislative amendment in 1945 to the Discretionary Power Act gave the Conservation Commission authority to establish more liberal fishing regulations on not more than 20 lakes and 10 streams (not more than one lake and one stream per county) for a period not to exceed five years on each water for the purpose of experimental research on fishing regulations. This is the authority under which the experimental regulations are set up on 14 lakes, and most of these 14 lakes were selected south of M-16 for reasons given above.

The present theory that our lakes will provide more fishing applies primarily to the pan fishes--the perch, crappie, rock bass, bluegill and sunfish. More fishing for pan fishes could be provided in any one of

several ways, either by changing or eliminating the closed seasons on some or all of the species, or increasing or eliminating the creel limit, or reducing or eliminating the size limit. Presumably the closed seasons are designed primarily to protect spawning fish, and eliminating the closed season (on bluegills, for example) would provide a test of the need for such protection.

In addition to the question of undercropping of adult or legal-sized pan fishes, another problem is involved in the experimental regulations. Many lakes have an overpopulation of certain species, especially the bluegill, yellow perch, or rock bass, to the extent that there are great numbers of small fish and the growth is so slow that only a small per cent reach a legal size. An effective method of managing such populations is greatly needed. Theoretically the problem is one of thinning out the small fish so that available food will be used for better growth of the remaining fish. If removal of the size limit will be followed by concerted cooperation of fishermen in removing large numbers of the small fish, merely to get them out of the lake, this might prove to be a feasible method of correcting stunting and improving fishing. On Bear Lake, Hillsdale County, where there was no size limit on pan fishes in effect during 1945, fishermen kept only 8 undersized pan fish per acre during the season. This number was too few to be significant in a stunted population. To give this theory a fair test, fishermen should ignore their scruples about protecting undersized fish, and should remove them in large numbers. Provisions for unlimited removal of undersized pan fishes will be in effect on three southern lakes by June 25th.

While the present experiments involve more fishing mostly for the pan fishes, they involve also some additional fishing for northern pike, pikeperch (walleyes), and trouts in most of the 14 lakes where these species

happen to occur. Trout are abundant in only one of the lakes, but walleyes are present in several and northern pike are present in most of them. On northern pike and walleyes the additional fishing will be during the period from May 15 to June 24, which is a favorable season for catching these species. The pike and walleye season on most of these experimental, southern lakes is the same as on all non-trout lakes north of highway M-46. The present experiments do not involve any changes in regulations on the largemouth and smallmouth bass, but the need for the present regulations on these species should also be tested by future experiments.

The 14 lakes on which experimental liberalized fishing regulations have been put into effect this year, together with the specific regulations, and the purpose and proposed duration of the experiments, are as follows:

(1) Lakes open to hook and line fishing throughout the year for all fish during their respective open seasons. Effective March 15, 1946 for five years.

Craig Lake, Girard Township, Branch County.

Duck Lake, Clarence Township, Calhoun County.

Fine Lake, Johnston^W_A Township, Barry County.

Lobdell Lake, Argentine Township, Genesee County.

Pontiac Lake, White Lake and Waterford townships, Oakland County.

Whitmore Lake, Green Oak Township in Livingston County, and

Northfield Township in Washtenaw County. (On Whitmore,

effective April 1, 1946 for 5 years.)

Open seasons on the various species are:

Brook, brown and rainbow trout - last Saturday in April to Labor Day.

Largemouth and smallmouth bass - June 25 to December 31.

Bluegills and sunfish - June 25 to February 28.

Northern pike, pikeperch (walleyes) and muskellunge - May 15 to
March 15.

Sturgeon - no open season.

All other species - no closed season.

All statutory size limits and creel limits remain in effect.

Thus these six lakes are in the same category as all non-trout lakes north of highway M-46. The change on these lakes provides for more fishing for all species except the largemouth and smallmouth bass, bluegill and sunfish. The purpose of the experiment is to determine if southern Michigan lakes will yield more fish without detracting from the quality of fishing during the summer or subsequent years.

(2) Lakes open to hook and line fishing for bluegills and sunfish at any time of the day or year, and open throughout the year for other species of fish during their respective open seasons. Effective March 15, 1946 for 5 years.

Big Portage Lake, Henrietta and Waterloo townships, Jackson County.

Fife Lake, Fife Lake and Springfield townships, Grand Traverse
and Kalkaska counties.

Minnewaukon Lake, Sherman Township, St. Joseph County.

Sugarloaf Lake, Lyndon Township, Washtenaw County.

On these lakes there is no closed season on bluegills and sunfish. Open seasons on all other species are the same as cited under group (1) above. All statutory size limits and creel limits remain in effect. The purpose of this experiment is to test the effect of additional fishing for species except the basses, and in addition to determine the effect of eliminating the closed season on bluegills and sunfish.

(3) Lakes open to hook and line fishing throughout the year for taking bluegills, sunfish, perch, rock bass, and calico bass (crappies)

at any time; in addition to the statutory creel limit for such species (25 singly or in any combination except not more than 15 bluegills) six inches in length or over, an unlimited number of the undersized of such species may also be taken. Other species may be taken only during statutory open seasons and according to statutory creel limits and size limits.

Effective March 15, 1946 for 5 years.

Bear Lake, Cambria Township, Hillsdale County.

Saddle Lake, Columbia Township, Van Buren County.

On these two lakes there is no size limit on the pan fishes, and an unlimited number of pan fish under 6 inches may be taken in addition to the regular creel limit of pan fish over 6 inches. In addition there is no closed season on bluegills and sunfish. All other species may be taken only during statutory open seasons (cited under (1) above). Statutory size limits and creel limits remain in effect on all species except the pan fishes (bluegills, sunfish, perch, rock bass, and calico bass).

The primary purpose of this experiment is to determine if fishermen will remove enough of the undersized pan fishes to improve conditions in an overcrowded and stunted population. To give the experiment a fair test fishermen are encouraged to fish for and remove as many of these small fish as possible. There is probably no chance of removing so many as to seriously deplete these species. Our primary concern is that fishermen may not remove enough ^{of them} to do any good.

The provision on Bear and Saddle whereby there is no closed season on bluegills and sunfish, and an open season on some other species from April 1 to June 25 was the result of an oversight in the wording of the Commission Order. This can be corrected for next year, if it is to the interest of local fishermen that this be done.

(4) Lake open to hook and line fishing for taking bluegills, sunfish, perch, rock bass, and calico bass of any size only during specified open seasons. In addition to the statutory creel limit for such species (25 singly or in any combination except not more than 15 bluegills) six inches in length and over, an unlimited number of the undersized (less than 6 inches in length) of such species may also be taken. Effective June 25, 1946 for 1 year.

Turk Lake (both the upper and lower parts of the lake), Montcalm Township, Montcalm County.

Specified open seasons on this lake are as follows:

Brook, brown and rainbow trout - June 25 to Labor Day.

Largemouth and smallmouth bass - June 25 to December 31.

Northern pike, pikeperch (walleyes) and muskellunge - June 25 to March 15.

Sturgeon - no open season.

Bluegills and sunfish - June 25 to February 28.

All other species - June 25 to March 31.

The lake remains closed to all fishing from April 1 to June 24. Statutory size limits and creel limits remain in effect on all species except bluegills, sunfish, perch, rock bass, and calico bass.

The purpose of the experiment on Turk Lake is to find out if fishermen will remove enough of the undersized pan fishes (especially bluegills in this lake) in an overcrowded population to effect better growth among the remaining fish. A fair test of the experiment will require that fishermen remove large numbers of these small fish, presumably all that they can catch by hook and line. It is expected that fishermen will cooperate to this extent, for a majority of the cottage owners on Turk Lake have expressed themselves in favor of eliminating the size limit on bluegills in their lake.

(5) Lake open to hook and line fishing from May 15 to March 31 for taking all fish during their respective open seasons. Effective January 1, 1946 for 3 years.

Birch Lake, Porter Township, Cass County.

Open seasons on this lake are as follows:

Brook, brown and rainbow trout - May 15 to Labor Day, except that rainbow trout may also be taken during September, October and November. Special creel limit of 5 trout per day.

Largemouth and smallmouth bass - June 25 to December 31.

Bluegills and sunfish - June 25 to February 28.

Northern pike and pikeperch (walleyes) - May 15 to March 15.

All other species - May 15 to March 31.

There are no changes in statutory creel limits or size limits except as indicated for trout.

Birch Lake has proven to be a good rainbow trout lake and plantings of legal-sized hatchery rainbows have given good returns to anglers. In previous years the lake has opened on June 25, and by this date the surface water is too warm for trout which are therefore in deep water. Fishing earlier in the season would encounter these trout in shallower water where some of them could be taken by fly fishermen. The purpose of the experiment is to find out if this spring fishing, in addition to summer and fall fishing, will give a greater return to anglers of the hatchery-planted rainbows. While past returns have been good, even better returns are hoped for and may be realized by the additional spring fishing.

To find out the results of these experiments on liberalized fishing regulations, the Fish Division of the Conservation Department is conducting a creel census of fishing on each of the lakes. Creel census clerks are stationed at Fife, Sugarloaf, Big Portage, Minnowaukon, Saddle, Bear, and Birch lakes. In addition, one man is covering Lobdell, Pontiac and Whitmore, two days a week on each; and another man is handling Craig, Duck and Pine lakes on the same basis. The creel census at Turk Lake will be on a voluntary basis with fishermen filling out their own records at stations set up by the Fish Division.

In addition to the creel census, the Fish Division will be making special studies on the rate of growth and the abundance of the various game species in each of the lakes.

The aim of the creel census is to obtain a complete record, or else an estimate based on a generous sample, of all fishing and fish caught throughout the year. The special growth studies and the creel census record will be necessary to correctly evaluate these experimental changes in fishing regulations. Fishermen on these lakes frequently will be contacted by the creel census clerks. The cooperation of fishermen will be appreciated.

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