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## INSTITUTE FOR FISHERIES RESEARCH

DIVISION OF FISHERIES

## MICHIGAN DEPARTMENT OF CONSERVATION COOPERATING WITH THE UNIVERSITY OF MICHIGAN

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OBSERVATIONS MADE ON SPAWNING CONDITIONS FOR NORTHERN PIKE AT HOUGHTON LAKE, MARCH 25 TO APRIL 1, 1942

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## W. F. Carbine

The water level at Houghton Lake is much higher than average this year. Damage to the shores caused by the ice push was much worse than in a good many years. Many marshes adjacent to the lake were flooded this year and stand a much better chance of remaining flooded than in several years past. In 1941 the water was high both in the lake and in the marshes, but not as high as in 1942. Again, in 1941, the water in the marshes, and the lake level dropped rather suddenly, probably before the northern pike eggs hatched. This year there is more snow and water and therefore a better chance that the water level will remain higher for a longer period than in 1941. If so, and if there are sufficient pike present in the lake to spawn, the production and survival of young pike should be much greater than during the past four or five years.

It is during periods of low lake level that northern pike spawning areas are at a premium. In 1940 we made a survey of possible pike spawning areas, some of which are used every year and others only during times of high water. This year dozens of places are available for spawning because of the unusually high water level.

On the night of March 27, Ike Jones. President of the Houghton Lake Chamber of Commerce, paid us a visit at Peterson's. I have never yet seen a man holding such a high position as Mr. Jones who could act so mean and downright nasty. Mr. Jones has his own ideas regarding the run of northern pike and improving the conditions for northern pike in Houghton Lake. Mr. Jones listened to what we had to say about northern pike but emphatically stated that he did not care what we had found, he still did not believe it. This condition is prevalent among many of the so-called sportsmen and resort operators at Houghton Lake. They all have their own ideas and do a great deal of talking about what should be done, but their words are louder than their actions. This is all probably due to the fact that they are looking out for themselves and are not genuinely interested in helping the lake for fear that one of their competitors would reap more benefit than themselves. These people believe that every pike in the Muskegon River (in its entire length) belongs in or came originally from Houghton Lake. It was pointed out to Mr. Jones (and other Houghton Lake residents) that the Muskegon River is capable of supporting a fairly large pike population. Most everyone will agree to this but claim that if these pike were not caught in the river they would certainly come into Houghton Lake. We told Mr. Jones the results that were obtained from the operation of the Muskegon River weir in 1939 and 1940, and the results of the tagging operations to date.

We advised Mr. Jones against dipping the fish over the Reedsburg Dam this year. The main reason given was that the job may run into more work and expense than the pike thus transferred would be worth. Also that if a large number were transferred it would probably greatly diminish the normal river population of morthern pike. We told Mr. Jones

that if the Chamber of Commerce and sportsmen wanted to do something to improve northern pike fishing at Houghton Lake, they could do any one or all of the following:

- 1. The culverts leading from Ditch No. I to V (see Institute for Fisheries Research Report No. 583) at Peterson's should be screened during the upstream run of adult pike, and completely blocked as soon as the water in Ditch I starts to flow into Ditch V. In the past most of the young pike that hatch in Peterson's ditches have probably gone downstream into the river. In connection with this blocking of the culverts to hold the water back, it was pointed out that a certain few people (all real estate promoters) object to this procedure. The reasons for this are that with the high water in the ditches, their lots are nearly under water and therefore harder to sell, and that they think that the hordes of mosquitoes are hatched in the ditches. From my observations and those of other reliable people, no mosquitoes live in the ditches but are to be found in the marshes and woods some little distance from the ditches. In other words, the people do not need to choose between mosquitoes and pike. If the ditches are drained early they will still have mosquitoes, (but not as many as there would be if the ditches were full of water), but no pike.
- 2. There is a five-acre piece of marsh land adjoining the lake shore, near the Muskegon River, that would make an ideal natural rearing pond. This particular area receives the drainage water from about 10 or 20 acres of woods and marsh land. When Mr. Claf Michelson had a canal dug on his property touching on the river, a dyke was built that actually makes a shallow pond of this marsh area to the south. A small hole has been cut in the dyke to allow the water to escape into the canal. The

sportsmen could build a small dam in this outlet in the dyke to be used after the pike have entered and before the water goes down, because the level of this marsh will have to be maintained until the eggs hatch. In case pike do not normally enter this area now (Mr. Frank will make observations this spring) it may be possible for the sportsmen to obtain some adults in the Denton Creek or at Peterson's to place in this particular area. Water could also be diverted into this area from the road drainage ditches.

- 3. With the expenditure of a little more work and money, a natural spawning area could be developed in the Hartwick marsh about a mile and a quarter north of Peterson's. This marsh area is low and contains some water the year around.
- Let Burnt Point could be developed into a natural spawning area, but would require a little more labor and probably would cost more than the others listed above. Some fill dirt for dykes would be necessary here. But the sportsmen should be able to find some public-spirited coul who would donate the services of a truck for a day or two and the labor could be provided by the sportsmen.
- 5. The Chamber of Commerce could, with approval of the conservation officer, patrol various ditches and marsh areas to prevent poaching.

If the sportsmen were sufficiently interested in improving fishing at "oughton lake, they would probably take it upon themselves to attempt some of the projects listed above. The whole thing would cost very little money and could be conducted as a club project or hobby. I am certain that the results would justify their effort.

The writer has always been in favor of allowing the removal of suckers and redhorse from the streams at Houghton Lake during their spring migration. At Denton Creek, however, we are confronted with

several problems. One is that a Mr. McKee who owns the property at the mouth of Denton Creek places his nets in the water in such a fashion (staggering his nets) that the stream is almost, if not entirely, blocked to upstream migration of fish. It is possible, although it probably does not happen, that Mr. McKee could obtain the entire run of suckers. Some (the percentage is not known) should be allowed to spawn. It is also known that Mr. McKee does appropriate a few northern pike during the spring run for his own use. (I was told that Mr. McKee was selling northern pike this spring. I notified the conservation officer and Roscommon Headquarters of this. The source of the information—a state trooper.) Obviously something should be done about this. Probably a law should be passed limiting the number of nets that can be used by any one person and probably setting a certain definite distance that nets can be spaced.

It should also be called to the attention of the conservation officer at Houghton Lake and District Headquarters at Roscommon that the dip nets that are used by Mr. McKee are illegal. His nets are constructed of wire poultry netting. According to Section d, page 35, of the fishing laws (revision of 1941): "Dip nets.....Provided, That for the purpose of this act a dip net is defined as a square net which shall be constructed from a piece of webbing of relatively heavy twine..."

INSTITUTE FOR FISHERIES RESEARCH

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