

Copy of this attached to
Fife Lake Creel Census & Fish
Population Survey

Went to Johnstone
Klamath

Regal
Fife Lake
Camp

Original: Fish Division
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INSTITUTE FOR FISHERIES RESEARCH
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ANN ARBOR, MICHIGAN

March 24, 1936

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REPORT NO. 348

PROPOSED STUDY OF FISH YIELD AND FISH
MOVEMENTS IN CONNECTION WITH CREEL CENSUS

The creel census projects conducted by the E.C.W. in cooperation with the Institute for Fisheries Research are providing a wealth of information essential to fish management in our inland lakes. The many benefits derived from the census are indicated in the various reports submitted on this subject from time to time by the Institute. Exact data on the annual crop from a number of our inland lakes are being compiled. The annual "turnover"--the percentage of the crop actually harvested--is not known. It is proposed that, for one lake, this important information, along with certain other valuable data, be determined in connection with the creel census project.

The added labor involved includes the following:

1. Tagging of a total of approximately 2000 fish of various species. Tagging of perch, pike and walleyes would be done at approximately the spawning time of these species (April or early May). The other species would be tagged in May or early June. The seining and tagging of the fish would be under the immediate supervision of the Institute staff, with most of the labor contributed by the E.C.W. camp.
2. Making of approximately 10 markers containing numbers large enough to be read at considerable distance. These markers would be anchored in the lake at various places during the summer fishing season.

An intensive creel census during the summer would of course be necessary.

Because a census has already been taken for two seasons on Fife Lake, because the

residents and resorters have cooperated excellently in this census, and because the census was taken on this lake in a very satisfactory manner, it is believed that Fife Lake should be selected for this work. The favorable location of the camp, with reference to the lake, was considered in selecting Fife Lake for this study.

In connection with the regular census activities, the census takers would carefully examine each fish for tags, would list the number on the tag, and would record the exact length of the tagged fish. They would determine also, from the fisherman, the location in the lake where he fished (nearest which marker).

In addition to the usual information, the following data would then be made available by tabulating the information after the summer season:

1. Approximate number of adult fish of each species in the lake. For example, if, of the smallmouthed bass caught, one fish in ten had a tag, and, if 200 had been tagged, the lake would actually contain approximately ten times as many smallmouthed bass as the number tagged; it would contain about 2000 adult smallmouthed bass.
2. The annual "turnover" for each species. Perhaps 50% of the adults of one species are taken each year and only 5% of another. This would involve a 50% harvest of one crop and only a 5% harvest of the other. Naturally, the fish producing the largest crop should be given more encouragement by stocking and improvement than those which produce little return. The value of determining what percentage of the fish of each species may be taken without detriment to future abundance of each species in the lake is obviously great.
3. Movements of the fish within the lake. Definite records will be kept of the location where the tagged fish were released. It will also be known where most of these fish were caught. If most of them are caught near the point where they were released, it will indicate that the individual fish stay in one area; if those released at one point are recovered at various points in the lake, it will show that the individual fish move around considerably. Perhaps some species stay in certain areas while others use the entire lake. This information is of value in stocking and in lake improvement work.

4. Various information with reference to rate of growth. It will make possible the testing of the reliability of present methods to determine the rate of growth of each of the several species.

The Fife Lake census for 1934 was discussed at the meeting of the American Fisheries Society in Tulsa, Oklahoma last September. Fisheries workers from other states have shown considerable interest in this project. Published accounts of this census will probably be available in a few months. Data on the 1935 census will probably be available within a few weeks and may also be published later. If the proposed project is successfully carried out, the Fife Lake E.C.W. camp, the local residents, resorters and fishermen will have made another valuable contribution to fish management, of value to Michigan and to other states as well. To be really successful the project would call for especially selected and closely and carefully supervised census takers, an active interest on the part of the E.C.W. camp personnel, and full cooperation of the residents, resorters and fishermen. It is believed that this cooperation is obtainable, and that it will be gladly given by those interested in the lake and in fishing in general. The Institute would, of course, keep in close contact with the work, would provide some of the needed material and would supervise some of the operations.

Much would depend, of course, on the success in obtaining fish for tagging. Although there is some possibility that the desired number could not be seined, the attempt is certainly justified. Working at irregular hours, especially at night (night seining) might be involved; however, such irregularities would be of relatively short duration, perhaps a week or two at most.

It is hoped that this proposed project may receive the favorable consideration from the various agencies involved and that full cooperation on the part of the various agencies be assured. The interesting and favorable publicity, coupled with the knowledge that the work is of basic value in the improvement of fishing should provide the necessary incentive on the part of the agencies involved to cooperate fully.

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