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DIVISION OF FISHERIES
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PRELIMINARY REPORT ON FISH LOSSES IN LAKE MACATAWA (BLACK LAKE), IN OTTAWA COUNTY

by

James W. Moffett

A sample of game fish collected alive from Lake Macatawa in Ottawa County was sent to the Institute for Fisheries Research by Claude Lydell, District Supervisor of Fisheries Operations, District No. 8. The Institute was asked to determine whether these fish were fungused and if so, whether the fungus had appeared on the fish as a result of mechanical injury incidental to seining operations for "noxious fish" as carried on by the Holland Game Club. Examination by the author and Mr. Leonard Allison revealed no fungus spots on these fish. Some rather bloody areas were noted around the anterior ends of these specimens. The bodies of these fish were covered with a thick layer of mucus. The gills and mouth areas were also jammed with mucus. A protozoan, Cyclochaeta, was observed on the gills. This form does not invade tissues but may cause some irritation. Other instances of parasitism were rare. There seemed to be a congestion of blood in the anterior end of the body. Most of the livers of these fish were practically white. The last two symptoms often appear in fish collected from polluted waters.

It was felt that a better conception of the trouble involved could be obtained if the actual netting operations were observed. On April 17, Mr. Allison and the author accompanied Mr. Lydell to Lake Macatawa, where a netting was scheduled. The seine used was 1500 feet long and about 10-15 feet deep. Stretched mesh in the seine measured 5 inches, while in the centrally located bag a smaller mesh was used. About 1 ton of carp, quillback and sheepshead was taken in this seine haul. Game fish were quite rare in comparison. They constituted about 1 per cent of the catch. Largemouth bass, white bass and bullheads were the species released. Only a few bass were seen in the haul. Other game fish were absent. As would be expected, the fish when confined to a small area began threshing about and it was quite evident that mechanical injury to all species in the net was unavoidable. Infection by fungus under such circumstances is very probable, but only 1 sheepshead was fungused at all and this patch was confined to the upper part of the head. Examination of largemouth bass showed the same symptoms as were found in the specimens sent to the Institute for examination. No mortality of game fish was observed following or during the netting. Conversation with Albert Van der Yacht, supervising officer on the project, revealed that mortalities in the past have been immediate. He also stated that some partially decomposed fish had been taken in several net hauls previous to this time. Several specimens taken from the net by Mr. Lydell and his staff for show purposes had not developed any fungus after being held in tanks for two days.

From the information secured, it is believed that netting, although injurious, is not entirely responsible for the deaths of game fish that occur. Some mechanical injury is self-evident, but the apparent scarcity

of badly fungused fish would indicate that most of these injuries did not become infected with this plant (fungus). More information and study is necessary to determine the actual cause of the trouble. Most any lake, seined heavily during late winter and early spring, would give up dead or dying fish and it is quite possible that a frequency of fungus occurrence would be found as great or even greater than was the case in Lake Macatawa.

Researches have shown that by removal of carp the success and yield of panfish and bass have been increased greatly. The reasoning then suggests that removal of these "obnoxious" species should greatly increase the numbers of game fish in a body of water such as Lake Macatawa. Some increase has been noted by supervising officer Van der Yacht. If such is the case, the carp seining, although detrimental to a few game fish immediately, will prove an aid to the game fish as time goes on. Furthermore, the application by the Holland Game Club of funds derived from these seining operations to development of wayside parks and rearing ponds seems to somewhat offset the harm done.

INSTITUTE FOR FISHERIES RESEARCH

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