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January 16, 1945

REPORT NO. 988

THE INTRODUCTION OF NORTHERN PIKE IN KEENEY POND, LENAWEE COUNTY, IN AN ATTEMPT TO CONTROL A STUNTED POPULATION OF BLUEGILLS

by

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On June 2, 1944 Mr. Westerman sent the Institute a copy of his letter to Mr. John R. Keeney of Tipton and copies of letters from Mr. Keeney and Mr. Harold Treat regarding Keeney Pond. Mr. Keeney was interested in removing the goldfish in his private, farm pond because he believed them responsible for the fact that the bluegills and pumpkinseed sunfish did not reach any size. Mr. Westerman suggested that some member of the Institute staff look over the pond when in that vicinity and make recommendations for improving the fishing.

On September 18, Mr. George Washburn contacted Mr. Keeney and the two of them looked over the pond (T. 5 S., R. 3 E., Section 21) and discussed the various problems. Keeney Pond is located about one mile west of the village of Tipton. According to Mr. Keeney the dam was constructed in the early 1920's. For the first few years the bluegill, pumpkinseed and largemouth bass fishing was very good. A partial winter-kill occurred during the winter of 1935-36 and since this time largemouth bass have never been taken. Mr. Keeney did not know just when the goldfish were introduced. Fishing during the past few years has been poor. It is possible to catch large numbers of bluegills and pumpkinseeds but few of them are of legal size. The goldfish are extremely abundant and so are

the bluegills.

The area of Keeney Pond was estimated at about 15 acres. The maximum depth is about 10 feet and the average depth is believed to be greater than 5 feet. The pond is fed by runoff and springs. One spring has an estimated flow of between 200 and 250 gallons per minute and had a temperature of 52°F. The overflow from the pond enters a tile to Tipton and thence to the River Raisen. The water of the pond is light brown in color and the visibility is about 1.5 to 2 feet. Most of the land surrounding the pond is under cultivation or is used for pasture.

Large numbers of colored and uncolored goldfish were observed. Some of these fish would reach an estimated size of better than two pounds. Small bluegills and pumpkinseeds appeared to be rather numerous.

Because it would be impossible to poison the pond at the present time, Mr. Keeney agreed that he would be very willing to cooperate in any management plans that the Institute desired to make.

It was decided that the introduction of some species such as the northern pike might be tried in an attempt to control the stunted bluegills and possibly the goldfish. The presence of several marshy areas practically assured us that the northern pike would be able to reproduce successfully in Keeney Pond. There are a number of public lakes containing populations of stunted fish that could be handled in the same manner providing this experiment is successful.

It was about this same time that we heard that Mr. Claude Lydell, District Supervisor of Fisheries Operations, Comstock Park, Michigan, had a number of northern pike on hand. Arrangements were made to have Mr. Lydell place these pike in Keeney Pond.

On September 25 the writers met Mr. Lydell at Keeney Pond. A total of 91 northern pike had survived the trip from the hatchery. These 91 fish were fin-clipped (left pelvic) and scales and measurements were taken from a random sample. Mr. Lydell told us that these northern pike were taken from the Greenville Rearing Pond when it was drained. As this pond is drained every other year, it is possible that some of these pike could be at least three years old. The pike ranged in length from 8.9 to 22.1 inches in length. All of these fish were in excellent condition upon release into the pond. Mr. Keeney promised us that he would not permit the removal of any of the northern pike until next summer.

The writers walked around the pond and made various observations. Several marshy areas were found that could be used by spawning pike. The one area was located in the southwest end of the pond near the entrance of the big spring. The other marsh area was just across the county road, and below the farm buildings. At the time we were there the culvert leading from the marsh area to pond had been plugged by the County Road Commission when they added fill dirt on the shoulders. Mr. Keeney was going to see that a new culvert was installed.

The writers made one haul with a 100 foot bag seine to obtain a sample of fish. Measurements and scale samples were taken from a random sample of the fish. Only three species of fish were taken--bluegills, pumpkinseed sunfish and goldfish. Several bluegillxpumpkinseed hybrids were also caught in the seine. No other species were observed.

Scales of the bluegill and pumpkinseed sunfish were examined under a microscope. All of the bluegills and pumpkinseeds and the hybrids between the two were growing much slower than average for the state. Bluegills between 5 and 5.5 inches were in their fifth and sixth years of life. The largest bluegill that we took was 7.1 inches long and was in its eighth

year of life. The largest pumpkinseed sunfish that we took were just under four inches in length and were in their fourth year of life.

Recommendations

Observations should be made early next spring (1945) to determine whether the northern pike are able to spawn successfully.

At least one fish collection should be made during 1945. A good series of scale samples should be secured from the bluegills and pumpkinseeds.

A map should be made of the pond as soon as possible and preferably this winter.

A series of temperatures and oxygen analyses should be made in the pond during late summer of 1945 and during the period of ice cover, especially in the end near the entrance of the big spring. It is possible that Keeney Pond might be suitable for trout after poisoning.

The spring stream should be re-routed so that its entrance to the pond is more direct. At present this stream is fairly long and enters a shallow marshy bay. It is believed that by shortening the stream and re-routing it, that the oxygenated water would greatly assist in preventing winter kill. Also, if it is found that this pond has trout possibilities, the direct entrance of the cold water from the spring stream would be desirable.

No northern pike should be removed from Keeney Pond until the summer of 1946 (this may be subject to change). If any pike are captured, it would be desirable to obtain a length measurement of the fish before it is released.

Mr. Keeney can control the fishing on this pond. Every angler should report the number of each species that they catch and keep. Mr. Keeney will be furnished several creel census books for the purpose of recording the fishing.

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