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December 9, 1940

REPORT NO. 637

THE AGE OF YELLOW PERCH FROM WEBER LAKE, ALGER COUNTY, WITH SOME SUGGESTIONS AS TO MANAGEMENT AND FUTURE INVESTIGATION OF THIS LAKE

by

W. C. Beckman

On July 18, 1940, at the request of Mr. F. P. Furlong, District Supervisor of the Division of Field Administration at Newberry, I went in to Weber Lake (T. 48 N., R. 13 W., Sec. 8), Alger County, with Conservation Officer Forest Carter, of Grand Marais. As the lake is about 1½ miles off the nearest logging road, Officer Carter and I packed in a rubber boat and two experimental gill nets (5 by 125 feet, with five mesh sizes graduated from 1½ to 4 inches stretched measure). After setting the gill nets, we took a few random soundings and found a depth of 45 feet in the eastern part of the lake, and a depth of 35 feet in the western part. We also took a few temperature readings, and obtained a surface reading of 70° F. at about 2 p.m., and a bottom reading (with a Taylor pocket thermometer, lowered to the bottom and allowed to remain for five minutes and then hauled up as rapidly as possible) of 65° F., at a depth of 45 feet.

There are no visible inlets or outlets other than a small stream flowing into the lake from a small unnamed marshy lake to the west. The area of Weber Lake was estimated to be about 60 acres. The shore line is encroaching bog mat around most of the lake. That which is not is rocky, quite steep shore. There is a small island in the eastern part. The only sand bottom seen was off this island.

On the 19th, I was accompanied to the lake by Fire Warden Walter Niemi, as Officer Carter was called on other duties. Niemi and I lifted the nets and there were 23 perch varying in size from 5 3/4 to 14 3/4 inches in the nets. No other species of fish was taken. After we had packed the boat and nets out to the road, Niemi helped me in taking measurements and scale samples from the perch. These samples were taken to the laboratory of the Institute for Fisheries Research in Ann Arbor. They were cleaned and mounted for age determinations. These determinations have been completed and are as follows:

Size and Age of Yellow Perch from Weber Lake, Alger County

(Specimens caught 7/19/40)

Total length, in inches	Weight in ounces	Age	Sex
5 7/8	1.2	V	♀
6	1.1	V	♀
6	1.1	VI	♂
6	1.3	VI	♀
6 1/4	1.2	VI	♀
6 3/8	1.4	VI	♀
7 1/4	1.9	VI	♀
10 1/2	9.2	VI	♀
7 3/8	2.5	VII	♂
5 3/4	1.1	VII	♂
5 3/4	1.1	VII	♀
6 5/8	1.7	VIII	♀
7 3/8	2.0	VIII	♀
7 3/4	2.7	VIII	♀
9 1/4	4.4	VIII	♀
11 3/4	11.8	VIII	♀
8	3.4	IX	♀
10 3/8	6.1	IX	♀
11 1/5	10.3	IX	♀
14 3/4	20.7	IX	♀
12 1/4	9.5	IX	♀
11 3/4	11.6	X	♀

Mr. Furlong had hoped that this lake could be made into a trout lake. He and Officer Carter had fished it, but had taken no fish. It is quite unlikely that this lake could be made into a trout lake. The presence of the perch makes it improbable that a successful trout planting could be made even with legal-sized fish, judging by the results of such plantings in similar waters. The temperatures would probably increase as the summer progressed and would

probably exceed the tolerance limit for trout. It is likely that oxygen may be deficient in the colder bottom water during the mid-summer. A more thorough survey of this lake should be made before entirely rejecting the trout possibilities. A series of temperatures with an accurate reversing thermometer, and a chemical analysis of the water should be made.

The perch were stunted in this lake. This may be due to lack of food. In rowing around the lake we saw no minnows of any kind. The five-year-old fish, the youngest fish taken, had just barely reached legal size, while two of the seven-year-old perch had not yet reached legal size. Younger perch may be present in the lake, but were too small to be taken in the finest mesh of our nets. According to our present limited data, perch should reach legal size in about three years. (More detailed information is being compiled on this subject, and will be completed in the near future. Several thousand perch scale samples are being studied at the present time.)

An increased amount of fishing on this lake might help in reducing the population of the perch. This reduction in population might have either of two effects. One, the reduction would permit the remaining fish to grow faster because more food would be available for the remaining fish, and thus they would reach legal size sooner. Or, two, as fishing tends to remove the larger fish, the reduction in the numbers of the larger fish might permit an overabundance of small fish to thrive and thus increase stunting.

Increased fishing could be facilitated by changing the classification of this lake from the "all others" to a "pike lake." Along with the change in classification a stocking of some northern pike might be made. A northern pike—yellow perch combination in a lake is generally a good combination. The pike would keep the perch population in check, and thus both

the pike and perch should make good growth.

From this brief examination of Weber Lake, it does not seem that conditions are suited to walleyed pike. Transfer of adults of this species would be difficult because of distance from roads and scarcity of stock. Walleyed pike fry might be brought in on sleds during April, but we question whether any would survive predation by the numerous perch. On the other hand, northern pike would undoubtedly spawn in the marshy areas and would find excellent food in the perch. Pike are more readily available and the introduction of a few pairs should establish this species.

However, since this lake may have trout possibilities, it is urged that no fish introductions be attempted until a complete fisheries survey can be made. Weber Lake will be placed on the list for investigation during the summer of 1941.

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