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REPORT NO. 891

FURTHER OBSERVATIONS ON LINCOLN LAKE, KENT COUNTY

by

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and

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On August 17 and 18, 1943 the writers made a check of Lincoln Lake, Kent County, to carry out some of the suggestions made in Report No. 849.

These suggestions were:

1. "To find out more about the walleye population in Lincoln Lake, it is suggested that checks and nettings be carried out at convenient times of the year when these fish would be more apt to be taken and that the conservation officer in that district be instructed to make special effort to secure creel census records of walleye catches."

2. "A check should be made in Lincoln Lake to find the amount of dissolved oxygen near the bottom, in late summer, since this lake may be suitable for cold-water species."

The writers wish to thank Mr. Claude Finkbeiner for the use of his rowboat during the two days we were at the lake and for certain information on the fishing.

Three gill nets were set in Lincoln Lake for a period of 24 hours in an attempt to secure some walleyes. A total of 29 fish were taken in

these nets as follows:

3 northern pike	3 black crappie	3 pumpkinseed sunfish
3 rock bass	6 largemouth bass	4 common suckers
1 perch	4 bluegills	2 yellow bullheads

As will be noted above, no walleyes were taken. The writers made inquiry from local residents and fishermen in order to ascertain whether any walleyes had been taken this year. There was not a single report of walleyes having been caught this year. Mr. Finkbeiner, who caught some walleyes in 1942 and obtained a number of records from other fishermen, reported that he had not caught any this year nor had he heard of any being taken by other fishermen.

It is very probable that walleyes are unable to reproduce in Lincoln Lake and their maintenance would have to depend upon stocking. The few walleyes that have been taken in other years no doubt were survivors of previous plantings, or migrants from the stream below. Because walleyed pike have not been able to establish themselves in Lincoln Lake, it is recommended that no future plantings of this species be made. There are also other reasons for not encouraging this species in Lincoln Lake. Usually predatory forms such as the walleye are introduced only in large lakes or in lakes containing stunted (slow growing) populations of bluegills, sunfish or perch. Lincoln Lake is not in this category. Studies on other lakes which were formerly good bass and bluegill waters before walleyes were introduced, indicate a marked decline in the bass and bluegill populations after the introduction of this predatory fish.

Fishing for largemouth and smallmouth bass, bluegills and northern pike has been good in Lincoln Lake. These species reproduce in the lake and are capable of maintaining themselves.

A check was made on dissolved oxygen in Lincoln Lake on August 17. The thermocline was located between 20 and 27 feet and only 1.1 p.p.m. of oxygen was found at the 27 foot level. This means that all fish would be excluded from the water over 27 feet deep and maybe slightly above this depth.

Since there is very little oxygen in the colder part of the thermocline and practically none in the water below, Lincoln Lake could not support trout during the critical part of the summer. The lake should therefore be managed for the largemouth bass and pan fish for which it is very well suited.

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