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THE PLANTING OF MINNOWS AND CRAWFISH IN LITTLE LONG LAKE

by

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A total of 15,446 fatheaded minnows were planted in Little Long Lake on May 15 and June 17, 1937 (see Report No. 444). Since these minnows were planted, three checkups were made as follows: On July 24 and 25, 1937, D. S. Shetter and Edwin Cooper seined the lake and recovered two of the planted fish, but no young of the year. Between September 6 to 9, 1937, Lowell Woodbury and the writer seined the lake, but no minnows were taken. On August 28, 1939, K. E. Goellner and the writer seined the lake and no evidence of the presence of fatheaded minnows was obtained.

From this evidence we are quite certain that the fatheaded minnows that were planted in 1937 were unable to maintain themselves in Little Long Lake.

It was decided after the last checkup had been made to introduce golden shiners in Little Long Lake. It was also decided that if one of the state fish hatcheries could furnish a supply of crawfish, these should also be planted.

On September 23, 1939, K. E. Goellner and the writer transported a load of golden shiners and crawfish to Little Long Lake. The golden shiners were obtained from experimental ponds 8 and 9 at the Drayton Plains Hatchery and were for the most part young of the year. The minnows were seined from the experimental ponds on September 22, and were held overnight in minnow tanks in the hatchery building.

On the morning of September 23, approximately one-third of the golden shiners were dead, presumably from the effects of seining and handling. Enough remained, however, to plant. All of the adult golden shiners were sorted out from the young of the year. A random sample of the young shiners was weighed and measured. They averaged 275 fish to four ounces, or 1100 fish to the pound. The length varied from 1 to 3 inches. The fish from pond 8 weighed 1 3/4 pounds, or a total of 1,925 fish. The number of fish from pond 9 were estimated because of the excessive loss attained in handling and weighing. It was estimated that there were 2,500 golden shiners remaining from those taken from pond No. 9. These minnows were of the same average length as those taken from pond 8. A total of two hundred 4 to 5 inch adult shiners was obtained.

The 4,625 minnows were equally divided among five 10-gallon cans and five twenty-gallon cans having an average water temperature of 56°F. We left Drayton Plains at 8:55 a.m. and arrived at Little Long Lake, 157 miles distant, at 2:40 p.m. The water temperature of the cans averaged 60°F. on our arrival at the lake. The temperature of the lake water was 66°, while that of the air was 59°F. The minnows in the cans were gradually tempered over a period of one-half hour. Approximately 1 1/4 pounds, or 1,375 minnows, died enroute. The remaining 3,250 fish were scattered along the shallow areas of the

north, south and west shores, in patches of thick weeds.

Whether the golden shiners will maintain themselves is uncertain. Frequent seinings and observations during the next year or so will determine that.

Several interesting incidents relative to the survival of this planting of minnows were noted. The first can of minnows planted (on the north shore) swam vigorously away into deeper water. Several minutes later several loud splashes called our attention to this spot. The minnows were returning to shallow water. Many of them would skip along the surface, occasionally jumping completely out of the water. Upon closer examination, a 6 to 8 inch largemouth bass was observed chasing the minnows. It was apparent at the time that several other bass must be chasing these minnows also. Later on, as several hundred minnows were planted in a weed bed along the west shore, a loud splash probably meant the end of another shiner; although we did not see a bass, the sound could not be mistaken.

More than an hour after the first minnows were planted along the north shore, several small, scattered schools of shiners were found swimming about in the weeds.

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Crawfish Section by K. E. Goellner

Since crawfish had not been found in seining Little Long Lake, and since there was nothing in the survey data to indicate that crawfish could not survive there, it was decided to plant a number of them with the minnows to determine whether or not crawfish could be established in the lake as bass food. Large numbers of the common pond crawfish,

Cambarus immunis, from the Fenton bass rearing ponds were available at the time and seemed suitable for this purpose. They were brought from the ponds to the Drayton Plains hatchery on September 22 and kept overnight in tanks containing running water at a temperature of 54°F.

The total weight of the crawfish planted was 160 pounds. Five random samples gave an average count of 75 to the pound. On this basis it was estimated that 12,000 crawfish were planted. In length they averaged 2 1/8 inches, ranging from 1 3/8 inches to 2 7/8 inches.

Very little difficulty was experienced in transferring the crawfish. They were loaded in eleven 10-gallon milk cans as follows: five cans of 20 pounds (1500) each, six cans of 10 pounds (750) each. All cans were filled with river water at 58°F. except one of 20 pounds and another of 10 pounds, which were filled with spring water at 54°F. When we arrived at the lake, the crawfish had been in the cans 6 hours and 40 minutes, during which time the 54° water had warmed to 60°, the 58° water to 61°.

Before planting, the crawfish in all cans were gradually tempered over a period of three-quarters of an hour to about 65°, the temperature of the lake water. About 5,000 crawfish were then released in the shallow water and 500 in the deeper water at the north end of the lake; the remainder were released along the west and south shores of the lake.

We watched the crawfish for about three hours after this release. They lay quite still where released for about an hour before they began to scatter. Not more than one in twenty to twenty-five were dead. Probably at least half of these were dead or dying when loaded. We could see no difference in degree of mortality between crawfish from cans with 1500 and crawfish from cans of 750, nor between crawfish from cans of different water temperatures.

Seining for crawfish next spring and summer and examination of the stomachs of fish caught subsequently to planting would be a desirable means of checking the feasibility of such planting.

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