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OBSERVATIONS ON HOWE LAKE, CRAWFORD COUNTY, JULY 4-5, 1940

by

John Greenbank

W. C. Beckman and I spent several hours on Howe Lake, on July 4, 1940, and set two experimental gill nets overnight. A few notes on our observations are recorded below.

Howe Lake is in Sec. 32, T. 27 N., R. 4 W., Crawford County. Its area is about 13 acres, with a maximum depth of 24 feet, and a sandy shoal with a very scanty vegetation.

The lake has figured in the history of fisheries investigation as follows. From 1930 to 1933 it was closed to fishing, and used as a stock producing lake. In 1930 several loads of gravel were placed on the shoals to provide bass spawning beds. In 1933 five truck loads of manure were put into the lake. In 1932 and 1933 attempts were made to introduce Chara and yellow pond lilies.

In 1933 a CCC crew, under the direction of I. A. Rodeheffer, installed several brush shelters, and slab devices for the spawning of minnows. Additional gravel also was put into the lake at that time.

On September 7, 1937, under the direction of R. W. Eschmeyer,* the lake was poisoned with derris root. The fish population was recovered, and tabulated in Eschmeyer's report. By far the dominant fish, from the standpoint of numbers, was the large-mouth bass. About 19,000 specimens had a weight of 11.6 pounds per acre. Thirteen large carp were taken, with a weight of 15.7 pounds per acre. About 3,000 perch were taken, and relatively small numbers each of common sucker, blunt-nosed minnow, common sunfish, and darters (Boleosoma nigrum and Poecilichthys exilis).

The restocking, as recorded in the fish planting records, has been as follows:

Large-mouth bass	1937	580	5 month
	1938	500	4 "
	1939	2,000	3 "
Small-mouth bass	1938	100	adult
	1939	100	"
Bluegill	1937	16,700	3 to 4 mo.
	1939	5,000	4 month
Golden shiner	1938	500	adult

At the time of our visit on July 4, 1940, the sandy shoals around the lake were thickly dotted with spawning nests, and literally thousands of common pumpkinseed sunfish (Lepomis gibbosus) were on the shoals. A sample of these fish, taken in the afternoon with a bag seine, showed them to be mostly common sunfish, with a small proportion of bluegills and green sunfish. Our gill nets also took fish in about the same proportions. One cannot be certain whether the common sunfish does overwhelmingly dominate the other two species in numbers in the lake, or whether there merely happened to be a relatively larger proportion of the former on the spawning beds at the time of our visit.

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* Eschmeyer, R. W. Analysis of the complete fish population from Howe Lake, Crawford County, Michigan. Inst. Fish. Res. Report No. 450, January 7, 1938.

The presence of any common sunfish or green sunfish in the lake must be considered to be accidental; since the poisoning presumably killed all of the fish present at that time, and since records of subsequent stocking do not indicate any planting of either of these two species. It is probable that the "bluegills" which were planted were actually a mixture of bluegills, common and green sunfish.

Two hours fishing in the afternoon failed to produce even a strike from a bass; and none of the spawning nests could be identified as that of a bass. However, one eleven-inch small-mouth bass was taken in the bag seine, and a large school of one-inch small-mouth bass fry was observed along the shore.

The fecundity of the common sunfish is demonstrated by the fact that specimens as small as 2 1/2 inches total length, and one-sixth of an ounce in weight, were taken off the spawning beds, and were ripe for spawning !

The gravel piles appeared largely to have become disintegrated; possibly the reason that we saw no bass nests is that the shoals now are pretty uniformly sand. The vegetation transplanting seems to have been practically a failure. Only a few scattered pond lilies are left.

The brush shelters mostly have gone to pieces. Probably they were placed in too shallow water, and have been torn to pieces by wave or ice action. Many of the slab devices are still in place, and are functioning. I lifted two of them, and observed two male minnows (probably blunt-nosed) which had nests under one, and three under the other.

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