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DEC 5 1934

FISH DIVISION

INSTITUTE FOR FISHERIES RESEARCH
UNIVERSITY MUSEUMS
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN

November 30, 1934

Report 264

INITIAL EXAMINATION OF INLAND LAKES IN WHICH PLANTINGS OF THE GREAT-
LAKE SHINER (NOTROPIS ATHERINOIDES) HAVE BEEN MADE

During the period of January 11 to January 24, 1934, the Department of Conservation made extensive plantings of great-lake shiners (Notropis atherinoides) in Michigan inland lakes, the shiners having been obtained from the Grand River at Grand Haven. Seining have recently been made in these inland lakes, by members of the Institute staff. The prime object of these seining was to obtain evidence relative to the possibility of reproduction in these inland lakes by this introduced species. The following table summarizes the plantings and our recent seining.

Name of lake	County	No. of fish planted	No. old enough to be spawners for 1934	Date of seining 1934	Number of hours spent seining	Length of shore-line covered by seining efforts
Gull	Kalamazoo	160,000	6,400	11/21	2 1/2	450 yards
Hess	Newaygo	300,000	8,800	11/19	2 1/2	300 "
Freemont	Newaygo	400,000	8,000	11/19	2	100 feet
Houghton	Roscommon	250,000	10,000	11/17	6 1/2	700 feet
Higgins	Roscommon	250,000	3,000	11/18	2	500 yards
Croton Dam	Newaygo	250,000	10,000	11/20	1	500 "
Blue	Newaygo	50,000	2,000	11/19	2	300 feet
Blanche	Newaygo	50,000	2,000	11/20	1 3/4	100 yards
Crystal	Oceana	100,000	4,000	11/20	2	1000 feet
Cadillac	Wexford	250,000	None	11/18	2	200 yards
*Hubbard	Alcona	* 90,000	?	11/16	2 1/2	300 yards

Total 2,500,000

*Other shiners have been planted, during the past few years, in Hubbard Lake from the Harrisville Hatchery.

In the larger lakes (Gull, Houghton, Higgins and Hubbard), the seining were made near the point at which the plantings were made.

One specimen of the Great-Lake shiner was obtained from Higgins Lake, and none of this species were obtained from any of the other lakes. The single specimen obtained

from Higgins is a young fish (hatched during the summer of 1934), determined by an examination of its scales. This fish however, had a deep gash on its side just behind the dorsal fin. There is the possibility that this fish was being used by a bait fisherman, was hooked and escaped, or was partially hooked and discarded. Obtaining this single specimen is not necessarily positive evidence that the species spawned in Higgins Lake during the past summer.

The combined negative results obtained from the seining of this group of lakes is fairly reliable evidence that the species is not being established in the group of lakes as a whole. However there is still the possibility that it has reproduced in some of these lakes, especially those which more nearly approximate the Great Lakes in ecological conditions. In the Great Lakes this species is an open water (pelagic) form during the summer and congregates along the shore during the winter. How the species would act in an inland lake is not known. A schooling population of considerable size could easily be missed entirely during a few hours seining along the shore of a lake as large as Higgins or Houghton Lakes.

Efforts will be made by the Institute to obtain further evidence relative to the results of the plantings which have been made. We do not believe the possibility of establishing this species in inland lakes to be a dead issue, and we feel that further plantings should be made, to be regarded as of experimental value. If the Departmental policies sanction further plantings of this species, we will, at your request, suggest a further list of lakes for this purpose.

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