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District Fisheries Supervisors 1-23-42

INSTITUTE FOR FISHERIES RESEARCH

DIVISION OF FISHERIES Foremen 1-23-42

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A SIXTH EXAMINATION OF MICHIGAN LAKES IN WHICH

PLANTINGS OF THE GREAT LAKES EMERALD SHINER

(NOTROPIS ATHERINOIDES) HAVE BEEN MADE.

by

W. F. Carbine

During the past summer the sixth examination was made on those Michigan lakes in which plantings of the lake emerald shiner (Notropis atherinoides) have been made. Data pertaining to these examinations are presented in the following table.

Lake	County	Date 1941	Collector
Cadillac	Wexford	July 7	Fish Collecting Party
Missaukee	Missaukee	July 11-14	Fish Collecting Party
Gull	Kalamazoo	Aug. 21-30	Lake Survey Party
Higgins	Roscommon	Sept. 5-6	Carbine and Beckman
Houghton	Roscommon	Sept. 6-7	Carbine and Beckman
Mitchell	Wexford	Sept. 7	Carbine and Beckman
Fremont	Newaygo	Sept. 8	Carbine and Beckman
Crystal	Oceana	Sept. 8	Carbine and Beckman
Blanche	Newaygo	Sept. 8	Carbine and Beckman

In each of the lakes listed in the table above, it is believed that sufficient seine hauls were made to adequately determine the presence of any lake emerald shiners. In none of the collections that were made, however, were any lake emerald shiners taken.

Lake emerald shiners were introduced into various Michigan lakes during 1933, 1934 and 1935. Plantings made in lakes on which checks have been made are summarized in the following table. (Also refer to Institute Reports 264, 323a and 533).

Summary of Plantings of Great Lakes Shiners
in Lakes Which Have Been Examined

Lake	County	Number of fish planted		
		1933-1934	1935	Total
Gull	Kalamazoo	160,000	...	160,000
Fremont	Newaygo	400,000	...	400,000
Houghton	Roscommon	250,000	...	250,000
Higgins	Roscommon	250,000	...	250,000
Blanche	Newaygo	50,000	...	50,000
Crystal	Oceana	100,000	...	100,000
Cadillac	Wexford	250,000	500,000	750,000
Mitchell	Wexford	...	500,000	500,000
Missaukee	Missaukee	...	500,000	500,000

It is felt that enough time has elapsed since planting for this species to have become established if conditions were suitable for their maintenance. Evidence has been obtained that indicates that there has been some natural reproduction in some of these lakes. The extent of

Table 1
Summary of Recovery Records of Great Lakes Shiners
During Four Checkups Made in 1934-1935 by
Gerald P. Cooper

Lake	County	Date of examination	Number obtained	Age
Blanche	Newaygo	4-5-35	1	*Young of 1934
Fremont	Newaygo	4-5-35	32	*Young of 1934
Fremont	Newaygo	10-20-35	184	*Young of 1934
Houghton	Roscommon	7-28-35	7	*Young of 1934
Higgins	Roscommon	11-18-34	1	Young of 1934--deep gash on back (bait)
Higgins	Crawford	7-28-35	1	*Young of 1934
Higgins	Crawford	7-28-35	2	Young of 1933 - original plant
Outlet Higgins	Roscommon	10-24-35	42	*Young of 1935
Outlet Higgins	Roscommon	10-24-35	1	Young of 1932 - original plant

* Probably represent instances of natural reproduction in lake.

this natural reproduction, however, is not known. The young were apparently unable to maintain themselves in any of the lakes examined. It has been found that adults from the original planting were still present in some of the lakes two years after planting and in one lake five years after planting. Eugene Kuhne, who lives on Crystal Lake in Oceana County, informed the writer that he observed two small schools of 50 - 75 lake shiners during the early summer of 1941. This would indicate that fish of the original plant have survived for about seven years in Crystal Lake

The effect of these plantings of lake shiners on game fish is not known. At best these minnows probably furnished only a meal or two for some of the game fish present.

From the evidence that we have accumulated since the plantings of lake shiners were made, it is apparent that attempts to establish this minnow have been unsuccessful. Furthermore, from the evidence that has been obtained during the six checkups, we are certain that good breeding stocks of other minnows or other forage fish are present in each of the lakes studied. It is the opinion of the writer that no further plantings of lake emerald shiners should be made in inland lakes unless a temporary increase of forage fish should prove to be desirable.

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Report approved by A. S. Hazzard

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