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INSTITUTE FOR FISHERIES RESEARCH

DIVISION OF FISHERIES

MICHIGAN DEPARTMENT OF CONSERVATION

COOPERATING WITH THE
UNIVERSITY OF MICHIGAN

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REPORT ON FISHING FOR 1937 AND RECOMMENDATIONS
FOR PLANTING IN 1938 IN THE LAKES OF THE PIGEON RIVER STATE FOREST

Fishing in the lakes of the Pigeon River State Forest has been checked by CCC enrollees for several years (see Reports No. 429 and No. 438). In 1937 the census work was repeated and the results are compiled below.

These lakes are being used for experiments in fish management and a complete creel census on them is especially desirable. Examination of the census records suggests that the work of the enrollees is not very accurate. One one occasion, at least, the reports were obviously fabricated. It is possible that the data are relatively dependable and that the one occasion mentioned was an exception. The data given below should probably be regarded as approximations rather than as exact figures. The census work was done by Camp Pigeon River; compilations were made by the Institute.

No creel census was taken on Pickerel Lake, Ford Lake or Section Four Lake. Census-takers were not available from Camp Vanderbilt (Park Service), which is located on Pickerel Lake. Fishing in Ford Lake has been prohibited, as it is being used for experiments with Grayling, and Section Four Lake was probably fished very little. Fishing on Grass Lake and Devil's Soup Bowl was too meager to justify checking, but a census-taker was present

during part of the season. One record for Grass Lake shows a catch of two brook trout. The date listed is June 24th. This record is possibly not reliable. Another record indicates a catch of 3 large-mouthed bass and 8 bluegills. No other records are available. Both bass and bluegills (the latter planted in 1935--1,000 4-months old fish) seem to be growing well and should reproduce successfully in this lake. Three records were obtained for Devil's Soup Bowl. All indicated that no fish were taken. This lake was stocked with brown trout according to Mr. William Horsell, Forest Supervisor, but the plant does not appear in the stocking record.

For the other five lakes reasonably complete records are presumably available. The information is listed below by individual lakes.

North Twin Lake

North Twin Lake was fished for 105 fisherman-days. A total of 493 fish were taken in 371 hours of fishing. The fish, all perch except for one brook trout, were taken at the rate of 1.3 fish per hour. They had an average length of 9 inches. The data are summarized by months in Table 1.

Anglers who fished the lake represented 15 counties and 3 states other than Michigan. Eleven fisherman-days were by non-residents.

No intensive census had been taken on North Twin Lake in previous years.

South Twin Lake

One hundred legal-sized rainbow trout were planted in South Twin Lake before the 1936 fishing season. Sixty-two were taken in 1936 by angling and two were recovered by the Institute. This left only 36 trout at the opening of the 1937 season--provided there was no mortality and provided all which were previously removed had been recorded.

Nine of these trout were taken in 1937 according to the census records, leaving a maximum of 27 fish. The trout had attained a reasonably large size (average 16.3 inches) and had attracted considerable fishing. On nine fisherman-days, one trout each was taken; the other 102 fisherman-days yielded no fish. General data on the fishing are given in Table 2.

Hemlock Lake

Fishing was poor on Hemlock Lake. A total of 47 fish, all brook trout, were taken in 54 fisherman-days, an average of less than one trout per day. Most of the trout were taken in May. Numerous undersized trout were caught, many of which were probably not recorded.

The number of legal-sized trout caught has decidedly declined since 1935, when 215 trout were taken. Fifty-two were removed in 1936, and during the last season only 47 were taken. General data on the 1937 fishing are given in Table 3.

West Lost Lake

Two hundred and sixty-one legal-sized fish, all brook trout, were taken in West Lost Lake in 1937. An equal number of undersized were reported. The legal-sized fish had an average length of $9\frac{1}{2}$ inches. Fishing tended to improve from May to August. It was poorest in May. The number of anglers was much greater in May than in any other month. One hundred ninety-nine trout were taken in 1935; the following year the catch consisted of 254 trout.

In this lake, therefore, the annual take has not declined as it has in other lakes in the area. The 261 fish taken in 1937 were of the same average size as were the 254 caught the previous year. Data for the 1937 fishing are found in Table 4.

Lost Lake

In 1935 the anglers took 461 brook trout from Lost Lake. The next year they caught 166 trout. In 1937 the recorded catch included only 22 trout. In two years this lake declined from an excellent trout lake to an almost worthless lake in spite of planting from 2500 to 6000 fish (5 to 8 months old) each year. Data on the 1937 catch are given in Table 5.

Discussion

For unknown reasons fishing has very decidedly declined in Lost Lake and Hemlock Lake during the last several seasons. This decrease in the catch cannot be attributed to understocking for several thousand trout have been placed in each lake each year. Whether or not overstocking was responsible could not be determined. Possibly food has become scarce as a result of repeated heavy plants or possibly some disease may have decidedly reduced the numbers of trout. A reasonably thorough study of these two lakes might suggest the cause for the decline in angling. At present no satisfactory explanation can be given.

Stocking Recommendations

Definite suggestions are made below for stocking in 1938. Some changes may be made in these recommendations after the lakes have been examined further and after records of the current fishing have been studied. Since these lakes are being used as experimental waters, the suggestions should be closely followed and the number of fish stocked should be accurately counted.

Grass Lake. This lake now contains bluegills and large-mouthed bass, although no record of stocking for the latter could be found. Adult small-mouthed bass were introduced in 1937. Spawning conditions appear favorable for bluegills and bass. Do not stock in 1938.

Devil's Soup Bowl. There appears to be no record of the planting of brown trout in this lake late in 1936, but browns are reported to have been planted. Do not stock in 1938.

Pickerel Lake. Now little used by the public--probably because of the proximity of the CCC Camp. Do not stock in 1938.

Ford Lake. Now used for grayling experiment. Do not stock.

Hemlock Lake. Stock with 200 legal-sized brook trout. The lake has not been yielding many fish in recent years despite heavy stocking with fingerlings. Stocked fish should preferably be tagged or fin-clipped.

Lost Lake. Lost and West Lost are to be used for special study and should receive identical stocking preferably with about the same number as previously planted. Recommend stocking each with 3000 6 to 8 month old brook trout, preferably fin-clipped or tagged.

West Lost Lake. See Lost Lake.

Section Four Lake. Stock with 100 adult rainbows, fin-clipped or tagged.

North Twin. North Twin and South Twin should receive identical stockings--preferably 150 adult rainbows each. These too should be fin-clipped or tagged if time is available. It is understood that any tagging or fin-clipping will be done by the Institute.

South Twin Lake. See North Twin Lake.

The Institute is not informed on the lakes in the forest not mentioned above and therefore cannot suggest a stocking program for them.

INSTITUTE FOR FISHERIES RESEARCH
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Table 1

General Data on Fishing in North Twin Lake, Otsego County, Summer of 1937

Date	Number of fisherman-days	Number of fishermen taking no fish	Number of hours fished	Number of legal fish taken	Number of fish per fisherman	Number of fish per hour	Average size of all legal fish (inches)	Number of hours per fisherman-day
May	17	10	43	31	1.8	0.7	7.3	2.5
June	8	0	28	97	12.1	3.5	8.7	3.5
July	32	7	144	227	7.1	1.6	9.2	4.5
August	39	19	125	94	2.4	0.6	8.4	3.2
September	9	3	31	44	4.9	1.4	10.7	3.4
Total or Average	105	39	371	493	4.7	1.3	9.0	3.5

Table 2

General Data on Fishing in South Twin Lake, Otsego County, Summer of 1937

Date	Number of fisherman-days	Number of fishermen taking no fish	Number of hours fished	Number of legal fish taken	Number of fish per fisherman	Number of fish per hour	Average size of all legal fish (inches)	Number of hours per fisherman-day
April	44	40	78	4	0.09	0.05	15.5	1.8
May	42	38	104	4	0.09	0.04	16.6	2.4
June	15	15	37	0	0	0	0	2.4
July	6	5	18	1	0.2	0.05	18.0	3.0
August	4	4	15	0	0	0	0	3.8
Total or Average	111	102	252	9	0.08	0.035	16.3	2.3

Table 3

General Data on Fishing in Hemlock Lake, Cheboygan County, Summer of 1937

Date	Number of fisherman-days	Number of fishermen taking no fish	Number of hours fished	Number of legal fish taken	Number of fish per fisherman	Number of fish per hour	Average size of all legal fish (inches)	Number of under-sized fish caught	Number of hours per fisherman-day
April 24-25-26	4	3	10	1	0.25	0.1	14.0	0	2.4
May 1 to 24	29	22	173	36	1.2	0.2	9.3	21	6.0
June 11-27	2	2	7	0	0	0	0	20	3.5
July 12-14- 24-28	6	4	15	2	0.3	0.14	8.5	7	2.4
August 11-12- 22-27	12	8	36	8	0.7	0.2	8.4	9	3.0
September 5	1	1	3	0	0	0	0	0	3.0
Total or Average	54	40	244	47	0.87	0.2	9.2	57	4.5

Table 4

General Data on Fishing in West Lost Lake, Otsego County, Summer of 1937

Date	Number of fisherman-days	Number of fishermen taking no fish	Number of hours fished	Number of legal fish taken	Number of fish per fisherman	Number of fish per hour	Average size of all legal fish (inches)	Number of under-sized fish caught	Number of hours per fisherman-day
April	45	29	207.00	61	1.4	0.3	12.0	100	4.6
May	101	69	464.50	50	0.5	0.11	9.3	45	4.6
June	34	21	153.00	46	1.4	0.3	8.2	57	4.5
July	22	10	71.00	32	1.45	0.45	8.7	35	3.2
August	35	19	110.00	70	2.00	0.6	8.7	22	3.1
September	10	8	66.00	2	0.2	0.03	10.0	0	6.6
Total or Average	247	156	1071.50	261	1.05	0.2	9.5	259	4.3

Table 5

General Data on Fishing in Lost Lake, Otsego County, Summer of 1937

Date	Number of fisherman-days	Number of fishermen taking no fish	Number of hours fished	Number of legal fish taken	Number of fish per fisherman	Number of fish per hour	Average size of all legal fish (inches)	Number of hours per fisherman-day
April	13	12	96	1	0.1	tr.	11	7.4
May	12	9	55	13	1.1	0.2	8	4.7
June	16	15	45	1	tr.	tr.	7	2.8
July	13	12	35	1	0.1	tr.	7	2.8
August	13	10	27	3	0.2	0.1	12	2.1
September	17	14	54	3	0.2	0.1	10	3.3
Total or average	84	72	312	22	0.3	0.1	8	3.7

1937 Stocking Record

(For previous stockings in the pit lakes
see Report 429, p. 6)

Ford	None
Devil's Soup Bowl	None recorded but brown trout reported (number not known)
Hemlock	5000 brook trout (8 mo.) 1000 grayling (adults)
Lost*	None recorded but brook trout probably planted
West Lost*	5000 brook trout (8 mo.)
Section Four	100 rainbow (adults) 1000 grayling (adults)
North Twin	100 rainbow (adults)
South Twin	200 rainbow (adults)
Grass	65 small-mouthed bass (adults)
Pickeral	20,000 bluegills (3 mo.)

* Apparently 2500 brook trout (8 mo.) in Lost and West Lost
according to letter from Mr. Westerman to Mr. Lincoln
(May 25, 1938)