

Original: Fish Division
cc: Mr. Paul Travis
Education-Game
Dr. Shetter

INSTITUTE FOR FISHERIES RESEARCH
DIVISION OF FISHERIES
MICHIGAN DEPARTMENT OF CONSERVATION
COOPERATING WITH THE
UNIVERSITY OF MICHIGAN

ALBERT S. HAZZARD, PH.D.
DIRECTOR

ADDRESS
UNIVERSITY MUSEUMS
ANN ARBOR, MICHIGAN

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RESULTS OF THE 1938 ¹ FISHING SEASON ON
LITTLE LONG LAKE, BUCKHORN RANCH, OSCEOLA COUNTY

by

David S. Shetter

The two appended tables summarize the results of the 1938 catch records on this 34.5 acre lake in west-central Michigan. Since the lake is private and fishing is restricted to the owner and his friends, the lake is rather lightly used. George Travis, manager of the Ranch during 1938, kept the records of the catch on regular creel census forms.

During 1938, a total of 39 anglers fished 90.5 hours and caught 41 largemouthed bass, 296 bluegills, and 1 yellow perch. Only two of the 39 fishermen were unsuccessful, or 5.1 per cent. The catch per hour was 3.7 fish, the catch per angler was 8.7 fish, while the average time spent in fishing was 2.3 hours. Twenty-two undersized fish were reported as returned to the water. The fishing pressure--the number of man-hours of fishing per acre of water surface--was 2.6 in both 1937 and 1938 (See Table 1).

¹ No records of fishing were kept during 1939.

In 1937, although four (4) less anglers fished, the total catch was greater by 72 fish and the catch per hour was 0.9 fish per hour greater (3.7 to 4.6). The catch per angler averaged three fish higher (Table 1).

In Table 2 will be found the average size of the fish taken in 1938, assembled by months. The average size of largemouthed bass decreased very slightly from 1937 to 1938 (12.2 to 12.0 inches), while there was a very noticeable increase in the average size of the bluegills (7.5 to 8.2 inches, a gain of 0.7 inches) from 1937 to 1938. Too few specimens of perch were taken in either year to obtain a true picture of the average size of the legal perch population.

The catch per acre of legal fish in 1938 was 9.8, compared with 11.9 in 1937. However, it should also be noted that the average size of the total catch was greater in 1938 than in 1937 (8.7 inches to 8.4 inches). The catches were not weighed in either year, but it appears likely that the total poundage of fish removed was only slightly less in 1938 than in 1937.

As previously pointed out by Eschmeyer (Report 475), Little Long Lake is probably underfished. At least twice as many bluegills and bass could probably be removed without affecting the quality of the fishing.

That the quality of the angling in Little Long Lake was better than average during 1938 is demonstrated by the comparative figures presented in Tables 3 and 4. For purposes of comparison, results obtained from the 1938 general creel census of non-trout waters of Hatchery District No. 7 (Mason, Lake, Osceola, Clare, Oceana, Newaygo, Isabella and Mecosta Counties), in which district the Buckhorn Ranch is located, have been used. The figures obtained by the 1938 general census are the combination of random samples of the fishing on a large number of lakes in Hatchery District 7.

From these tables it is readily observed that the catch per hour was over $1 \frac{3}{4}$ times as great on Little Long Lake as in District 7 as a whole, and that the catch per angler during 1938 was almost 3 fish greater for an average fishing trip of less duration.

The average size of the large-mouthed bass was 1.1 inches less, but the bluegills, which form the bulk of the fisherman's catch, were 0.7 inches larger than the fish recorded from the other waters of District 7. The one perch caught in 1938 was a 12-inch fish, but in 1937 the perch averaged 9.5 inches also, as compared with 8.2 inches from the public waters of District 7.

TABLE 1. CREEL CENSUS, LITTLE LONG LAKE, 1938

(Area 34.5 acres)

Month	Number of fisherman-days	Taking no fish		Hours fished	Legal fish caught	Catch per angler	Catch per hour	Hours per fisherman-day	Number of undersized fish caught	Fishing pressure
		Number	Percentage							
May	4	...	...	11.00	35	8.3	3.2	2.8	20	...
June	13	...	...	24.00	122	9.4	5.1	1.8	2	...
July	9	...	...	20.00	117	13.0	5.9	2.2	...	...
August	9	...	...	18.00	54	6.0	3.0	2.0	...	...
September	4	2	50	17.50	10	2.5	0.6	4.4	...	...
Total or Averages	39	2	5.1	90.50	338	8.7	3.7	2.3	22	2.6
1937 Results	35	...	0.0	88.50	410	11.7	4.6	2.5	Not given	2.6

¹/₂ Fishing pressure is given in hours of fishing per acre of water for the entire season.

TABLE 2. NUMBER AND AVERAGE SIZE IN INCHES OF FISH
 TAKEN DURING 1938 CREEL CENSUS, LITTLE LONG LAKE

Month	Largemouthed bass		Bluegills		Yellow perch		Total	
	Number	Average size	Number	Average size	Number	Average size	Number	Average size
May	6	11.0	29	7.9	...	...	35	8.4
June	17	11.3	105	7.7	...	...	122	8.3
July	8	13.4	109	8.6	...	...	117	9.0
August	9	12.0	44	8.6	1	12.0	54	9.3
September	1	12.0	9	6.5	...	...	10	7.1
Total and average size	41	12.0	296	8.2	1	12.0	338	8.7
1937 Results	65	12.2	331	7.5	13	9.5	¹ / ₄₀₉	8.4

¹/ One bullhead caught in 1937 not included in this total.

TABLE 3. COMPARISON OF ANGLING RESULTS ON LITTLE LONG LAKE
 DURING THE SUMMER OF 1938 WITH GENERAL CREEL CENSUS
 RESULTS OF HATCHERY DISTRICT NO. 7

Item	Number of fishermen	Percentage taking no fish	Hours of fishing	Total legal fish caught	Catch per hour of legal fish	Catch per angler	Hours per fisherman-day
Little Long Lake	39	5.1	90.50	338	3.7	8.7	2.3
Hatchery District No. 7	1,058	30.0	3,052.50	6,319	2.1	6.0	2.9

TABLE 4. COMPARISON OF THE AVERAGE SIZE OF THE FISH TAKEN FROM
 LITTLE LONG LAKE IN 1938 WITH THE AVERAGE SIZE OF FISH TAKEN IN
 HATCHERY DISTRICT NO. 7.

Item	Average size (in inches)			
	Largemouth Bass	Bluegills	Perch	All Fish
Little Long Lake	12.0	8.2	12.0	8.7
Hatchery District No. 7	13.1	7.5	8.0	8.5

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