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CREEL CENSUS DATA FOR CLEAR LAKE, OGEMAW COUNTY, SUMMER OF 1934

Data on winter fishing on Clear Lake (winter of 1933-'34) were presented in Report 271. This report covers only the summer fishing (1934) and is based on information collected by the Ogemaw C.C.C. Camp under the general supervision of Camp Superintendent Behan.

The census differs from that taken by other C.C.C. camps in that the fishermen themselves recorded the information. Some sheets were prepared with great care, others were without date or without certain other desired information, some represented the fishing of one individual, others covered the fishing of 3 or 4 persons. The data

may, therefore, not show accurately the summer fishing but the information in this report at least gives a fair conception of the fishing conditions in Clear Lake for the summer of 1934. It is assumed that the information given here covers between 75% and 100% of the fishing.

Clear Lake has a marl bottom, limited vegetation and clear water; differing in type from Fife Lake for which a similar report has been previously submitted.

In the discussion of Table I the numbers preceding the items refer to the same item numbers in the table.

Discussion of Table I.

1. Six percent of the fishermen used 2 lines each, 94% used only one line.
2. The total fish caught (1817) represent a per acre catch of only 4.78 fish (assuming the area is correctly given as 380 acres in the Michigan Lakes and Streams Directory).
3. There were approximately only two fisherman-days per acre of water, all summer.
5. The average catch per fisherman in June was almost double. the average catch during the remainder of the summer.

Table I

Statistics in Fishing in Clear Lake, Ogemaw County. Summer of 1934.

Item	June <sup>1</sup>	July	August	Sept. <sup>2</sup>	No date <sup>3</sup>	Total <sup>4</sup>
1. Total number of lines	62	204	289	72	157	784
2. Total no. of legal-sized fish	233	445	577	139	423	1817
3. Total number of fishermen	60	192	267	69	151	739
4. Total number of hours fished	202 1/4	514 1/4	725	265 1/2	544 3/4	2251 3/4
5. Average no. of fish per fisherman	3.9	2.3	2.2	2.0	2.8	2.5
6. Average no. of fish per hour	1.15	.87	.80	.52	.78	.81
7. Average no. of hours per fisherman	3.6	3.9	2.7	2.2	3.8	3.0
8. Total no. of women fishign	9	32	47	20	50	158
9. No. of fishermen taking no fish	14	96	132	36	73	351
10. Percent of fishermen taking no fish	23.3	50	49.4	52.2	48.3	47.5
11. Average size of all fish caught	8.6" <sup>5</sup>	8.0"	8.1"	7.9"	8.2"	8.1"
12. Total no. of "undersized" fish	195	209	517	160	182	1263
13. Bait fished with by fishermen (where only one kind of bait was listed)						
Worms	25	61	109	24	66	285
Minnows	—	13	7	2	3	25
Frogs	—	4	6	1	—	11
Crayfish	—	—	5	—	—	5
Grub	—	—	—	—	2	2
Grasshopper	—	—	1	—	1	2
Ham	—	1	—	—	—	1
Totals for Natural Bait	25	78	128	27	72	331
Plug	20	21	17	1	9	68
Spinner	2	10	1	1	4	18
Fly	1	3	—	—	4	8
Totals for Artificial bait	23	34	18	2	17	94
14. Method of fishing (when only one method was used)						
Casting	19	21	42	2	17	101
Trolling	7	17	16	2	17	59
Still fishing	18	72	142	31	78	341
Method of fishing (when one or more methods were used) <sup>7</sup>						
Casting	31	87	93	20	40	261
Trolling	11	65	58	24	41	199
Still fishing	29	134	182	55	108	508
15. Perch						
a. Number taken <sup>8</sup>	179	304	418	135	214	1231
b. Average size <sup>9</sup>	7.3	7.1	7.3	7.2	7.3	7.2
c. Percent of total catch	76.8	68.3	72.4	83.5	50.6	67.7
d. Number of undersized	167	174	399	119	126	985
e. Approximate size of undersized <sup>9</sup>	5	5	5	5	5	5
16. Large-mouth bass						
a. Number taken	34	29	54	4	25	146
b. Average size	13.2	12.5	12.0	12.7	12.1	12.4
c. Percent of total catch	14.6	6.5	9.4	2.9	5.9	8.0
d. Number of undersized	20	14	34	4	29	101
e. Approximate size of undersized	8	8	7 1/2	6	8	8
17. Small-mouth bass						
a. Number taken	11	24	23	8	35	101
b. Average size	11.4	12.9	13.5	13.5	12.7	12.9
c. Percent of total catch	4.7	5.4	4.0	5.8	8.3	5.6
d. Number of undersized	1	12	14	21	13	61
e. Approximate size of undersized	6	9	8	5	7	7
18. Bluegills						
a. Number taken	3	19	16	2	44	84
b. Average size	7.5	7.6	7.0	8.0	7.3	7.3
c. Percent of total catch	1.3	4.3	2.8	1.4	10.4	4.5
d. Number of undersized	—	7	12	2	—	21
e. Approximate size of undersized	—	5	4 1/2	5 1/2	—	5
19. Sunfish <sup>10</sup>						
a. Number taken	1	59	55	8	96	219
b. Average size	7.0	7.2	7.2	6.1	7.2	7.1
c. Percent of total catch	.4	13.3	9.5	5.8	22.7	12.1
d. Number of undersized	7	2	57	14	14	94
e. Approximate size of undersized	4	5	4	4 1/2	4 1/2	4 1/2
20. Rockbass						
a. Number taken	1	4	1	—	—	6
b. Average size	9.0	7.0	6.0	—	—	7.2
c. Percent of total catch	.4	.9	.2	—	—	.3
d. Number of undersized	—	—	1	—	—	1
e. Approximate size of undersized	—	—	3	—	—	3
21. Northern Pike						
a. Number taken	2	3	3	1	5	14
b. Average size	20.0	21.3	22.3	27.0	28.0	24.1
c. Percent of total catch	.8	.7	.5	.7	1.2	.8
d. Number of undersized	—	—	—	—	—	—
22. Bullheads						
a. Number taken	—	3	7	—	4	14
b. Average size	—	11.3	11.3	—	12.5	11.6
c. Percent of total catch	—	.7	1.2	—	.9	.8
23. Walleye (Pike Perch) <sup>11</sup>	2 (23")					

1 June 25-30 only.

2 September 1-15 only.

3 All taken in the summer of 1934, but month and day were not given.

4 Exclusive of data on 5 sheets which were discarded because of incompleteness.

5 Exclusive of undersized fish.

6 Fish of below legal length, caught and returned.

7 Fish includes all methods listed as having been used in the day's fishing. Some used only one, some two and some all three methods.

8 Number taken includes, in all cases, legal-sized fish only.

9 Size given in inches in all cases.

10 Species not indicated. Probably all, or essentially all, were common sunfish.

11 Mr. C. H. Clipper, who has been a resorter and ardent fisherman on Clear Lake for some years, states that he has never taken a walleye in Clear Lake or heard of one being taken there. The two fish listed as Walleyes probably were Northern Pike.

6. Fishing, on a fish-per-hour basis, was best in June and poorest in September.

The average catch for the years 1928-1932 inclusive on non-trout waters in Ogemaw

County was .83 per hour<sup>↓</sup>. The per hour catch on Clear Lake (summer of 1934) was .81 fish.

7. The average fishermen-day for the summer as a whole was 3 hours.

8. Twenty-one percent of the fishermen were women.

10. Almost half of the fishermen took no fish.

11. The fish were of a rather small average size.

12. Two fish of each five caught were undersized. Undersized fish were not included in the other figures of the table except when definitely indicated.

13. Of those who fished with one kind of bait only, 285 fishermen (66%) used worms. Sixty-eight used plugs exclusively while only 25 used minnows exclusively.

14. About half of those who fished used more than one method of fishing. This extent of diversity of fishing appears unusual, at least it was not evident in the fishing on Fife Lake during the same summer.

15. Two-thirds of all fish caught were perch. A large number of undersized perch (under 6 inches in length) were also taken.

16. Large-mouth bass represented 8% of the catch.

17. Small-mouth bass were slightly larger than the large-mouth but were not quite as well represented in the catch.

18. It is possible that some of the fish listed as sunfish were actually bluegills.

21. Only 14 northern pike were reported caught. Mr. C. H. Clipper states that the northern pike catch "dropped off" very decidedly in 1933 and 1934.

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<sup>↓</sup> Taken from Institute Report 238 "First Analysis of the Michigan Creel Census".

23. The two "walleyes" were probably northern pike.

Table II

Statistics on the catch, based on the kind of bait used <sup>1/</sup>.

Bait	No. using the bait <sup>2/</sup>	No. and % getting no fish		Total no. taken <sup>3/</sup>	Av. size of all taken <sup>3/</sup>	No. of under sized fish	Fish per fisherman day
		No.	%				
Worms	285	78	27.4	1199	7.5	848	4.2
Minnows	25	13	52.0	49	9.8	—	2.0
Frogs	11	4	36.4	3	13.1	—	.7
Grasshoppers	2	—	100	—	—	4	0.0
Crayfish	5	—	—	9	11.9	—	1.8
Grubs	2	—	—	3	11.2	—	1.5
Plug	69	32	46.4	80	12.9	37	1.2
Spinner	18	13	72.2	7	18.0	1	.4
Artificial fly	8	2	25.0	6	10.3	6	.8

<sup>1/</sup> Includes 57.5% of all creel census records. The others represented use of several kinds of bait.

<sup>2/</sup> Includes only those fishermen using one kind of bait for their entire days fishing, i.e., only worms, only minnows, etc.

<sup>3/</sup> Legal fish only.

Discussion of Table II

The information is too meager to permit any generalization on the effectiveness of different kinds of bait. They indicate that worms and plugs were the two principle baits used, and that worm fishing gave the best results in number of fish caught but the poorest results in size of fish taken. It is rather surprising that minnows were used so little for bait.

Table II<sup>3</sup>

Number (and size) of fish taken (listed by species) on each kind of bait<sup>↓</sup>.

Bait	Perch	Large mouth bass	Small mouth bass	Blue-gills	Sunf-fish	Rock-bass	Northern pike	Bull-heads
Worms	984(7.3) <sup>2</sup>	19(13.3)	39(12.1)	35(7.4)	108(7.2)	6(7.2)	....	8(11.1)
Minnows	20(6.6)	7(13.8)	16(13.2)	....	6(7.2)	....	....	....
Frogs	....	3(11.7)	2(11.3)	....	1(7.0)	....	1(24)	1(14)
Grasshoppers	....	....	....	....	....	....	....	....
Crayfish	1(10.5)	2(12.0)	6(12.0)	....	....	....	....	....
Grubs	1(6.5)	....	....	....	....	....	....	2(13.5)
Plug	2(8.0)	50(13.3)	15(13.2)	2(7.5)	7(7.4)	....	4(22.0)	....
Spinner	....	3(12.5)	1(12.0)	....	....	....	3(22.3)	....
Artificial Fly	....	6(10.3)	....	....	....	....	....	....

<sup>↓</sup> Includes 57.5% of all creel census records. Those for fishing with only one kind of bait.

<sup>2</sup> Figures in parenthesis indicate average length, in inches, of fish taken (legal-sized fish only).

General discussion

It may be safely concluded that fishing in Clear Lake during the summer of 1934 was relatively poor. Indications are that the lake is more or less overrun with small perch, a condition which is by no means uncommon in lakes of this type. With an apparent scarcity of the larger predatory fish (especially northern pike), the small perch may become even more abundant in the future.

The decline in northern pike catch is probably attributable to the low water level of the several previous years, causing a temporary destruction of the marshy spawning areas of these fish.

The taking of a large number of undersized fish might indicate that fishing will be better in the future, provided however, that growth rate of the fish is fairly rapid and that the kind of bait used (chiefly worms) was not unusually effective in taking these small fish.

The lake has recently been subjected to some lake improvement work. A survey of the present conditions in the lake should indicate what steps might be taken to further improve the fishing conditions.