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RESULTS OF THE VOLUNTARY CREEL CENSUS ON THE
AU SABLE RIVER SYSTEM, 1945 TROUT SEASON.

by

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During the period 1942 - 1944 several comments concerning the quality of the fishing (both damning and laudatory) on the Au Sable drainage, particularly the Main Stream, were received by various members of the Fish Division. However, the Conservation Department has no record of any kind concerning the angling on the Au Sable, except for the scattered testimony of various anglers.

The road pattern and the extensive amount of private ownership, particularly on the Main Au Sable and also on the North Branch, precludes an intensive creel census except for short pieces of stream, and then at considerable cost. The use of the stream by canoe anglers also complicates the problem of obtaining creel census data.

During the early winter of 1944, the matter was discussed with Hans L. Peterson, District Fisheries Supervisor, at the state Fish Hatchery at Grayling. He advised that we lay the problem before the Crawford County Sportsmen's League, and ask their cooperation in

obtaining as many fishing records during 1945 as possible. The author spoke before the above-mentioned group in March, 1945, and explained the problem, and the club agreed to lend its support and cooperation. Mr. Peterson drew up a list of individuals whom we thought could furnish the most records, and simple sheets for recording the fishing were mailed to them, along with a circular letter explaining what information was desired. A sample record sheet will be found attached.

This sheet provided for the recording of only the necessary data to compute the total angling days, total unsuccessful fishermen, total hours of fishing, the total catch by species, and the stream and locality fished. The results of the tabulation from these records kept by guides, resort operators, cabin owners and individual anglers will be discussed in the following pages.

All records combined

Most of the records were kept by individual stream, but some cooperators combined fishing data from two streams, so not all fishing could be separated for the final tabulation. For this reason, a tabulation of the entire drainage by months was made, so that all combined records could be used. This includes records from the Main Stream, North Branch, South Branch, East Branch, and the various forks of Big Creek tributary to the North Branch of the Au Sable. The data from these records are presented in Table 1.

On the entire drainage, records show that some 1,644 angling days were expended, of which 226 (or 13.7 per cent) were unsuccessful. A total of 7,208.25 hours were spent on the various parts of the Au Sable drainage, during which time 3,353 brook trout, 4,004 brown trout, and 452 rainbow trout were captured, or a total of 7,809 legal trout.

This gave a very creditable average catch per hour of 1.08 legal trout for the entire 1945 trout season.

Fishing started out in April somewhat below the season's average, but steadily increased in quality through July, and then gradually declined. More fishing was listed for June than for any other month, and the greatest number of fish were caught in June (2,777). Brown trout were the dominant species in the catch each month except June and September. For the season as a whole over the entire drainage the three species of trout appeared in the catches in the following ratio: 1 rainbow trout to 7 brook trout to 9 brown trout.

Night Fishing

As will be noted on the sample sheet, a part of the instructions called for the recording of night fishing separately. It was hoped by Mr. Peterson and the author that data from these separate records might give some information on this highly controversial subject about which little factual information exists.

From all reports, a total of 60 nights of angling were recorded (out of a total of 1,644 days and nights, or 3.6 per cent of the total angling days and nights)--Table 2. Sixteen of these night trips were unsuccessful, or slightly over 26 per cent. In 224 hours of night fishing the total catch was 2 brook trout, 154 brown trout and 2 rainbow trout - a total of 158 trout, or a catch per hour of 0.71 legal trout. As might be expected, night fishing was best in June, when 151 of the 158 fish were captured in 185 hours of fishing, a catch per hour of 0.81 legal trout. It should be pointed out that the night fishing was only about 85 per cent as good as all fishing recorded for that month.

Most of the night fishing records were supplied by one resort owner on the North Branch of the Au Sable and a cabin owner on the Main Stream. From the data at hand, it might appear that comparatively little night fishing is done on the Au Sable drainage as a whole, or else the various recorders failed to list their night fishing separately.

Records by individual streams

Table 3 presents the fishing recorded for the various streams of the Au Sable drainage from which records are available. Only those records were used which listed results for a single stream on any date. The results are given by months for each stream.

Main Stream

Judged by the catch per hour, angling on the Main Stream was better during April, May and June, since in each of those months anglers reported catching from 1.06 to 1.27 legal trout per hour. In July, August and September, quality fell off considerably, as the catch per hour ranged from 0.44 legal trout per hour in September to 0.80 legal trout per hour in July.

For the season as a whole, of 849 angling days recorded from the Main Stream, 159 were unsuccessful (17.5 per cent). A total of 3,067.50 hours of fishing yielded 2,909 legal trout, divided among the three species as follows: brook trout, 480; brown trout, 2,079; rainbow trout, 350. The species found in the creel are in the ratio of slightly more than one brook trout and one rainbow trout to six brown trout. The catch per hour of legal trout for the entire season on the Main Stream was 0.97 fish.

Fishing records on the Main Stream were chiefly from the stream sections between Grayling and Wakely Bridge.

North Branch of the Au Sable

According to the records at hand, this stream gave the best fishing during 1945, as the monthly catch per hour was consistently better than the other streams, ranging from 1.12 to 3.91 legal fish. The greatest number of records were listed for June, and the most fish were taken in that month, although the catch per hour was higher in May and July. A total of 484 angling days were listed for North Branch anglers. Of this number, 27 (or 5.9 per cent were listed as unsuccessful). In these angling days, a total of 2,529.50 hours of fishing produced a combined catch of 3,383 legal trout, made up 2,272 brook trout, 1,107 brown trout, and 4 rainbow trout. The catch per hour for the entire season was 1.34 legal fish. Excluding rainbow trout from consideration because of their scarcity in the North Branch catches, there appear to be about two brook trout to one brown trout in the legal catches of the North Branch.

The bulk of the records for the North Branch fishing were obtained for the stream section between Dam 2 and the "Brush Fence", although some records from the vicinity of Kellog's Bridge were present also.

South Branch of the Au Sable

Fewer records were turned in for fishing on this river than either of the other large branches. According to these records, fishing was poorer than on the Main Stream and the North Branch, the catch per hour in the various months ranging from 0.24 in September to 1.06 in June. More fishing records were listed for July, yet May anglers fished the greatest number of hours, but the best fishing was in June, when the catch per hour was 1.06 legal trout.

For the season as a whole, only 10 out of 115 angling days were unsuccessful (8.7 per cent). In 592 hours of fishing a total of 454 legal trout were captured, a catch per hour of 0.77 legal fish for the season. The catch consisted of: 140 brook trout, 226 brown trout and

88 rainbow trout, or a ratio between the various species in the anglers' creel of 2 rainbow trout to 3 brook trout to 5 brown trout.

Branches of Big Creek (tributary to the North Branch of the Au Sable)

Records for 32 angling days from April to July for the various branches of Big Creek indicated that there was very good fishing in this part of the drainage. The aforementioned anglers had no unsuccessful days, and spent 108.75 hours in fishing, during which time they creeled 149 legal trout for a catch per hour of 1.37. Their catch consisted of 127 brook trout and 22 brown trout, a ratio of about 6 brook trout to one brown trout. More hours were spent fishing here in May, when 45 hours of angling yielded 54 brook trout and 13 brown trout.

East Branch of the Au Sable

Only 9 angling days and 28 hours of fishing were recorded in the 1945 season. This amount of angling yielded 55 legal trout (48 brook trout, 7 brown trout) for a catch per hour of 1.96 legal fish. These records were almost all from one angler.

Discussion

In general, the records turned in indicate that, at least for the anglers furnishing the records, the 1945 trout season on the Au Sable and its tributaries provided fishing that ranged from good to excellent. The low percentage of unsuccessful anglers may indicate that the fishermen whose records were kept were mostly expert fishermen, since previous intensive creel censuses of trout waters have shown that, on the average, from 40 to 65 per cent of the angling days are unsuccessful.

To the author, it seems that the night fishing records represent only a small proportion of angling effort for that type of fishing. If it does represent the true fraction of fishing after dark, then night fishing is not pursued by any great number of anglers on the Au Sable

River drainage.

It is to be hoped that some similar records will be kept in the future by those interested in the Au Sable River drainage both for sport and livelihood. As pointed out previously, this form of recording appears to be the only inexpensive solution for obtaining data on the trends in the fishing on these waters.

Before the 1945 season opened, record sheets were mailed to about 40 individuals, of this number, 15 mailed in their records consistently. To these individuals and clubs I wish to express my sincere appreciation for the time and trouble they spent in recording their fishing results. Thanks also are due to Hans L. Peterson, District Fisheries Supervisor, and to the Crawford County Sportsmen's League for assistance and advice on the project.

INSTITUTE FOR FISHERIES RESEARCH

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Table 1 Au Sable drainage volunteer creel census, 1945 trout season, by months (all records used).

Month	Total angling days	Number catching no fish	Total hours fished	Legal trout caught			Total	Catch per hour
				Brook	Brown	Rainbow		
April	205	47	839.00	268	405	65	738	0.88
May	462	71	2,022.50	935	1,057	140	2,132	1.05
June	510	31	2,487.25	1,460	1,181	136	2,777	1.12
July	250	27	1,044.00	327	932	61	1,320	1.26
Aug.	187	49	654.50	319	386	36	741	1.13
Sept.	30	1	161.00	44	43	14	101	0.63
Total	1,644	226	7,208.25	3,353	4,004	452	7,809	1.08

Table 2 Night fishing records from Au Sable drainage volunteer creel census, 1945 trout season.

Month	Total angling days	Number catching no fish	Total hours fished	Legal trout caught			Total	Catch per hour
				Brook	Brown	Rainbow		
April	--	--	-----	--	--	--	--	--
May	--	--	-----	--	--	--	--	--
June	49	10	185.00	1	149	1	151	0.81
July	7	3	24.00	1	4	1	6	0.25
Aug.	4	3	15.00	-	1	--	1	0.07
Sept.	-	-	-----	-	-	-	-	-----
Totals	60	16	224.00	2	154	2	158	0.71

Table 3

Au Sable drainage volunteer creel census, 1945, by stream and month-
(only those records used where data was given by individual streams).

Stream	Month	Total angling days	Number catching 0 fish	Total hours of angling	Legal trout caught				Catch per hour
					Brook	Brown	Rainbow	Total	
Main Stream	April	115	31	362.50	78	320	64	462	1.27
	May	258	41	774.50	126	577	116	819	1.06
	June	196	14	778.00	191	535	115	841	1.08
	July	157	24	638.50	55	419	35	509	0.80
	August	105	48	413.50	20	202	12	234	0.57
	September	18	1	100.50	10	26	8	44	0.44
	Totals	849	159	3,067.50	480	2,079	350	2,909	0.97
North Branch	April	28	0	170.50	150	58	0	208	1.22
	May	128	9	655.00	632	395	4	1,031	1.58
	June	254	15	1,395.50	1,078	483	0	1,561	1.12
	July	29	0	148.00	157	76	0	233	1.57
	August	42	3	154.00	222	83	0	305	1.98
	September	3	0	11.50	33	12	0	45	3.91
	Totals	484	27	2,529.50	2,272	1,107	4	3,383	1.34
South Branch	April	10	0	37.00	7	15	0	22	0.59
	May	26	6	160.00	52	42	14	108	0.68
	June	24	1	130.00	37	80	21	138	1.06
	July	28	3	120.00	37	58	24	119	0.99
	August	18	0	96.00	6	26	23	55	0.57
	September	9	0	49.00	1	5	6	12	0.24
	Totals	115	10	592.00	140	226	88	454	0.77
Big Creek Branches (Crawford, Mont., N. side)	April	1	0	5.00	5	0	0	5	1.00
	May	11	0	45.00	54	13	0	67	1.49
	June	12	0	36.75	39	9	0	48	1.30
	July	8	0	22.00	29	0	0	29	1.32
	August	-	-	-----	-	-	-	-	-----
	September	-	-	-----	-	-	-	-	-----
	Totals	32	0	108.75	127	22	0	149	1.37
E. Br. Au Sable	Totals	9	0	28.00	48	7	0	55	1.96
GRAND TOTALS		1,489	196	6,325.75	3,067	3,441	442	6,950	1.09

