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INTENSIVE CREEL CENSUS RESULTS ON THE HUNT CREEK  
FISHERIES EXPERIMENTAL AREA, 1946 TROUT SEASON

by David S. Shetter

Introduction

This report will present the angling statistics obtained from the stream sections of Hunt Creek Experimental Area for the eighth consecutive trout season, and discuss the relationship of these results to the various researches in progress at the present time. Details of the results of the first year's operation of the special 6-inch size limit for brook trout in Sections C, D, and E of Hunt Creek and for Fuller Creek are given also.

Methods

The methods of taking the census has been described in detail in previous reports (see Institute for Fisheries Report No. 1061) and will not be repeated here. As far as could be determined only 11 of 764 anglers fishing in the experimental sections were not contacted (1.4 per cent). The creel census records were obtained by L. H. Bush, Fisheries Research Technician A, William E. Mason, Fisheries Research Technician C, with part-time assistance from Henry Vondett, Fisheries Research Technician C, and Ole M. Pynnonen, Fisheries Research Technician C. The latter was replaced by T. H. Turppa, Jr., when Pynnonen enlisted in the Armed Services in July, 1946. The author also aided in creel census work during periods of heavy angling pressure.

Angling Results (Tables 1, 2, 3, 4, 5, and 6)

The 1946 trout fishermen using the experimental Sections A, B, C, D, and E of Hunt Creek spent a total of 764 angling days on the stream, a very marked increase (102 per cent) over the 378 angling days noted in 1945. An observed total of 753 days of fishing were prosecuted by 271 individuals (254 males, 27 females) who spent a total of 1,206.25 hours, or almost twice as much time as in 1945. For 524 of these days of fishing (69.6 per cent), no trout which were 7 inches or larger were taken. On 315 days (41.8 per cent of the days fished) no "special" trout were captured nor were any 7-inch or larger trout taken.

During the 1946 trout season, a total of 439 brook trout which were 7 inches or larger were caught in Sections A, B, C, D, and E. Of these, 434 which weighed 67.60 pounds were kept. Under the special regulations authorized by the Conservation Commission which allowed anglers to remove 6- to 7-inch brook trout from Sections C, D, and E of Hunt Creek, a total of 422 brook trout between 6 and 7 inches were taken which weighed 36.87 pounds, or a total legal poundage removed by angling of 104.47 pounds. The indices to angling quality for brook trout 7 inches and larger were 0.36 legal trout per hour and 0.056 pounds of trout per hour; for 6 to 7 inch trout, the catch per hour was 0.35 fish and the pounds per hour removed was 0.031.

In addition to the legal and "special" fish lawfully removed from the designated stream sections already listed, a total of 63 sublegal brook trout ranging in size from 5.7 inches to 6.9 inches, whose total weight was 4.56 pounds, also were removed from the experimental waters. Also 24 sublegal brook trout weighing 2.47 pounds were kept which came from the waters below Section A.

The best angling during the 1946 season, as measured by the catch per hour or the pounds of trout removed per hour, was found in Section B. In this 1,605 feet of improved trout water 92 anglers spent 134.50 hours and removed 78 legal brook trout weighing 11.75 pounds at the rate of 0.58 fish per hour and

0.087 pounds of trout per hour. A total of 633 sublegal trout was reported returned to the water - a return rate of 4.71 short fish per hour of fishing. Unsuccessful anglers amounted to 62 per cent of the total (57/92).

Angling in Section A improved in quality compared with the 1945 results, and was only a shade behind Section B. A total of 133 angling days was spent on Section A, of which 81, or 61 per cent, were unsuccessful. During these days 208.25 hours of angling yielded 119 legal brook trout. One hundred fourteen of these were kept, and weighed 16.18 pounds. The catch per hour of legal brook trout was 0.57 fish and 0.077 pounds. Section A anglers reported releasing 878 undersized brook trout at the rate of 4.21 fish per hour.

Section D was third on the list. Some 249 angling days were spent in this section, and 178 or 71.5 per cent of them were unsuccessful in taking brook trout larger than 7 inches. A total of 402.00 hours were expended here to catch 122 legal brook trout weighing 19.84 pounds at the rate of 0.30 legal fish per hour and 0.049 pounds of trout per hour. Nine hundred twenty-three (923) undersized fish were reported returned at the rate of 2.30 fish per hour of fishing.

Section E, the uppermost of the experimental sections followed. In this narrow, brushy portion of Hunt Creek, 21 angling days (of which 13 or 62.8 per cent were unsuccessful) were spent, and a total of 36.00 hours of fishing were expended. The total catch of legal brook trout was 10 fish weighing 1.47 pounds, giving quality indices of 0.28 fish per hour and 0.041 pounds of legal fish per hour. The catch of sublegal brook trout, which were released, amounted to 183 fish, or 5.08 per hour.

Section C was the most heavily fished of all the experimental waters (258 anglers, 425.50 hours), but also had the highest percentage of unsuccessful anglers (194, or 74.8 per cent of the totals using Section C). The total catch of brook trout 7 inches or larger was 110 fish weighing 18.36 pounds for quality indices of 0.26 legal brook trout per hour and 0.043 pounds of legal

brook trout per hour. Brook trout too small to keep were returned at the rate of 2.62 fish per angling hour, and these totaled 1,114.

If one considers the experimental sections as a whole, the first four weeks of the season yielded fishing of a quality about 33 per cent below the season's average of 0.36 legal brook trout per hour. From May 25 to July 5, angling quality was from about 16 to 33 per cent better than the season's average. During the period July 6-19, angling quality was at its lowest point during the entire season (0.21 legal brook trout per hour). From July 20 - August 16, angling quality was at its best for the entire season with a catch per hour of 0.62 and 0.45 legal brook trout for the two periods involved (from 25 to 33 per cent above the season's average). The last period in August (August 17-30) yielded angling of poor quality - 0.23 legal fish per hour, or about 33 per cent below the average; however, during the last three days of the season angling quality improved to 0.39 legal trout per hour, or about 8 per cent better than the season's average.

#### Pounds and Numbers of Legal Brook Trout

##### Removed by Angling (Table 7)

The yield data for the experimental sections of Hunt Creek are presented in Table 7. The 1946 yields in number of legal brook trout and pounds of legal brook trout removed per acre are given, with the 1939 - 1946 averages -- for those two items shown also for comparative purposes.

Sections A and D were about 10 per cent below the eight-year average for those waters, while Sections B and C gave considerably better yields (from about 10 to about 50 per cent) during 1946 than the average yields for the 1939 - 1946 period. The 1946 yield of Section E was approximately 68 per cent less than the average for the seven-year period. Considering the experimental sections as a whole, the 1946 yield was slightly less than 2 per cent below the eight-year average yield in pounds per acre and about 3 per cent below the 1939 - 1946 average number taken per acre.

The fact that the yield in 1946 is, for practical purposes, identical

Table 1

Angling results, Section A, 1946 trout streams

Period	Number of anglers	Number taking no legal fish %	Total hours fished	Legal brook trout caught		Sublegal brook trout caught		Pounds of legal brook trout removed	Pounds per hour
				Number	Catch/hour	Number	Catch/hour		
Apr 27-May 10	23	20 (86.9)	37.25	3	0.09	92	2.46	0.39	0.010
May 11-24	8	4 (50.0)	16.25	7	0.43	74	4.55	0.81	0.050
May 25-Jun 4	20	10 (50.0)	38.75	32	0.83	179	4.62	4.13	0.107
Jun 8-21	9	6 (66.7)	14.00	3	0.21	43	3.07	0.43	0.031
Jun 22-Jul 5	13	9 (69.2)	20.00	12 <sup>1</sup>	0.55	173	8.65	1.81	0.091
Jul 6-19	21	17 (80.9)	26.50	4	0.14	70	2.64	0.60	0.023
Jul 20-Aug 2	18	7 (38.8)	23.50	24 <sup>3</sup>	1.02	97	4.12	3.37	0.143
Aug 3-16	14	6 (42.9)	19.50	22 <sup>1</sup>	1.12	90	4.61	2.90	0.149
Aug 17-30	4	2 (50.0)	7.00	4	0.57	27	3.86	0.56	0.080
Aug 31-Sep 2	3	0 (0.0)	5.50	8	1.60	33	6.00	1.18	0.213
Totals, averages	133	81 (60.9)	208.25	119 <sup>5</sup>	0.57	878	4.21	16.18	0.077

\* - Percentages of unsuccessful anglers are given in parentheses.

✓ - Numbers in carets indicate numbers of legal trout returned to water.

Table 2

Angling results, Section B, 1946 trout season

Period	Number of anglers	Number taking no legal fish %	Total hours fished	Legal brook trout caught		Sublegal brook trout caught		Pounds of legal brook trout removed	Pounds per hour
				Number	Catch/hour	Number	Catch/hour		
Apr 27-May 10	16	11 (68.8)	33.00	9	0.27	153	4.64	1.06	0.032
May 11-24	7	4 (57.1)	7.25	4	0.55	28	3.86	1.10	0.152
May 25-Jun 7	16	13 (81.3)	21.00	7	0.33	141	6.71	0.89	0.042
Jun 8-21	2	1 (50.0)	1.00	1	1.00	7	7.00	0.15	0.150
Jun 22-Jul 5	9	2 (22.2)	13.75	17	1.24	92	6.69	2.46	0.180
Jul 6-19	11	11 (100)	12.00	...	0.00	41	3.42	...	0.000
Jul 20-Aug 2	10	3 (30.0)	12.25	20	1.63	47	3.84	2.97	0.243
Aug 3-16	15	8 (53.3)	26.75	14	0.52	87	3.25	2.40	0.090
Aug 17-30	5	4 (80.0)	5.25	2	0.38	22	4.19	0.22	0.042
Aug 31-Sep 2	1	0 (0.0)	2.25	4	1.78	15	6.67	0.50	0.222
Totals, averages	92	57 (62.0)	134.50	78	0.58	633	4.71	11.75	0.087

\* - Percentages of unsuccessful anglers are given in parentheses

Table 3

## Angling results, Section C, 1946 trout season

Period	Number of anglers	Per cent taking no legals (or specials)	Total hours of fishing	Legal brook trout caught		Sublegal brook trout caught *		Pounds of brook trout removed		Pounds per hour	
				Number	Catch/hour	Number	Catch/hour	Legal	Special	Legal	Special
Apr. 27-May 10	69	75.4 (58.0)	123.50	34	0.28	214 (56)	1.73 (0.45)	4.98	4.86	0.040	0.039
May 11-24	26	84.6 (61.5)	39.00	5	0.13	188 (18)	4.82 (0.46)	0.80	1.60	0.021	0.041
May 25-Jun 7	23	82.6 (78.3)	32.50	5	0.15	88 (9)	2.71 (0.28)	0.75	0.78	0.023	0.024
Jun 8-21	7	57.1 (42.9)	5.25	4	0.76	28 (3)	5.33 (0.57)	0.58	0.27	0.109	0.051
Jun 22-Jul 5	42	71.4 (57.1)	83.00	21	0.25	177 (45)	2.13 (0.54)	3.60	4.10	0.043	0.049
Jul 6-19	21	57.1 (52.3)	32.50	11	0.34	103 (6)	3.14 (0.18)	2.33	0.62	0.071	0.019
Jul 20-Aug 2	29	72.4 (55.2)	48.50	21	0.43	168 (22)	3.46 (0.45)	3.70	1.93	0.076	0.040
Aug 3-16	20	80.0 (60.0)	28.25	6	0.21	86 (17)	3.04 (0.60)	0.98	1.45	0.035	0.051
Aug 7-30	13	84.6 (61.5)	17.75	2	0.11	35 (12)	1.97 (0.68)	0.49	0.99	0.028	0.056
Aug 31-Sep 2	8	87.5 (87.5)	15.25	1	0.07	27 (0)	1.77 (0.00)	0.15	...	0.010	0.000
Totals, averages	258	74.8 (60.0)	425.50	110	0.26	1,114 (188)	2.62 (0.44)	18.36	16.60	0.043	0.039

\* - The data on the 6- to 7-inch trout are found in parentheses.

Table 4

## Angling results, Section D, 1946 trout season

Period	Number of anglers	Per cent taking no legals (or specials)	Total hours of fishing	Legal brook trout caught		Sublegal brook trout caught <sup>↓</sup>		Pounds of brook trout removed		Pounds per hour	
				Number	Catch/hour	Number	Catch/hour	Legal	Special	Legal	Special
Apr 27-May 10	72	75.0 (66.7)	110.75	29	0.26	200 (19 <sup>↓</sup> )	1.81 (0.43)	4.72	4.15	0.043	0.037
May 11-24	16	81.3 (75.0)	25.50	3	0.12	108 (15)	4.24 (0.59)	0.39	1.27	0.015	0.050
May 25-Jun 7	22	63.6 (54.5)	39.50	20	0.51	105 (27)	2.66 (0.68)	2.88	2.36	0.073	0.060
Jun 8-21	10	80.0 (50.0)	16.25	9	0.55	45 (11)	2.77 (0.68)	1.44	1.03	0.089	0.063
Jun 22-Jul 5	45	62.2 (51.1)	72.25	29	0.40	137 (40)	1.88 (0.55)	4.93	3.37	0.068	0.046
Jul 6-19	20	75.0 (60.0)	35.00	7	0.20	109 (12 <sup>↓</sup> )	3.11 (0.31)	1.28	1.04	0.037	0.030
Jul 20-Aug 2	22	59.1 (50.0)	34.25	14	0.41	74 (12)	2.16 (0.35)	2.51	0.98	0.073	0.029
Aug 3-16	19	84.2 (78.9)	28.75	4	0.14	46 (9)	1.60 (0.31)	0.63	0.79	0.022	0.027
Aug 17-30	12	83.3 (75.0)	17.25	3	0.17	29 (7)	1.68 (0.41)	0.41	0.59	0.024	0.034
Aug 31-Sep 2	11	63.6 (54.5)	22.00	4	0.18	70 (8)	3.18 (0.36)	0.65	0.60	0.030	0.027
Totals, averages	249	71.5 (61.4)	402.00	122	0.30	923 (190 <sup>↓</sup> )	2.30 (0.47)	19.84	16.18	0.049	0.040

↓ - Numbers in carets indicate numbers returned to stream

\* - The data on 6- to 7-inch trout are found in parentheses.



Table 5

## Angling results, Section E, 1946 trout season

Period	Number of anglers	Per cent taking no legals (Or specials)	Total hours of fishing	Legal brook trout caught		Sublegal brook trout caught *		Pounds of brook trout removed		Pounds per hour	
				Number	Catch/hour	Number	Catch/hour	Legal	Special	Legal	Special
Apr 27-May 10	4	75.0 (50.0)	6.00	1	0.17	19 (4)	3.17 (0.67)	0.13	0.34	0.022	0.057
May 11-24	7	57.0 (43.0)	9.00	3	0.33	40 (1)	4.44 (0.11)	0.42	0.08	0.047	0.009
May 25-Jun 7	...	...	...	...	...	...	...	...	...	...	...
Jun 8-21	2	100.0 (50.0)	2.00	...	0.00	15 (2)	7.50 (1.00)	...	0.18	...	0.090
Jun 22-Jul 5	...	...	...	...	...	...	...	...	...	...	...
Jul 6-19	...	...	...	...	...	...	...	...	...	...	...
Jul 20-Aug 2	4	50.0 (0.0)	11.50	2	0.17	65 (29)	5.65 (2.52)	0.21	2.71	0.018	0.236
Aug 3-16	2	50.0 (50.0)	1.00	1	1.00	4 (1)	4.0 (1.00)	0.19	0.09	0.190	0.088
Aug 17-30	...	...	...	...	...	...	...	...	...	...	...
Aug 31-Sep 2	2	50.0 (0.0)	6.50	3	0.46	40 (9)	6.15 (1.38)	0.52	0.69	0.080	0.106
Totals, averages	21	62.8 (33.3)	36.00	10	0.28	183 (46)	5.08 (1.28)	1.47	4.09	0.041	0.114

\* - The data on 6- to 7-inch brook trout are found in parentheses.

Table 6

Angling results, Sections A, B, C, D, and E, Hunt Creek,

1946 trout season

Period	Number of anglers	Per cent taking no legals (or specials)	Total hours of fishing	Legal brook trout caught		Sublegal brook trout caught *		Pounds of brook trout removed		Pounds per hour	
				Number	Catch/hour	Number	Catch/hour	Legal	Special	Legal	Special
Apr 27-May 10	184	76.1 (48.9)	310.50	76	0.24	678 (108 <sup>1</sup> / <sub>2</sub> )	2.18 (0.35)	11.28	9.35	0.036	0.030
May 11-24	64	73.4 (48.4)	97.00	22	0.23	438 (34)	4.52 (0.35)	3.52	2.95	0.036	0.031
May 25-Jun 7	81	69.1 (37.0)	131.75	64	0.49	513 (36)	3.89 (0.27)	8.65	3.14	0.066	0.024
Jun 8-21	30	70.0 (30.0)	38.50	17	0.44	138 (16)	3.58 (0.42)	2.60	1.48	0.067	0.038
Jun 22-Jul 5	109	63.3 (43.1)	189.50	79 <sup>1</sup> / <sub>2</sub>	0.42	579 (85)	3.06 (0.45)	12.80	7.47	0.068	0.039
Jul 6-19	73	75.3 (31.5)	106.00	22	0.21	323 (17 <sup>1</sup> / <sub>2</sub> )	3.05 (0.16)	4.21	1.66	0.040	0.016
Jul 20-Aug 2	83	55.4 (32.5)	130.00	81 <sup>3</sup> / <sub>4</sub>	0.62	451 (63)	3.47 (0.48)	12.76	5.62	0.098	0.043
Aug 3-16	70	68.6 (40.0)	104.25	47 <sup>1</sup> / <sub>2</sub>	0.45	313 (27)	3.00 (0.26)	7.10	2.33	0.068	0.022
Aug 17-30	34	79.4 (50.0)	47.25	11	0.23	113 (19)	2.39 (0.40)	1.68	1.58	0.035	0.033
Aug 31-Sep 2	25	60.0 (52.0)	51.50	20	0.39	185 (17)	3.59 (0.33)	3.00	1.29	0.058	0.025
Totals, averages	753	69.6 (41.8)	1,206.25	439 <sup>5</sup> / <sub>8</sub>	0.36	3,731 (422 <sup>2</sup> / <sub>3</sub> )	3.09 (0.35)	67.60	36.87	0.056	0.031

\* - The data on 6- to 7-inch brook trout are found in parentheses.

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✓ - Numbers in carets indicate numbers of legal or 6- to 7-inch brook trout returned to the water.

with the average yield for the past eight seasons is an excellent indication that the stream is not suffering from the present policy of no stocking of hatchery-reared brook trout in the Hunt Creek drainage. No fingerlings have been planted since the fall of 1940, and no legal brook trout have been released since the spring of 1941 in the streams. Since 1942 the catches have consisted almost solely of wild brook trout.

Table 7

The yield in pounds and numbers of brook trout per acre for 1946, with the average per acre yields for the period 1939-1946

Stream section	Dimensions		Area (acres)	Yield per acre, in 1946		Average yields per acre, 1939-1946 in	
	Length (ft.)	Av. width (ft)		Pounds	Numbers	Pounds	Numbers
A	2,577	24.3	1.44	11.24 (16.18)	82.6 (119)	12.47 (143.64)	89.2 (1,028)
B	1,605	17.5	0.64	18.36 (11.75)	121.9 (78)	12.84 (65.76)	80.3 (411)
C	3,970	11.8	1.07 or 0.71	25.86 (18.36)	154.9 (110)	22.44 (143.60)	138.4 (886)
D	2,386	21.5	1.18	16.81 (19.84)	103.4 (122)	18.25 (172.25)	119.2 (1,125)
<sup>1</sup> / <sub>E</sub>	1,250	11.8	0.36	4.11 (1.47)	27.8 (10)	12.69 (31.98)	82.5 (208)
Totals, averages	11,788	17.4	4.33 or 4.69	15.61 (67.60)	101.4 (439)	15.92 (557.23)	104.5 (3,658)

<sup>1</sup>/<sub>✓</sub> - Data for 1940-1946 only.

Average Size of Legal Brook Trout, 1946 (Table 8)

The average size for each section and each year is given in Table 8, together with the 1939-1946 averages for each section, and the combined averages for the experimental sections.

From this table one can see that Sections B, C, E, D, and A produce

brook trout of the largest average size in the order given, based on the eight-year averages. In 1946, Section C led (7.9 inches, 2.7 ounces), followed by Section D (7.8 inches, 2.6 ounces), Section B (7.6 inches, 2.4 ounces), Section E and Section A (7.5 inches, 2.3 ounces).

The average size of the brook trout taken by the anglers during the 1939-1946 period has been 7.6 inches, total length, and 2.5 ounces in weight. In no section in any year has the average length been less than 7.4 inches nor greater than 8.0 inches, nor has the average weight been less than 2.2 ounces nor more than 3.0 ounces. For all sections combined, the average lengths in the various years have ranged between 7.5 and 7.9 inches, and the average weights have varied between 2.4 and 2.7 ounces.

Little change in the average sizes has been noted in years of heavy angling pressure (1941, 1942, 1946), as well as the other years when angling pressure was much lighter (1939, 1943, 1944). If a relatively constant average size is a valid index, the experimental sections have not yet been over-fished. Theoretically when they are fished beyond their capacity, the average size would drop sharply to barely above 7 inches, the present legal size limit.

#### Yield of Specially Designated Water Areas (Table 9)

The catch of two of the larger pools of Section A have been tallied separately for a number of years. Signs denote the pool limits, and census clerks are instructed to note the catches of Pools 1 and 2 on the census blanks. Pool 1 embraces 2.6 per cent of the total area of Section A and Pool 2 comprises 2.8 per cent of the total area of Section A.

Over the period 1940-1946, Pool 1 has contributed 6.81 per cent of the total catch (70/1028), 7.31 per cent of the total weight of legal trout removed (10.51 lbs./143.64 lbs.). However, during 1946, Pool 1 yielded only one of the total catch of 119 legal brook trout or 0.84 per cent of the catch, and 0.80 per cent of the total weight removed. Pool 2 has yielded over the 1940-1946 period 4.47 per cent of the total catch (46/1,028), and

Table 8

Average size of legal brook trout removed by  
anglers 1939-1946, with yearly average sizes

Stream section	Average total length (inches) and average weight (ounces) of legal brook trout in years								Averages 1939-1946
	1939	1940	1941	1942	1943	1944	1945	1946	
A	7.6-2.5 (121)	7.4-2.2 (151)	7.5-2.3 (126)(116)	7.6-2.5 (130)(128)	7.4-2.4 (132)	7.6-2.4 (136)	7.7-2.4 (59)	7.5-2.3 (114)	7.5-2.4 (969)(957)
B	7.4-2.5 (7)	8.0-2.9 (41)	7.7-2.7 (30)(25)	7.8-2.9 (62)	7.6-2.7 (52)	7.6-2.6 (70)	8.0-3.0 (36)	7.6-2.4 (78)	7.8-2.7 (376)(371)
C	7.6-2.4 (106)	7.8-2.6 (111)(105)	7.9-2.8 (180)(172)	7.7-2.5 (117)(109)	7.6-2.5 (74)(72)	7.9-2.7 (62)	8.0-2.8 (101)	7.9-2.7 (110)	7.8-2.6 (861)(837)
D	7.6-2.3 (204)	7.6-2.4 (90)(89)	7.7-2.6 (252)(247)	7.4-2.3 (194)(191)	7.7-2.8 (79)	7.9-2.6 (62)	7.8-2.6 (100)	7.8-2.6 (122)	7.6-2.5 (1,103)(1,094)
E	...	... <sup>1</sup>	7.7-2.6 (132)(109)	7.8-2.6 (24)(23)	... <sup>1</sup>	7.6-2.6 (5)	7.8-2.5 (16)	7.5-2.3 (10)	7.7-2.6 (187)(163)
Totals, averages	7.5-2.4 (438)	7.6-2.4 (393)(386)	7.7-2.6 (720)(669)	7.6-2.5 (527)(513)	7.5-2.6 (337)(335)	7.7-2.5 (335)	7.9-2.7 (312)	7.6-2.5 (434)	7.6-2.5 (3,496)(3,422)

<sup>1</sup> - In these years a small number of legal brook trout removed from Section E were included in the Section D data.

5.19 per cent of the total weight of legal brook trout removed (7.45 lbs. / 143.64 lbs.). During 1946, three of the 119 brook trout caught in Section A came from Pool 2 (2.52 per cent), and their weight comprised 2.35 per cent of the total weight of legal trout removed by anglers (0.38/16.18). Apparently in years when fishing is of average or better than average quality in Section A, the pools are not fished to any extent, and anglers are able to take fish from other than the pooled areas of deeper water.

Table 9

The percentage of the anglers' catch of Section A coming from Pools 1 and 2, 1946 trout season.

(Actual data are given in parentheses)

Pool number	Per cent of total area of Section A in pool	Per cent of total catch from pool, 1940-1946		Per cent of total catch from pool, 1946	
		Number	Pounds	Number	Pounds
Pool 1	2.6	6.81 (70/1028)	7.31 (10.51/143.64)	0.84 (1/119)	0.80 (0.13/16.18)
Pool 2	2.8	4.47 (46/1028)	5.19 (7.45/143.64)	2.52 (3/119)	2.35 (0.38/16.18)

Contribution of Tributary Streams to the Catch of the Main Stream (Table 10)

Since 1941 all brook trout longer than 4 inches have been jaw-tagged as they were passed through the several weirs on the tributary streams located on the area. Daily records of fish movement are kept, showing the number of fish moving, their size, and the directions of movement, and the tag numbers on the tags applied. A complete record of the numbers of brook trout moving into or out of the main stream thus is available. The number of tagged fish originating in the tributaries which enter the anglers' catch is available from the creel census data. In Table 10 will be found a summary of the number of tagged brook trout moving from Tributaries 2, 3, and 4 into Hunt Creek; also the numbers of

Table 10

Numbers of tagged brook trout (exclusive of fish less than 4 inches long)  
moving from tributaries in Hunt Creek, and numbers taken by anglers in  
1942, 1943, 1944, 1945, and 1946.

Year <sup>1/</sup>	Number of tagged brook trout moving down tributaries to Hunt Creek			Tagged brook trout caught in Hunt Creek coming from						Anglers' catch in year		Per cent of total catch coming from tributaries		Per cent of recovery by angling in exp. sec. and below A
	No. 2	No. 3	No. 4	No. 2		No. 3		No. 4		Exp. sec.	Below A	Exp. sec.	Below A	
				Exp. sec.	Below A	Exp. sec.	Below A	Exp. sec.	Below A					
1942	380	257	33	1	1	3	2	0	0	543	352	0.7	0.8	1.04
1943	150	587	377	1	3	7	3	2	0	379	233	2.6	2.5	1.43
1944	163	282	316	1	0	6	2	4	0	364	333	3.0	0.6	1.70
1945	90	524	196	1	0	1	0	3	0	315	182	1.5	0.0	0.61
1946	10	84	70	0	1	1	2	0	0	439	292	0.2	1.0	2.43
Totals, averages	793	1,734	992	4	5	18	9	9	0	2,040	1,392	1.5	1.0	1.28

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<sup>1/</sup> - Weir summaries are for periods Oct. 1 - Sept. 30. For example, the 1942 figures are for the period Oct. 1, 1941 - Sept. 30, 1942.

tagged brook trout which entered the anglers' catches in the years 1942-1946 inclusive in the experimental sections and below Section A.

Between September 30, 1941, and September 30, 1946, a total of 3,519 brook trout were tagged in the three tributaries. Sixty-eight of these brook trout were 7 inches or larger; the remainder ranged between 4 inches and 6.9 inches. During the trout seasons of 1942, 1943, 1944, 1945, and 1946, a total of 45 recoveries from the 3,519 tagged fish were made by Hunt Creek anglers fishing in the experimental sections and below A, a percentage of recovery of 1.28 per cent.

During these five trout seasons just past, a total legal catch of 2,040 brook trout was observed in the experimental waters. In this catch, 31 fish were tagged brook trout originating in the tributaries, 1.52 per cent of the total catch of the experimental sections.

In the waters below A, the observed legal catch during 1942, 1943, 1944, 1945, and 1946, amounted to 1,392 legal brook trout. The legal catch had 14 tagged fish from the tributaries, or 1.0 per cent of the total catch of these waters.

In any year, the percentage of the total catch coming from the tributaries and entering the anglers' catch of the experimental sections has varied between 0.2 per cent and 3.0 per cent; for the five year's data it amounted to 1.5 per cent. Tagged brook trout coming from the tributaries and finding their way into the anglers' catches below A varied from 0.0 per cent to 2.5 per cent in the five years; for the entire period 1.0 per cent of the anglers' catches of below A came from the tributaries.

Returns by mail on brook trout tagged in the tributaries from the Hunt Creek ~~or~~ Thunder Bay drainages further downstream and not covered by creel census have amounted to 3 tag recovery reports during 1943, 1944, 1945, and 1946, making the total known percentage of recovery 1.36 per cent. Apparently the great majority of tagged fish are recovered relatively close to the small streams in which they originated.



The small number of fish originating in the tributaries which are later observed to enter the legal catch of anglers in the main stream suggests that the present legal status of the so-called "feeder" streams is probably the most sound from all standpoints, at least in the Hunt Creek drainage. If the "feeder" streams were closed, a small but constant number of "brush" stream anglers would be forced onto the often overcrowded main streams. Thus a portion of what is now a part of our legal catch, taken from the brushy "feeders", would become unavailable to the angling public. Even if the potential catch of "feeder" stream anglers were added to the known catch of the main stream, it is doubtful if anything would be gained by such closing regulations.

Results from Sections C, D, and E of Hunt Creek  
and Fuller Creek West of the Water-wheel where  
the Legal Size Limit is 6 Inches (Table 11)

In these stream sections, an order of the Conservation Commission permitted the taking of 6- to 7-inch brook trout for the first time in 1946. Anglers fishing these waters were given a duplicate of the creel census slip signed by the census-taker to validate their catches of what would be considered "short" fish in other trout waters of the state. The pertinent statistics for the stream areas in question are presented in Table 11.

To show the effect of the angling for these "short" fish on the general fishing picture, the 1939-1946 averages for Sections C, D, E, and Fuller Creek have been compared with the 1946 results for the same sections. The same procedure also was followed for the totals from these four areas.

The special regulation apparently attracted more anglers to these waters, since the percentage difference between the 1939-1946 averages and the 1946 data indicate an increase of 57 per cent in number of anglers and 51 per cent in number of hours fished. Only in Section E did the 1946 data fall below the eight-year average.

Table 11.

The effect of taking 6- to 7-inch brook trout in Sections C, D, and E of Hunt Creek and Fuller Creek west of the Rotary Screen during the 1946 trout season.

Item	Number of anglers	Per cent taking no legal trout <sup>1</sup>	Total hours of fishing	Total catch <sup>2</sup>		Catch per hour <sup>3</sup>		Pounds of legal trout taken		Pounds per hour	
				7 in.+	sublegal	7 in.+	sublegal	7 in.+	6-7 in.	7 in.+	6-7 in.
1939-1946 averages for Section C	168	66	288	111	1,075	0.38	3.73	17.95	...	0.062	...
1946 data, Section C	258	75 (60)	425.50	110	1,114 (188)	0.26	2.62 (0.44)	18.36	16.60	0.043	0.039
1939-1946 averages for Section D	207	66	316	141	881	0.44	2.78	21.53	...	0.068	...
1946 data, Section D	249	72 (61)	402.00	122	923 (188)	0.30	2.30 (0.47)	19.84	16.18	0.049	0.040
1940-1946 averages for Section E	24	48	40	29	172	0.73	4.26	4.57	...	0.113	...
1946 data, Section E	21	63 (33)	36.00	10	183 (46)	0.28	5.08 (1.28)	1.47	4.09	0.041	0.114 <sup>4</sup>
1940-1946 averages for Fuller Creek	78	67	111	37	491	0.33	4.42	5.34	...	0.048	...
1946 data, Fuller Creek	223	82 (47)	277.75	56	999 (91)	0.20	3.60 (0.33)	7.74	8.06	0.028	0.029
1939-1946 averages for the above areas	477	61	755	319	2,619	0.42	3.45	49.39	...	0.065	...
1946 data, above areas	751	73 (50)	1,140.75	298	3,219 (513)	0.26	2.82 (0.45)	47.41	44.93	0.042	0.039
Percentage difference between 1939-1946 averages and 1946 data	+57	+20 (-19)	+51	-7	+42	-38	-5	+87 <sup>4</sup>		+25 <sup>4</sup>	

<sup>1</sup> Figures in parentheses indicate percentage of anglers taking no legals or specials.

<sup>2</sup> Figures in parentheses indicate number of 6-7 inch brook trout removed.

<sup>3</sup> Figures in parentheses indicate catch per hour of 6-7 inch brook trout.

<sup>4</sup> In these two calculations of percentage changes between the 1939-1946 averages and the 1946 data, the legals plus the specials for 1946 were compared with the 1939-1946 averages.

Considering 6-inch trout as legal fish, the percentage of unsuccessful anglers was reduced from an average of 61 per cent in the period 1939-1946 to 50 per cent in 1946.

The 1946 catch of seven-inch and larger brook trout was 7 per cent less than the 1939-1946 average for these waters. The 1946 catch of normally legal brook trout in Section C was only one fish short of the 8-year average, and the Fuller Creek catch for 1946 was 19 fish better than the average catch of 7-inch and larger brook trout for the 1939-1946 period. However, Sections D and E fell somewhat short of their 8-year averages during 1946.

In all the special waters there was an increase in the 1946 catch of fish less than 7 inches compared with the 1939-1946 averages. The 1946 catch of brook trout less than 7 inches was 42 per cent larger than the 1939-1946 average (a total of 3,732 brook trout less than 7 inches were caught during 1946 as compared with an average of 2,619 brook trout of the same size group caught and returned during the period 1939-1946). Of this 3,732 sublegal fish, 513 or 13.7 per cent fell into the 6- to 7-inch size group, and were removed by the anglers. The remaining 3,219 fish reported were less than 6 inches long.

Although the 1946 catch of 7-inch and larger brook trout was not much less than the eight-year average, the percentage difference in the catch per hour for 1946 and the 1939-1946 average catch per hour was considerably greater (38 per cent less), primarily because of the differences in angling pressure. A similar situation can be noted also for the sublegal brook trout.

During the period 1939-1946, the average total weight of 7-inch and larger brook trout removed from Sections C, D, E of Hunt Creek, and Fuller Creek amounted to 49.39 pounds. In 1946, from these same waters, 47.41 pounds of normally legal brook trout were removed, or 4 per cent less than the average for the eight previous years. In addition, the 513 brook trout in the 6- to 7-inch size group, contributed 44.93 pounds to the total catch, making the total weight of all brook trout removed by angling 92.34 pounds,

or 87 per cent above the eight-year average poundage removed.

If all brook trout larger than 6 inches, total length are considered, the results of the first year of lowering the size limit from 7 inches to 6 inches in the four stream areas mentioned might be summarized briefly as follows: (1) the number of unsuccessful anglers was reduced by approximately 19 per cent; (2) the quality of the angling was increased by approximately 25 per cent (as measured by pounds of fish removed per hour); (3) and the total poundage of trout removed from the four experimental sections was increased 87 per cent. These percentages changes represent the percentage differences between the 1939-1946 averages and the 1946 results.

The average size of the "special" trout was identical in Sections C, D, and E of Hunt Creek - 6.4 inches and 1.4 ounces. In Fuller Creek above the water wheel the average size was almost the same - 6.3 inches and 1.4 ounces.

The effect of removing 6- to 7-inch brook trout on the future angling for 7-inch and larger will be followed through the creel census and population estimates during the next few years. From a study of the population estimates for Sections A, B, C, and D of Hunt Creek of September, 1946, it can be observed that despite the removal during the 1946 season of 376 brook trout in the 6- to 7-inch size range, from Sections C and D the estimated number of sublegal trout (size range 4-6.9 inches) present per acre in Sections C and D was 869 at the end of the season. In Sections A and B, where sublegal brook trout were not removed (theoretically) the estimated September, 1946, population of 4-6.9 inch brook trout was only 849 per acre.

#### Angling Results Below A, 1946 (Table 12)

During the 1946 trout season, creel census records again were taken from the stream section between the bridge at the lower end of Section A and the Brailey cottage. Since an unknown number of anglers park at Brailey's and fish upstream and return without coming under observation of the clerk stationed at the A bridge, the records for this 3/4-mile stretch of stream

Table 12

Angling results, Below Section A, 1946 trout season

Period	Number of anglers	Number taking no legal fish <sup>*</sup>	Total hours fished	Legal brook trout caught		Sublegal brook trout caught		Pounds of legal brook trout removed	Pounds per hour
				Number	Catch/hour	Number	Catch/hour		
Apr 27-May 10	87	65 (74.4)	209.50	54	0.26	566	2.70	8.48	0.040
May 11-24	14	5 (35.7)	31.00	18	0.58	70	2.25	2.95	0.095
May 25-Jun 7	29	17 (58.6)	65.25	34	0.52	198	3.23	4.87	0.075
Jun 8-21	26	9 (34.6)	55.25	34	0.62	184	3.33	6.46	0.117
Jun 22-Jul 5	35	21 (60.0)	68.75	24	0.35	213	3.11	3.82	0.056
Jul 6-19	19	12 (63.2)	33.75	13	0.39	74	2.19	2.20	0.065
Jul 20-Aug 2	31	15 (48.4)	77.75	60	0.77	235	3.02	11.60	0.149
Aug 3-16	27	16 (59.0)	53.00	30	0.56	151	2.85	4.61	0.087
Aug 17-30	15	12 (73.3)	29.75	8	0.27	95	3.19	1.32	0.041
Aug 31-Sep 2	7	0 (0.0)	24.75	17	0.69	49	1.98	2.79	0.113
Totals, averages	290	172 (59.3)	648.75	292	0.45	1,835	2.82	49.09	0.076

\* - Percentages of unsuccessful anglers are given in parentheses.

never have been regarded as complete. However, each year an estimated 75 to 85 per cent of the angling over this water is recorded.

In 1946, a total of 290 angling days representing 648.75 hours of fishing were recorded. This time was expended by 207 different individuals (190 males, 17 females). Of the total angling days, 172, or 59.3 per cent were unsuccessful. The total legal catch amounted to 292 brook trout weighing 49.09 pounds, or 0.45 legal fish and 0.076 pounds of legal fish per hour of fishing. Anglers reported releasing 1,835 sublegal brook trout, or 2.82 short trout per hour of fishing. In addition, 24 short brook trout weighing 2.47 pounds were illegally retained by anglers, making the total weight of brook trout removed 51.56 pounds.

The part of the stream below A was most heavily fished during the opening two weeks (209.50 hours, by 87 anglers) but fishing was poorest then (0.26 fish, 0.040 pounds per hour). The best fishing was noted during the period July 20-August 2, when 31 anglers fished 77.75 hours and caught 60 legal brook trout at the rate of 0.77 fish per hour and 0.149 pounds per hour. From May 11 to June 21, angling quality was good (from 0.52 to 0.62 legal fish per hour). From June 22 to July 19 it dropped off noticeably (0.35 to 0.39 legal brook trout per hour). A month of good fishing was then followed by two weeks of poor catches, and the season was closed by three days of better than average angling.

The average size of the anglers' legal catch during 1946 was 7.8 inches and 2.7 ounces, slightly heavier (0.1 ounce) than the 1945 average, but the same average length.

Four legal fish in the catch of below A originated from tributaries entering the experimental waters. Two jaw-tagged fish marked as sublegal brook trout in 1945 as they moved down Tributary No. 3 were captured, and one jaw-tagged brook trout marked in 1945 as it moved down Tributary No. 2 as a sublegal fish also was captured. A dorsal-marked brook trout, marked as a fingerling less than 4 inches long entered the 1946 catch, too. This

mark has been used on the Tributary No. 3 migrants smaller than 4 inches total length since the spring of 1944.

Angling Results on Fuller Creek,

1946 Season (Table 13 and 13a)

During 1946, a total of 223 angling days representing 277.75 hours of fishing were recorded for this water. This fishing was done by 131 individuals (118 males, 13 females). The total legal catch amounted to 56 brook trout larger than 7 inches weighing 7.74 pounds, and 91 brook trout between 6 and 7 inches which weighed 8.06 pounds or a total of 15.80 pounds of brook trout 6 inches and larger. The quality of the fishing as measured by the catch per hour of 7-inch and larger trout was 0.20 fish per hour, and 0.33 "special" brook trout were taken per hour of angling, or a total of 0.55 brook trout of 6 inches and larger per hour. The pounds per hour of brook trout removed by angling amounted to 0.057 pounds (0.028 pounds per hour of brook trout larger than 7 inches, 0.029 pounds per hour of brook trout from 6 to 7 inches long).

The average size of the normally legal catch was 7.4 inches and 2.2 ounces. The "special" brook trout averaged 6.3 inches and 1.4 ounces.

Angling Results on Miscellaneous Waters (Table 14)

Scattered records of angling on waters other than those where records were usually taken were obtained. These waters were Sutton's Pond, lower Hunt Creek, Hunt Creek above Section E, Tributary No. 2, Tributary No. 3, and East Fish Lake Outlet. The records were complete for the last three streams. The pertinent creel census statistics are given in Table 14. Except for Tributary No. 3, what fishing was prosecuted was well rewarded, as the catch per hour ranged from 0.75 to 2.44 legal brook trout per hour.

Number and Percentage of Anglers Taking Various

Numbers of Trout from the Various Portions of

Hunt Creek Fisheries Experimental Area

The data for all the stream creel census, plus the Sutton's Pond

Table 13

Angling results, upper section, Fuller Creek, 1946 trout season with totals for lower section, and grand totals.

Six- to seven-inch brook trout were legal in the upper section, but not in the lower section.

Period	Number of anglers	Per cent taking no legal (no specials)	Total hours of fishing	Legal brook trout caught		Sublegal brook trout caught*		Pounds of brook trout removed		Pounds per hour	
				Number	Catch/hour	Number	Catch/hour	Legal	Special	Legal	Special
Apr 27-May 10	33	79.0 (54.5)	65.25	8	0.01	208 (20)	3.19 (0.31)	1.03	1.69	0.016	0.026
May 11-24	15	73.3 (46.7)	17.50	5	0.29	91 (13)	5.20 (0.74)	0.68	1.11	0.039	0.063
May 25-Jun 7	15	66.7 (46.7)	21.75	7	0.32	71 (19)	3.26 (0.87)	1.04	1.85	0.048	0.085
Jun 8-21	16	93.7 (81.2)	23.25	1	0.43	68 (4)	2.92 (0.17)	0.12	0.31	0.005	0.013
Jun 22-Jul 5	25	88.0 (68.0)	24.75	3	0.12	126 (21)	5.09 (0.85)	0.38	1.88	0.015	0.076
Jul 6-19	12	83.3 (83.3)	16.25	2	0.12	49 (3)	3.02 (0.18)	0.24	0.27	0.015	0.017
Jul 20-Aug 2	6	83.3 (50.0)	3.00	1	0.33	15 (2)	5.00 (0.67)	0.12	0.16	0.040	0.053
Aug 3-16	28	78.0 (64.2)	30.25	12	0.39	88 (6)	2.09 (0.19)	1.70	0.48	0.056	0.016
Aug 17-30	12	91.6 (91.6)	17.00	1	0.06	46 ...	0.27 (0.00)	0.11	...	0.006	0.000
Aug 31-Sep 2	1	0.0 (0.0)	3.50	2	0.57	20 (3)	5.17 (0.86)	0.39	0.31	0.111	0.089
Totals, averages upper section	163	81.0 (63.8)	222.50	42	0.19	782 (91)	3.51 (0.41)	5.81	8.06	0.026	0.036
Totals, averages lower section	60	83.3	55.25	14	0.25	217	3.93	1.93	...	0.035	...
Totals, averages Fuller Creek	223	82.1 (46.6)	277.75	56	0.20	999 (91)	3.60 (0.33)	7.74	8.06	0.028	0.029

\* - Percentages of unsuccessful anglers are given in parentheses.



Table 13a

Angling results, lower section, Fuller Creek, 1946 trout season

legal size limit, 7 inches.

Period	Number of anglers	Number taking no legal fish	Total hours fished	Legal brook trout caught		Sublegal brook trout caught		Pounds of legal brook trout removed	Pounds per hour
				Number	Catch/hour	Number	Catch/hour		
Apr 27-May 10	6	4 (66.7)	8.25	2	0.24	21	2.55	0.29	0.035
May 11-24	2	2 (100.0)	0.75	...	0.00	10	13.33	...	0.000
May 25-Jun 7	6	3 (50.0)	4.75	3	0.63	13	2.74	0.35	0.073
Jun 8-21	4	3 (75.0)	4.50	3	0.64	55	12.00	0.48	0.107
Jun 22-Jul 5	4	2 (50.0)	2.50	3	1.20	25	10.00	0.45	0.180
Jul 6-19	14	13 (92.9)	15.25	1	0.07	50	3.28	0.13	0.009
Jul 20-Aug 2	5	5 (100.0)	2.50	...	0.00	8	3.20	...	0.000
Aug 3-16	17	16 (94.1)	14.75	2	0.14	28	1.97	0.23	0.016
Aug 17-30	1	1 (100.0)	0.50	...	0.00	7	14.00	...	0.000
Aug 31-Sep 2	1	1 (100.0)	1.50	...	0.00	...	0.00	...	0.000
Totals, averages	60	50 (83.3)	55.25	14	0.25	217	3.93	1.93	0.035

Table 14

Creel census results in miscellaneous waters  
of the Hunt Creek Fisheries Experimental Area,  
1946 trout season. (Percentage of unsuccessful  
anglers are given in parentheses)

Stream or pond	Number of fishing days	Number of days no legal trout	Total hours of fishing	Total brook trout caught	Catch per hour	Total pounds of brook trout caught	Pounds per hour	Total sub- legal brook trout re- moved	Catch per hour
Lower Hunt	3	0 (0)	4.50	11	2.44	...	...	27	6.00
Above Sec. E	6	4 (67)	3.25	5	1.54	1.04	0.320	54	16.61
Trib. #2	1	0 (0)	1.00	1	1.00	0.10	0.100	12	12.00
Trib. #3	3	2 (100)	5.25	0	...	...	...	12	2.28
E. Fish L. Outlet	6	2 (33)	7.25	7	0.97	0.93	0.128	25	3.44
Sutton's Pond	6	1 (16)	12.00	8	0.75	1.54	0.128	3	0.25

records have been incorporated in Table 15. In the data for Sections C, D, and E of Hunt Creek, and for Fuller Creek west of the water wheel (upper), 6- to 7-inch trout have been treated as "legal".

Combining the data for the experimental sections A, B, C, D, and E on the basis outlined above, it can be shown that 59.9 per cent of the total anglers took no fish, 15.9 per cent caught one fish and 7.8 per cent creeled three trout larger than 6 inches. The percentage of unsuccessful anglers is slightly higher than that noted in 1945 (58.9 per cent) and the percentage of anglers catching one and two fish is lower than in 1945 (21.2 per cent, 9.6 per cent) despite the lower size limit prevailing in 1946 in Sections C, D, and E. However, the percentage of anglers taking three to 15 trout in 1946 was 15.4; in 1945 only 9.4 per cent of the anglers took from three to 15

Table 15

Number and percentage of 1946 anglers on Hunt Creek Fisheries Experimental Area taking various numbers of brook trout. Six to seven inch trout have been included (or Sections C, D, and E of Hunt Creek and for Fuller Creek (upper). Percentages are given in parentheses.

Stream and/or stream section	Number of anglers taking number of brook trout in 1946															Total anglers	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14		15
Hunt Creek																	
Sec. A	81	28	7	6	4	2	3	1	1	...	...	...	...	...	...	...	133
Sec. B	57	14	7	9	3	1	1	...	...	...	...	...	...	...	...	...	92
Sec. C	155	38	22	15	7	5	7	3	3	1	1	...	1	...	...	...	258
Sec. D	151	35	20	12	8	9	2	2	3	3	2	...	1	...	...	1	249
Sec. E	7	5	3	...	2	...	1	...	1	...	1	...	...	1	...	...	21
Totals	451	120	59	42	24	17	14	6	8	4	4	...	2	1	...	1	753
	(59.9)	(15.9)	(7.8)	(5.6)	(3.2)	(2.3)	(1.9)	(0.8)	(1.1)	(0.5)	(0.5)	...	(0.3)	(0.1)	...	(0.1)	(100)
Above E	3	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	6
	(50.0)	(16.7)	(33.3)	...	...	...	...	...	...	...	...	...	...	...	...	...	(100)
Below A	172	51	27	19	10	4	1	1	...	1	1	...	1	2	...	...	290
	(59.3)	(17.6)	(9.3)	(6.7)	(3.5)	(1.4)	(0.3)	(0.3)	...	(0.3)	(0.3)	...	(0.3)	(0.7)	...	...	(100)
Lower Hunt	...	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	3
	...	...	(33.3)	(33.3)	...	...	(33.4)	...	...	...	...	...	...	...	...	...	(100)
Fuller Creek																	
Lower	50	7	2	1	...	...	...	...	...	...	...	...	...	...	...	...	60
Upper	104	27	11	11	5	4	...	...	...	...	...	1	...	...	...	...	163
Totals	154	34	13	12	5	4	...	...	...	...	...	1	...	...	...	...	223
	(69.1)	(15.3)	(5.8)	(5.4)	(2.2)	(1.8)	...	...	...	...	...	(0.4)	...	...	...	...	(100)
East Fish L.Outlet 2	2	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	6
	(33.3)	(33.3)	(16.7)	(16.7)	...	...	...	...	...	...	...	...	...	...	...	...	(100)
Trib. #2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	...	(100)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(100.0)
Trib. #3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
	(100)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(100)
Sutton's Pond	1	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	6
	(16.7)	(33.3)	(50.0)	...	...	...	...	...	...	...	...	...	...	...	...	...	(100)

trout. Apparently the more expert anglers benefited to a larger degree from the liberalized size regulations.

On Fuller Creek there was a greater percentage of unsuccessful anglers than elsewhere (69.1 per cent), and only one angler (0.4 per cent) took more than 5 trout (legal + special). The lower part of Fuller Creek east of the rotary screen had size limit of 7 inches. In that area 83.3 per cent of the anglers were unsuccessful, whereas in the upper section where the 6-inch size limit prevailed, the unsuccessful anglers amounted to 63.8 per cent.

Below Section A about the same percentage of anglers were unsuccessful as in the experimental sections (59.3 per cent) despite the 7-inch size limit. The percentages of successful fishermen catching one to four fish was higher below A than for the same categories in the experimental waters, lower for the four-to-ten-fish groups, and slightly higher above ten fish.

In the miscellaneous waters mentioned, the angling pressure has been noted to be light, and in general the percentage of unsuccessful anglers was 50 per cent or less.

#### Residence of Anglers (Table 16)

The streams of the Hunt Creek Fisheries Experimental Area were fished by anglers from 37 counties of the lower peninsula of Michigan, and by non-resident who came from Ohio, Illinois, Missouri, New York, and Canada. Resident anglers on all waters totaled 1,241, out-of-state fishermen amounted to 47, and the residence of three anglers was not learned, making a total of 1,291 anglers.

The waters under observation were most heavily used by Wayne County fishermen (318), followed by local fishermen from Montmorency County (299), anglers from Oakland County (97). In fourth and fifth place were Calhoun County (84) and Genesee County (66). These data reflect the ability of the urban trout fishermen to return to the stream in increasing numbers after several years of war-time restrictions. During 1943, 1944, and 1945, local anglers predominated on the streams of the area.

Table 16

Residence of anglers using various streams and parts of streams  
on the Hunt Creek Fisheries Experimental Area, 1946 trout season.

County or state	Experimental sections	Below A	Fuller Creek	Other waters	Totals
Alpena	2	2	...	...	4
Arenac	4	...	1	...	5
Bay	13	3	12	...	28
Berrien	...	1	2	...	3
Calhoun	37	29	17	1	84
Clare	...	...	3	...	3
Eaton	9	4	...	...	13
Genesee	36	17	10	3	66
Gratiot	5	2	...	...	7
Hillsdale	2	6	...	...	8
Ingham	6	8	2	...	16
Iosco	10	...	2	...	12
Isabella	...	2	...	...	2
Jackson	25	22	2	...	49
Kalamazoo	1	1	...	...	2
Kent	1	1	1	...	3
Leelanau	1	...	...	...	1
Lenawee	16	16	...	...	32
Livingston	3	1	...	1	5
Macomb	6	6	1	...	13
Midland	4	1	4	...	9
Monroe	4	3	...	...	7
Montcalm	...	...	1	...	1
Montmorency	176	50	56	17	299
Oakland	74	9	13	1	97
Ogemaw	4	...	...	...	4
Oscoda	18	...	7	2	27
Otsego	...	2	2	...	4
Presque Isle	2	2	...	...	4
Roscommon	4	2	...	...	6
Saginaw	6	6	...	...	12
Sanilac	4	...	3	...	7
St. Clair	32	9	...	...	41
Shiawassee	11	2	...	...	13
Tuscola	6	1	7	...	14
Washtenaw	17	5	...	...	22
Wayne	193	58	67	...	318
Total resident	732	271	213	25	1,241
Ohio	16	15	7	...	38
Illinois	1	2	1	...	4
New York	2	...	...	...	2
Canada	2	...	...	...	2
Missouri	...	...	1	...	1
Total non-resident	21	17	9	...	47
Unknown	...	2	1	...	3
Grand totals	753	290	223	25	1,291

Outstate anglers were led by Ohio fishermen (38) followed by Illinois (4), New York (2), and Missouri (1). Two Canadians came across the border to fish Hunt Creek. Non-residents made up 3.6 per cent of the total number of fishermen.

INSTITUTE FOR FISHERIES RESEARCH

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