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Education-Game

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CREEL CENSUS ON THE HUNT CREEK FISHERIES EXPERIMENTAL AREA, 1942 TROUT SEASON

bу

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This report will present a summary of angling results obtained by intensive creel census methods from the experimental waters of Hunt Creek drainage during the 1942 trout season. Almost complete records (800 of 808) of the angling are available from Sections A, B, C, D, and E (see sketch). Incomplete data are available also from Fuller Creek, below Section A. Special Section I, and from the vicinity of the Hunt Creek Rearing Station. The angling results for the 1941 and 1942 seasons on East Fish Lake have been reported on and discussed in Report Number 848 which has been previously submitted.

Methods

The intensive creel census technique employed was the same as described in previous reports, except for Special Section I. This particular section was covered on Saturdays only after the opening week-end because of a shortage of help.

As in the past, the catches were recorded by the various types of water in which the anglers had fished. The catch records then were separated into the five different stream sections or trout

habitats of Hunt Creek proper. The limits of two pools in Section A were designated again by signs, and in Section D the limits of one old beaver dam were again designated by signs also. The catch records for these particular waters were studied to obtain information on the yield of these more or less special habitat types.

Angling Results

(See Tables 1, 2, 3, 4, 5, 6, and 7)

In the course of the 1942 trout season, a total of 808 angling-days were spent on the five experimental sections of Hunt Creek. This amount of time was spent on the stream by 486 different individuals (417 males, 69 females). Of the total number of angling days, 537, or 67 per cent yielded no legal fish. The total number of hours spent in fishing was 1,280 hours (a decrease of 18 per cent over the 1941 season) or approximately 1.6 hours per angling-day. This fishing effort yielded 548 legal brook trout for an average catch per hour for the 1942 season of 0.43 legal trout for the experimental area.

A total of 3,539 undersized brook trout were reported as caught and returned to the water (a rate of capture of 2.79 sub-legal fish per hour of angling).

The total weight of the legal catch removed by angling was found to be 83.77 pounds (97 per cent of all the fish caught were weighed, weights on the remainder were estimated carefully). The yield per acreduring the 1942 census may be estimated to be 19.2 pounds of brook trout for the waters of the experimental sections (area of water open to fishing 4.33 acres). The catch per hour in terms of pounds of legal trout removed was (based on the poundage given above) 0.065 pounds.

The figures on the general results given above include the estimated hours of fishing and the probable catch of legal fish of

the eight fishermen listed as "not contacted" assuming them to have been average for the two-week period in which they fished.

If the marked fish of hatchery origin taken from the experimental sections (12 fish) are deducted from the total catch, the catch of wild fish is found to be 536 legal brook trout of a total weight of 82.82 pounds removed from the experimental sections.

Section D was fished most heavily again (345 angling-days, 513.25 hours). Sections C, A, B, and E followed in that order. The best average catch per hour was experienced by anglers using Section A where 0.72 legal brook trout (0.112 lbs. per hour) were captured for each hour of fishing. Elsewhere the catch per hour for the entire season varied as follows: Section B, 0.51 fish (0.087 lbs. per hour); Section C, 0.30 fish (0.048 lbs. per hour); Section D, 0.38 fish (0.055 lbs. per hour); Section E, 0.63 fish (0.083 lbs. per hour).

Section D yielded the most legal brook trout and the most pounds of legal fish (196 fish, 28.26 pounds), followed by Section A (136 fish, 21.29 pounds), Section C (117 fish, 18.72 pounds), Section B (65 fish, 11.04 pounds), and Section E (29 fish, 3.82 pounds).

The trend of the fishing in the experimental portion (all sections combined) might be summed up as follows: From April 25 to August 14 the quality of the angling was quite uniformly good, varying in average by two-week periods from 0.40 and 0.55 fish per hour of angling; from August 15 to September 7 fishing would be classed as poor, as the catch per hour varied between 0.27 and 0.24 fish per hour of angling effort.

Yield to the anglers--Pounds of legal brook trout and number of legal brook trout per acre removed by angling

In Table 8 will be found listed the water acreages of the various experimental sections together with the number of legal fish and the

The total weight of the legal catch of wild fish includes the weight of 525 legal brook trout (536-11 fish returned to the stream), plus the weights of 5 undersized brook trout illegally removed by anglers.

pounds of legal fish removed from these sections by angling during the 1942 trout season. The yield per acre can be calculated from these data, and are presented there also. For purposes of comparison the same data from preceding years are included.

The calculated yields per acre for the several sections during the 1942 season were as follows:

Section	Pounds per acre removed	Number of legal fish per acre
A	· 1/1.8	94
В	17•3	102
C	26.4	165
D .	23•9	166
E	10.9	81
Average	19•2	125

The per acre yields increased slightly in Sections A and B over 1941, but dropped noticeably in Section C, D, and E. The decline in the yields of the latter sections may have been caused by a drop in fishing pressure from the 1941 level, or may have been the result of over fishing in 1940 and 1941. The latter is suggested by the drop in catch per hour and a slight decrease in the average length of the fish caught in Sections C and D.

		194 1			1942	
Section	Catch per hour	Average length (mm.)	Average weight (grams)	Catch per hour	Average length (mm.)	Average weight (grams)
C.	0.41	200	8 o	0.30	195	72
D	٠٠١١	196	73	0.38	189	65
E	0.93	195	. 73	0.63	197	73
						

Number of marked brook trout from experimental plantings entering the catch of legal brook trout during the 1942 trout season

As in the past, careful examination of all brook trout caught by the anglers in Sections A, B, C, D, and E, and also below Section A enabled us to determine the exact number of hatchery-reared fish and "wild fish" in the total catch because all of the hatchery-reared brook trout planted in or near the experimental sections have been marked either by jaw-tagging or fin-clipping since August, 1939. Some of the so-called wild fish may have originated from fingerling plantings prior to 1939, but from the results of fingerling planting experiments the number of such fish is probably insignificant.

In the course of the 1942 trout season, a total of 41 marked brook trout entered the catch of legal fish from the experimental waters. Of this number, \$12\$, or 2.2 per cent of the total catch were trout of hatchery origin; 29 were wild brook trout which had been marked as controls in fingerling experiments. The remainder (97.8 per cent of the total catch) consisted of wild, unmarked brook trout.

The data presented in Table 9 summarize the results of the marking experiments which demonstrate the comparative survival to the anglers' creel of early-fall-planted fingerlings of hatchery origin with wild brook trout fingerlings of the same size. All available recoveries during the 1942 season have been listed, including those from waters under partial as well as complete census. The total number of marked fish known to have been caught in 1940 and 1941 are shown, and the percentage of each planting recovered as legal brook trout up to the end of the 1942 season is indicated.

Seven of the 12 fish of hatchery origin were planted as legalsized brook trout in May and June, 1942; for purposes of experimental angling. These seven fish migrated upstream from 100 to 600 yards before capture in the experimental area. These are discussed elsewhere in the report. Also, one tagged hatchery fish of legal size escaped from an experiment in raceway 1-B of Section C and was taken by an angler in Section B about 100 yards downstream.

The marking which was most prominent in the 1912 catch was the left pelvic marking (500 wild fingerlings seined in Section C and marked in August, 1940). Nineteen fish so marked were taken from Sections A, E, C, D, and E. Twelve of these 19 fish were captured in Section D, again indicating a tendency for the wild fish of Section C to move upstream slightly as they increase in size and age. One brook trout with a left pelvic marking was recorded from the catches of Fuller Creek, and this was the only fish of that marking that was found to have wandered to any degree during the 1942 season.

Recoveries of the companion marking of hatchery fingerlings (right pelvic fin clipped from holy hatchery-reared fingerling brook trout and planted in Section C in August, 1940) were scattered over considerable territory. One recovery was made in Section D, one between Halbergs Bridge and the Ohio Club, and three were listed in the catches of Special Section I (about $3\frac{1}{2}$ miles downstream from Section C). It is possible that such dispersion may indicate that fish of hatchery origin are inclined to migrate more readily (especially downstream), since both the wild and hatchery-reared fish were released in Section C.

From the 1939 marking of wild fish in Section C (1,000 fingerlings, left pectoral clipped), 1942 anglers captured 11 legal brook trout.

Four were recaptured in Section C and six in Section D, and one "above Special Section I".

None of the hatchery-reared fingerlings marked and released in Section C at the same time in August, 1939 (right pectoral fin clipped on 1,000 fingerling brook trout) were recorded from any of the waters under census.

Comparable results were noted for the large-scale plantings of

marked hatchery-reared fingerling brook trout made in October, 1939 (35,109 fish-dorsal and adipose mark) and in October of 1940 (right pelvic and adipose mark-17,635 fish). These latter plantings were made over the entire length of Hunt Creek below the experimental sections (with the exception of an estimated 1200 marked fish in 1939 which were released by mistake at Halberg's Bridge and the Section D Bridge). During 1942, three fish with the dorsal and adipose mark entered the legal catch of the experimental sections, one being taken in Section A and two in Section C. None were recorded in any of the other waters covered by census. However, 17 fish entered the legal catch bearing the right pelvic and adipose mark (October 1940 release). Four were taken in Special Section I, 12 were taken Below Section A, and one was captured in Section A.

Of the brook trout marked in Section C in 1939 and 1940, the wild marked fingerlings have survived in considerably larger numbers than the marked hatchery-reared fingerlings to reach a size of 7 inches or larger—and the anglers' creel. The percentage of survival to date for the 1939 experiments in Section C is as follows: for hatchery fish—0.30 per cent; for wild fish—2.40 per cent. In the 1940 experiments the results were: hatchery fish—1.29 per cent; wild fish—4.20 per cent. Expressed in relative terms, the 1939 experiments produced for the creel 8 times as many wild fish as hatchery fish; the 1940 experiments 3.2 times as many as the hatchery fingerlings.

It is recognized that the recoveries listed above do not represent the total number of marked fish from these plantings which were taken as legal trout during the past two years, since at least 7 miles of stream were not covered by any type of creel census. The major crossings and landings were, however, well posted with explanatory signs asking for reports concerning the capture of any fin-clipped fish. Very few

reports of fin-clipped fish taken in Hunt Creek have been obtained by other than the creel census crews. It is reasonable to assume that any large number of such marked fish coming into the catch would have caused some comment among the anglers with the probability that a number of reports would have reached us.

Experiments over the entire stream, a greater percentage of return to the angler has occurred from the smaller planting. These experiments suggest that a higher percentage of survival to legal size might be expected from stocking 500 hatchery fingerlings per acre of stream rather than 1,000 fingerlings per acre (Section C, the scene of the intensive marking experiments, is 1.07 acres in extent). The same tendency for smaller plantings to yield higher percentages of return to the angler has been noted in fingerling plantings of brook trout in certain of the Pigeon River Forest lakes (Report #620). Apparently this same principle applies too in planting legal-sized trout as shown by studies conducted on the Pine River in Lake County (Report #614), and in Kinne Creek (Report #840). These results are logical since we can probably assume that a given body of water has a certain carrying capacity as well as a limited productive capacity.

As has been recognized since the inception of the experimental work on Hunt Creek, in order to obtain more accurate information on brook trout migrations, it will be necessary, at some time in the future, to construct a weir similar to the one now in operation on Fuller Creek at the lower end of Section A or at any nearby convenient site below the A Bridge. Until some such device is available we can never be certain how many of our experimental fish move out of the range of possible scrutiny, or how many unmarked wild fish enter the experimental area from downstream.

Yield of Specially Designated Water Areas

Pools 1 and 2, located in Section A, were marked again by signs placed at their upper and lower limits, as was the largest and deepest of the old beaver dams in Section D. Creel census clerks questioned the anglers fishing in those sections in order to determine whether or not any of their catches came from these special pools, and fish taken from these pools were noted on the creel census blanks.

Pool 1 is an "open" pool located in a marsh-grass meadow in the lower part of Section A. It is 81 feet long with an average width of 20.8 feet. It has an area of 0.038 acres and this pool area constitutes 2.6 per cent of the total area of Section A. Pool depth varies from 3-4 inches to 4 feet, and during 1942 an estimated 30 per cent of the pool area was in water over 2 feet deep. The bottom is made up of sand, silt, and muck. The only cover is provided by undercut sod banks and overhanging marsh grass, except for the depth of water available.

During the 1942 trout season 25 legal brook trout were removed from Pool 1 (24 wild fish, one hatchery fish). These fish ranged in size from 7 to 10.7 inches and were of an average length of 7.9 inches. The total weight of the 25 fish was 4 pounds 8 1/4 ounces, and the average weight of the fish was 2.89 ounces. The season's catch from Pool 1 constituted 18.3 per cent of the total number of trout taken from Section A, and 21.2 per cent of the total weight of brook trout removed by angling from this particular section.

Pool 2 lies in the upper end of Section A at the edge of a spruce-cedar swamp. This pool is 126 feet long with an average width of 14.5 feet. The area of Pool 2 is 0.041 acres, or 2.8 per cent of the total area of Section A. In reality this pool is a series of closely adjoining pools of smaller size. Bank and underwater cover are good, consisting

of overhanging tag-alders and some cedar on the banks, with their roots and some deadfalls making good underwater hides. The bottom consists of sand and silt with some gravel at the upper end of the pool. The water approaches 4 feet in depth, but there is not as large an expanse of deeper water as there is in Pool 1.

During the 1942 trout season, eight legal brook trout were captured from Pool 2 (6 wild fish, 2 hatchery fish). These fish ranged in size from 7.1 to 8.8 inches in size, and were of an average size of 7.5 inches. The total weight of these eight fish was 1 pound, 2 ounces, and their average weight was 2.25 ounces. The catch from Pool 2 during 1942 made up 5.8 per cent of the total catch of Section A and 5.2 per cent of the total weight of legal fish removed from Section A.

Section D Beaver Pond has remained about the same in appearance and trout habitat characteristics for the past three seasons. The pond which has been specially designated is one of three old beaver ponds located in a meadow in the mid-course of Section D. The pond is open except for a small amount of shade furnished by a few tag-alders that grow along the margins. Formerly, under conditions of higher water level, the roots and lower limbs of the tag-alders furnished underwater cover. The depth of the pond varies from 3-4 inches to approximately 3 feet in the water just above the dam. The bottom consists of muck and silt with a small amount of sand in the upper end and in mid-channel. The measurements of the pond (as determined from the plane-table map made in 1939) are as follows: length, 430 feet; average width (at present) 22.3 feet; area 0.22 acres (or 18.6 per cent of the total area determined for Section D, which has been calculated to be 1.18 acres in extent).

During 1942 a total of 25 legal brook trout were removed by angling from the Section D Beaver Pond. These fish weighed 3 pounds, 8 3/4 ounces.

The average size of the fish taken was 7.5 inches and 2.36 ounces. The total catch made up 12.8 per cent of the total catch of Section D, and 12.5 per cent of the total weight of fish removed by angling from this section.

The available data, particularly from Pools 1 and 2 of Section A, indicate that a large percentage of the total catch or total yield from any stream probably comes from a comparatively limited stream area. Under more favorable water levels, such as existed in 1939, the Section D Beaver Pond yielded more fish. Tabulations on Pools 1 and 2 during 1941 also showed that a relatively high percentage of the total yield for that season came from these rather limited areas. This suggests that if more of Hunt Creek could be made like pools 1 and 2 the stream might be more productive of legal trout. This idea is being tested in Section B.

Size of legal brook trout taken by anglers in the census sections on Hunt Creek, 1942 season

Almost all legal fish captured were measured for length (527 of 532), and 96 per cent of the total catch was weighed (513 of 532). The average lengths and average weights have been assembled by two-week periods for each census section and are presented in Table 10.

The average size of all fish taken during the 1942 trout season from Sections A, B, C, D, and E was 7.6 inches and 2.48 ounces, very slightly smaller than during 1941, when the average size of the brook trout captured was 7.7 inches and 2.50 ounces. By sections the average sizes were as follows during 1942:

Section	Average Total Length	Average Weight
A	7.6 inches	2.49 ounces
В	7.8 H	2.85 "
C	7•7 "	2.54 "
D	7•5 ^{ff:}	2.29
E	7.8 m	2.57 "

The average size of legal trout taken in areas not under complete census coverage will be found in Table 10a. Legal fish taken in "Below Section A" were of an average size of 7.50 inches and 2.65 ounces, further downstream in Special Section I the legal trout taken were of an average size of 7.75 inches and 2.65 ounces. Still further down stream at the Hunt Creek Rearing Station the average length of the legal fish reported was 8.4 inches. No weights were available on these latter fish.

Angling pressure on the experimental sections of Hunt Creek in relation to the fish yield of the experimental sections

In previous reports the changes in angling pressure from one season to the next have been compared with the changes from season to season in the yield per acre of legal trout. A similar tabulation has been made to compare the 1942 data with the results from the 1941 trout season. Table 11 presents the water acreage of the various creel census sections, the total hours of angling, the fishing pressure (man-hours per acre per season), yield in terms of pounds per acre of legal brook trout removed, and the percentage changes from season to season both in pressure and in yield.

During 1942 the angling pressure on the experimental sections decreased, except in Section B, which showed an increase in pressure

of 69 per cent. Sections A, C, D, and E experienced pressure decreases varying from 10 to 68 per cent. The experimental sections as a whole had an angling pressure 25 per cent lighter than that experienced in 1941.

In Section A, although the angling pressure decreased 40 per cent, the yield was 21 per cent higher than that of 1941. Inasmuch as the catch per hour in Section A increased from 0.40 to 0.72 fish per hour in 1942, it would appear that with the present legal trout population of Section A, the quality of the fishing and the yield will be at its best when the angling pressure is somewhere between 132 and 206 manhours per acre per season.

The 1942 calculations concerning Section B indicate that the angling pressure increased 69 per cent and the yield increased 114 per cent over 1941. To the author this means that Section B could stand a still greater angling pressure and still produce fishing of at least average quality, and with a greater yield. It should be pointed out, however, that this area of the stream was the scene of installation of numerous stream improvement devices between the 1941 and 1942 trout seasons. The habitat changes brought about by these devices may have affected the yield.

In Section C during the 1942 trout season, angling pressure decreased 12 per cent and the yield decreased 41 per cent compared with 1941 results on the same water.

In Section D during the 1942 season, angling pressure dropped 10 per cent and the yield diminished 30 per cent compared with the 1941 data.

Likewise in Section E in 1942, a drop of 68 per cent in angling pressure was accompanied by a decrease in the yield of 82 per cent on

comparison with 1941 calculations. In this section the decrease in the yield was more closely in proportion to the decrease in angling pressure than in Sections C and D.

It is possible that the higher yields noted in Sections C, D, and E for 1941 were the result of the breaking through of the large beaver dam on the Flint Club property with the attendant freeing of an unknown number of legal fish, which may or may not have moved downstream into the experimental sections. If such was the situation in 1941, the 1942 data on percentage change in angling pressure and percentage change and yield probably should not be interpreted to indicate that overfishing took place in Sections C, D, and E in 1941.

The Flint Club beaver dam broke through in May, 1941. Catch records in Sections C, D, and E do not indicate any great increase in the catch per hour in May, 1941. In late June, the catch records for all sections except A began to show an increase in the catch per hour (which can be correlated rather well with increased angling pressure)-even as far downstream as Below Section A.

An examination of the average size of the trout taken in the various two-week periods in Sections C, D, and E in 1941 after May does not reveal any sudden upward trend. Rather they tended to vary in a more or less normal manner. From what has been related to the writer by members of the Flint Club, some very large (14,1-16) brook trout should have been taken in the experimental sections if the beaver dam fish had moved downstream to any degree. None of such large size were recorded.

After considering all the facts related to the interpretation of the data involved, it appears more likely to the writer that overfishing took place in Sections C, D, and E in 1941, and the results of such overfishing became evident in 1942. However lacking any evidence to prove or disprove a downstream migration of legal brook trout from the Flint Club waters, the possibility that such a movement did occur is not excluded.

Considering the experimental sections as a whole there was a decrease in angling pressure of 25 per cent over 1941 accompanied by a decrease in yield of 28 per cent compared with 1941 results.

Angling results on other water areas where the complete fishing effort could not be obtained

Hunt Creek Below Section A (Table 12)

The data listed in Table 12 probably represent the majority of the fishing prosecuted over approximately 3/4 mile of stream below the Section A Bridge. The records from this water have been regarded as incomplete since the number of anglers entering and leaving the lower end of this piece of stream can not be ascertained with any degree of reliability.

During the 1942 trout season this area was fished by 264 anglers for 657.6 hours. Unsuccessful anglers constituted 46 per cent of the total number fishing. A total of 368 legal trout were captured at the rate of 0.56 fish per hour. The total weight of legal fish removed (including legal trout removed by electrical means for taste tests by the Home Economics Department of Michigan State College) was 60.87 pounds, or 0.092 pounds of fish per hour of angling. The above figures include the estimated catches of 13 anglers who were seen fishing but left before their catches were examined.

A total of 1,937 undersized fish were reported to have been caught and released. These sub-legal brook trout were caught at the rate of 3.10 fish per hour.

As in past years the quality of the fishing in this section varied considerably throughout the season. The poorest fishing was experienced during the last nine days of the season when no legal trout were taken in 24.50 hours of fishing. The best fishing was to be had during the period June 20-July 3 when the catch per hour was 1.12 fish. In other periods the catch per hour varied between 0.20 and 0.72 legal fish. The average size of the legal brook trout taken by angling during 1912 was 7.5 inches and 2.64 ounces, as compared with an average size during 1941 of 7.7 inches and 2.49 ounces.

More hatchery-reared fish entered the legal catch of this section than in any other part of the stream under observation. Of the 352 fish recorded, 49, or approximately 14 per cent were of hatchery origin. However, thirty-six of the hatchery fish were from the May and June plantings of legal brook trout which were released for the experiment conducted to determine the relative "fighting" abilities of hatchery brook trout and wild brook trout (21 of 39 fish planted in May were recovered and 15 of 46 fish planted in June were recovered).

Twelve recoveries were made from the right pelvic and adipose marking of hatchery fingerlings planted in the fall of 1940. This planting of 17,635 fingerlings was spread between the Ohio Club (located at the lower end of what is considered "Below Section A", and the Thunder Bay River, and this was the largest number of recoveries made in any one area on this group of fish.

One recovery was made from the August, 1940 planting of 464 hatchery fingerlings released in Section C. This fish had moved downstream at least $\frac{1}{2}$ mile.

East Fish Lake Outlet and Fuller Creek (Table 13)

This water area is typical "feeder" stream, flowing for the most part

through thick cedar swamp under or through a tangle of roots and debris. East Fish Lake Outlet joins Fuller Creek a short distance below the Fuller Creek Beaver Pond, and for all purposes the two streams may be considered as one.

In 1942, only about half as much angling was done here as in 1941, and the recorded catch was only about one-third that of 1941. A total of 31 anglers fished in these waters, 29 of which were contacted. These anglers spent 39.25 hours on the area and caught 11 legal brook trout at the rate of 0.28 fish per hour. They reported releasing 229 sub-legal brook trout, or 5.83 undersized fish per hour. The total weight of the legal catch was very slightly over 2 pounds. The average size of the 11 fish taken was 8.3 inches and 2.92 ounces.

The entire catch consisted of wild fish.

Special Section I (Table 14)

This area lies approximately 2 miles downstream from the lower end of the experimental waters, and is located between the unused bridge below Welch's Bridge and Smith's Cabin. It embraces about one mile of water. The section was patrolled during the opening weekend and on each Saturday of the trout season. In addition to collecting data on the quality of the angling in areas downstream from the experimental sections, we hoped to secure some idea as to the number of hatchery fingerlings entering the legal catch from the 1939 and 1940 releases of marked fish, many of which were released in this general stream area.

During 1942, Saturday anglers and opening weekend anglers totalled 68, and 65 of them were contacted. These fishermen spent 166.25 hours on the stream and caught 92 legal brook trout weighing 15.33 pounds (92 times the average weight of the 39 fish which were weighed).

The catch per hour was 0.55 fish and 0.092 pounds of fish. Four hundred and fifty-seven undersized fish were released at the rate of 2.75 sublegal fish per hour of angling. The average size of the legal fish captured was 7.7 inches and 2.66 ounces.

Hatchery fish entering the legal catch amounted to seven fish or 7.6 per cent of the total catch. Four were marked as fingerlings in the 1940 fall planting of 17,635 hatchery brook trout, and three legal fish were fin-clipped fish from the August, 1940 planting of 464 fingerlings released in Section C about 3 miles upstream from where they were caught.

Hunt Creek Rearing Station (Table 15)

Through the cooperation of Mr. Hans Peterson, Fisheries Supervisor of the Grayling Hatchery District, Ted Monti, caretaker of Hunt Creek Rearing Station in 1942, recorded the angling done in the vicinity of the rearing station for the period of time that the station was in operation. The data are presumably complete for the period June 20-September 7, 1942.

During this time 28 anglers fished 74.25 hours above and below the rearing ponds and caught 71 legal brook trout at the rate of 0.96 fish per hour. The average size of the legal trout taken was 8.38 inches. Weights were not taken. One hundred and forty-six undersized fish were returned to the water at the rate of 1.97 sub-legal trout per hour of angling. For the time period covered, this part of the stream yielded the best fishing recorded anywhere on Hunt Creek. This high angling quality is probably the result of the semi-private nature of the water with the attendant light angling pressure.

It should be noted here that none of the fish taken by the anglers in this portion of the stream were recorded as marked hatchery brook trout, although numerous marked fish from the 1939 and 1940 fall plantings

of fingerlings were released at, above, and below the site of the rearing station. Two marked wild fish were captured, one of them a sub-legal trout tagged when it was trapped moving down Trib #3 on May 12, 1942, at a size of 126 mm. (5^n) . This fish was recaptured at the Rearing Station above Pond 6 on July 2, 1942 at a size of 141 mm. (5.6^n) . It had moved downstream approximately $5\frac{1}{2}$ miles. The other wild marked brook trout was a dorsal and left pectoral mark which had been marked in Section A for a special experiment. This fish had moved downstream slightly less than $5\frac{1}{2}$ miles at some time after marking in the fall of 1941.

Miscellaneous Records (Table 16)

Scattered records from eight different localities have also been tabulated. Because of their location it was not certain that the records represent the total fishing effort on these waters. These localities are Sutton's Pond, Above Special Section I, Below Special Section I, Above Section E, Trib #2 Beaver Pond, Fuller Creek Beaver Pond, Below Ohio Club, and Above Highway 612. The records may be of use when compared with similar records taken in the past and in the future.

Number and percentage of "anglers" catching various numbers of legal brook trout

The number of anglers catching various numbers of brook trout from the experimental sections (A, B, C, D, and E) of Hunt Creek are presented in Table 17. Sixty-six and five-tenths per cent of the total fishermen-days were unproductive, while 16.3 per cent caught one legal brook trout, 9.4 per cent caught two legal brook trout. The percentage catching three, four, five, and six trout was 3.3, 2.4, 0.88, and 1.13 respectively. The largest number of trout taken by any one angler

Means angling-days

during the 1942 trout season was 11, and one other angler took 8 fish.

It should be pointed out that in trout fishing only a very small percentage of the anglers ever take more than five legal fish in any one day's fishing. The question in the writer's mind is: Is it fair to the great mass of average anglers to allow the fishermen who are on the stream at propitious periods, or who are extremely skillful and persistent, to remove near-limit or limit catches of 15 trout?

Many other progressive states have lowered the daily limit to 10 trout. It would be psychologically and biologically to our advantage if Michigan adopted such a measure to spread the available trout supply in a more equitable fashion. With the increased angling pressure that is to be expected following the present war, the daily limit of the future will have to be set at some figure lower than the present one if the average post-war angler is to be more nearly satisfied and if he is to have a few fish to take home in his creel.

Residence of Anglers (Table 12)

The experimental stream and the waters immediately surrounding it were subjected to 1,408 days of angling during the 1942 trout season.

Michigan residents using these waters included fishermen from 30 counties; all except one (Iron County) were counties located in the Lower Peninsula.

Wayne county anglers were the most numerous (449), followed by Genesee County fishermen (215), and local fishermen from Montmorency County (204).

Non-resident fishermen from five states spent part of their vacations fishing on the sections of Hunt Creek under observation. Ohio anglers

As will be noted in Table 19, the great majority of the anglers

were the most numerous (37), followed in order by Indiana (11), Illinois

and New Jersey (3 each), and New York (2). The residence of 21 anglers

was not learned.

using Hunt Creek came from counties in the eastern half of the Lower Peninsula, or the State of Chio. There still appears to be considerable relationship between the angler's residence and the choice of fishing locality.

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Report typed by: M. Klaphaak

Table 1
Intensive Creel Census Data For Section A, Hunt Creek,
1942 Trout Season

· ·		Number	Per cent	·	Legal br	ook trout		legal trout		Wt. of legal fish caught
Two-week periods	Number of anglers	taking no	taking no fish	Total hours of angling	Number	Catch per hour	Number	Catch per hour	legal fish (grams)	per hour (grams)
April 25-May 8	22	11	50	38.25	20	0.52	158	4.31	1,302	34.04
May 9-May 22	9	4	741	18.25 .	15	0.82	170	9.32	1,108	60.71
May 23-June 5	10	3	30	17.25	22	1.24	92	5•33	1,522 5	88.23
June 6-June 19	1	1	100	00.50		0.00				
June 20-July 3	14	5	36	37.00	2 9	0.78	87	2.35	2,342	63.30
July 4-July 17	13	14	31	36.25	25	0.69	87	2.40	1,716	47.34
July 18-July 31	10	6	60	9.25	94	0.97	38	4.11	603 🗓	65.19
Aug. 1-Aug. 14	5	14	80	6.50	3	0.46	11,	2.15-	273	42.00
Aug. 15-Aug. 28	3	2	67	3.50	4	1.14	30	8.•57	ᆀ	69.71
Aug. 29-Sept. 7	18	13	72	23.00	9	0.39	75	3.26	549	23.87
Totals or averages	105	53	50	189.75	136△	0.72	751	3.96	9,659 6 4	/ 50.90 (0.112 lbs. per hour)

Table 2

Intensive Creel Census Data For Section B, Hunt Creek,

		Number	Per cent		Legal b	rook trout		legal trout	Total wt. of legal fish (grams)	Wt. of legal fish caught
Two-week periods	Number of anglers	taking no fish	taking no fish		Number	Catch per hour	Number	Catch per hour		per hour (grams)
Apr. 25-May 8	15	9 .	60	19.50	1 0	0.51	128	6.56	634	32-51
May 9-May 22	4	2	50	12.75	. 2	0.16	· 56	4.39	122	9•57
May 23-June 5	5	2	40	6.50	5	. 0.77	44	.6.77	311	47.85
June 6-June 19	-	-								
June 20-July 3	15	6	40	24.50	2 6	1.06	.87	3.55	2,201	89.84
July 4-July 17	. 17	8 .	47	26.50	13.	0.49	88	3.32	1,230	46.42
July 18-July 31	7	6	87	12,50	1,	0.08	38	3.04	60	4.80
Aug. 1-Aug. 14	1	0	 .'	1.00	2/2	2.00	, 3	3.00		· ·
Aug. 15-Aug. 28	14	2	50	6.50	3	0.46	7	1.08	184	28.31
Aug. 29-Sept. 7	8	6	75	16.75	3	0.18	48	2.87	267	1.59
Totals or	76	· 41	54	126.50	65 &	0.51	499	3.94	5,009	39.60
werages									(11.04 lbs.)	(0.087 lbs. per hour)

Table 3

Intensive Creel Census Data For Section C, Hunt Creek,

:		Number	Per cent	13	Legal b	rook trout	Sub-legal brook trout		Total wt.	Wt. of legal fish caught
Two-week periods	Number of anglers	taking no fish	taking no fish	Total hours of angling	Number	Catch per hour	Number	Catch per hour	legal fish (grams)	per hour (grams)
Apr. 25-May 8	38 @	30	79	57•75	18	0.31	196	3•39	1,262 🗵	21.85
May 9-May 22	8	8	100	6.75		0.00,	23	3.41	-	
May 23-June 5	28	21,	86	34-50	8	0.23	134	3.88	531	15.39
June 6-June 19	21	15	71	40.25	12	0.30	128	3.18	846	21.02
June 20-July 3	3 9	2년 ·	62	84.50	40 ·	0.47	202	2•39	2,804	33.18
July 4-July 17	37	2 9	78	51.00	9	0.18	127	2.49	6 52	12.78
July 18-July 31	10	5	50	18,00	11	0.61	31	1.72	792	14.00
Aug. 1-Aug. 14	13	10	77	10.75	4	0.37	42	3.91	1 .1 3	38.42
Aug. 15-Aug. 28	· 2 8	23	82	35-50	7	0,20	83	2.34	710	20.00
Aug. 29-Sept. 7	31	2/1	77	52.50	8	0.15	95	1.81	483	9•20
Totals or averages	253 (192	76	391.50	117	0.30	1,061	2•71	8,493 ⁽⁸⁾ (18.72 lbs.)	21.69 (0.048 lbs. per hour)

Table 4

Intentive Creel Census Data For Section D, Exclusive Of Beaver Dam, Hunt Creek,

		Number	Per cent		Legal b	rook trout	Sub- brook	legal trout	Total wt.	Wt. of legal fish caught
Two-week periods	Number of anglers	taking no fish	taking no fish	Total hours of angling	Number	Catch per hour	Number	Catch per hour	legal fish (grams)	per hour (grams)
April 25-May 8	14th	30	68	76.50	27	0.52	213	2.78	1,603 🗓	20.95
May 9-May 22	28	20	71	36.75	11	0.30	74	2.01	767	20.87
May 23-June 5	30	20	. 67	45.25	20	باباء ٥	, 111	2.45	1,464	32•35
June 6-June 19	40	19	1,8	85.75	41	0.48	138	1.61	2,390	27.87
June 20-July 3	36	29	81	58.00	1/4	0.24	111	1.91	993	17.12
July 4-July 17	1,8	30	63	75•00	34	0.45	107	1.43	2,137D	28.49
July 18-July 31	13	10	77	21.00	5	0.21	60	2.50	491	20.46
Aug. 1-Aug. 14	16	114	88	14.00	2 .	0.14	39	2.79	211 🗓	15.07
Aug. 15-Aug. 28	28	22	79	44.75	11 ♠	0.25	. 80	1.79	752₩	16.80
Aug. 29-Sept 7	. 25	20	80	29•75	6 -	0.20	39	1.31	403	13.55
Total or average	308	21/1	70	489•75	171	0•35	972	1.91	11,211 ³ V	22,89

Table 5

Intensive Creel Census Data For Section D-Beaver Dam, Hunt Creek,

1942 Trout Season

		Number	Per cent		Legal brook trout		Sub-legal brook trout		Total wt.	Wt. of legal fish caught
Two-week periods	Number of anglers	taking no	taking no fish	Total hours of angling	Number	Catch per hour	Number	Catch per hour	legal fish (grams)	per hour (grams)
April 25-May 8	7	4	57	4.50	4	0.89	4	0.89	279	62,00
May 9-May 22	1	0	0	0.50	1	2.00	0	0	. 73	146.00
May 23-June 5	1	1	100	0.25	0	, 0	· 0	0		. 0
June 6-June 19	2 .	0	0	1.50	3	2.00	3	2.00	177	118.00
June 20-July 3	5	3	60	5.00	. 2	0.40	9	1.80	124	24.80
July 4-July 17	9	8	89 .	4.25	2	0.47	11	5.50	107	25.18
July 18-July 31				 .						
Aug. 1-Aug. 14	2	0	0	4.00	9∕∆	2.25	<u>L</u>	1.00	556	139.00
Aug. 15-Aug. 28	2 .	2	100	0.50	0	0	1.	2.00		-
Aug. 29-Sept. 7	4	. 3	75	3.00	4.	1.33	7	2•33	293	97.67
Beaver Dam	33	21	64	23.50	25∕1	1.06	39	1.66	1,609	68 .1.7
Stream (Table 4)	3084	21/1	70	489•75	1714	0.35	972	1.91	11,211	22.89
Section D totals and averages	3314	235	72	513.25	1962	0.38	1,011	1.97	12,820 D	24.98

Table 6

Intensive Creel Census Data For Section E, Hunt Creek,

		Number	Per cent	•	Legal by	ook trout		legal trout	Total Wt.	Wt. of legal fish caught
Two-week periods	Number of anglers	taking no fish	no fish	Total hours of angling	Number	Catch per hour	Number	Catch per hour	legal fish (grams)	per hour (grams)
April 25-May 8	7	4	57	10.00	62	0.60	32	3.20	329	32.90
May 9-May 22	3	ı	33	5.50	. 3	0.55	3	0.55	238	43-27
May 23-June 5	1 .	0	0-	1.25	2	1.60	\mathbf{n}_{i}	11.20	118	94•140
June 6-June 19	1	0	0	- 2.00	. 2	1.00	. 0	0 .	106	53.00
June 20-July 3										,
July 4-July 17	5	ı	20	12.50	9	0.72	40	3.20	663	53.04
July 18-July 31	1	0	0	3.00	4/3	1.33	4	1.33	104	34•67
Aug. 1-Aug. 14			, -					•	***	**
Aug. 15-Aug. 28	3	2	67	4.50	1	0.22	13	2.89	₅₂ []]	11.56
Aug. 29-Sept. 7	4	3	75	7.50	2	0.27	111	11,.80	121	16.13
Totals or averages	25	. 11	1,1,	l;6.25	29 🕭	0.63	217	4. 69	1,731 (1 (3.82 lbs.)	37.43 (0.083 lbs. per hour)

Table 7
Summary of Intensive Creel Census on Hunt Creek for the

1942 Trout Season (Data from Sections A, B, C, D, and E combined)

	Total	Number Catching	Per cent catching		Legal br	ook trout		legal trout	Total Wt. of legal	Wt. of legal fish caught
Two-week periods	Number of anglers	no legal fish	no legal fish	Total hours of angling	Number	Catch per hour	Number	Catch per hour	fish removed (grams)	per hour (grams)
April 25-May 8	141 &	88	66	206.50	85	0.41	731	4-54	5,409	26.19
May 9-May 22 .	53	35	66	80.50	32	0,40	326	4.05	2,308	28.63
May 23-June 5	75	50	67	105.00	5 7 -	0.54	395	3.76	3,946国也	√ 37•54
June 6-June 19	65	35	54.	130.00	. 58	0.45	269	. 2.07	3,519	27.07
June 20-July 3	109	67	62	209.00	111	0.53	496	2.37	8,464	70-70
July 4-July 17	129	80	62	205.50	9 2	0,45	460	2.24	6,505	31.65
July 18-July 31	41	27	66	66.75	30₺	0.45	171	2.56	2,050	30.71
Aug. 1-Aug. 14	37	28	76	36.25	₂₀ A	0.55	102	2.81	1,453 N	40.08
Aug. 15-Aug. 28	.68	53	78	95.25	₂₆ A	0,27	21/1	2.25	1,942 0 4	20,39
Aug. 29-Sept. 7	90	69	77	132.50	32	0 .2]	375	2.83	2,116	15,97
Totals or averages	808	532	67	1,267.25	543 A	0.43	3,539	2•79	37,712 18\ (83.13 lbs.)	29.74 (0.066 lbs. per hour)

Table 8

Yield Statistics for the Experimental Sections of Hunt Creek for 1939, 1910, 1911, and 1912, giving pounds of legal trout and number of legal trout removed per acre of water surface by angling (actual numbers and pounds removed are given in parentheses)

Stream	Length	Width	Area	1939 yie per acre	in	1910 yi		1941 yi per acr		1942 yi per acr	e in
section	(feet)	(feet)	(acres)	Pounds	Number	Pounds	Mumber	Pounds	Number :	Pounds	Number
À	2,577	24•3	1.44	13.9 (20.02)	65 99	14.4 (20.75)	105 (152)	12.2 (17.61)	85 (126)	1/ _{4•} 8 (21•29)	9l ₁ (136)
E	1,605	17.5	0•64	1.7 (1.09)	23 (15)	10.5 (6.69)	6 <u>l</u> 4 (l11)	δ.1 ((5.23)	50 · (32)	17•3 (11•04)	102 (65)
С	3,970	11.8	1.078	14.9 (15.97)	105 (112)	16.8 (17.95)	106 (113)	以。? (31•75)	253 (1 80)	26.4	165 (117)
D	2,386	21.5	1.18	25•3 (29•90)	186 (220)	11.5 (13.62)	77 (91)	34.3 (40.49)	214 (252)	23.9 (28.26)	166 (196)
E	1,250	11.8	0.36	Not cen	sused	3•7 (1•3 <u>l</u> ₁)	25 (9)	58.7 (21.13)	367 (1 32)	10.6 (3.82)	81 (29)
Totals or averages, all sections	11,738	17.4	4.69ª	15.4 (66.98)	112 (492)	12.8 (60.35)	84 (1:06)	26.8 (116.21)	167 (7 22)	(83.13)	125 (543)

The total area of the experimental waters has been as follows:
1939, 1.33 acres; 1940, 1.69 acres; 1941 and 1942, 1.33 acres.
The fluctuation has been caused, first, by the addition of Section E (0.36 acres) then by the closing to fishing of 0.36 acres in and around the diversions in Section C.

Table 9

Location of recovery by anglers during the 1942 trout season and percentage recovered as legal fish, of marked fingerlings released in or seined from Hunt Creek in 1939 and 1940.

		Planted i	n Section C		Over Entire Stream				
	Wild fin	gerlings	Hatchery :	fingerlings	Hatchery	fingerlings			
	Left	Left	Right	Right	Dorsal and	Right pelvic			
Stream section	pectoral	pelvic	pectoral	pelvic	adipose	and adipose			
or locality	1,000 marked	500 marked	1,000 marked	Li6Li marked	35,109 marked	17,635 marked			
of recovery	Aug. 1939	Aug. 1940	Aug. 1939	Aug. 1940	Oct. 1939	0ct. 1940			
Special Section I	mm 405			3		1,			
Above Section I	1	***	·						
Below A				. 1		12 -			
Section A .		1	-		1	1			
Section B		1.		 ·					
Section C	14	14			2				
Section D	6	12		1					
Section E		1							
Fuller Creek		1							
Totals, 1942	11	20		5	3	17			
Totals 1940 and 1941	13	1	3	1	23	32			
Grand Totals	21,	21	3	6	26	149			
Per cent recovered as legal fish to date	2.40	4.20	0.30	1.29	0.07	0.28			

Table 10

---1 --- -

Average length (in millimeters) and caught in Sections A, B, C, D, D-(Number of specimens weighed rage weight (in grams) of hegal brook trout or Pond, and E of Hunt Ordek, 1942 trout season. measured are given if barentheses)

				. (1	number of speci	mens weigned o	r measured are	given in bere	ntheses)					
Two-week		ion A		ion B		ion C		ion DStream		Beaver Fond	Scet	ion E	All Se	
periods	Av. length	Av. weight	Av. length	Av. weight	Av. length	Av. weight	Av. length	Av. weight	Av. len-th	Av. weight	Av. length	Aw. weight	Av. length	Av. weight
April 25-May 8	184.70 (20)	64.95 (20)	195.22	70.44 (9)	208,59	65.50 (10)	190.68	56.77	194.50	69•75 (4)	210.00 (4)	32.25	192.22	64+14; (73)
Pay 9-May 22	188,80	70-53	192.50 (2)	61.00	-		193.18 (11)	69.73	197.00	73.00	206.33	79-33	192.년4 (32)	70.55 (32)
May 23-June 5	183.53	65.18 (17)	188.60	62 .2 0 (5)	176-25 (8)	66.38 (8)	197•55 (20)	73-20 (20)	- -	-	185.50 (2)	59-00 (2)	188.37 (52)	67.92 (52)
June 6-June 19			 .,	. <i></i> , '	194•17 (12)	70 - 50 (12)	177.22 一(加)。	(41)	196.33	59.00 (3)	182.50	53•00 . (2)	181.38 (58)	60.67
June 20-July 3	199-10 (29)	80.76 (29)	205.62 (26)	84.65 (26)	(元) (元)	, 70-10 (40)	193.07 (址)	70.93 (11)	183 . 50 (2)	62.00 (2)	***		197•l3 (111)	76.25 . (111)
July 4-July 17	193-24 (25)	68.64 (25)	197.77	94.62 (13)	198.00 · (9)	72.44 (9)	187 . 38 . (34)	(33)	179.50 (2)	53.50 (2)	194.67	74.67 (9)	192.00 (92)	70.99 (91)
July 18-July 31	202-38 (8)	72.00 (7)	182.00	60.00	193•73 (11)	72,00	212.00	98.20 (5)			222.00	104.00 (1)	200.51; (25)	78.04 (25)
Aug. 1-Aug. 11;	215-67 (3)	91.00			224.75 (4)	103 .2 5 (4)	218.00 (2)	63.00	193.00 (8)	69.50 (8)		-	207.41 (17)	81.56 (16)
Ang. 15-Ang. 28	184-00 (4)	61.00 (4)	186.00 (3)	61.33	215 .2 9 (7)	101.43	195.80 (10)	67.20 (10)		- !	108.00		197 .5 6 (25)	75.42 (24)
Aug. 29-Sept. 7	186•33 · (9)	61.75	205.00	89.00 (3)	185.50 · (8)	60•38 (8)	191.17	67.17	194 .5 0 (4)	73-25	193.00	60.50	190.25	66.48 (31)
Totals or averages	191.77	70.61 (128)	199•31 (62)	80.79 (62)	194+99 (117)	71.96 (109)	189.20 (170)	65.05 (167)	190.83	67.04	197•33 (24)	73.00 (23)	192.75 (527)	70 .2 6 (513)
Av. measurements in inches and our	1005 7.6	2.49	7.8	2.85	7.7	2.54	7-4	2.29	7.5	2.29	7.8	2.57	7.6	2.48
e e e e e e e e e e e e e e e e e e e								·					,	
. 7	St. 100	A SECTION				•								

Table 10a

Average length (in millimeters) and average weight (in grams) of legal brook trout caught in Sections not Intensively Censused, Funt Creek Area, 1942 trout season.

(Number of specimens weighed or measured are given in parentheses)

Two-week	Below Se	ection A		Section Fuller Creek Funt Creek Re					
periods	Av. length	Av. weight	Av. length	Av. weight	Av. length	Av. weight	Av. length	Av. weight	
April 25-May 8	191.48 (69)	73.22 (69)	195.23 (62)	75-22 (18)	205.86 (7)	71.71			
May 9-May 22	191.88 (26)	74.00	207.33	87.50 (6)			 .	 ·	
May 23-June 5	176•52 (63)	71.67 (63)	189.00 (3)						
June 6-June 19	201.0 <u>L</u> (25)	86.64 (25)	201.00 (6)	86•25 (4)					
June 20-July 3	191•52 (6k)	72.22 (6½)	·		208.50 (2)	92.00 (2)	206.05 (L;2)		
July 1:-July 17	199•35 . (52)	86.10	181;.67 *(3)	60.00			208.27		
July 18-July 31	194.05 (19)	73.33 (18)	211 ₄ .67 (3)	107.00 (1)			232•50 (12)		
Aug. 1-Aug. 14	192.lı2 (19)	66.50 (13)	206.00	74.00 (1)			228•00 (山)		
Aug. 15-Aug. 28	190 . 11.	70.23 (22)	192.33	64.75	277.00 (1)	170.00 (1)	21:0.00		
Aug. 29-Sept. 7	 ·		. 178.00 (2)	53.00 (2)	184.00 (1)	61.00			
Totals or averages	190.80 (359)	75.03 (354)	196,03 (92)	75•6L ₄ (39)	210,82	83.36 (11)	213.06 (71)		
Av. measurements in inches and our	7.50	2.64	7•7	2.66	8.3	2.92	8.4	». ——	

→No weights given

Estimated coverage by creel census- 85%

Consused on opening week-end (Sat. and Sun.) and each Saturday during the balance of the season.

Table 11 Tabular Summary of the Changes in Angling Pressure (angling hou

on the Experimental Sections of Hunt Creek, 1939

Section	Area		Hours of	angling						
	(acres)	1939	19140	1941	1942	1939	1940	per acre	1942	1939
A	باباه 1	199•00	296.25	315.75	189.75	138	. 206	219	132	13.9
В	0.64	33•50	86.50	74.75	126.50	52	135	117	198	1.7
c	1.078	262.75	259.50	1443.00	391.50	246	2143	621:	551	14.9
D	1.18	263.25	251.00	570.25	513•25	223	213 ·	483	1435	25 •3
E	0.36	Not censused	8.00	142.25	46.25	Not censused	22	3 95	128	Not censused
Totals, averages	4.698	780.50	901.25	1,546.00	1,267.25	180 .	. 208	390	293	15•4

The area under census has varied as follows:
1939, 4.33 acres; 1940, 4.69 acres; 1941 and 1942, 4.33 acres.
This variation has been caused by the addition of Section E in 1940, and the reduction of Section C by 0.36 acres in 1941 when the stream in and around the diversions was closed to fishing.

Table 11 g Pressure (angling hours per acre per season) and Yield ns of Hunt Creek, 1939 to 1942 Inclusive

			CKETC CO STATE		ius		sentrage change		101/	sonoage chan	5 6
re			of fish	per acre			ishing pressur	e		in yield	
	1942	1939	19140	1941	1942	139 to 1240 ·	'LO to 'L1	'l _! 1 to '42	'39 to '1.0	'LiO to 'Li1	'41 to '42
	132	13.9	14.4	12.2	114.8	4 49	+ 6	-140	.+3	-15	‡ 21
	198	1.7	10.5	8.1	17•3	+160	-13	+ 69	+517	-13	+114
	551	14.9	16.8	LH+•7	26.4	-1	+157	-1 2	41 3	+166	-Li1
	435	25 •3	11.5	34•3	23.9	-1,	+127	-10	- 55	+1 98	- 30
	128	Not censused	3•7	58 .7	10.6	No data	#1, 695	- 68	No data	+1, 486	-82
	293	15•4	12.8	26.8	19.2	+ 15	† 87	-25	-17	+ 109	-28

Table 12
Intensive Creel Census Data For Below Section A, Hunt Creek,

		Number	Per cent	· · · · · · · · · · · · · · · · · · ·	Legal bro			legal trout	Total wt. of	Wt. of legal fish caught	
Two-week periods	Number of anglers	taking no fish	taking no fish	Total hours of angling	Number	Catch per hour	Number	Catch per hou r	legal fish (grams)	per hour (grams)	
April 25-May 8	50 ©	211	49	120.75	. 69	0.57	429	3.55	5,052	39.62	
May 9-May 22	23 O	. 12	5 7	55.50	2 6	0.47	429	7•73	2,236	40.29	
May 23-June 5	29	9	31	88.00	63	0.72	271	3.08	4,671 3	53.08	
June 6-June 19	23	10	43	59.00	38 🕰	0.64	166	2.81	2,166	36.71	
June 20-July 3	17	4	2 <u>1;</u>	51.00	5 7	1.12	174	3.41	4,622 �	90.63	
July 4-July 17	31	9	29	78.75	52	0.66	93	1.18	4,423 3	56.17	
July 18-July 31	22 (. 11	52	45.75	19	0.42	107	2.34	1,412	30.86	
Aug. 1-Aug. 14	₂₈ 0	1 6	59	57•50	19	0.33	117	2.03	1,247	21.69	
Aug. 15-Aug. 28	21 ①	7	35	44.50	9	0.20	. 102	2.29	1,545	34.72	
Aug. 29-Sept. 7	20 O	13	100	24.50		0.00	49	2.00			
Total or averages	264 🛈	115	Ц6 ·	625•25	352 🖎	0.56	1,937	3.10	27.374 5 9 (60.87 lbs.)	(0.092 lbs. per hour)	

Table 13

Intensive Creel Census Data For Fuller Creek, E. Fish Lake Outlet,

1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		Number	Per cent		Legal by	rook trout		legal trout	Total wt.	Wt. of legal fish caught	
Two-week periods	Number of anglers	taking no		Total hours of angling	Number	Catch per hour	Number	Catch per hour	legal fish (grams)	per hour (grams)	
April 25-May 8	5	2	40	5.50	7	1.27	23	4.18	502	91.27	
May 9-May 22	1	1	100	2.25	0	0.00	3	1.33	· 		
May 23-June 5	1	1	100	3.00	o .	0.00	35	11.67			
June 6-June 19	*	· 					***				
June 20-July 3	7	5	71	9•75	2	0.21	81	8.31	184	18.87	
July 4-July 17	·			·							
July 18-July 31		·		. .							
Aug. 1-Aug. 1/4	8	. 8	.100	7•75	0	0.00	38	4.90			
Aug. 15-Aug. 28	6 ව	3	75	8.00	ļ	0.13	47	5.88	170	21.25	
Aug. 29-Sept. 7	3	2	67	3.00	1	0.33	2	0.67	61	20.33	
Total or averages	31 0	22	76	39•25	11	0.28	229	5.83	917	23.36	

1942 Trout Season (Record of opening weekend and Saturday fishing only)

	Total	Total number	Per cent		Legal b	rook trout		legal trout		Wt. of legal fish caught
Inclusive Date	number of anglers	taking no fish	taking no fish	Total hours of angling	Number	Catch per hour	Number	Catch per hour	legal fish (grams)	per hour (grams)
April 25-Sept.	_{5 68} 3	33	51	166.25	92	0.55	457	2.75	6,959 ***	19.14

*Out of total of 92 legal fish removed, 39 fish were weighed and 53 fish had been cleaned; weights of 39+5=144 fish weighed.

Table 15
Intensive Creel Census Data For Hunt Creek Rearing Station,

•		Number	Per cent		Legal b	rook trout		legal trout		
Two-week periods	Number of anglers	taking no fish	taking no fish	Total hours of angling	Number	Catch per hour	Number	Catch per hour		
April 25-June 19	No d	ata	•							•
June 20-July 3	14	. 2	14	46.50	<u> 1</u> 42	0.90	79	1.70		
July 4-July 17	5	1	20	15.50	11	0.71	12	0.77		
July 18-July 31	4	0		4.50	12	2.67	10	2.22	•	
Aug. 1-Aug. 14	2	1	50	2.25	4	1.78	15	6.67		
Aug. 15-Aug. 28	3	2	67	5.50	2	0.36	30	5•45		
Aug. 21-Sept. 7										
Total or Average	28	6	21	74-25	71	0.96	146	1.97		

^{**}Total weight includes weights of 5 sub-legal fish that had been removed from stream.

Table 16

Summary of Creel Census Data For Areas in the Hunt Creek Drainage

Not Intensively Censused 19h2 Trout Season Total wt. Wt. of legal Sub-legal brook trout fish caught Number Per cent Legal brook trout of taking Total hours Catch Catch legal fish per hour Number of taking no per hour anglers no fish of angling Number Number (grams) Locality fish per hour (grams) 4 5.50 0.18 0 50 9.09 Sutton's Pond 3 75 1 ₃₂@ 1,259 Above Section I. 19 63 63.00 0.43 154 2.44 19.98 27 310 b 7 12.53 Below Section I 3 43 24.75 13 0.53 113 4.57 624 E 5 26.27 45 16 0.67 73 3.07 Above Section E 11 23.75 Trib. #2 Beaver Pond 476¢ 4.15 4 20.00 0.60 83 23.80 11 36 12 Fuller Cr. Beaver 6 0.51 18 1.53 575 48.94 10 5 50 11.75 Below Brailey's 1 4.00 4 1.00 15 3.75 327 81.75 24€ Above 612 Bridge 1.25 2 1.60 19.20 ₇₇Ø 3,645° Total or 39 51 154.00 81 456 2.92 0.53 23.93 average

Includes weights of 16 fish--11 fish were cleaned.

Includes weights of 6 fish -- 7 fish were cleaned.

SIncludes weights of 8 fish -- 8 fish were cleaned.

Includes weights of 7 fish -- 5 fish were cleaned.

Includes weights of 1 fish -- 1 fish was cleaned.

[€]Includes weights of 38 fish--32 fish were cleaned.

Table 17

Numbers and Percentages of Anglers Taking Various Numbers of Legal Brook Trout >
from Sections, A, B, C, D, and E of Hunt Creek

						Num	bers of	Fish Take	en by Nur	mbers of	Fisherme	n .	,				
Two-week periods	.0	1	2	3	4	5	6	7	8	9	io	11	12	13	12,	15	Total number of anglers
April 25-May 8	88	22	. 14	3	5		1		·				-				133
Hay 9-May 22	35	10	5	1	1		1										53
Eay 23-June 5	50	12	3	5	2	. 2	1	·					·				75
June 6-June 19	35	17	· 7	1	3	2			·				, ,				. 65
June 20-July 3	67	13	16	5	2		4		1		-	1	<u> </u>			 	109
July 4-July 17	80	21,	15	6.	1	2	1					-					129
July 18-July 31	27	6	4	1	2	1											41
Aug. 1-Aug. 14	28	4	2	2			1										37
Aug. 15-Aug. 28	53	9	3	1	2												68 .
Aug. 29-Sept. 7	69	13	6	1	1												90
Totals	532	130	75	26	19	7	9		1			1					800
Percentages	ó6 . 5	16•3	9.4	3•3	2.4	0.8	1.1		0.1			0.1					100•0

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Table 18

Residence of Anglers, 1942 Trout Season

Residen		Non-resi	
County	Number	State	Number
Alcona	- 14	Illinois	3
Arenac	9	Indiana	3 11
Alpena	9 13 31	New Jersey	3
Bay	31	New York	2
Calhou n	رآر	Ohio	3 2 37
Crawford	1		21
Eaton), 1 2 1	Unknown	21
Emmet	ī	OIMIZIOWII.	
Genesee	215		
Gratiot	14		
Ingham	84	•	
Iron	4		
Isabella	53		
Jackson	53 1 2 2 3 13		
Ment	. 2		
Lenawee	2		
Macomb	3		
Midland	13		
Mon roe			
Montmorency	204		
Oakland	35 .		
Otsego	2		
Oscoda	18		
Saginaw	38		
St. Clair	7.9		,
Sanilac	11		
Shiawassee	1 ₄ 8 36		
Tuscola	8		
Washtenaw	36		
Wayne	449		
Total	1,331	Total	77

