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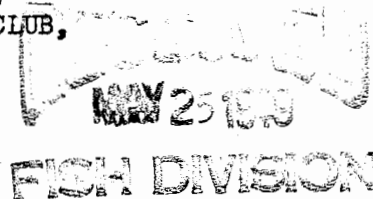
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Report No. 1227

ANGLING RESULTS ON KINNE CREEK, WINGLETON CLUB,
LAKE COUNTY, 1948 TROUT SEASON



By

David S. Shetter

Wingleton Club members tallied the trout caught and the hours spent in fishing from Kinne Creek for the eleventh consecutive season during 1948. The anglers recorded their catches in the icehouse record book, listing date, name, species, numbers, and lengths of the trout caught, and the amount of time spent fishing on Kinne Creek. This report will be a summary of the angling data listed by the club members for the 1948 trout season.

Trout plantings, 1948

The 1948 planting of hatchery-reared stock amounted to 500 adult rainbow trout which ranged mainly between 9 and 12 inches in length with some specimens exceeding this range. These were planted during the second week of May.

Angling results, 1948 (Table 1)

According to the icehouse records, some 167 days of angling were prosecuted on Kinne Creek, during which a total of 376.5 hours of fishing was done. In this time, 388 trout were caught, divided among the three

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Table 1.--Angling results, 1948 trout season, Kinne Creek, Wingleton Club.

(Average lengths are given in parentheses)

Month	Total angling days	Total hours fished	Legal trout caught			Total trout caught	Catch per hour	Catch per angler-day
			Brook	Brown	Rainbow			
April	1	4.0	6 (8.3)	6 (8.3)	1.50	6.00
May	41	90.5 ²	20 (8.5)	33 (9.3)	39 (11.4)	92 (9.9)	1.02	2.24
June	43	90.0 ⁸	11 (8.3)	27 (9.3)	47 (11.1)	85 (10.0)	0.94	1.98
July	48	97.0 ³	11 (7.9)	48 (9.6)	49 (10.5)	108 (9.8)	1.11	2.25
August	22	61.5	9 (8.9)	18 (8.5)	42 (10.8)	69 (9.9)	1.12	3.14
September	13	33.5	4 (7.9)	5 (8.4)	19 (10.1)	28 (9.5)	0.84	2.15
Totals	167	376.5 ¹³	61 (8.3)	131 (9.3)	196 (10.9)	388 (9.9)	1.03	2.32

Note: ², etc.--indicates number of anglers who did not record hours fished. These anglers were assigned the average fishing time as determined from those anglers who did record their fishing hours.

species as follows: brook trout, 61; brown trout, 131; and rainbow trout, 196. The catch per hour for the entire season was 1.03 adult trout. The average length of the fishing day was 2.25 hours, and the average catch per angler-day was 2.32 creel-size fish.

The 1948 season saw a noticeable increase in the number of angling days (from 110 to 167), but because the average angler fished a shorter period of time, the total hours fished increased only slightly (from 363.0 in 1947 to 376.5 in 1948). The total catch of trout in both years was approximately the same (390 in 1947, 388 in 1948); the average size of all trout in 1947 was 9.8 inches; in 1948 the average total length was 9.9 inches.

The 1948 brook trout catch was slightly lower than in previous years (61 fish in 1948, 69 in 1947, 71 in 1946). About the usual number of brook trout were taken above the railroad grade (33). In most years from 29 to 33 fish are removed from this area. The remainder of the 1948 catch (28 fish) came from below the railroad grade. The most brook trout were taken during May (20 fish), the least in September (4 fish). The average size of all brook trout was 8.3 inches, and they ranged from 7 inches to 11 inches.

Brown trout came into the anglers' catch in greatest numbers in 1948 during July, when 48 fish of an average size of 9.6 inches were removed. The next best month was May, when 33 brown trout were captured. The average size of the 131 brown trout taken over the entire season was 9.3 inches, and they ranged in size from 7 1/2 to 18 1/2 inches.

The 1948 rainbow trout catch increased by 66 fish over that recorded in 1947 (from 130 to 196), and it was this increase which was responsible

for keeping the 1948 total catch more or less on a par with the previous year. Except for September, when only 19 rainbow trout were removed, the monthly catch was between 39 and 49 fish. The average total length of the rainbow trout taken in the various months ranged between 10.1 inches (September) and 11.4 inches (May). The total length of all rainbow trout removed varied between 7 and 15 1/2 inches. Numerous fish larger than 10 inches were noted in the records.

In past years when rainbow trout were not stocked, between 2 and 13 rainbow trout were recorded. If we make a convenient assumption that possibly 16 rainbow trout of the 1948 catch were either "carry-overs" from plantings of the previous years, or naturally spawned, then 180 fish of the 1948 rainbow catch came from the 1948 planting. This amounts to a recovery of 36 percent of the planting, and these fish made up 46.3 percent of the total trout catch in 1948 from Kinne Creek.

Of some possible interest to Wingleton Club anglers is the relationship between the rate of stocking, the angling pressure and the angling quality, as measured by the catch per hour during the past five seasons. These data are presented in Figure 1 (filed with Institute copy in Ann Arbor) and are taken from Table 2. Note in the years 1944 and 1945, when no trout were stocked because of wartime conditions, that when angling pressure (as measured by the hours of fishing) dropped, angling quality rose. In 1946, 1947, and 1948 from 400 to 500 adult trout were planted, and the total hours of angling recorded have risen each year from 277.25 hours in 1946 to 376.5 hours in 1948. The catch per hour was highest in 1946 (1.24 fish per hour), but the increasing pressure since that time has spread what appears to be a relatively

Table 2.--Summary of stocking, hours fished and catch per hour,

Kinne Creek, 1944-1948.

Year	Total trout stocked	Total hours of fishing	Total trout catch	Catch per hour
1944	...	303.00	189	0.62
1945	...	122.50	115	0.94
1946	500	277.25	343	1.24
1947	400	363.00	390	1.07
1948	500	376.50	388	1.03

constant number of catchable fish over a greater number of angling hours each year, with a resulting slight decline of the catch per hour to 1.03 fish in 1948.

If it is assumed that the wild trout population is more or less the same each year, the angling quality experienced on Kinne Creek appears to be dependent on two factors--the numbers of trout stocked, and the amount of angling pressure exerted on the stream. Judging by the past three years' results, if angling pressure is between 300 and 400 hours and from 400 to 500 adult trout are stocked, an average seasonal angling quality of between 1.00 and 1.25 fish per hour will be provided.

Can better angling be provided? Yes, more hatchery fish could be planted if the club is willing to stand the cost. However, past experience in Kinne Creek has demonstrated that the number of hours of fishing has not been great enough to remove an economically justifiable percentage of the planted stock when more than 500 fish are planted each year.

There is a possibility that better angling might be made by radically changing the species composition of the stream from the railroad grade downstream. Originally the entire stream was inhabited by brook trout (a species readily caught by the anglers) but earlier management practices, such as the creation of pools behind the various dams, favored the brown trout (a species not easily taken by the average trout fishermen) after they were established in the lower stream. It seems possible that were the brown trout severely reduced in numbers that brook trout might be encouraged to make a come-back

of decent proportions in this habitat between the Pere Marquette River and the railroad grade.

This reduction of brown trout numbers might be carried on in two ways. A predetermined portion, or as many as possible, of the brown trout might be taken out by going over all wadable water with the electric shocker. Another method would be to carefully observe the brown trout spawning beds each fall and to destroy the redds after egg deposition. This would have to be done for at least three successive seasons. It should be borne in mind that the angling quality might drop off for a two- or three-year period while the brook trout were re-establishing themselves, regardless of how the brown trout reduction was conducted. If the club anglers are more interested in brook trout than brown trout angling, this proposal presents an opportunity for an interesting experiment in stream management.

INSTITUTE FOR FISHERIES RESEARCH

David S. Shetter

Approved by A. S. Hazzard

Typed by M. J. Lambert



MICHIGAN DEPARTMENT OF CONSERVATION

To Mr. F. A. Westerman Date 5/25/49
From Institute Hour _____

We did not supply the addresses for Mr. Idema and Mr. Lenz when we submitted report No. 1227 yesterday. They are

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*Attach to our Report now
in files.*

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