

CRANBERRY LAKE BOAT AND GAME CLUB
CRANBERRY LAKE, NEW YORK

May 1, 1949

SPRING 1949 NEWS LETTER TO MEMBERS:

The Club is particularly fortunate to have a report of the activities of the State Conservation Department's Northern Fisheries District. Our appreciation goes to Dr. W. M. Lawrence, Senior Aquatic Biologist, District Head in Saranac Lake, who compiled the report which follows:

CRANBERRY LAKE BROOK TROUT STUDY

Area Covered

The study is concerned primarily with Cranberry Lake and the Oswegatchie River from Cranberry Lake to High Falls. Investigations are being carried out on the tributaries to both the lake and river and on the ponds in that general area as the need is indicated and as time permits.

Purposes of the Study

1. To obtain information that will provide the basis for better management of the brook trout fishery in Cranberry Lake and the Oswegatchie River.
2. To obtain information that can be applied in the management of other brook trout waters.

1947 Operations

Fifteen thousand yearling brook trout were stocked in Cranberry Lake in May 1947. These trout were marked by the removal of a fin so that they could be identified later. Although the trout averaged 4.6 inches in length when planted, a small percentage were of legal size and a number of others should have attained legal length before the end of the fishing season in September. An attempt was made to obtain some data on the number of marked fish that were caught during their first year in Cranberry Lake through a voluntary creel census. No marked trout of legal size were reported caught in 1947. Several trout of this planting of sub-legal size were caught. On the basis of the reports, 114 hours of fishing in Cranberry Lake during July and August produced 37 legal brook trout, with an average length of 10.3 inches. It required an average of 3.1 hours to catch one legal trout.

The Oswegatchie River above Cranberry Lake was stocked with 7,880 marked yearling brook trout, with an average length of 4.6 inches in June 1947. On the basis of the limited information available, very few of these marked trout were caught in 1947.

The data are too fragmentary to permit definite conclusions but it appears that the yearling brook trout stocked in 1947, which averaged 4.6 inches in length, contributed little to legal catch in their first year in Cranberry Lake and the Oswegatchie River.

1948 Operations

A man was stationed at Cranberry Lake during the entire 1948 trout season to carry out a creel census. Additional data were obtained from records kept by fishermen, guides and camp and hotel operators. It is estimated that approximately 40 per cent of the fishermen on Cranberry Lake and 15 per cent of the fishermen on the Oswegatchie were included in the census.

Fourteen thousand marked yearling brook trout stocked in Cranberry Lake in May 1948. These trout averaged 7.25 inches in length. The Oswegatchie River was stocked with 5,730 marked yearling trout averaging 8.0 inches in length in June 1948.

As part of the overall study, data were obtained on the growth, age and spawning activities of the brook trout, movement of stocked trout and the incidence and distribution of yellow perch. Preliminary work was accomplished on an inventory of the beaver population and an evaluation of the relationship of the beaver to the trout fishery.

Results from Marked Trout Stocked in 1947

As far as can be determined very few of marked trout stocked in 1947 were caught in 1947. Thus, the 1948 catch represents almost the entire yield to date from the 1947 stocking.

The 1948 recorded catch contained 60 of the 1947 marked trout stocked in the lake and 48 of the 1947 marked trout stocked in the river. The 1947 marked trout made up 5.8 per cent of the 1948 recorded catch in Cranberry Lake and 3.8 per cent in the Oswegatchie River. The data indicate that the marked trout stocked in 1947 contributed only a small part of the 1948 catch. Apparently, the survival of trout stocked as yearlings to a second season in the lake or river is not large.

Results from Marked Trout Stocked in 1948

The marked yearling trout stocked in 1948 differed from those stocked in 1947 in that they were legal sized.

The marked yearling trout were stocked in Cranberry Lake on May 1. The 1948 marked trout made up 35.1 per cent of the catch in Cranberry Lake from May to the end of the season. Their contribution to the catch was greatest in the two months following stocking, May and June, and declined appreciably thereafter.

The 1948 marked trout made up 55.0 per cent of the 1948 recorded catch in the Oswegatchie River. Their contribution to the catch was rather uniform from June to the end of the season, dropping slightly in September.

Unmarked Trout in 1948 Catch

Unmarked trout made up 66.5 per cent of the total recorded catch in Cranberry Lake and 41.3 per cent in the Oswegatchie River. Since none of the marked trout were more than two years old, all of the older and larger fish were unmarked. Unmarked trout contributed more to the weight of 1948 catch than to the number of trout caught.

Unmarked trout represent fish from two sources: natural reproduction and stocked trout which were not marked. The number of unmarked fish in the catch suggest that fingerling stocking and natural reproduction play a part and possibly an important one in the fishery. Investigations now underway will yield more

1948 Catch in Cranberry Lake

The adverse weather during April and May resulted in a light fishing pressure and made it difficult for those who braved the weather to fish efficiently. Fishing success was best in June when 1.7 hours were required to take a trout and poorest in April when 6.2 hours were required. The average time required to catch a trout for the entire season was 3.5 hours. The fishermen caught an average of 1.7 trout per fishing day.

1948 Catch in Oswegatchie River

Because of the light fishing pressure in April and May, no data were obtained from the Oswegatchie River prior to June 1. Fishing was best in June and became poorer each successive month of the season. One hour was required to catch a trout in June as compared with 5.7 hours in September. The average time required to catch a trout for the period of June through September was 1.6 hours. The fishermen caught an average of 3.1 trout per fishing day.

Size and Age of the Trout

The average length of the legal trout caught in Cranberry Lake was 9.5 inches. In the Oswegatchie River, the average length of the legal trout caught was 8.8 inches. Approximately 83 per cent of the trout caught in Cranberry Lake and 88 per cent in the Oswegatchie River were under 12 inches in length. Trout ranging in length from 8.0 to 8.9 inches in length made up the largest group in the catches in both waters.

The average size of trout of various ages was as follows:

<u>Cranberry Lake</u>		<u>Oswegatchie River</u>	
<u>Age</u> <u>(years)</u>	<u>Length</u> <u>(inches)</u>	<u>Age</u> <u>(years)</u>	<u>Length</u> <u>(inches)</u>
1	7.8	1	7.4
2	9.5	2	9.7
3	12.6	3	12.9
4	16.0	4	17.2

The average length for one-year-old fish pertains only to those trout large enough to enter the legal catch. No data are available on the one-year-old fish less than seven inches in length. Only two five-year-old fish have been observed in the two years of work at Cranberry Lake. They were both females and measured 17.8 and 19.5 inches.

Two-year-old trout made up about 60 per cent of the unmarked trout in the 1948 catch. The three-year-old fish were the next most important age group accounting for about 20 per cent of the catch. The remainder of the catch consisted of one and four-year-old trout.

Movement of Stocked Trout

In general, most of the stocked trout were caught in the area in which they were planted. More of the trout which had been in the lake or river for a year moved a measurable distance than the trout which had been recently stocked. There

was a tendency for the trout stocked in the Oswegatchie River to move upstream. Some of the trout planted in Cranberry Lake moved down into the outlet even though none were planted closer than one mile to the outlet dam. The policy of not stocking the outlet end of the lake appears to be a sound practice in that it may help to lessen the numbers of stocked trout moving out of the lake.

Spawning Studies

A total of approximately 15,000 eggs have been collected from wild trout in the Oswegatchie River during the falls of 1947 and 1948. The purpose of this work is to compare the growth and survival of trout from the Oswegatchie River stock with regular hatchery stock. Thirty-three hundred of the trout reared from eggs taken in 1947 were planted in the Oswegatchie River at Wanakena in October 1948.

Several areas have been checked for spawning fish in the course of this study. The section of the Oswegatchie River at the mouth of Glasby Creek is the only area in which any concentration of spawning trout have been observed. The height of the spawning season has been from October 10 to 15 both years. The water temperature at that time has averaged about 47° F.

Yellow Perch Problem

The first authentic record of a perch in Cranberry Lake was a perch caught in Dead Creek Flow on April 28, 1948. A total of 31 yellow perch are known to have been caught in 1948. Twenty-five of the perch were taken in the vicinity of Dead Creek Flow. The remaining six perch were scattered over the southern end of the lake.

The presence of perch in Cranberry Lake presents a serious problem. If the perch become well established, they may bring about the almost complete elimination of brook trout. The perch problem will be investigated further during 1949. Special emphasis will be placed on determining if there are any effective methods of perch control which can be applied in Cranberry Lake.

Beaver Study

An inventory was made in 1948 of the number of beaver dams and the size of the impoundments in the Oswegatchie River and all of the tributaries of Cranberry Lake. This rather large mass of data is in the process of being analyzed at the present time. The 1948 data should provide the basis for evaluating the relationship of the beaver to the trout fishery and the need for corrective action.

1949 Program

Mr. Martin Pfeiffer of the New York State Conservation Department will be stationed at Cranberry Lake throughout the 1949 trout season for the primary purpose of conducting a creel census of the Oswegatchie River and Cranberry Lake. Approximately 45,000 marked trout have been stocked in the lake and river in 1947 and 1948. Additional marked trout will be stocked in 1949. It is vitally important that we learn what happens to these stocked trout if we are to improve the fishing.

Tentative conclusions indicate that if legal sized trout are to be stocked the management program should be directed toward obtaining the greatest possible first year returns. As part of the 1949 work it is planned to test the effect of stocking yearling brook trout two or three times during the season as compared with stocking all of the trout at one time.

The 1949 work will include further investigation of the importance of natural reproduction and fingerling stocking in maintaining the brook trout fishery. Work will be continued on the perch problem, beaver-trout relationship and the investigation of small ponds.

How the Sportsman Can Help

Cranberry Lake and the Oswegatchie River represent a large water area. Despite the most intense efforts, no one man can completely cover this area. The cooperation of the sportsmen is urgently needed. The better the cooperation the sooner the information necessary to improve the fishing will become available.

The sportsmen can help in the following specific ways:

1. Contact Mr. Martin Pfeiffer before starting fishing if possible. He will make arrangements with you for obtaining a record of your fishing effort. He will be glad to answer any questions you have regarding the investigation and explain the various combinations of missing fins to be found on the trout.

2. Please notify Mr. Pfeiffer of all perch caught or seen. Accurate information on perch is needed if any method of control is to be attempted.

The purpose of this study is to find out how to improve your fishing. Your Cooperation is Needed.

Northern Fisheries District
April 1, 1949

NUMBER OF BROOK TROUT STOCKED IN
PONDS IN CRANBERRY LAKE-OSWEGATCHIE RIVER
AREA, 1947 AND 1948

Pond	1947		1948	
	Number	Average Length (inches)	Number	Average Length (inches)
Bassout	1,500	3.25	1,500	3.75
Buck	200	3.75	200	4.0
Cat Mountain	500	3.25	500	3.75
Clear (Hedgehog)	300	3.25	300	3.75
Cowhorn	1,000	3.25	1,000	3.75
Nick's Pond	300	3.25	300	4.0
Olmstead	1,000	3.25	1,000	3.75
Simmons	500	3.25	500	3.75

Table 2.

UNMARKED BROOK TROUT STOCKED IN CRANBERRY LAKE
AND OSWEGATCHIE RIVER, 1944 TO 1948

Location	Age	1947		1948	
		Number	Average Length (inches)	Number	Average Length (inches)
Tributaries to Cranberry Lake	fingerlings	8,900	3.7	10,900	2.3
Tributaries to Oswegatchie River	fingerlings	2,600	3.5	2,200	4.0

Table I.

MARKED BROOK TROUT STOCKED IN CRANBERRY LAKE
AND OSWEGATCHIE RIVER, 1947 AND 1948

Location	Date	Number Trout	Average Length (inches)	Mark (fins clipped)
Cranberry Lake	May 1947	15,000	4.6	right ventral
	May 1948	14,000	7.25	anal
Oswegatchie River				
Wanakena and Inlet	June 1947	7,880	4.6	left ventral
Wanakena	June 1948	2,030	8.0	right ventral, adipose
Inlet	June 1948	1,870	8.0	left ventral, adipose
High Falls	June 1948	1,830	8.0	left ventral, right ventral
Wanakena	October 1948	3,300	3.5	right pectoral

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ACTIVITIES OF 1948 - 1949 YEAR

Buoys - Buoys and anchors have been prepared and put in position at critical points of the lake. A study is being made of a proposal to mark parts of the shore line and islands with luminous markers such as are used to mark obstacles on our highways.

Dock - A floating dock was built in the fall, using dock logs provided by the Bragdens of Bock Island. Mr. Delavan of the Forestry School furnished the labor of felling the trees and towing it to town. Cross logs were salvaged from old lumber company material. The docking was bought by the 1947-48 Dock Committee from Club funds.

An effort was made to get town board support for the rebuilding of the Emporium Railroad trestle into a pier. The board members individually were sympathetic, but because of conditions beyond the control of the Dock Committee no actual construction was begun. This project will be turned over to the 1949-1950 Dock Committee for completion during the low water period of the fall.

Sailing - The leavels of Chair Rock Camp have put a great deal of effort and enthusiasm into sailing at the head of the lake. It is hoped that interest will increase by the purchase of additional sailboats. It is desirable to have boats of the same class so that all will be evenly handicapped. Since several members own snipes, this sailboat is recommended as the boat to buy. THE SAILING COMMITTEE HOPES FOR SOME INTERESTING RACES THIS SUMMER.

Ice went out of the lake about April fifteenth.

Art Owen, Treasurer, will always accept dues and contributions.

FOR THE CRANBERRY LAKE BOAT AND GAME CLUB:

A. V. ARNOLD
PRESIDENT, 1948 - 1949

Suggestions for improving the Club are being sought by our Secretary.