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MICHIGAN DEPARTMENT OF CONSERVATION
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FIRST REPORT OF THE RESULTS OF PLANTING
LEGAL-SIZED BROOK TROUT IN THE PINE RIVER, LAKE COUNTY

Within the past decade conservation departments in a number of states have been planting an increasingly large number of legal-sized trout in an effort to keep up with the demands of the angler. Such programs in New Jersey, Connecticut, Colorado, Utah and other states have been highly publicized but apparently little effort has been made to determine with any degree of exactness how successful these plantings have been and how much they have contributed to the total catch in the various streams. Except in the case of a single planting in Connecticut, no tagging was done to determine how soon a planting is caught out and how much the newly liberated fish migrate.

During this same period Michigan has increased the average size of the fingerling trout planted and in some instances has planted fish of "keeper" size. Reports of anglers fishing streams planted with these large trout have generally been favorable, but in line with the Department's policy for proceeding upon the basis of facts instead of random reports, it was suggested that the results of the first large scale releases of legal-sized trout be checked by the scientific staff of the Fish Division.

Fortunately the fisheries biologists of the Division had been experimenting with various means of marking fish so that they could be identified later and had perfected several methods for this technique as well as for

securing adequate catch records from anglers. The Institute for Fisheries Research was therefore equipped with tools to do the job and to secure checkable results of this new venture.

The Pine River, in the section between the Walker and Hoxeyville bridges was chosen for this experiment for the following reasons:

1. The Conservation Department owns or controls the frontage on the majority of the 12 miles of river involved and has established anglers' camps at five points where the stream is readily accessible to the public.
2. A creel census could be secured through the M.E.C.W. which would insure practically 100% reports on all the fishing.
3. The Pine River is considered reasonably productive and in many respects quite typical of the trout streams of Michigan. ~~Whatever~~ from checking plantings of legal-sized is learned in this stream may be considered indicative of results to be expected elsewhere.

The responsibility for proper distribution of the fish was assigned to Mr. Robert Fortney, District Supervisor of Fishery Operations. Mr. David Shetter of the Institute staff was detailed to carry on the tagging work and to assist in planning the experimental distribution of the trout.

The M.E.C.W. approved a creel census project submitted by the Department for this section of the Pine River to cover the entire trout season and assigned a crew of 20 selected C.C.C. enrollees from Camp Sauble River. A man was stationed at each of the following points: Walker Bridge, Canfield Rollway, Lincoln Bridge (Beaver Creek), Elm Creek, Poplar Grove and Hoxeyville Bridge. Two shifts were used daily including Sundays and holidays so that records were secured from 8 a.m. to 9 p.m. Selection of the men and general supervision of the project was efficiently carried out by Mr. James Gibson, Chief Foreman of Camp Sauble River.

Attractive posters illustrating tagged trout, explaining the purpose of the experiment and requesting cooperation of the fishermen in reporting catches were placed at the various camps and at other conspicuous places along the stream.

The following report summarizes the early results of the first distribution of legal-sized brook trout as revealed by creel census reports secured from May 18 to May 27.

On May 18 and 19 a total of 3,000 brook trout of an average length of 9 inches were planted in the Pine River, Lake County by Mr. Fortney. Plantings were liberated in the immediate vicinity of each of the following points on the river: Walker Bridge, mouth of Silver Creek and Canfield Rollway. One third of this planting was marked by encircling the lower jaw with a numbered, duraluminum tag. The tagging was done at the Grayling hatchery from May 14-17 by Dr. David Shetter and Mr. Walter Crowe. The fish were transported to the stream by tank truck.

In the 10 days following the planting, 1242 legal brook trout were reported taken by fishermen of which 338 bore tags. Since one out of every three trout liberated May 18-19 was tagged, the total catch from this planting may be estimated to be three times as great as the number of tagged fish caught or 1014. This assumes that tagged and untagged trout were taken in proportionate numbers.*

This first release of large brook trout therefore contributed approximately 82% of the total catch of brook trout during the ten days following planting. The balance of the catch (²²⁸~~1370~~) may be considered as the

* To determine if these newly planted fish could be taken immediately, Dr. Shetter and Mr. Crowe fly fished for a short time immediately after one of the plantings. Four tagged trout were taken and returned to the water.

result of previous fingerling plants and natural reproduction.

Since approximately 1/3 of this first planting was taken by anglers during the ten days immediately following, it may be assumed that 3,000 legal-sized brook trout will "last" approximately one month or the period originally scheduled to elapse between plantings. This of course presupposes that the rate of catch and the fishing intensity on the Pine River remains constant throughout the thirty days following a planting. When the catch records for each month are complete this estimate can be verified.

The majority of the re-captures were made within 1/4 mile of the points of release. However, a fairly large number were reported taken as far as 1 1/2 miles downstream from the places where they were liberated. The two longest migrations thus far on record for the planting of May 18-19 were made by a trout released at the Walker Bridge which was recovered on May 23 about 1 mile above Poplar Grove Creek (a distance of approximately 12 miles) and by a trout planted at Canfield Rollway which was caught about a mile above the Peterson Bridge (approximately 15 miles by stream). No upstream movement has been reported as yet.

No growth was indicated by the returns during this 10 day period which was to be expected considering the short time since tagging and liberation.

The numerous recoveries of tagged trout within such a short time after planting give support to the popular belief that hatchery-reared trout are readily caught even by inexperienced anglers as a number of limit catches were made by all methods of fishing starting the day the fish were stocked.

Previous trout migration studies by the Institute have indicated that brook trout are the least migratory of the three species of trout in Michigan. This may partly account for the large number taken soon after planting in the vicinity of popular camp grounds and suggests that the next planting to be made by boat may result in a better dispersion of the fish and a slower and therefore more satisfactory removal by the anglers.

No sportsman cares to take his entire limit from a single pool as was reported to have occurred in several instances. Trout fishing can be made too easy to be good sport.

At the close of the trout season a more detailed and complete report of the results of these planting experiments will be prepared. When the complete data are available, it will be possible to draw some rather definite conclusions as to the value of such plantings and as to the most effective methods of distributing the fish.

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