

Original: Fish Division
cc: Institute for Fisheries Research
Education-Game
Dr. D. S. Shetter
Field Administration Division



ALBERT S. HAZZARD, PH.D.
DIRECTOR

INSTITUTE FOR FISHERIES RESEARCH
DIVISION OF FISHERIES
MICHIGAN DEPARTMENT OF CONSERVATION
COOPERATING WITH THE
UNIVERSITY OF MICHIGAN

Mr. S. Shust
Mr. J. Wilkinson
Mr. R. S. Marks
Mr. D. J. Curry
Mr. H. L. Aldrich

ADDRESS
UNIVERSITY MUSEUMS ANNEX
ANN ARBOR, MICHIGAN

March 20, 1947

Report No. 1104

Mr. F. Warren
Mr. J. Scully
Mr. H. Thompson
Mr. E. Basford

SUGGESTED EXPERIMENTS TO DETERMINE THE RELATIVE VALUE
OF "SPOT" AND "BOAT" PLANTING

Mr. L. Anderson
Mr. D. Reynolds
Mr. W. Crowe
Dr. L. Allison
Mr. S. Lievens

by

David S. Shetter

Earlier tagging experiments during the open trout season were not designed so as to yield information on the relative values of "spot" and "boat" plantings to the anglers; in other words they failed to indicate which method of planting during the open season would benefit the most fishermen. In order that we might obtain some data on this angle of planting legal-size trout, the series of tagging experiments below are outlined.

It is suggested the four experimental plantings be made; one May, June, July, and August of 1947 on the following streams: Middle Branch of the Ontonagon River (Gogebic County) in vicinity of the Watersmeet Hatchery; AuSable River (Crawford County) near Grayling in vicinity of the Grayling Hatchery; Sturgeon River (Cheboygan County) near Indian River; Slagle Creek (Wexford County) in vicinity of Harrietta Hatchery; and Gamble Creek and Rifle River (Ogemaw County) on the Rifle River Area, and Thompson Creek (Schoolcraft County) near

the Thompson Hatchery. Creel census records and returns on marked fish may be obtained more or less readily through random checking by Institute personnel at these sites.

The procedure should be as follows:

1. Using ether or urethane as an anesthetic tag two groups of legal trout with the same numbers of trout in each, and hold the two groups in separate tanks. Record total length in inches and tenths and weight in grams for each fish tagged.

2. Arrange to plant one group at a single locality; i.e., at a bridge-head, public fishing site, or other access points in the manner now used for what is considered a "spot" planting.

3. Scatter the other lot of fish over approximately $3/4$ mile of stream above and below the "spot" planting site. When possible, a boat should be used. In smaller streams not navigable by boat, planting will have to be done from a floating live crate or carried along the banks in pails.

Make sure that the tag numbers of trout which are "spot planted" are listed separately from those which are scattered.

The following numbers and species are suggested for each planting, half to be "spot" planted and half to be scattered:

Middle Branch Ontonagon	-	Brook trout	-	200
Sturgeon River	-	Rainbow trout	-	200
Slagle Creek	-	Brook trout	-	100
Au Sable River	-	Brown Rainbow trout	-	100 100
Gamble Creek	-	Brown trout	-	100
Rifle River	-	Brown trout	-	200
Thompson Creek	-	Brown trout	-	100

Since a complete, intensive creel census will not be possible except on Gamble Creek and Rifle River, the other streams should be posted with an appropriate placard for the 1-1/2-2 miles upstream in which the marked fish are distributed. About 20 placards per stream will be needed.

The angling should be closely checked for the first three days after planting, and as often thereafter as possible, particularly on weekends. Creel census records of the catches of anglers fishing through all or a part of the planted water can be written up on the type of blank used in the 1945 spot census.

Tag numbers and lengths and weights (wherever possible) of tagged fish should be recorded on the back of these blanks giving the location of each tagged fish caught as accurately as possible. It might be well to place numbered or lettered signs at 1/4 mile intervals on each stream section stocked to help the angler in reporting where he caught tagged trout.

In taking this census the number of fin-clipped and of unmarked legal trout taken should also be recorded.

<u>Total legal trout needed</u> - Watersmeet Hatchery	800 brook trout
Sturgeon River Rear- ing station	800 rainbow trout
Harrietta Hatchery	400 brook trout
Grayling Hatchery	400 rainbow trout 1,600 brown trout
Thompson Hatchery	400 brown trout
<hr/>	
Total	4,400 legal trout

In the conduct of this work, the District Biologist will be responsible for the tagging, measuring and record-keeping involved, with assistance from hatchery personnel as needed. The District Fisheries Supervisor will be responsible for providing the necessary fish and for seeing that the plantings are carried on in the stream areas jointly decided upon by the District Biologist and the Fisheries Supervisor. The District Biologist should accompany the plantings and assist in their release.

Note - Trout already marked by removal of the dorsal fin can be used for these experiments if unmarked trout of the usual size planted in these streams are not available.

INSTITUTE FOR FISHERIES RESEARCH

David S. Shetter

Approved by A. S. Hazzard
Typed by: S. E. Bommer