

*copy to: R. G. Farney
11-19-35*

INSTITUTE FOR FISHERIES RESEARCH
UNIVERSITY MUSEUMS
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN

Report 322

November 12, 1935

ON THE GENERAL BEHAVIOR AND CONDITION OF BROWN TROUT PLANTED IN CRYSTAL
LAKE, NEAR HART, OCEANA COUNTY

On October 21, 1935, Mr. E. L. Cooper and the writer examined Crystal Lake, Oceana County, in an attempt to recover Great Lake Shiners. Crystal is one of the eleven lakes in which this minnow was planted by the State Conservation Department in January, 1934. During our seining in this lake, we made observations on a large number of stocked brown trout which appear worthy of record. The planting record, as obtained from Mr. Westerman, is "2,000 brown trout 7 months old planted in the above lake Sept. 21 by Paris Hatchery".

Crystal Lake is a clear-water lake having a sand-bottom shoal region practically devoid of vegetation. Over most of the shore shallows, this shoal area is scarcely over 30 ft. wide, but at the east end of the lake its area is much larger extending several hundred feet into the lake (water depth of 2 to 4 feet over this area).

On October 21, we found a considerable concentration of brown trout over this extensive shoal area at the east end of the lake. It is quite possible that the planting was made at this point, as a public road here approaches the lake. We also seined a few (four) brown trout from just off the shoal shelf along the west shore of the lake, indicating that there had been some movement of these trout over much of the lake, providing the planting was made at the point suggested.

Four hauls with a 60-foot seine over the extensive shoals on the east shore of the lake yielded 156 brown trout. The fact that nearly 10% of the original plant of 2000 were congregated over this shallow water (one month after the planting was made), might have some significance as indicative of the behavior of brown trout planted in lakes.

Of these 156 brown trout, at least 19 were monstrosities, or deformed; 9 deformed fish were preserved for study, the others were released alive. The nature of the deformity involved a shortening of the vertebral column: in 6 of the 9 fish this shortening had occurred in the anterior part of the trunk of the fish causing a "hump-backed" condition; in 3 of the 9 fish, this shortening had occurred in the region of the caudal peduncle producing fish with normal trunks but with the region behind the dorsal fin greatly reduced.

Whether this 12% deformity (19 out of 156) was typical of the entire plant of 2000 fish, or whether such abnormal fish may have been more reluctant in leaving the shoal area than the normal fish, is not apparent.

INSTITUTE FOR FISHERIES RESEARCH

Gerald P. Cooper

Gerald P. Cooper
In Charge, Forage Fish Experiments

GPC:B