

copy to: Mr. Foster
Mr. Walters

August 23, 1935

Report No. 307

IDENTIFICATION OF RAINBOW TROUT FROM LITTLE MANISTEE RIVER

On August 22, 1935, the Institute received the head of a salmonoid fish from the Fish Division with a request for a definite identification, and with a copy of Conservation Officer's letter of transmissal, which was as follows:

"I am sending the head of a trout taken from the Little Manistee, 21-16, the trout was taken on a minnow after dark, weighed 4 1/2 pounds and 22 1/2 inches long. I didn't see the whole fish, but Mr. Foster said it was styled like the Chinook salmon, the pink strip run the full length and as wide as on the gills. He would like to know the species as Mr. Foster is an ardent fisherman.

"Thanking you for any information, I remain,

Ray Walters, Conservation Officer."

The description, "the pink strip run the full length and as wide as the gills," suggested that the fish was not a Chinook Salmon, but rather a Rainbow Trout (Salmo gairdnerii). Examination of the head confirmed this identification.

To make certain, however, the head was compared with several Chinook Salmon specimens from the West Coast, especially with the head of an adult male. Differences were at once apparent in general form and appearance. One technical character proved particularly different. The vomerine teeth (on the middle of the roof of the mouth) form a very long strip in the Little Manistee specimen, as usual in Rainbow Trout, extending far back in the mouth, beneath the eyes. In the Chinook Salmon, these teeth form only a short patch, scarcely extending backward farther than a line drawn vertically down from the nostril.

The lower jaw is hooked somewhat as in the salmon, but not on exactly the same pattern. The extreme toothless tip is hooked upward, forming the grasping point for fighting and breeding males; the teeth are not very greatly enlarged. In the Chinook Salmon male, the extreme tip of the lower jaw is flat, not hook-

ed upward, But a pair of teeth at the front of the tooth row is greatly enlarged and the jaw bones swollen at their bases. In this way these teeth, rather than the hard but toothless tip of the jaw forms the grasping organ.

The specimen from the Little Manistee River therefore represents a Rain-bos Trout, not a Chinook Salmon

INSTITUTE FOR FISHERIES RESEARCH

UNIVERSITY OF MICHIGAN

Copies to Messrs. Forster and Wolters.

By Carl L. Hubbs,

Director.