

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

Report 298

July 23, 1935

THE ATTEMPTED INTRODUCTION OF PACIFIC SALMON IN LAKE ERIE WATERS.

At least two species of Pacific salmon, the King Salmon, Oncorhynchus tshawytscha (Walbaum), and the Silver Salmon, O. kisutch (Walbaum), have been introduced into Lake Erie and its tributary streams. As early as 1873 the Ohio Fish Commission introduced King Salmon fry into Lake Erie. Between 1873 and 1878 this state planted at least 172,000 fry in Lake Erie and the streams flowing into it.

At about the same time Michigan also planted King Salmon fry in several Michigan waters tributary to Lake Erie.

On the whole these early introductions were unsuccessful (possibly because the fish planted were fry instead of fingerlings or larger fish). There is however, one published record of the capture of a "California Salmon" from these early plantings. A specimen 13 1/2 inches long was taken the first of October 1876, in Lake Erie at Cedar Point, near Toledo. This fish was said to have been one of those planted in the River Raisin in the spring of 1874.

In 1926, Dr. Hubbs published (A Check-list of the Fishes of the Great Lakes and Tributary Waters, with Nomenclatorial Notes and Analytical Keys, University of Michigan Museum of Zoology, Miscellaneous Publications, No. 15: pp. 15) the information that "Efforts to introduce this Pacific salmon into the waters of the Great Lakes seem to have been almost wholly lacking in successful outcome. I have, however, seen an adult specimen taken at Killarney on Georgian Bay."

Apparently few introductions of salmon were made between 1890 and 1925. On March 25, 1933 the following plants were made by the Ohio Division of Conservation:

25,000 Silvery Salmon Little Pickerel and Cold Creeks, Sandusky Bay, Erie
County, Ohio.

16,000 Silver Salmon Mouth of Cold Creek at Venice, Erie County, Ohio.

70,000 King Salmon Little Pickerel and Cold Creeks, Sandusky Bay, Erie County, Ohio.

9,000 King Salmon Mouth of Cold Creek at Venice, Erie County, Ohio.

These fish were from 3 to 8 inches in total length at the time planted. They were planted under the direction of Dr. T. H. Langlois and myself, for the Ohio Division of Conservation.

There have been several published comments on and since the planting of these fish by the Ohio Division. In the "Mail Bag" of the July, 1933 Fisherman, page 5, is a note on the introduction of these salmon in Lake Erie waters; also a statement that "A few years ago some of these salmon were released in Sandusky Bay and so far several of the silversides (O. kisutch?) weighing from 6 to 8 pounds have been caught".

In "Pauls Netting Gazette" of December, 1934 (Vol. V, No. 3, p. 8) is a note under the title "Experiment with Pacific salmon in Lake Erie proves successful" which states that "Several weeks ago commercial fishermen began reporting catches of silversides or Pacific salmon from three to five pounds" and that "It is interesting to note the remarkable growth of these salmon from fingerling size in the Spring of 1933 to a size of five pounds by October, 1934".

In the "Fisherman" of January, 1935 (Vol. 4: No. 1; p. 4) is another article, stating that commercial fishermen were catching salmon weighing from "three to five pounds each" and that now "salmon are taken almost daily".

A recent inquiry concerning records of the capture of salmon in Lake Erie was sent to Mr. E. L. Wickliff, Chief of the Bureau of Scientific Research of the Ohio Division of Conservation. In reply he sent a copy of the following letter:

Mr. Frank T. Bell
Commissioner
U. S. Bureau of Fisheries
Washington, D. C.

Dear Mr. Bell:

On October 16, 1934, Mr. Webb Sadler of the Castalia Trout Club brought five salmon to this office. They apparently were the Silver Salmon of the Pacific Coast. They varied in length from 18 to 23 inches. Mr. Sadler thinks they are the result of a plant of 50,000 in Sandusky Bay, March 25, 1933.

We are today sending you one of these salmon for positive identification, also for the age of the fish in case this can be determined from the specimen.

Quite a number of years ago the Ohio Fish Commission introduced the Atlantic Salmon and the Pacific Salmon into several of the streams of the state but I do not know of any authentic record of their capture.

If these adult salmon brought in by Mr. Sadler are the result of the plant of 1933 it would seem to be an unusual growth for Pacific Salmon in Lake Erie, and it is the first record that I know of where this species of salmon has been caught in the western end of the lake. They were taken just off Cedar Point.

I should also appreciate receiving what records you have of Pacific Salmon being planted in the waters of Ohio.

Mr. Wickliff also wrote that the fish sent to the U. S. Bureau of Fisheries was not received ^{by} ~~them~~ them or else had arrived in such a condition that examination and identification of the fish was impossible.

On July 6, 1935 the Institute received from Mr. F. Clatworthy of the Great Atlantic and Pacific Tea Company, a King Salmon which was 19.25 inches in total length, weighed 2 pounds 7 1/4 ounces, and was 3 years old. It was taken in a pound net in Lake Erie off Kingsville, Ontario, in the early summer of 1935 (see Institute Report No. 297).

No definite records indicating the establishment of the Silver Salmon in Great Lakes waters have come to our notice.

Unfortunately few of the salmon reported taken recently in Lake Erie have been examined by men competent to identify them. Whether the King Salmon or the Silver Salmon is the species most often taken is not known. We consider it probable that most of these so-called "salmon" are Rainbow Trout (Salmo gairdnerii irideus), for this trout has also been introduced into Lake Erie waters in numbers and a considerable number have been captured over the past eight or ten years. There is a considerable superficial resemblance between rainbow trout and salmon, enough to cause one not especially familiar with these fish to make an erroneous identification.

It is unfortunate that so few of the salmon recently taken have been identified. It is therefore suggested that the commercial fishermen or others who take salmon in Great Lake waters should send samples on ice to the Institute for Fisheries Research, or to the Great Lakes office of the U. S. Bureau of Fisheries, both at Ann Arbor, Michigan, along with a report of the numbers they have taken, in order that it may be definitely determined

which species are taken, and in what relative numbers.

In the preparation of this report, assistance was kindly given by Dr. John Van Costen, In Charge, Great Lakes Investigations, U. S. Bureau of Fisheries.

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