

I have here some photographs which will probably paint a little clearer picture. (Produces photograph).

The CHARMAN: Mr. Poole, the Committee very much appreciate the information you have given.

Statement by J. A. Rodd, Director of Fish Culture re Hybridization and Selective Breeding of Speckled Trout.

The European brown trout has been crossed with Atlantic salmon with a view to developing a game fish of larger size than the brown trout and one that will not return to sea as the Atlantic salmon does.

Brown trout have been crossed with Atlantic salmon at St. John Hatchery and some hybrids are now at that establishment which are seven-eighths brown trout and one-eighth Atlantic salmon. These hybrids are a larger and prettier fish than the brown trout of the same age. The experiment has not yet been carried sufficiently far to determine its success.

Atlantic salmon and landlocked salmon have been crossed at the same establishment. The landlocked salmon are non-migratory but are not as highly regarded for their game qualities as the Atlantic salmon. Several hundred of these hybrids two and one-half years old were marked and liberated in the Chamcook lakes, N.B., in the autumn of 1933.

The selective breeding of speckled trout is carried on at all the hatcheries in the Maritime Provinces where there are facilities for rearing brood trout. Selection and mating is made to develop rapid early growth, early maturity and large egg production and also where desirable to develop spawning early in the season before severe weather sets in. Considerable success has been attained and generally the average yield of eggs per female has been largely increased. At the Antigonish Hatchery the following results were obtained in 1933: Fry hatched from eggs obtained from different groups of parents were held under precisely the same conditions and given the same food. An equal number of fingerlings raised from fry hatched in 1933 all of the same age were weighed. The fingerlings from the hatchery's selected parents weighed $50\frac{1}{2}$ oz; those from the non-selected hatchery parents (general stock) $33\frac{1}{2}$ oz; the progeny of the first generation of Lochaber lake trout from the hatchery pond $19\frac{1}{2}$ oz.; those from the sea trout $13\frac{1}{2}$ oz. and those hatched from eggs from wild trout taken direct from Lochaber lake $7\frac{3}{4}$ oz.

The parent or brood trout held in the hatchery ponds at Antigonish and Yarmouth, N.S., Florenceville and St. John, N.B., in 1933 yielded over 9,000,000 eggs.

Speckled trout fingerlings hatched at the Antigonish Hatchery on March 6th, 1933 were 7 in. long in December of the same year. According to investigations made by the Ontario Fisheries Research Laboratory the average size of speckled trout produced in three different types of habitat is 7.5 in. on August 1st of their third year, that is when they are approximately 27 months old.