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Report of the Atlantic salmon eggs from
Miramichi River, New Brunswick
November 1944

This report is intended to show the uses to which the Atlantic salmon eggs, so kindly sent to us by the Canadian Government from the Miramichi River, New Brunswick, have been put in the New England Salmon Restoration Program.

Three lots of eyed eggs have been received and have been used exclusively to provide hatchery reared fish for marking experiments. These marking experiments have been designed to study several points in the stocking of sea-run salmon in New England. First, because of the inability of previous fry plants to maintain the salmon runs, the fish were held in the hatchery to various size fingerlings. By planting, fish at different sizes, information can be obtained on the best size and age to plant hatchery raised fish to have the best survival in the stream. Second, as little is now known about the suitability of Maine rivers for salmon, the fish have been planted in different places in the river system. It was thought that as salmon, in any quantity, have been missing from most of the rivers for some time that other fish may now inhabit the stream and which would be predacious on or compeditive with the salmon. ~~also~~ The stream may have changed in physical aspect so that it is no longer suitable to salmon. Third, marked plantings will also show the stream and sea mortality. It was planned to install downstream weirs to catch the fish moving out to sea and traps to retake the spawning adults. The installation of downstream weirs has been discontinued because of the shortage of manpower and materials cause by the war. This project will be resumed as soon as possible. Plans are ready for installing traps to catch the return-

ing adults, when they appear.

The first lot of 51,150 Miramichi eggs was received at the Craig Brook Fisheries Station in March 1941. These eggs were hatched and reared at this hatchery. In May 1942, when the fish were 1½ years old, 17,645 were marked by removing the adipose and left ventral fins and planted in the St. George River. The following October 3,703 of the fish still at the hatchery (now 2 years old) were marked adipose and anal and again planted in the same locality of the St. George. By May 1943 the fish were 2½ years old and the 6,728 remaining in the hatchery were marked dorsal and anal and planted in a different locality of the same river. Of the original egg supply, 28,076 fish survived to be marked and planted. This represents 54.9 percent of the eggs received. These fish are expected to return for spawning next year (1945) and will be taken in a trap and examined for marks.

The second lot of 50,750 eggs was received in March 1942. These fish were hatched and held for planting the following fall, but an unfortunate outbreak of disease occurred during the summer of 1942 and a large portion of the fish were lost. Those that survived were in such an emaciated condition in the fall of 1942 that it was decided to hold them over-winter and plant the following spring. The 3,448 fish remaining were marked and planted in May 1943. These fish were in good condition and had made good growth during the winter.

The third lot of 50,000 eggs was received in March 1944 and are still being held at the hatchery. As of August 31, 1944 there was an estimated 37,269 of these fish on hand at the hatchery. Plans for these fish call for two plantings in May and September 1945.

The following table summarizes the plantings to date and those

planned for next year.

The eggs received from the Miramichi River and the fish resulting from these eggs have been a fortunate addition to the supply of Atlantic salmon taken in New England rivers. It has allowed the stocking of one river (St. George) on a purely experimental basis. This river has no natural salmon run, it is relatively free from sanitary and industrial pollution, it is small, but has sufficient water flow and spawning and nursery areas, and although it has several dams, most are provided with fishways. It is hoped that this river will give information on the practicability of the stocking program.

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Salmon Restoration Program

Species	Year spawned	Source	Stocking Date	River	Locality	Number	Mark	Number per lb
Atlantic	1940	Miramichi	May '42	St. George	Heart Falls	17,645	A+L	
"	"	"	Oct '42	" "	" "	3,703	A+N	25.2
"	"	"	May '43	" "	Sennebec Pond	6,728	D+N	14.7
						28,076		
Atlantic	1941	Miramichi	May '43	St. George	Sennebec Pond	3,448	D+A	121.0
Atlantic	1943	Miramichi	May '45	St. George	Sennebec Pond		D+L	
"	"	"	Sep '45	" "	" "		L+R	

Key to marks
A = adipose
D = dorsal
N = anal
L = left ventral
R = right ventral