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DEPARTMENT OF FISHERIES

ANNUAL REPORT

ON

FISH CULTURE

1938

OTTAWA
J. O. PATENAUDE, I.S.O.
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1940

FISH CULTURE

ANNUAL REPORT J. A. RODD, DIRECTOR

Fish cultural operations of the Department of Fisheries were confined to those provinces in which it administered the fisheries, namely, Nova Scotia, New Brunswick and Prince Edward Island. In addition over 1,000,000 sockeye salmon eyed eggs were planted in Hillier creek, tributary to Maggie lake, Vancouver Island, in continuation of the stocking effort, resumed in 1937, to add these waters to the sockeye reproducing areas of the Barkley Sound district.

The transfer of the game fish hatcheries, previously operated by this department, to the Province of British Columbia, under the authority of the Order in Council (P.C. 2532) of October 12, 1937, is reflected in the distribution statements embodied in this report, which show a considerable decrease as compared with distributions for 1937. In 1938, however, 95 per cent of the output was reared to various stages of development beyond the fry stage in comparison with 53 per cent in 1937.

The total output from the hatcheries operated by this department in 1938 was 33,685,297. The numbers of each species distributed were:—

STATEMENT BY SPECIES OF THE FISH AND FISH EGGS DISTRIBUTED FROM THE HATCHERIES DURING THE YEAR ENDED DECEMBER 31, 1938

Species	Eyed Eggs	Fry	Advanced Fry	Fingerlings	Yearlings and Older	Total Distribution
Salmo salar-Atlantic salmon	.....	280,000	5,453,400	15,853,103	53,807	21,640,310
Salmo salar ouananiche-Ouananiche salmon	.....	.....	.....	.....	1,612	1,612
Salmo salar sebago-Sebago salmon	.....	.....	.....	42,239	26,320	68,559
Salmo irideus-Rainbow trout	.....	.....	.....	158,133	7,235	165,368
Salmo fario-Hybrid brown trout (Brown trout-Atlantic salmon)	.....	.....	.....	.....	1,885	1,885
Oncorhynchus nerka-Sockeye salmon	1,033,359	.....	.....	.....	.....	1,033,359
Salvelinus fontinalis-Speckled trout	.....	309,000	684,000	9,449,134	37,495	10,479,629
Cristivomer namaycush-Salmon trout	.....	.....	120,000	174,575	.....	294,575
Totals	1,033,359	589,000	6,257,400	25,677,184	128,354	33,685,279

The following classification of green eggs, eyed eggs, fry, advanced fry, No. 1 fingerlings, etc., applies to all statements and references in this report:—

Green Eggs.—Eggs until they are "eyed."
Eyed Eggs.—Eggs showing the eyes of the developing fish.
Fry.—Fish from date of hatch until free-swimming with the food sac fully absorbed. (No fry are distributed until the sac is fully absorbed.)
Advanced Fry.—Fry that are feeding systematically.
No. 1 Fingerlings.—Fish that are feeding from two to eight weeks.
No. 2 Fingerlings.—Fish that are feeding from eight to fourteen weeks.
No. 3 Fingerlings.—Fish that are feeding from fourteen to twenty weeks.
No. 4 Fingerlings.—Fish that are feeding from twenty to twenty-six weeks.
No. 5 Fingerlings.—Fish that are feeding from twenty-six weeks to one year from date of hatch.

Inspections were continued with a view to locating waters where fish eggs might be obtained in sufficient quantities to warrant the establishing of collecting camps and also with a view to locating sites where the fish cultural service might be extended advantageously to districts that are not readily accessible from existing hatcheries.

Experiments with equipment, methods and foods of various kinds were continued at several hatcheries. The experiments and the investigations in relation to fish cultural problems that were made by the Fisheries Research Board of Canada are referred to in the board's report for 1938.

Thirteen main hatcheries, one subsidiary hatchery, six rearing stations, eight salmon-retaining ponds and several egg-collecting stations were operated in 1938. The output from these establishments was as follows:—

THE FOLLOWING TABLE SHOWS THE HATCHERIES OPERATED, THEIR LOCATION, DATE OF ESTABLISHMENT, THE SPECIES AND THE NUMBER OF EACH SPECIES DISTRIBUTED FROM EACH HATCHERY DURING 1938

Established	Hatchery	Location	Species	Eyed eggs	Fry	Advanced fry	Fingerlings					Yearlings and Older	Total distribution by species	Total distribution by hatcheries
							No. 1	No. 2	No. 3	No. 4	No. 5			
1929	Antigonish	St. Andrews, N.S.	Atlantic salmon			450,000	980,000	69,304					1,499,304	
			Rainbow trout					24,694				971	25,665	
			Speckled trout				1,576,000	167,106	9,000	2,000		3,518	1,757,624	3,282,593
1876	Bedford	Bedford, N.S.	Atlantic salmon			45,000	735,125						780,125	
			Speckled trout			198,000	353,600						551,600	1,331,725
1937	Cobequid	Jackson, N.S.	Atlantic salmon		180,000	820,000	848,600						1,848,600	
			Speckled trout				590,000	130,168	21,783				741,951	2,590,551
1938	Coldbrook *(f)*	Coldbrook, N.S.	Speckled trout							108,000			108,000	108,000
1936	Grand Lake *(f)*	Wellington Station, N.S.	Atlantic salmon						478,624			28,807	507,431	507,431
1937	Kejimkujik *(f)*	New Grafton, N.S.	Atlantic salmon				20,000	33,000	42,000				95,000	
			Speckled trout						3,000	66,628			69,628	164,628
1912	Lindloff	St. Peters, N.S.	Atlantic salmon					419,206					419,206	
			Rainbow trout					22,249					22,249	
			Speckled trout					151,000	33,486				184,486	625,941
1902	Margaree	N.E. Margaree, N.S.	Atlantic salmon			1,360,000	945,000	255,000	199,000	68,650			2,827,650	
			Speckled trout				1 206,585	295,000	259,000	230,000	155,190	4,706	2,150,481	4,978,131
1935	Mersey river, No. 3 Development *(f)*	Liverpool, N.S.	Atlantic salmon						64,600				64,600	64,600
1913	Middleton	Middleton, Annapolis Co., N.S.	Atlantic salmon				50,000	425,000	8,350				483,350	
			Salmon trout			120,000	174,575						294,575	
			Speckled trout				146,000	292,000	274,275				712,275	1,490,200
1933	Nictaux Falls *(d)*	Nictaux Falls, N.S.	Atlantic salmon			80,000	275,000	145,000	201,400				701,400	701,400
1929	Yarmouth	South Ohio, N.S.	Atlantic salmon		100,000	225,000	130,000	50,000	200	118,800	10,000	25,000	659,000	
			Rainbow trout						200	18,500		5,000	23,700	
			Speckled trout		250,000	118,000	315,000		73,950	32,000	43,300	18,437	850,687	1,533,387
1928	Florenceville	Florenceville, N.B.	Atlantic salmon				645,000	428,000	384,211				1,457,211	
			Speckled trout			20,000	576,500	17,000	950			6,251	620,701	2,077,912
1880	Grand Falls	Grand Falls, N.B.	Atlantic salmon			75,000	1,137,000	825,000	408,403				2,445,403	
			Speckled trout		20,000	85,000	30,000	715,000	388,486				1,238,486	3,683,889
1874	Miramichi	South Esk, N.B.	Atlantic salmon			2,067,000	1,198,600	548,350					3,813,950	
			Speckled trout			40,000	66,000	14,800	2,566			41	123,407	3,937,357
1874	Restigouche	Flatlands, N.B.	Atlantic salmon				2,501,668	29,788					2,531,456	
			Speckled trout		4,000		69,801						73,801	2,605,257
1914	Saint John	Saint John, N.B.	Atlantic salmon			275,000	647,112		1,512				923,624	
			Brown trout hybrids.									1,885	1,885	
			Ouananiche salmon.									1,612	1,612	
			Rainbow trout									1,264	1,264	
			Sebago salmon						42,239			26,320	68,559	
			Speckled trout		35,000	195,000	471,500	3,500		8,750		4,542	718,292	1,715,236
1938	Cardigan *(f)*	Cardigan, P.E.I.	Rainbow trout					12,000	38,000	42,490			92,490	
			Speckled trout						209,500	160,770			370,270	462,760

1906	Kelly's Pond	Southport, P.E.I.	Atlantic salmon	.....	.....	56,400	526,600	.....	.....	.....	.....	.....	583,000	.....
			Speckled trout	.....	.....	28,000	155,624	.....	24,316	.....	.....	.....	207,940	790,940
1911	Anderson Lake *(a)*	Anderson lake, Kildonan, Vancouver Island, B.C.	Sockeyesalmon *(e)*	1,033,359	.....	.....	.....	.....	.....	.....	.....	.....	1,033,359	1,033,359
				1,033,359	589,000	6,257,400	16,370,890	5,072,165	3,169,051	856,588	208,490	128,354	33,685,297	33,685,297

(a) Subsidiary hatchery.
(d) Pond and rearing station combined.
(f) Rearing station.
(e) Autumn collection, 1938.

The eggs, fry and fingerlings included in this distribution, with the exceptions indicated, were from collections in the autumn of 1937 and the spring of 1938.

HATCHERY OUTPUT, BY PROVINCES, OF EYED EGGS, FRY, FINGERLINGS, YEARLINGS AND OLDER FISH DURING 1938

——	Eyed eggs	Fry	Advanced fry	Fingerlings					Yearlings and Older	Total distribution by species	Total distribution by province
				No. 1	No. 2	No. 3	No. 4	No. 5			
Nova Scotia—											
Atlantic salmon	.....	280,000	2,980,000	3,983,725	1,396,510	994,174	187,450	10,000	53,807	9,885,666	
Rainbow trout	.....	.....	.....	.....	46,943	200	18,500	.....	5,971	71,614	
Salmon trout	.....	.....	120,000	174,575	.....	.....	.....	.....	.....	294,575	
Speckled trout	.....	250,000	316,000	4,188,185	1,035,274	674,494	438,628	198,490	26,661	7,127,732	
	.....	530,000	3,416,000	8,346,485	2,478,727	1,668,868	644,578	208,490	86,439	17,379,587	17,379,587
New Brunswick—											
Atlantic salmon	.....	.....	2,417,000	6,129,380	1,831,138	794,126	.....	.....	.....	11,171,644	
Brown trout hybrids	.....	.....	.....	.....	.....	.....	.....	.....	1,885	1,885	
Ouananiche salmon	.....	.....	.....	.....	.....	.....	.....	.....	1,612	1,612	
Rainbow trout	.....	.....	.....	.....	.....	.....	.....	.....	1,264	1,264	
Sebago salmon	.....	.....	.....	.....	.....	42,239	.....	.....	26,320	68,559	
Speckled trout	.....	59,000	340,000	1,212,801	750,300	392,002	8,750	.....	10,834	2,773,687	
	.....	59,000	2,757,000	7,342,181	2,581,438	1,228,367	8,750	.....	41,915	14,018,651	14,018,651
Prince Edward Island—											
Atlantic salmon	.....	.....	56,400	526,600	.....	.....	.....	.....	.....	583,000	
Rainbow trout	.....	.....	.....	.....	12,000	38,000	42,490	.....	.....	92,490	
Speckled trout	.....	.....	28,000	155,624	.....	233,816	160,770	.....	.....	578,210	
	.....	.....	84,400	682,224	12,000	271,816	203,260	.....	.....	1,253,700	1,253,700
British Columbia—											
Sockeye salmon	1,033,359	.....	.....	.....	.....	.....	.....	.....	.....	1,033,359	1,033,359
											33,685,297

Six thousand, three hundred and fifty-eight Atlantic salmon were obtained for fish cultural purposes and retained at the various ponds operated by this department in the Maritime provinces. Of these 4,210 were purchased from commercial fishermen and 2,148 were taken in the departmental traps. The following is the average weight in pounds of salmon secured in 1938 from various sources: In Nova Scotia: Margaree harbour, Inverness county, 10·6; Nictaux river, Annapolis county, 6·4; River Philip, Cumberland county, 12; Sackville river, Halifax county, 12. In New Brunswick: Miramichi river, Northumberland county, 8·3; New Mills, Restigouche county, 14; St. John harbour, St. John county, 11. And in Prince Edward Island, Morell river, Kings county, 8. The average weight of the Sackville River salmon was more than double the average weight of those impounded in 1937 and 27,753,500 Atlantic salmon eggs were collected from all ponds.

The production of speckled trout eggs at the Maritime Province hatcheries reached a new high this year with over 17,124,000 ova secured—an increase of more than 1,320,000 over last year. This increase is largely due to expansion of rearing facilities and of accommodation for brood fish. Noticeable increases over the previous year were made from the Antigonish, Florenceville and St. John hatchery ponds. The possibilities of McRae lake in the Lindloff Hatchery district were prospected and 126,000 eggs secured.

Five hundred thousand salmon trout eyed eggs were obtained from the Department of Game and Fisheries for Ontario for an equal number of speckled trout eyed eggs.

Anderson Lake hatchery, Vancouver Island, was opened up in October to continue the stocking of Maggie lake with sockeye salmon and over 1,000,000 eyed eggs were planted under favourable conditions on December 10 and 11, 1938.

In continuation of the experiment in regard to the influence of environment versus heredity on Atlantic salmon referred to in previous reports, some 189,000 fingerlings, the progeny of "early" fish taken at New Mills, Chaleur bay, were distributed in the St. John river and its tributaries from the Grand Falls hatchery.

Over 566,000 Atlantic salmon fingerlings including some 69,000 yearlings and some two-year fish have been distributed to date in waters of the Maritime provinces having two fins missing, viz., the adipose and one pectoral or one ventral. A fair proportion of the New Mills stock distributed in the St. John river are included in this number.

The recapture of these marked salmon will add to present data in regard to the "homing" theory, sea movements or migrations and the influence of heredity versus environment in relation to the Atlantic salmon of Canadian streams. One dollar will be paid for scales and scars left by the removal of the fins from each recaptured marked salmon together with particulars as to its length, weight, date and place of recapture.

The closed circulatory system was again tested at Restigouche hatchery, 110,000 Atlantic salmon semi-eyed eggs being placed in the experimental troughs on December 12, 1937. The previous season's plan was modified slightly in as much as the sand was removed from the filter when the eggs began to hatch and varying amounts of fresh water were added up to five gallons per minute. During the experiment the temperature of the water in the closed system ranged from 3 to 13 degrees higher than it was in the remainder of the hatchery. The eggs in the closed system hatched between January 11 and February 12 while the remainder hatched between April 30 and May 21.

The experiment was not a success as the percentage loss in the eggs in the experimental group was higher than it was in the remainder, and the loss of fry due to blue sac and gill disease in the former was so heavy that the experiment was abandoned on May 3.

Copper sulphate treatment of lakes for the purpose of eliminating undesirable fish, which has been referred to in recent annual reports, was extended to Trefry's lake, Yarmouth county, Nova Scotia, in 1938. Trefry's lake has an area of 53·26 acres, a maximum sounded depth of 43 feet and an estimated average depth of 13·5 feet. It contained an estimated volume of 31,084,000 cubic feet of water. Treatment took place on August 6 under the direction of Dr. M. W. Smith, of the Atlantic Biological Station. The species composition of fish killed, the numbers, and the numbers and pounds of fish per acre were as follows:—

Species	Number in lake	Number per acre	Weight in lake, pounds	Pounds per acre	Average weight, gm.
Ameiurus nebulosus (Catfish or bullhead)	776	15	77·0	1·5	45·0
Anguilla rostrata (Eel)	3,262	61	140·3	2·6	19·5
Fundulus diaphanus (Killifish)	8,738	164	69·5	1·3	3·6
Morone americana (White perch)	11,761	221	456·6	8·6	17·6
Notemigonus crysoleucas (Golden shiner)	841	16	51·6	1·0	27·85
Osmerus mordax (Smelt)	4,424	83	21·7	0·4	2·2
Perca flavescens (Yellow perch)	1,360	26	71·6	1·3	23·9
Pomolobus pseudoharengus (Gaspereau)	4,346	82	51·2	1·0	5·4
Pungitius pungitius (Stickleback)	9	.....	.....	.....	.....
Totals	35,517	668	939·5	17·7	

Lake Jesse, also in Yarmouth county, was treated in August, 1934, stocked with speckled trout in 1936 and 1937, closed to angling for three years and will be opened on April 15, 1939. Arrangements are being made to obtain an accurate census of the numbers and species of fish that may be caught for some weeks after the lake is opened.

Tedford and Boar's Back lakes which were also treated in August, 1936, were stocked with speckled trout fry on an acreage basis during the past season.

Two thousand five hundred coarse fish, mostly white and yellow perch, were trapped and destroyed at lake Annis and close to the same number at the Milo lakes, Yarmouth county, Nova Scotia. The traps were supplied by the department and were operated under the general direction of the superintendent of the Yarmouth hatchery. The Lake Annis trap (one) was tended by the owner-manager and those at the boys' camp " Mooswa." The (three) traps at the Milo lakes were tended by the members of the Milo Aquatic Club of Yarmouth.

As available information indicates that runs of sockeye salmon have never occurred in the streams of the easterly coast of Vancouver Island south of Seymour Narrows, a survey of the Nanaimo River system, with a view to ascertaining whether or not a sockeye run could be established there, was undertaken in 1932. As far as could be determined from a short summer investigation, physical conditions were found to be reasonably suitable for sockeye salmon production, but there were two adverse biological factors in an apparent paucity of plankton and a large trout population. Following this survey an experimental planting of eyed sockeye salmon eggs from the Rivers Inlet hatchery was made in March, 1933. These eggs were collected in the autumn of 1932.

In 1936, the fourth year after the eggs were taken, a gill-net was operated in the lower section of the river during July, August and September. Only three male sockeye were taken. Observations were continued in 1937 and 22 sockeye were caught. All were identified by their scales as five-year fish which had spent two years in fresh water. In addition to those that were caught and examined, the fishery guardian saw over 30 sockeye on July 30 and over 100 in August in a pool about five miles above the mouth of the river. Similar operations were carried on during the run of 1938 and 6 sockeye were taken. These were

identified by their scales as six-year fish. As the six specimens obtained were sufficient for examination no further effort was made to secure more salmon.

The appearance of sockeye in the Nanaimo river where they were not known to have occurred previously, in three consecutive years and of the same age each year would seem to be due to the planting of the eggs that were collected at Rivers Inlet in 1932.

The Supervisor of Fisheries for Eastern Nova Scotia reported that, generally speaking, the streams of the easterly part of Halifax county were affording better sport since they have been stocked with salmon fry. Quite a number of salmon were also reported in the Middle river, Gloucester county, where very few have been reported for the past twenty years. Middle river has been systematically stocked from the Restigouche hatchery since 1933. Trout angling in the streams and ponds of Prince Edward Island is also said to have been good. An eight and three-quarter pound sea trout, reported to be the largest ever taken in Prince Edward Island, was landed in May at Big Pond, Kings County.

Thirty-nine per cent of the sebago salmon that were taken during the collection of such eggs in 1938 at the Chamcook lakes, New Brunswick, had two fins missing, having been marked in this way before they were distributed a few years previously. Twenty-four per cent of the catch during similar operations during 1937, and thirty-nine per cent in 1936, bore the hatchery mark. These percentages indicate the importance of hatchery reared fish in maintaining sebago salmon angling in these waters.

Representative series of the fish produced at the Maritime Province hatcheries were exhibited at various exhibitions or contributed to displays made by provincial governments or by fish and game protective associations. These are referred to in the reports of the hatcheries that produced the fish.

The Canadian National, the Canadian Pacific and the Dominion Atlantic Railway companies continued their generous assistance and co-operation by furnishing free transportation for shipments of game fish and game fish eggs with their attendants. The extent of this co-operation is indicated in the following summary:

Railway	Total mileage on trip passes	Number of passages	Mileage baggage car permits			Number of cases or cans			Number of permits
			Full	Empty	Total	Full	Empty	Total	
C.N.R.	344	4	2,217	1,207	3,424	61	37	98	25
C.P.R.	2,044	12	923	799	1,722	36	34	70	14
D.A.R.	254	4	127	24	151	16	10	26	3
	2,642	20	3,267	2,030	5,297	113	81	194	42

NOTE.—Number of passages refers to transportation one way—a return trip counting as two passages. Number of permits refers to one way passages for cases or cans.

The interest displayed in fish cultural operations by the general public has been most encouraging. The provincial fish and game protective associations co-operated as opportunity offered and local fish and game clubs, angling and protective associations have co-operated with and assisted hatchery staffs in distributing the season's output, particularly in waters in which these organizations are interested. The Fredericton branch of the New Brunswick Fish and Game Protective Association purchased a truck for this purpose last year. Among others that rendered valued and appreciated co-operation are the Fish and Game Protective Association, Madawaska county, and the associations of the Grand Falls, Yarmouth, Middleton, Coldbrook and Cobequid districts.

Prophylactic and sanitary measures to prevent the outbreak of disease were conducted on quite an extensive scale at all hatcheries and rearing ponds. Valuable and much-appreciated advice and co-operation were extended wholeheartedly by Doctors A. H. Leim, M. W. Smith and R. H. M'Gonigle (Pathologist), as well as by other members of the staffs of the Fisheries Research Board in the Maritime Provinces, all of which are referred to in the report of the board.

Several vacancies in the hatchery staffs at the beginning of the year were filled by the Civil Service Commission and several much-needed positions were created and filled also by the commission. Consequently, the fish cultural staff in the Maritime Provinces is in a much better position than it ever has been in regard to personnel.

The most important additions were the appointment of two assistants (District Supervisors of Fish Culture, Grade I), in the persons of Messrs. F. A. Tingley and A. P. Hills, to Mr. James Catt, District Supervisor of Fish Culture, Grade 2, for the Maritime Provinces. In addition to general inspections of fish cultural activities, these appointees will be employed in stream and lake surveys during the summer months. They have become fairly well acquainted with the situation in regard to fish cultural activities and requirements in the Maritime Provinces. During July and August they were stationed at the Atlantic Biological Station where they gained experience in laboratory technique, the copper sulphate treatment and survey of lakes under the supervision of the director and the scientific staff of the station. From September to December they were in the field engaged in general fish culture work. They then returned to the station where for over three months they received further instruction in chemistry, physics, fish anatomy, embryology, limnology, pathology, etc.

Expansion during the year consisted of a hatchery and superintendent's dwelling on the Charlo river, New Brunswick, at the site selected last year, a superintendent's dwelling at Grand lake, Nova Scotia, and a hatchery and superintendent's dwelling at Lindloff, Nova Scotia, details of which are given in the respective references to these establishments.

Collections, transfers and distributions are given to the nearest thousand in the summaries of operation at the respective establishments.

ANTIGONISH HATCHERY

K. G. Shillington, Superintendent

Production and receipt of eggs during the year were: Hatchery ponds, speckled trout eggs 8,955,000 and rainbow trout eggs 287,000; from Kelly's Pond hatchery 300,000 and Bedford hatchery 1,340,000 Atlantic salmon eyed eggs. Transfers and distributions were: Speckled trout eyed eggs to Bedford hatchery 750,000, to Cobequid hatchery 1,000,000, to Kelly's Pond hatchery 550,000 and to Department of Game and Fisheries, Toronto (exchange for salmon trout eyed eggs) 500,000; and rainbow trout eyed eggs to Lindloff hatchery 45,000. Distributions of advanced fry, fingerlings and older fish were: Atlantic salmon 1,499,000, speckled trout 1,758,000, and rainbow trout 26,000. Of the above 2,739 speckled trout were marked by the removal of the adipose and the right pectoral fins.

Feeding tests, which had as control rations 100 per cent beef liver and 100 per cent sardines (young herring), were carried on with six groups of speckled trout of the same age and observations were continued until the eggs produced by each group of trout were completely hatched. The highest average yield of eggs was from one group that received liver only while the highest percentage hatch was in the eggs produced by the group that was fed on fish. The other rations tested were plucks and fish, 50 per cent each; liver and fish,

50 per cent each; pigs' lungs, 90 per cent, and gaspereaux roe, 10 per cent; and liver, plucks, fish and roe in equal proportions. The smallest average yield of eggs was from the group that was fed lungs and roe and the highest percentage loss in eggs was from the group that was fed on liver only.

An additional 20-inch diameter intake pipe was laid and an improved screen was devised for the pond outlets. These screens have round iron bars at the bottom and are boarded in at the top. The draw of the water at the bottom of the screen facilitates the removal of debris and the cleaning of the ponds.

BEDFORD HATCHERY AND SACKVILLE RIVER SALMON RETAINING POND

George Heatley, Superintendent

The number of Atlantic salmon caught and eggs collected at the Sackville pond were considerably smaller than the numbers taken during 1937 and 1936, although the salmon taken were of greater average weight than those of previous years. A considerable percentage of the salmon captured at this point have been rather small. These small fish did not appear with the larger fish this year, their non-appearance at the usual time being attributed to their intermittent and casual ascent during the late summer and early autumn, before trapping for hatchery purposes began. One hundred and two salmon only were secured for the pond compared with 248 in 1937 and 329 in 1936. Three hundred and seventy-three thousand eggs of unusually good quality were taken and laid down in the Bedford hatchery. Collection and receipt of eggs at the Bedford hatchery were: from Sackville river pond 373,000 and from River Philip pond 2,384,000 Atlantic salmon eggs, and from the Antigonish hatchery 750,000 speckled trout eyed eggs. Transfers were: to Antigonish hatchery 1,340,000 Atlantic salmon eyed eggs, to Grand Lake rearing ponds 21,000 sebago salmon eyed eggs, to Dalhousie University 12,000 Atlantic salmon eggs and to Grand Lake rearing ponds 518,000 Atlantic salmon fry and fingerlings. Distributions of advanced fry and fingerlings were: Atlantic salmon 780,000 and speckled trout 552,000.

COBEQUID HATCHERY AND RIVER PHILIP SALMON-RETAINING POND

J. W. Heatley, Superintendent

Collections of eggs were: Speckled trout from Hart lake 181,000 and hatchery ponds 6,000; Atlantic salmon from River Philip 3,568,000. One million speckled trout eyed eggs were received from the Antigonish hatchery and 10,000 speckled trout No. 3 and No. 4 fingerlings were transferred to the Grand Lake rearing ponds. Distributions were: 1,849,000 Atlantic salmon and 742,000 speckled trout. Sixteen thousand speckled trout fingerlings were marked by the removal of the adipose and right ventral fins.

The collection of speckled trout eggs at Hart lake was disappointing in view of the experience of the previous years. Reports indicated that quite a large number of trout were taken by anglers in this lake during the summer which may account for the comparatively small size of the fish that were caught for hatchery purposes and for the fact that only 18 of the 811 that were marked in 1937 were observed by the egg-collecting staff. Marking was continued and the right ventral fin was removed from all the Hart lake trout—570 in number—that were handled during 1938. The 6,000 eggs were from trout that were caught in Poison lake and River Philip and transferred to the hatchery ponds in November, 1938.

A large run of Atlantic salmon occurred in River Philip. Assistant C. Sayer was in charge of operations. The first fish entered the hatchery trap on September 21 and 1,520 were impounded by November 1, after which the fences

were opened and the balance of the run permitted to ascend. A considerable number were observed passing over the dam after the fences were removed and 158 of those impounded were liberated unstripped as sufficient eggs to meet requirements, namely 5,952,000, had been secured; 2,384,000 were laid down at the Bedford hatchery and 3,568,000 at the Cobequid hatchery. Five hundred stripped salmon were marked by attaching a numbered tag to their dorsal fin.

In December electric power became available and was installed. The Cobequid power plant was dismantled and transferred to the new Lindloff hatchery. The circular rearing ponds continued to leak and several kinds of water-proofing materials were tested.

COLDBROOK READING PONDS

E. Barrett, Superintendent

The Coldbrook rearing ponds, which were opened in 1938, received 350,000 speckled and 15,000 salmon trout No. 1 fingerlings from the Middleton hatchery. Considerable loss was experienced during the season and distributions, which were completed before the end of September, consisted of 108,000 specked trout of an average length of 4½ inches. The property was enclosed and the grounds further improved.

GRAND LAKE REARING PONDS

J. M. Butler, Superintendent

Most of the two-year old sebago salmon reared in the ponds were immature, and the eggs obtained from them, as well as from older pond fish, were of poor quality. Traps were again operated at Waverley run and Rawdon river. Very few sebago made their appearance, only 45 being taken at both places, of which 14 were females. Their average weight was three pounds and the collection amounted to only 13,000 eggs.

Twenty-one thousand sebago salmon eyed eggs and 518,000 Atlantic salmon fry and fingerlings were received from the Bedford hatchery, and 10,000 speckled trout fingerlings from the Cobequid hatchery. The latter group will be carried at Grand lake through the winter and distributed next spring. A representative series of the sebago salmon of different ages available from the hatchery ponds were supplied the University of Toronto for study in connection with the investigation of the landlocked salmon of the Maritime Provinces, particularly as to their having heritable characters different from those of the sea salmon.

A dwelling of bungalow type, thirty feet square, with full basement, verandah across the front and summer kitchen, was built for the Superintendent. It provides a living room, dining room, kitchen, bathroom and five bedrooms.

Considerable repairs were made to the ponds; the whole series was enclosed by a mink-proof fence, and the grounds generally were improved.

Distributions for the season amounted to 507,000 Atlantic salmon.

KEJIMKUJIK REARING PONDS

F. F. Annis, Superintendent

The Kejimkujik rearing ponds were opened on April 26, some fifteen days earlier than was the case last year. They received from the Yarmouth hatchery 250,000 speckled trout advanced fry and 100,000 Atlantic salmon advanced fry, the last on May 26. The trout made satisfactory growth until July 22 when they were attacked by fin disease which they appear to have contracted from fish in the water supply above the ponds. Further trouble was caused by the high temperature combined with the low oxygen content of the water and

heavy losses in the trout continued until lower water temperatures occurred on August 21. As compared with the trout, the salmon did well. They were not affected by disease and they made satisfactory growth.

Distributions, which were completed on September 27, were: Atlantic salmon 95,000 and speckled trout 70,000.

Considerable improvement was made to the grounds.

LINDLOFF HATCHERY

Wm. T. Owens, Superintendent

The following eyed eggs were received: 200,000 speckled trout from the Margaree, 600,000 Atlantic salmon from the Miramichi and 45,000 rainbow trout from the Antigonish hatcheries. Slightly over 126,000 speckled trout ova were collected at McRae lake, which is an increase over the collection of the previous year, and 1,050,000 Atlantic salmon eggs were received from the Margaree salmon retaining pond. All species made good growth and the survival of speckled trout compared favourably with previous years. Distributions were: Atlantic salmon 419,000, rainbow trout 22,000 and speckled trout 184,000. Of these 10,000 salmon and 1,000 speckled trout were marked by the removal of the adipose and left pectoral fins.

In December 361 speckled trout were caught in a nearby brook and placed in the hatchery ponds with the idea of developing this local strain as the nucleus of a brood stock.

A hatchery, 25 feet by 65 feet over all, embodying a hatching room, 25 feet by 52 feet 5 inches, equipped with 30 troughs 16 feet long, office, feed room and coal room, was built as well as a superintendent's dwelling of a semi-bungalow type, 30 feet square, with a verandah extending across the front, full basement, living room, dining room, kitchen, bathroom, five bedrooms and summer kitchen.

Increased numbers of salmon smolt and parr were reported in Grand river as well as improved angling for trout in the east and west branches of the Tillard river.

MARGAREE HATCHERY

W. D. Turnbull, Superintendent

Over 3,000,000 speckled trout eggs were obtained from hatchery stock and 4,362,000 Atlantic salmon eggs were received from the Margaree salmon retaining pond. Two hundred thousand speckled trout eyed eggs were transferred to the Lindloff hatchery and distributions were: Atlantic salmon 2,828,000 and speckled trout 2,150,000. Eleven thousand seven hundred and ninety-nine Atlantic salmon fingerlings and 4,530 speckled trout of various ages were marked by the removal of the adipose and right pectoral fins. Several feeding experiments were made. One group of yearling speckled trout were not given any artificial food from December 20 to April 15 following. This group lost 16 per cent of their original weight while another group of the same number and age, retained under similar conditions, which were fed in the usual way, increased their weight by 26 per cent during the same period. The grounds and rearing pond facilities were further improved. Low lying land was filled in, and a gasoline tank and pump installed. Angling in the waters stocked from this hatchery is reported to be improving, particularly in the Margaree river and lake O'Law.

MARGAREE SALMON RETAINING POND

J. P. Chiasson, Superintendent

In accordance with the usual practice, salmon for the Margaree salmon retaining pond were purchased from the Margaree Harbour Salmon Fisheries Association whose net was operated intermittently for fish cultural purposes from September 19 to October 19.

In the interest of the anglers in the river above, the association's net was not set until September 19. It was operated for three days, September 19 to 21 inclusive, during which 30 salmon were caught, all of which were placed in the salmon retaining pond. During the next four days from September 22 to 25 inclusive, the net was lifted and the river was open to the ascent of fish. During the next four days, September 26 to 29 inclusive, the net was fished and 117 salmon were caught all of which were placed in the retaining pond. Ninety-seven caught from September 30 to October 2 inclusive were tagged and liberated above the net. During the remainder of the season the net was fished continuously but half of the salmon taken each day were liberated above the net and the remainder were placed in the pond.

One hundred and twenty salmon were caught on October 3, half of which, or 60, were tagged and liberated. Three hundred and fourteen were caught on October 4, half of which, 157 were liberated, 43 of them being tagged. In all, 200 salmon caught from September 30 to October 4 inclusive were tagged and liberated above the net on October 3 and 4. During the whole of the season 758 salmon were impounded and 644 were liberated. One thousand four hundred and two salmon passed through the association's net, which is the largest number on record in any year since the net was first operated in 1909.

Altogether only 11 or 5½ per cent of the 200 tagged salmon were recaptured up to the end of the angling season on October 15. Three of these fish were found in the retaining pond during stripping operations. The remainder, eight or four per cent, were taken by anglers. Three of those that were tagged on October 3 were taken two days later on October 5, two in McDaniel's pool six miles distant and one in Thornbush pool seven and one-half miles distant. One tagged on October 3 was taken in Thornbush pool three days later. One tagged on October 4 was taken in McDaniel's pool four days later. One tagged on October 3 was taken in Hut pool seven and one-quarter miles distant five days later. Two tagged on October 3 were taken in McDaniel's pool one of them six days later and the other ten days later.

Of the eight recaptured by anglers, seven were tagged on October 3 and one only on October 4. The distance that they travelled from the time they were tagged until they were recaptured ranged from six to seven and one-half miles. Those that were tagged and recaptured by anglers happen to have been liberated as a sharp freshet was subsiding. The freshet, as recorded at Frizzleton, was on October 1 and 2 and dropped abruptly on October 3. The salmon were liberated on (1) the morning of October 3 (2) the afternoon of October 3 and (3) on October 4. Of the first group six (six per cent) were taken by anglers, three on October 5 and one on October 6, six and seven and one-half miles up the river but none were caught at a greater distance although taken as late as October 13. Of the second group one fish (1·6 per cent) was taken by angling and of the third group also one fish (2·3 per cent) but neither of these was as far up the river as those referred to previously. The availability to the anglers of the salmon that were liberated on October 3 and 4 would seem to have been due to the tagging and liberation having been so closely related to the freshet at Frizzleton which no doubt tended to bring these salmon up the river. All of these fish were marked during their autumn ascent to the spawning grounds and the small percentage of recaptures made by anglers, namely four per cent, is an indication of the effect that this net has late in the season on the angling in the river above.

Ten salmon were lost during the operating period, September 19 to December 5. All eggs taken were transferred, 4,362,000 to the Margaree and 1,050,000 to the Lindloff hatcheries.

MERSEY RIVER REARING POND

T. K. Lydon, Officer-in-Charge

The lower pool in the fishway at No. 3 Development, Mersey river, was fitted up and used experimentally as a rearing pond for salmon. The pool was securely screened against the entry of eels, none of which were observed in the pool during or at the end of the season.

Ninety thousand Atlantic salmon No. 1 fingerlings were transferred from the Middleton hatchery and placed in this pool between July 8 and 11. The growth during the 83 days that the salmon were in the pool was quite satisfactory, some of those distributed on September 29 being five inches long. The total production of 64,600 fingerlings was distributed in the Mersey River system.

MIDDLETON HATCHERY, STEVENS PONDS, NICTAUX SALMON POND AND REARING STATION

F. M. Millett, Superintendent

While a larger number of speckled trout were caught at Sand lake, they were of smaller size than were those taken during the last two seasons and they were also in poor condition. The collection of eggs was consequently smaller, amounting to 81,000. Five hundred thousand salmon trout (eyed) eggs (an exchange) were received from the Department of Game and Fisheries, Toronto, Ontario; 101,000 Atlantic salmon eggs from the Nictaux pond and 1,100,000 (eyed) from the Miramichi hatchery. One million three hundred and twenty-seven thousand speckled trout (eyed) eggs were purchased from the Brookdale Trout Company.

In so far as the hatching, rearing and distribution of trout and salmon are concerned, the Middleton hatchery, Stevens ponds and Nictaux rearing station are operated more or less as one unit. The ponds and rearing station receive their annual supplies of fry and eggs from or through the Middleton hatchery. The collection of salmon eggs at the Nictaux pond was quite disappointing. The expected number of salmon did not appear, the total number impounded being 83 only, and the total collection of eggs slightly under 101,000. Thirty-seven of the salmon were marked by tags attached to their dorsal fins.

The Nova Scotia Light and Power Company, Limited, who operate a power station on the Nictaux river, immediately below the rearing station, co-operated closely with the department in facilitating the safe descent of salmon smolt by closing down their power plant from May 24 to July 1. No. 1 fingerlings to the extent of 350,000 speckled trout and 15,000 salmon trout were transferred to the Coldbrook ponds and 90,000 Atlantic salmon to the Mersey River rearing station.

Distributions from the Middleton hatchery were: 483,000 Atlantic salmon, 294,000 salmon trout and 712,000 speckled trout, and from the Nictaux rearing station 701,000 Atlantic salmon, advanced fry and fingerlings. Three thousand salmon fingerlings from the Nictaux rearing station and 7,000 from the Middleton hatchery were marked by the removal of the adipose and left ventral fins and distributed in the Gaspereau river.

YARMOUTH HATCHERY

H. V. Gates, Superintendent

Larger than usual losses in speckled trout fingerlings were caused by high water temperatures that prevailed during the greater part of the summer. The selected stock developed at the hatchery recovered more quickly and were much larger at the end of the season than those hatched from eggs from other sources.

One hundred and forty-seven thousand speckled trout eggs and 33,000 rainbow trout eggs were obtained from the fish in the hatchery ponds, and 720,000 speckled trout (eyed) eggs were purchased from the Brookdale Trout Company. Two hundred and fifty thousand speckled trout and 100,000 Atlantic salmon (advanced fry) were transferred to the Kejimkujik rearing ponds. Distributions were: 659,000 Atlantic salmon, 24,000 rainbow trout and 851,000 speckled trout, made up of fry, fingerlings and older fish. The Fisheries Research Board received 10,000 speckled trout No. 1 fingerlings. One thousand three hundred and thirty-nine speckled trout—one and two years old—were marked by the removal of the adipose and right ventral fins. Representative series of the fish at the hatchery were contributed to displays made at the Nova Scotia Fisheries Exhibition, Lunenburg, and at the Yarmouth county and the Municipality of Clare exhibitions.

FLORENCEVILLE HATCHERY

George Sutherland, Superintendent

Although the production of speckled trout eggs from the hatchery ponds was not as large as was expected—considering the number of fish that were handled—it amounted to 2,796,000, which is approximately 400,000 larger than the collection of 1937. One million two hundred and fifty-eight thousand Atlantic salmon eggs (green) were received from the St. John salmon retaining pond; 1,000,000 (eyed) from the Miramichi and 30,000 (eyed) from the Restigouche hatcheries. Speckled trout eggs (eyed) were transferred; viz., 400,000 to Grand Falls, 100,000 to Restigouche and 200,000 to Miramichi. One million four hundred and fifty-seven thousand Atlantic salmon and 621,000 speckled trout advanced fry, fingerlings, yearlings and older fish were distributed in the lakes and streams of the district. Six thousand two hundred and fifty-one speckled trout yearlings and older fish were marked by the removal of the adipose and left pectoral fins. Representative series of the fish at the hatchery were contributed to the displays made respectively by the Fredericton and Carleton branches of the New Brunswick Fish and Game Protective Association at the Fredericton and Woodstock exhibitions. Nutritional tests were carried on in relation to the yield and quality of the eggs produced by trout fed in different ways. Minor repairs, as necessary, were made to the buildings.

GRAND FALLS HATCHERY

W. A. McCluskey, Superintendent

The number of speckled trout eggs obtained from Fraser's pond, Three brooks, was disappointing in comparison with numbers obtained during the two preceding years. This decrease is attributed to the younger average age and smaller size of the trout that were available. The collection amounted to 659,000 eggs, as compared with over 1,166,000 in 1937 and 1,720,000 in 1936. One million five hundred and seven thousand Atlantic salmon (green) eggs were received from the St. John pond and 221,000 (eyed) from the Restigouche hatchery; 400,000 speckled trout (eyed) eggs from the Florenceville hatchery and 100,000 speckled trout (eyed) eggs, as a present for purposes of comparison, from the American Fish Culture Company, and 500,000 speckled trout (eyed) were purchased from the Brookdale Trout Company of Massachusetts. Two million four hundred and forty-five thousand Atlantic salmon and 1,238,000 speckled trout were distributed. Forty-two thousand salmon (Restigouche stock) and 2,000 speckled trout were marked by the removal of the adipose and right pectoral fins. Several diets were tested in the feeding of speckled trout fingerlings.

MIRAMICHI HATCHERY AND MIRAMICHI SALMON-RETAINING POND

Frank Burgess, Superintendent

This hatchery and pond are operated more or less as a unit under the same staff. One thousand eight hundred and twenty-six salmon, purchased by tender from the late summer and early autumn run, were impounded between September 9 and October 1. They did extremely well during retention, suffering a loss of only eleven fish. The production of 8,565,000 eggs was eyed at the Miramichi hatchery. The following transfers from eggs laid down the fall of 1937 were made: to Florenceville hatchery 1,000,000, Lindloff hatchery 600,000, Middleton (Nictaux Falls) hatchery 1,100,000. Two hundred thousand speckled trout eyed eggs were received from Florenceville. Three million eight hundred and fourteen thousand Atlantic salmon and 123,000 speckled trout were distributed. Fourteen thousand nine hundred and forty Atlantic salmon fingerlings were marked by the removal of the adipose and right ventral fins. Some feeding tests were also carried on, and the grounds and surroundings were further improved.

NEW MILLS SALMON RETAINING POND

William White, Superintendent

Four hundred and thirteen salmon of the early run were purchased from the commercial fishermen of the district and delivered between May 21 and July 22. Throughout the whole of the season a loss of only three salmon occurred. Over 1,821,000 eggs were produced and laid down in the newly constructed hatchery, at the mouth of the Charlo river.

RESTIGOUCHE HATCHERY, FLATLANDS, CHARLO HATCHERY, CHARLO

R. O. Barrett, Superintendent

The original salmon hatchery on the Restigouche river, established in 1874, was one of the first fish-breeding establishments operated by the Dominion Government in the Maritime Provinces. Operations were first carried on at Deeside and were later moved to Flatlands. As the Flatlands hatchery was of limited capacity, and the site and water supply did not permit of an expansion of the hatching and rearing facilities, it was closed at the end of the 1938 distribution season, and all suitable equipment was moved to the new hatchery, just completed, at the mouth of the Charlo river. The hatchery at Flatlands during 1938 received 1,328,000 Atlantic salmon eyed eggs from Kelly's pond and 100,000 speckled trout eyed eggs from the Florenceville hatchery. Two hundred and twenty-one thousand Atlantic salmon eyed eggs were transferred to Grand Falls and 30,000 to the Florenceville hatchery. Two million five hundred and thirty-one thousand Atlantic salmon and 74,000 speckled trout fry and fingerlings were distributed.

The Charlo hatchery, at the mouth of the river of the same name, in Restigouche county, New Brunswick, was opened on October 22, when it received its first Atlantic salmon eggs. In all 1,821,000 were received from the New Mills pond. This new plant consists of a main hatchery, 37 feet 8 inches by 63 feet, which includes a hatching-room, coal-room, office and toilet with storage space overhead for equipment; an auxilliary hatchery, 28 feet 8 inches by 68 feet $6\frac{3}{4}$ inches, including a hatching-room, storeroom and coal-room with storage space overhead; a building 21 feet by 65 feet, containing a double garage, ice-house, workroom, feed-room, cold storage with storage space above; and a superintendent's dwelling of the bungalow type, 30 feet square, with full basement, living-room, dining-room, kitchen, bathroom and five bedrooms, a verandah across the front and a summer kitchen at the rear. The hatching-room in the

main hatchery is 37 feet 8 inches by 51 feet 2 inches, and is equipped with forty hatching troughs, 20 feet long 10½ inches wide and 6½ inches deep, and sixteen floor troughs, 20 feet 6½ inches long, 24 inches wide and 9 to 12 inches deep. The auxiliary hatching-room is 28 feet 8 inches by 61 feet 5 inches, and is equipped with twenty-one hatching troughs, 20 feet long, 20½ inches wide and 10 inches deep. The water supply is taken from Charlo falls, on the south branch of the Charlo river, where a concrete headworks is provided. From this point a pipe 18 inches in diameter conveys the water some 1,720 feet to the hatcheries, adjacent to which an extensive system of rearing ponds is contemplated. The drains for sixteen circular ponds were completed in 1938. Light is supplied to all buildings by a thirty-two volt electric light plant with a 1,500 watt generator and 240 ampere hour storage batteries.

ST. JOHN HATCHERY, ST. JOHN SALMON RETAINING POND, AND CHAMCOOK LAKES EGG COLLECTING STATION

J. D. Nichol, Superintendent

The collection of speckled trout eggs from the hatchery ponds this season was slightly over 1,803,000, being nearly 200,000 larger than the collection of 1937. This collection was supplemented by a present of 10,000 speckled trout eyed eggs (special stock) from the American Fish Culture Company, 1,204,000 Atlantic salmon eggs from the St. John pond, and 113,000 sebago salmon eggs from the Chamcook lakes. Distributions were: 924,000 Atlantic salmon, 69,000 sebago salmon and 718,000 speckled trout and small groups of brown trout hybrids, ouananiche and rainbow trout, yearlings and older fish. Atlantic salmon eggs and fingerlings were supplied Dr. A. G. Huntsman and the Fisheries Research Board as required. Representative series of the fish at the hatchery were forwarded the Bureau of Information and Tourist Travel for the display made by the Province of New Brunswick at the Sportsmen's Shows at Boston and New York. This fish display was in charge of Assistant Wm. T. Owens, of the St. John hatchery. Similar series were supplied the St. John branch and Moncton branch of the New Brunswick Fish and Game Protective Association for displays made by them respectively at the St. John and Moncton exhibitions. Twenty-two thousand six hundred and twelve sebago and ouananiche salmon, 1,264 rainbow trout and 9,542 speckled trout were marked by the removal of the adipose and one other fin. Feeding tests were carried on with speckled trout with a view to finding a diet best suited towards a large production of eggs of good quality. The St. John salmon pond was in charge of Assistants T. K. Lydon and N. J. Lamb. One thousand two hundred and thirteen salmon were purchased from the commercial weir fishermen of St. John harbour for this pond. Low water and high temperatures contributed to a heavy loss in these fish during the summer months. Three million nine hundred and sixty-nine thousand eggs were produced and allotted, as follows: Florenceville 1,258,000, Grand Falls 1,507,000, and St. John 1,204,000. Numbered tags were affixed to the dorsal fins of 657 salmon which were liberated in St. John harbour at the close of the season.

The collection of eggs at the Chamcook lakes was in charge of Assistant T. K. Lydon. One hundred and seventy-one sebago salmon, i.e., 98 males and 73 females, were taken. Sixty-seven of these fish, or 39·1 per cent of the number taken, had two fins missing, having been marked in this way when they were distributed. The numbers of marked sebago salmon in these lakes are referred to elsewhere in this report. A fairly representative series of the sebago salmon of these waters was supplied Mr. D. G. Wilder, University of Toronto, for study in regard to the question of the landlocked salmon of the Maritime Provinces having heritable characters different from those of the sea salmon. Feeding tests were carried on with a view to finding a diet conducive to a large production of speckled trout eggs of good quality.

KELLY'S POND HATCHERY AND MORELL RIVER SALMON RETAINING POND

F. C. Hayley, Superintendent

The collection of speckled trout eggs was smaller than it was in the previous year; 65,000 were obtained from York pond, 186,000 from Watts pond and smaller numbers from Andrews and the hatchery ponds. The first three mentioned ponds are privately owned. The eggs as collected there were laid down in the Kelly's pond hatchery and only those that reached the eyed stage were paid for. Five hundred and fifty thousand speckled trout eyed eggs were received from the Antigonish hatchery and 100,000 rainbow trout eggs, also eyed, from the Cape Cod Trout Company. One million five hundred and fifty-nine thousand Atlantic salmon (green) eggs were received from the Morell pond. Transfers of Atlantic salmon eyed eggs collected in 1937 were: 1,328,000 to the Restigouche hatchery and 300,000 to Antigonish hatchery; 501,000 speckled trout and 95,000 rainbow trout advanced fry and fingerlings were transferred to the Cardigan ponds. Five hundred and eighty-three thousand Atlantic salmon and 208,000 speckled trout advanced fry and fingerlings were distributed. Twenty-four thousand three hundred and sixteen speckled trout fingerlings were marked by the removal of the adipose and left pectoral fins and distributed in Vessey brook, tributary to Winter river. Operations at the Morell pond were at first in charge of J. J. Hayley and were taken over by Superintendent Tait when the Cardigan ponds were closed for the season. The first salmon were caught on October 10 and between that date and November 14 four hundred and forty-three were impounded. The loss during retention was only one salmon. The total collection of 1,559,000 eggs was placed in the Kelly's pond hatchery.

CARDIGAN REARING PONDS

A. Tait, Superintendent

The Cardigan rearing ponds, which were built in 1937, were ready for operation towards the end of May and received 95,000 rainbow trout and 501,000 speckled trout advanced fry and fingerlings from the Kelly's Pond hatchery. The operations for the initial season were very satisfactory. Distributions which were completed on October 25 consisted of 92,000 rainbow trout and 370,000 speckled trout fingerlings. The property was enclosed and general improvement thereof was begun.

STATEMENT BY SPECIES, OF LOCAL COLLECTION AND DISPOSAL OF EGGS DURING 1938

Species	Collection area	First and last eggs	Number collected	Disposal—Establishment at	Number	Totals
Atlantic salmon	Margaree pond, N.S.	Nov. 11-Dec. 5	5,412,000	Lindloff	1,050,000	
				Margaree	4,362,000	
	Nictaux pond, N.S.	Nov. 7-17	100,956	Middleton	100,956	
	River Philip, N.S.	Nov. 7-18	5,951,850	Bedford	2,384,250	
				Cobequid	3,567,600	
	Sackville river, N.S.	Nov. 3-10	373,500	Bedford	373,500	
	Miramichi pond, N.B.	Oct. 18-Nov. 11	8,564,973	Miramichi	8,564,973	
	New Mills pond, N.B.	Oct. 21-Nov. 11	1,821,633	Charlo	1,821,633	
	St. John pond, N.B.	Oct. 26-Nov. 9	3,969,105	Florenceville	1,258,145	
				Grand Falls	1,506,890	
				St. John	1,204,070	
	Morell river, P.E.I.	Nov. 8-22	1,559,500	Kelly's pond	1,559,500	27,753,517
Sebago salmon	Chamcook lakes, N.B.	Nov. 8-18	113,274	St. John	113,274	
	Grand lake, N.S.	Nov 8-Dec. 10	13,000	Grand lake	13,000	
	Grand lake rearing ponds, N.S.	Nov. 8-30	48,400	Grand lake	48,400	174,674
Ouananiche salmon	Grand lake rearing ponds, N.S.	Nov. 8-19	3,800	Grand lake	3,800	3,800
Rainbow trout	Antigonish hatchery ponds, N.S.	Mar. 19-Apr. 25	286,700	Antigonish	286,700	
	Yarmouth hatchery ponds, N.S.	Mar. 26-Apr. 24	33,000	Yarmouth	33,000	319,700
Sockeye salmon	Anderson lake, B.C.	Oct. 25-29	1,050,000	Anderson lake	1,050,000	1,050,000
Speckled trout	Antigonish hatchery ponds, N.S.	Nov. 1-Dec. 20	7,924,060			
			(b) 1,030,500	Antigonish	8,954,560	
	Margaree hatchery ponds, N.S.	Oct. 16-Nov. 21	2,381,647			
			(b) 642,918	Margaree	3,024,565	
	Hart lake, Colchester and Cumberland Cos., N.S.	Nov. 2-7	181,124	Cobequid	181,124	
	Poison lake and River Philip, Cumberland Co., N.S.	Week Dec. 3	6,000	Cobequid	6,000	
	McRae lake, Richmond Co., N.S.	Oct. 4-17	126,534	Lindloff	126,534	
	Sand lake, Annapolis Co., N.S.	Nov. 7-17	81,180	Middleton	81,180	
	Yarmouth hatchery ponds, N.S.	Nov. 3-24	90,000			
			(b) 57,000	Yarmouth	147,000	
	Florenceville hatchery ponds, N.B.	Oct. 7-Dec. 24	2,539,464			
			(b) 256,900	Florenceville	2,796,364	
	St. John hatchery ponds, N.B.	Oct. 24-Dec. 5	1,343,684			
			(b) 459,730	St. John	1,803,414	
	Kelly's pond hatchery pond, P.E.I.	Dec. 13	4,000	Kelly's pond	4,000	17,124,741
						46,426,432

(b) Eggs from yearling fish.

EYED EGGS PURCHASED IN 1938

Species	Month laid down	Purchased from	Laid down in hatchery	Number received	Total by species
Rainbow trout	April	Cape Cod Trout Company, Wareham, Mass.	Kelly's pond	100,000	100,000
Speckled trout	December 1938, January 1939	Brookdale Trout Company, Kingston, Mass.	Middleton	1,327,435	
	December	Brookdale Trout Company, Kingston, Mass.	Yarmouth	720,000	
	December	Brookdale Trout Company, Kingston, Mass.	Grand Falls	500,000	
	October, November	Donald Fraser, Plaster Rock, N.B.	Grand Falls	459,770	
	November, December	Harold Watts, York, P.E.I.	Kelly's pond	255,348	3,262,553
					3,362,553

Summary of eggs received: Eggs collected, 46,426,432; Eggs purchased 3,362,553; total 49,788,985.

EXCHANGED OR DONATED EYED EGGS RECEIVED 1938

From Department of Game and Fisheries, Toronto, Ontario, in exchange for speckled trout:—

Salmon trout from Wiarton hatchery, laid down at Middleton hatchery 500,000

From American Fish Culture Company, Carolina, Rhode Island, donated:—

Speckled trout, laid down at Grand Falls hatchery 100,000

Speckled trout, laid down at St. John hatchery 10,000

In the interest of economy and convenience in the distribution of fry the following transfers of eyed eggs were made in 1938:—

Species	From	To	Number	Date received
Atlantic salmon	(a) Bedford	Antigonish	1,340,000	March 10, 16
	(a) Middleton	Nictaux Falls	680,075	April 1
	(a) Miramichi	Lindloff	600,000	April 1
	(a) Miramichi	Nictaux Falls	1,100,000	April 2
	(a) Miramichi	Florenceville	1,000,000	March 24
	(a) Restigouche	Florenceville	30,186	March 16
	(a) Restigouche	Grand Falls	221,364	March 16
	(a) Kelly's Pond	Antigonish	300,000	February 26
	(a) Kelly's Pond	Restigouche	1,328,000	February 4
Rainbow trout	(b) Antigonish	Lindloff	45,000	May 29
Sebago salmon	(a) Bedford	Grand Lake	21,390	April 22
Speckled trout	(a) Antigonish	Bedford	750,000	March 5
	(a) Antigonish	Cobequid	1,000,000	April 1
	(a) Antigonish	Kelly's Pond	550,000	March 4
	(a) Margaree	Lindloff	200,000	March 12
	(a) Florenceville	Grand Falls	400,000	March 9
	(a) Florenceville	Miramichi	200,000	March 18
	(a) Florenceville	Restigouche	100,000	March 17

(a) 1937 fall collection. (b) 1938 collection.

Tagging and Marking of Fish

The tagging of Atlantic salmon taken for fish cultural purposes, which was commenced in 1913, was continued on a somewhat larger-than-usual scale in 1938 at the several salmon retaining ponds in the Maritime Provinces. The adipose and one ventral or one pectoral fin was removed from 191,902 Atlantic and sebago salmon, ouananiche, rainbow and speckled trout before they were distributed. The object of the tagging is to add to present information in regard to the movements of the fish, frequency in spawning and the extent to which early salmon of any season return to fresh water as early fish or vice versa. The marking or fin clipping was practised for the purpose of gaining further information on the movements, growth and survival of hatchery product. Special reference is made to the tagging and liberation of fish from the net operated by the Margaree Harbour Salmon Fisheries Association under "Margaree salmon retaining pond." The extent of the tagging is given in detail in the following statement:—

ADULT ATLANTIC SALMON, TAGGED BY AFFIXING TAGS TO THE DORSAL FIN, 1938

—	Number tagged	Type of tag	Period of tagging	Where liberated
Nova Scotia—				
Margaree pond	200	Aluminum	October 3, 4	Margaree river, immediately above Salmon Fisheries Association net.
Nictaux Falls pond	37	Aluminum	November 11, 17	Nictaux river.
River Philip pond	500	Aluminum	November 8-14	River Philip.
New Brunswick—				
St. John pond	657	Aluminum	November 5-15	St. John Harbour.

(1) The recaptures of tagged Atlantic salmon reported during 1938, (2) of all tagging done and of all recaptures of tagged salmon reported since tagging was initiated in 1913 to December 31, 1938, are as follows:—

TABLE No. 1

RECAPTURES, 1938—ATLANTIC SALMON

MARGAREE RIVER, N.S.

Number	Weight (lbs.)	Length (ins.)	Condition	Sex	Date	1. Where liberated 2. Where caught
F7814	7	31	Kelt.....	F	Nov. 25, 1936	Margaree Pond, N.S.
	20¼	.....	Clean.....	F	July 27, 1938	McArras Brook, Antigonish county, N.S.
F7827	14	37	Kelt.....	F	Nov. 25, 1936	Margaree Pond, N.S.
	24	41	Clean.....	F	July 21, 1938	One and one-half miles north of Margaree Harbour, N.S.
F7838	15	38	Kelt.....	F	Nov. 25, 1936	Margaree Pond, N.S.
	(z) (u) 22	41	Clean.....	F	1938	*(a)* Margaree Pond, N.S.
F7843	7	31	Kelt.....	F	Nov. 25, 1936	Margaree Pond, N.S.
	(v) 30	.....	Clean.....	F	July 25, 1938	Broad Cove Chapel, Inverness county, N.S.
F7866	10	34	Kelt.....	F	Dec. 1, 1936	Margaree Pond, N.S.
	(z) (u) 21	41	Clean.....	F	1938	*(a)* Margaree Pond, N.S.
F7885	14	38	Kelt.....	F	Dec. 1, 1936	Margaree Pond, N.S.
	21	41	Clean.....	F	July 30, 1938	West of Point Cross brook outlet, Inverness county, N.S.
F7888	17	37	Kelt.....	F	Dec. 1, 1936	Margaree Pond, N.S.
	32	44	Clean.....	F	June 6, 1938	Pigeon Island, two miles from Lead Cove, Newfoundland.
F7965	10	33	Kelt.....	M	Dec. 10, 1936	Margaree Pond, N.S.
	27	40	Clean.....	M	Aug. 6, 1938	One hundred yards west of Ferguson's ponds outlet, Pictou county, N.S.
*(f)*K131	.....	.....	Clean.....	F	Oct. 3, 1938	Margaree Salmon Fisheries Association net, Margaree Harbour, N.S.
	18	.....	Clean.....	F	Oct. 5, 1938	Thornbush pool, Margaree river, N.S.
*(f)*K204	.....	.....	Clean.....	.....	Oct. 3, 1938	Margaree Salmon Fisheries Association net, Margaree Harbour, N.S.
	8	.....	Clean.....	.....	Oct. 6, 1938	Thornbush pool, Margaree river, N.S.
*(f)*K210	.....	.....	Clean.....	M	Oct. 3, 1938	Margaree Salmon Fisheries Association net, Margaree Harbour, N.S.
	7	.....	Clean.....	M	Oct. 5, 1938	McDaniel pool, Margaree river, N.S.
*(f)*K216	.....	.....	Clean.....	M	Oct. 3, 1938	Margaree Salmon Fisheries Association net, Margaree Harbour, N.S.
	16½	.....	Clean.....	M	Oct. 5, 1938	McDaniel pool, Margaree river, N.S.
*(f)*K238	.....	.....	Clean.....	.....	Oct. 3, 1938	Margaree Salmon Fisheries Association net, Margaree Harbour, N.S.
	9¼	.....	Clean.....	.....	Oct. 13, 1938	McDaniel pool, Margaree river, N.S.

TABLE No. 1—*Continued*

RECAPTURES, 1938—ATLANTIC SALMON—*Continued*

MARGAREE RIVER, N.S.

Number	Weight (lbs.)	Length (ins.)	Condition	Sex	Date	1. Where liberated 2. Where caught
*(f)*K239	.....	.....	Clean.....	.....	Oct. 3, 1938	Margaree Salmon Fisheries Association net, Margaree Harbour, N.S.
	10 to 12	.....	Clean.....	.....	Oct. 8, 1938	Hut pool, Margaree river, N.S.
*(f)*K261	.....	.....	Clean.....	M	Oct. 3, 1938	Margaree Salmon Fisheries Association net, Margaree Harbour, N.S.
	(z) (u) 7	30	Clean.....	M	1938	*(e)* Margaree Pond, N.S.
*(f)*K266	.....	.....	Clean.....	M	Oct. 4, 1938	Margaree Salmon Fisheries Association net, Margaree Harbour, N.S.
	(z) (u) 7	30	Clean.....	M	1938	*(e)* Margaree Pond, N.S.
*(f)*K272	.....	.....	Clean.....	F	Oct. 4, 1938	Margaree Salmon Fisheries Association net, Margaree Harbour, N.S.
	10	.....	Clean.....	F	Oct. 8, 1938	McDaniel pool, Margaree river, N.S.
*(f)*K280	.....	.....	Clean.....	M	Oct. 3, 1938	Margaree Salmon Fisheries Association net, Margaree Harbour, N.S.
	10	.....	Clean.....	M	Oct. 9, 1938	McDaniel pool, Margaree river, N.S.
*(f)*K285	.....	.....	Clean.....	F	Oct. 3, 1938	Margaree Salmon Fisheries Association net, Margaree Harbour, N.S.
	(z) (u) 6	29	Clean.....	F	1938	*(e)* Margaree Pond, N.S.

NICTAUX RIVER, N.S.

F6209	5	26½	Kelt.....	F	Nov. 5, 1936	Nictaux Pond, N.S.
	10¼	31½	Clean.....	F	May 20, 1938	Nictaux river, halfway from mouth and Rogers bridge, N.S.
F7034	6	28½	Kelt.....	F	Nov. 9, 1936	Nictaux Pond, N.S.
	11½	32	Kelt.....	F	Apr. 22, 1938	Nictaux river, at Rogers bridge, N.S.
1001	7	29	Kelt.....	M	Nov. 15, 1937	Nictaux Pond, N.S.
	7	30	Clean.....	M	June 7, 1938	Bay of Fundy, ten miles off Point Lepreau, N.B.
1007	3	25	Kelt.....	M	Nov. 15, 1937	Nictaux Pond, N.S.
	5⅞	25½	Clean.....	M	June 28, 1938	Placentia Roads, Newfoundland.
1012	4	27	Kelt.....	F	Nov. 16, 1937	Nictaux Pond, N.S.
	.....	.....	Kelt.....	F	Apr. 19, 1938	Nictaux river, Stevens pool, N.S.
1059	7	31	Kelt.....	M	Nov. 16, 1937	Nictaux Pond, N.S.
	.....	.....	Kelt.....	M	May 10, 1938	Annapolis river, at Lawrencetown, N.S.
1063	6	29½	Kelt.....	M	Nov. 16, 1937	Nictaux Pond, N.S.
	7½	.....	Kelt.....	M	Apr. 19, 1938	Nictaux river, at Rogers bridge, N.S.
1084	7	31	Kelt.....	F	Nov. 17, 1937	Nictaux Pond, N.S.
	*(aa)*6	32	Clean.....	F	July 8, 1938	Garnish, Fortune bay, Newfoundland.

TABLE No. 1—*Continued*

RECAPTURES, 1938—ATLANTIC SALMON—*Continued*

RIVER PHILIP, N.S.

Number	Weight (lbs.)	Length (ins.)	Condition	Sex	Date	1. Where liberated 2. Where caught
82	*(d)*	.....	.....	.....	Oct. 13, 1937	River Philip Pond, N.S.
	6¼	.....	Kelt.....	.....	Apr. 17, 1938	River Philip, at Oxford Junction, N.S.
F2567	17	37	Kelt.....	F	Nov. 10, 1936	River Philip Pond, N.S.
	*(aa)*25	.....	Clean.....	F	1938	St. Anthony, Labrador.
F4869	7	29	Kelt.....	F	Nov. 12, 1936	River Philip Pond, N.S.
	18	32	Clean.....	F	July 10, 1938	One mile east of Coal point, Big Island, Pictou county, N.S.
F4883	15	37	Kelt.....	F	Nov. 12, 1936	River Philip Pond, N.S.
	(z) 21	41	Clean.....	F	1938	*(c)* River Philip Pond, N.S.

SACKVILLE RIVER, N.S.

F7042	4	23	Kelt.....	M	Nov. 3, 1936	Sackville Pond, N.S.
	14¼	32	Clean.....	M	June 11, 1938	One and one-quarter miles south of Herring Cove Light House, Halifax county, N.S.
F7043	8	30½	Kelt.....	F	Nov. 3 1936	Sackville Pond, N.S.
	(z) (u) 10½	35	Clean.....	F	1938	*(b)* Sackville Pond, N.S.
2047	3	23½	Kelt.....	F	Nov. 8, 1937	Sackville Pond, N.S.
	.....	.....	Kelt.....	F	May 5, 1938	Moirs Mill pond, at Bedford, N.S.
2116	3	23	Kelt.....	M	Nov. 12, 1937	Sackville Pond, N.S.
	.....	.....	Kelt.....	M	Apr. 30, 1938	Sackville river, near Sunnyside, N.S.
2141	7	31½	Kelt.....	M	Nov. 19, 1937	Sackville Pond, N.S.
	(z) (u) 10	32½	Clean.....	M	1938	*(b)* Sackville Pond, N.S.

MIRAMICHI RIVER, N.B.

F1892	12	34	Kelt.....	F	Oct. 28, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 28, 1938	Miramichi river, one-quarter mile west of Nappan river, N.B.
F1895	10½	31	Kelt.....	M	Oct. 28, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	M	May 22, 1938	Southwest Miramichi river near Doaktown, N.B.
44	*(d)*	.....	.....	.....	Sept. 17, 1937	Miramichi Pond, N.B.
	.....	23	Kelt.....	.....	May 22, 1938	Miramichi river, at Colgate camp at Big Hole, Curventon, N.B.
50	8	29⅝	Kelt.....	F	Oct. 24, 1937	Miramichi Pond, N.B.
	10	.....	Clean.....	F	Aug. 3, 1938	Miramichi river, in Nappan bay, N.B.
101	8	30½	Kelt.....	F	Oct. 27, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 21, 1938	Northwest Miramichi river, at Exmoor, N.B.
108	8	30	Kelt.....	F	Oct. 27, 1937	Miramichi Pond, N.B.
	.....	30	Kelt.....	F	May 26, 1938	Northwest Miramichi river, one-quarter mile above hatchery, South Esk, N.B.

TABLE No. 1—*Continued*

RECAPTURES, 1938—ATLANTIC SALMON—*Continued*

MIRAMICHI RIVER, N.B.—*Continued*

Number	Weight (lbs.)	Length (ins.)	Condition	Sex	Date	1. Where liberated 2. Where caught
502	9	30	Kelt.....	F	Oct. 30, 1937	Miramichi Pond, N.B.
.....	.....	31	Kelt.....	F	May 27, 1938	Miramichi river, at Bartibog Bridge, N.B.
506	16	36	Kelt.....	F	Oct. 30, 1937	Miramichi Pond, N.B.
	19	37	Kelt.....	F	June 2, 1938	Miramichi river, at Derby Junction, N.B.
508	10	30	Kelt.....	F	Oct. 30, 1937	Miramichi Pond, N.B.
.....	.....	31	Kelt.....	F	May 20, 1938	Miramichi river, at Chatham, N.B.
512	11	31½	Kelt.....	M	Nov. 1, 1937	Miramichi Pond, N.B.
.....	.....	33¼	Kelt.....	M	May 27, 1938	Miramichi river (north side) at Chatham, N.B.
518	8½	29	Kelt.....	F	Oct. 30, 1937	Miramichi Pond, N.B.
.....	.....	.....	Kelt.....	F	May 24, 1938	Northwest Miramichi river (south side), at Northwest Bridge, N.B.
541	9	28½	Kelt.....	F	Nov. 1, 1937	Miramichi Pond, N.B.
.....	.....	29½	Kelt.....	F	May 25, 1938	Miramichi river, at Bartibog Bridge, N.B.
556	9½	28	Kelt.....	F	Nov. 1, 1937	Miramichi Pond, N.B.
.....	.....	.....	Kelt.....	F	May 19, 1938	Northwest Miramichi river, at Exmoor, N.B.
566	9	29½	Kelt.....	F	Nov. 1, 1937	Miramichi Pond, N.B.
.....	.....	.....	Kelt.....	F	May 9, 1938	Little Southwest Miramichi river, at Silliker, N.B.
567	17½	37½	Kelt.....	F	Nov. 1, 1937	Miramichi Pond, N.B.
.....	.....	.....	Kelt.....	F	May 21, 1938	Northwest Miramichi river, at Exmoor, N.B.
588	16	35½	Kelt.....	F	Nov. 1, 1937	Miramichi Pond, N.B.
.....	.....	.....	Kelt.....	F	May 22, 1938	Northwest Miramichi river, at Exmoor, N.B.
607	6½	23	Kelt.....	M	Nov. 2, 1937	Miramichi Pond, N.B.
.....	.....	25	Clean.....	M	June 24, 1938	Black Duck Cove, St. Barbe district, Newfoundland.
629	10½	31½	Kelt.....	F	Nov. 2, 1937	Miramichi Pond, N.B.
.....	.....	.....	Kelt.....	F	May 14, 1938	Little Southwest Miramichi river, two miles above Red Bank, N.B.
643	9½	30	Kelt.....	F	Nov. 4, 1937	Miramichi Pond, N.B.
.....	.....	30	Kelt.....	F	May 10, 1938	Northwest Miramichi river, N.B.
645	10	30½	Kelt.....	F	Nov. 4, 1937	Miramichi Pond, N.B.
.....	.....	31	Kelt.....	F	May 25, 1938	Northwest Miramichi river, four miles above hatchery, South Esk, N.B.
648	9½	30½	Kelt.....	F	Nov. 4, 1937	Miramichi Pond, N.B.
.....	.....	.....	Kelt.....	F	May 25, 1938	Miramichi river, at Loggieville, N.B.
651	8½	29½	Kelt.....	F	Nov. 5, 1937	Miramichi Pond, N.B.
.....	.....	.....	Kelt.....	F	Apr. 27, 1938	Northwest Miramichi river, N.B
661	16	38	Kelt.....	F	Nov. 5, 1937	Miramichi Pond, N.B.
.....	.....	39	Kelt.....	F	May 24, 1938	Miramichi river, off West Point, near Loggieville, N.B.

TABLE No. 1—*Continued*

RECAPTURES, 1938—ATLANTIC SALMON—*Continued*

MIRAMICHI RIVER, N.B.—*Continued*

Number	Weight (lbs.)	Length (ins.)	Condition	Sex	Date	1. Where liberated 2. Where caught
667	9½	30	Kelt.....	F	Nov. 5, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 10, 1938	Northwest Miramichi river, N.B.
673	9	29½	Kelt.....	F	Nov. 5, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 23, 1938	Little Southwest Miramichi river, three-quarter mile above Red Bank bridge, N.B.
688	17½	38	Kelt.....	F	Nov. 5, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	June 1, 1938	Northwest Miramichi river, at South Esk, N.B.
697	9	30	Kelt.....	F	Nov. 5, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 23, 1938	Northwest Miramichi river, at South Esk, N.B.
699	16½	38	Kelt.....	F	Nov. 5, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 24, 1938	Miramichi river, at Bartibog bridge, N.B.
731	12	32	Kelt.....	M	Nov. 8, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	M	Apr. 27, 1938	Little Southwest Miramichi river, at Lyttleton, N.B.
785	11	31½	Kelt.....	M	Nov. 6, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	M	May 27, 1938	Northwest Miramichi river, at South Esk, N.B.
797	10	29½	Kelt.....	M	Nov. 6, 1937	Miramichi Pond, N.B.
	.....	29¾	Kelt.....	M	May 25, 1938	Miramichi river, near mouth of Nappan river, N.B.
817	11	31½	Kelt.....	M	Nov. 6, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	M	May 20, 1938	Northwest Miramichi river, one-quarter mile above hatchery, South Esk, N.B.
821	13	33½	Kelt.....	M	Nov. 6, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	M	May 15, 1938	Northwest Miramichi river, one mile from mouth of Millstream, N.B.
870	12½	32½	Kelt.....	M	Nov. 5, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	M	May 9, 1938	Southwest Miramichi river, at Renous bridge, N.B.
879	13½	32	Kelt.....	M	Nov. 5, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	M	May 25, 1938	Miramichi river, at Lower Newcastle, N.B.
898	8½	29	Kelt.....	F	Nov. 5, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	June 2, 1938	Miramichi river, at Loggieville, N.B.
900	18	38½	Kelt.....	F	Nov. 5, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 23, 1938	Northwest Miramichi river, at Exmoor, N.B.
904	11	30½	Kelt.....	F	Oct. 30, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 27, 1938	Northwest Miramichi river, at Cassilis, N.B.
919	17	36½	Kelt.....	F	Oct. 29, 1937	Miramichi Pond, N.B.
	.....	.....	Clean.....	F	Aug. 29, 1938	Miramichi river, one mile below Loggieville wharf, N.B.
935	8½	29	Kelt.....	F	Oct. 29, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 27, 1938	Northwest Miramichi river, one and one-half mile above hatchery, South Esk, N.B.

TABLE No. 1—*Concluded*

RECAPTURES, 1938—ATLANTIC SALMON—*Concluded*

MIRAMICHI RIVER, N.B.—*Concluded*

Number	Weight (lbs.)	Length (ins.)	Condition	Sex	Date	1. Where liberated 2. Where caught
963	8½	30	Kelt.....	F	Oct. 29, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 25, 1938	Northwest Miramichi river, one quarter mile above hatchery, South Esk., N.B.
969	9	29	Kelt.....	F	Oct. 29, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 3, 1938	Little Southwest Miramichi river, at Silliker, N.B.
988	16	35	Kelt.....	F	Oct. 29, 1937	Miramichi Pond, N.B.
	20¼	39	Clean.....	F	Oct. 13, 1938	Cain river, N.B.
992	8½	29	Kelt.....	F	Oct. 29, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 25, 1938	Miramichi river, at Loggieville, N.B.
993	15	35½	Kelt.....	F	Oct. 29, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 27, 1938	Miramichi river, at Oyster river, N.B.
996	10¾	31	Kelt.....	F	Oct. 29, 1937	Miramichi Pond, N.B.
	.....	.....	Kelt.....	F	May 23, 1938	Miramichi river, below Oyster river, N.B.

NEW MILLS POND, N.B.

99	7½	30	Kelt.....	F	Oct. 29, 1937	New Mills Pond, N.B.
	.....	30	Kelt.....	F	May 19, 1938	Restigouche river, at Flatlands, N.B.
1156	11½	34	Kelt.....	M	Oct. 30, 1937	New Mills Pond, N.B.
	.....	.....	Kelt	M	May 23, 1938	Bay Chaleur, at Point la Nim, N.B.
1166	7½	31	Kelt.....	F	Oct. 30, 1937	New Mills Pond, N.B.
	(v) 8	.....	Kelt.....	F	Apr. 29, 1938	Nipisiguit river, one mile from mouth, N.B.
1175	11	34	Kelt.....	M	Oct. 30, 1937	New Mills Pond, N.B.
	11½	.....	Kelt.....	M	May 31, 1938	Bay Chaleur, at Miguasha West, Que.
1177	9½	32	Kelt.....	M	Oct. 30, 1937	New Mills Pond, N.B.
	.....	.....	Kelt.....	M	May 25, 1938	Bay Chaleur, at Miguasha West, Que.
1200	11½	34	Kelt.....	M	Nov. 2, 1937	New Mills Pond, N.B.
	.....	.....	Kelt.....	M	May 27, 1938	McLeod Siding, N.B.

(aa) Weight when dressed.
(a) Caught for second time for fish cultural purposes, Sept. 19-Oct. 19, 1938.
(b) Caught for second time for fish cultural purposes, Sept. 1-Oct. 10, 1938.
(c) Caught for second time for fish cultural purposes, Sept. 21-Nov. 1, 1938.
(d) Tagged and liberated without weighing or measuring.
(e) Salmon caught tagged and liberated above the Margaree Salmon Fisheries Association net October 3 and 4; recaptured and placed in the Margaree salmon pond prior to October 19, 1938.
(f) Salmon tagged and liberated in Margaree river immediately above the Margaree Salmon Fisheries Association net.
(u) Liberated with same tag attached.
(v) Weight estimated.
(z) Weight after stripped.

TABLE No. 2

STATEMENT OF ATLANTIC SALMON TAGGED (TAGS ATTACHED TO DORSAL FIN) AT THE SEVERAL POINTS EACH YEAR, FROM 1913 TO 1938, INCLUSIVE, THE NUMBER OF RECAPTURES OF CLEAN FISH OF EACH SEASON'S TAGGING AT THE SEVERAL POINTS THAT HAVE BEEN REPORTED AND THE APPROXIMATE PERIOD THAT ELAPSED BETWEEN TAGGING AND RECAPTURE.

Place where tagging was done	Year	Number of Tags attached	Year after tagging during which clean fish were recaptured				
			First year	Second year	Third year	Fourth year	Fifth year
Allen's lake, N.S.	1929	21	0	0	0	0	0
	1930	218	2	0	0	0	0
Port Maitland, N.S.	1925	(Spring) 25	3	0	0	0	0
		264	5	0	0	0	0
Margaree pond, N.S.	1913	98	5	(b) 8	0	0	0
	1914	150	(a) 2	2	0	0	0
	1915	119	0	1	0	0	0
	1916	200	1	5	0	0	0
	1917	99	0	7	0	0	0
	1918	99	0	(b) 6	0	0	0
	1919	84	0	1	2	0	0
	1920	105	3	5	0	0	0
	1921	(Spring) 18	(f) 1	0	0	0	0
	1921	(Fall) 103	0	(b) 2	0	0	1
	1922	(Spring) 30	1	0	0	0	0
	1922	(Fall) 98	0	1	0	0	0
	1923	(Spring) 20	1	0	0	0	0
	1923	(Fall) 99	0	(b) 2	0	0	0
	1924	99	0	(b) 7	0	0	0
	1925	0	0	0	0	0	0
	1926	0	0	0	0	0	0
	1927	0	0	0	0	0	0
	1928	100	0	1	0	0	0
	1929	0	0	0	0	0	0
	1930	486	(a) 4	(g)32	0	0	0
	1931	0	0	0	0	0	0
	1932	0	0	0	0	0	0
	1933	166	1	6	0	0	0
	1934	536	(a) 6	(b)24	(h) 1	0	0
	1935	641	(a) 8	(b)12	0	0	0
	1936	193	0	(b) 8	0	0	0
	1937	33	0	0	0	0	0
	1938	200	11	0	0	0	0
		3,776	44	130	3	0	1
Nictaux Pond, N.S.	1931	261	4	(m)5	0	0	0
	1932	165	4	(m)4	0	0	0
	1933	140	0	(n) 9	1	0	0
	1934	76	2	0	0	0	0
	1935	0	0	0	0	0	0
	1936	92	1	1	0	0	0
	1937	124	3	0	0	0	0
	1938	37	0	0	0	0	0
		895	14	19	1	0	0
River Philip and Wallace river, N.S.	1924	198	0	0	0	0	0
River Philip pond, N.S.	1929	247	1	(p) 5	0	0	0
	1930	293	1	1	0	0	0
	1931	0	0	0	0	0	0
	1932	0	0	0	0	0	0
	1933	0	0	0	0	0	0
	1934	0	0	0	0	0	0
	1935	0	0	0	0	0	0
	1936	200	0	(p) 3	0	0	0
	1937	44	0	0	0	0	0
	1938	500	0	0	0	0	0
		1,482	2	9	0	0	0

TABLE No. 2—*Continued*

Place where tagging was done	Year	Number of Tags attached	Year after tagging during which clean fish were recaptured				
			First year	Second year	Third year	Fourth year	Fifth year
Sackville pond, N.S.	1932	97	(j) 3	2	0	0	0
	1933	150	(j) 4	(k) 7	0	1	0
	1934	54	1	0	0	0	0
	1935	0	0	0	0	0	0
	1936	97	(j) 6	(k) 2	0	0	0
	1937	239	(j) 1	0	0	0	0
	1938	0	0	0	0	0	0
		637	15	11	0	1	0
Miramichi pond, N.B.	1913	250	0	3	0	3	0
	1914	97	1	(c) 3	0	0	0
	1915	119	1	(c) 3	0	0	0
	1916	297	0	(c) 1	0	0	0
	1917	149	0	(c) 1	0	0	0
	1918	149	0	(c) 4	0	0	0
	1919	100	0	0	0	0	0
	1920	188	1	(c) 1	0	0	0
	1921	161	0	0	0	0	0
	1922	149	0	(c) 4	0	0	0
	1923	150	0	0	0	0	0
	1924	195	(q) 1	2	0	0	0
	1925	0	0	0	0	0	0
	1926	0	0	0	0	0	0
	1927	0	0	0	0	0	0
	1928	100	0	0	0	0	0
	1929	0	0	0	0	0	0
	1930	0	0	0	0	0	0
	1931	0	0	0	0	0	0
	1932	0	0	0	0	0	0
	1933	0	0	0	0	0	0
	1934	0	0	0	0	0	0
	1935	0	0	0	0	0	0
	1936	0	0	0	0	0	0
	1937	617	4	0	0	0	0
	1938	0	0	0	0	0	0
Cains river, N.B.	1927	(Spring) 20	0	0	0	0	0
		2,741	8	22	0	3	0
Tabusintac river, N.B.	1928	(Spring) 17	0	0	0	0	0
	1928	(Fall) 8	0	0	0	0	0
	1929	(Spring) 2	0	0	0	0	0
	1930	(Spring) 5	0	0	0	0	0
		32	0	0	0	0	0
Restigouche and Upsalquitch rivers, N.B.	1921	(Spring) 228	2	0	0	0	0
Kedgwick river, N.B.	1919	172	0	5	0	0	0
Little Main river, N.B.	1920	19	0	1	0	0	0
Matapedia river, N.B.	1927	100	1	1	0	0	0
	1928	100	0	0	0	0	0
	1929	0	0	0	0	0	0
	1930	100	0	1	0	0	0
		719	3	8	0	0	0
Tide Head pond (Restigouche), N.B.	1913	49	0	1	0	0	0
	1914	24	0	0	0	0	0
New Mills pond, N.B.	1914	76	0	0	0	0	0
	1915	67	0	3	0	0	0
	1916	100	0	1	0	0	0
	1917	50	0	1	0	0	0
	1918	0	0	0	0	0	0
	1919	98	0	2	0	0	0
	1920	0	0	0	0	0	0
	1921	100	0	0	0	0	0
	1922	99	0	0	0	0	0
	1923	100	0	2	0	0	0
	1924	99	0	1	0	0	0
	1925	0	0	0	0	0	0
	1926	0	0	0	0	0	0

TABLE No. 2—*Continued*

Place where tagging was done	Year	Number of Tags attached	Year after tagging during which clean fish were recaptured				
			First year	Second year	Third year	Fourth year	Fifth year
	1927	0	0	0	0	0	0
	1928	0	0	0	0	0	0
	1929	0	0	0	0	0	0
	1930	409	1	5	0	0	0
	1931	0	0	0	0	0	0
	1932	0	0	0	0	0	0
	1933	0	0	0	0	0	0
	1934	0	0	0	0	0	0
	1935	0	0	0	0	0	0
	1936	0	0	0	0	0	0
	1937	169	0	0	0	0	0
	1938	0	0	0	0	0	0
		1,440	1	16	0	0	0
Nipisiguit river, N.B.	1924	231	1	(r) 2	0	0	0
	1925	169	1	3	0	0	0
	1926	118	0	1	0	0	0
	1927	64	0	0	0	0	0
		582	2	6	0	0	0
Saint John pond, N.B.	1913	50	0	1	0	0	0
	1914	100	0	2	0	0	0
	1915	70	(d) 2	1	0	0	0
	1916	196	0	5	0	0	0
	1917	100	0	1	0	0	0
	1918	100	0	0	0	0	0
	1919	100	1	0	0	0	0
	1920	96	0	1	0	0	0
	1921	104	0	0	0	0	0
	1922	99	1	0	0	0	0
	1923	100	1	1	0	0	0
	1924	100	0	1	0	0	0
	1925	0	0	0	0	0	0
	1926	0	0	0	0	0	0
	1927	0	0	0	0	0	0
	1928	0	0	0	0	0	0
	1929	0	0	0	0	0	0
	1930	806	5	13	0	0	0
	1931	0	0	0	0	0	0
	1932	0	0	0	0	0	0
	1933	0	0	0	0	0	0
	1934	2	0	0	0	0	0
	1935	0	0	0	0	0	0
	1936	0	0	0	0	0	0
	1937	20	0	0	0	0	0
	1938	658	0	0	0	0	0
		2,701	10	26	0	0	0
Morell river, P.E.I.	1918	44	0	0	0	0	0
	1919	48	0	1	0	0	0
	1920	0	0	0	0	0	0
	1921	49	(s) 1	0	0	0	0
	1922	78	0	0	0	0	0
	1923	48	0	1	0	0	0
	1924	39	0	0	0	0	0
	1925	0	0	0	0	0	0
	1926	0	0	0	0	0	0
	1927	0	0	0	0	0	0
	1928	0	0	0	0	0	0
	1929	137	(t) 5	1	0	0	0
	1930	273	(t) 2	(v)10	0	0	0
	1931	0	0	0	0	0	0
	1932	0	0	0	0	0	0
	1933	0	0	0	0	0	0
	1934	0	0	0	0	0	0
	1935	0	0	0	0	0	0
	1936	0	0	0	0	0	0
	1937	34	0	0	0	0	0
	1938	0	0	0	0	0	0
		750	8	13	0	0	0

TABLE No. 2—*Concluded*

Place where tagging was done	Year	Number of Tags attached	Year after tagging during which clean fish were recaptured				
			First year	Second year	Third year	Fourth year	Fifth year
Tadoussac pond, Que.	1913	37	0	0	0	0	0
	1914	99	0	3	0	0	0
	1915	69	6	0	0	0	0
	1916	98	0	1	0	0	0
	1917	60	0	3	0	0	0
	1918	0	0	0	0	0	0
	1919	50	0	0	0	0	0
	1920	126	0	0	0	0	0
	1921	102	1	1	0	0	0
		641	7	8	0	0	0
York pond, Que.	1917	25	0	(e) 1	0	0	0
	1918	50	0	0	0	0	0
	1919	150	0	1	0	0	0
York river, Que.	1921	100	0	0	0	0	0
		325	0	2	0	0	0
Allen's lake andPort Maitland, N.-S.		264	5	0	0	0	0
Margaree Pond, N.S.		3,776	44	130	3	0	1
Nictaux, pond, N.S.		895	14	19	1	0	0
River Philip, Wallace river and River Philip pond, N.S.		1,482	2	9	0	0	0
Sackville pond, N.S.		637	15	11	0	1	0
Miramichi pond and Cains river. N.B.		2,741	8	22	0	3	0
Tabusintac river, N.B.		32	0	0	0	0	0
Restigouche, Upsalquitch, Kedgwick, Little-Main and Matapedia rivers, N.B.		719	3	8	0	0	0
Tide Head and New Mills ponds, N.B.		1,440	1	16	0	0	0
Nipisiguit river, N.B.		582	2	6	0	0	0
Saint John pond, N.B.		2,701	10	26	0	0	0
Morell river, P.E.I.		750	8	13	0	0	0
Tadoussac pond, Que.		641	7	8	0	0	0
York pond and river, Que.		325	0	2	0	0	0
		16,985	119	270	4	4	1

Total clean recaptures..... 398

(a) Five of these were stripped and liberated at pond the second time, *viz.*, one, 1914 and 1915; one, 1930 and 1931; two, 1934 and 1935, and one, 1935 and 1936.

(b) Thirteen of these were stripped and liberated at pond the second time, *viz.*, one, 1913 and 1915; two, 1918 and 1920; one, 1921 and 1923; one, 1923 and 1925; one, 1924 and 1926; three, 1934 and 1936; two, 1935 and 1937; and two, 1936 and 1938.

(c) Twelve of these were stripped and liberated at pond the second time, *viz.*, one, 1914 and 1916; one, 1915 and 1917; one, 1916 and 1918; one, 1917 and 1919; four, 1918 and 1920; one, 1920 and 1922, and three, 1922 and 1924.

(d) One of these was stripped and liberated at pond the second time, *viz.*, 1915 and 1916.

(e) Stripped and liberated at pond the second time, *viz.*, 1917 and 1919.

(f) Tagged in spring 1921 and captured in net operated in Margaree river, stripped and liberated at pond, fall 1922.

(g) Four of these were caught the second time for fish cultural purposes, *viz.*, 1930 and 1932.

(h) Stripped and liberated at pond the second time, *viz.*, 1934 and 1937.

(j) Eight of these were stripped and liberated at pond the second time, *viz.*, one, 1932 and 1933; two 1933 and 1934; four, 1936 and 1937, and one, 1937 and 1938.

(k) Five of these were stripped and liberated at pond the second time, *viz.*, four, 1933 and 1935, and one, 1936 and 1938.

(m) Two of these were stripped and liberated at pond the second time, *viz.*, one, 1931 and 1933, and one, 1932 and 1934.

(n) Eight of these were caught the second time for fish cultural purposes, *viz.*, 1933 and 1935. One died in pond and others lost their tags during summer.

(p) Five of these were stripped and liberated at pond the second time, *viz.*, four, 1929 and 1931, and one, 1936 and 1938.

(q) Stripped and liberated at pond the second time, *viz.*, 1924 and 1925.

(r) One of these was stripped and liberated at pond the second time, *viz.*, 1924 and 1926.

(s) Stripped and liberated at Morell pond, 1921, and caught at Margaree pond, stripped and liberated, fall 1922.

(t) Three of these were stripped and liberated at pond the second time, *viz.*, two, 1929 and 1930, and one, 1930 and 1931.

(v) One of these was stripped and liberated at pond the second time, *viz.*, 1930 and 1932.

The recapture of clean salmon (table No. 2) that had been reported to December 31, 1938, constitutes 2·34 per cent of the total number (almost entirely kelts) that were tagged and liberated. The percentage of recaptures of salmon that were tagged in the various districts varies considerably, ranging from nil from the Tabusintac river to 4·71 per cent from the Margaree river. The failure of returns from the Tabusintac may be partly due to the small number, 32, that were tagged there.

The respective percentages are as follows:—

	Per cent
Allen's lake and Port Maitland, N.S.	1·89
Margaree river, N.S.	4·71
Nictaux river, N.S.	3·87
River Philip and Wallace river, N.S.	·74
Sackville river, N.S.	4·23
Miramichi and Cains rivers, N.B.	1·20
Tabusintac river, N.B.	nil
Restigouche river and tributaries and New Mills, N.B.	1·29
Nipisiguit river, N.B.	1·37
St. John river, N.B.	1·33
Morell river, P.E.I.	2·80
Saguenay river, Tadoussac, P.Q.	2·34
York river, P.Q.	0·61

The summary of all tagging, from 1913 to 1938 inclusive, with returns therefrom, shows that 119 fish—or 29·9 per cent of the total number recaptured—were taken within one year; 270 salmon, or 67·8 per cent, within the second year; and four, or one per cent, in the third year; four or one per cent in the fourth year, and one salmon, or ·3 per cent in the fifth year, after they were tagged and liberated. The fifth-year fish was from the Margaree river.

As is to be expected, only a few of the salmon tagged in 1937, and none of those tagged in 1938, were reported up to the end of 1938.

The recapture of Atlantic salmon tagged in connection with Canadian Fish Cultural Operations referred to above is analysed in *"Sea Movements of Canadian Atlantic Salmon Kelt"* (Huntsman, A. G., 1938).

The marking of fish by fin clipping has been extended to hatchery product generally as indicated by table No. 3.

——	Number marked	Species	Age	Distributed	Nature of mark—Removal of
Nova Scotia—					
Antigonish hatchery	300	Speckled trout	Yearlings	Dec. 12—Cooee Coffre lake	Adipose and right pectoral
	300	" "	"	Dec. 12—Copper lake, Antigonish county	" "
	250	" "	"	Dec. 9—Dewar dam-Barney river	" "
	200	" "	"	Dec. 14—McDonald dam-East river	" "
	150	" "	"	Dec. 16—Mountain Meadow pond-West river	" "
	173	" "	"	Dec. 16—Stewart dam tributary to Little Harbour	" "
	200	" "	Two years	Dec. 13—McLean or James river lake	" "
	389	" "	"	Dec. 9—South river	" "
	300	" "	"	Dec. 13—West river, Antigonish county	" "
	200	" "	Three years	Dec. 3—Brierly brook lake	" "
	277	" "	"	Dec. 16—Stewart dam tributary to Little Harbour	" "
Cobequid hatchery	2,000	" "	Fingerlings	Aug. 11—Gleason brook-Portapique river	Adipose and right ventral
	2,000	" "	"	July 30—Isaac lake	" "
	2,000	" "	"	Aug. 13—Maccan river, south branch	" "
	2,000	" "	"	July 30—Newfound lake	" "
	2,000	" "	"	Aug. 16—River Philip	" "
	2,000	" "	"	Aug. 23—Simpson lake	" "
	2,000	" "	"	Aug. 15—Tillie creek	" "
	2,000	" "	"	Aug. 22—Wallace river	" "
	570	" "	Wild	Nov. 21—Hart lake	Right ventral
Lindloff hatchery	10,000	Atlantic salmon	Fingerlings	Aug. 29—Grand river	Adipose and left pectoral
	1,000	Speckled trout	"	Aug. 25—Pottie lake (Madame island)	" "
Margaree hatchery	11,799	Atlantic salmon	"	Oct. 24, 25—Northeast Margaree river, Murray pool	Adipose and right pectoral
	200	Speckled trout	"	Dec. 23—Hatchery or Ingram brook	" "
	682	" "	Yearlings	Nov. 26—Lake O'Law	" "
	197	" "	Two years	May 13—Lake O'Law	" "
	100	" "	"	Nov. 21—Lake O'Law	" "
	200	" "	"	Nov. 26—Lake O'Law, upper	" "
	516	" "	Three years	May 13, 14—Lake O'Law	" "
	375	" "	"	Dec. 13—Plaster pond	" "
	140	" "	"	Dec. 17—Lake O'Law	" "
	160	" "	Four years	May 13, 14—Lake O'Law	" "
	730	" "	"	Nov. 21—Lake O'Law	" "
	550	" "	"	Dec. 16—Plaster pond	" "
	680	" "	Five years	May 12—Lake O'Law	" "
Middleton hatchery	7,000	Atlantic salmon	Fingerlings	Sept. 12—Gaspereau river	Adipose and left ventral
Nictaux Falls rearing station	3,000	" "	"	Sept. 12—Gaspereau river	" "
Yarmouth hatchery	6,000	Atlantic salmon	Yearlings	Apr. 12, 1937—Clyde river	Adipose and right ventral
	4,000	" "	"	Apr. 20, 1937—Mersey river	" "
	600	Speckled trout	"	Dec. 8—Gardener brook	" "
	739	" "	Two years	Dec. 8—Gardener brook	" "

TABLE No. 3—FISH MARKED BY FIN CLIPPING, 1938—*Continued*

——	Number marked	Species	Age	Distributed	Nature of mark—Removal of
New Brunswick—					
Florenceville hatchery....	500	" "	Yearlings....	June 16—Brown lake.....	Adipose and left pectoral
	400	" "	"	June 16—Hagerman brook-St. John river.....	" "
	300	" "	"	June 15—Hardwood brook-St. John river.....	" "
	500	" "	"	July 21—Kingsley brook-Nashwaaksis river.....	" "
	600	" "	"	July 26—Limekiln brook-Nashwaak river.....	" "
	500	" "	"	June 15—Pokiok river.....	" "
	500	" "	"	July 29—Tinkettle brook-Nashwaak river.....	" "
	391	" "	Three years.	June 14, July 18—Bull creek-St. John river.....	" "
	250	" "	"	June 9, 10—Cranberry lake.....	" "
	240	" "	"	June 21, 22—Cross creek-Nashwaak river.....	" "
	180	" "	"	June 18—Second Eel river lake.....	" "
	600	" "	"	June 3, 8, 11, 13—Nashwaak river.....	" "
	360	" "	"	June 4, 7, 17—Nashwaaksis river.....	" "
	180	" "	"	June 18—Shogomoc river.....	" "
	200	" "	Five years..	May 16, 18—Big Guisiguit river.....	" "
	200	" "	" ..	May 16, 19—Little Guisiguit river.....	" "
	100	" "	" ..	May 17—Gallivan brook-St. John river.....	" "
	100	" "	" ..	May 18—McLeary brook-Lakeville pond.....	" "
	150	" "	" ..	May 17, 19—River de Chute.....	" "
Grand Falls hatchery.....	(a) 7,000	Atlantic salmon...	Fingerlings..	Sept. 30—St. John river, at Kilburn ferry.....	Adipose and right pectoral
	(a) 5,000	" " ...	"	Sept. 30—St. John river, at lower Perth.....	" "
	(a) 5,000	" " ...	"	Sept. 30—Salmon river, at Boat Landing.....	" "
	(a) 5,000	" " ...	"	Sept. 19—Salmon river headwaters.....	" "
	(a) 5,000	" " ...	"	Sept. 28—Hayley brook-Tobique river.....	" "
	(a) 5,000	" " ...	"	Sept. 26—Tobique river, Millers bogan.....	" "
	(a) 5,000	" " ...	"	Sept. 29—Tobique river, at Plaster rock.....	" "
	(a) 5,000	" " ...	"	Sept. 27—Tobique river, Waters bogan.....	" "
	2,000	Speckled trout.....	"	Sept. 29—Private pond, Power creek, Mr. Zeno Martin	" "
Miramichi hatchery.....	4,000	Atlantic salmon...	"	Aug. 19—Northwest Miramichi river.....	Adipose and right ventral
	2,000	" " ...	"	Aug. 11—Sevogle river-Northwest Miramichi river...	" "
	5,500	" " ...	"	Aug. 13, 22—Southwest Miramichi river.....	" "
	3,440	" " ...	"	Aug. 23—Renous river-Southwest Miramichi river....	" "
St. John hatchery.....	545	Rainbow trout....	Yearlings....	Sept. 30—Crooked creek.....	Adipose and right ventral
	719	" "	Two years...	Oct. 3, 5—Crooked creek.....	" "
	12,000	Sebago salmon....	Fingerlings..	Sept. 24—Chamcook lake.....	Anal
	10,000	" "	Yearlings....	Sept. 23—Chamcook lake.....	Adipose and left pectoral
	1,612	Ouananiche.....	Two years...	Sept. 28—Chamcook lake.....	Adipose and right pectoral
	5,000	Speckled trout....	Fingerlings..	July 18—Red Rock lake.....	Adipose and right ventral
	2,700	" "	Yearlings....	Dec. 7—Loch Lomond.....	" "
	566	" "	"	Dec. 7—Lily lake-Rockwood Park.....	" "

	1,000	"	"	Two years..	Dec. 7—Loch Lomond.....	"	"
	267	"	"	" ..	Dec. 7—Lily lake-Rockwood Park.....	"	"
	9	"	"	Five years...	Dec. 7—Lily lake-Rockwood Park.....	"	"
Prince Edward Island—							
Kelly's Pond hatchery....	24,316	"	"	Fingerlings..	Aug. 22, 23—Vessey brook-Winter river.....	Adipose and left pectoral	
Total.....	191,902						

(a) Restigouche stock.

The percentage of marked trout that have been reported from different districts varies greatly in relation to the number that were marked. In some districts the anglers and residents do not seem to be interested to a sufficient extent to go to the trouble of reporting the capture of marked fish to the department, or to the nearest fishery officer.

The numbers of marked fish reported from 1935 to 1938, inclusive, are as follows:—

RECAPTURES OF FISH WITH FINS MISSING

Where recaptured	Number	Species	Date	Distributed from	Fins missing
Lake Edward dam, tributary to Gardener brook	20	Speckled trout	April 19, 1936	Yarmouth hatchery	Adipose and right ventral
Gardener brook	several	"	Spring, 1936	" "	" "
Whitehouse Mill—Salmon river	8	"	April 25, 1936	" "	" "
Hick's Falls—Carleton river	several	"	Spring, 1936	" "	" "
Lake Skinner	several	"	Spring, 1936	" "	" "
Chamcook lakes	40	Sebago salmon	Oct. 21-Nov. 13, 1936	St. John hatchery	Adipose and right pectoral
Kejimkujik lake	several	Speckled trout	April and May, 1937	Yarmouth hatchery	Adipose and right ventral
Beaver lake	36	(a) "	April 1-May 31, 1937	St. John hatchery	Right pectoral
Ping Pong lake	21	(a) "	" "	" "	"
Campbell lake—River John	24	"	Angling season, 1937	Antigonish hatchery	Adipose and right pectoral
Cooee Coffre lake	458	"	" "	" "	" "
Copper lake	87	"	" "	" "	" "
Donahue lake	178	"	" "	" "	" "
James River lake or McLean lake	228	"	" "	" "	" "
Long lake—East River St. Mary	31	"	" "	" "	" "
Sherbrook lake	231	"	" "	" "	" "
Simon lake	23	"	" "	" "	" "
South River lake	32	"	" "	" "	" "
Stewart dam on tributary to Little Harbour	113	"	" "	" "	" "
West river	16	"	" "	" "	" "
Antigonish Harbour	6	"	" "	" "	" "
Chamcook lakes	26	Sebago salmon	Oct. 23-Nov. 1, 1937	St. John hatchery	" "
Copper lake	198	Speckled trout	Angling season, 1938	Antigonish hatchery	" "
Cutler lake	400	"	" "	" "	" "
Dobson lake	125	"	" "	" "	" "
Donahue lake	224	"	" "	" "	" "
Grant lake	36	"	" "	" "	" "
James River lake or McLean lake	332	"	" "	" "	" "
Long lake—East River St. Mary	46	"	" "	" "	" "
Sherbrook lake	187	"	" "	" "	" "
Simon lake	150	"	" "	" "	" "
South River lake	37	"	" "	" "	" "
Stewart dam on tributary to Little Harbour	700	"	" "	" "	" "
Trout lake	40	"	" "	" "	" "
Grand lake	22	Sebago salmon	May-Sept., 1938	Grand Lake ponds	Adipose and right ventral
Hart lake	18	Speckled trout	Oct. 19-Nov. 11, 1938	Cobequid hatchery	Adipose
Chamcook lakes	1	Sebago salmon	June 3, 1938	St. John hatchery	Adipose and right pectoral
Chamcook lakes	65	"	Oct. 25-Nov. 16, 1938	" "	" "
Chamcook lakes	2	"	Oct. 25, 26, 1938	" "	Adipose and right ventral
Ping Pong lake	1	(a) Speckled trout	May 30, 1938	" "	Right pectoral

(a) Wild stock from Rairdon brook.

The 20 speckled trout listed under lake Edward were caught on April 19, 1936, in Gardener brook, one mile upstream from the point of liberation, five days later. The eight caught at Whitehouse Mill, Salmon river, were distributed in lake Ellenwood and were caught three miles upstream from the point of distribution within a period of 10 days. Those caught in Hick's falls, Carleton river, were distributed in lake Skinner in November, 1935, and had travelled downstream from ten to twelve miles before they were taken the following spring. Lake Skinner has no outlet which these fish could ascend and this condition may explain their movement downstream, which is the reverse of most recaptures.

With the exception of the sebago salmon caught on June 3, 1938, all the others listed were taken during egg collecting operations at the Chamcook lakes. Three more marked sebagos were reported by anglers, and the supervisor of fisheries for the district also reports that angling conditions were reasonably satisfactory and about 90 per cent of the fish taken bore the hatchery marks.

The Kejimkujik trout had travelled considerable distance from the point of liberation, crossed the lake, descended the Mersey river and were taken in the latter's tributaries.

The recaptures at Beaver and Ping Pong lakes afford additional proof that stunted races of speckled trout attain normal growth if they are transferred to a more suitable habitat where normal quantities of natural food are available.

The trout planted in these lakes came originally from Rairdon brook where they averaged 0·8 ounce in weight and five inches in length. They were retained and fed at St. John hatchery for a year, increasing in weight to 3·7 ounces and in length to 9¼ inches. They were then marked and distributed in Beaver and Ping Pong lakes. The 36 recaptures in 1937 in Beaver lake showed a good growth ranging up to 11 inches in length. Two had descended to Mispec river and were taken 2½ miles from point of liberation. Others were taken in the lake 1¼ miles from point of liberation so that the maximum range of spread was 3¾ miles. The 21 recaptured in 1937 in Ping Pong lake ranged up to 12 inches in length and the largest was three-quarters of a pound in weight. One taken in 1938 weighed 15½ ounces. This lake has no outlet and the fish are evenly distributed over its entire area.

The recaptures of marked trout reported from the Antigonish area up to the close of the angling season in 1938 represents 16·5 per cent of the number marked and distributed from that hatchery from 1935 to 1937 inclusive. The respective percentage recaptures of the marked fish distributed in the several lakes and streams in this district varies considerably, as shown in the following summary:—

Water	Number marked fish distributed	Number recaptured	Percentage recaptured
Campbell lake—River John	900	24	2·7
Cooee Coffre lake	1,000	458	45·8
Copper lake	900	285	31·7
Cutler lake	500	400	80·0
Dobson lake	468	125	26·7
Donahue lake	1,500	402	26·8
Grant lake	200	36	18·0
James River lake or McLean lake	1,000	560	56·0
Long lake—East river St. Mary	3,504	77	2·2
Sherbrook lake	1,700	418	24·6
Simon lake	690	173	25·1
South River lake	1,816	69	3·8
Stewart dam on tributary to Little harbour	1,625	813	50·0
Trout lake	200	40	20·0
West river	2,800	22	·8

Of the Cooee Coffre Lake group caught in 1937 seventy-six were taken in Sand lake, 87 in Pan Handle lake, 16 in Cole Harbour river and the balance in the lake where they were distributed.

Of the Sherbrook Lake group caught during the angling season of 1937, twenty-five were taken in the lake outlet, one in St. Mary's river and a number in Thud lake, three miles above Sherbrook lake. Those caught in 1938 were taken in the lake and in the outlet stream.

From those caught during the angling season of 1938 in the Dobson Lake group nineteen were taken one mile below the lake; in the Donahue Lake group twelve were taken one-quarter mile below the lake; in the McLean Lake group fourteen were taken below McLean lake; and in the Trout Lake group twenty were taken one-quarter to one-half mile below Trout lake—the balance in all cases being taken in the lakes where they were planted.

The eighteen marked trout from Hart lake were taken during egg-collecting operations and had been marked during a similar operation the previous year. The percentage recaptured in this instance was quite small, but angling had been carried on rather extensively during the intervening year.

The first distribution of marked Atlantic salmon from the Florenceville hatchery was made in 1935. These were from the spawning of 1933. Two salmon were reported with fins missing in June and July, 1938. The examination of the scales showed two years of parr life and two years in the sea.

ANTIGONISH HATCHERY

—	Atlantic salmon			Rainbow trout		Speckled trout						
	Advanced fry	Fingerlings		Fingerlings No. 2	Yearlings	Fingerlings				Yearlings	Two years	Three years
		No. 1	No. 2			No. 1	No. 2	No. 3	No. 4			
Antigonish Co.—												
Beaver Meadow river						70,000						
Brierly brook						20,000						
Brierly brook lake												200
Copper lake						30,000				300		
Glenroy river						80,000						
James river	40,000	25,000										
Maryvale brook						15,000						
Meadow Green river						75,000						
McLean lake or James river lake						25,000					200	
North lake						25,000						
Polson brook—South river						25,000						
Rights river	40,000	25,000										
South river		40,000	9,304								973	195
South river lake						55,000						
South lake						25,000						
Springfield brook—Glenroy river								5,000				
West river						115,000	25,000				300	
Guysborough Co.—												
Cole Harbour lake						25,000	3,606					
Cooee Coffre lake						40,000				300		
Country Harbour river	80,000	70,000										
Cutler lake							20,000					
Dobson lake						15,000	3,500					
Donahue lake						40,000						
Doyle lake						10,000						
Eight Island lake						10,000						
Ecum Secum river						39,000						
Fitzgerald lake						10,000						
Goldboro lake						10,000						
Guysborough river		30,000				35,000	25,000					
Hazel Hill lake						45,000						
Indian Harbour lake						39,000						
Jellow lake						40,000						
Lawlor lake								4,000				
Long lake—Salmon river						20,000						
Long lake—East river St. Mary									1,700			
Narrow lake						10,000						

ANTIGONISH HATCHERY—*Concluded*

—	Atlantic salmon			Rainbow trout		Speckled trout						
	Advanced fry	Fingerlings		Fingerlings No. 2	Yearlings	Fingerlings				Yearlings	Two years	Three years
		No. 1	No. 2			No. 1	No. 2	No. 3	No. 4			
Guysborough Co.—*Concluded*												
Nickerson lake						10,000						
East River St. Mary	125,000	250,000										
West River St. Mary	125,000	195,000	60,000									
Salmon river		100,000				30,000	25,000					
Seal Harbour lake						10,000						
Sherbrook lake						52,000						
Square lake						20,000						
Smelt lake				24,694	971							
Tracadie river		60,000										
Pictou Co.—												
Barney river	40,000	60,000										
Big brook—East river						20,000						
Brora lake						50,000						
Calder lake						40,000						
Big Cariboo river						6,000						
Little Cariboo river						18,000						
Chisholm lake—East river						50,000						
Chisholm lake—West river St. Mary						40,000						
Dewar dam—Barney river						10,000				250		
East river		50,000										
French river		55,000										
French river, branch						25,000	15,000					
Fraser's or Horse pond—Little Harbour									300			
Little Harbour lake						50,000						
Maple lake						10,000						
McLellan brook						35,000						
McDonald dam—East river										200		
Middle river		20,000										
Mountain Meadow pond—West river										150		
Six Mile brook						42,000						
Stewart dam tributary to Little Harbour										173		277
West branch brook						20,000						
West river						90,000	50,000					
	450,000	980,000	69,304	24,694	971	1,576,000	167,106	9,000	2,000	1,373	1,473	672

Total distribution 3,232,593

BEDFORD HATCHERY

	Atlantic Salmon		Speckled trout	
	Advanced fry	Fingerlings No. 1	Advanced fry	Fingerlings No. 1
Experimental pond (Job's) Wittenberg				2,000
Colchester Co.—				
Otter brook				33,000
Pembroke river	45,000	42,000		
Stewiacke river, south branch				33,000
Halifax Co.—				
Big Salmon river		42,000		
Brown lake—Musquodoboit river				30,000
Chezzetcook river		21,000		
Conrod lake			33,000	
Governor brook—Nine Mile river		42,000		
Halfway river				33,000
Little Sheldrake lake			33,000	
McGrath lake				30,000
Moser river		42,000		
Musquodoboit river, upper		30,000		
Oyster ponds			33,000	
Upper Petpeswick—Long Bridge or Bridge End lake				33,000
Porter lake		20,000		
Quoddy river		21,000		
Sackville river		42,550		
Salmon river (Port Dufferin)		30,000		
Ship Harbour lake		40,575		
Taylor brook		42,000		
Little West river—Sheet Harbour		21,000		
West River Sheet Harbour		42,000		
Hants Co.—				
Cameron lake				13,600
Coxcomb lake				33,000
Five Mile lake				30,000
Kennetcook river		40,000		
Lunenburg Co.—				
Corkum lake			33,000	
Gold river		133,000		
Middle river		84,000		
Mill lake—Canaan river				20,000
Mill lake—Hubbard river				30,000
Spectacle lake				33,000
Seffernsville lake			33,000	
Spondo lake brook			33,000	
	45,000	735,125	198,000	353,600

Total distribution 1,331,725

COBEQUID HATCHERY

—	Atlantic salmon			Speckled trout		
	Fry	Advanced Fry	Fingerlings No. 1	Fingerlings No. 1	Fingerlings No. 2	Fingerlings No. 3
Westmorland Co.—						
Chapman pond brook					7,500	
Lac St. Emile					1,000	
Little Shemogue river					7,500	
Colchester Co.—						
Bass river, at Five Islands				15,000		
Debert river			100,000			
East river, at Five Islands				15,000		
Economy river		120,000	40,000			
Economy lake				15,000		
Folly river		60,000	40,000			
Folly lake				15,000		8,000
Gamble lake					10,000	
Little Gamble lake						3,000
Great Village river		60,000	40,000			
Hart lake					20,000	
Irving lake				10,000		
Long lake—French river				10,000		
McCallum lake				10,000		
Moose lake				5,000		
Newton lake				15,000		
North river, near Truro			110,000			
Portapique river		60,000	40,000			
Salmon river		60,000	105,000			
Shatter lake				10,000		
Silica lake or Bass River lake				15,000		
Simpson lake				30,000		4,000
Truro Reservoir, Leper brook					8,000	
Waughs river				10,000		
Whirley Wha lake				10,000		
Cumberland Co.—						
Amherst Pumping Station pond				10,000		
Black river				15,000		
Blair lake					10,000	
Currie pond				10,000		
East river—Maccan river					10,000	
Fountain lake				25,000		
Fox river				5,000		
French river				20,000		
Gilbert lake				20,000		1,000
Gleason brook—Portapique river				10,000	2,000	
Halfway river lake				20,000		
Harrison lake					8,168	
Isaac lake				20,000	2,000	
Little lake—Newfound lake				5,000		
McAloney lake				15,000		1,000
Maccan river	60,000	50,000	20,000			
Maccan river, south branch				20,000	2,000	
Maccan river, west branch				20,000		
Mountain brook				10,000		
Newfound lake				20,000	2,000	
Parrsboro Aboiteau				15,000		1,000
Polly brook				5,000		
Pugwash river				20,000		
Ramshead river				5,000		
River Philip	60,000	135,000	303,600		8,000	
River Philip, east branch				15,000		1,783
River Philip, west branch				15,000		
Shinimikas river		100,000				
Sugarloaf brook				15,000		
Sutherland lake				10,000	7,000	
Tidnish river		40,000			10,000	
Tillie creek				5,000	5,000	
Vickery lake					10,000	
Wallace river	60,000	135,000	50,000	20,000		2,000
Wallace river, west branch				20,000		
Pictou Co.—						
River John				15,000		
	180,000	820,000	848,600	590,000	130,168	21,783

Total distribution 2,590,551

COLDBROOK REARING PONDS

	Speckled trout Fingerlings No. 4
Kings Co.—	
Annapolis river	5,000
Aylesford lake	32,000
Canard river	3,000
Cornwallis river	5,500
Gaspereau lake	15,000
Habitant river	3,000
Hardwood lake	5,000
Kinsman brook	500
Lake Paul	5,000
Lake Torment	20,000
Mack lake	2,000
Murphy lake	5,000
Nimchin Page lake	3,000
Parker brook	500
Thomas Clark brook	500
Trout river	3,000
	108,000
Total distribution	108,000

GRAND LAKE REARING PONDS

—	Atlantic salmon	
	Fingerlings No. 3	Yearlings
Halifax Co.—		
Big Salmon river	25,000	.....
Chezzetcook river	39,000	.....
Grand lake	9,624	.....
Ingram river	52,000	5,500
Musquodoboit river	13,000	.....
Nine Mile river	39,000	2,000
Partridge run-Echo lake	13,000	.....
Quoddy river	24,000	.....
Sackville river	26,000	6,807
Salmon river (Jeddore Harbour)	12,000	.....
Salmon river (Port Dufferin)	24,000	1,500
Ship Harbour river	12,000	3,500
Little West river-Sheet Harbour	24,000	.....
West river-Sheet Harbour	37,000	.....
Hants Co.—		
Kennetcook river	26,000	.....
Pembroke river	13,000	.....
Stewiacke river	13,000	.....
Lunenburg Co.—		
Gold river	39,000	4,000
Middle river	38,000	5,500
	478,624	28,807
Total distribution	507,431	

KEJIMKUJIK REARING PONDS

—	Atlantic salmon Fingerlings			Speckled trout Fingerlings	
	No. 1	No. 2	No. 3	No. 3	No. 4
Annapolis Co.—					
Cashman brook					3,000
Little river				3,000	9,000
Fairy lake					3,000
Maitland river					3,000
Mount Tom brook					6,000
Roger brook					6,000
West river					12,000
Queens Co.—					
Grafton lake					2,128
Kejimkujik lake					15,000
Medway river	20,000	33,000	42,000		
Menchan lake					4,000
Mill pond—Medway river					3,500
	20,000	33,000	42,000	3,000	66,628

Total distribution 164,628

LINDLOFF HATCHERY

—	Atlantic salmon Fingerlings	Rainbow trout Fingerlings	Speckled trout Fingerlings	
	No. 2	No. 2	No. 2	No. 3
Cape Breton Co.—				
Enon lake (via Munroe lake)		11,125		
Gaspereau river	55,470			
Lever lake		11,124		
Salmon river	162,838			
Richmond Co.—				
Black river			20,000	
Ferguson lake			20,000	
Grand river	200,898			
Grand lake (Madame island)			30,000	
Mary Ann's lake			3,000	
McIsaac lake			20,000	
Pottie lake (Madame island)				18,486
Saint Esprit lake			15,000	
Seaview lake			18,000	
Shaw lake (Madame island)				15,000
Thompson lake			5,000	
Tillard river, east			20,000	
	419,206	22,249	151,000	33,486

Total distribution 625,941

—	Atlantic salmon					Speckled trout					Yearlings	Two years	Three years	Four years	Five years
	Advanced fry	Fingerlings				Fingerlings									
		No. 1	No. 2	No. 3	No. 4	No. 1	No. 2	No. 3	No. 4	No. 5					
Cape Breton Co.—															
Bell lake									15,000						
Black brook—Mira river								5,000							
Brown lake								15,000							
Canoe lake								10,000	10,000						
Catalogne lake									20,000						
Chain lakes—Mira river								10,000	10,000						
English lake								5,000							
Ferguson lake								10,000							
Forester lake									10,000	10,000					
Giovanetti lake									10,000						
Gillis lake									30,000						
Grand lake—Indian bay								20,000							
Hardy lake									20,000						
Jackson lake										20,000					
Keefe lake									10,000						
McCormack lake									20,000						
McDonald or Widow lake								10,000							
McInnes lake									10,000						
McIntyre lake									15,000						
McPherson lake									10,000						
McVicar lake										10,000					
Meadow brook-Sydney river								20,000							
Scotch or Scott lake									20,000						
Stewart lake								10,000							
Trout brook—Mira river								5,000							
Dalem lake (Boularderie island)								20,000							
Inverness Co.—															
Captain John's brook								5,000							
Cheticamp river		150,000	35,000												
Flat brook							5,000								
Gallant river						65,000	30,000			5,000					
Gillis brook						20,000									
Glen brook—River Denys							10,000								
Graham river								6,000							
Grand Etang brook							10,000								
Horton lake							10,000								
Little Judique river								6,000							
Northeast Mabou river						60,000									
Southwest Mabou river							50 000								
Northeast Margaree river—															
Between Black Rock and Ward's pool		50,000													
Big brook						90,000				7,000					
Big Intervale bridge	200,000		65,000	30,000	4,650										
Black Rock pool		50,000	30,000												
Cranton bridge	150,000				4,000										

—	Atlantic salmon					Speckled trout									
	Advanced fry	Fingerlings				Fingerlings					Yearlings	Two years	Three years	Four years	Five years
		No. 1	No. 2	No. 3	No. 4	No. 1	No. 2	No. 3	No. 4	No. 5					
Inverness Co.—*Concluded*															
Northeast Margaree river—*Concluded.*															
Doyle's bridge		60,000													
Egypt brook						90,000				3,000					
Forest Glen brook							30,000			5,000					
Hart pool					4,000										
Hatchery or Ingram brook						20,000				5,200		102	274		
Ingraham bridge	80,000														
Island brooks	50,000														
Lake O'Law brook						91,211				7,000					
Lake O'Law									10,000	42,315	682	297	656	890	680
Fortune brook						30,000									
McKinnon brook						30,000									
Lake O'Law, upper									10,000	26,000		200			
Levis brook						77,289				5,000					
McDaniel pool		50,000													
McDermid pool	100,000														
McDonald brook						30,000									
McLean pool				40,000											
McLeod brook						30,000									
Murphy brook						17,167				3,000					
Murray brook						30,000				3,000					
Murray pool				30,000	20,000										
Old bridge pool				24,000											
Rock pool				30,000	8,000										
Ross bridge	200,000				4,000										
Stewart brook					8,000										
Stewart brook, above		60,000		15,000	8,000										
Stewart brook, below		100,000			8,000										
Tingley crossing	100,000		30,000												
Ward's pool		50,000		30,000											
Watson brook						15,000									
McColl brook							10,000								
McDonnell brook—tributary to Margaree Harbour						20,000									
McPherson brook-River Denys								10,000							
Mull river		75,000													
Plaster pond													375	550	
Plateau brook							30,000								
Skye brook							20,000								
Soutnwest Margaree river	100,000														
Captain Allan's brook						50,000									
McDonnell brook						50,000									
McFarland's bridge	200,000														
Matheson Glen brook						50,000									
Salt brook			20,000												
Strathlorne brook						40,000									

Victoria Co.—															
Baddeck bay brook						30,000									
Baddeck river—															
Farquar Angus or McDonald brook							30,000								
Forks		75,000													
Gillis brook							15,000								
North branch		75,000													
Peter brook						60,000									
Barachois river								20,000							
Big Harbour brook						30,000									
Giffin lake								6,000							
Morrison lake								6,000							
Middle river	80,000														
Beaver brook						65,000				3,675					
Cold brook							15,000								
Indian brook						65,000									
McDonald brook						50,918									
McLennan's bridge	100,000														
North river		150,000	75,000												
Church river								20,000							
Tarbot river								20,000							
South Gut brook							30,000								
Washabuck river								20,000							
	1,360,000	945,000	255,000	199,000	68,650	1,206,585	295,000	259,000	230,000	155,190	682	599	1,305	1,440	680

Total distribution.....4,978,131.

MERSEY RIVER POND

	Atlantic salmon Fingerlings No. 3
Queens Co.—	
Mersey river	34,100
Lower Great brook	11,300
Upper Great brook	19,200
Total distribution	64,600

MIDDLETON HATCHERY

—	Atlantic salmon Fingerlings			Salmon trout		Speckled trout		
				Advanced fry	Fingerlings No. 1	Fingerlings		
	No. 1	No. 2	No. 3			No. 1	No. 2	No. 3
Annapolis Co.—								
Annie Morehouse lake							10,000	
Bailey lake								10,000
Bear river		20,000						
Beaver lake—Bear river							10,000	
Bogart lake								10,000
Crisp brook						5,000		
Elliott lake							10,000	
Fed lake								8,000
Foster lake								7,000
Gibson lake							10,000	
Lake Jolly							15,000	
Lamb brook								10,000
Lequille river		50,000						
Lily lake						6,000		3,000
Little river—Annapolis river								7,000
Long lake—Bear river								10,000
Long lake—North Mountain								10,000
Lower Sixty lake								10,000
McGill lake							15,000	10,000
Milford lake						25,000		
Milbury lake								5,000
Morton brook							10,000	
Nictaux river			1,350					10,000
North lake—Round Hill river								10,000
Paradise lake						10,000		
Parker brook						10,000		
Rumsey lake							15,000	
Round Hill river		45,000						
Sand lake								11,000
Sandy Bottom lake							15,000	
Shannon lake						20,000		
Simpson lake								10,000
Slocomb brook						5,000		
Todd lake							10,000	
Trout lake							10,000	
Walker lake							10,000	
Waterloo lake								12,000
Young lake								5,000
Zwicker lake						10,000		
Digby Co.—								
Barnes lake							10,000	
Mallett lake								10,000
Porter or Mistake lake							8,000	
Hants Co.—								
Avon river, south branch		20,000						
Falls lake stillwater							10,000	
Halfway river								6,275
Lebreau brook								5,000
Mockingigh lake								12,000
Murphy lake							10,000	
Panuke lake								15,000
Zwicker lake							10,000	
Kings Co.—								
Gaspereau river		15,000	7,000					
Lunenburg Co.—								
Butler lake							10,000	
Canoe lake, north								7,000
Canoe lake, south								7,000
Card lake						25,000		
Feener lake								7,000
Franey lake							10,000	
Gold river	50,000	45,000						
Holbert lake							10,000	
Indian lake							10,000	
LaHave river		50,000						
Lake William						20,000		
Lewis lake							10,000	
Middle river		45,000						
Petite river		45,000						
Sherbrooke lake				120,000	174,575			
Smith lake							8,000	
Vaughan lake								10,000
Wentzell lake								7,000
West lake							8,000	
Whetstone lake							15,000	
Whitney lake						10,000		
Wiles Stillwater—La Have river							8,000	
Queens Co.—								
Little Winford or Long lake—Medway river								10,000
Maligeak lake							15,000	
Medway river		90,000						
Mersey river, headwaters								20,000
	50,000	425,000	8,350	120,000	174,575	146,000	292,000	274,275

Total distribution 1,490,200

NICTAUX FALLS REARING STATION

—	Atlantic salmon			
	Advanced fry	Fingerlings		
		No. 1	No. 2	No. 3
Annapolis Co.—				
Annapolis river	.....	50,000	.....	20,000
Fales river	.....	.....	25,000	.....
Nictaux river	.....	200,000	80,000	178,400
Hants Co.—				
Avon river, west branch	.....	.....	15,000	.....
Kings Co.—				
Cornwallis river	.....	25,000	.....	.....
Gaspereau river	.....	.....	.....	3,000
Lunenburg Co.—				
LaHave river	80,000	.....	.....	.....
Queens Co.—				
Medway river	.....	.....	25,000	.....
	80,000	275,000	145,000	201,400

Total distribution 701,400

No.	—	Atlantic salmon							
		Fry	Advanced fry	Fingerlings					Yearlings
				No. 1	No. 2	No. 3	No. 4	No. 5	
	Annapolis Co.—								
1	Whalen lake								
	Digby Co.—								
2	Babine Meadows								
3	Bear river, west branch								
4	Belliveau Cove river								
5	Boar Back lake								
6	Carrying Road lake								
7	Dean brook								
8	Doucette brook								
9	Grosses Coques river								
10	Haines lake								
11	Harris lake								
12	Mallett lake								
13	Meadow brook—Carleton river								
14	Meteghan river, east branch								
15	Meteghan river, west branch								
16	Payson's Meadow								
17	Porter or Mistake lake								
18	Riviere a Margo-Meteghan river								
19	Salmon river	100,000	30,000	40,000			54,800		8,000
20	Salmon river, headwaters								
21	Seven Pence Ha'Penny river								
22	Silver river								
23	Sissiboo river								
24	Sullivan Flowage								
25	Thibault lake								
26	Wentworth lake								
	Kings Co.—								
27	Sunken lake								
	Lunenburg Co.—								
28	Blystner lake								
29	Feener's brook					200			
30	Wall lake								
31	Wiles lake								
	Queens Co.—								
32	Christopher brook								
33	Fifteen Mile brook								
34	Medway river			55,000			15,000	10,000	6,000
35	Medway river, headwaters								
36	Mersey river								5,000
37	Tupper lake								
	Shelburne Co.—								
38	Baker's Flats pond								
39	Birchtown brook								
40	Clyde river		120,000		50,000		34,000		6,000
41	Deception brook								
42	East river								
43	Lake George								
44	Granite Village brook								
45	Pugg lake								
46	Tigney brook								
	Yarmouth Co.—								
47	Argyle river								
48	Burrell brook								
49	Carleton river								
50	Coldstream river								
51	East branch—Tusket river								
52	Ellenwood lake								
53	Gardener brook								
54	Little river—Tusket river								
55	Big Meadow brook								
56	Mood brook—Salmon river								
57	Reynard bridge—Carleton river								
58	Salmon river		75,000	35,000			15,000		
59	Tedford lake								
60	Tusket river								
		100,000	225,000	130,000	50,000	200	118,800	10,000	25,000

HATCHERY

Rainbow trout			Speckled trout									No.
Fingerlings		Yearlings	Fry	Advanced Fry	Fingerlings				Yearlings	Two years	Three years	
No. 3	No. 4				No. 1	No. 3	No. 4	No. 5				
								5,000				1
			25,000									2
								5,000				3
					25,000							4
				42,000								5
							3,000					6
			25,000									7
					15,000							8
					25,000							9
							2,500					10
								2,600				11
							2,500					12
				20,000	7,000							13
			50,000					1,000				14
			50,000									15
					20,000							16
							3,000					17
						10,000		1,700				18
												19
					25,000							20
							3,000					21
					35,000							22
							4,000					23
					13,000							24
								2,000				25
						20,000						26
	5,000											27
								4,000				28
						200			60	30	8	29
								4,000				30
200		2,500										31
								5,000				32
							6,000					33
												34
									4,000			35
												36
	7,500											37
							3,000					38
								3,000				39
												40
								3,000				41
								2,000				42
								1,000				43
								2,000				44
	6,000	2,500										45
								2,000				46
					30,000							47
					15,000							48
			100,000									49
						15,000			5,000			50
					20,000							51
							5,000					52
									8,600	739		53
						15,000						54
					20,000							55
					15,000							56
						10,000						57
												58
				56,000								59
					50,000	3,750						60
200	18,500	5,000	250,000	118,000	315,000	73,950	32,000	43,300	17,660	769	8	

Total distribution..... 1,533,387

NEW BRUNSWICK

FLORENCEVILLE HATCHERY

—	Atlantic salmon			Speckled trout						
	Fingerlings			Advanced fry	Fingerlings			Yearlings	Three years	Five years
	No. 1	No. 2	No. 3		No. 1	No. 2	No. 3			
New Brunswick Fish and Game Protective Association—										
Fredericton branch			500				250			
Carleton branch			500							
Carleton Co.—										
Becaguimec river	135,000		34,442							
Big Guisiguit river					30,000					200
Little Guisiguit river				20,000	30,000					200
Big Presquile river	75,000	36,000								
Little Presquile river		24,000	20,000							
Big Shiktahawk river	40,000		5,000							
Little Shiktahawk river			24,769							
Bogan brook-Southwest Miramichi river	10,000									
Bull creek-Saint John river					35,000	6,000			391	
Burpee brook-Presquile river					6,000					
Carr lake					10,000					
Clearwater brook-Southwest Miramichi river	15,000									
Colton brook-Shiktahawk river					5,000					
Debec brook-Saint John river						6,000				
Dingee brook-Saint John river					1,500					
Elliot brook-Southwest Miramichi river	25,000									
Gallivan brook-Saint John river					7,000					100
Gibson creek, north branch-Saint John river						5,000				
Hagerman brook-Saint John river					15,000			400		
Hardwood brook-Saint John river					6,000			300		
McLeary brook-Lakeville pond					15,000					100
Mallory brook-Saint John river					10,000					
Maynes brook-Little Presquile river					15,000					
Meduxnekeag river	75,000	58,000	34,000							
Mile brook-Saint John river					1,000					
Southwest Miramichi river, north branch	75,000	24,000	70,000							
Southwest Miramichi river, south branch	75,000	60,000	36,000							
Monquart river	60,000		5,000							
Priest brook-Monquart river					5,000					
River de Chute					40,000					150
Simpson brook-Southwest Miramichi river	10,000									

York Co.—										
Artificial lake-Keswick river							700			
Brown lake								500		
Conn brook-Shogomoc river					5,000					
Cranberry lake									250	
Cross creek-Nashwaak river					15,000				240	
Davidson lake					35,000					
Second Eel river lake					25,000				180	
Keswick river		36,000	52,000							
Kingsley brook-Nashwaaksis river					5,000			500		
Limekiln brook-Nashwaak river					5,000			600		
Long creek-Saint John river					5,000					
McBean brook-Naskwaak river					10,000					
McCullum brook-Nashwaak river					5,000					
Mactaquac river		30,000	18,000							
Manzer Mill stream-Nashwaak river					10,000					
Middle brook-Nashwaak river					5,000					
Nackawic river		36,000	18,000							
Nashwaak river		66,000	48,000						600	
Nashwaaksis river					65,000				360	
Pidgeon brook-Nashwaak river					5,000					
Pokiok river					50,000			500		
Risteen lake					15,000					
Shogomoc river					40,000				180	
Skiff lake	50,000	58,000	18,000							
Taffa lake					20,000					
Tay creek					15,000					
Tinkettle brook-Nashwaak river					10,000			500		
	645,000	428,000	384,211	20,000	576,500	17,000	950	3,300	2,201	750

Total distribution 2,077,912

GRAND FALLS HATCHERY

—	Atlantic salmon				Speckled trout				
	Advanced fry	Fingerlings			Fry	Advanced fry	Fingerlings		
		No. 1	No. 2	No. 3			No. 1	No. 2	No. 3
Salmon River—Victoria Co.—									
Salmon river (over 10 miles)		50,000							
Salmon river flats		30,000	20,000						
Salmon river, headwaters			15,000	84,000					
Salmon river, mouth of		20,000							
Salmon river, at Estey camp		15,000	55,000						
Salmon river, at Guimont lodge		18,000	40,000						
Salmon river, at Mignault lodge			20,000						
Salmon river, at Power's camp		18,000	60,000						
Aubin crossing		20,000	20,000						
Big bogan		18,000	20,000						
Boat Landing		35,000		18,681					
Cote Mill		15,000	60,000						
Covered bridge		18,000	40,000						
Cyr flats		15,000	45,000						
Danish Mill		15,000							
Davis Mill		15,000	20,000						
Iron bridge		25,000							
Little Salmon river		45,000	35,000						
Mersereau lake					5,000				
Outlet brook					5,000				
Sutherland brook						50,000			
Watson flats		25,000							
St. John river-Victoria Co.—									
Andover		20,000							
Andover bar		40,000							
Andover, lower		25,000							
Andover, upper		20,000							
Argossy		20,000	20,000						
Aroostook			25,000						
Aroostook bar		50,000							
Aroostook Junction		20,000							
Boutout brook						10,000			3,000
Cliffordvale		15,000							
Coronation		15,000							
Costigan point		30,000							
Dee point		25,000							
Four Falls brook							15,000		7,000
Gallagher flats		20,000	40,000						
Hatchery brook, above falls									4,486
Hitchcock flats		25,000	35,000						
Inman			15,000						
Inman brook									5,000
Inman flats		55,000							
Kilburn ferry	25,000		15,000	20,000					
Limestone		30,000							
Lower Basin		20,000	15,000						
McLaughlin flats		30,000							
Morrill		25,000	75,000	15,722					
Muniac river, mouth of	25,000		25,000						
Muniac, upper		40,000							
Ortonville		25,000	35,000						
Perth		25,000	25,000						
Perth, lower	25,000	50,000	35,000	20,000					
Perth, upper		20,000							
Pokiok brook								65,000	25,000
Sullivan flats		20,000							
Undine		5,000							
Watson flats		10,000							
Tobique river (over 10 miles)		25,000							
Tobique river, mouth of		35,000							
Arthurette				15,000					
Arthurette bridge				20,000					
Bear brook					10,000				
Grear flats				20,000					
Haley brook				20,000					
Millers				20,000					
Millers bogan				20,000					
Plaster Rock				20,000					
Red Rapids			15,000	20,000					
Riley brook				35,000					
Two brooks				20,000					
Waters bogan				20,000					
Watson flats				20,000					

GRAND FALLS HATCHERY—*Continued*

——	Atlantic salmon				Speckled trout				
	Advanced fry	Fingerlings			Fry	Advanced fry	Fingerlings		
		No. 1	No. 2	No. 3			No. 1	No. 2	No. 3
Madawaska Co.—									
Baker brook	.....	.....	.....	.....	.....	.....	.....	35,000	.....
Baker lake	.....	.....	.....	.....	.....	.....	.....	80,000	.....
Grand river	.....	.....	.....	.....	.....	.....	.....	45,000	.....
Beaver brook	.....	.....	.....	.....	.....	.....	.....	10,000	.....
Big Fork	.....	.....	.....	.....	.....	.....	.....	25,000	.....
Black brook	.....	.....	.....	.....	.....	.....	.....	15,000	.....
Harrison brook	.....	.....	.....	.....	.....	.....	.....	7,000	.....
Mud brook	.....	.....	.....	.....	.....	.....	.....	10,000	.....
Violette brook	.....	.....	.....	.....	.....	.....	.....	12,000	.....
Yellow brook	.....	.....	.....	.....	.....	.....	.....	11,000	.....
Green river	.....	.....	.....	.....	.....	.....	.....	.....	140,000
Iroquois river	.....	.....	.....	.....	.....	.....	.....	80,000	37,000
Ledges pond	.....	.....	.....	.....	.....	.....	.....	10,000	10,000
Little river	.....	.....	.....	.....	.....	25,000	15,000	.....	20,000
Michaud rocks	.....	.....	.....	.....	.....	.....	.....	.....	30,000
Nine Mile brook	.....	.....	.....	.....	.....	.....	.....	.....	20,000
Private pond, Power creek, Mr. Zeno Martin	.....	.....	.....	.....	.....	.....	.....	.....	2,000
Quisibis river	.....	.....	.....	.....	.....	.....	.....	60,000	.....
Siegas river	.....	.....	.....	.....	.....	.....	.....	45,000	.....
Trout river	.....	.....	.....	.....	.....	.....	.....	125,000	25,000
Unique lake	.....	.....	.....	.....	.....	.....	.....	80,000	50,000
Lake Rond, Temiscouata Co., Que.	.....	.....	.....	.....	.....	.....	.....	.....	10,000
	75,000	1,137,000	825,000	408,403	20,000	85,000	30,000	715,000	388,486

Total distribution 3,683,889

MIRAMICHI HATCHERY

	Atlantic salmon			Speckled trout				
	Advanced fry	Fingerlings		Advanced fry	Fingerlings			Yearlings
		No. 1	No. 2		No. 1	No. 2	No. 3	
Black river—Kent Co.						3,000		
Black river—Northumberland Co.				5,000			2,566	41
Butouche river					4,000	500		
Burnt Church river					5,000			
Caraquet river				5,000				
Cocagne river					4,000	500		
Elmtree river					5,000			
Grand Aldouane river						4,000		
Green brook—Bartibog river				5,000				
Kouchibouguac river					4,000	500		
McGinnis brook					4,000	500		
Little river—Nipisiguit bay					5,000			
Little Southwest Miramichi river	450,000	392,000	50,000					
McKee Mills river					4,000	500		
Middle river	39,000							
Millstream—Nipisiguit bay					5,000			
Nappan river				5,000				
Nigadu river					5,000			
Northwest Miramichi river	1,035,000	64,000	125,000					
Millstream	101,000							
Sevogle river			200,000					
Stewart brook			23,350					
Trout brook		32,000						
Pabineau lake					4,000			
Pokemouche river				5,000				
Richibucto river, Coal branch					4,000	500		
River des Caches					5,000			
St. Nicholas river					4,000	500		
Salmon river					4,000	500		
Scoudouc river						3,800		
Southwest Miramichi river		178,500	100,000					
Barnaby river	101,000							
Cain river	90,000	172,900						
Renous river	101,000	45,000	50,000					
Dungarvon river	56,000	82,500						
Taxis river		85,200						
Tabusintac river	49,000	74,500						
Eskedelloc brook				5,000				
Tetagouche river	45,000	72,000						
Tracadie river				5,000				
Little Tracadie river				5,000				
	2,067,000	1,198,600	548,350	40,000	66,000	14,800	2,566	41

Total distribution 3,937,357

RESTIGOUCHE HATCHERY

—	Atlantic salmon Fingerlings		Speckled trout	
	No. 1	No. 2	Fry	Fingerlings No. 1
Charlo river, north branch				23,801
Christopher brook				18,000
Black brook				5,000
Eel river				18,000
Jacquet river	90,000			
Loch Lomond			4,000	
Middle river	50,000			
Nipisiguit river	352,496			
Restigouche river	767,477	29,788		
Kedgwick river	160,096			
Little Main river	138,569			
Matapedia river	543,030			
Upsalquitch river	400,000			
Walker brook				5,000
	2,501,668	29,788	4,000	69,801

Total distribution 2,605,257

No.	—	Atlantic salmon			Brown trout hybrid yearlings	Sebago salmon	
		Advanced fry	Fingerlings			Fingerlings No. 3	Yearlings
			No. 1	No. 3			
1	Atlantic Biological Station, St. Andrews, New Brunswick						
	Albert Co.—						
2	Crooked creek						
3	Little river						
4	Mechanic lake						
5	Point Wolfe river						
6	Pollett river						
7	Prosser brook-Little river						
8	Sodom lake						
9	Turtle creek-Petitcodiac river						
10	West river						
	Charlotte Co.—						
11	Bartlett brook						
12	Burns brook-Digdeguash river						
13	Chamcook lake					42,239	26,320
14	Clarence stream-Magaguadavic river						
15	Craig brook-Digdeguash river						
16	Digdeguash river						
17	Disappointment or Mistake lake						
18	Doak brook-St. Croix river						
19	Duck lake						
20	Big Eel brook						
21	Little Eel brook						
22	Gibson lake						
23	Green Brown brook-Kanus river						
24	Half Moon lake						
25	Kerr lake						
26	Lake Utopia						
27	Lepreau river						
28	Linton stream-Magaguadavic river		100,000				
29	McClary brook-St. Croix river						
30	McDougall lake						
31	Magaguadavic river		200,000				
32	Murchie brook-St. Croix river						
33	New river						
34	Red Rock lake						
35	St. Patrick lake						
36	Seal Cove brook						
37	Stein lake						
38	Welch lake						
	Kent Co.—						
39	Molus river						
	Kings Co.—						
40	Anagance river						
41	Ben lake						
42	Chisholm lake						
43	Hammond river						
44	Hatfield brook-Belleisle river						
45	Jack lake						
46	Kennebecasis river, headwaters						
47	Kennebecasis river, south branch						
48	McLeod brook						
49	Pichette lake						
50	Price brook						
51	Ray lake						
52	Robinhood lake						
53	Salt Springs brook-Hammond river						
54	Smith creek-Kennebecasis river						
55	Studholm brook or Millstream						
56	Trout creek-Kennebecasis river		100,000				
57	Wetmore dam-Kennebecasis river						
	Queens Co.—						
58	Canaan river, north forks						
59	Lake stream waters-Salmon river						
60	Salmon river		75,000				
61	Snowshoe lake						
	St. John Co.—						
62	Beaver brook-Mispek river						
63	Big Salmon river		70,000				
64	Black lake						
65	Black river	100,000	17,112	1,512			
66	Boaz lake						
67	Brandy brook-Mispek river						
68	Dolan lake						
69	Eagle lake						
70	Germain brook-Hammond river						
71	Graham lake						
72	Grassy lake						
73	Hanford brook						
74	Hanson river						
75	Henry lake						
76	Hopey lake						

HATCHERY

Ouananiche Two years	Rainbow trout		Speckled trout								No.
	Yearlings	Two years	Fry	Advanced fry	Fingerlings No. 1	Fingerlings No. 2	Fingerlings No. 4	Yearlings	Two years	Five years	
					11,500						1
	545	719									2
					5,000						3
						1,500					4
					5,000						5
					10,000						6
					5,000						7
					5,000						8
					5,000						9
					10,000						10
					10,000						11
					5,000						12
1,612											13
				15,000	10,000						14
					10,000						15
				25,000							16
				20,000							17
					5,000						18
							750				19
					2,000						20
					2,000						21
					5,000						22
					5,000						23
							750				24
					5,000						25
				30,000	5,000						26
					10,000						27
											28
					5,000						29
					10,000						30
											31
					5,000						32
					10,000						33
					5,000						34
					5,000						35
					2,000						36
					10,000						37
					5,000						38
				10,000							39
				10,000							40
							500				41
			10,000								42
				25,000							43
							500				44
							500				45
					10,000						46
					10,000						47
						1,000					48
				10,000							49
					5,000						50
					5,000						51
					5,000						52
							500				53
					10,000						54
					5,000						55
											56
					15,000						57
				5,000							58
					5,000						59
											60
					3,000						61
					3,000						62
											63
			5,000								64
											65
							1,000				66
					4,000						67
					5,000						68
							1,000				69
				10,000							70
					2,000						71
					3,000						72
				10,000							73
					10,000						74
				15,000							75
					3,000						76

No.	—	Atlantic salmon			Brown trout hybrid yearlings	Sebago salmon	
		Advanced fry	Fingerlings			Fingerlings No. 3	Yearlings
			No. 1	No. 3			
77	Hunter lake						
78	Lily lake-Rockwood Park						
79	Little river				1,885		
80	Loch Lomond						
81	Loch Lomond, third lake						
82	McDonald lake						
83	Milligan lake						
84	Moose creek						
85	Musquash river, west branch						
86	Sadler lake						
87	Southern lake						
88	Stephenson's brook pond—Loch Lomond						
89	Stoker brook-Mispek river						
90	Treadwell lake						
91	Tyne Mouth creek	75,000					
92	Wilmot brook-Loch Lomond						
	Sunbury Co.—						
93	Brisley brook						
94	Burpee brook-French lake						
95	Mersereau brook						
96	Oromocto river		75,000				
97	Otter brook						
98	Rockwell stream						
99	Shin creek						
100	Three Tree creek						
	Westmorland Co.—						
101	Hayward brook-Anagance river						
102	Memramcook river						
103	North river						
104	Petitcodiac river	100,000					
105	Tait brook-Memramcook river						
	York Co.—						
106	Baker brook						
107	Davis brook-Magaguadavic river						
108	Lake George						
109	Harvey lake						
110	Little McAdam stream						
111	Magaguadavic river						
112	Mink lake						
113	Mink stream						
114	Trout brook, upper						
115	Spring brook (James Vail)-Magaguadavic river		10,000				
116	Spring brook (Lemuel Vail)-Madaguadavic river						
		275,000	647,112	1,512	1,885	42,239	26,320

Total distribution 1,715,236

—*Continued*

Ouananiche Two years	Rainbow trout		Speckled trout								No.
	Yearlings	Two years	Fry	Advanced fry	Fingerlings No. 1	Fingerlings No. 2	Fingerlings No. 4	Yearlings	Two years	Five years	
					2,000						77
					2,000			566	267	9	78
											79
					10,000		500	2,700	1,000		80
					4,000						81
						1,000					82
					10,000						83
			20,000		10,000						84
							750				85
							1,000				86
					10,000						87
					5,000						88
					3,000						89
				10,000							90
											91
					10,000		1,000				92
					5,000						93
					5,000						94
					5,000						95
											96
					10,000						97
					5,000						98
					10,000						99
					10,000						100
					5,000						101
					4,000						102
					10,000						103
											104
					5,000						105
					5,000						106
					3,000						107
					6,000						108
					9,000						109
					3,000						110
					3,000						111
					3,000						112
					3,000						113
					3,000						114
											115
					3,000						116
1,612	545	719	35,000	195,000	471,500	3,500	8,750	3,266	1,267	9	

PRINCE EDWARD ISLAND

CARDIGAN REARING PONDS

—	Rainbow trout Fingerlings			Speckled trout Fingerlings	
	No. 2	No. 3	No. 4	No. 3	No. 4
Kings Co.—					
Bear river					5,000
Big brook-Fortune river					10,000
Big pond					10,000
Brudenell river					5,000
Coogan stream-Morell river					10,000
Crane's pond-Morell river				5,000	
Dingwell stream-Fortune river				6,000	
Fitzpatrick's pond-Seal river				5,000	
Goose river					3,000
Hay river					5,000
Head of Cardigan river					770
Leslie's pond-Souris river					1,000
McAulay brook-Morell river					3,000
McCaskil river					3,000
McDonald's pond-North lake					3,000
McInnis pond-Souris river					3,000
McKinnon stream-Morell river					5,000
McLeod's pond-Midgell river					5,000
McPherson's pond-Montague river				5,000	
McRae's pond-Montague river				5,000	
Molyneaux pond-Sturgeon river				5,000	
Montague Electric pond				6,000	
Montague river					5,000
Mooney's pond-Morell river				5,000	
Munn brook-Brudenell river					2,000
North lake					5,000
Poole's pond-Montague river					3,000
Priest pond					3,000
Quigley's pond				5,000	
Webster's pond-Marie river					5,000
Prince Co.—					
Bain creek				5,000	
Barbara Weit river					2,000
Barlow pond-Grand river				3,000	
Beaton stream-Percival river				4,000	
Bell's stream (Cape Traverse)					3,000
Brae river				4,000	
Conroy's pond				5,000	
Currie's pond-Little Pierre Jacques river					4,500
Doyle stream				5,000	
Dunk river				8,000	
Gard's pond-Mill river				4,500	
Gordon's pond-Kildare river				5,000	
Haywood's pond-Tignish river				5,000	
Kane's stream-Mill river				5,000	
Leard's pond-Trout river tributary to Lot 10 river				4,500	
McArthur's pond-Foxley river					4,000
McAusland's pond-Mill river				5,000	
McWilliam's pond-Big Pierre Jacques river					4,500
Marchbank's pond-Tyne river					3,000
Rix's pond-Kildare river				5,000	
Round pond				5,000	
Sheep river				5,000	
Tuplin's pond-Indian river				5,000	
Wilmot river					4,000
Wright Leard's pond-Dunk river					5,000
Queens Co.—					
Ballem stream					3,000
Beer's pond-Clyde river				5,000	
Belle river				6,000	
Black river					3,000
Brander's pond					4,000
Cousin's pond					5,000
Crooked creek				5,000	
Dixon's pond-Sable river				6,000	
Glenfinnan lake		23,000	36,490		
Holmes' pond-Sable river					3,000
Hope river				6,000	
Lake Verde					4,000
Lanes brook-Vernon river					2,000

CARDIGAN REARING PONDS—*Continued*

—	Rainbow trout Fingerlings			Speckled trout Fingerlings	
	No. 2	No. 3	No. 4	No. 3	No. 4
Queens Co.—*Concluded*					
Leard's pond-Pisquid river				8,000	
McLeod's pond-Belle river					2,000
McLeod's pond-Murray river					5,000
McPherson's pond-Flat river				6,000	
McPherson's pond-Pinette river				6,000	
Parson's pond-Glynde river				8,000	
Pisquid's or O'Keefes lake	12,000	15,000	6,000		
Rackham's pond-Wheatley river				6,000	
Simpson's pond-Hope river				5,000	
Stevenson's pond				5,000	
West river				7,500	5,000
	12,000	38,000	42,490	209,500	160,770

Total distribution 462,760

KELLY'S POND HATCHERY

—	Atlantic salmon		Speckled trout		
	Advanced fry	Fingerlings No. 1	Advanced fry	Fingerlings No. 1	Fingerlings No. 3
Kings Co.—					
Big Pond				10,000	
Coogan stream-Morell river				10,000	
Goose river				10,000	
Hooper's pond				10,000	
Leard's, below Mills-Morell river	56,400	53,200			
McKinnon brook-Morell river				10,000	
Mooney's bridge-Morell river		53,200			
Morell river		226,080			
Naufrage river		53,000			
Quigley's stream-St. Peters bay		34,920			
Quigley's pond				7,823	
Red bridge-Morell river		53,000			
Schooner pond		53,200			
Warren's pond-Head of East river				10,000	
Prince Co.—					
Dunk river			18,000		
Tryon river				9,600	
Queens Co.—					
Andrews pond-East river				6,852	
Callaghan's pond-East river				10,000	
Clark's stream-East river				10,000	
Coles pond-North river				7,260	
Crapaud river				9,600	
Gates pond-North river				7,260	
Graham's pond-Hunter river			5,000		
Hardy's pond-Winter river				10,000	
Pleasant Grove-Winter river				9,860	
Rackham's pond-Wheatley river			5,000		
Vessey brook-Winter river					24,316
Winter river				7,369	
	56,400	526,600	28,000	155,624	24,316

Total distribution 790,940

BRITISH COLUMBIA

ANDERSON LAKE HATCHERY

	Sockeye salmon Eyed eggs
Hillier creek—Maggie lake	1,033,359
Total distribution	1,033,359