

MAINE STATE LEGISLATURE

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MAINE PUBLIC DOCUMENTS

1952 - 1954

(in four volumes)

VOLUME 1

2

STATE OF MAINE

BIENNIAL REPORT

Atlantic Sea Run Salmon Commission

For Period

July 1, 1952, to June 30, 1954

STATE OF MAINE
BIENNIAL REPORT OF
ATLANTIC SEA RUN SALMON COMMISSION

Augusta, Maine

To the Honorable Governor and Executive Council

Sirs:

I hereby transmit, in compliance with the law, the report of the Atlantic Sea Run Salmon Commission for the two years ending June 30, 1954, together with such statistics and other pertinent information as are available.

Respectfully,

HORACE P. BOND
Chairman

CHAIRMAN'S REPORT

Our Atlantic Sea Run Salmon Commission restoration program continues to progress. Obstructions to the free movement of the fish, particularly to the vital spawning migrations, are still the principal obstacle. One fishway was constructed by Salmon Commission personnel during the biennium, several have been modified, and plans are drawn and construction of at least two others promised by the owners of the dams. Young hatchery-reared salmon are being stocked in our major rivers to build up good populations of adult spawning fish. The combination of habitat improvement and stocking should eventually provide a fishery that will in large part support itself. Citizen interest in the Atlantic salmon fishery and the restoration program has increased steadily during the past two years. Atlantic salmon clubs have been formed and tentative plans discussed for a state-wide association of sportsmen interested in the Atlantic salmon.

The research and management work of the Salmon Commission has been reorganized. This part of our program is now under the complete supervision and direction of our own Maine fishery biologists. Such an organization will result in better coordination and cooperation among our various State agencies, and lead to the fulfillment of a well-designed long term program.

HORACE P. BOND

Chairman

ATLANTIC SEA RUN SALMON COMMISSION

The Atlantic Sea Run Salmon Commission, created by the Ninety-third Legislature, has as its major duties the promulgation of "rules and regulations providing for the times, number and manner in which Atlantic Sea Run Salmon may be taken in all waters of the State."

In order that the Commission may carry out its duties and provide "such regulations as may be deemed remedial of any adverse condition proven to exist," a propagation and research program has been established.

The research program, designed to furnish scientific information on the environmental requirements of Atlantic salmon during those periods of their life cycle in which they are present in brackish and fresh waters, is provided by the U. S. Fish and Wildlife Service and the Maine Atlantic Sea Run Salmon Commission, with the assistance of the Departments of Inland Fisheries and Game and Sea and Shore Fisheries.

The three-member Commission determines policy and, within the framework of State law, gives direction to the Salmon program.

The principal research and management duties carried on by the Commission are:

1. Stream and fishway surveys and improvements
2. Stocking
3. Population and survival studies
4. Ecological investigations.

ATLANTIC SEA RUN SALMON COMMISSION

Vickery-Hill Building, Augusta, Maine

Organization Chart

Commissioners

H. P. Bond, *Chairman*

*Clerk Stenog. III (1) R. H. Cobb

S. R. Tupper

*Co-ordinator (1)

Biologist II (1)

†Laborer II (2)

‡Biology Aide (3)

*Part-time

†One vacancy

‡Seasonal

Research Committee

W. Harry Everhart, University of Maine

James S. Fletcher, Atlantic Sea Run Salmon Commission

Kenneth White, U. S. Fish and Wildlife Service

Gerry Wade, Dept. of Inland Fisheries and Game

Robert L. Dow, Dept. of Sea and Shore Fisheries

ATLANTIC SEA RUN SALMON COMMISSION

Comparative Statement of Operations

Fiscal Years Ended June 30

	1954	1953
Balance Forward July 1	\$ 15.06	*\$2,624.15
Appropriation	13,587.00	10,000.00
Transfer within fund	465.00	47.00
	\$14,067.06	\$12,671.15
Total Available	\$14,067.06	\$12,671.15

Expenditures:

Personal Services	\$ 5,965.67	\$ 4,952.68
Contractual Services	1,979.64	5,229.89
Commodities	492.90	344.17
Grants, Subsidies and Assessments	1,858.54	4.75
Capital Expenditures	1,411.00	2,119.35
	\$11,707.75	\$12,650.84
Total Expenditures	\$11,707.75	\$12,650.84

Balance:

Carried Forward June 30	\$ 1,417.70	\$ 15.06
Lapsed to General Fund	941.61	5.25
	\$14,067.06	\$12,671.15
Total	\$14,067.06	\$12,671.15

*Brought Forward . . . \$3,188.21

Adjustment (Cr.) . . . 564.06

\$2,624.15

ATLANTIC SALMON

INVESTIGATION RESEARCH ACTIVITIES

July 1, 1952--June 30, 1954

The research activities of the Atlantic Salmon Investigations during the two year period ending June 30, 1954, were under the supervision of Federal Coordinator, James E. Mason, until February, 1954, at which time the Federal Government's participation in the research phases of the investigations was terminated.

The research program has concentrated on stocking experiments, adult and smolt enumeration and migration studies on the various watersheds, obstructions, and stream surveys.

Stocking Experiments

The U. S. Fish and Wildlife Service hatchery at East Orland, Craig Brook Hatchery, and the Maine Department of Inland Fisheries and Game hatchery at Cherryfield, Tunk Lake Hatchery, have provided Atlantic salmon stock to carry out experimental stocking in various watersheds. Data on the complete stocking program may be found in Table II.

Adult Migration Studies

The Machias River and Hobart Stream have traps where adult enumeration studies may be carried out yearly. The Machias River trap was operated between July 7 and October 9, 1953, with 256 adult salmon being counted. Five of the migrants were stocked fish which had been marked (Fin clip) prior to liberation. During the period June 4 to June 30, 1954, 183 adult salmon were counted in the Machias River trap; five of these adults were marked returns. A large portion of the migrants were classified as 12 to 20 pounders, one would weigh approximately 35 pounds or more.

Two adults previously marked and released as young fish in Hobart Stream were retaken at the Hobart Stream Weir during the fall, 1953. These adults were taken following the repair of a breach in the weir structure. During the period the weir was inoperative adults were free to migrate in either direction. The capture of young-of-the-year salmon in the weir's downstream trap in the spring, 1954, indicates

that adult salmon have successfully spawned in Hobart Stream for the first time in almost eighty years.

Marked fish taken by anglers or in adult traps during the 1954 season have been recorded as follows: Dennys River, 4(D & L), 1(D & A), Narraguagus River, 1(L & R); Sheepscot River, 3(A & L); Penobscot River, 1(D & L); and Machias River, 2(L & R), 1(N & A), 1(D & L).

Smolt Migration Studies

Data collected at the two-way counting weir on Hobart Stream, Edmunds Township, have made it possible to recommend a definite stocking policy which will increase the numbers of Atlantic salmon stocked in Maine rivers at ages that result in greater numbers of smolts surviving to migration age.

Observations by biologists and information received from anglers indicate that a highly successful smolt migration has taken place on the Dennys, East Machias, Machias, Pleasant, and Narraguagus Rivers during the spring, 1954. These two-year-old smolts, following a normal two-year period of salt water life, will return to Maine streams as adults in 1956.

Reports of marked fish captured in weirs at the head of the Bay of Fundy and along the Newfoundland coast indicated the great distance travelled by smolts during the two-year period in salt water.

Obstructions

Continuing studies and evaluation of barriers and fishways have been carried on with successful fishways installed in the East Machias River and Harwood Dam on the Machias River. Sportsmen's groups on the Pleasant River and the Sheepscot River have been of great service on their respective watersheds in removing barriers to Atlantic salmon. The Caribou dam on the Aroostook River will have an approved fishway constructed as a result of the cooperation given by the owner, the Maine Public Service Company.

Stream Surveys

Data obtained during the 1950 and 1951 stream surveys have served as a basis for periodic checks of specific habitat types on the various watersheds where spawning areas, nursery areas, and resting pools have been kept under observation.

Atlantic Salmon Angling

While fishing intensity on the Narraguagus and Dennys Rivers has increased during the past few years it's expected that the presence of runs on the East Machias, Machias, Pleasant, and Sheepscot Rivers will relieve this pressure to some extent as soon as anglers become aware of their availability. The migration of adult salmon into the Machias River normally reaches a peak during the months of July and August yet angling is nil. Although the Salmon Commission does not favor the development of any one watershed, established runs should be utilized by the angler.

JAMES S. FLETCHER, *Biologist,*
Atlantic Sea Run Salmon Commission

Table I---Atlantic Salmon Rod Catches on Certain Maine Salmon Streams

Year	Dennys River				Bangor Pool, Penobscot River				Narraguagus River			
	Number Caught	Weight in Pounds			Number Caught	Weight in Pounds			Number Caught	Weight in Pounds		
		Largest	Smallest	Average		Largest	Smallest	Average		Largest	Smalles	Average
1948.....	79	14.5	6.5	9.1	15	17.0	7.0	9.8	110	20.0	4.5	9.8
1949.....	63	12.0	6.3	9.4	14	11.0	6.5	9.0	94	21.8	7.5	10.2
1950.....	39	15.5	6.0	9.0	9	10.0	6.2	8.0	34	18.5	4.2	9.6
1951.....	31	15.5	7.5	10.0	2	12.5	8.5	10.5	53	20.5	3.0	11.2
1952.....	39	23.0	7.5	10.4	35	11.5	2.5	8.5	39	19.5	7.0	10.5
1953.....	39			10.2	16			8.25	98			10.0
*1954.....	100			9.8	3			9.0	55			11.5

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Year	Machias River		East Machias River		Sheepscoot River	
	Number Caught	Avg. Wt.	Number Caught	Avg. Wt.	Number Caught	Avg. Wt.
1953.....	4	10.1	7	9.8	0	—
*1954.....	0		15	9.6	6	—

*To July 1, 1954

TABLE II—Atlantic Salmon Stocking October, 1948 to July, 1954

Experiment Number	Total Stocked	Number Marked	Mark Used	Fish per pound	Waters Stocked	Year of Majority Return
47A1-1048	7,036	7,036	L & R	70.2	Little Falls Stream	1952
47A2-1048	61,000	—	—	86.0	Penobscot River	1952
47A3-1048	12,000	—	—	168.2	Sheepscot River	1952
47A4-549	8,241	8,241	D & L	53.1	Sheepscot River	1952
47A5-549	7,322	—	—	104.0	Machias River	1952
47A6-542	7,810	—	—	126.2	Penobscot River in East Branch	1952
47A7-549	2,991	—	—	56.0	Penobscot River in Passadumkeag River	1952
47A8-549	5,820	—	—	67.5	Penobscot River in Sebois River	1952
47A9-549	5,007	5,007	D & R	46.1	Denny's River	1952
47A10-549	2,308	2,308	A & N	51.2	Little Falls Stream	1952
47A11-649	1,198	—	—	28.2	Penobscot River in Passadumkeag	1952
47A12-749	5,182	—	—	35.4	Penobscot River in Passadumkeag	1952
48A1-649	10,084	—	—	1420.0	Orland River in Gully Brook	1953
48A2-649	50,000	—	—	1517.0	Tunk Stream	1953
48A3-749	29,279	—	—	1036.0	Narraguagus River	1953
48A4-1049	30,247	30,247	L & R	170.8	Penobscot River in Sebois River	1953
48A5-1049	25,002	25,002	D & R	177.3	Machias River	1953
48A6-1049	24,837	24,837	D & L	152.5	Machias River	1953
48A7-1049	10,072	10,072	D & R	198.3	Sheepscot River	1953
48A8-1049	6,141	6,141	A & R	181.3	Little Falls Stream	1953
	101,000	—	—	—	St. Croix River; Stocking done by Department of Fisheries of Canada	
48A9-550	5,615	5,615	A & L	67.8	Little Falls Stream	1953
48A10-550	17,032	17,032	D & A	66.2	Machias River	1953
48A11-550	19,605	19,605	N & L	74.4	Penobscot River in Sebois River	1953
48A12-550	19,605	19,605	N & R	67.0	Penobscot River in Sebois River	1953
48A13-550	20,200	20,200	D & N	72.5	Sheepscot River	1953
48A14-850	394	394	N & L	10.5	Little Falls Stream	1953
48A15-551	2,011	2,011	D & N	9.5	Little Falls Stream	1953
49A1-750	100,149	—	—	1121.6	Machias River	1954
49A2-750	35,000	—	—	1140.0	Narraguagus River	1954

TABLE II—Atlantic Salmon Stocking October, 1948 to July 1954 (Continued)

Experiment Number	Total Stocked	Number Marked	Mark Used	Fish per pound	Waters Stocked	Year of Majority Returned
49A3-750	25,000	—	—	1237.0	Tunk Stream	1954
49A4-750	9,895	—	—	1499.2	Orland River in Gully Brook	1954
49A5-750	14,793	—	—	1648.3	Somesville Stream	1954
49A6-950	10,769	10,769	D & A	148.2	Little Falls Stream	1954
49A7-1050	10,004	—	—	190.9	Pleasant River	1954
49A8-1050	9,856	9,856	A & L	210.0	Narraguagus River	1954
49A9-1050	9,918	9,918	D & R	212.5	Tunk Stream	1954
49A10-1050	9,956	9,956	D & L	185.1	Denny's River	1954
49A11-1050	19,800	19,800	A & L	230.6	Sheepscot River	1954
49A12-1050	29,547	29,547	D & L	228.1	Penobscot River in Sebois River	1954
48A13-1050	29,502	29,502	L & R	185.3	Machias River	1954
49A14-551	19,935	19,935	A & N	72.1	Machias River	1954
49A15-551	20,333	20,333	D & A	64.0	Narraguagus River	1954
50A1-1051	14,988	14,988	D & N	99.0	Narraguagus River	1955
50A2-1051	14,978	14,978	D & R	100.3	Narraguagus River	1955
50A3-1051	5,962	5,962	D & L	101.2	Little Falls Stream	1955
50A4-1051	5,941	—	—	83.3	Little Falls Stream	1955
50A5-1051	4,988	4,988	D	65.9	Somesville Stream	1955
50A6-1051	45,708	45,708	N & L	62.5	Machias River	1955
50A7-1051	10,001	—	—	67.9	Tunk Stream	1955
50A8-1151	10,224	10,224	D & A	69.9	Dennys River	1955
50A9-1151	10,010	—	—	67.3	Sheepscot River	1955
50A10-1151	20,064	20,064	N & R	62.4	Aroostook River	1955
50A11-552	15,551	15,551	D & L	36.4	Narraguagus River and Tributaries	1955
50A12-552	21,504	21,504	N & R	36.4	Machias River and Tributaries	1955
50A13-652	16,072	16,072	D & L	24.1	Narraguagus River and Tributaries	1955
50A14-652	3,325	—	—	29.9	Little Falls Stream	1955
51A1-652	6,680	—	—	1663.7	Little Falls Stream	1955

TABLE II—Atlantic Salmon Stocking October, 1948 to July, 1954 (Concluded)

Experiment Number	Total Stocked	Number Marked	Mark Used	Fish per pound	Waters Stocked	Year of Majority Return
50A15-852	3,323	3,323	N & L	18.9	Little Falls Stream	1955
50A16-1052	1,314	1,314	D & L	10.0	Machias River	1955
50A17-1052	3,333	3,333	L & R	9.4	Little Falls Stream	1955
50A18-1052	12,328	12,328	N & R	9.9	Narraguagus River	1955
51A1-652	6,680	—	—	1663.7	Little Falls Stream	1956
51A2-852	6,668	6,668	D & N	237.4	Little Falls Stream	1956
51A3-1052	6,666	6,666	N & R	71.4	Little Falls Stream	1956
51A4-1152	5,493	5,493	D & L	95.1	West Branch Narraguagus River	1956
51A5-1052T	20,000	—	—	283.8	Dennys River	1956
51A6-1052T	20,000	—	—	271.4	Sheepscot River	1956
51A7-1052T	5,145	5,145	D & A	97.8	Somesville Stream	1956
51A8-1152T	20,100	—	—	238.1	Aroostook River	1956
51A9-1152T	73,058	73,058	D & L	205.7	Narraguagus River	1956
51A10-653	99,334	99,334	N & L	32.3	Narraguagus River	1956
51A11-653	3,246	3,246	D & R	24.8	Little Falls Stream	1956
51A12-853	2,092	2,092	D	13.3	Little Falls Stream	1956
51A13-1053	2,115	2,115	N	9.1	Little Falls Stream	1956
52A1-653	6,659	—	—	1331.8	Little Falls Stream	1957
52A2-853	6,553	6,553	N & L	224.0	Little Falls Stream	1957
52A3-1053	6,663	6,663	D & L	73.1	Little Falls Stream	1957
52A4-1153T	42,252	—	—	183.9	Narraguagus River and Tributaries	1957
52A5-1153T	43,928	—	—	183.9	Machias River and Tributaries	1957
52A6-554	4,976	4,976	L & R	36.4	Little Falls Stream	1957
52A7-554	4,969	4,969	D	35.0	Somesville Stream	1957
52A8-554	19,531	19,531	N & R	49.2	Dennys River	1957
52A9-554	19,871	19,871	N & L	38.6	Aroostook River	1957
52A10-554	19,826	19,826	D & R	30.8	Penobscot River, Sawtelle Brook	1957
52A11-654	13,524	13,524	D & L	19.0	Penobscot River, Passadumkeag River	1957

*The first two digits show the year the eggs were taken, followed by a letter indicating species (S—Silvers, A—Atlantics) and a number, in chronological order for the lot. After the hyphen is given the month and year of liberation. Thus, 50S1-951 indicates the first lot of Silvers to be planted from eggs stripped in 1950 and that the fish were liberated in September, 1951.

†The letters indicate fins removed from the fish in order that they may be recognized if they are recaptured. The letters refer to the following fins: A—adipose fin, D—dorsal fin, L—left ventral fin, R—right ventral fin, N—anal fin.