Ages of Atlantic Salmon Collected From Sport Fisheries in the Restigouche River System, 1972, 1973, 1976 and 1977

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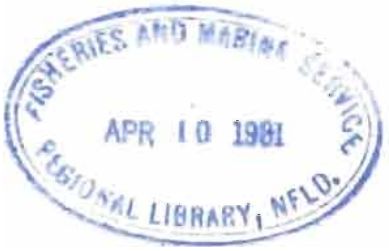
AGES OF ATLANTIC SALMON COLLECTED FROM SPORT FISHERIES IN THE RESTIGOUCHE RIVER SYSTEM, 1972, 1973, 1976 AND 1977

P.R. Pickard



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ABSTRACT

Pickard, P.R. 1979. Ages of Atlantic salmon collected from sport fisheries in the Restigouche River system, 1972, 1973, 1976 and 1977. Fish. Mar. Serv. Data Rep. No. 126, 24 p.

Ages of Atlantic salmon were determined from scale samples collected during the 1972, 1973, 1976 and 1977 angling seasons, from sport fisheries of the Upsalquitch, Northwest Upsalquitch, Southeast Upsalquitch, Kedgwick, Patapedia and Little Main Restigouche rivers, of the Restigouche River system. Samples originated from sampling programs conducted by the New Brunswick Fish and Wildlife Branch, Dept. of Natural Resources, and the federal Resource Branch, Fisheries and Marine Service.

Key words: Atlantic salmon, scale samples, scale reading, freshwater (smolt) age, sea age, age structure.

RESUME

Pickard, P.R. 1979. Ages of Atlantic salmon collected from sport fisheries in the Restigouche River system, 1972, 1973, 1976 and 1977. Fish. Mar. Serv. Data Rep. No. 126, 24 p.

Se basant sur des échantillons d'écailles de saumon Atlantiques recueillis au cours des années 1972, 1973, 1976 et 1977 durant les saisons de pêche sportive on à déterminé l'age des poissons des rivières Upsalquitch, Northwest Upsalquitch, Southeast Upsalquitch, Kedgwick, Patapedia et Little Main Restigouche. Tous ces cours d'eau font parties du réseau de la rivière Restigouche. Les échantillons provenaient d'un programme d'échantillonnage organisé par le service de la pêche et de la faune du département des Ressources Naturelles du Nouveau-Brunswick et la branche des ressources du service fédéral des pêches et de la mer.

INTRODUCTION

This report presents data on the ages of Atlantic salmon collected in 1972, 1973, 1976 and 1977 from sport fisheries of the Upsalquitch, Northwest Upsalquitch, Southeast Upsalquitch, Patapedia, Little Main Restigouche and Kedgwick rivers of the Restigouche River system, New Brunswick (Fig.). Data collected in 1974 and 1975 have been previously presented (Peppar et al. (1976).

Samples originated from a sampling program conducted by the New Brunswick Fish and Wildlife Branch (Department of Natural Resources) throughout the sport fisheries of the Restigouche system during the 1972, 1973, 1976 and 1977 angling seasons (June 1-August 31). This sampling program is conducted each year by the Branch as part of their general census of sport-fishery statistics of the Restigouche River system. Length, weight and sex are recorded and scale samples are obtained from angled fish. Additional samples originated from an angling survey conducted by the Fisheries and Marine Service (Resource Branch) on the Little Main Restigouche River during the 1975 and 1976 angling seasons (Peppar 1977).

At the close of the 1972, 1973, 1976 and 1977 angling seasons, scale samples were forwarded to the Resource Branch for subsequent examination. All ages were determined by scale reading.

METHODS AND PRESENTATION OF DATA

Each scale sample was examined under a binocular microscope and those scales with suitable (entire) centres were subsequently impressed on acetate slides. To read the scales, a micro-projector was employed to project the scale image on a white background.

All scale samples were independently read twice; additional readings were made of those samples in which the first two readings disagreed, and final ages were assigned on the basis of majority agreement. Differences in sample sizes recorded in the tables reflect the proportion of scales for which ages could not be determined; some scales did not provide suitable centres for determination of freshwater age.

The method used to record data in this report divides total age into two parts – freshwater (smolt) and sea ages; for example, a fish recorded as "3.2" has spent three years in freshwater and all or part of the succeeding two years in the sea. This is commonly referred to as a "two-sea-winter" salmon.

In presenting the age composition data, grilse (fish returning to spawn after spending one winter at sea) and large salmon (fish returning to spawn after spending two or more winters at sea) are treated separately in the tables. Previously spawned fish are "lumped" in the large

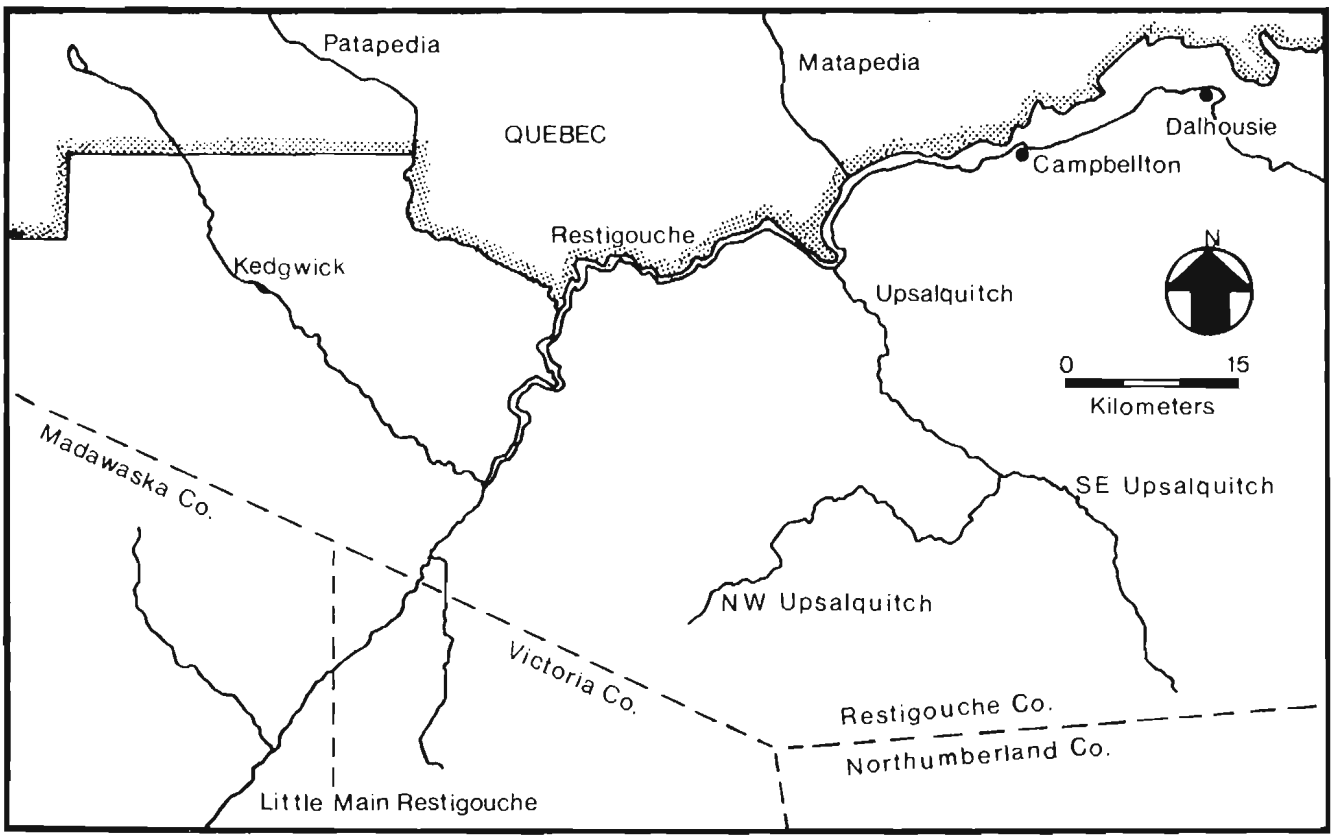

FIG. Map of Restigouche River system, New Brunswick.

salmon sea-age tables, regardless of at what age they spawned or how many times they had previously spawned. In the large salmon freshwater-age (smolt) tables, the previously spawned fish have been separated according to their sea age when entering the river for the first time. Remaining tables present final age (i.e., present age) at year of sampling, irregardless of previous spawning.

TABLE 1. Percentage composition of sea ages of large salmon caught during successive semi-monthly periods on the Restigouche River system, 1972-73.

Semi-monthly period	No. of fish in sample		Percent of sample							
			Maiden fish						Previous spawners	
			Sea age - 2 yr		Sea age - 3 yr		Sea age - 4 yr			
	1972	1973	1972	1973	1972	1973	1972	1973	1972	1973
Upsalquitch River										
Jun 16-30	26	17	80.8	94.1	15.4	5.9	-	-	3.9	-
Jul 1-15	52	15	96.2	100.0	1.9	-	-	-	1.9	-
Jul 16-31	25	5	84.0	100.0	8.0	-	-	-	8.0	-
Aug 1-15	13	21	100.0	66.7	-	9.5	-	-	-	23.8
Aug 16-31	11	8	90.9	100.0	9.1	-	-	-	-	-
Overall	127	66	90.6	87.9	6.3	4.6	-	-	3.2	7.6
Northwest Upsalquitch River										
Jun 16-30	10	10	80.0	100.0	-	-	-	-	20.0	-
Jul 1-15	30	4	96.7	100.0	3.3	-	-	-	-	-
Jul 16-31	13	0	100.0	-	-	-	-	-	-	-
Aug 1-15	5	0	100.0	-	-	-	-	-	-	-
Aug 16-31	2	1	50.0	100.0	50.0	-	-	-	-	-
Overall	60	15	93.3	100.0	3.3	-	-	-	3.3	-
Southeast Upsalquitch River										
Jun 16-30	1	2	100.0	100.0	-	-	-	-	-	-
Jul 1-15	4	0	100.0	-	-	-	-	-	-	-
Jul 16-31	3	0	100.0	-	-	-	-	-	-	-
Aug 1-15	3	0	100.0	-	-	-	-	-	-	-
Overall	11	2	100.0	100.0	-	-	-	-	-	-
Little Main Restigouche River										
Jun 16-30	12	9	91.7	100.0	8.3	-	-	-	-	-
Jul 1-15	18	9	88.9	88.9	11.1	11.1	-	-	-	-
Jul 16-31	22	6	77.3	83.3	22.7	16.7	-	-	-	-
Aug 1-15	6	2	83.3	100.0	-	-	-	-	16.7	-
Aug 16-31	1	2	-	100.0	100.0	-	-	-	-	-
Overall	59	28	83.1	92.9	15.3	7.1	-	-	1.7	-
Kedgwick River										
Jun 1-15	10	18	10.0	55.6	90.0	44.4	-	-	-	-
Jun 16-30	70	57	55.7	68.4	41.4	31.6	1.4	-	1.4	-
Jul 1-15	60	55	56.7	76.4	38.3	23.6	-	-	5.0	-
Jul 16-31	40	19	57.5	89.5	42.5	10.5	-	-	-	-
Aug 1-15	21	26	76.2	65.4	14.3	30.8	-	-	9.5	3.9
Aug 16-31	2	16	100.0	68.8	-	25.0	-	-	-	6.3
Overall	203	191	56.7	71.2	39.9	27.8	0.5	-	3.0	1.1

TABLE 2. Percentage composition of freshwater (smolt) ages in each sea-age group of large salmon caught in the Restigouche River system, 1972-73.

Sea age (years)	No. of fish in sample 1972	1973	Percent of sample: Smolt age - 2 yr 1972	1973	Smolt age - 3 yr 1972	1973	Smolt age - 4 yr 1972	1973
Upsalquitch River								
1	4	4	50.0	75.0	50.0	25.0	-	-
2	117	59	65.8	27.1	33.3	72.9	0.9	-
3	7	3	71.4	33.3	28.6	66.7	-	-
Overall	128	66	65.6	30.3	33.6	69.7	0.8	-
Northeast Upsalquitch River								
1	2	0	50.0	-	50.0	-	-	-
2	56	16	67.9	43.8	28.6	56.3	3.6	-
3	2	0	100.0	-	-	-	-	-
Overall	60	16	68.3	43.8	28.3	56.3	3.3	-
Southeast Upsalquitch River								
2	12	2	50.0	50.0	41.7	50.0	8.3	-
Overall	12	2	50.0	50.0	41.7	50.0	8.3	-
Little Main Restigouche River								
1	1	0	-	-	100.0	-	-	-
2	46	26	8.7	3.9	89.1	84.6	2.2	11.5
3	9	2	22.2	-	77.8	100.0	-	-
Overall	56	28	10.7	3.6	87.5	85.7	1.8	10.7
Kedgwick River								
1	2	1	-	-	100.0	100.0	-	-
2	113	138	17.7	10.1	76.1	86.2	6.2	3.6
3	85	53	9.4	15.1	90.6	84.9	-	-
4	1	0	100.0	-	-	-	-	-
Overall	201	192	14.4	11.5	82.1	85.9	3.5	2.6

TABLE 3. Age composition (age structure) of large salmon of the Restigouche River system, 1972-73.

Age structure	No. of fish in sample 1972	1973	Percent of sample 1972	1973
Upsalquitch River				
2.2	77	16	60.2	24.2
2.3	7	4	5.5	6.1
3.2	39	42	30.5	63.6
3.3	4	3	3.1	4.6
3.4	0	1	-	1.5
4.2	1	0	0.8	-
Overall	128	66	100.0	100.0
Northwest Upsalquitch River				
2.2	38	7	63.3	43.8
2.3	3	0	5.0	-
3.2	16	9	26.7	56.3
3.3	1	0	1.7	-
4.2	2	0	3.3	-
Overall	60	16	100.0	100.0
Southeast Upsalquitch River				
2.2	6	1	50.0	50.0
3.2	5	1	41.7	50.0
4.2	1	0	8.3	-
Overall	12	2	100.0	100.0
Little Main Restigouche River				
2.2	4	1	7.1	3.6
2.3	2	0	3.6	-
3.2	41	22	73.2	78.6
3.3	8	2	14.3	7.1
4.2	1	3	1.8	10.7
Overall	56	28	100.0	100.0
Kedgwick River				
2.2	20	14	10.0	7.3
2.3	7	8	3.5	4.2
2.4	2	0	1.0	-
3.2	86	119	42.8	62.0
3.3	76	45	37.8	23.4
3.4	1	0	0.5	-
3.5	2	1	1.0	0.5
4.2	7	5	3.5	2.6
Overall	201	192	100.0	100.0

TABLE 4. Age composition (total age in years) of large salmon of the Restigouche River system, 1972-73.

Total age (years)	From spawning year 1972	From spawning year 1973	No. of fish in sample 1972	No. of fish in sample 1973	Percent of sample 1972	Percent of sample 1973
Upsalquitch River						
4	1967	1968	77	16	60.2	24.2
5	1966	1967	46	46	35.9	69.7
6	1965	1966	5	3	3.9	4.6
7	-	1965	0	1	-	1.5
Overall			128	66	100.0	100.0
Northwest Upsalquitch River						
4	1967	1968	38	7	63.3	43.8
5	1966	1967	19	9	31.7	56.3
6	1965	-	3	0	5.0	-
Overall			60	16	100.0	100.0
Southeast Upsalquitch River						
4	1967	1968	6	1	50.0	50.0
5	1966	1967	5	1	41.7	50.0
6	1965	-	1	0	8.3	-
Overall			12	2	100.0	100.0
Little Main Restigouche River						
4	1967	1968	4	1	7.1	3.6
5	1966	1967	43	22	76.8	78.6
6	1965	1966	9	5	16.1	17.9
Overall			56	28	100.0	100.0
Kedgwick River						
4	1967	1968	20	14	10.0	7.3
5	1966	1967	93	127	46.3	66.2
6	1965	1966	85	50	42.3	26.0
7	1964	-	1	0	0.5	-
8	1963	1964	2	1	1.0	0.5
Overall			201	192	100.0	100.0

TABLE 5. Numbers of grilse samples taken during successive semi-monthly periods on the Restigouche River system, 1972-73.

Semi-monthly period	Upsalquitch 1972	Upsalquitch 1973	Northwest Upsalquitch 1972	Northwest Upsalquitch 1973	Southeast Upsalquitch 1972	Southeast Upsalquitch 1973	Little Main Restigouche 1972	Little Main Restigouche 1973	Kedgwick 1972	Kedgwick 1973
Jun 16-30	1	0	0	0	0	0	0	0	2	1
Jul 1-15	6	3	4	3	2	1	4	1	11	7
Jul 16-31	11	17	13	14	6	0	18	3	12	13
Aug 1-15	22	47	11	12	4	1	22	2	26	11
Aug 16-31	12	15	3	5	0	1	5	2	2	1
Overall	52	82	31	34	12	3	49	8	53	33

TABLE 6. Percentage composition of freshwater (smolt) ages of grilse caught in the Restigouche River system, 1972-73.

River	No. of fish in sample		Percent of sample					
			Smolt age - 2 yr		Smolt age - 3 yr		Smolt age - 4 yr	
	1972	1973	1972	1973	1972	1973	1972	1973
Upsalquitch	57	81	19.3	75.3	80.7	19.8	-	4.9
Northwest Upsalquitch	31	42	16.1	78.6	80.7	21.4	3.2	-
Southeast Upsalquitch	14	4	28.6	75.0	71.4	25.0	-	-
Little Main Restigouche	49	8	28.6	62.5	69.4	37.5	2.0	-
Kedgwick	53	33	11.3	42.4	88.7	54.6	-	3.0

TABLE 7. Age composition (age structure and total age in years) of grilse of the Restigouche River system, 1972-73.

Age structure	Total age (yr)	From spawning year		No. of fish in sample		Percent of sample	
		1972	1973	1972	1973	1972	1973
Upsalquitch River							
2.1	3	1968	1969	11	61	19.3	75.3
3.1	4	1967	1968	46	16	80.7	19.8
4.1	5	-	1967	0	4	-	4.9
Overall				57	81	100.0	100.0
Northwest Upsalquitch River							
2.1	3	1968	1969	5	33	16.1	78.6
3.1	4	1967	1968	25	9	80.7	21.4
4.1	5	1966	-	1	0	3.2	-
Overall				31	42	100.0	100.0
Southeast Upsalquitch River							
2.1	3	1968	1969	4	3	28.6	75.0
3.1	4	1967	1968	10	1	71.4	25.0
Overall				14	4	100.0	100.0
Little Main Restigouche River							
2.1	3	1968	1969	14	5	28.6	62.5
3.1	4	1967	1968	34	3	69.4	37.5
4.1	5	1966	-	1	0	2.0	-
Overall				49	8	100.0	100.0
Kedgwick River							
2.1	3	1968	1969	6	14	11.3	42.4
3.1	4	1967	1968	47	18	88.7	54.6
4.1	5	-	1967	0	1	-	3.0
Overall				53	33	100.0	100.0

TABLE 8. Percentage composition of sea ages of large salmon caught during successive semi-monthly periods on the Restigouche River system, 1976-77.

Semi-monthly period	No. of fish in sample		Percent of sample					
			Maiden fish					
			Sea age - 2 yr		Sea age - 3 yr		Previous spawners	
	1976	1977	1976	1977	1976	1977	1976	1977
Upsalquitch River								
Jun 1-15	2	0	100.0	-	-	-	-	-
Jun 16-30	54	29	90.7	86.2	1.9	10.3	7.4	3.5
Jul 1-15	63	45	98.4	95.6	1.6	2.2	-	2.2
Jul 16-31	36	28	100.0	100.0	-	-	-	-
Aug 1-15	15	19	100.0	100.0	-	-	-	-
Aug 16-31	15	17	93.3	88.2	6.7	-	-	11.8
Overall	185	138	96.2	94.2	1.6	2.9	2.2	2.9
Northwest Upsalquitch River								
Jun 16-30	2	11	50.0	100.0	-	-	50.0	-
Jul 1-15	5	30	100.0	96.7	-	-	-	3.3
Jul 16-31	0	1	-	100.0	-	-	-	-
Aug 1-15	2	1	50.0	100.0	-	-	50.0	-
Aug 16-31	0	2	-	100.0	-	-	-	-
Overall	9	45	77.8	97.8	-	-	22.2	2.2
Southeast Upsalquitch River								
Jul 1-15	0	2	-	100.0	-	-	-	-
Jul 16-31	1	5	100.0	80.0	-	-	-	20.0
Aug 1-15	0	1	-	100.0	-	-	-	-
Overall	1	8	100.0	87.5	-	-	-	12.5
Patapedia River								
Jun 16-30	0	13	-	53.9	-	38.5	-	7.7
Jul 1-15	0	3	-	100.0	-	-	-	-
Overall	0	16	-	62.5	-	31.3	-	6.3
Little Main Restigouche River								
Jun 16-30	1	0	100.0	-	-	-	-	-
Jul 16-31	2	0	100.0	-	-	-	-	-
Aug 1-15	2	0	100.0	-	-	-	-	-
Aug 16-31	5	0	60.0	-	-	-	40.0	-
Overall	10	0	80.0	-	-	-	20.0	-
Kedgwick River								
Jun 1-15	23	9	13.0	22.2	60.9	77.8	26.1	-
Jun 16-30	42	2	50.0	50.0	38.1	50.0	11.9	-
Jul 1-15	27	4	74.1	75.0	18.5	25.0	7.4	-
Jul 16-31	8	3	62.5	66.7	-	33.3	37.5	-
Aug 1-15	8	4	37.5	100.0	12.5	-	50.0	-
Aug 16-31	15	11	53.3	72.7	20.0	18.2	26.7	9.1
Overall	123	33	48.8	60.6	31.7	36.4	19.5	3.0

TABLE 9. Percentage composition of freshwater (smolt) ages in each sea-age group of large salmon caught in the Restigouche River system, 1976-77.

Sea age (years)	No. of fish in sample 1976	1977	Percent of sample: Smolt age - 2 yr 1976	1977	Smolt age - 3 yr 1976	1977	Smolt age - 4 yr 1976	1977
Upsalquitch River								
1	4	3	25.0	66.7	75.0	33.3	-	-
2	185	130	28.1	76.9	70.3	23.1	1.6	-
3	3	4	66.7	75.0	33.3	25.0	-	-
Overall	192	137	28.7	76.6	69.8	23.4	1.6	-
Northwest Upsalquitch River								
1	1	1	100.0	100.0	-	-	-	-
2	8	44	25.0	88.6	75.0	11.4	-	-
Overall	9	45	33.3	88.9	66.7	11.1	-	-
Southeast Upsalquitch River								
1	0	1	-	-	-	100.0	-	-
2	1	7	-	71.4	100.0	28.6	-	-
Overall	1	8	-	62.5	100.0	37.5	-	-
Patapedia River								
2	0	10	-	20.0	-	80.0	-	-
3	0	6	-	16.7	-	66.7	-	16.7
Overall	0	16	-	18.8	-	75.0	-	6.3
Little Main Restigouche River								
2	10	0	20.0	-	80.0	-	-	-
Overall	10	0	20.0	-	80.0	-	-	-
Kedgwick River								
1	3	0	-	-	100.0	-	-	-
2	71	20	28.2	35.0	69.0	65.0	2.8	-
3	52	13	7.7	15.4	92.3	61.5	-	23.1
Overall	126	33	19.1	27.3	79.4	63.6	1.6	9.1

TABLE 10. Age composition (age structure) of large salmon of the Restigouche River system, 1976-77.

Age structure	No. of fish in sample 1976	No. of fish in sample 1977	Percent of sample 1976	Percent of sample 1977
Upsalquitch River				
2.2	52	101	27.1	73.7
2.3	3	4	1.6	2.9
3.2	130	29	67.7	21.2
3.3	4	2	2.1	1.5
3.4	0	1	-	0.7
4.2	3	0	1.6	-
Overall	192	137	100.0	100.0
Northwest Upsalquitch River				
2.2	2	40	22.2	88.9
2.3	1	0	11.1	-
3.2	5	5	55.6	11.1
3.4	1	0	11.1	-
Overall	9	45	100.0	100.0
Southeast Upsalquitch River				
2.2	0	5	-	62.5
3.2	1	2	100.0	25.0
3.3	0	1	-	12.5
Overall	1	8	100.0	100.0
Patapedia River				
2.2	0	2	-	12.5
2.3	0	1	-	6.3
3.2	0	8	-	50.0
3.3	0	3	-	18.8
3.8	0	1	-	6.3
4.3	0	1	-	6.3
Overall	0	16	-	100.0
Little Main Restigouche River				
2.2	2	0	20.0	-
3.2	6	0	60.0	-
3.4	2	0	20.0	-
Overall	10	0	100.0	-
Kedgwick River				
2.2	19	7	15.1	21.2
2.3	2	2	1.6	6.1
2.4	1	0	0.8	-
2.5	2	0	1.6	-
3.2	41	13	32.5	39.4
3.3	41	7	32.5	21.2
3.4	10	0	7.9	-
3.5	8	1	6.4	3.0
4.2	2	0	1.6	-
4.3	0	3	-	9.1
Overall	126	33	100.0	100.0

TABLE 11. Age composition (total age in years) of large salmon of the Restigouche River system, 1976-77.

Total age (years)	From spawning year 1976	From spawning year 1977	No. of fish in sample 1976	No. of fish in sample 1977	Percent of sample 1976	Percent of sample 1977
Upsalquitch River						
4	1971	1972	52	101	27.1	73.7
5	1970	1971	133	33	69.3	24.1
6	1969	1970	7	2	3.7	1.5
7	-	1969	0	1	-	0.7
Overall			192	137	100.0	100.0
Northwest Upsalquitch River						
4	1971	1972	2	40	22.2	88.9
5	1970	1971	6	5	66.7	11.1
7	1968	-	1	0	11.1	-
Overall			9	45	100.0	100.0
Southeast Upsalquitch River						
4	-	1972	0	5	-	62.5
5	1970	1971	1	2	100.0	25.0
6	-	1970	0	1	-	12.5
Overall			1	8	100.0	100.0
Patapedia River						
4	-	1972	0	2	-	12.5
5	-	1971	0	9	-	56.3
6	-	1970	0	3	-	18.8
7	-	1969	0	1	-	6.3
11	-	1965	0	1	-	6.3
Overall			0	16	-	100.0
Little Main Restigouche River						
4	1971	-	2	0	20.0	-
5	1970	-	6	0	60.0	-
7	1968	-	2	0	20.0	-
Overall			10	0	100.0	-
Kedgwick River						
4	1971	1972	19	7	15.1	21.2
5	1970	1971	43	15	34.1	45.5
6	1969	1970	44	7	34.9	21.2
7	1968	1969	12	3	9.5	9.1
8	1967	1968	8	1	6.4	3.0
Overall			126	33	100.0	100.0

TABLE 12. Numbers of grilse samples taken during successive semi-monthly periods on the Restigouche River system, 1976-77.

Semi-monthly period	Upsalquitch		Northwest Upsalquitch		Southeast Upsalquitch		Patapedia		Little Main Restigouche		Kedgwick	
	1976	1977	1976	1977	1976	1977	1976	1977	1976	1977	1976	1977
Jun 1-15	6	0	0	0	0	0	0	0	0	0	0	0
Jun 16-30	6	0	0	1	0	0	0	0	0	0	0	0
Jul 1-15	49	7	9	10	0	0	0	0	9	0	14	1
Jul 16-31	171	38	2	7	1	7	0	1	11	0	20	9
Aug 1-15	60	9	4	8	0	0	0	0	10	0	16	5
Aug 16-31	27	11	1	5	3	0	0	0	12	0	19	3
Overall	319	65	16	31	4	7	0	1	42	0	69	18

TABLE 13. Percentage composition of freshwater (smolt) ages of grilse caught in the Restigouche River system, 1976-77.

River	No. of fish in sample		Percent of sample							
			Smolt age-2 yr		Smolt age-3 yr		Smolt age-4 yr		Smolt age-5 yr	
	1976	1977	1976	1977	1976	1977	1976	1977	1976	1977
Upsalquitch	321	64	51.7	12.5	44.9	87.5	3.1	-	0.3	-
Northwest Upsalquitch	16	31	56.3	6.5	43.8	93.6	-	-	-	-
Southeast Upsalquitch	4	7	50.0	14.3	50.0	85.7	-	-	-	-
Patapedia	0	1	-	-	-	100.0	-	-	-	-
Little Main Restigouche	41	0	51.2	-	48.8	-	-	-	-	-
Kedgwick	69	18	40.6	-	56.5	100.0	2.9	-	-	-

TABLE 14. Age composition (age structure and total age in years) of grilse of the Restigouche River system, 1976-77.

Age structure	Total age (yr)	From spawning year 1976	From spawning year 1977	No. of fish in sample 1976	No. of fish in sample 1977	Percent of sample 1976	Percent of sample 1977
Upsalquitch River							
2.1	3	1972	1973	166	8	51.7	12.5
3.1	4	1971	1972	144	56	44.9	87.5
4.1	5	1970	-	10	0	3.1	-
5.1	6	1969	-	1	0	0.3	-
Overall				321	64	100.0	100.0
Northwest Upsalquitch River							
2.1	3	1972	1973	9	2	56.3	6.5
3.1	4	1971	1972	7	29	43.8	93.6
Overall				16	31	100.0	100.0
Southeast Upsalquitch River							
2.1	3	1972	1973	2	1	50.0	14.3
3.1	4	1971	1972	2	6	50.0	85.7
Overall				4	7	100.0	100.0
Patapedia River							
3.1	4	-	1972	0	1	-	100.0
Overall				0	1	-	100.0
Little Main Restigouche River							
2.1	3	1972	-	21	0	51.2	-
3.1	4	1971	-	20	0	48.8	-
Overall				41	0	100.0	-
Kedgwick River							
2.1	3	1972	-	28	0	40.6	-
3.1	4	1971	1972	39	18	56.5	100.0
4.1	5	1970	-	2	0	2.9	-
Overall				69	18	100.0	100.0

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