

	North American Commission <i>St Pierre and Miquelon Fisheries Sampling Programme in 2021</i>	NAC(22)10
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Saint Pierre and Miquelon Fisheries Sampling Programme in 2021

A total of 51 samples were collected from the Saint Pierre and Miquelon salmon fishery between 26 May and 26 June 2021. Based on the interpretation of the scale samples, percentage sea age composition was 65% 1SW (Sea Winter), 35% 2SW, and no previously spawned salmon. River ages ranged from two to five years (modal age 3). The results of the genetic analyses of these samples will be provided to the ICES Working Group on North Atlantic Salmon in 2023.

Saint Pierre and Miquelon: Sample summary 2021									
Size group	Number of Samples (#)	Percent of Samples (%)	Virgin Sea Age (%)		River Age (%)				
			1SW	2SW	1	2	3	4	5
Small salmon (<63 cm)	33	64.7	100.0	0.0	0.0	12.1	72.7	12.1	3.0
Large salmon (≥63 cm)	18	35.3	0.0	100.0	0.0	33.3	61.1	5.6	0.0
All	51	100.0	64.7	35.3	0.0	19.6	68.6	9.8	2.0

All samples collected from the 2021 Saint Pierre and Miquelon fishery were analysed using the SNP panel range wide baseline (Figures 1 and 2). The estimated percent contributions to the genetic reporting groups (and associated 95% credible interval) are shown in Table 1 and summarized in Figures 3. The majority of the large salmon (≥ 63 cm) samples analysed assigned to two genetic reporting groups (77%: southern Gulf of St Lawrence and Gaspé Peninsula). A smaller percent of the large salmon samples (6%) assigned to the Labrador South genetic reporting group. Fifty-seven percent (57%) of the small salmon samples assigned to four Newfoundland genetic reporting groups and 29% assigned relatively equally between the southern Gulf of St Lawrence and Gaspé Peninsula genetic reporting groups.

Table 1. Genetic mixture analyses of Atlantic salmon (small salmon < 63 cm, large salmon ≥63 cm) caught in the Saint Pierre and Miquelon fishery in 2021 using the range wide SNP baseline. Mean and 95% credible interval percent values by range wide genetic reporting groups are shown (Figure 1 and Figure 2). Note that credible intervals with a lower bound including zero indicated little support for the mean assignment value and were therefore excluded.

Reporting Group (Acronym)	2021		
	Total	Small Salmon	Large Salmon
Spain (SPN)	—	—	—
France (FRN)	—	—	—
European Broodstock (EUB)	—	—	—
United Kingdom/Ireland (BRI)	—	—	—
Barents-White Seas (BAR)	—	—	—
Baltic Sea (BAL)	—	—	—
Southern Norway (SNO)	—	—	—
Northern Norway (NNO)	—	—	—
Iceland (ICE)	—	—	—
Greenland (GL)	—	—	—
Maine, United States (USA)	—	—	—
Western Nova Scotia (WNS)	—	—	—
Eastern Nova Scotia (ENS)	—	—	—
Inner Bay of Fundy (IBF)	—	—	—
Gulf of St Lawrence (GUL)	17.9 (7.9, 31.3)	14.9 (3.1, 30.5)	34.9 (14.6, 58.5)
St. John River & Aquaculture (SJR)	—	—	—
Québec City Region (QUE)	—	—	—
Gaspé Peninsula (GAS)	26.7 (13.9, 41.7)	14.1 (3.6, 29.8)	42.4 (15.8, 68.8)
Anticosti (ANT)	—	—	—
St. Lawrence North Shore Lower (QLS)	—	—	—
Newfoundland 2 (NF2)	10.8 (2.9, 22.8)	16.8 (4.4, 34.4)	—
Fortune Bay (FTB)	7.2 (1.0, 17.1)	10.5 (1.4, 25.6)	—
Burin Peninsula (BPN)	—	—	—
Avalon Peninsula (AVA)	—	—	—
Newfoundland 1 (NF1)	4.4 (0.3, 7.5)	6.6 (0.5, 17.8)	—
Western Newfoundland (WNF)	17.5 (8.1, 29.5)	22.7 (10.0, 38.6)	—
Northern Newfoundland (NNF)	—	—	—
Labrador South (LAS)	2.1 (0.03, 7.5)	—	5.8 (0.1, 19.7)
Lake Melville (MEL)	—	—	—
Labrador Central (LAC)	—	—	—
Ungava (UNG)	—	—	—
Samples	51	33	18

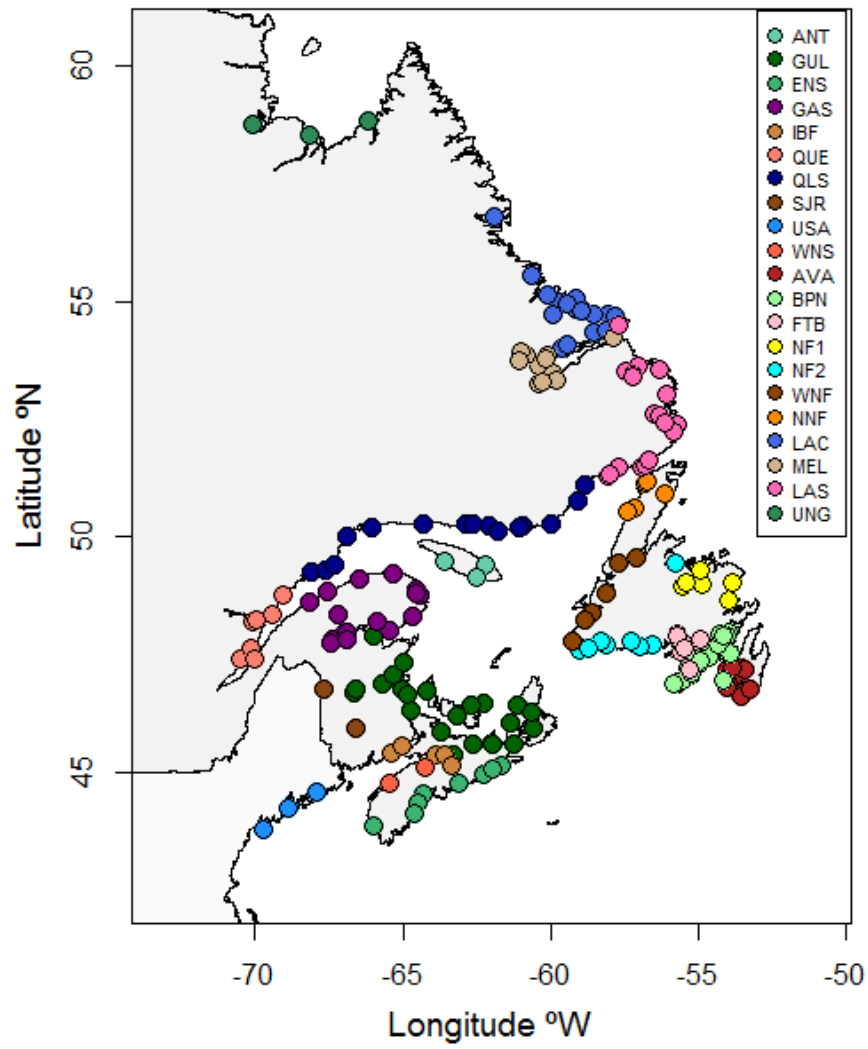


Figure 1. Map of North American sample locations used in the SNP baseline for Atlantic salmon. The 21 North American genetic reporting groups (labelled by acronym and identified by colour). Genetic reporting group acronyms are defined in Table 1. See Figure 2 for full range wide baseline sampling locations.

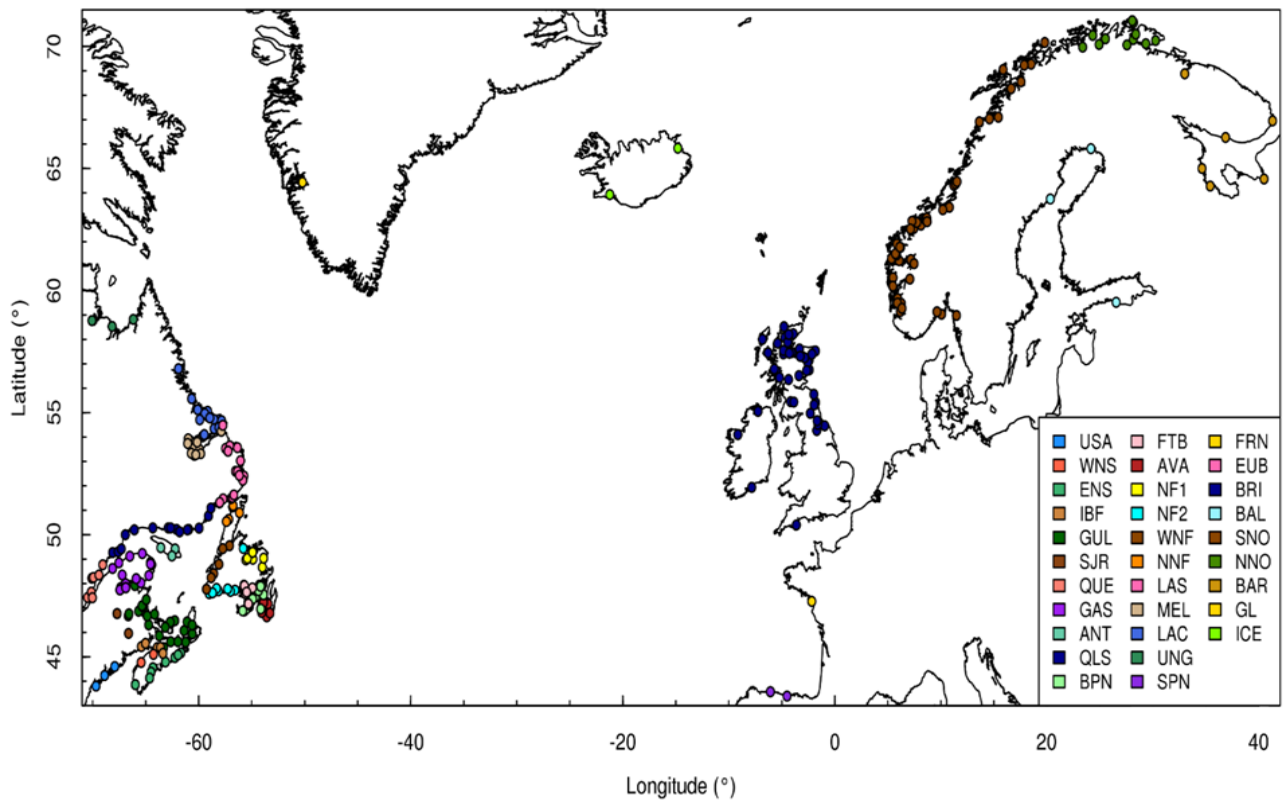


Figure 2. Map of range wide sample locations used in the SNP baseline for Atlantic salmon and the 31 defined genetic reporting groups (labelled by acronym and identified by colour). Genetic reporting group acronyms are defined in Table 1. See Figure 1 for finer resolution of North American locations.

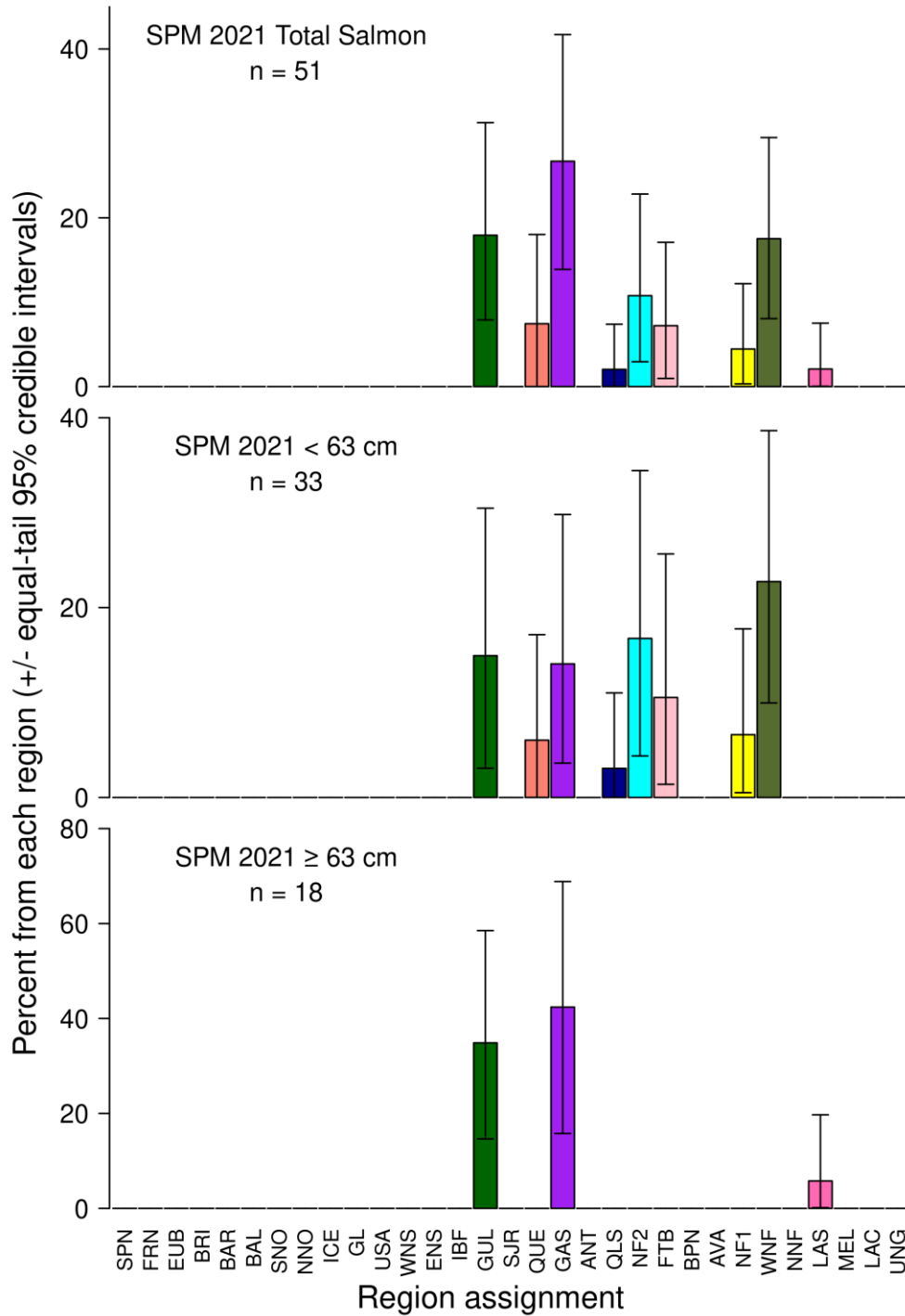


Figure 3. Bayesian mixture estimates of composition of samples from the Saint Pierre and Miquelon Atlantic salmon fishery using SNPs for 2021 overall and by size group (small <63 cm, large ≥63 cm). Baseline locations refer to genetic reporting groups identified in Figure 1 and Figure 2. Regional assignment acronyms are defined in Table 1. Note that credible intervals with a lower bound including zero indicated little support for the mean assignment value and were therefore excluded.