

2019 Scallop Survey Short Report

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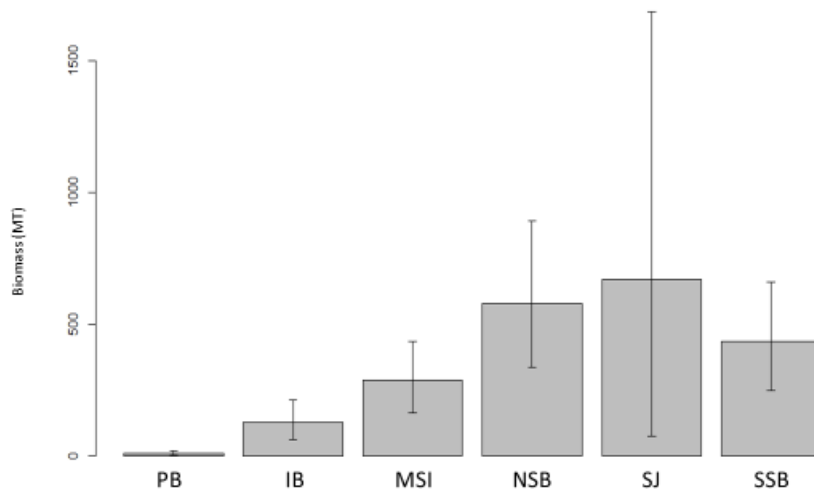
August 21st, 2019

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1.0 2019 SURVEY BIOMASS ESTIMATES

Dredge							
GOM (NGOM)	Abund. (millions)	Biomass (MT, >75 mm SH)	0.025 – 0.975 CI	MeanWt (g)	Mean Size (mm)	Density (g/m ² , >75 mm SH)	# Tows
Machias Seal Island	24.52	286.42	161.1-435.0	11.9	113.5	0.90	28
Platts Bank	0.46	8.45	1.8-17.2	19.6	123.5	0.09	26
Ipswich Bay	6.93	126.69	61.8-211.1	18.0	107.1	0.44	44
Southern Jeffreys	25.38	671.25	75.5-1687.8	19.4	108.3	1.46	45
North Stellwagen Bank	53.72	578.89	336.5-892.6	2.2	53.6	0.94	105
South Stellwagen Bank (note: Not in NGOM)	23.53	434.41	245.9-661.3	6.6	73.4	1.15	75

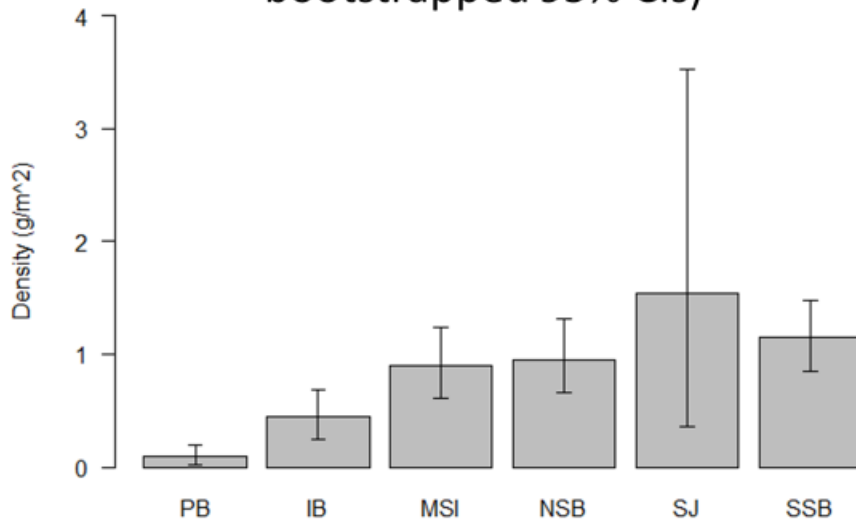
Biomass by Area (MT; SH>75.0; Efficiency = 0.4; bootstrapped 95% CIs)



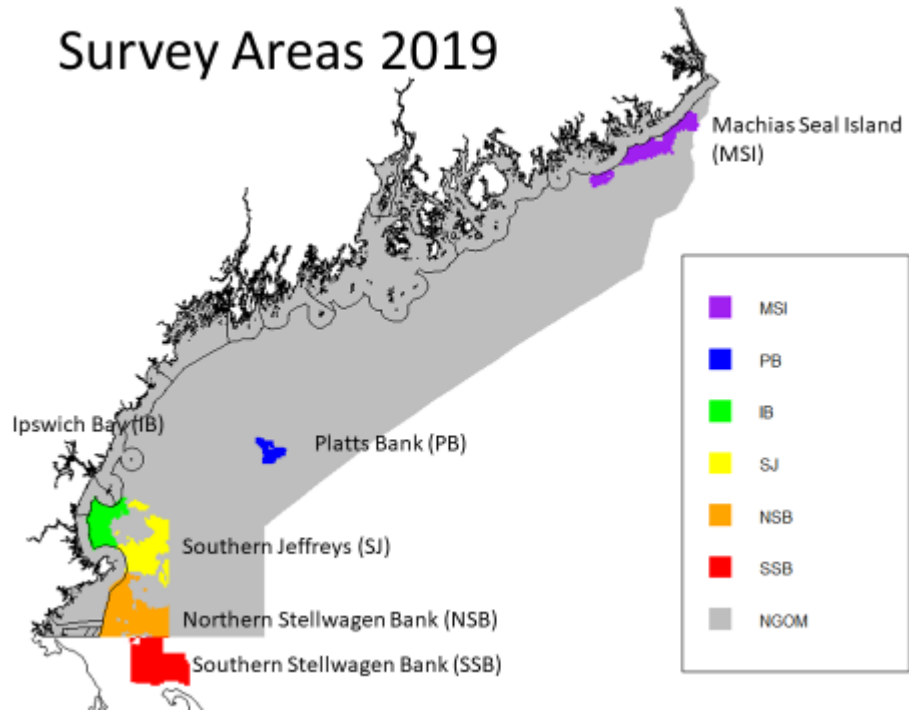
Biomass Density (g/m²; SH>75.0; Eff. = 0.4)

Biomass Percentile	q0.025	q0.100	q0.150	q0.200	q0.250	Mean	q0.975
Platts Bank	0.02	0.04	0.05	0.05	0.06	0.09	0.19
Ipswich Bay	0.24	0.30	0.33	0.36	0.35	0.44	0.68
Machias Seal Island	0.61	0.70	0.74	0.76	0.79	0.90	1.23
Northern Stellwagen Bank	0.67	0.75	0.78	0.81	0.83	0.94	1.31
Southern Jeffreys	0.36	0.51	0.59	0.66	0.74	1.46	3.53
Southern Stellwagen Bank	0.85	0.94	0.99	1.01	1.03	1.15	1.47
NGOM with Southern Stellwagen	0.47	0.52	0.55	0.58	0.60	0.72	1.14
NGOM	0.62	0.68	0.72	0.75	0.78	0.93	1.47

Biomass Density (SH>75.0; Efficiency = 0.4; bootstrapped 95% CIs)

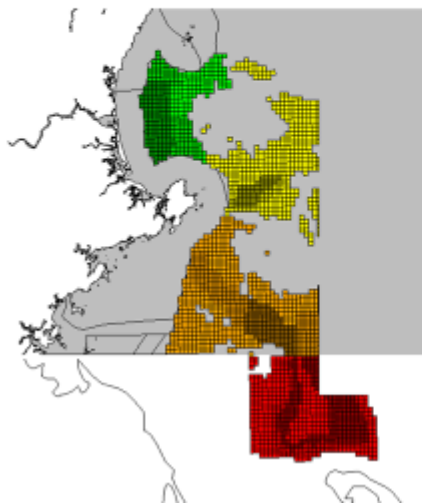


2.0 FIGURES OF SURVEY COVERAGE



Substrata Area Delineation

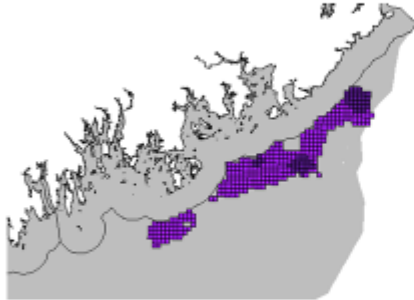
•Density substrata of southern areas were delineated using fisherman input, VTR, VMS and pervious survey data



Area	Density	Number of Cells (1 km ²)	
		Count	Color
IB	High	108	
	Medium	84	
	Low	100	
SJ	High	40	
	Medium	25	
	Low	368	
NSB	High	93	
	Medium	145	
	Low	375	
SSB	High	175	
	Medium	71	
	Low	276	

Substrata Area Delineation

•Density substrata of southern areas were delineated using fisherman input, VTR, VMS and pervious survey data

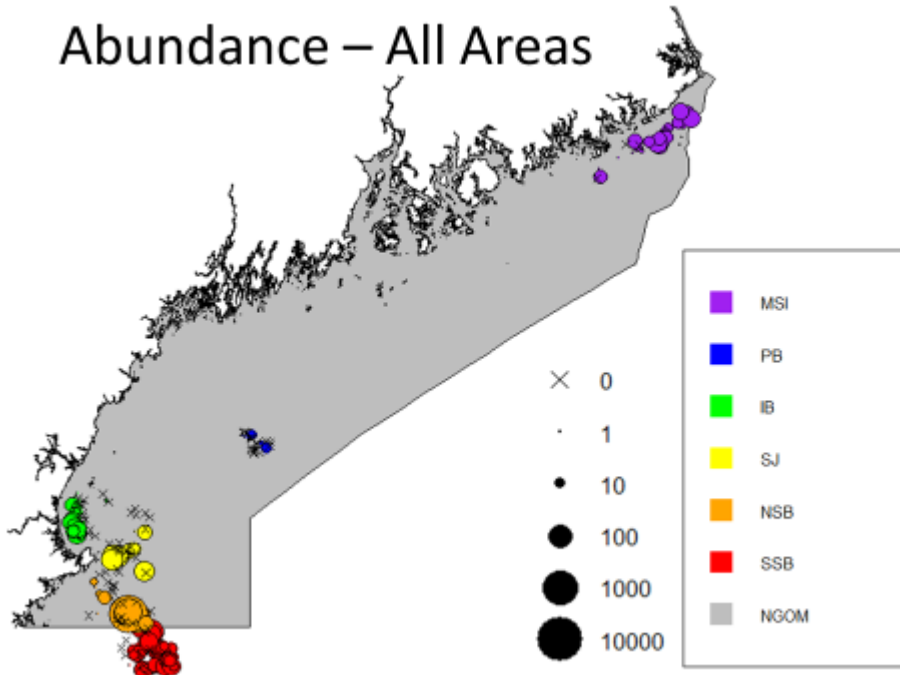


Area	Density	Number of Cells (1 km ²)	
		MSI	High
	Low	265	

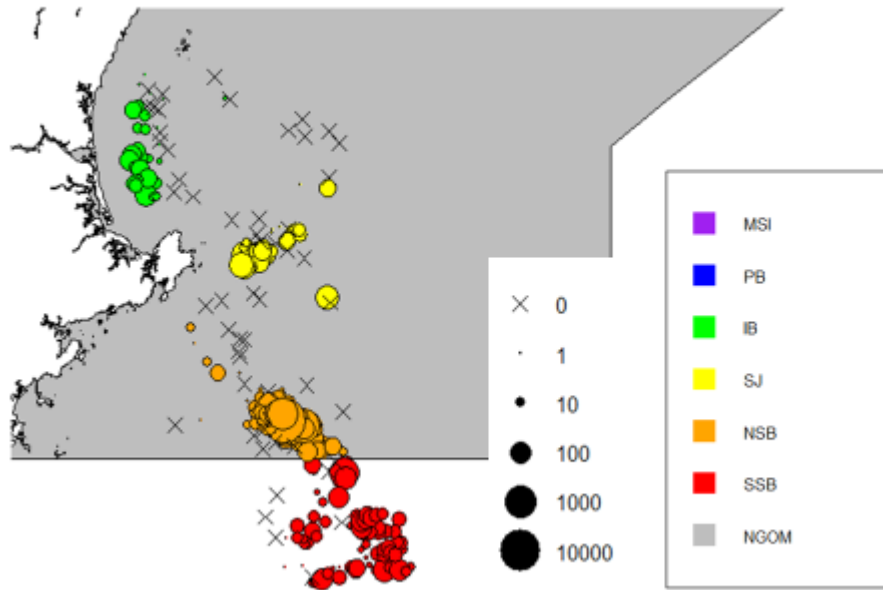


Area	Density	Number of Cells (1 km ²)	
		PB	-

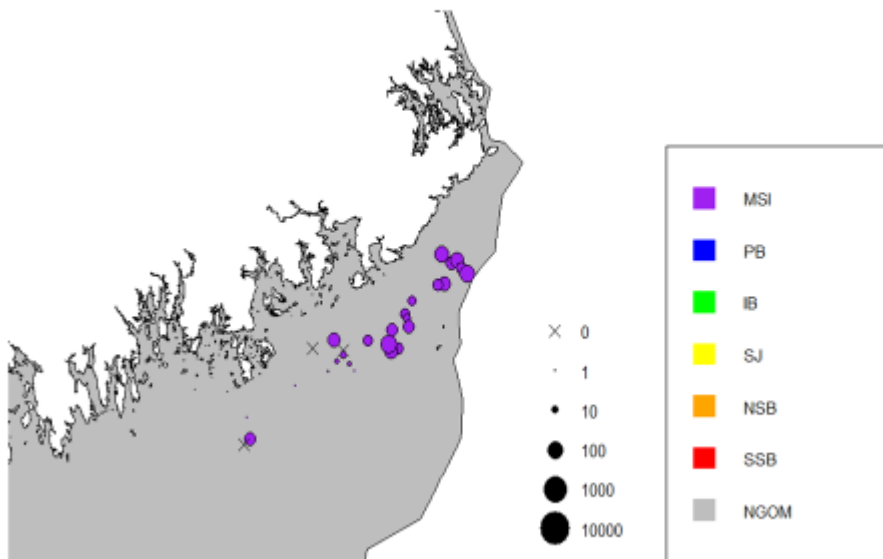
Abundance – All Areas



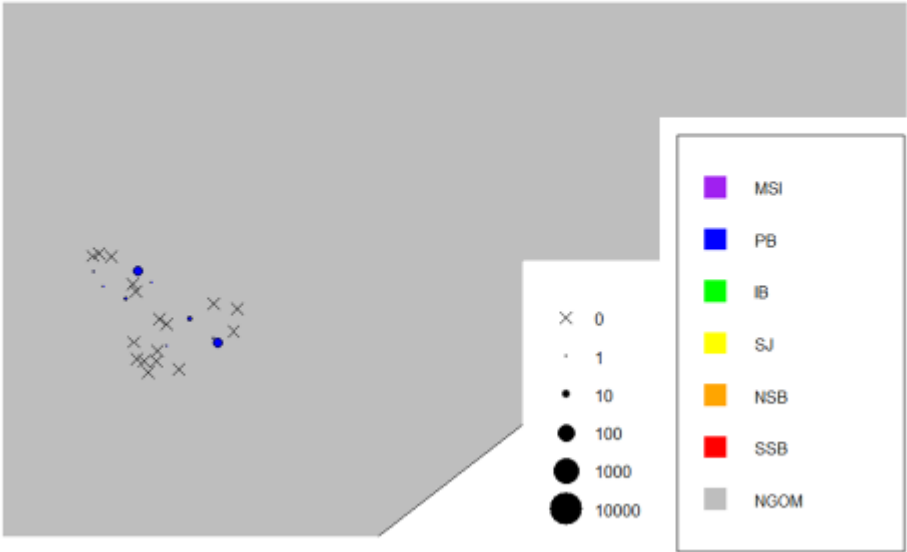
Abundance 2019 – Southern extent



Machias Seal Island

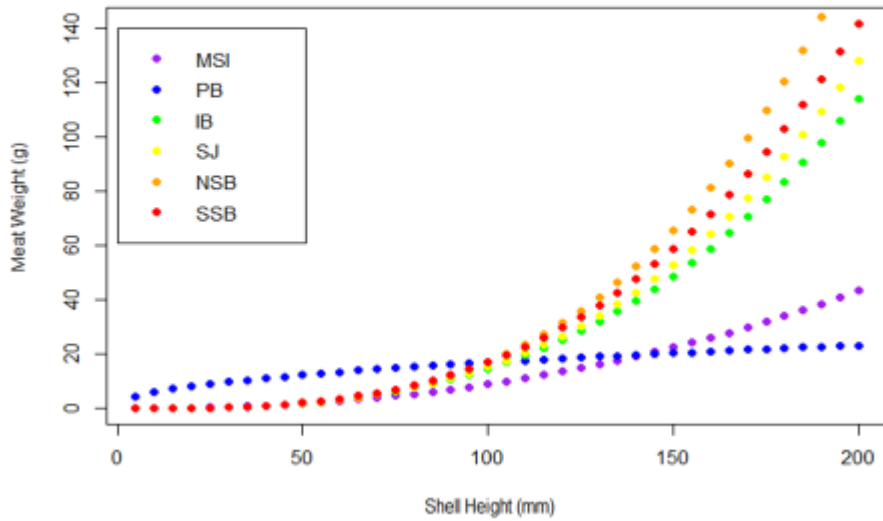


Platts Bank

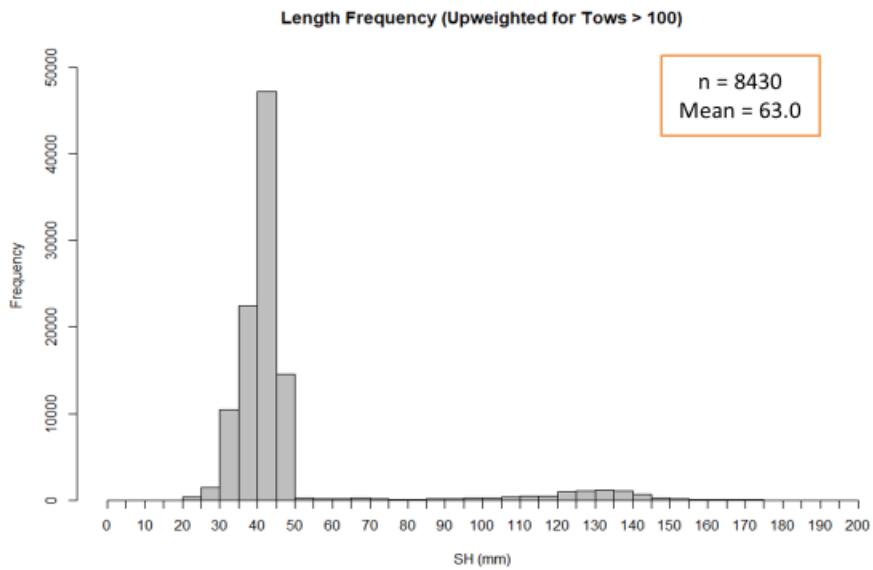


3.0 LENGTH FREQUENCY PLOTS BY SAMS AREA

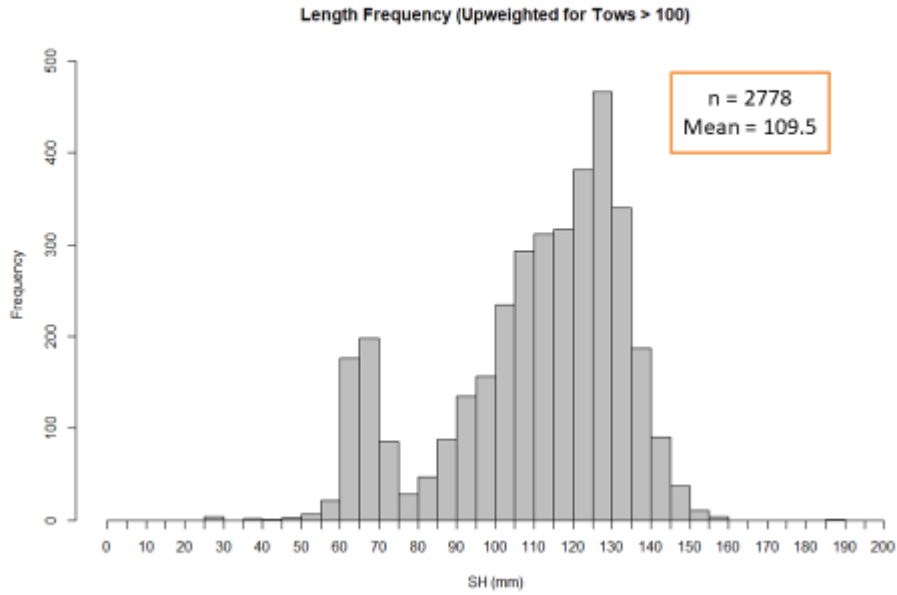
Survey Results – Shell Height/Meat Weight Log-Log Regression



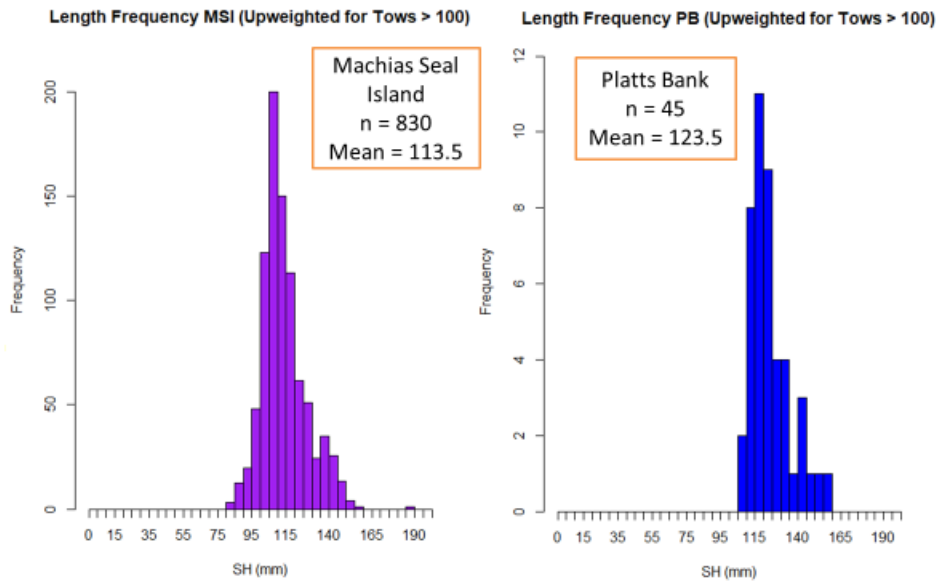
Length Frequencies, All Areas



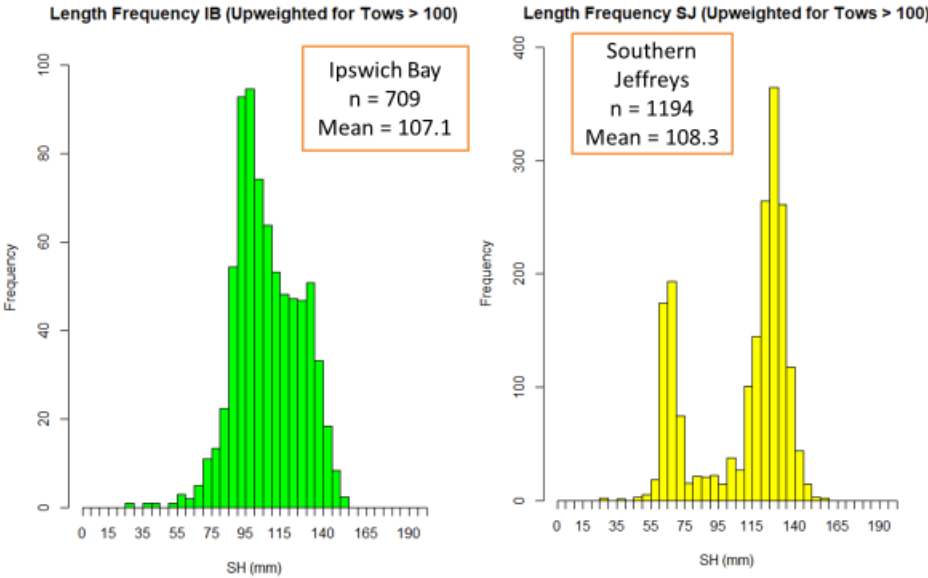
Length Frequencies, without Stellwagen



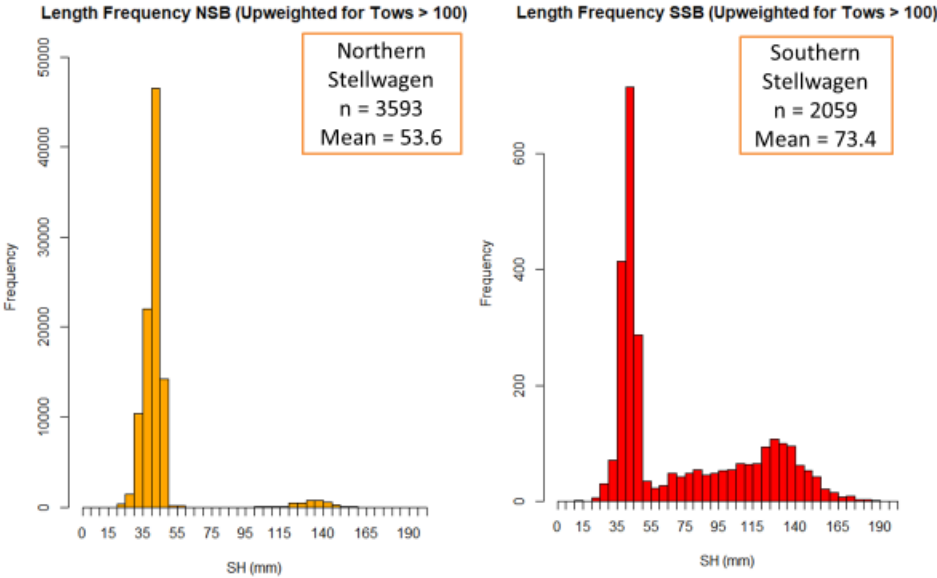
L-F: MSI & Platts Bank



L-F: Ipswich Bay & Jeffreys

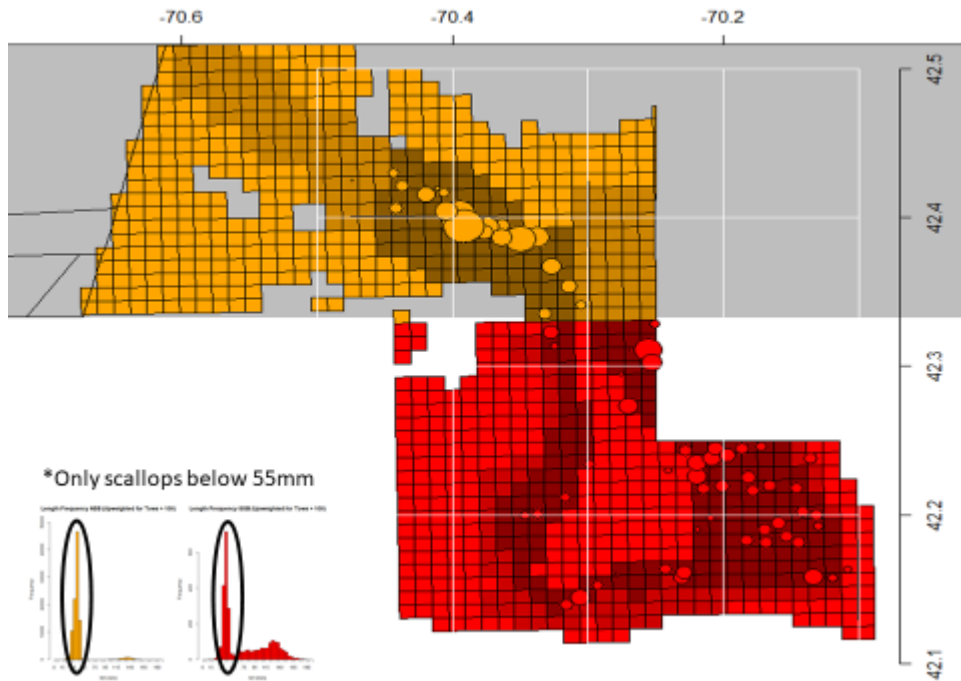
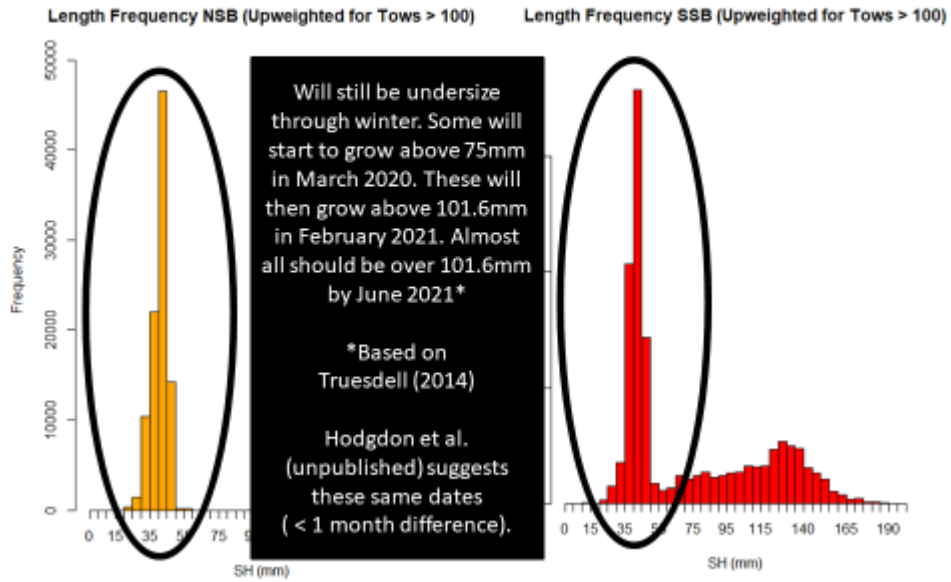


L-F: N & S Stellwagen Bank



4.0 SPECIAL COMMENTS

Length Frequencies



5.0 EXPLOITABLE BIOMASS ESTIMATES FOR 2019 (CURRENT FY)

Biomass by Area (MT; SH>75.0, Efficiency = 0.4)

Biomass Percentile	q0.025	q0.100	q0.150	q0.200	q0.250	Mean	q0.975
Platts Bank	1.84346	3.446336	4.472597	5.038386	5.438771	8.454488	17.17943
Ipswich Bay	61.80872	78.95989	85.59089	91.20121	95.83075	126.6919	211.1354
Machias/Seal Island	161.0772	198.0897	212.7228	225.0339	236.3946	286.4194	434.9683
Northern Stellwagen Bank	336.4664	400.9557	429.0515	452.7891	473.9551	578.8867	892.6838
Southern Jeffreys	75.48489	114.886	207.7014	218.2179	232.9736	671.2553	1687.782
Southern Stellwagen Bank	245.8878	299.5517	312.826	321.3201	328.5324	434.4066	661.2699
NGOM with Southern Stellwagen	882.5685	1095.889	1252.365	1313.601	1373.125	2106.114	3905.019
NGOM	636.6807	796.3375	939.5391	992.2804	1044.593	1671.708	3243.749

Biomass by Area (MT; SH>75.0, Efficiency = 0.4)

Biomass Percentile	q0.025	q0.100	q0.150	q0.200	q0.250	Mean	q0.975
PB	1.84346	3.446336	4.472597	5.038386	5.438771	8.454488	17.17943
IB_H	61.13586	77.39867	83.77721	89.09903	93.59668	116.3856	184.0148
IB_M	0.672855	1.561217	1.813676	2.102178	2.234071	3.195648	5.827039
IB_L	0	0	0	0	0	7.110646	21.29361
MSI_H	72.95224	87.13838	92.58869	97.02426	101.1786	121.305	181.3635
MSI_L	88.12499	110.9513	120.1341	128.0096	135.216	165.1144	253.6048
NSB_H	259.3095	283.1339	291.6864	299.3112	305.9778	333.7337	418.3561
NSB_M	77.15692	110.897	127.2151	140.8284	154.1278	222.1757	424.3035
NSB_L	0	6.924767	10.14998	12.64949	13.84953	22.97734	50.0242
SJ_H	57.57841	72.73845	78.60442	82.80476	86.65837	104.9401	157.7752
SJ_M	17.90648	37.66438	45.32874	49.40326	53.5806	80.83629	159.0683
SJ_L	0	4.483174	83.76827	86.00985	92.73461	485.4789	1370.938
SSB_H	123.3898	139.0426	145.4706	150.5545	155.2415	176.786	243.4769
SSB_M	117.6786	146.9296	152.0739	152.0739	152.0739	181.5323	220.8646
SSB_L	4.81935	13.57954	15.28145	18.69173	21.21704	76.08826	196.9284
NGOMwSSB	882.5685	1095.889	1252.365	1313.601	1373.125	2106.114	3905.019
NGOM	636.6807	796.3375	939.5391	992.2804	1044.593	1671.708	3243.749

Biomass by Area (MT; SH>75.0, Efficiency = 0.4)

Area	2012	2016	2019
Platts Bank	51	101	8
Ipswich Bay	72 (area > '16 or '19)	119	127
Machias Seal Island	59	228	286
Northern Stellwagen Bank	92 (area > '16 or '19)	1681	579
Southern Jeffreys	Part of IB, NSB	230	671
Southern Stellwagen Bank	Not surveyed	Not surveyed	434
NGOM with Southern Stellwagen	Not surveyed	Not surveyed	2106
NGOM	274	2360	1672

