

SMAST Georges Bank Survey Results 2025

Adam Delargy and Kevin Stokesbury

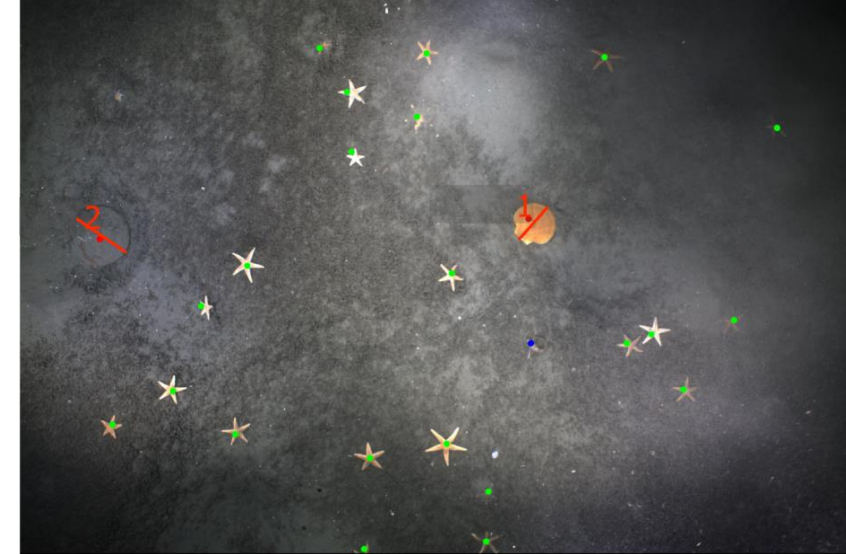
Scallop PDT Meeting



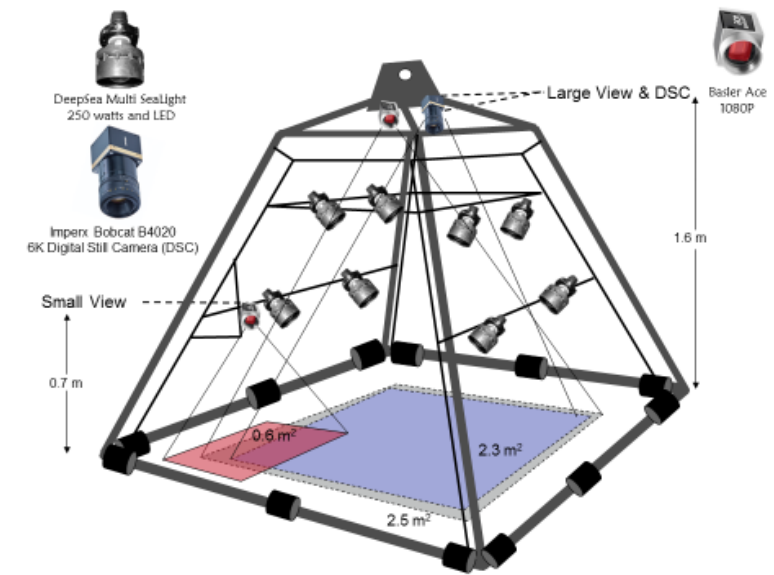
Department of Fisheries Oceanography
School for Marine Science and Technology
University of Massachusetts Dartmouth



NL4 Temperature: 10.5 C Position: -68.9959478333333N 40.4748961666667W
Station: 081 Quadrat: 4 Depth: 41.72 Fathoms 02:54:55 AM 05/26/2025



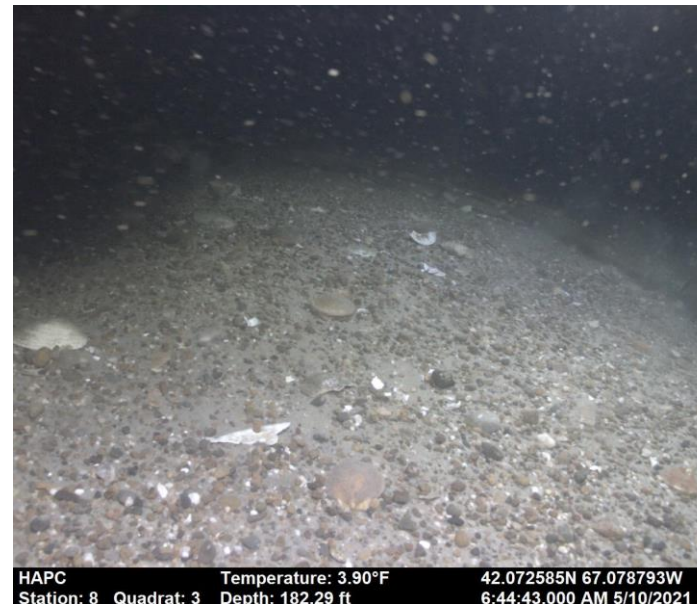
Drop camera pyramid



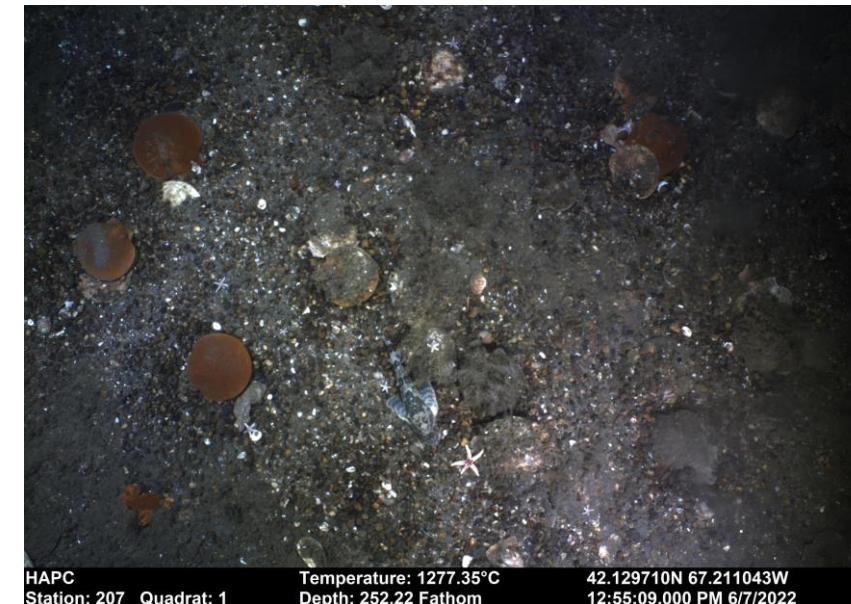
Large camera (2.5 m²)



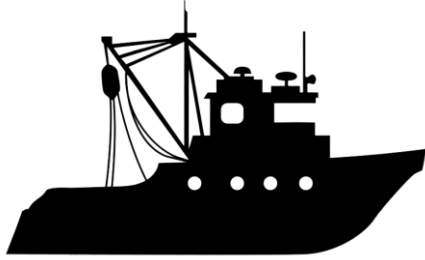
Side camera (0.6 m²)



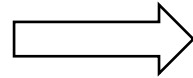
Digital still camera (2.3 m²)



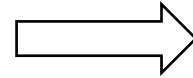
Data Collection



At-Sea Data Collection

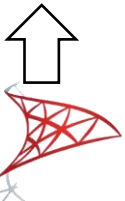


Upload survey data to webserver



1. Image Annotation
2. Video replay for accuracy
3. QA/QC

All occurs on the accessible
Web Interface

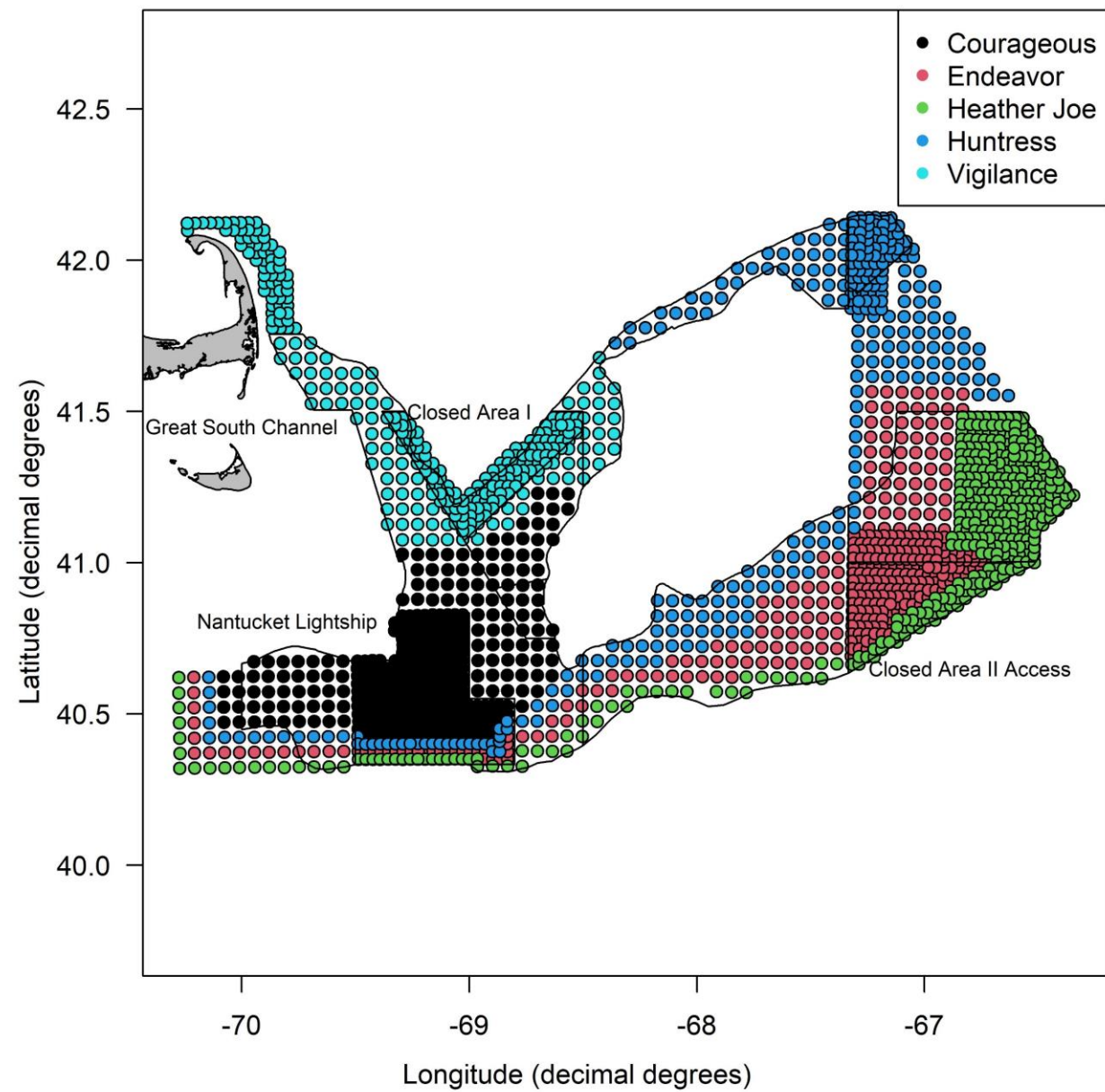


Microsoft®
SQL Server®

Import finalized data
to UMD database

Receive processed
data files (JSON) from
annotation platform
host





Shell height meat weight equations: Georges Bank

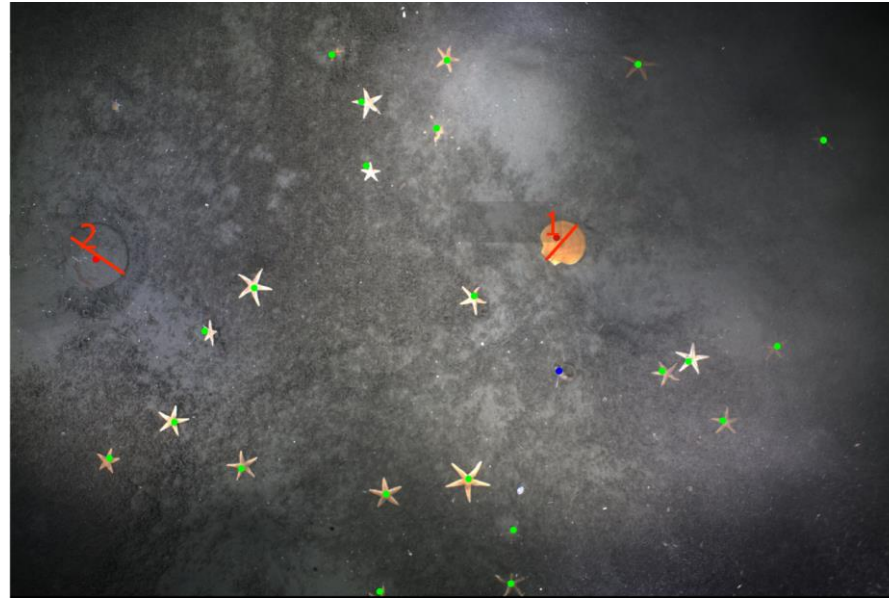
Georges Bank RTA 2025

$$W = \exp(-7.3309 + 2.9911 * \ln(\text{shell height}) - 0.0804 * \text{latitude} + (0.00159 - 0.00156 * \ln(\text{shell height})) * \text{depth})$$

NLS-South

$$W = \exp(-11.84 + 3.167 * \ln(\text{shell height})) \quad \text{SARC 65 specific}$$

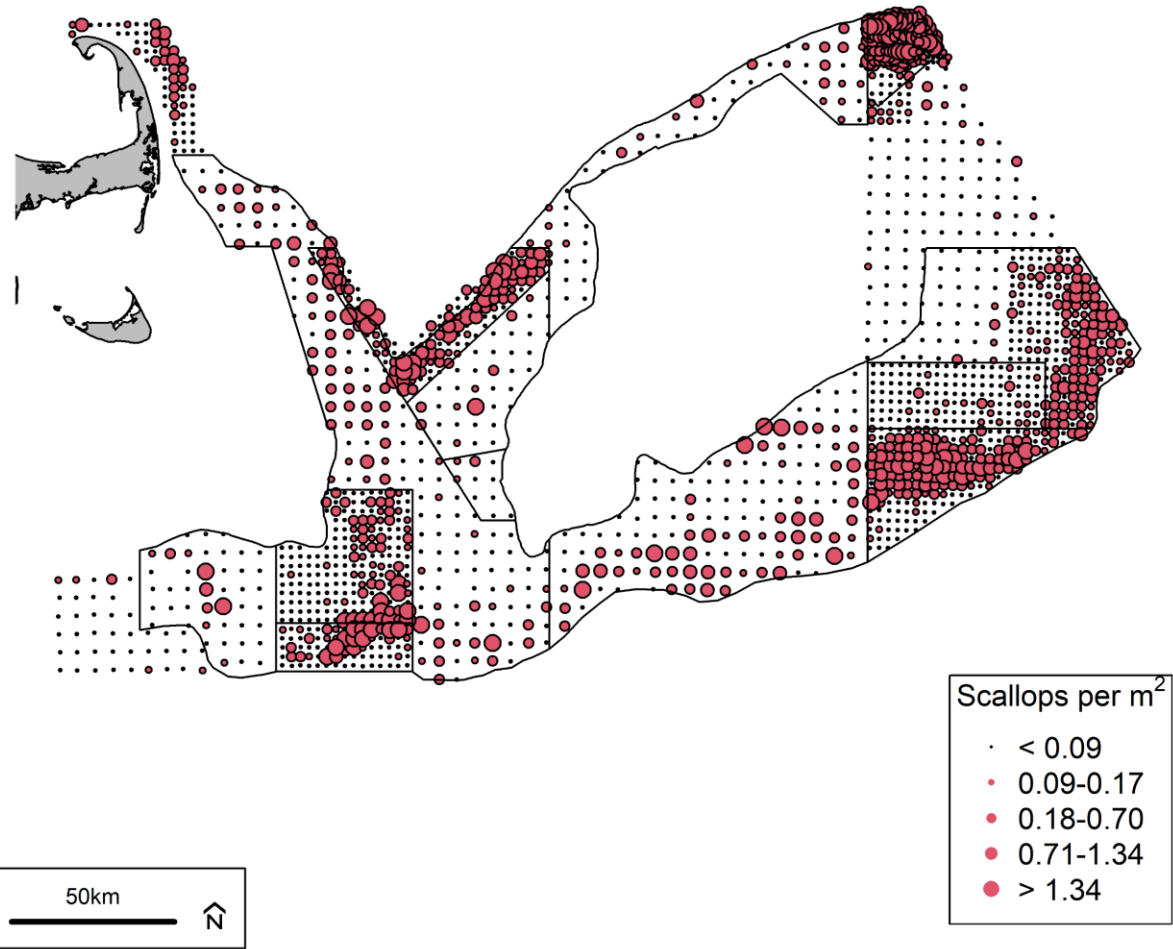
$$W = \exp(-27.39 + 2.96 * \ln(\text{shell height}) - 0.21 * \ln(\text{depth}) + 0.43 * \text{latitude} - 0.22) \quad \text{VIMS 2016-2023, 2025 eq}$$



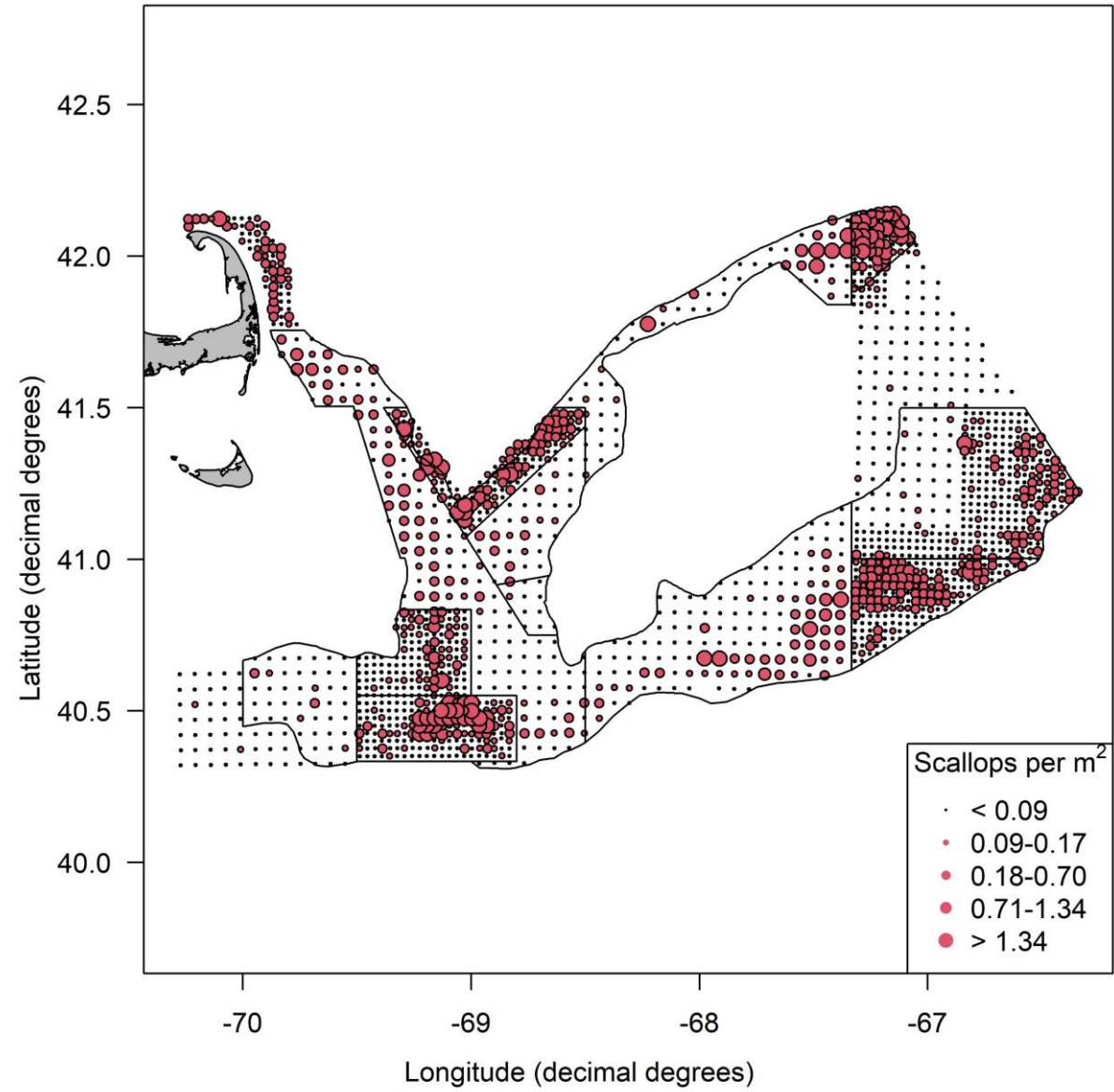
	Abundance (millions)			Biomass (metric tons)			Exploitable Biomass (metric tons)		
	2024	2025	Percent Difference (%)	2024	2025	Percent Difference (%)	2024	2025	Percent Difference (%)
CL1-Access	81.3	30.9	-62	1773	590	-67	1068	258	-76
CL1-Sliver	1052.4	411.5	-61	13103	5278	-60	5747	2301	-60
CL1-South	13.9	0.0	-	596	0	-	505	0	-
CL2-South	234.3	92.1	-61	5703	1540	-73	3917	742	-81
CL2-Ext	252.8	165.6	-34	4090	1784	-56	2352	607	-74
CL2-North	365.4	199.3	-45	12625	4231	-66	9890	2432	-75
Great South Channel	623.4	210.8	-66	8637	2478	-71	4311	980	-77
NLS-North	279.2	52.8	-81	1762	868	-51	562	397	-29
NLS-South	4652.4	7863.7	69	10416	24041	131	441	3262	640
NLS-West	159.2	34.6	-78	3799	620	-84	2306	242	-89
Northern Flank	112.1	138.6	24	1781	1616	-9	841	675	-20
Southern Flank	1188.3	3321.3	180	8451	15999	89	2514	2755	10

Eastern Georges Bank	18.4	0.0	-	215	0	-	96	0	-
NLS West Extension	0.0	2.9	-	0	33	-	0	8	-
North Cape Cod	9.5	14.6	53	80	352	342	48	223	360
Sliver Extension	59.9	43.7	-27	929	649	-30	640	340	-47
South Cape Cod	10.2	10.2	-1	73	146	102	9	62	592

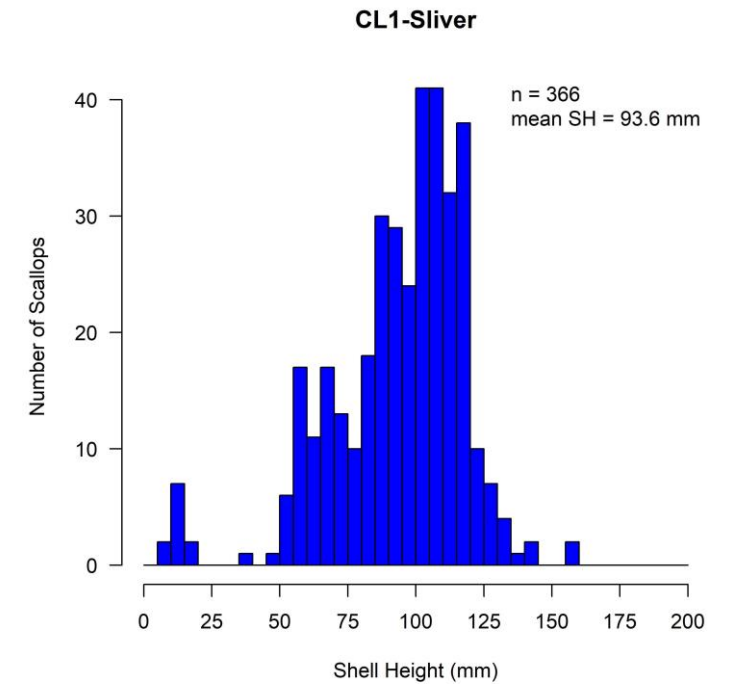
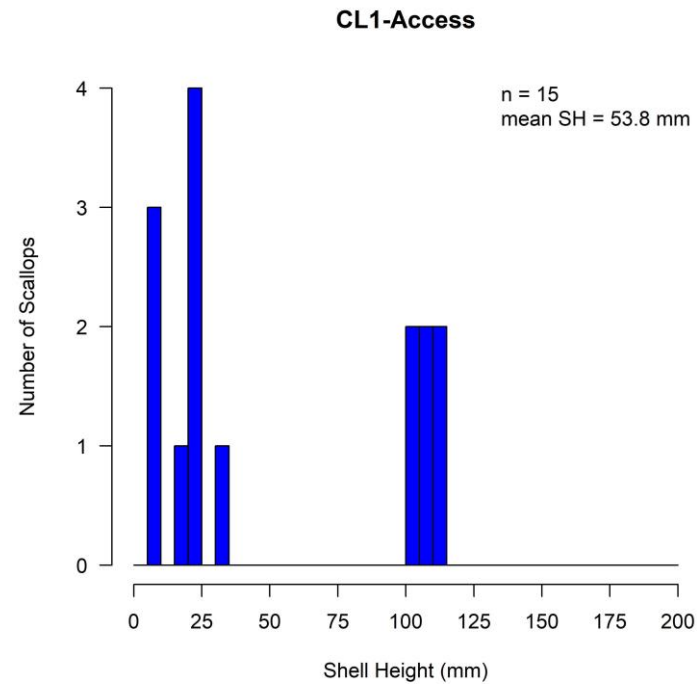
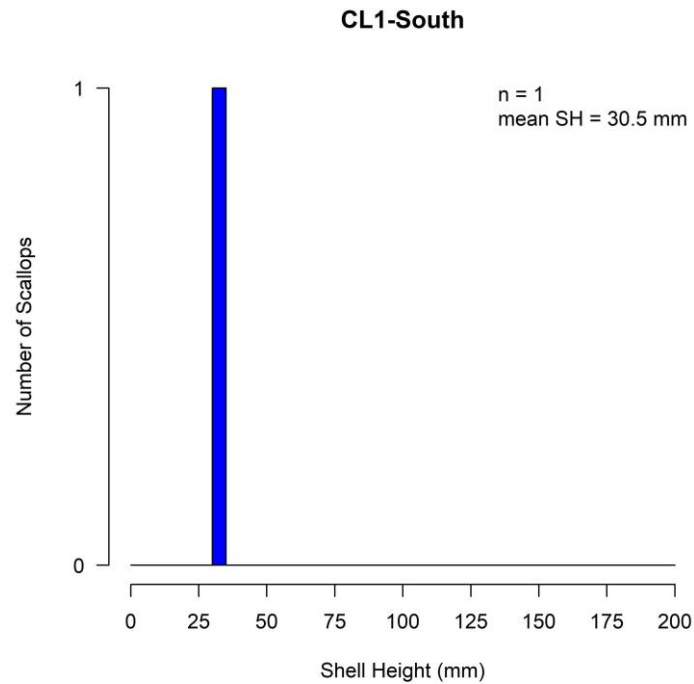
2024



2025

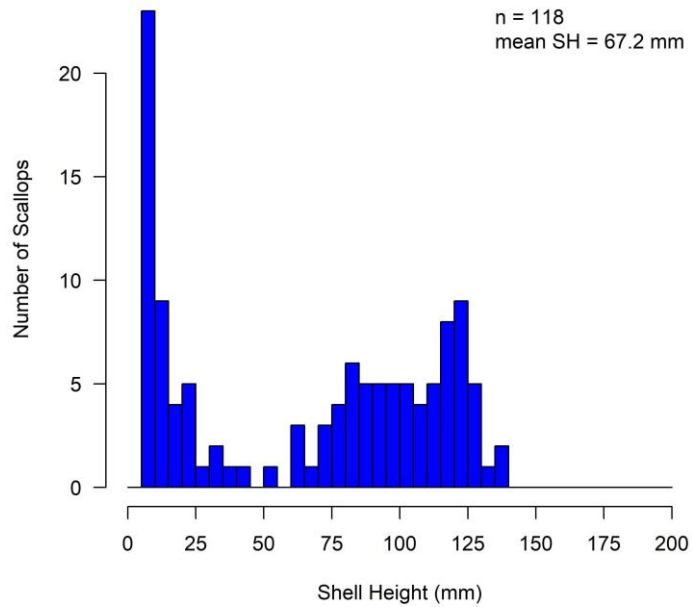


Closed Area I

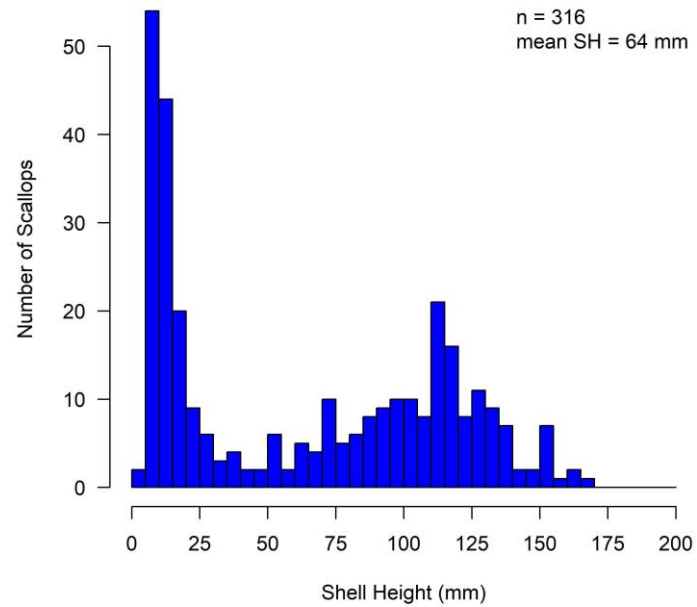


Closed Area II

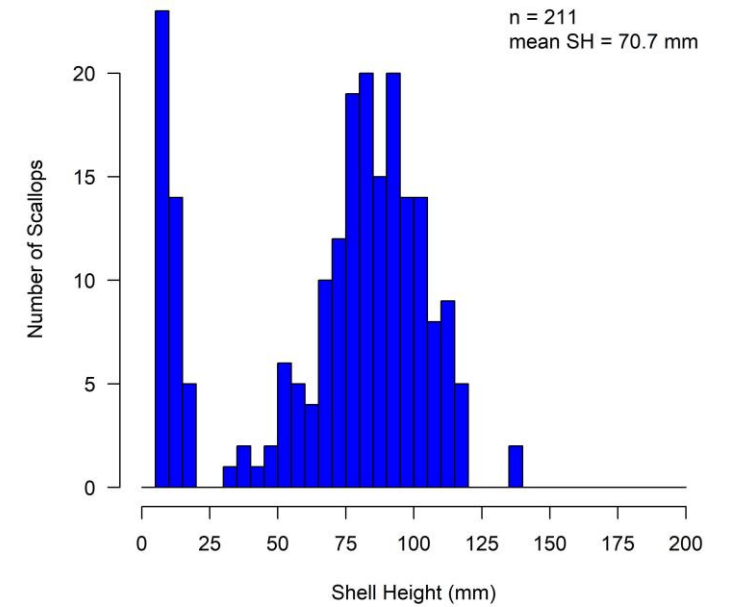
CL2-Access



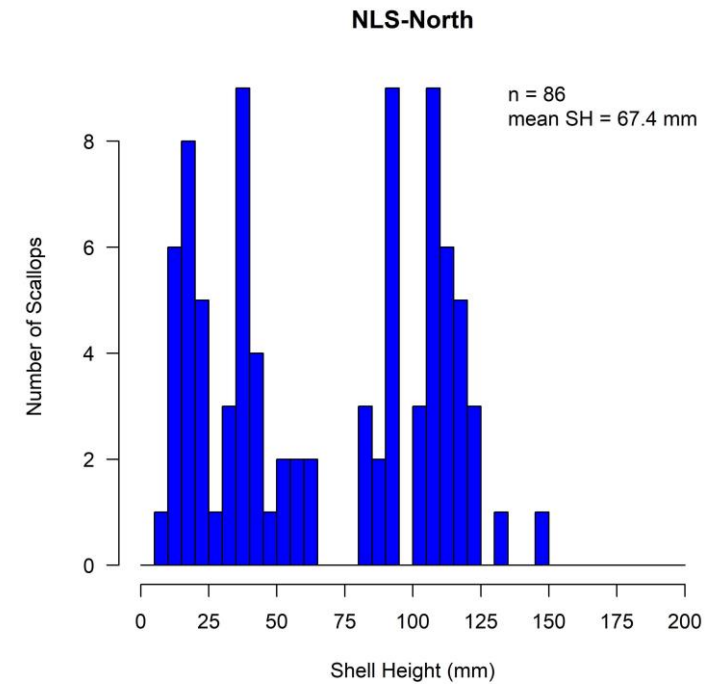
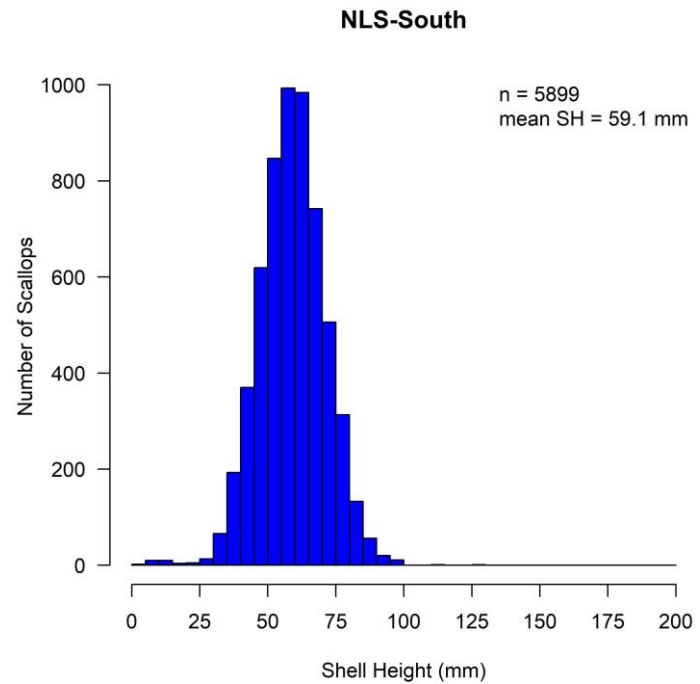
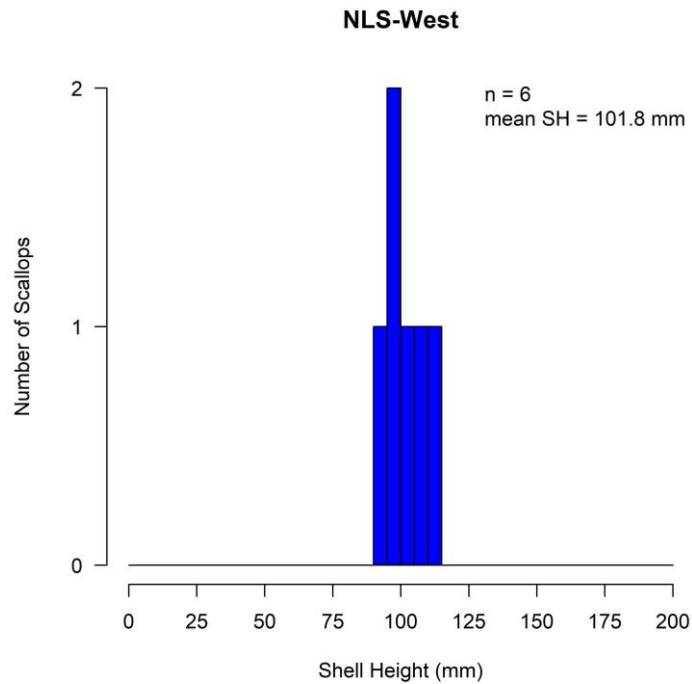
CL2-North

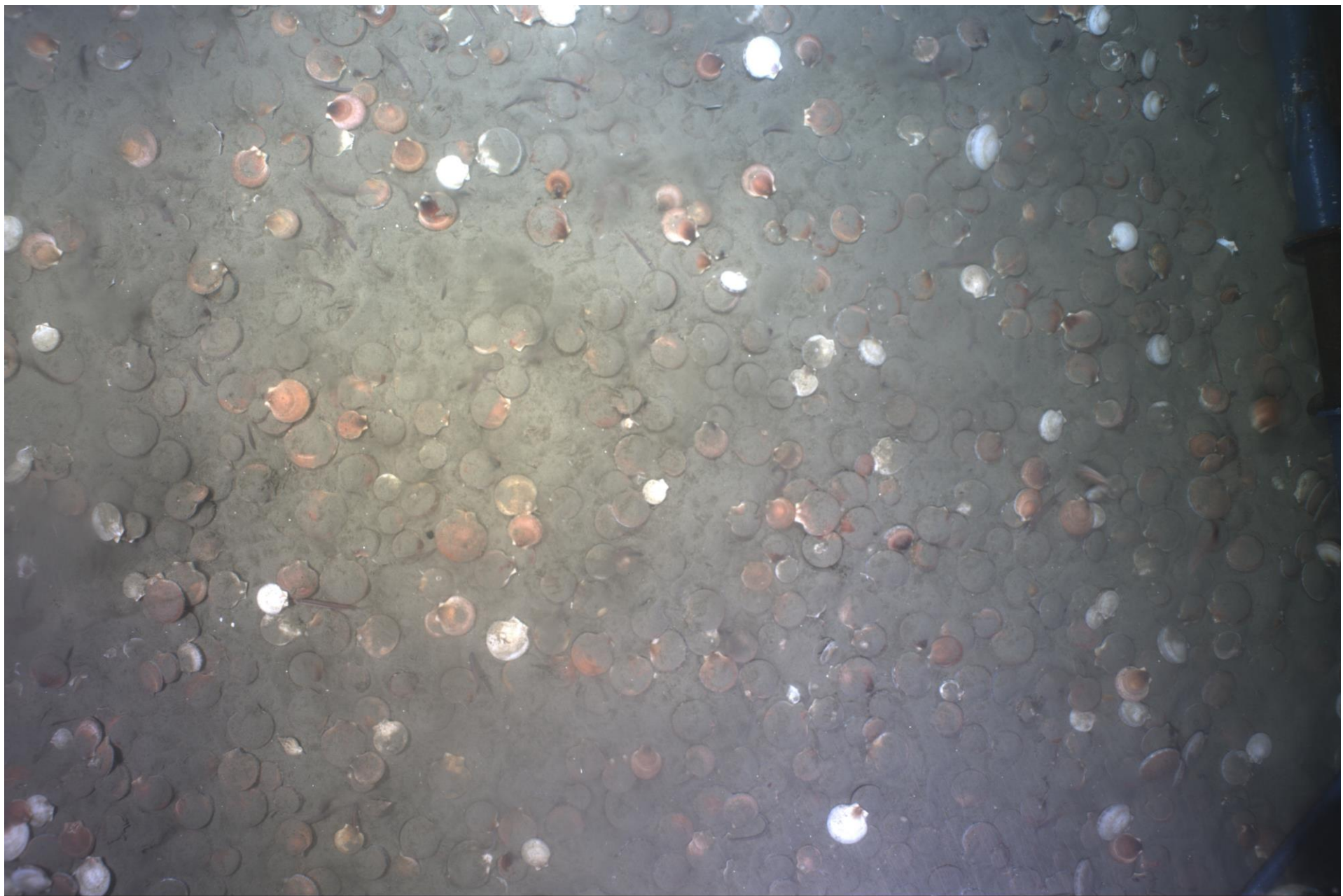


CL2-Ext



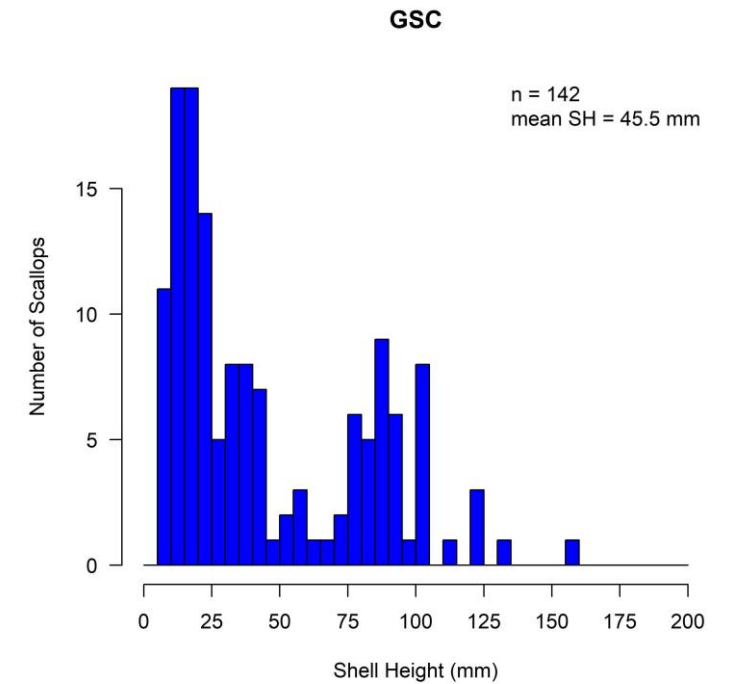
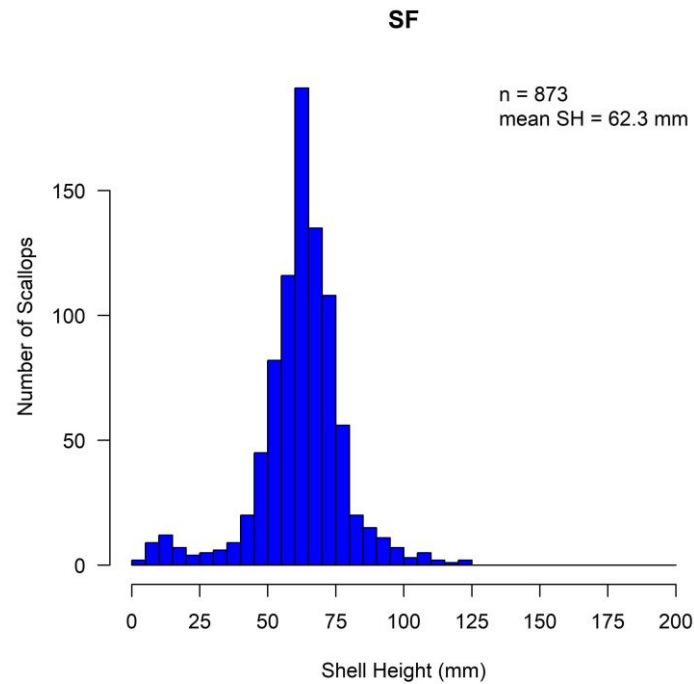
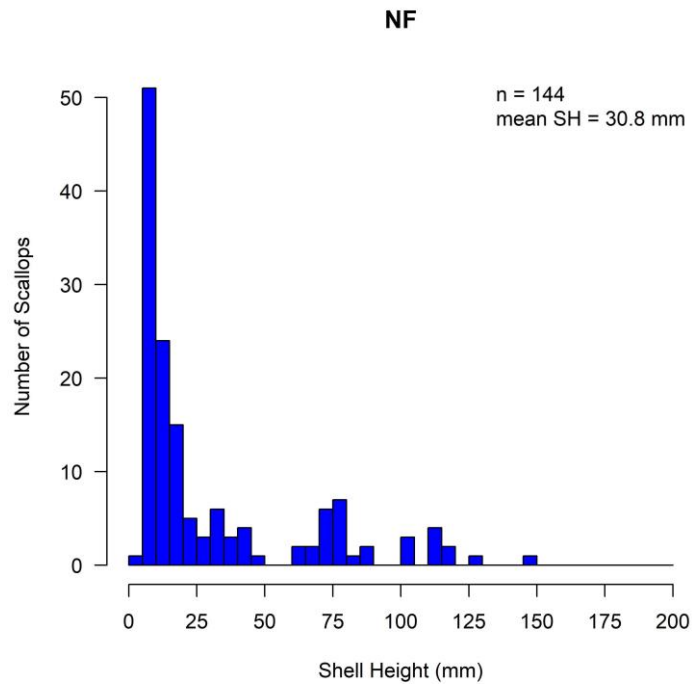
Nantucket Lightship



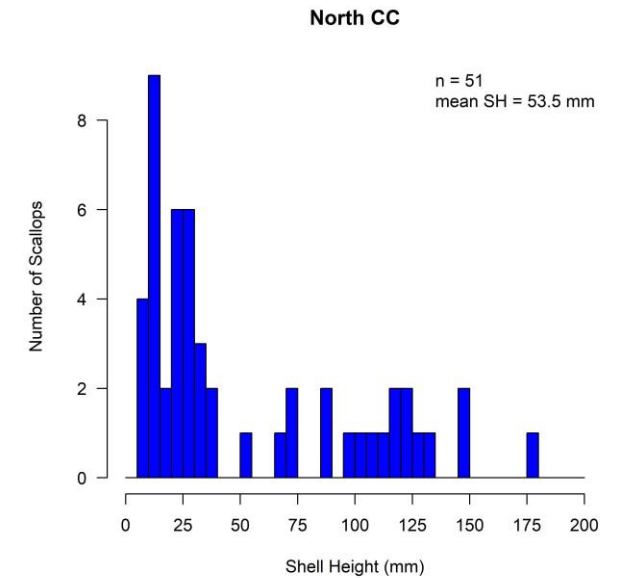
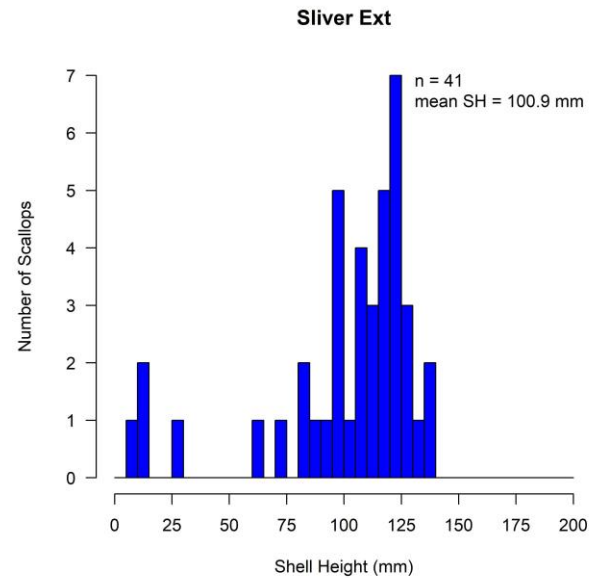
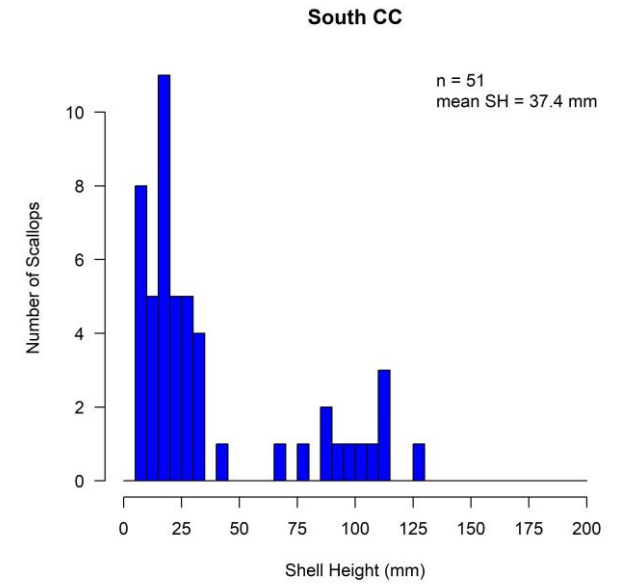
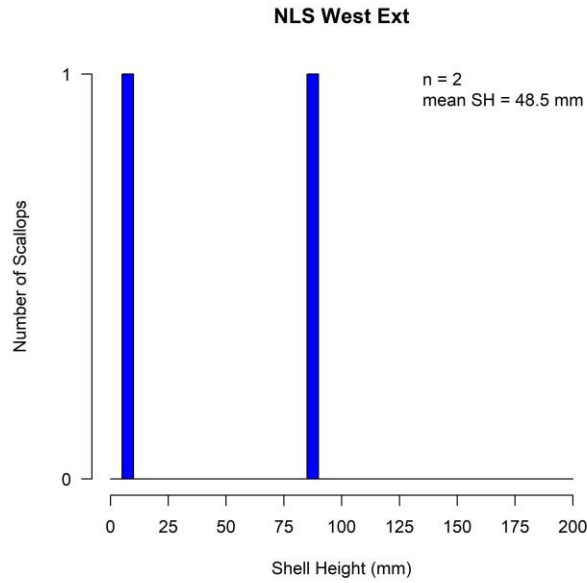


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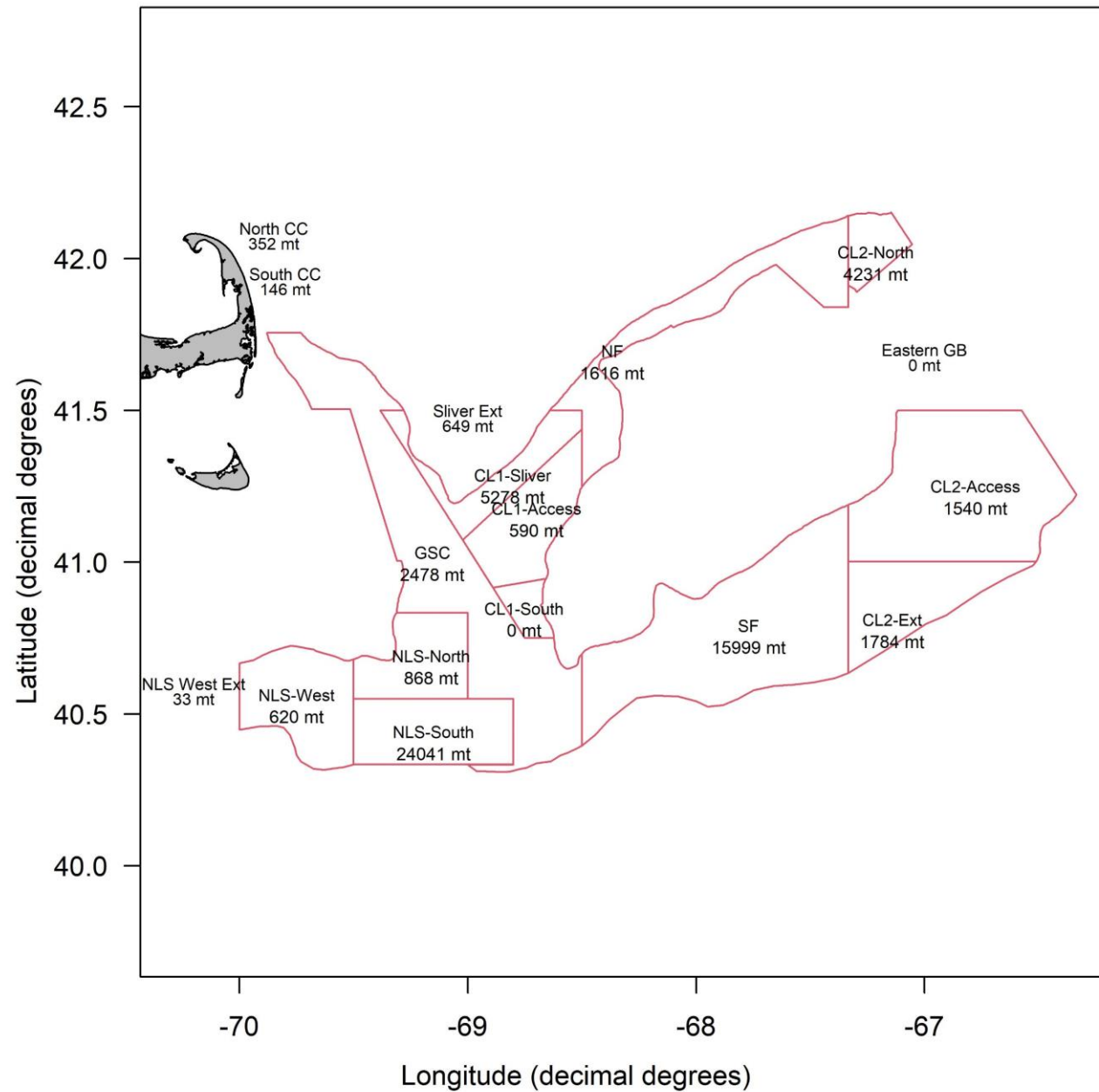
Northern and Southern flanks and Great South Channel



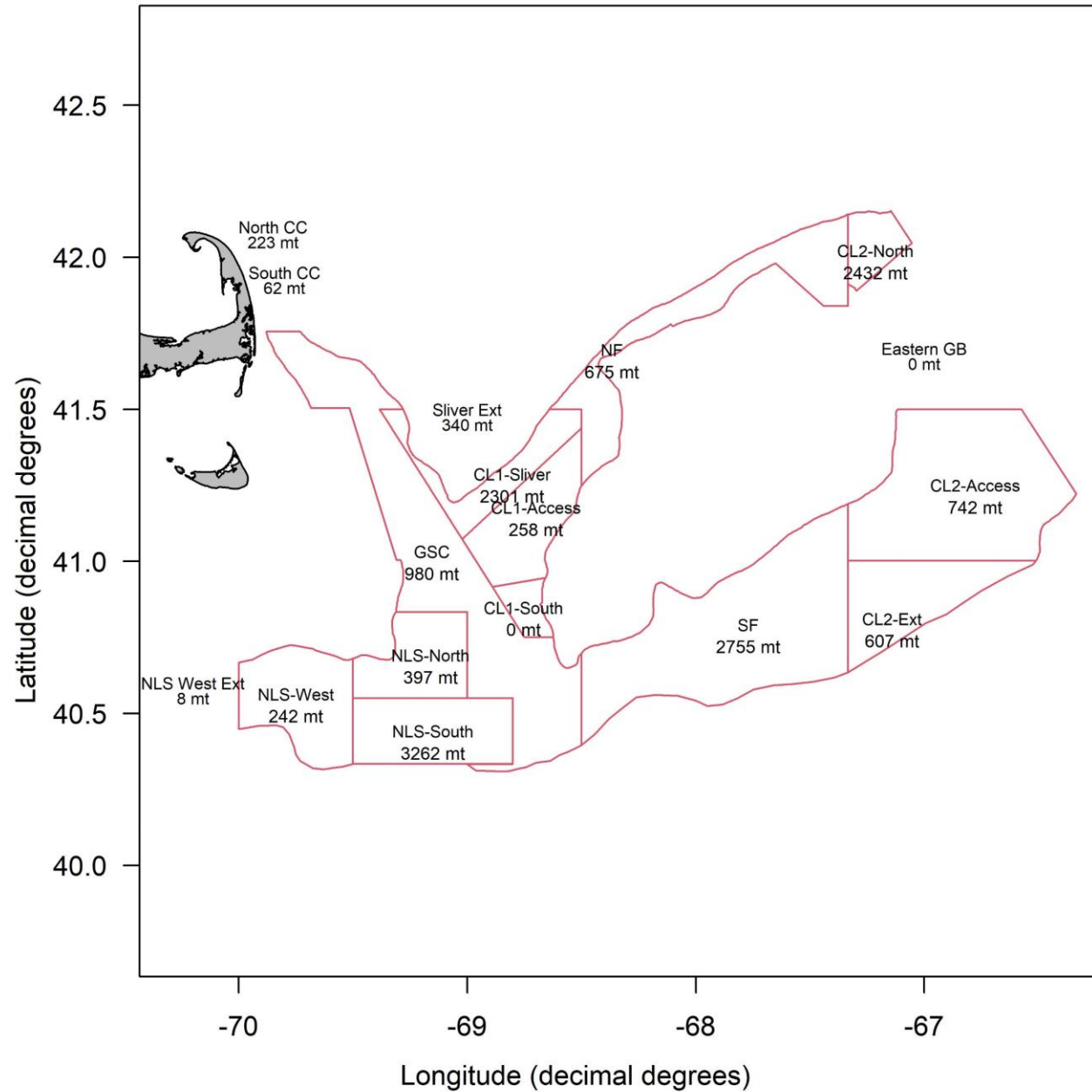
Non-SAMS areas



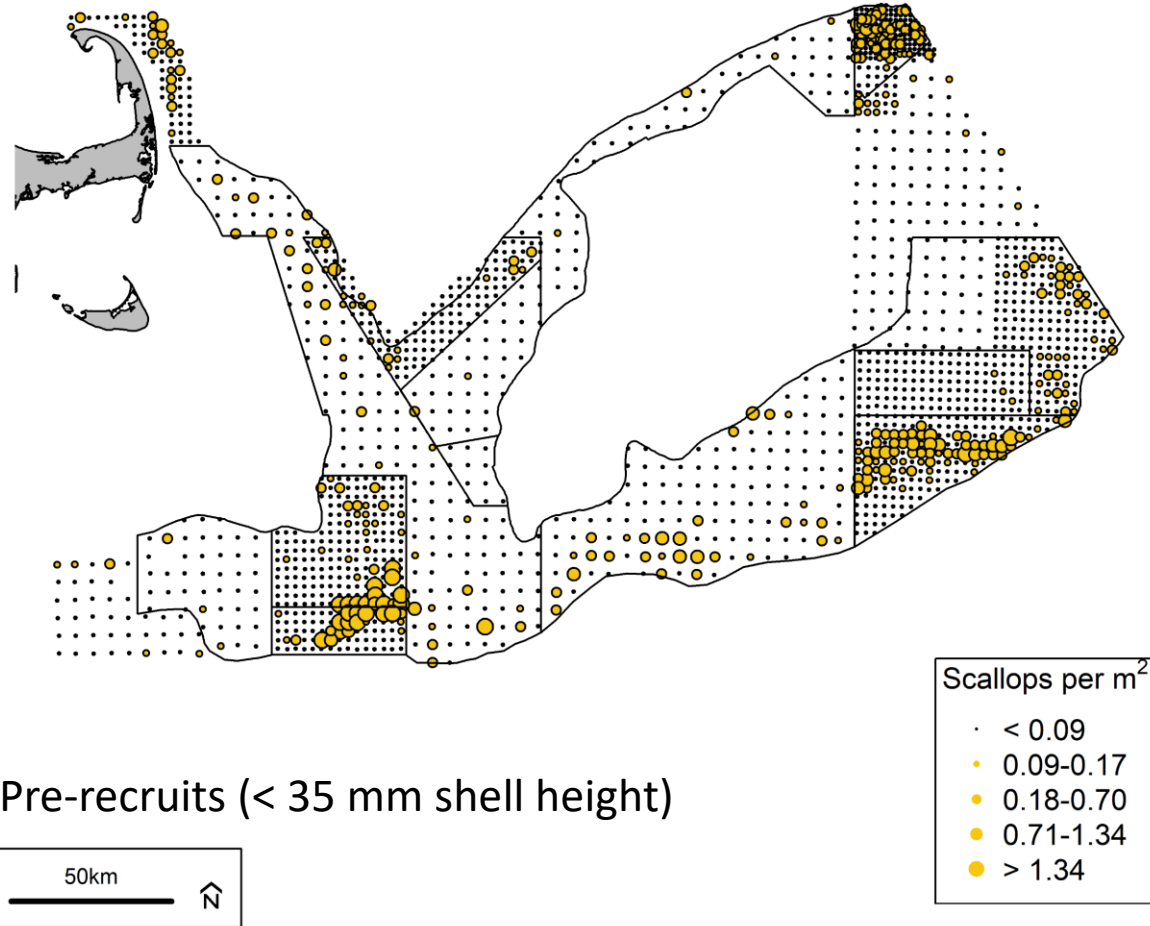
Biomass
estimates (≥ 40
mm shell
height) in
metric tons



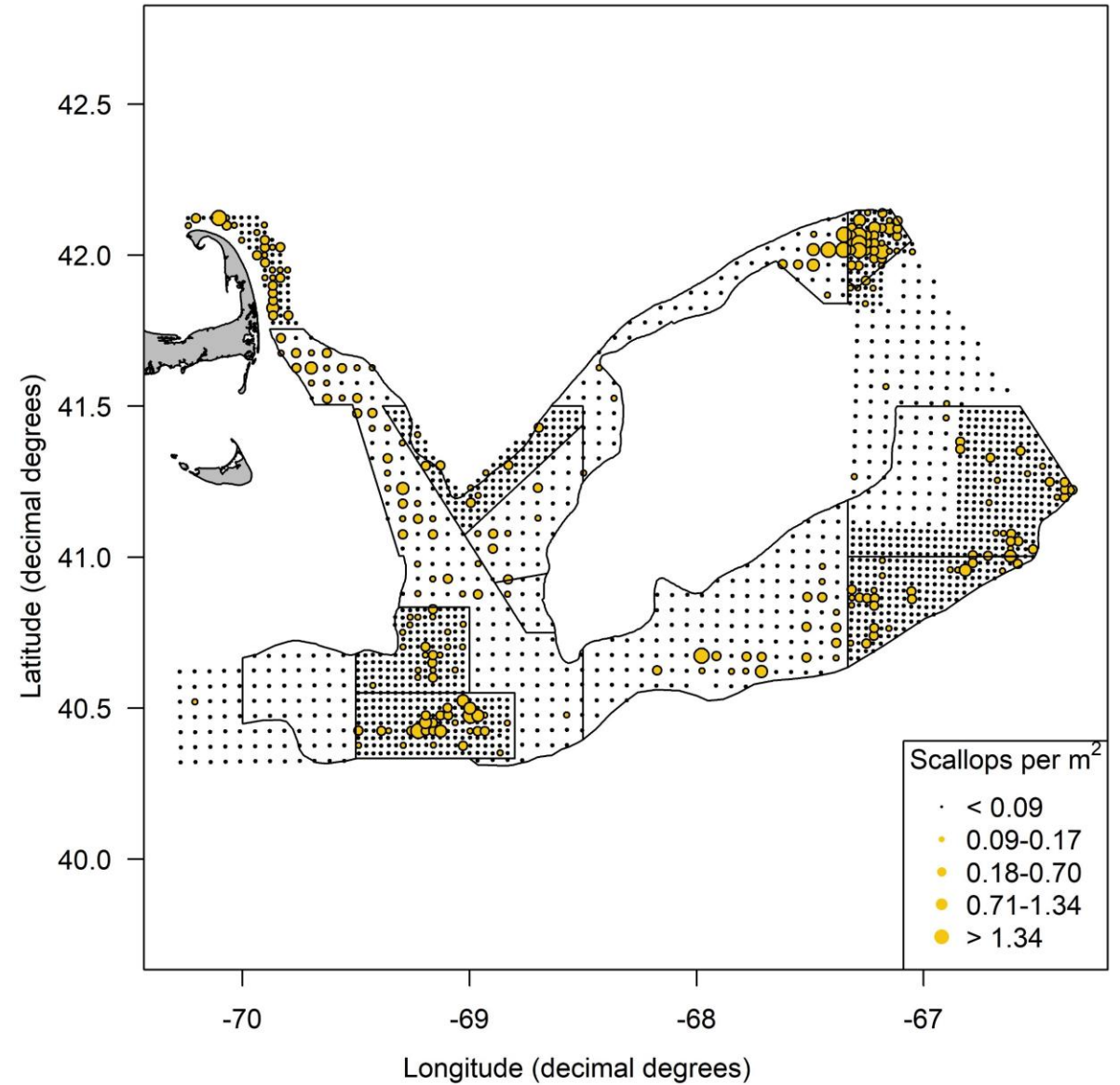
Exploitable biomass estimates in metric tons



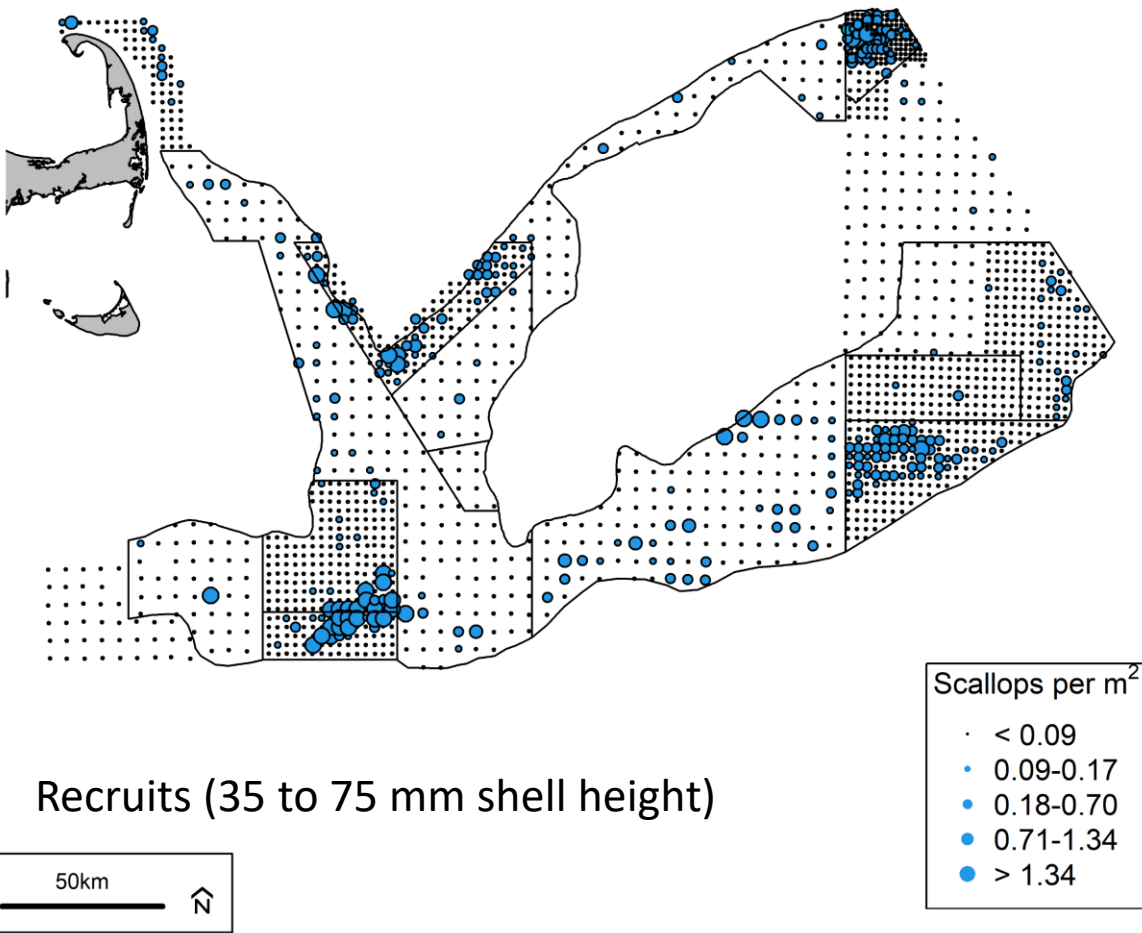
2024



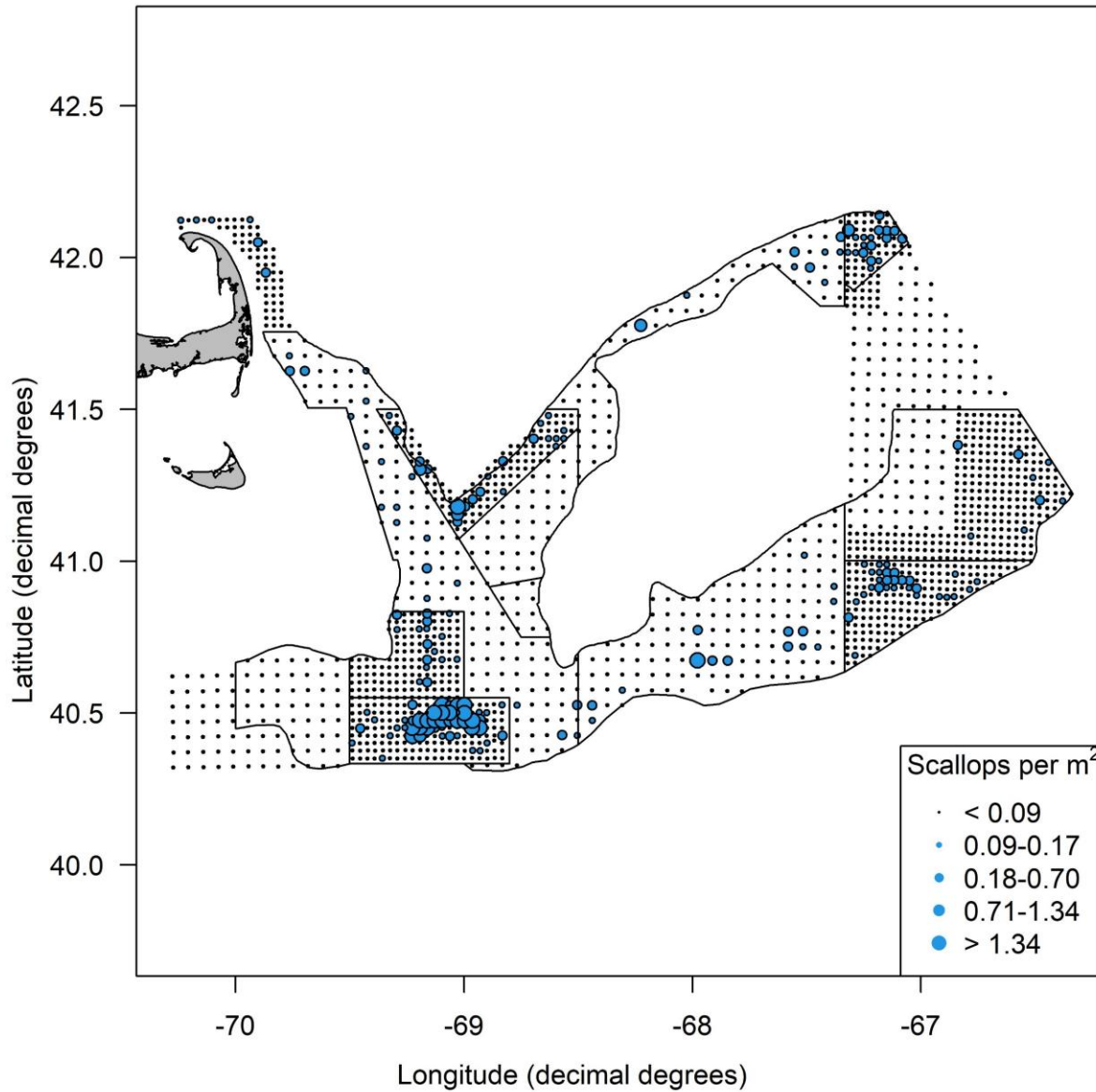
2025



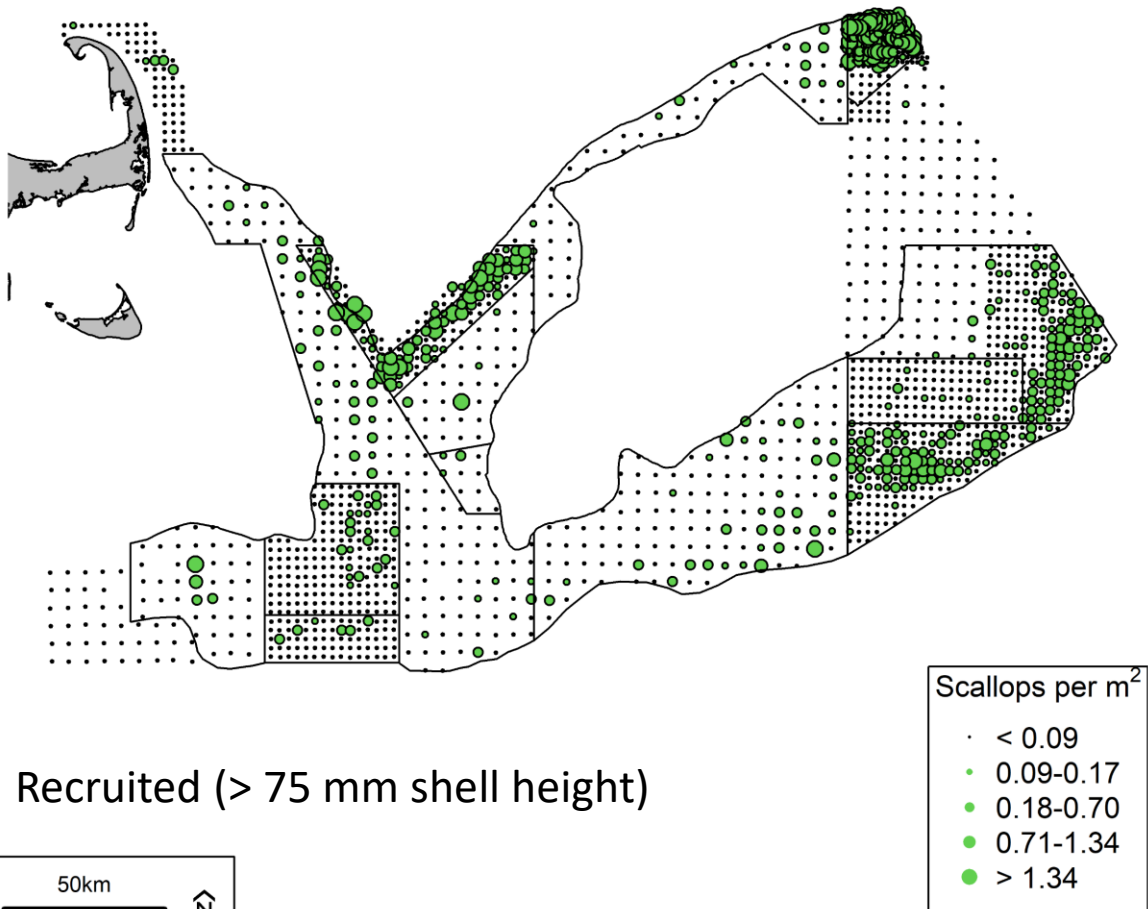
2024



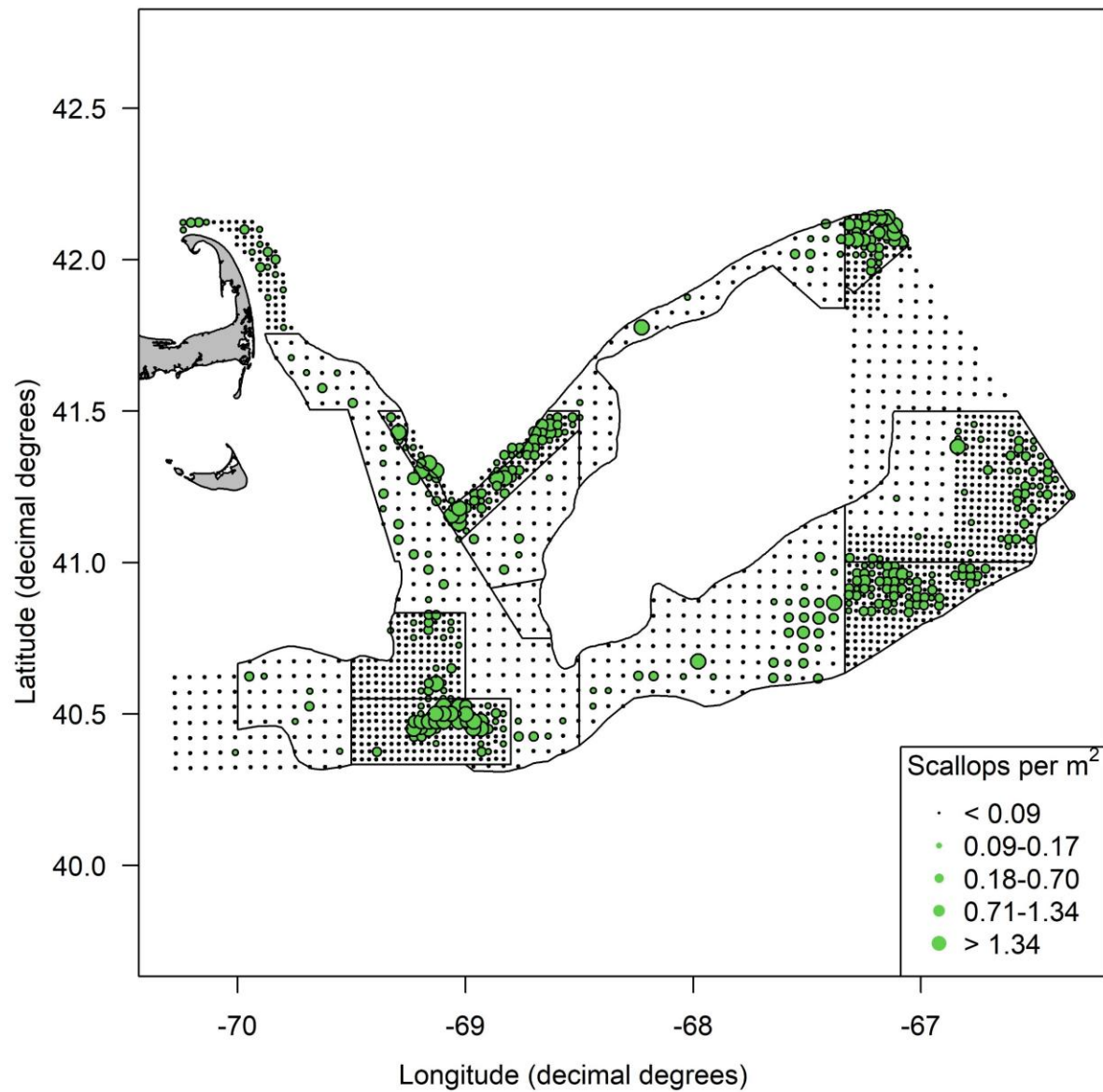
2025



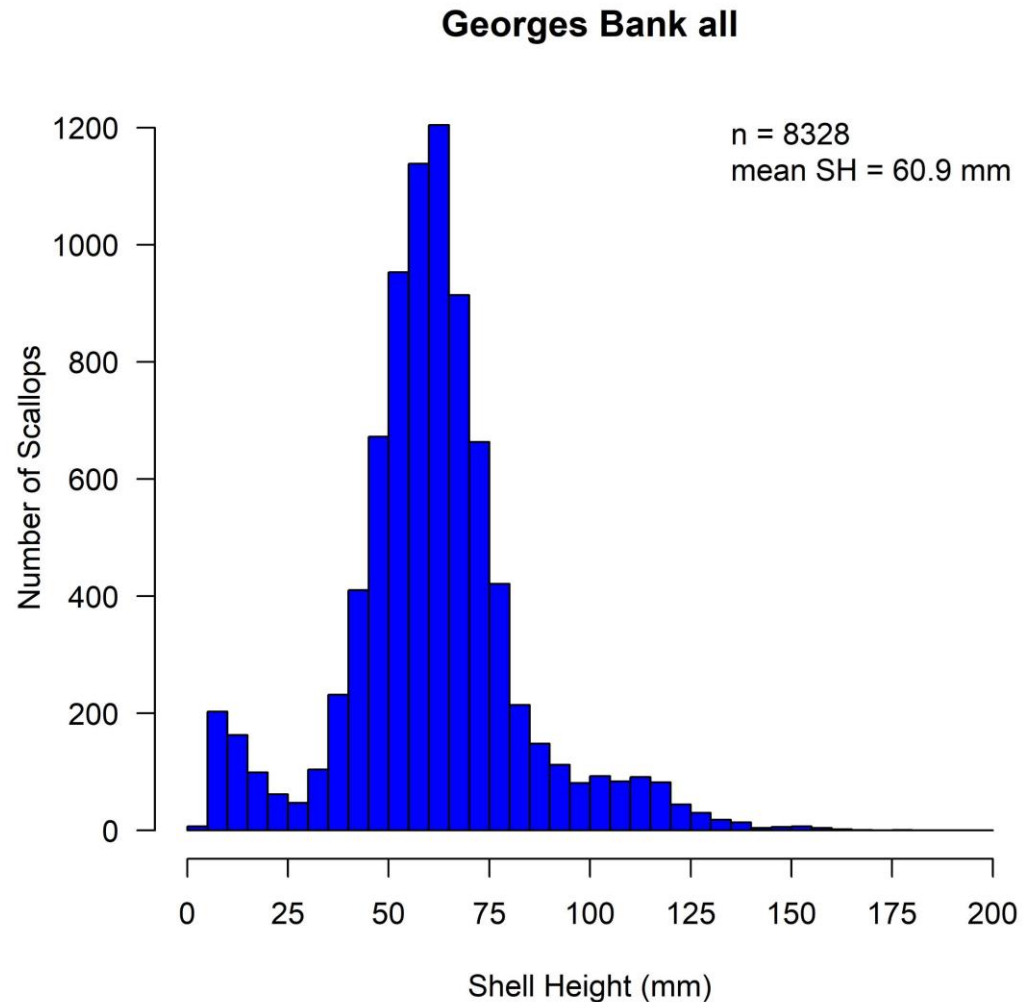
2024



2025



Georges Bank – all areas and all sizes



Abundance (millions)			
2024	2025	Difference	Percentage change (%)
17,220	14,534	-2,686	-15.6
Biomass (metric tons)			
2024	2025	Difference	Percentage change (%)
85,153	61,507	-23,646	-27.8
Exploitable biomass (metric tons)			
2024	2025	Difference	Percentage change (%)
35,952	15,651	-20,301	-56.5

Acknowledgements

- RSA funding – thank you
- SMAST survey personnel and digitizers
- Electromechanica
- CVision AI
- Blue Fleet Welding
- New Bedford Ship Supply
- Captains and crew of F/V:
 - Courageous
 - Endeavor
 - Heather Joe
 - Huntress
 - Vigilance

