2019 Scallop Survey Short Report

Habcam

Prepared by:

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1 2019 SURVEY BIOMASS ESTIMATES

Table 1.1. Summary of 2019 Habcam estimates for scallops larger than 40 mm shell height using combined data from NEFSC and CFF. The SH-MW equations estimated by VIMS using data from 2016 to 2019 were used to estimate the meat weights for NLS-North, NLS-South-Shallow, NLS-South-Deep, and NLS-West, whereas the SARC 65 SH-MW equations were used for all other areas.

SAMS Area	NumMill	BmsMT	BmsMTSE	MeanWt	AvgSize	#PerM^2	#Annotated
Georges Bank							
CL2-Access	1035	11710	356	11.3	67.6	0.31	4526
CL2-Ext	653	6714	117	10.3	71.6	0.4	2141
NLS-North	71	3066	379	42.9	124.6	0.07	1939
NLS-South-Deep	3829	46060	871	12	91.2	5.24	1309
NLS-South-Shallow	219	3420	9	15.6	96.9	0.76	531
NLS-West	623	12575	3618	20.2	99.5	0.43	1946
SF	1074	8514	188	7.9	62	0.25	8634
Mid-Atlantic							
BI	37	850	8	22.7	100.8	0.05	2624
DMV	47	599	58	12.8	81.6	0.01	6750
ET-Flex	778	24357	457	31.3	121.5	0.43	3974
ET-Open	634	17215	229	27.1	120.7	0.23	5189
HCS	762	18303	2273	24	112.3	0.18	12417
LI	570	12282	769	21.6	102.4	0.04	23500
MAB-Nearshore	26	1020	7	39.6	105.7	0.01	4854
NYB	487	7091	330	14.6	81	0.1	9202

2 FIGURES OF SURVEY COVERAGE

The 2019 NEFSC Dredge/Habcam survey took place in Mid-Atlantic from May 15th to 28th and Georges Bank from May 30th to June 15th. The center completed 1,319 nm of Habcam tracks in Mid-Atlantic and 286 nm in part of Georges Bank (Figures 2.1 and 2.2). A total of 2,585,168 image pairs were collected, of those 85,041 images were manually annotated. Twenty-one geostatistical models were constructed to produce the spatial count and biomass estimates of scallop for part of Georges Bank and Mid-Atlantic for 2019.

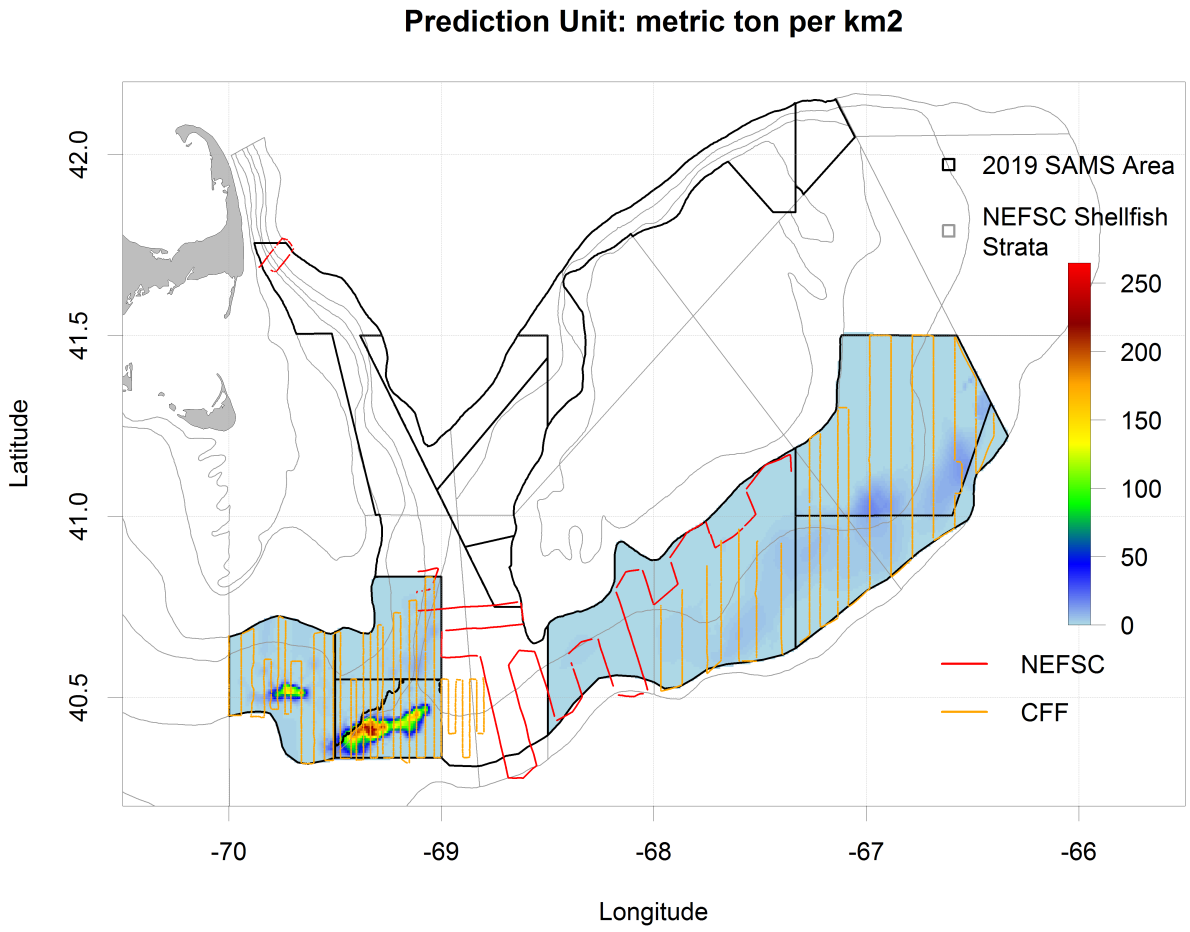


Figure 2.1. The 2019 Habcam survey tracks conducted by NEFSC and CFF, along with scallops number per image by size classes and 2019 Habcam biomass estimates for part of Georges Bank.

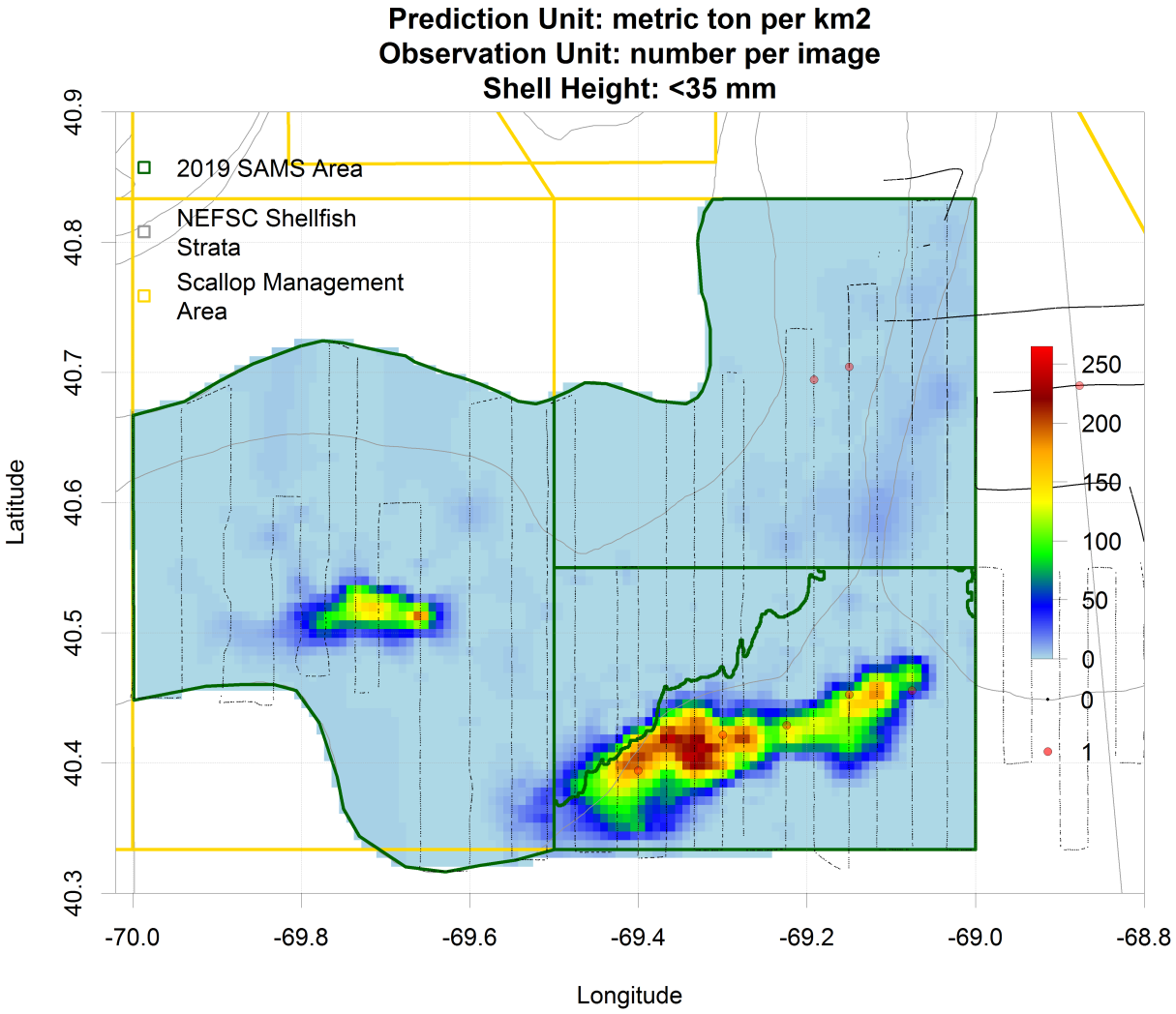
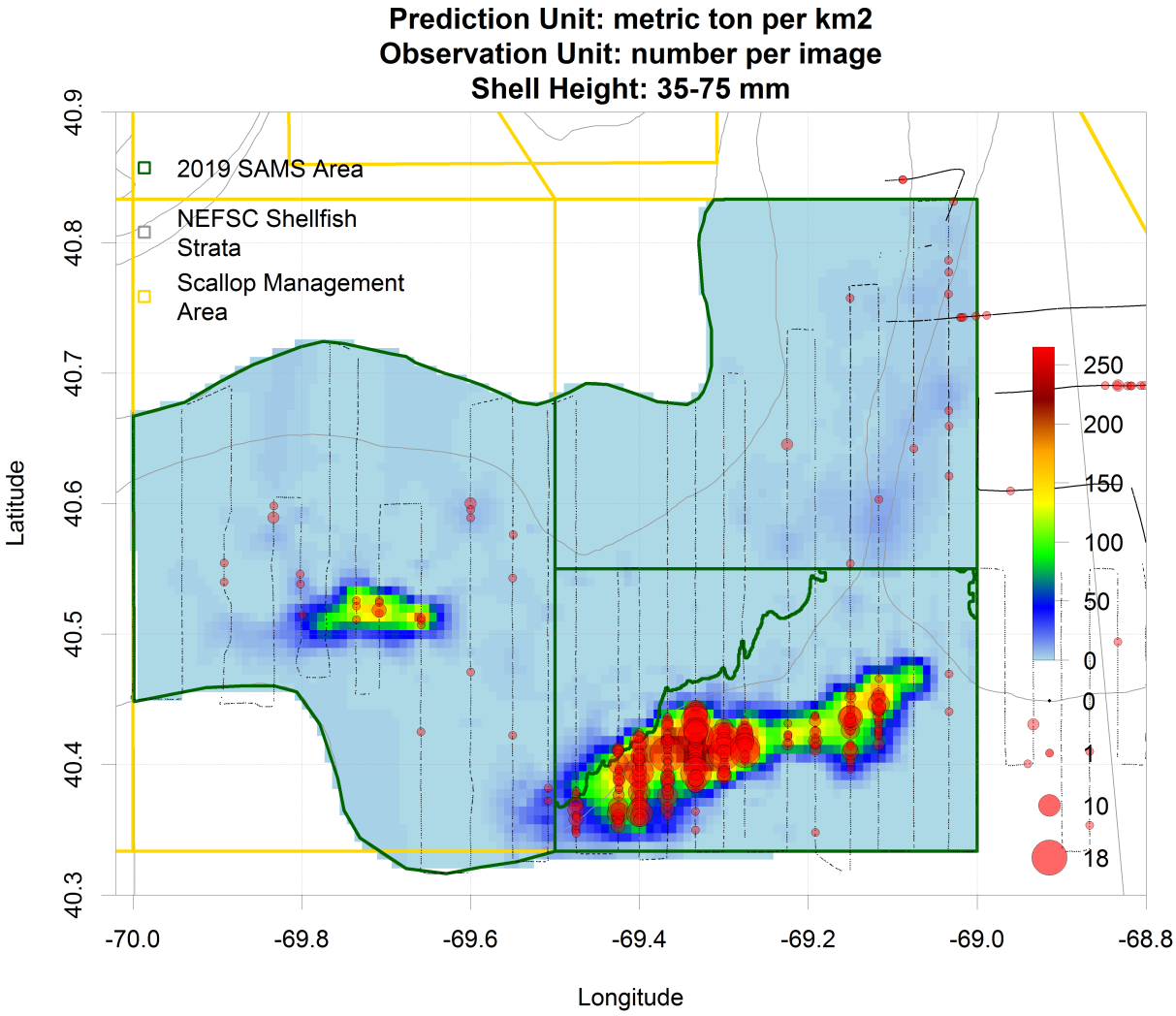


Figure 2.1. Continued.



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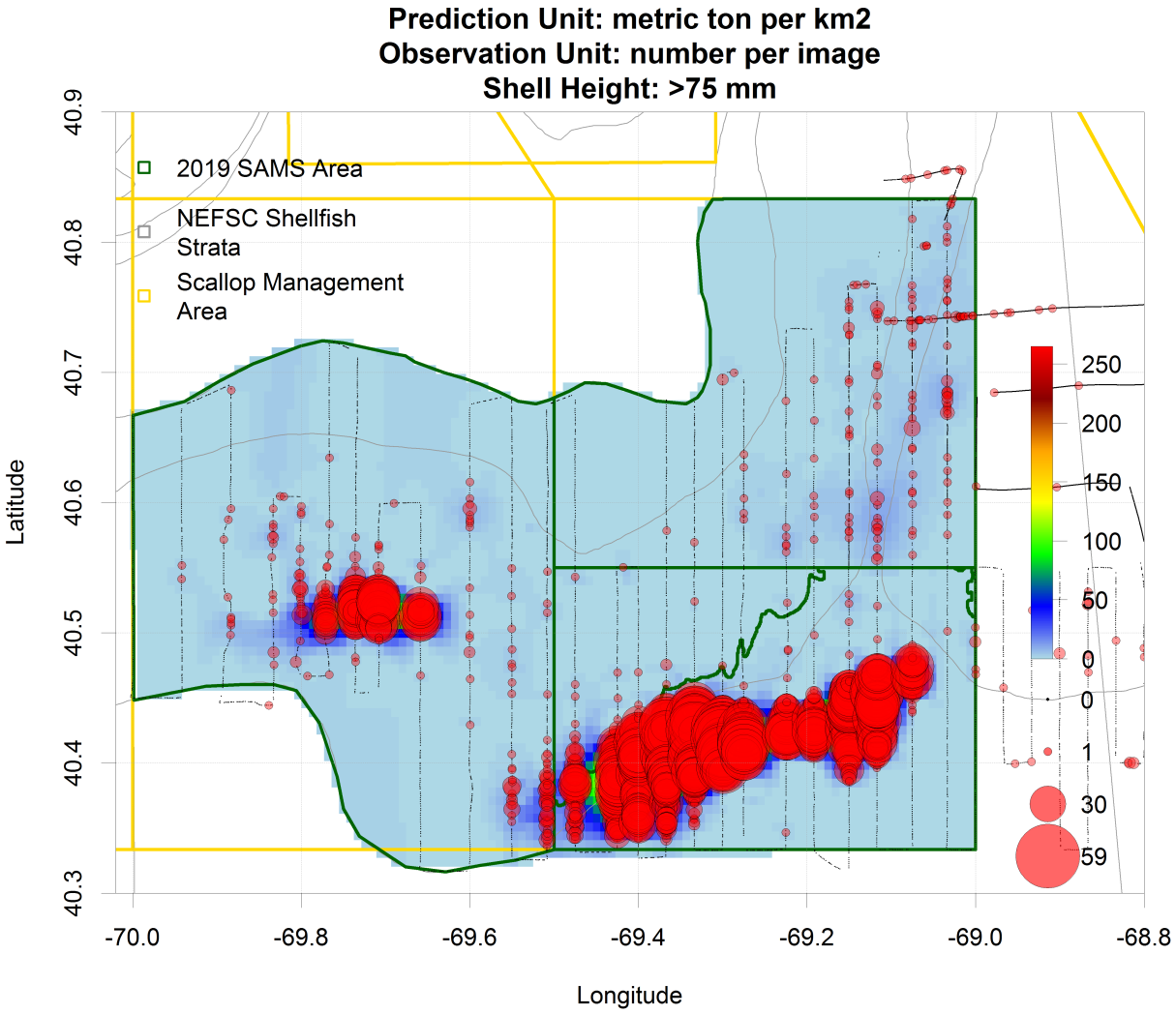
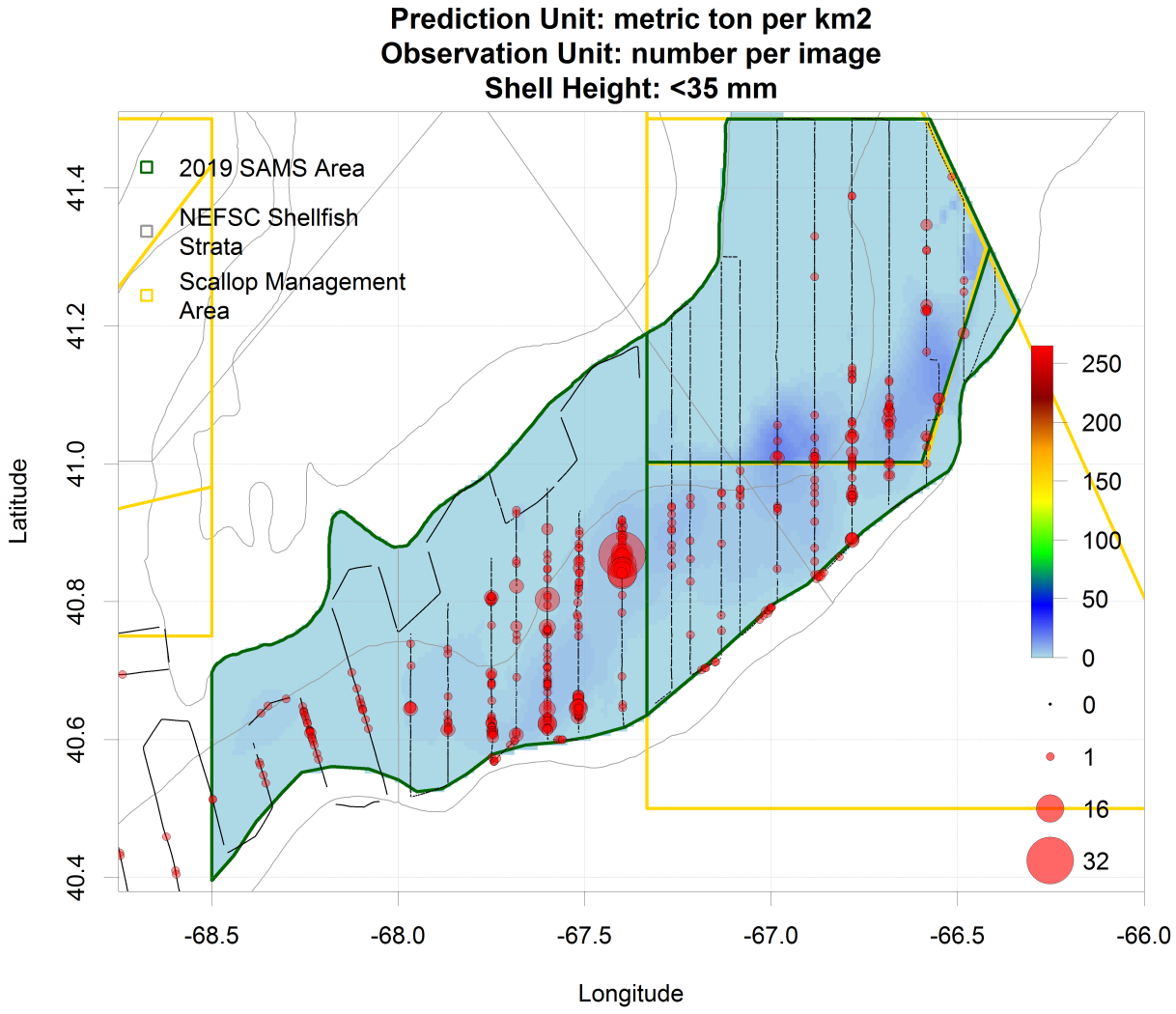


Figure 2.1. Continued.



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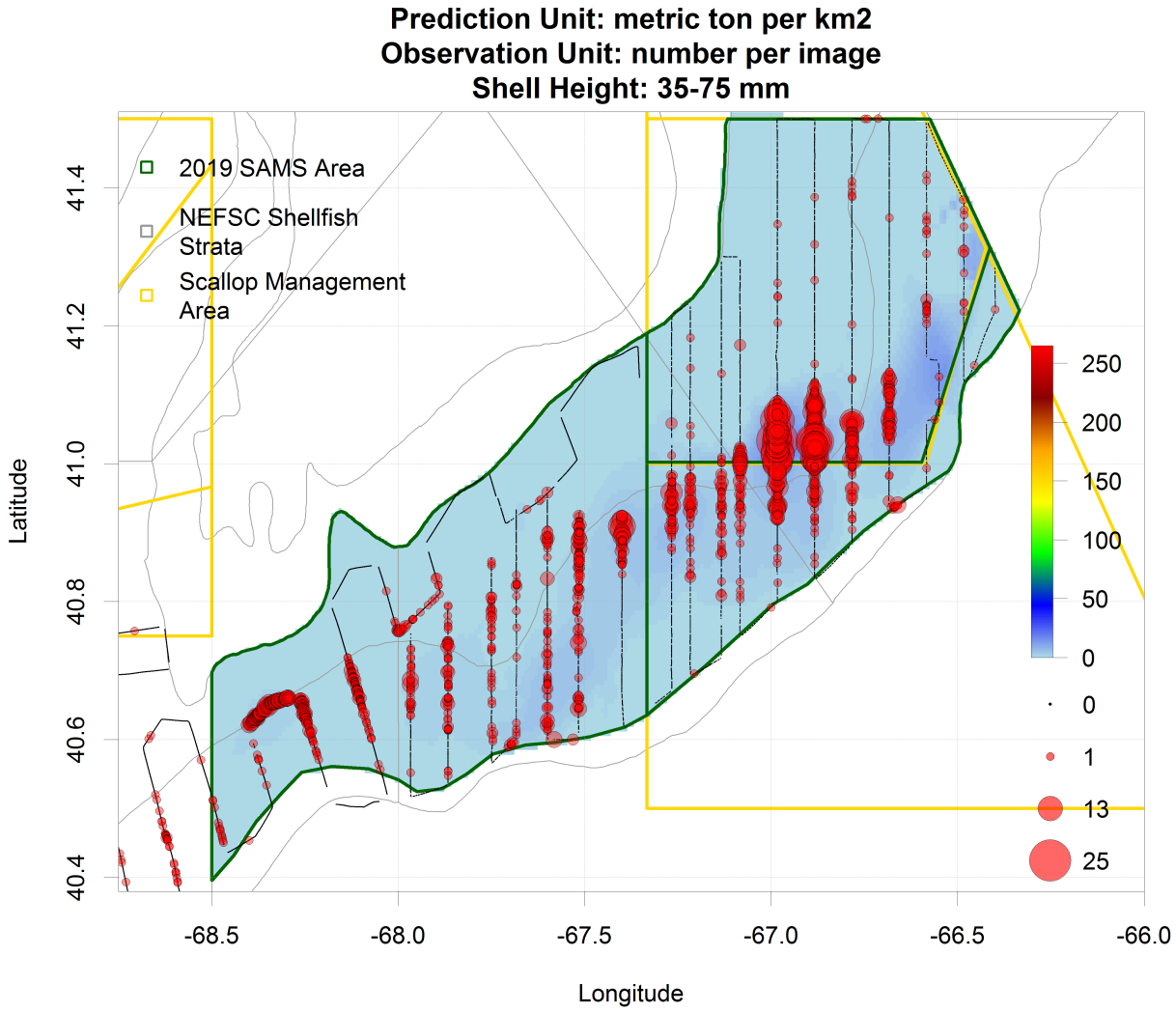

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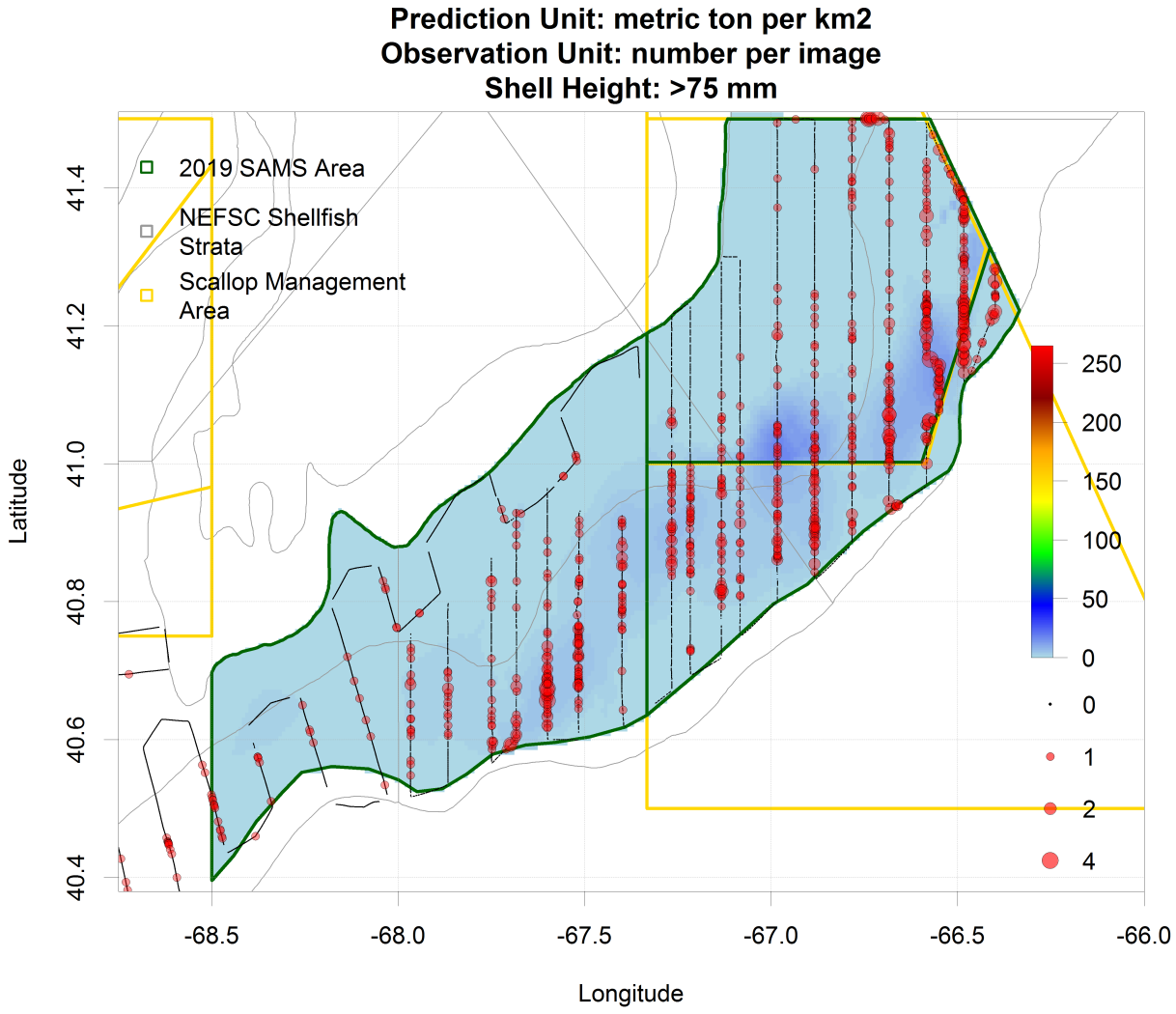


Figure 2.1. Continued.

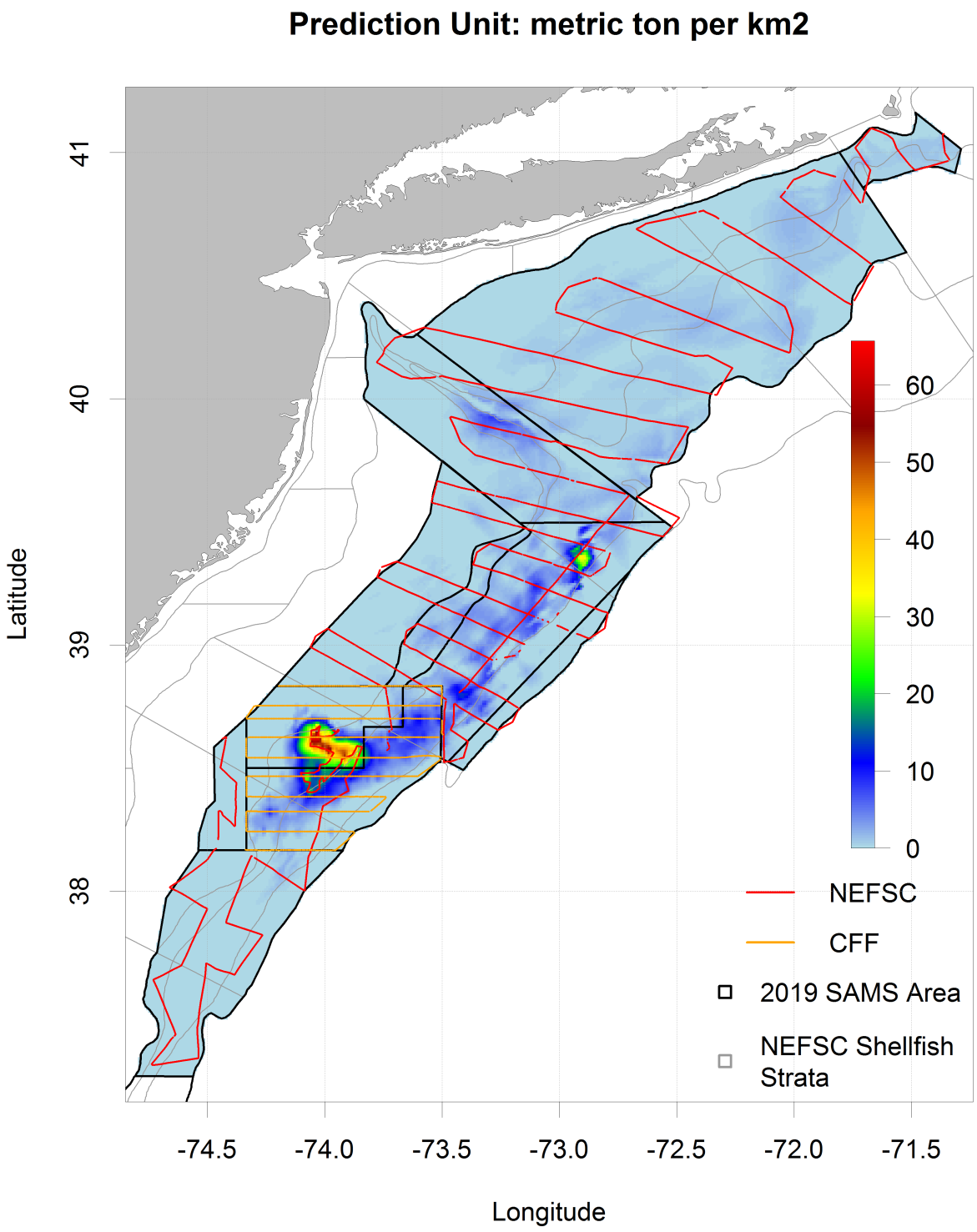


Figure 2.2. The 2019 Habcam survey tracks conducted by NEFSC and CFF, along with scallops number per image by size classes and 2019 Habcam biomass estimates for Mid-Atlantic.

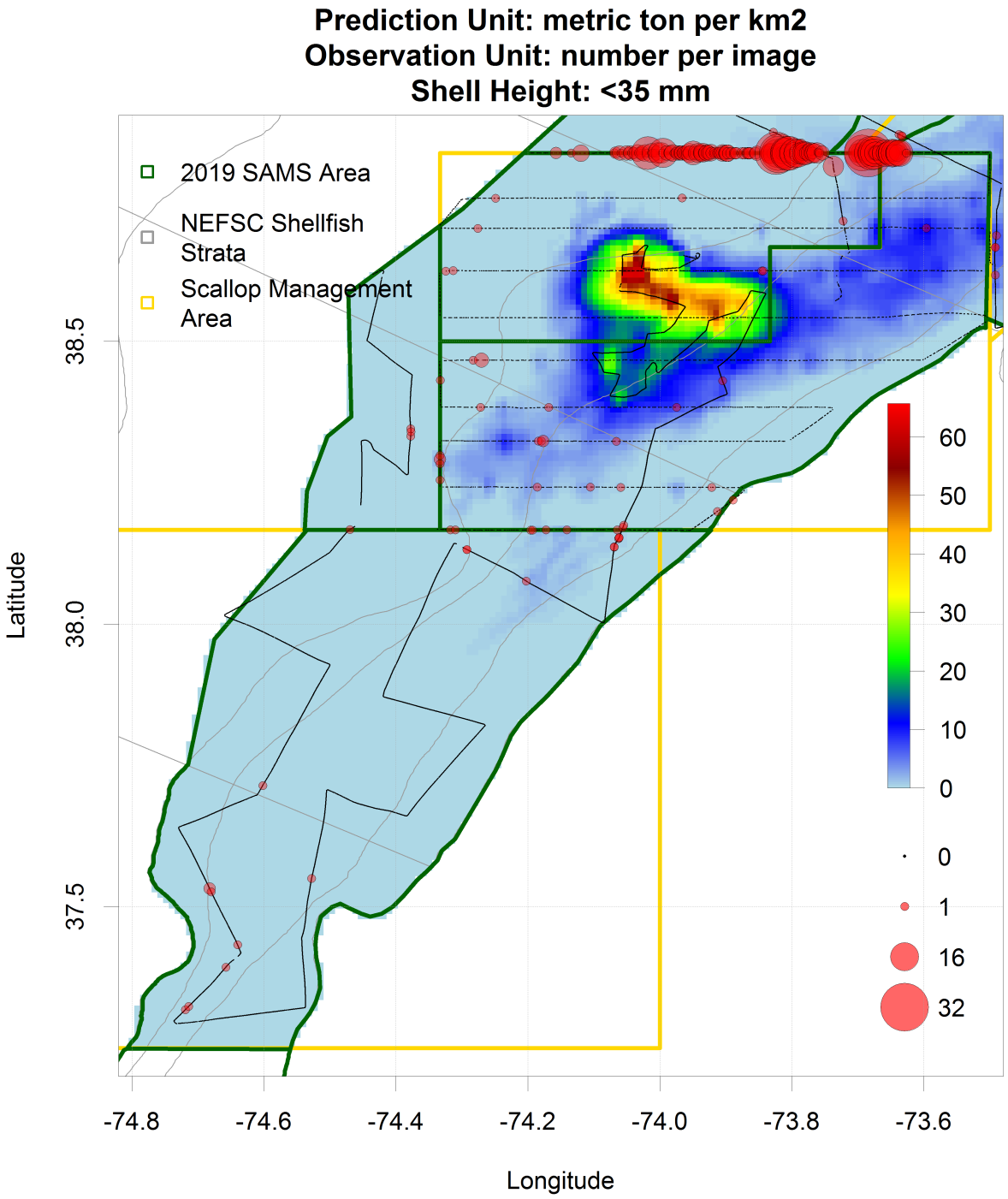
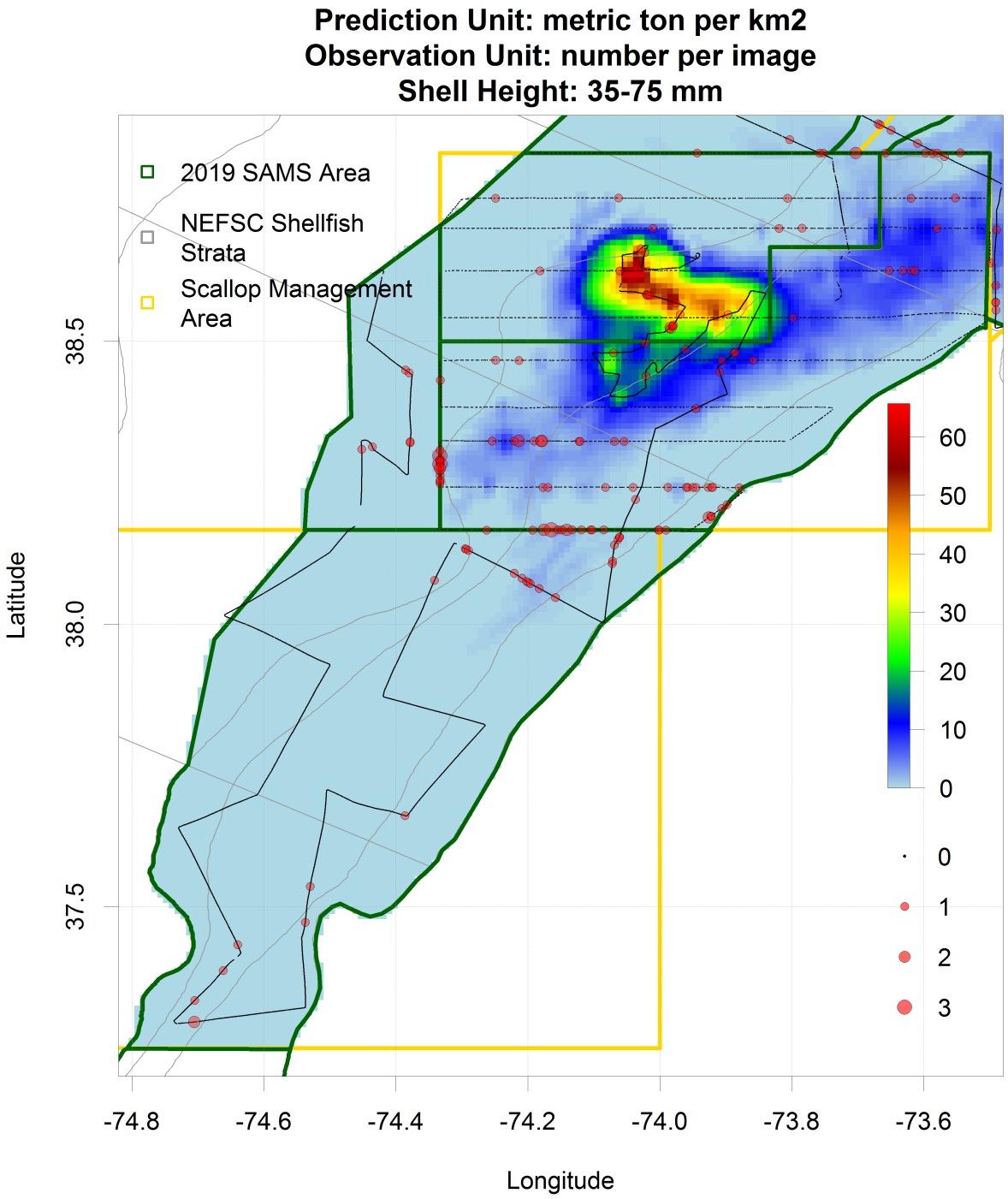


Figure 2.2. Continued.



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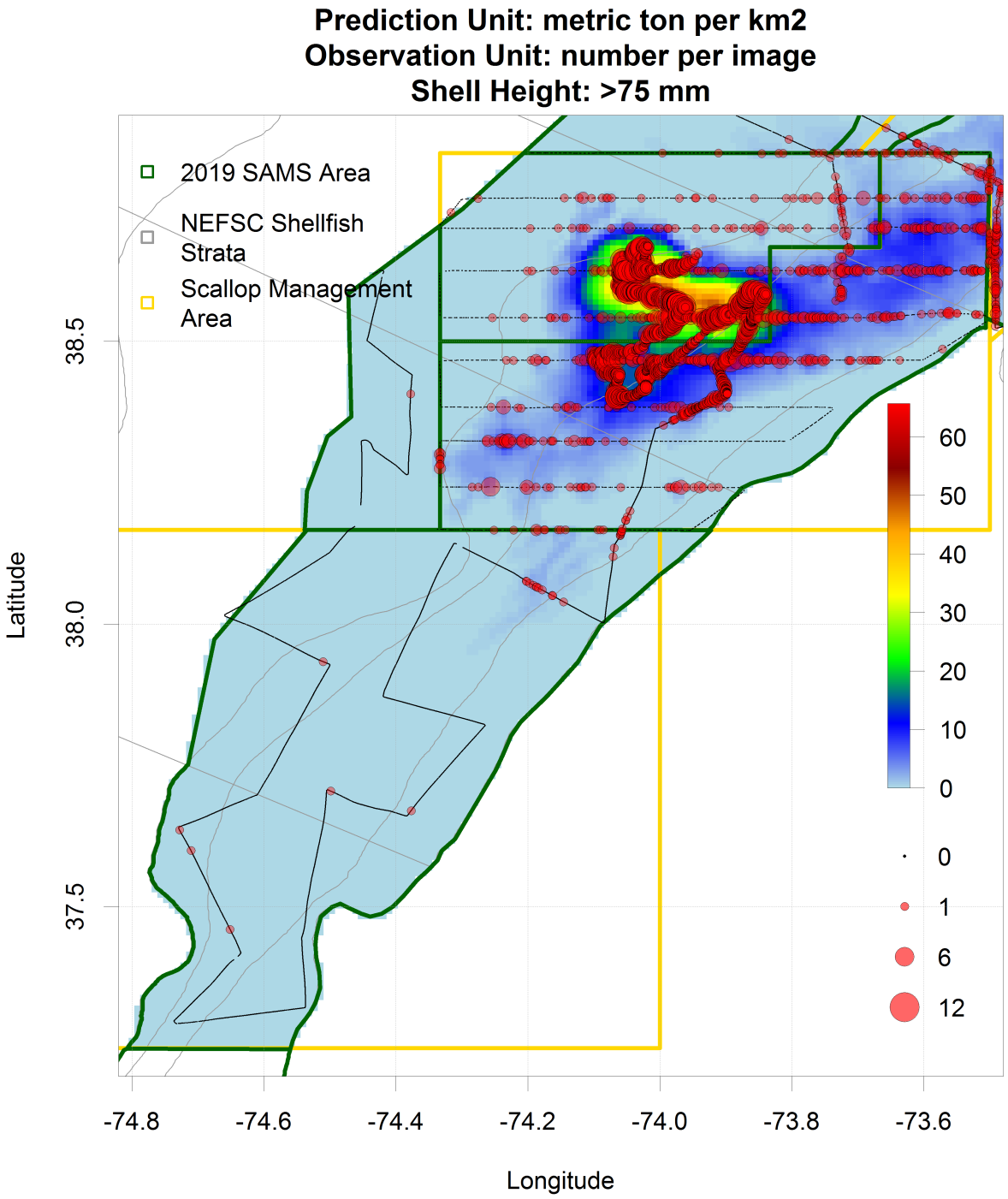

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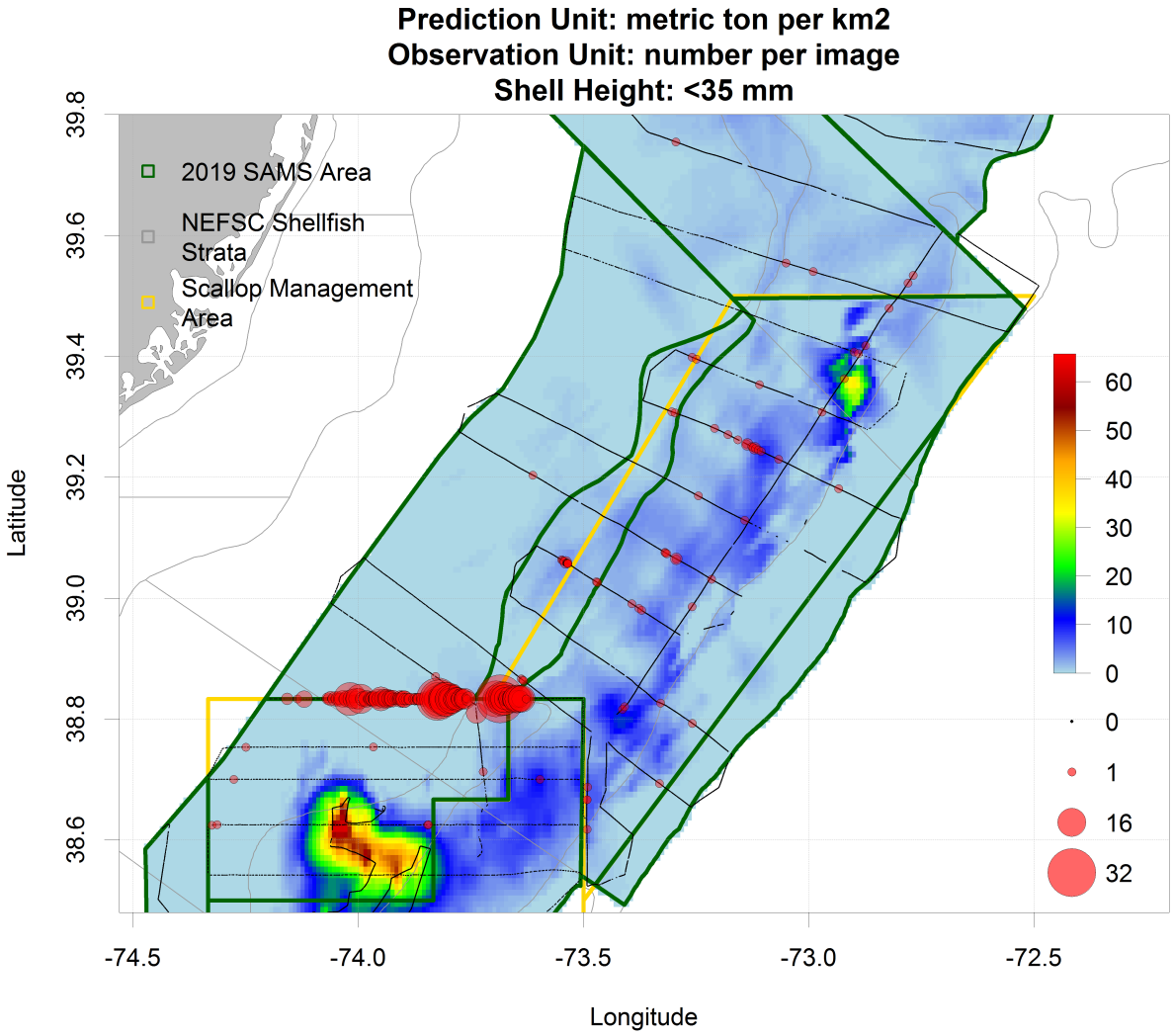

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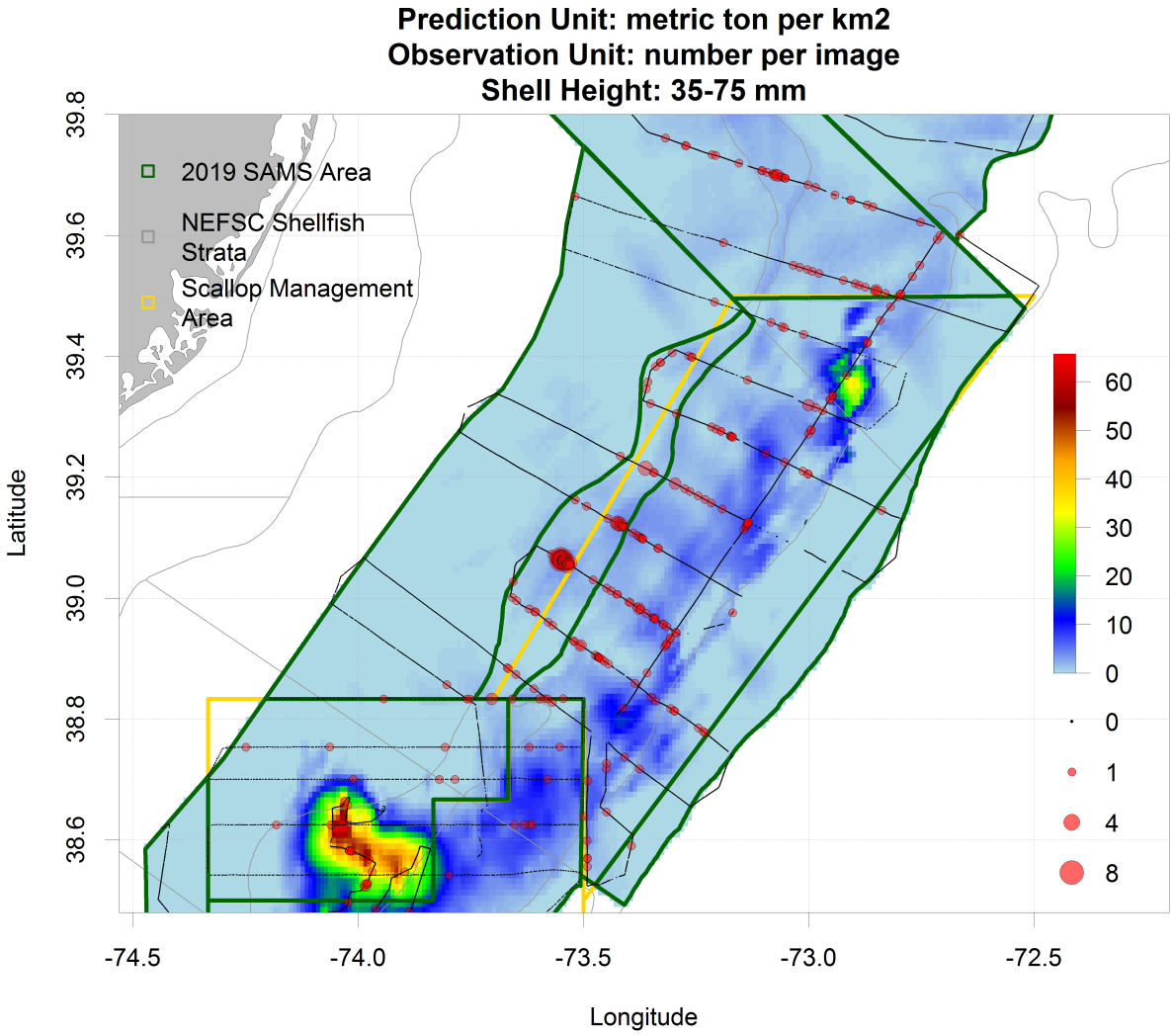

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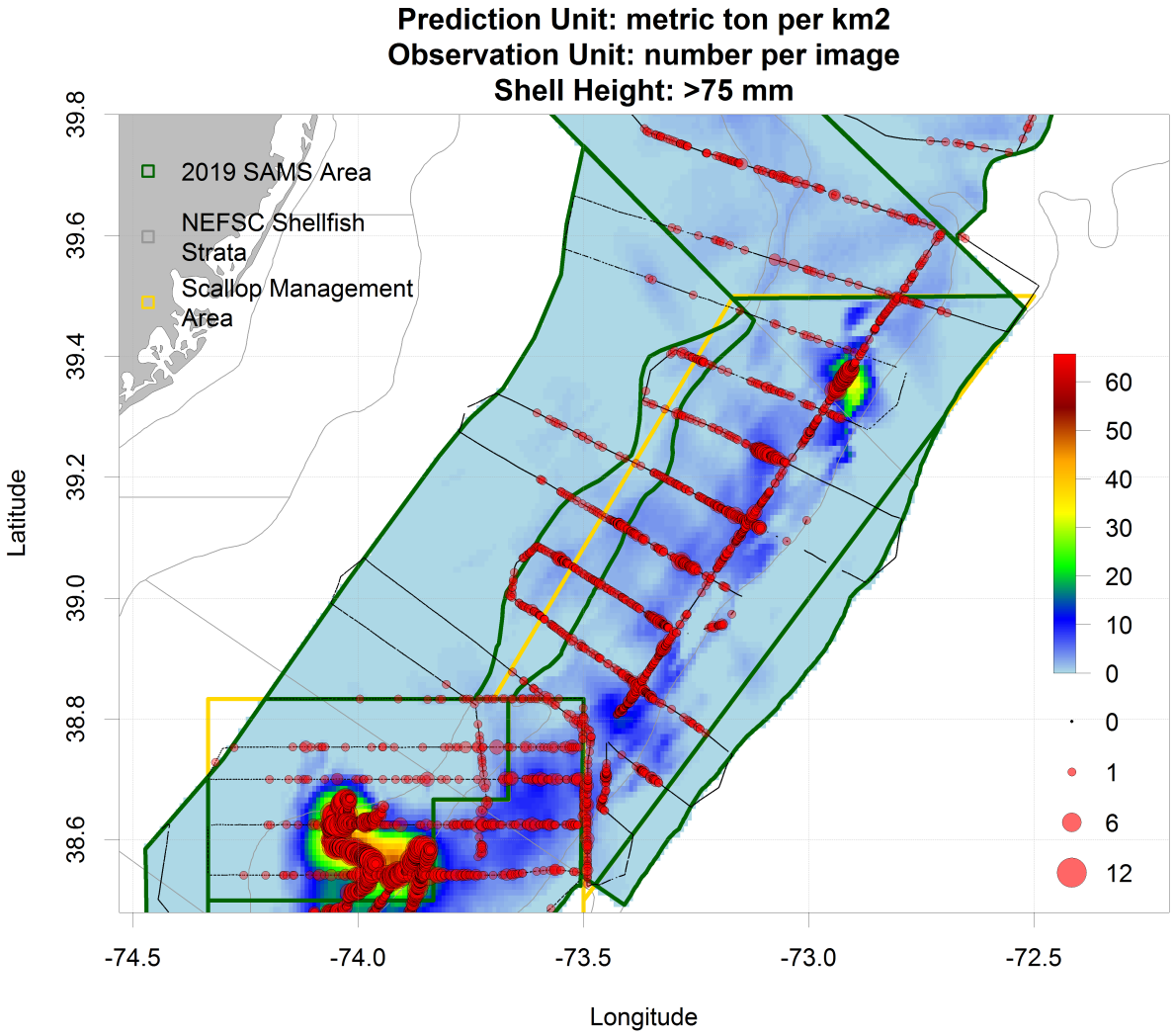

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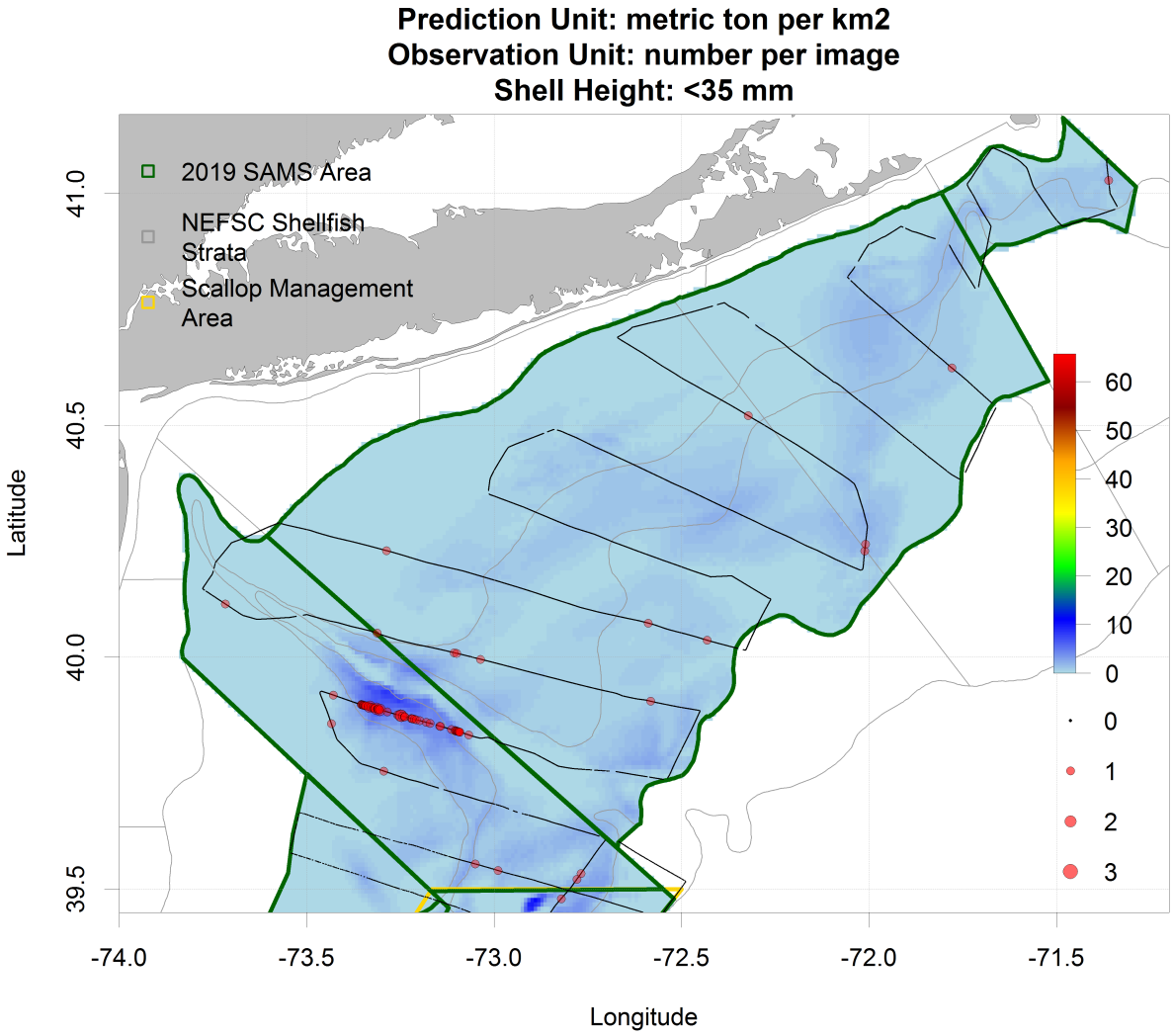

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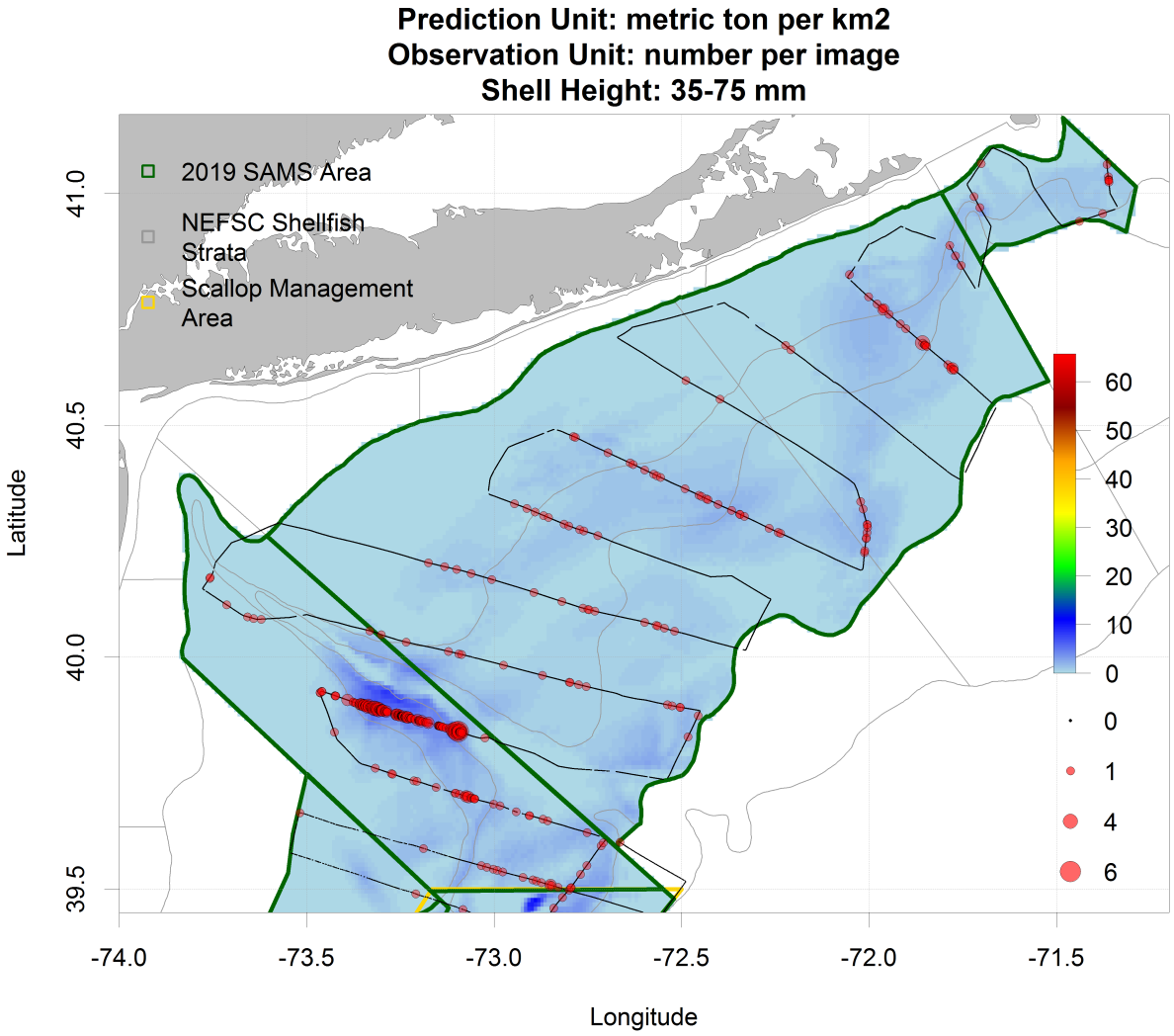

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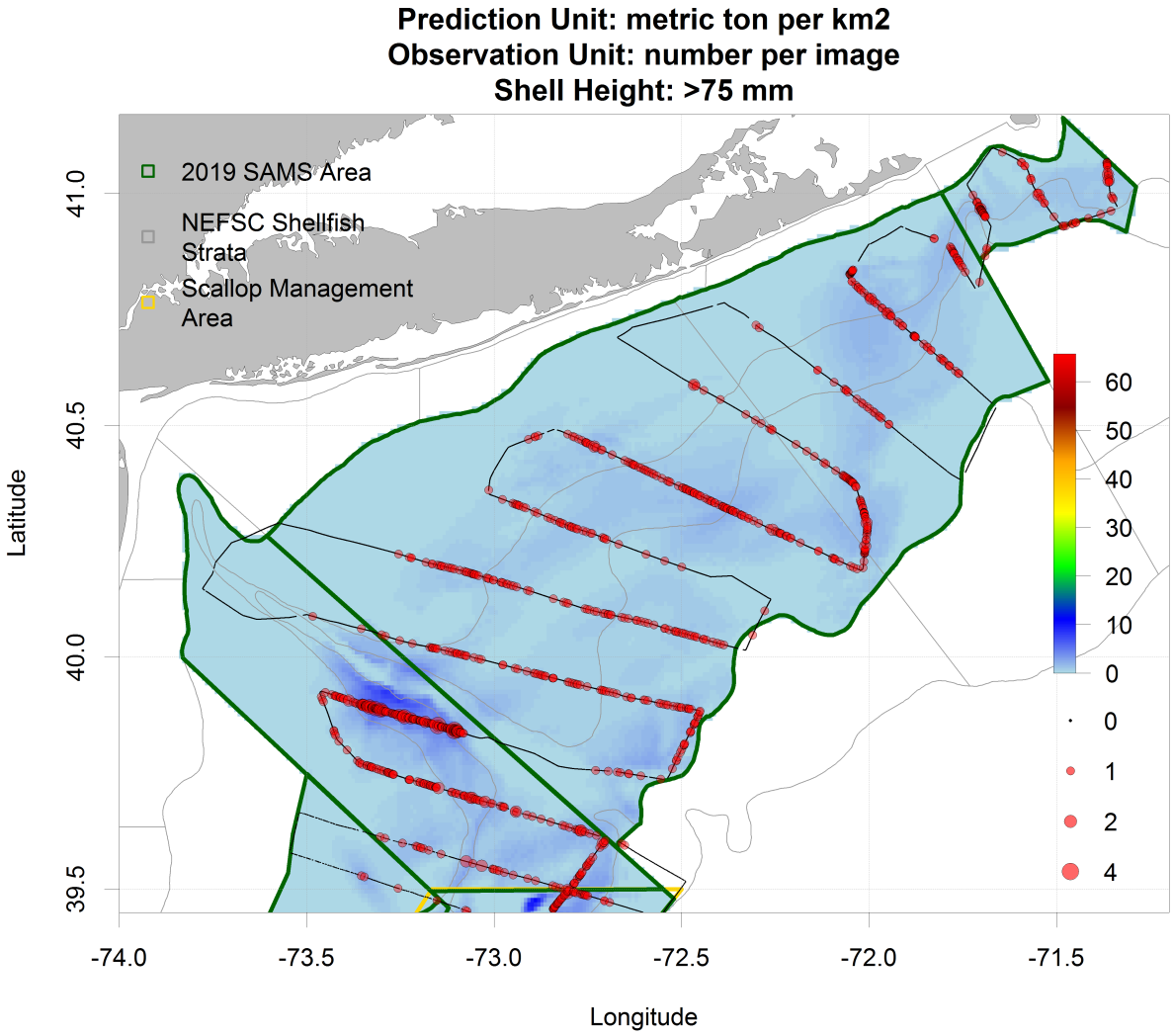

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3 LENGTH FREQUENCY PLOTS BY SAMS AREA

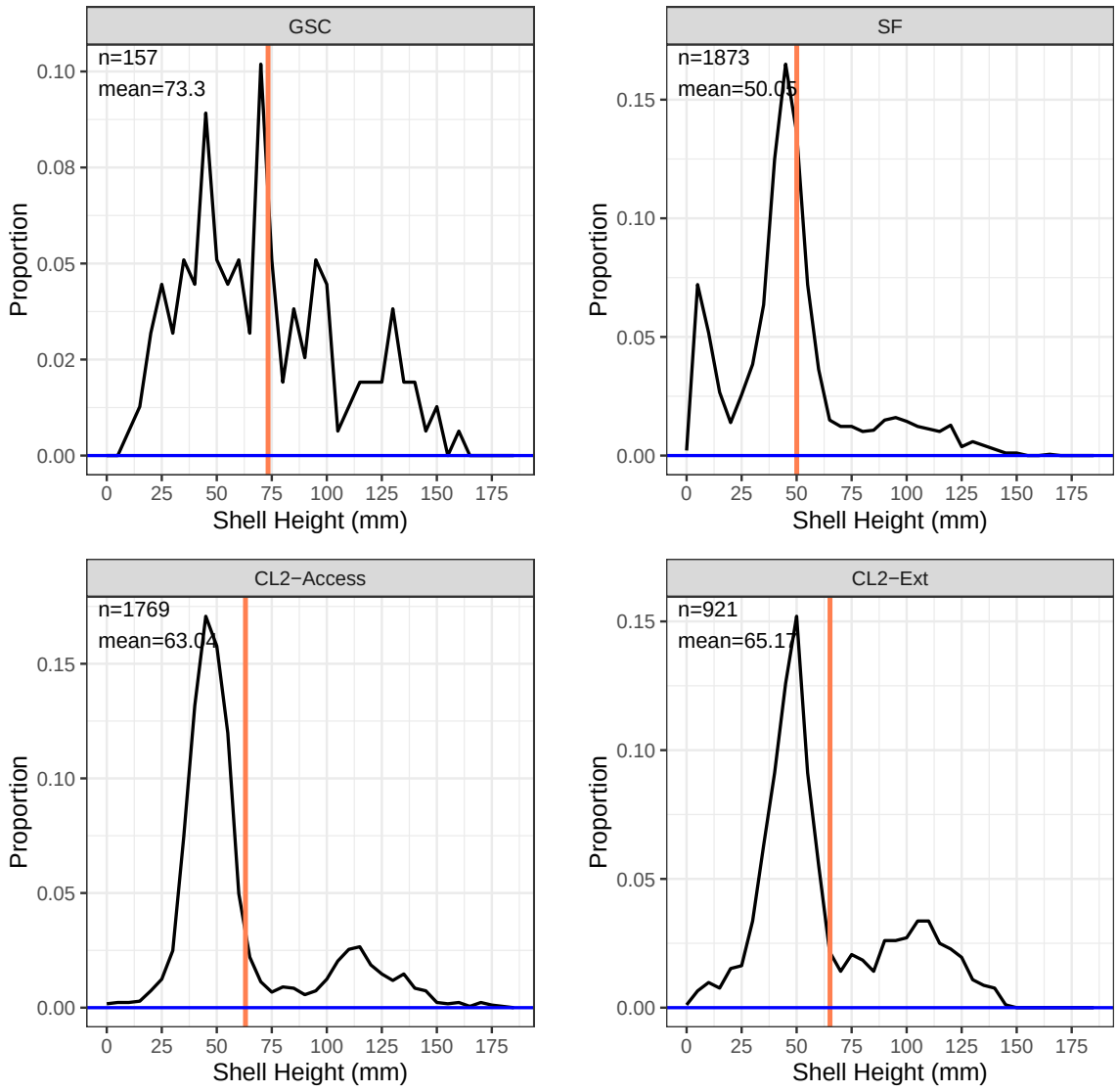
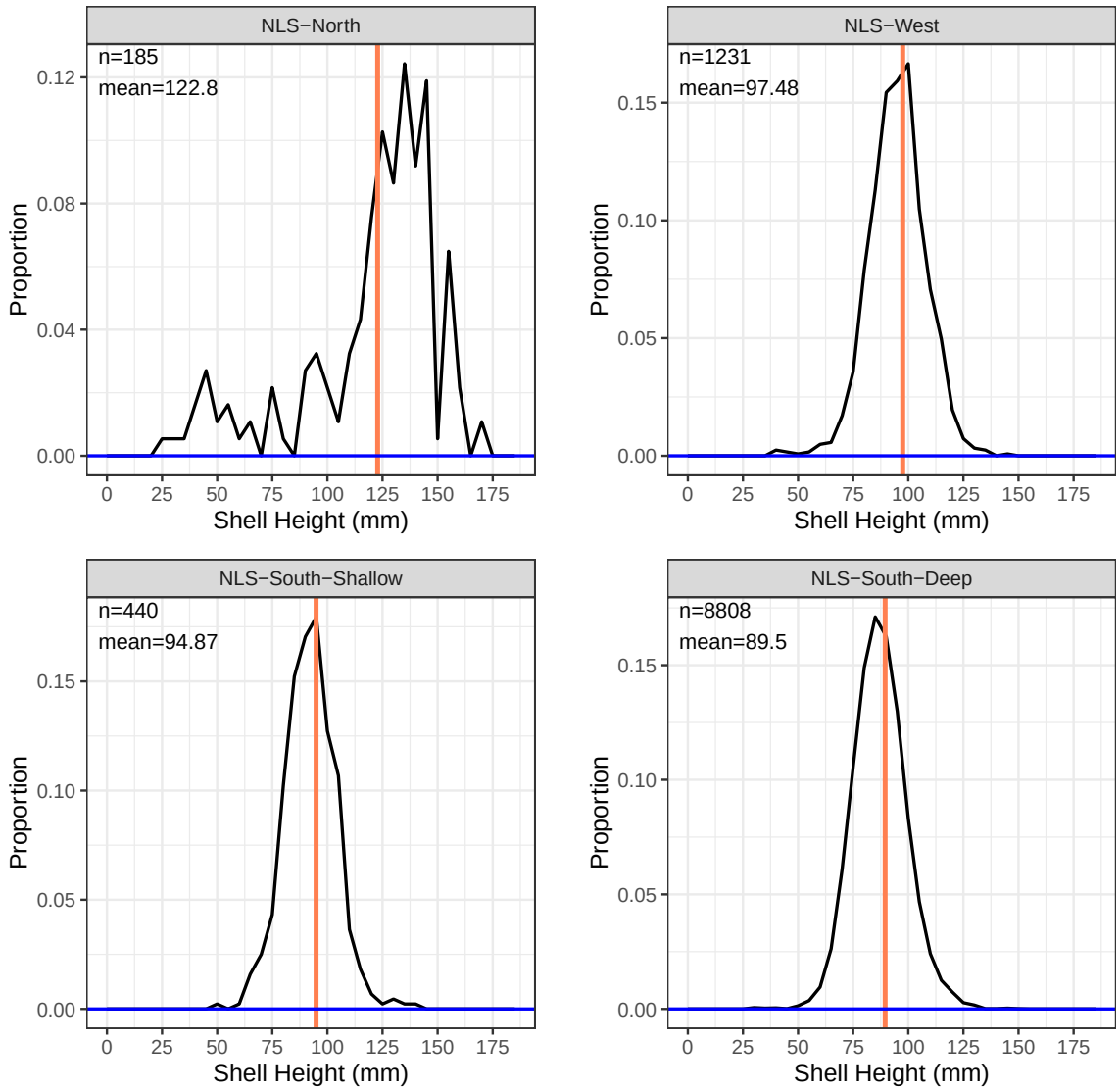


Figure 3.1. The 2019 Habcam size frequencies, mean shell height, and its sample size by SAMS area for all scallops using data from NEFSC and CFF for part of Georges Bank.



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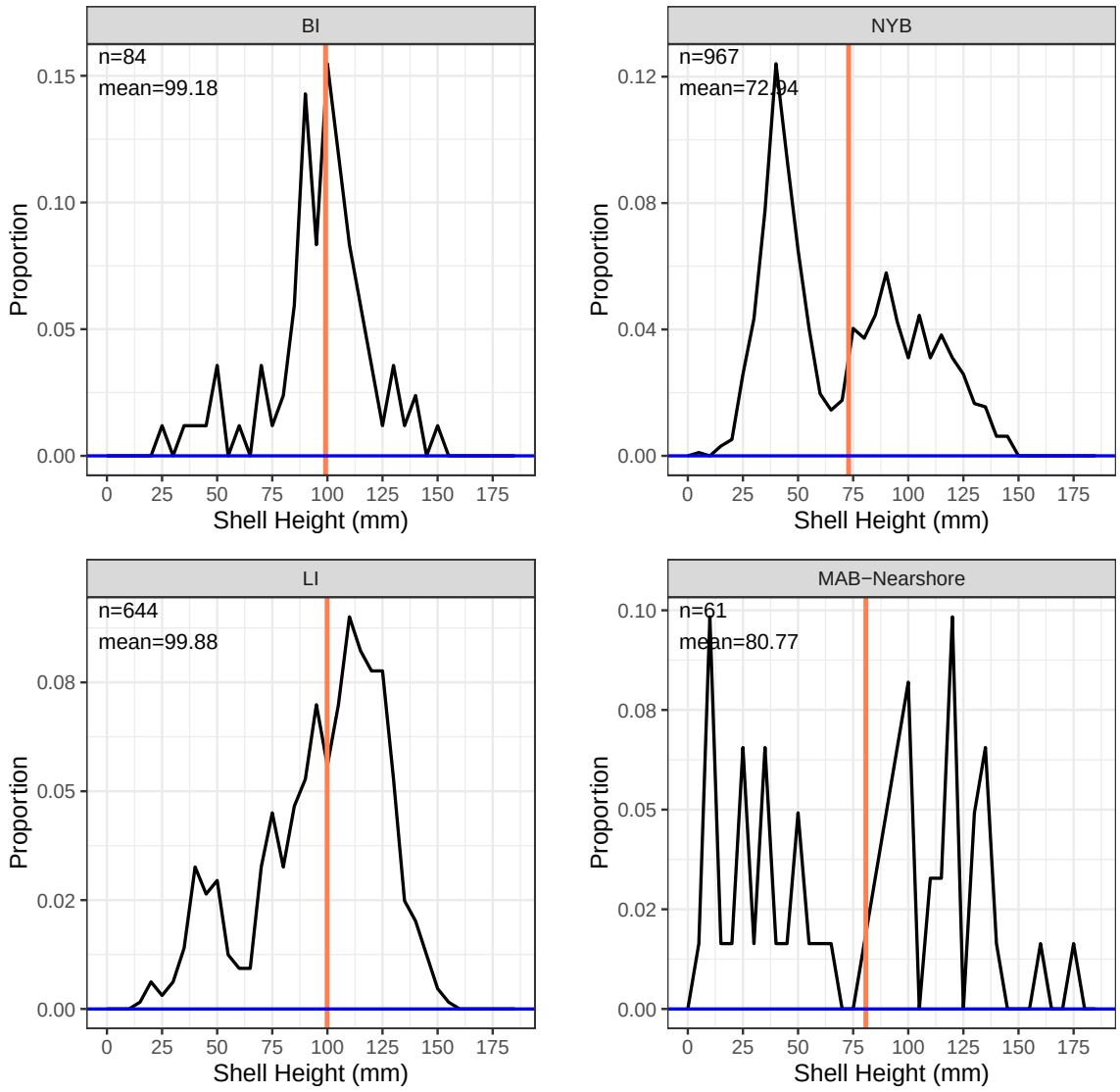

Figure 3.2. The 2019 Habcam size frequencies, mean shell height, and its sample size by SAMS area for all scallops using data from NEFSC and CFF for Mid-Atlantic.

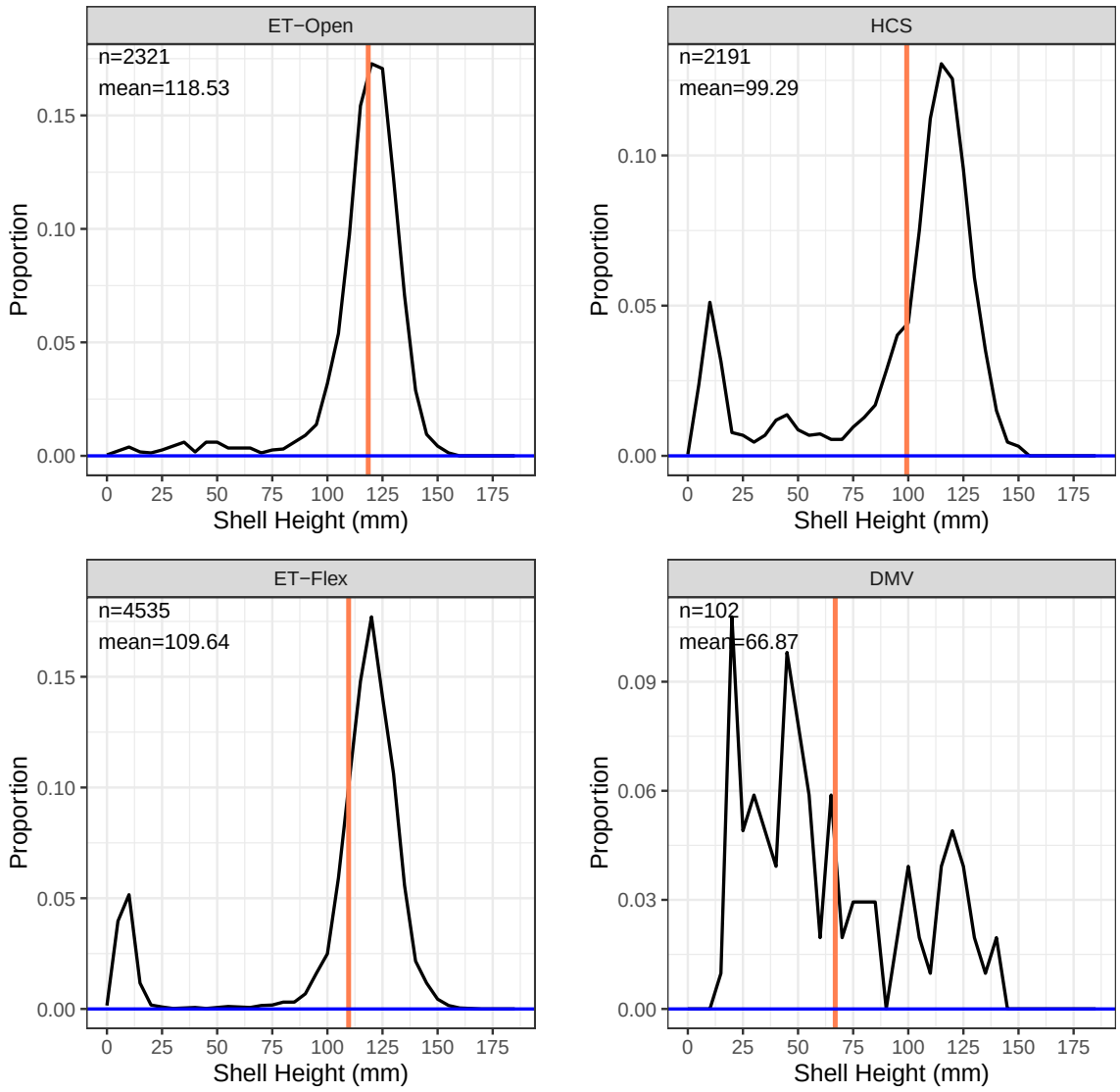

Figure 3.2. Continued.

4 SPECIAL COMMENTS

The Habcam spatial count estimates for part of Georges Bank and Mid-Atlantic for 2019 are in Figures 4.1 and 4.2. The Habcam spatial biomass estimates can be found in Section 2 Figures 2.1 and 2.2. The differences between 2019 Habcam biomass estimates in the Nantucket Lightship Area using VIMS 2016-2019 and SARC 65 SH-MW equations are most significant in the NLS-South-Shallow and NLS-West (Table 4.1).

Table 4.1. Comparison of 2019 Habcam biomass estimates (40+ mm) using VIMS 2016-2019 and SARC 65 SH-MW equations for Nantucket Lightship Area. Percent difference was calculated using biomass estimates (VIMS - SARC 65)/(VIMS).

SAMS Area	BmsMT (VIMS)	BmsMT (SARC 65)	%Diff
NLS-North	3066.38	3295.44	-7.47
NLS-South-Deep	46060.47	48350.22	-4.97
NLS-South-Shallow	3420.05	4197.21	-22.72
NLS-West	12574.7	17701.15	-40.77

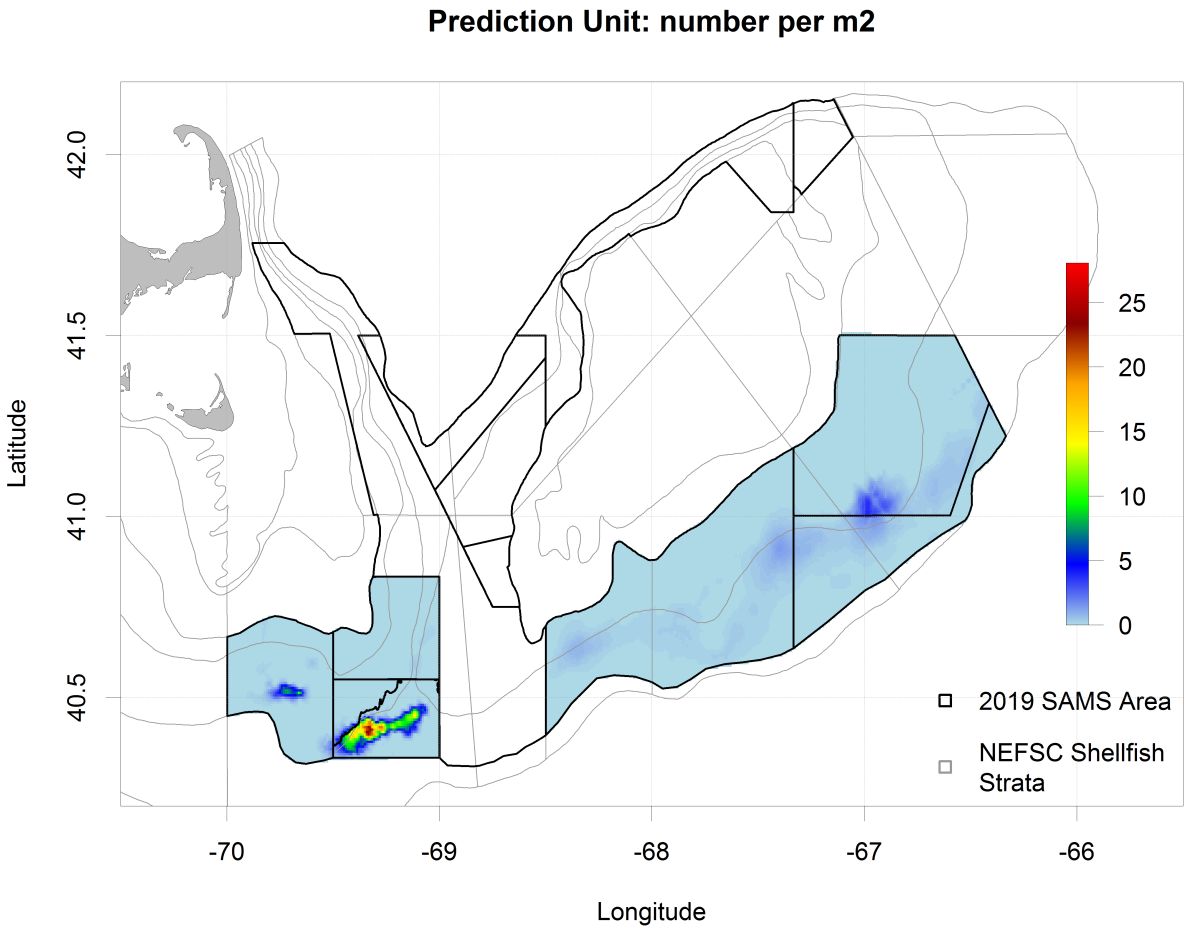

Figure 4.1. The 2019 Habcam count estimates for part of Georges Bank.

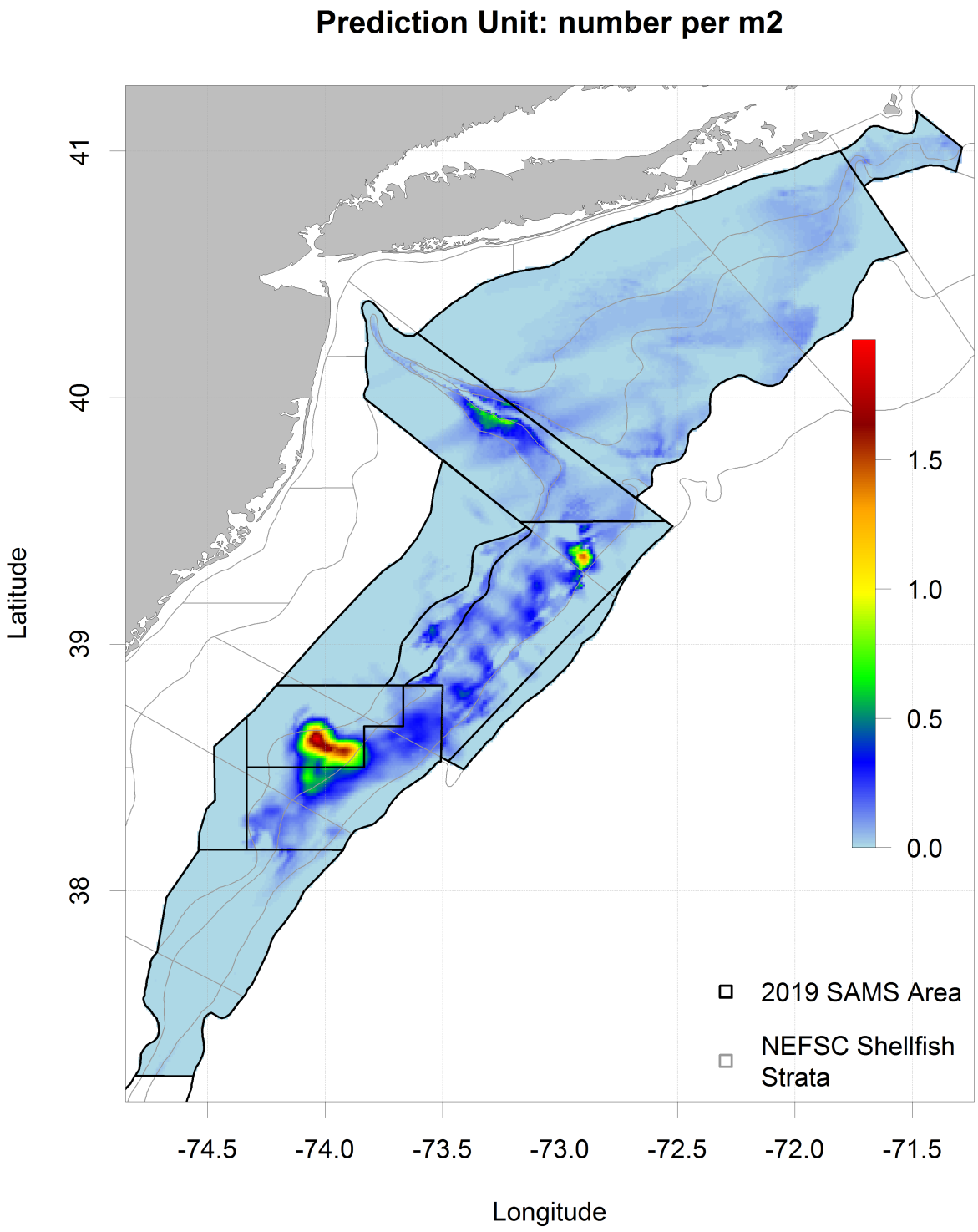

Figure 4.2. The 2019 Habcam count estimates for Mid-Atlantic.

5 EXPLOITABLE BIOMASS ESTIMATES FOR 2019 (CURRENT FY)

Table 5.1. Summary of 2019 Habcam estimates for exploitable scallops using combined data from NEFSC and CFF. The VIMS 2016-2019 SH-MW equations were used to estimate the meat weights for NLS-North, NLS-South-Shallow, NLS-South-Deep, and NLS-West, whereas the SARC 65 SH-MW equations were used for all other areas. Yochum and DuPaul 4-inch ring selectivity was used for exploitable cutoff.

SAMS Area	ExNumMill	ExBmsMT	ExBmsMTSE	ExMeanWt
Georges Bank				
CL2-Access	200.2	7320.7	222.6	36.6
CL2-Ext	151.5	4100.5	71.5	27.1
NLS-North	58.4	2886.4	356.9	49.4
NLS-South-Deep	1410.7	21002	396.8	14.9
NLS-South-Shallow	104.9	1924.5	5.2	18.4
NLS-West	331.3	7734.1	2226.1	23.4
SF	140.2	4256.4	94.1	30.4
Mid-Atlantic				
BI	20.9	585.3	5.6	28
DMV	15.7	410.6	39.9	26.2
ET-Flex	680.9	22029.9	413.8	32.4
ET-Open	545.3	15596.5	207	28.6
HCS	570.7	15536.8	1929.3	27.2
LI	337.5	9544.7	597.9	28.3
MAB-Nearshore	15.9	853.9	5.6	53.8
NYB	163.7	4610.8	214.3	28.2