2025 Scallop Survey Short Report

Habcam/LRAUV

Prepared by:

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1 2025 SURVEY BIOMASS ESTIMATES

Table 1.1. Summary of 2025 Habcam/LRAUV model-based estimates for scallops larger than 40 mm shell height using the combined data from NEFSC and CFF. VIMS 2016-2023, 2025 SH-MW equation was used to estimate meat weights for the scallops in NLS-South, whereas RT 2025 SH-MW equations were used for the rest of the SAMS areas. MeanWt is estimated using BmsMT/NumMill. #PerM^2 is estimated using NumMill/Area. The target annotation rate is 1:50 for NEFSC Habcam, 1:5 for NEFSC LRAUV, and 1:100 for CFF Habcam for 2025.

SAMS Area	NumMill	BmsMT	BmsMTSE	MeanWt	AvgSize	#PerM^2	#Annotated
Georges Bank							
CL2-Access	24	667	71	27.5	118.3	0.01	6009
CL2-Ext	78	1595	110	20.5	96.4	0.06	2294
NLS-South	2046	8760	514	4.3	65.9	1.43	5730
NLS-West	26	701	121	27	86.3	0.02	5167
SF	461	5033	196	10.9	74.1	0.11	7440
Mid-Atlantic							
BI	12	196	7	15.8	90.2	0.02	3892
LI	452	5916	69	13.1	87.7	0.03	18960
NYB	223	2125	18	9.5	77.1	0.04	4975
ET	562	6079	66	10.8	83	0.12	8810

2 FIGURES OF SURVEY COVERAGE

The 2025 NEFSC Habcam survey took place in Georges Bank on:

- 6/6-16 in NLS-West, GSC (south portion), and CL1 (east portion; Leg 1 - Bigelow)

Two LRAUVs, Polaris and Stella, were deployed in the Mid-Atlantic:

- 7/9-13 in BI and top of LI (Polaris) and
- 712-/14 in BI (Stella).

The center completed 289 nm of Habcam tracks in Georges Bank, and 89 nm of LRAUV tracks using Polaris and 27 nm of LRAUV tracks using Stella in Mid-Atlantic. About 1 million image pairs were collected, and 20,190 images were manually annotated. Of all the images with scallops annotated, 100% (606) were QAQCed. The overall QAQC rate is 7% (1463/20190). Fourteen geostatistical models were constructed to produce the spatial count and biomass estimates of scallops for parts of Georges Bank and Mid-Atlantic for 2025..

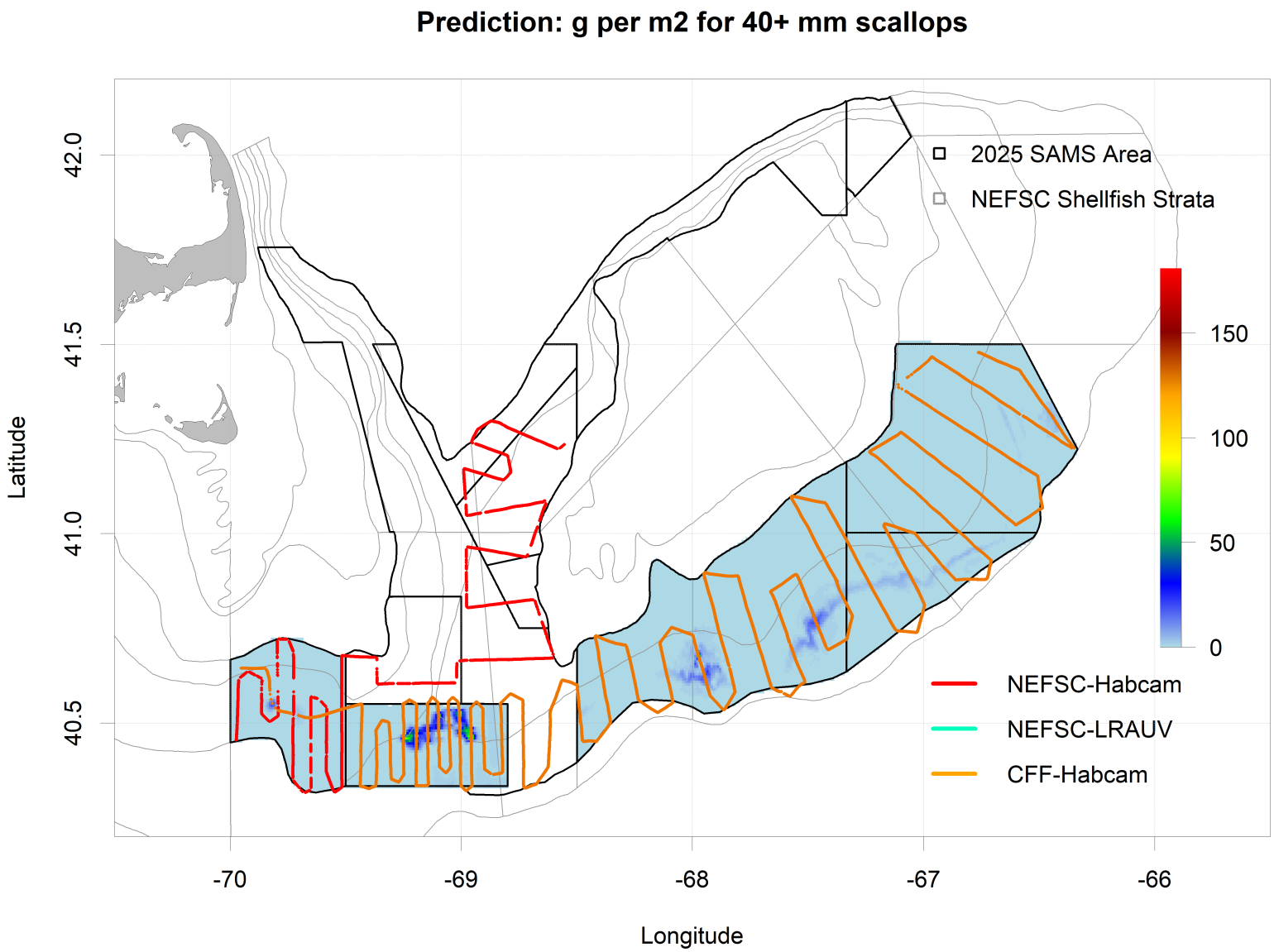

Figure 2.1. The 2025 Habcam survey tracks conducted by NEFSC and CFF, along with biomass estimates for 40+ mm scallops for Georges Bank.

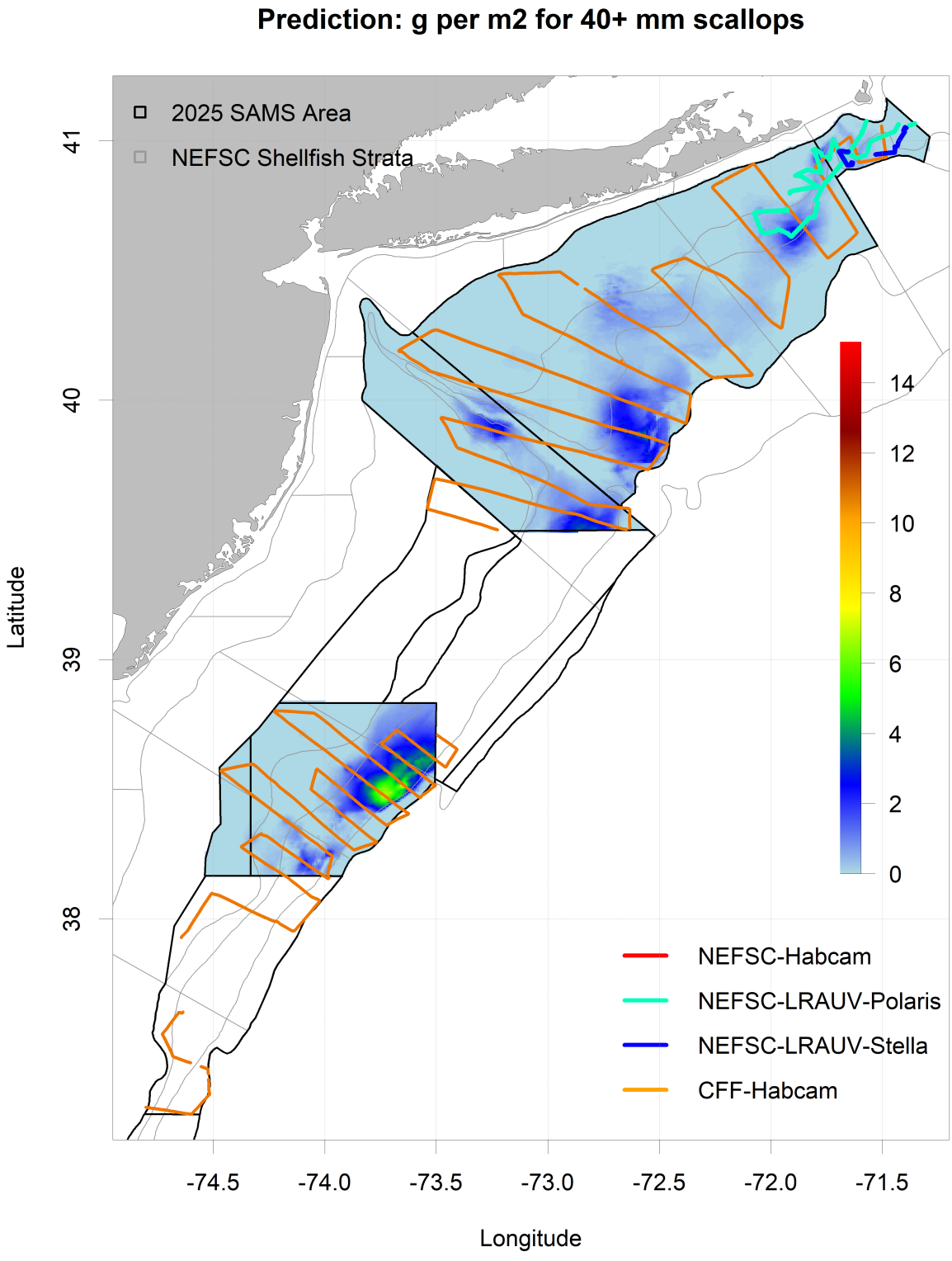

Figure 2.2. The 2025 Habcam/LRAUV survey tracks conducted by NEFSC and CFF, along with biomass estimates for 40+ mm scallops for Mid-Atlantic.

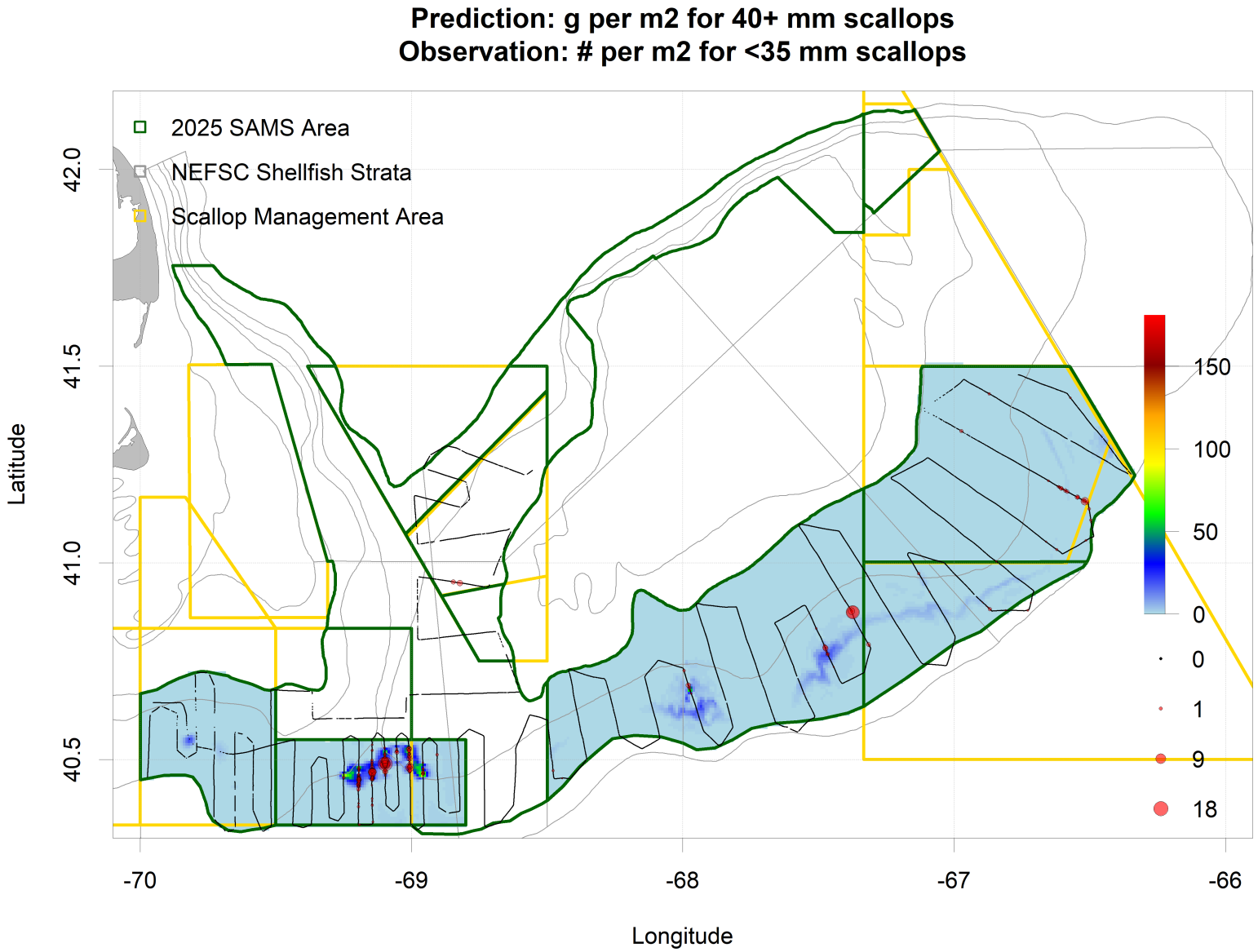

Figure 2.3. The number of <35 mm scallops observed on the 2025 NEFSC and CFF Habcam survey, along with biomass estimates for 40+ mm scallops for Georges Bank.

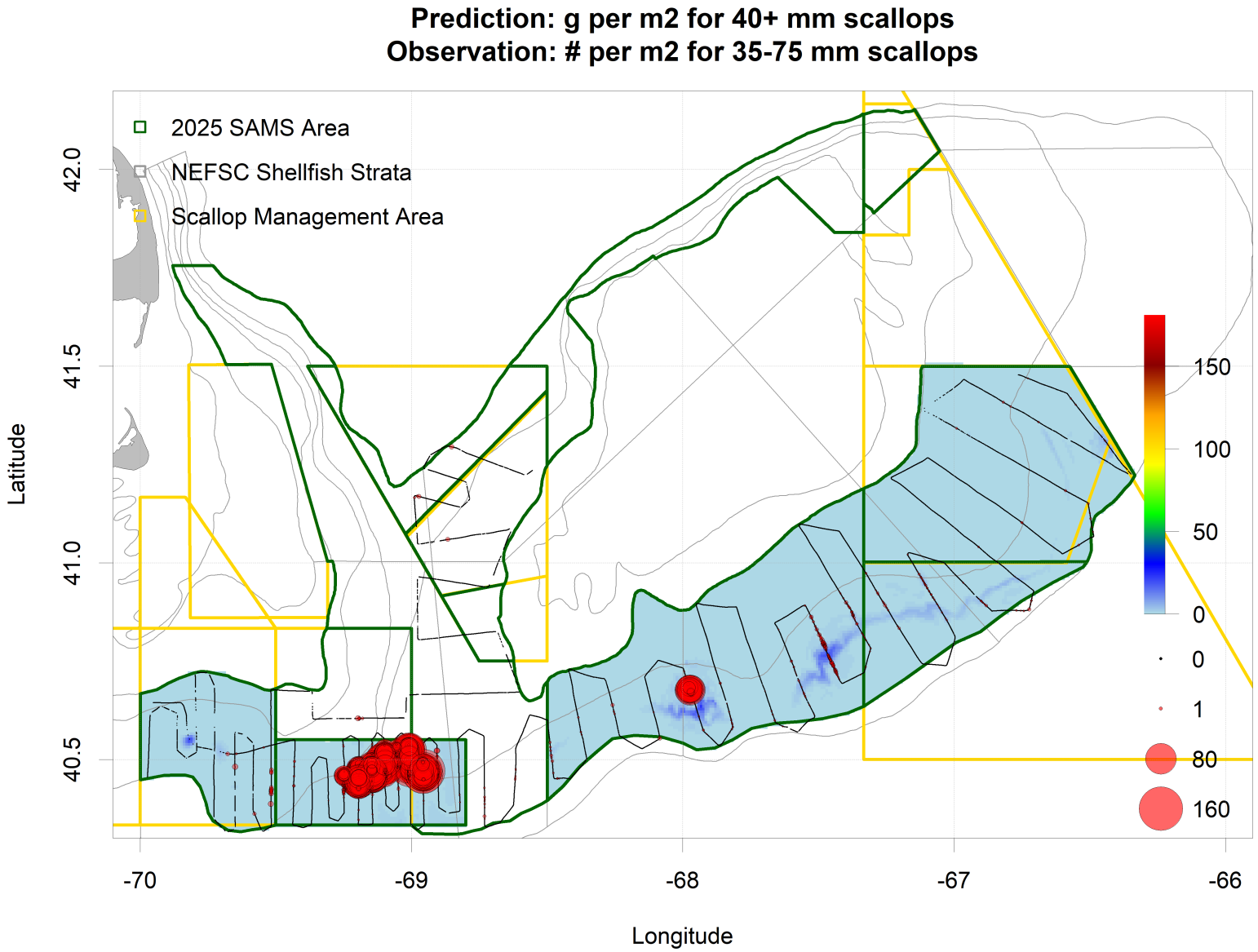

Figure 2.4. The number of 35-75 mm scallops observed on the 2025 NEFSC and CFF Habcam survey, along with biomass estimates for 40+ mm scallops for Georges Bank.

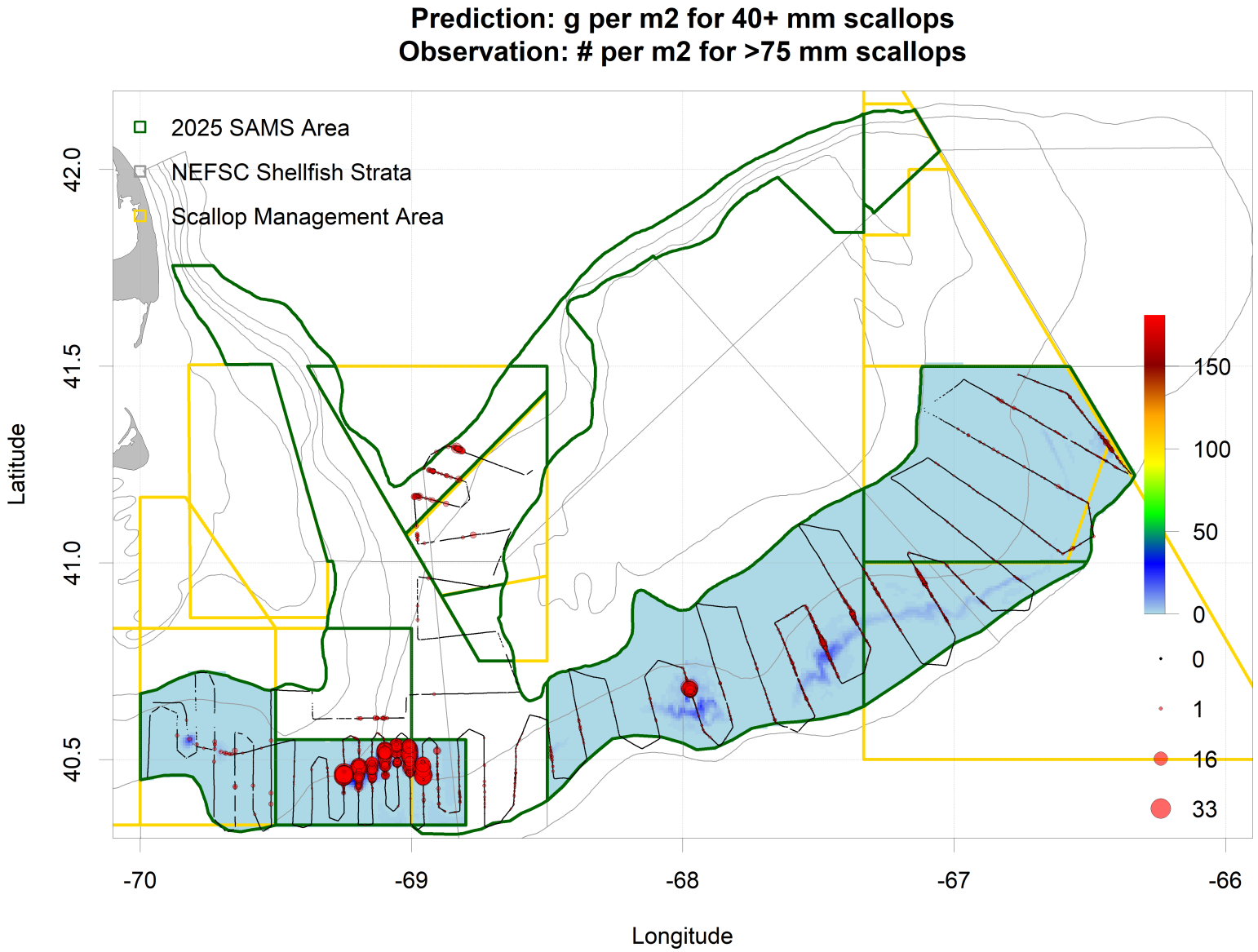

Figure 2.5. The number of >75 mm scallops observed on the 2025 NEFSC and CFF Habcam survey, along with biomass estimates for 40+ mm scallops for Georges Bank.

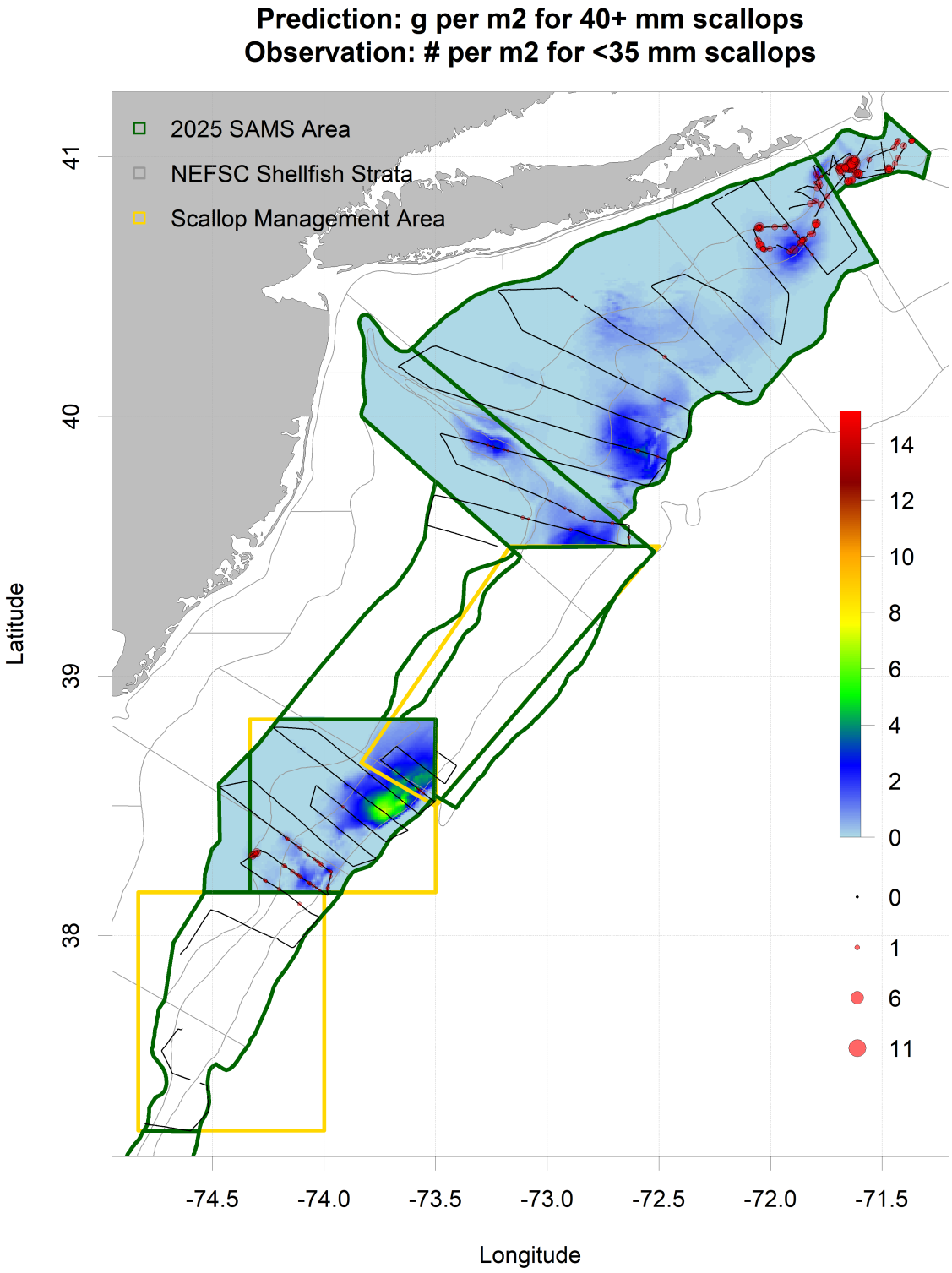

Figure 2.6. The number of <35 mm scallops observed on the 2025 NEFSC Habcam, NEFSC LRAUV, and CFF Habcam surveys, along with biomass estimates for 40+ mm scallops for Mid-Atlantic.

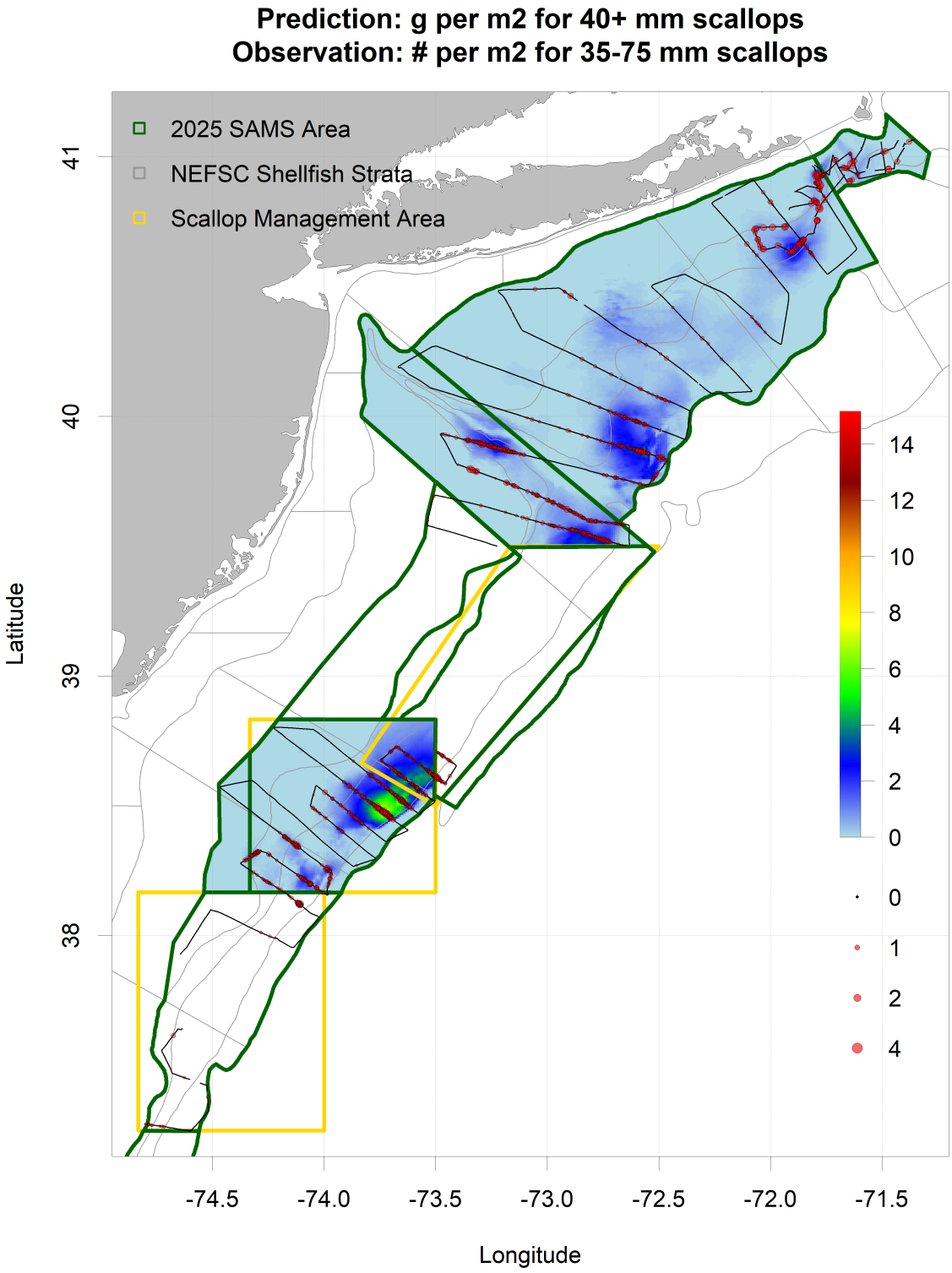

Figure 2.7. The number of 35-75 mm scallops observed on the 2025 NEFSC Habcam, NEFSC LRAUV, and CFF Habcam surveys, along with biomass estimates for 40+ mm scallops for Mid-Atlantic.

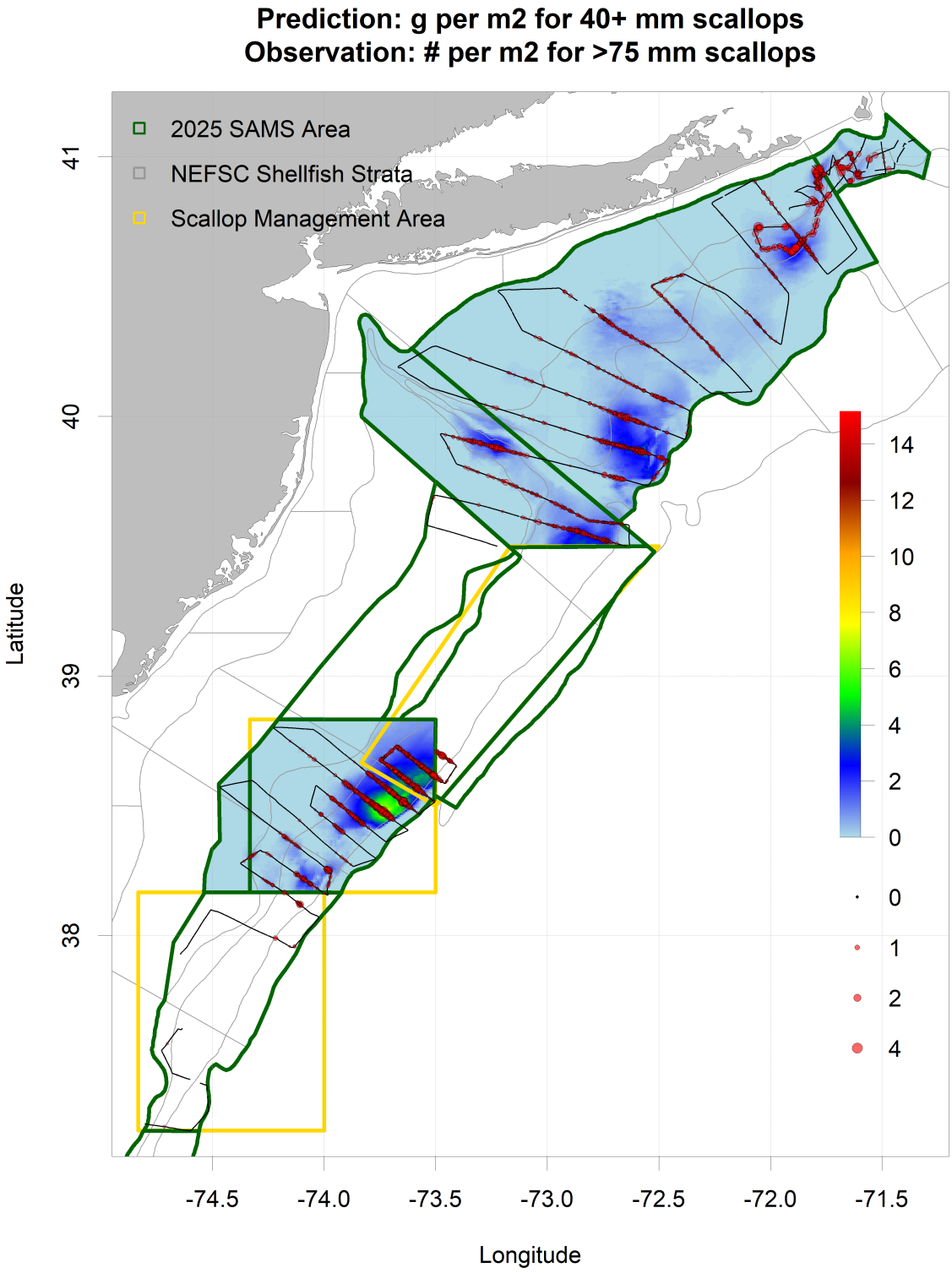

Figure 2.8. The number of >75 mm scallops observed on the 2025 NEFSC Habcam, NEFSC LRAUV, and CFF Habcam surveys, along with biomass estimates for 40+ mm scallops for Mid-Atlantic.

3 LENGTH FREQUENCY PLOTS BY SAMS AREA

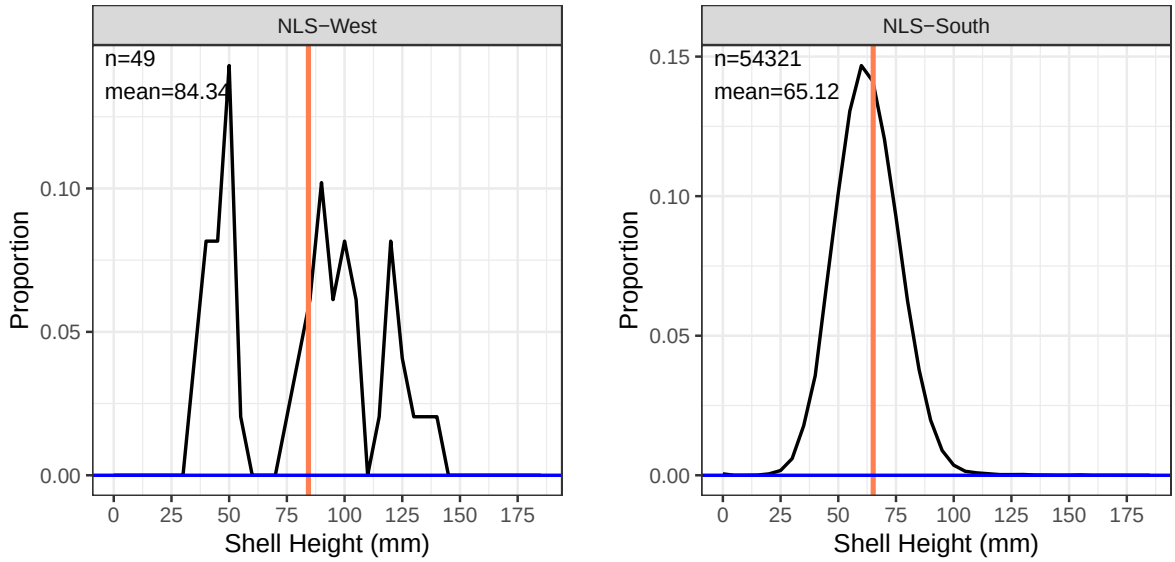

Figure 3.1. The 2025 size frequencies, mean shell height, and its sample size by SAMS area for 0+ mm scallops using combined data from NEFSC and CFF Habcam surveys for Georges Bank.

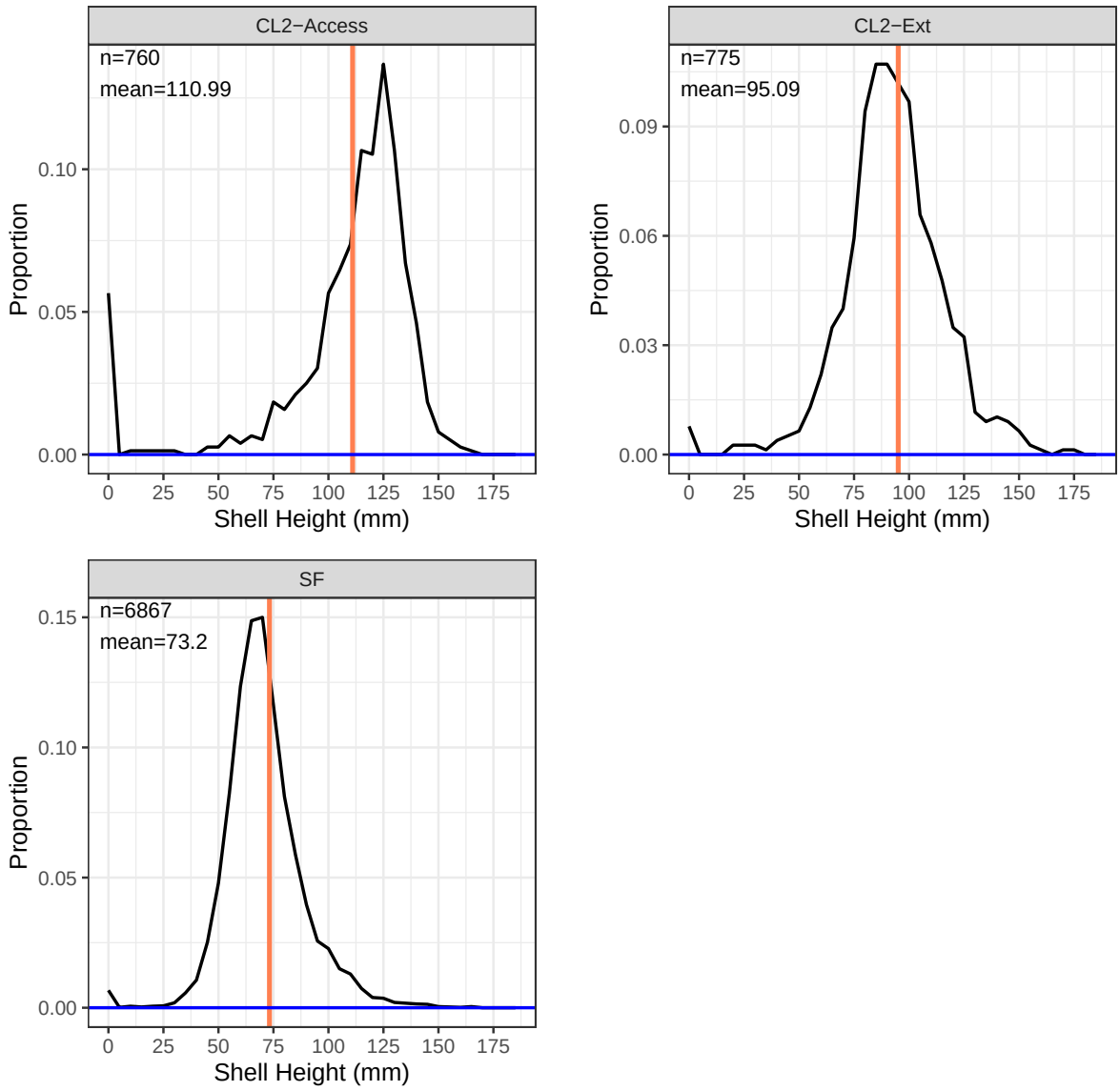

Figure 3.1. Continued.

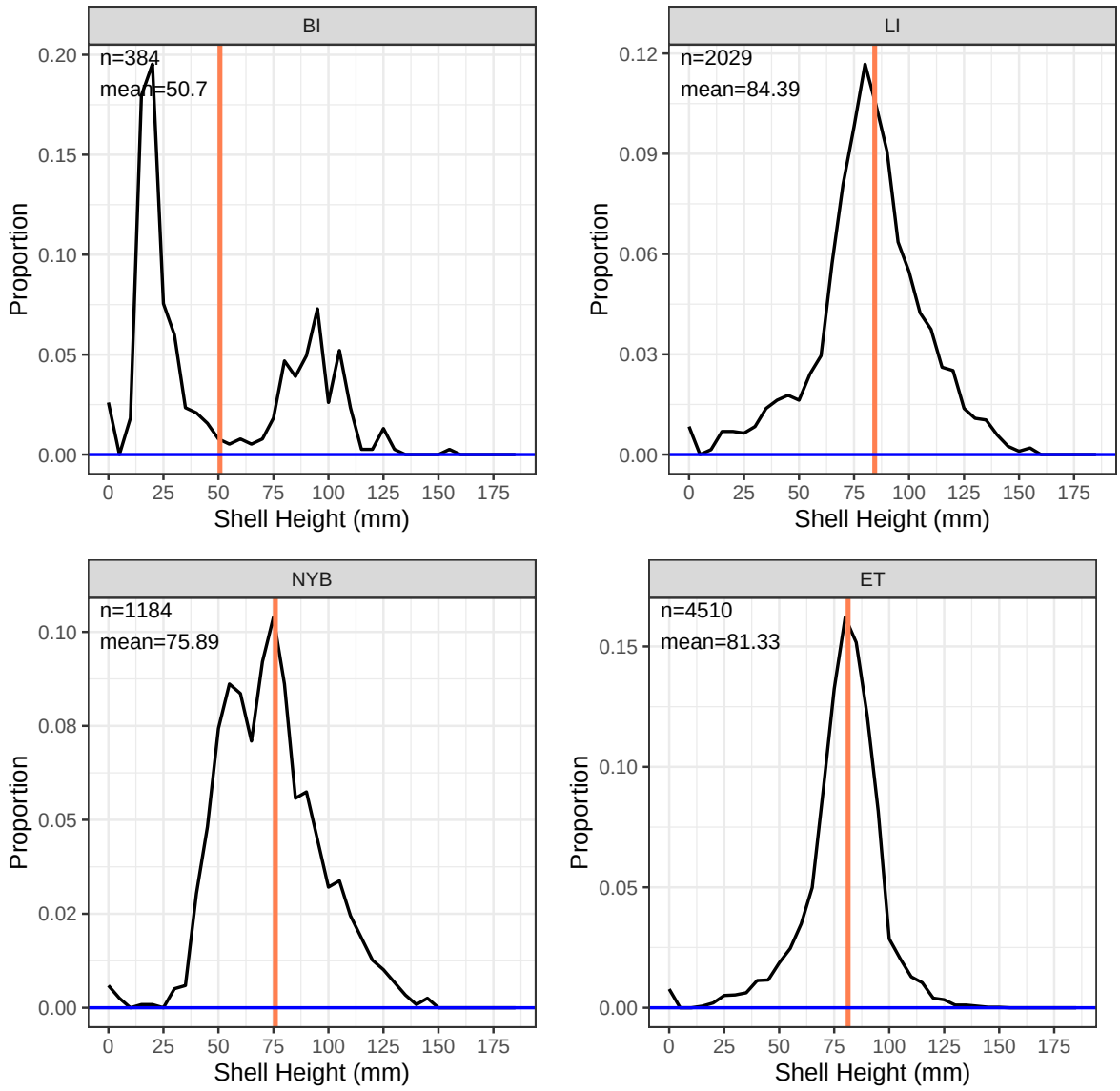

Figure 3.2. The 2025 size frequencies, mean shell height, and its sample size by SAMS area for 0+ mm scallops using combined data from NEFSC Habcam, NEFSC LRAUV, and CFF Habcam surveys for Mid-Atlantic.

4 ADDITIONAL ANALYSES

4.1 Comparison of NLS-South biomass estimates

Table 4.1. Comparison of 2025 Habcam biomass estimates (40+ mm) using VIMS 2016-2023, 2025 and RT 2025 SH-MW equations for NLS-South. Percent difference was calculated using biomass estimates (RT - VIMS)/(RT).

SAMS Area	BmsMT (RT 2025)	BmsMTSE (RT 2025)	BmsMT (VIMS16-23,25)	BmsMTSE (VIMS16-23,25)	%Diff
NLS-South	8760.44	513.67	13606.26	773.33	-55.31

5 SPECIAL COMMENTS

5.1 2025 Habcam/LRAUV survey spatial count estimates for 40+ mm scallops

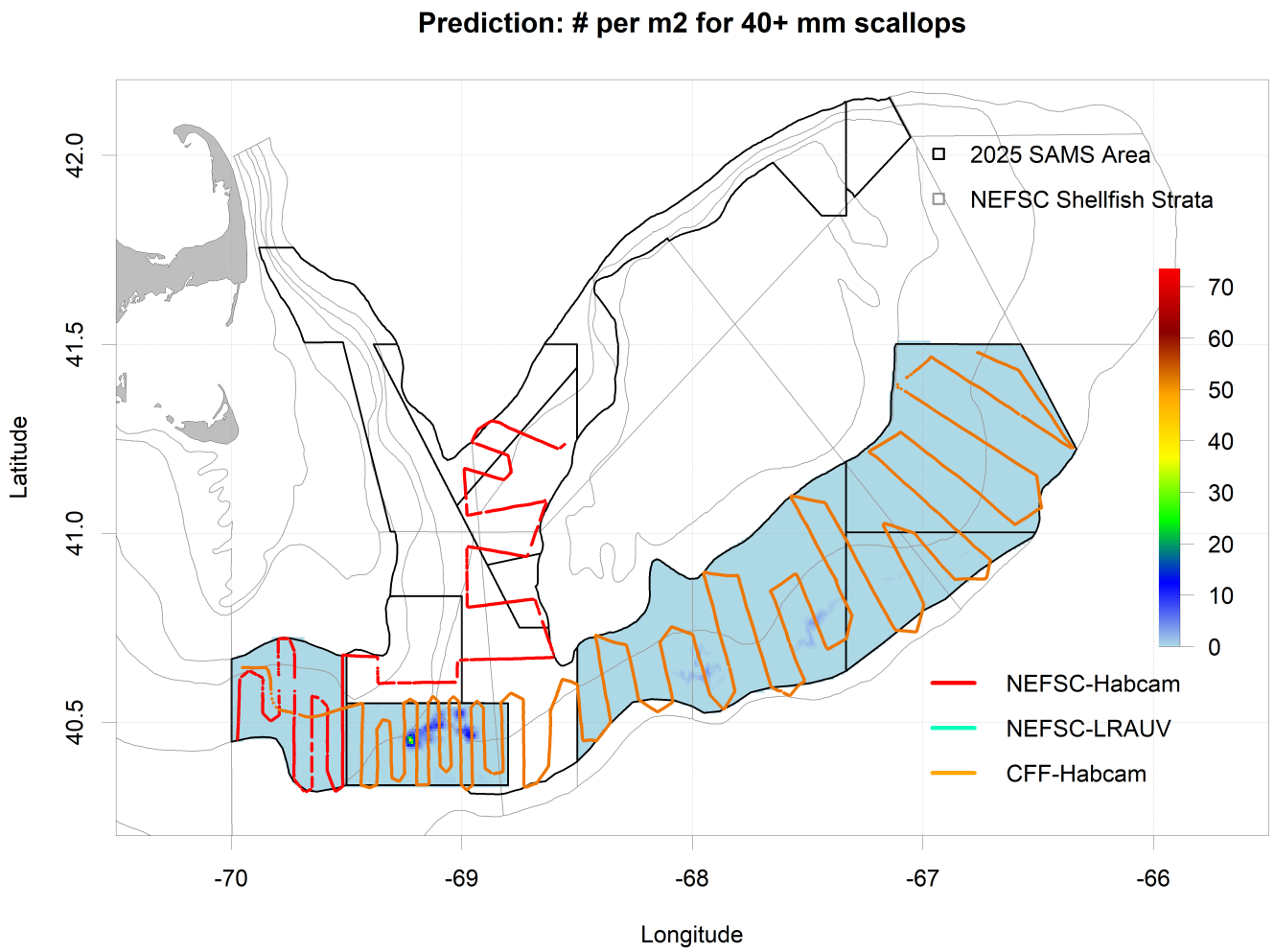

Figure 5.1. The 2025 Habcam survey tracks conducted by NEFSC and CFF, along with count estimates for 40+ mm scallops for Georges Bank.

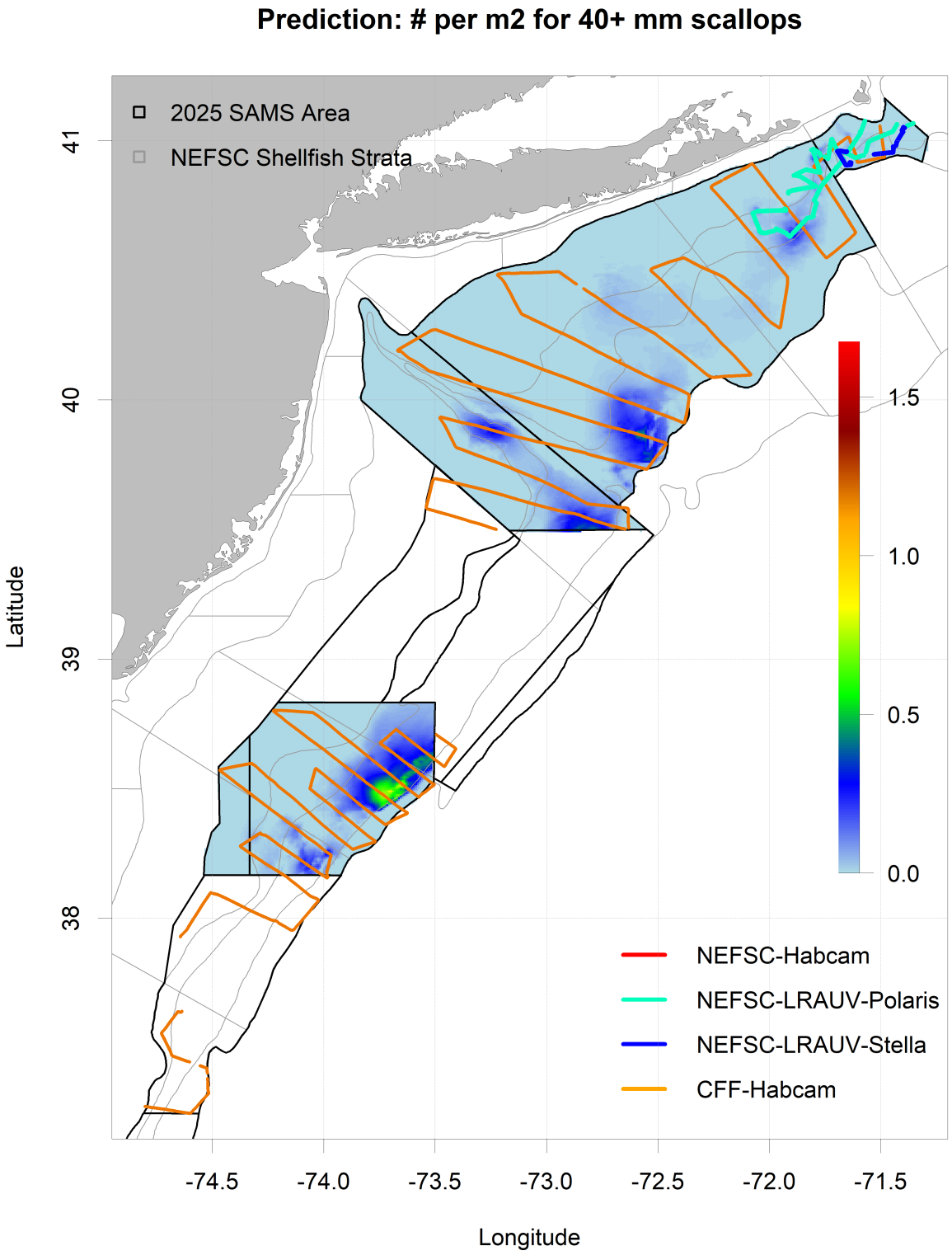

Figure 5.2. The 2025 Habcam/LRAUV survey tracks conducted by NEFSC and CFF, along with count estimates for 40+ mm scallops for Mid-Atlantic.

5.2 2025 Habcam/LRAUV survey design-based estimates for 40+ mm scallop

Table 5.1. Summary of 2025 Habcam/LRAUV design-based estimates (stratified mean by image) for scallops larger than 40 mm shell height using the combined NEFSC and CFF data. VIMS 2016-2023, 2025 SH-MW equation was used to estimate meat weights for the scallops in NLS-South, whereas RT 2025 SH-MW equations were used for the rest of the SAMS areas MeanWt is estimated using BmsMT/NumMill.

SAMS Area	NumMill	BmsMT	BmsMTSE	MeanWt
Georges Bank				
CL2-Access	130	3556	208	27.4
CL2-Ext	132	2212	127	16.8
NLS-South	7243	28337	1098	3.9
NLS-West	15	265	57	17.5
SF	1084	9223	842	8.5
Mid-Atlantic				
BI	14	193	24	14.0
LI	513	6946	256	13.5
NYB	361	3450	180	9.5
ET	573	5952	156	10.4

6 EXPLOITABLE BIOMASS ESTIMATES FOR 2025 (CURRENT FY)

Table 6.1. Summary of 2025 Habcam/LRAUV model-based estimates for exploitable scallops using the combined NEFSC and CFF data. VIMS 2016-2023, 2025 SH-MW equation was used to estimate meat weights for the scallops in NLS-South, whereas RT 2025 SH-MW equations were used for the rest of the SAMS areas. Yochum and DuPaul 4-inch ring selectivity was used for exploitable cutoff.

SAMS Area	ExNumMill	ExBmsMT	ExBmsMTSE	ExMeanWt
Georges Bank				
CL2-Access	19	590	63	30.5
CL2-Ext	36	1017	70	28.2
NLS-South	148	1176	69	8
NLS-West	10	483	83	46.7
SF	70	1519	59	21.8
Mid-Atlantic				
BI	5	109	4	21.6
LI	152	3106	36	20.4
NYB	49	905	8	18.6
ET	138	2072	22	15