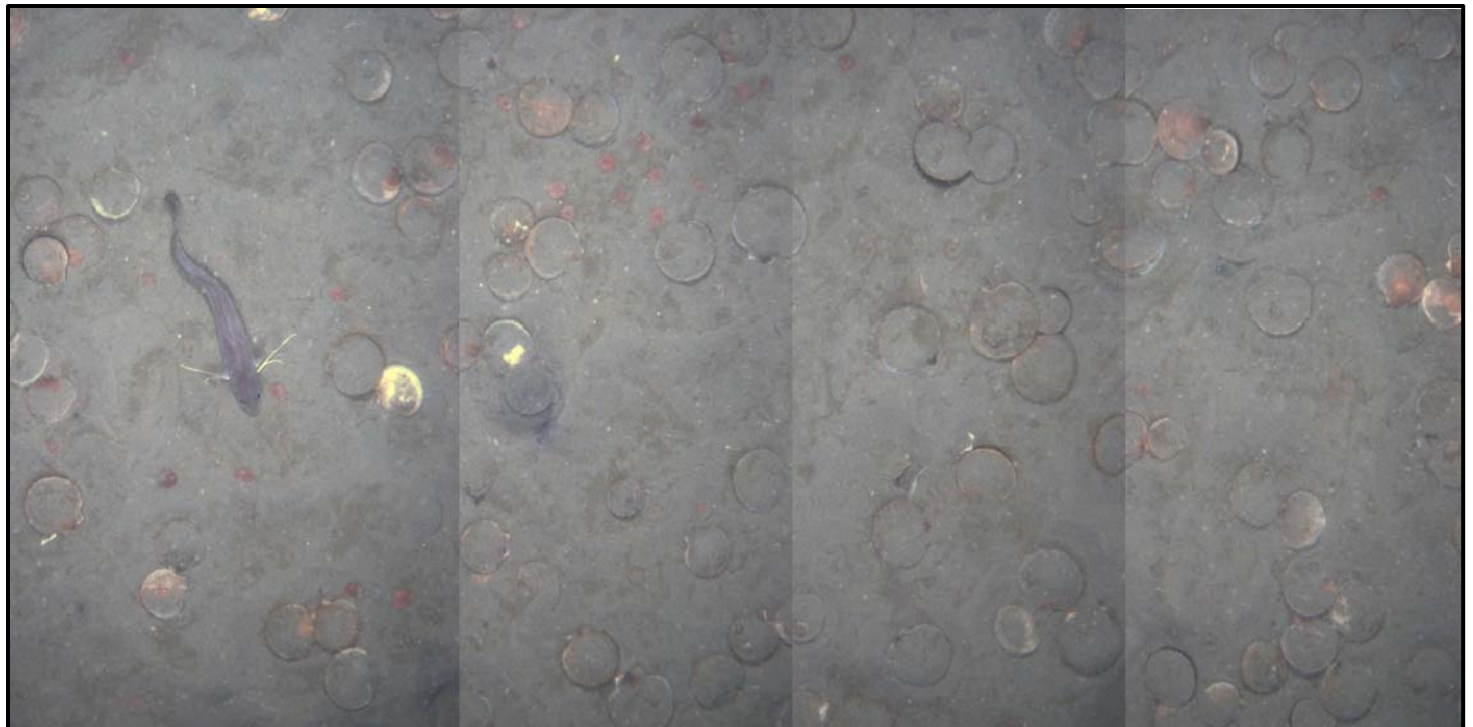


2017 RSA HabCam v3 Survey

Nantucket Lightship

Jason Clermont, Liese Siemann, John Ceccolini¹; Richard Taylor, Karen Bolles-Hopkins, Paul Rosonina, Arnie DeMello²; Jui-Han Chang³; David Rudders⁴

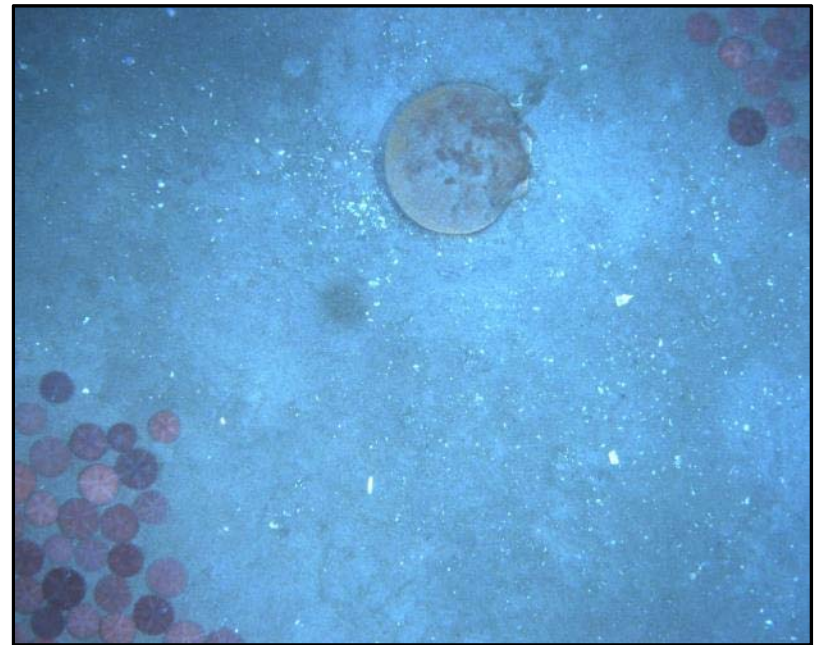
1. Coonamessett Farm Foundation; 2. Arnie's Fisheries / HabCam Group; 3. NOAA Northeast Fisheries Science Center; 4. Virginia Institute of Marine Science



Overview

Objectives

1. Provide biomass estimates and size distribution of scallops in NLSCA
2. Provide cursory geographical information on potential scallop predator distributions in survey areas
3. *Comparison of current scallop biomass with previous surveys*
 - *Growth and survival*
4. *Analysis of survey methodologies*
 - *Compare biomass estimates generated by dredge and optical technologies in overlapping survey areas*



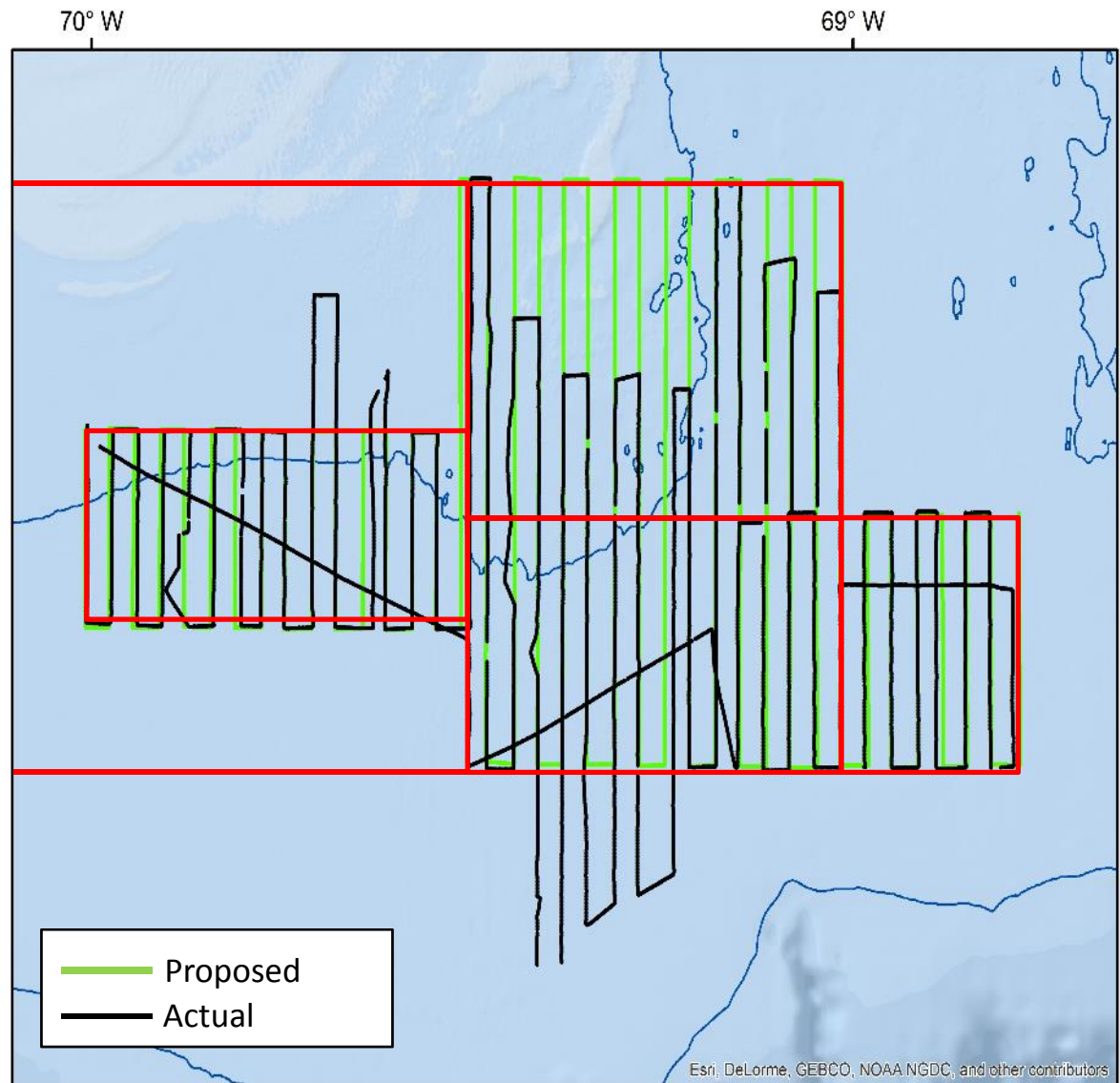
Nantucket Lightship: Survey Information

Survey

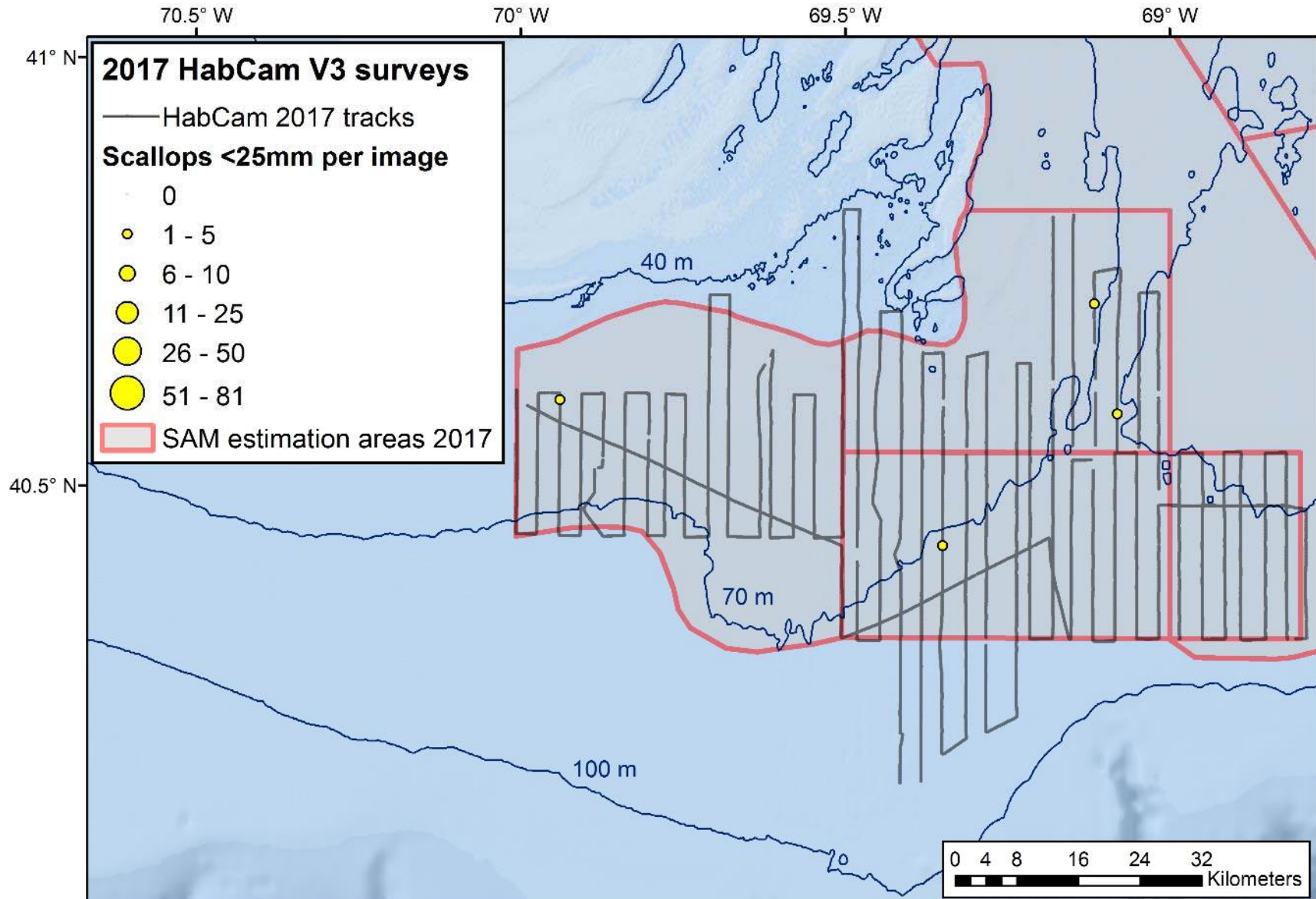
- 15-22 July 2017
- 875 nm
 - Modified due to bathymetric features
- 680 W-E
- 130 nm E-W
- 65 re-do SE corner
- 1.5 nm spacing

Images

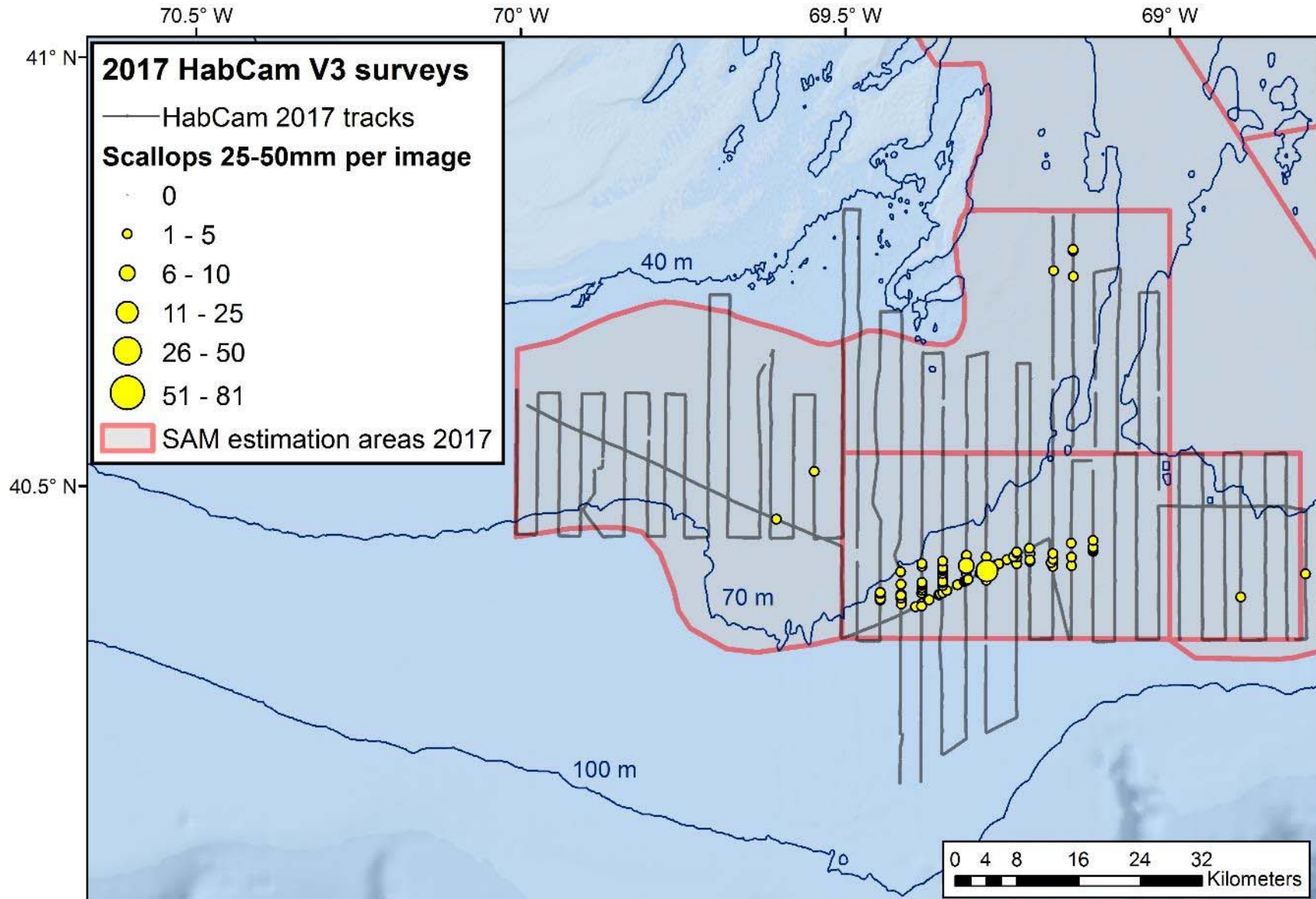
- Target altitude 1.7-1.9 m
- 4.5-5 knots
- Collected: 3.7 million
- Annotated: 10,745
 - Rate - 1:400



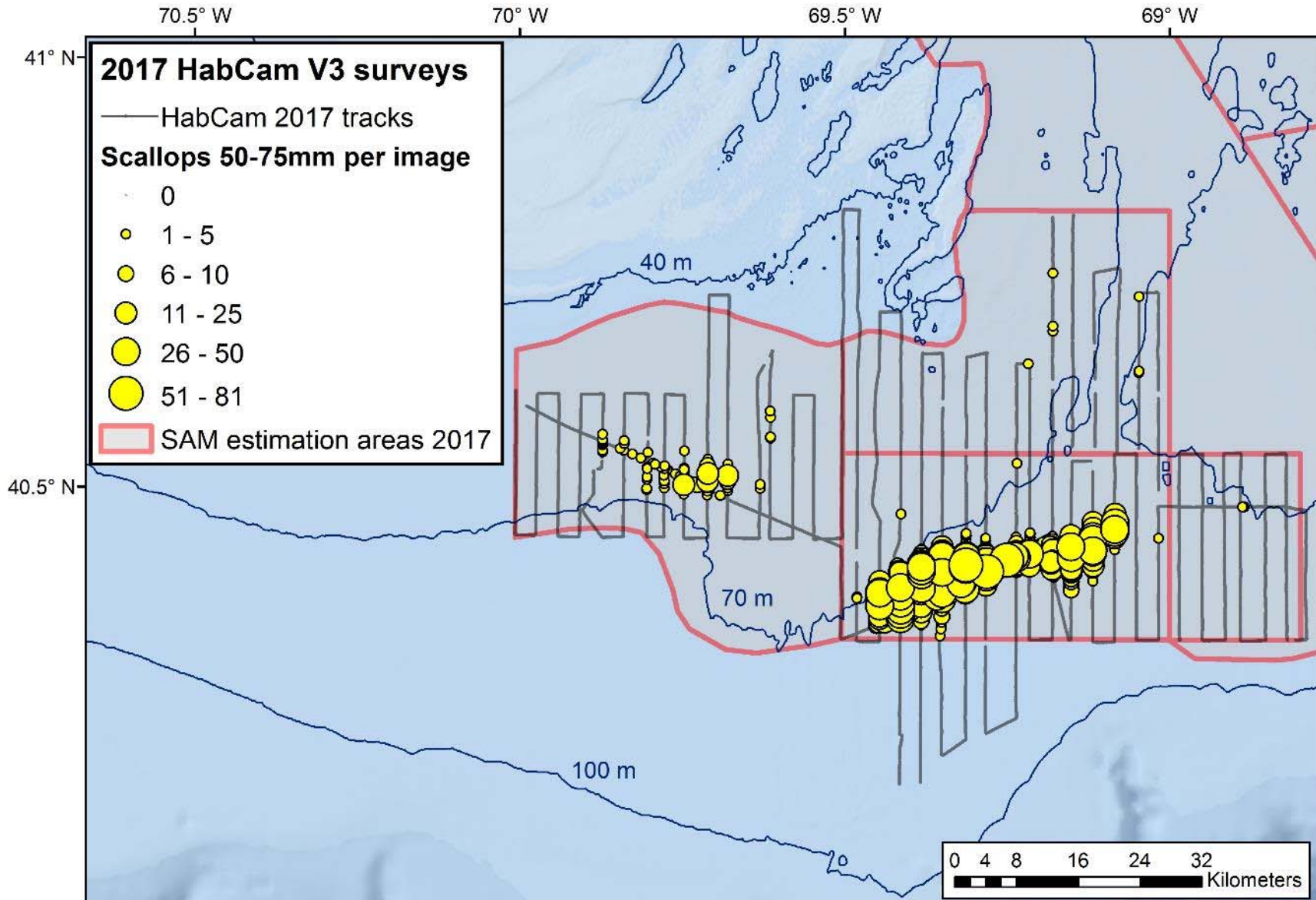
Nantucket Lightship Scallop Size Distribution



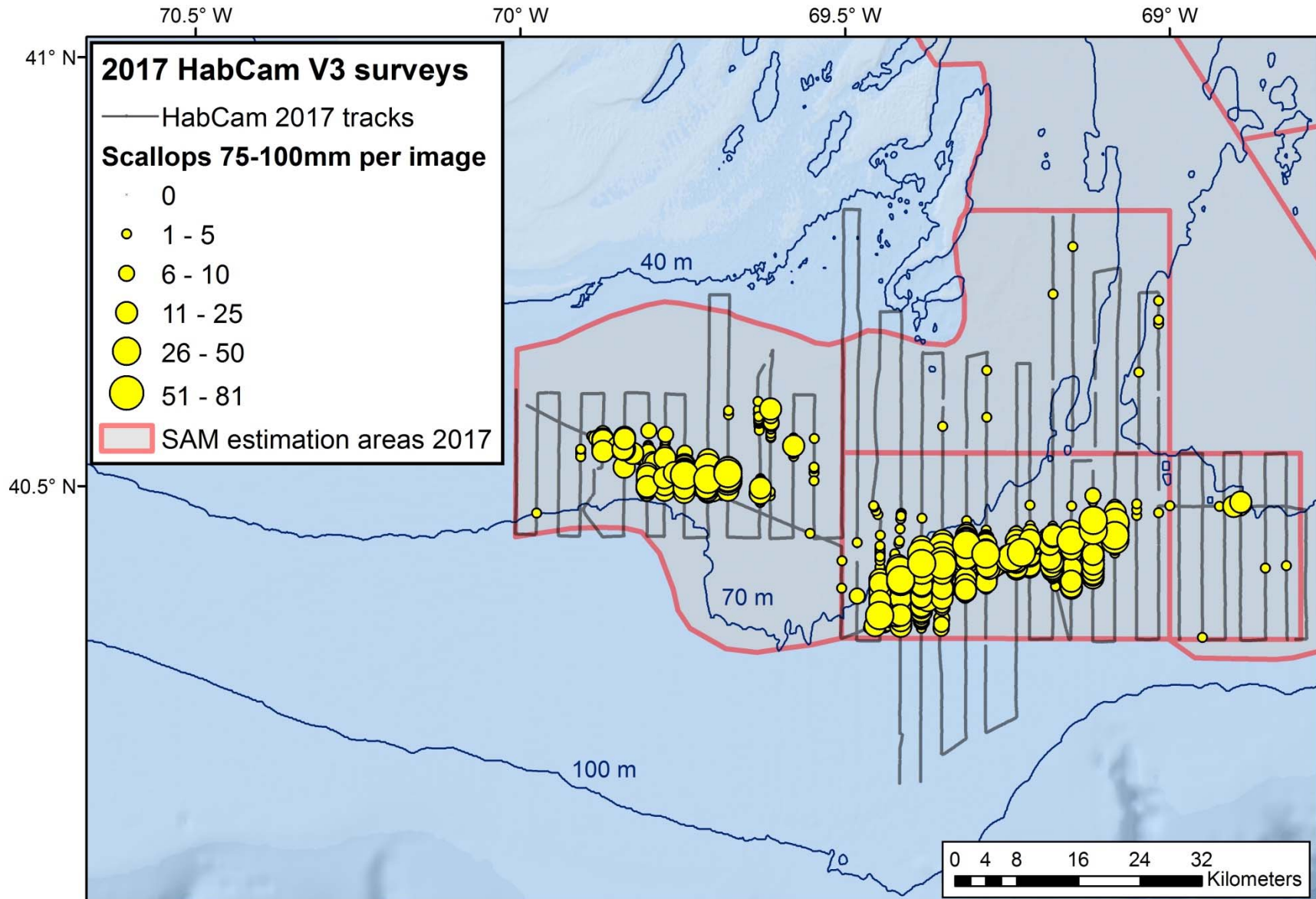
Nantucket Lightship Scallop Size Distribution



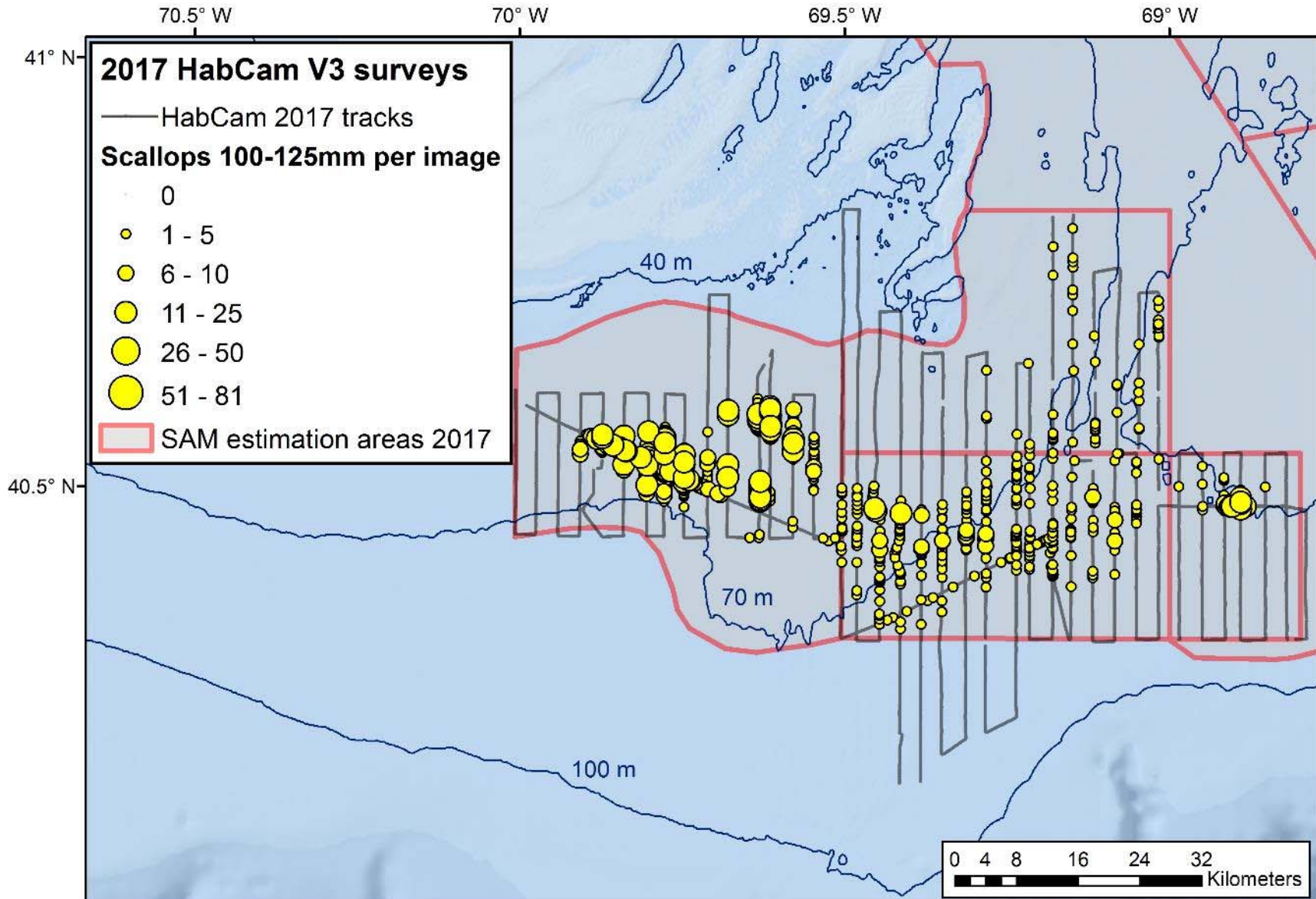
Nantucket Lightship Scallop Size Distribution



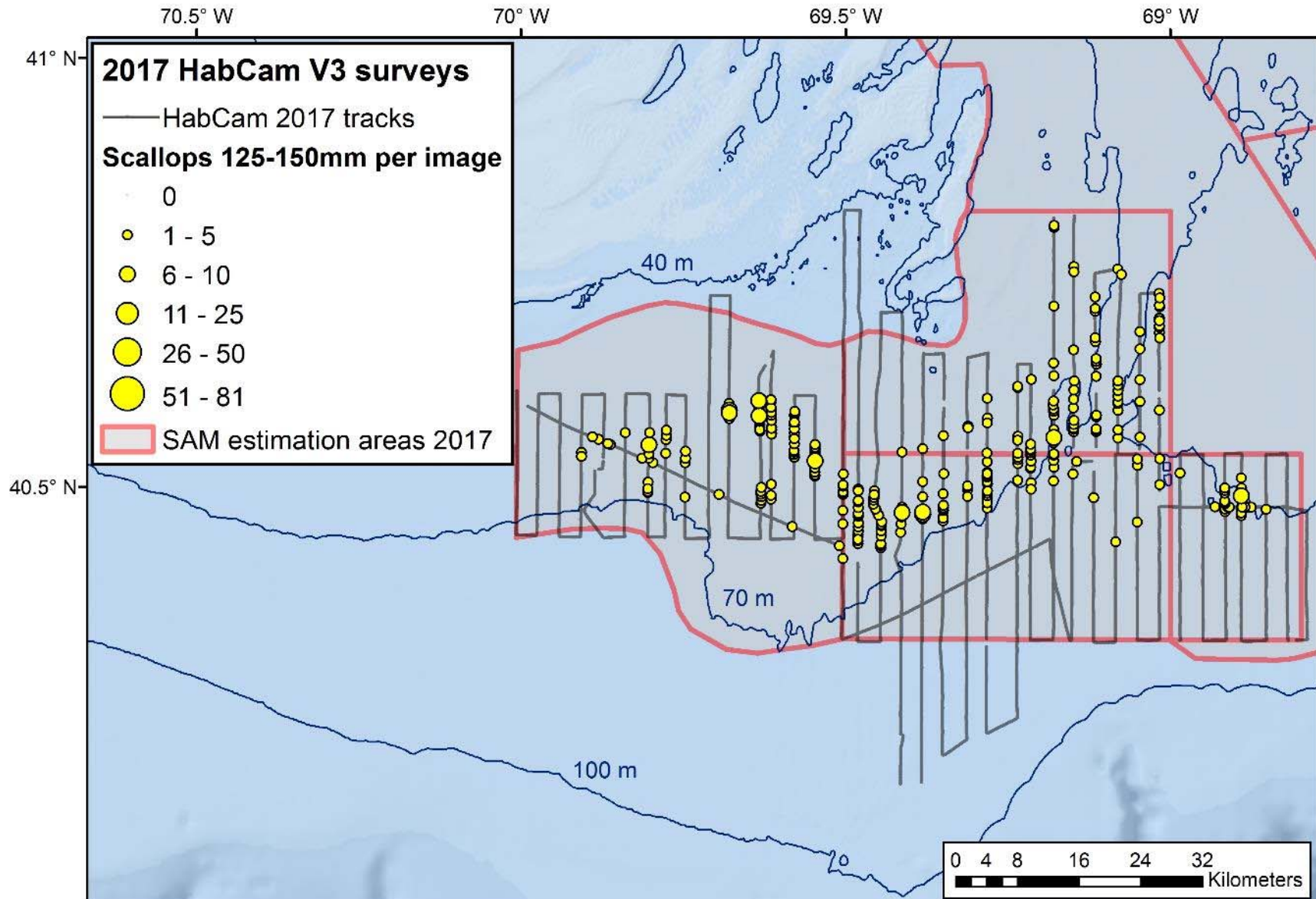
Nantucket Lightship Scallop Size Distribution



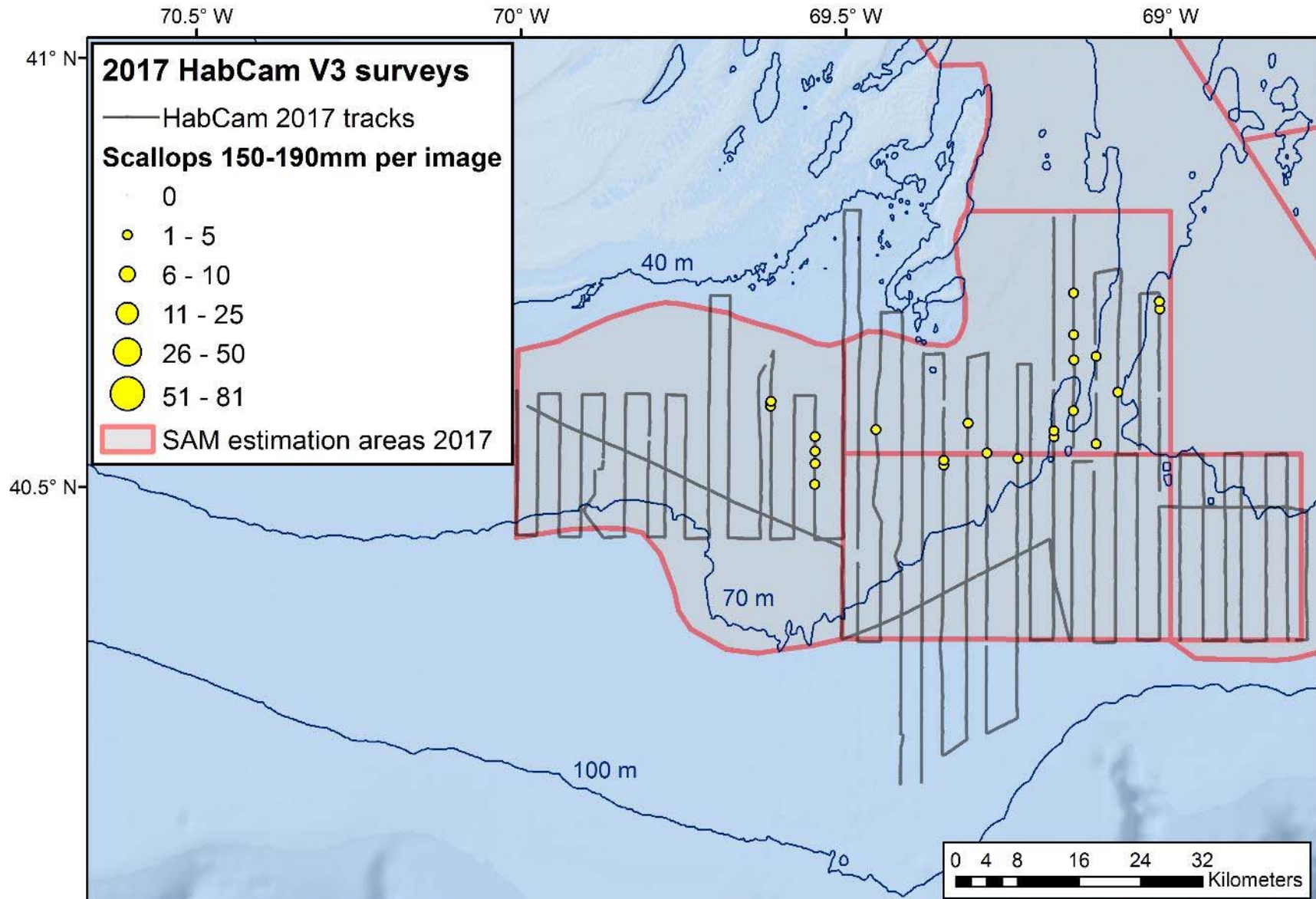
Nantucket Lightship Scallop Size Distribution



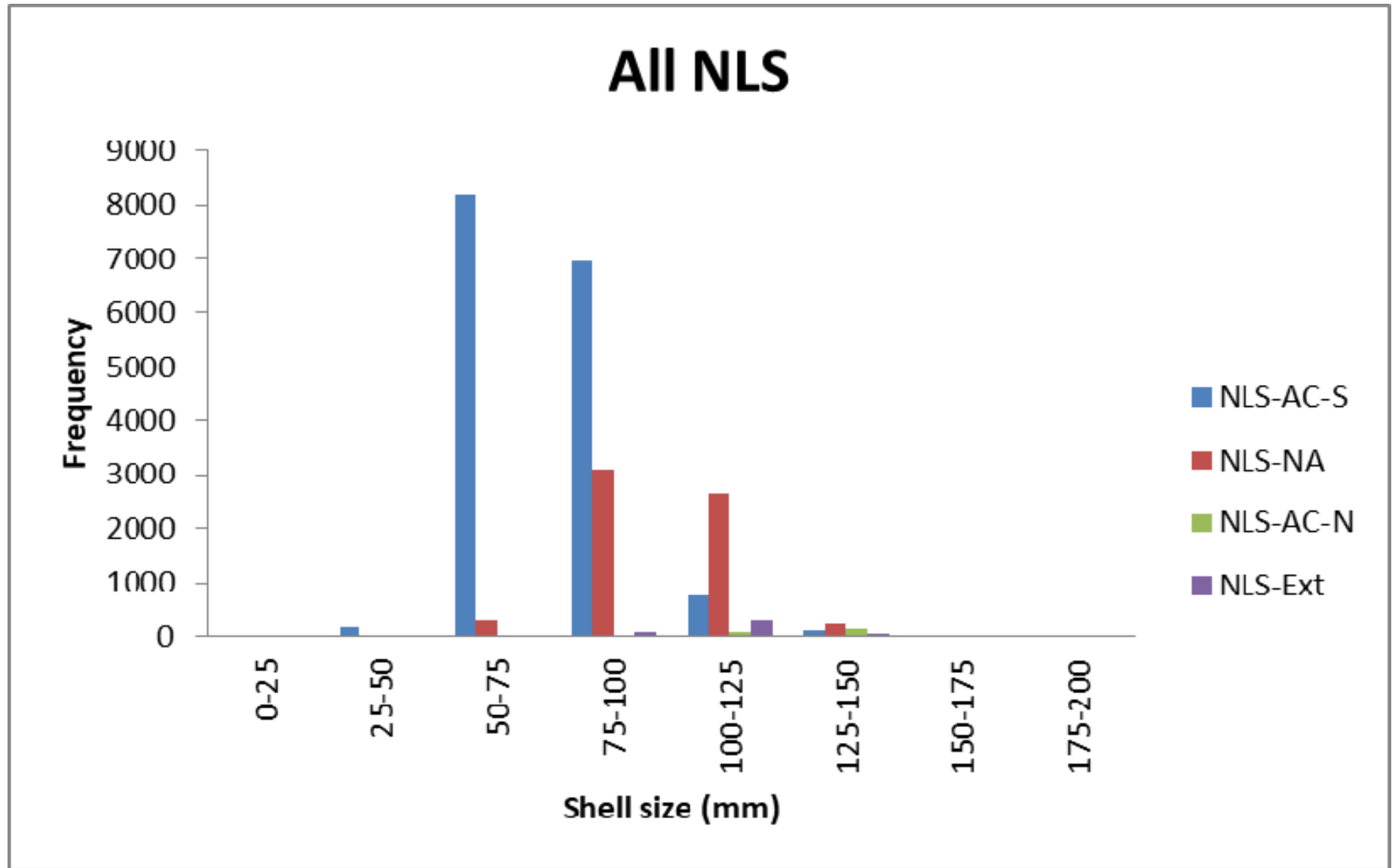
Nantucket Lightship Scallop Size Distribution



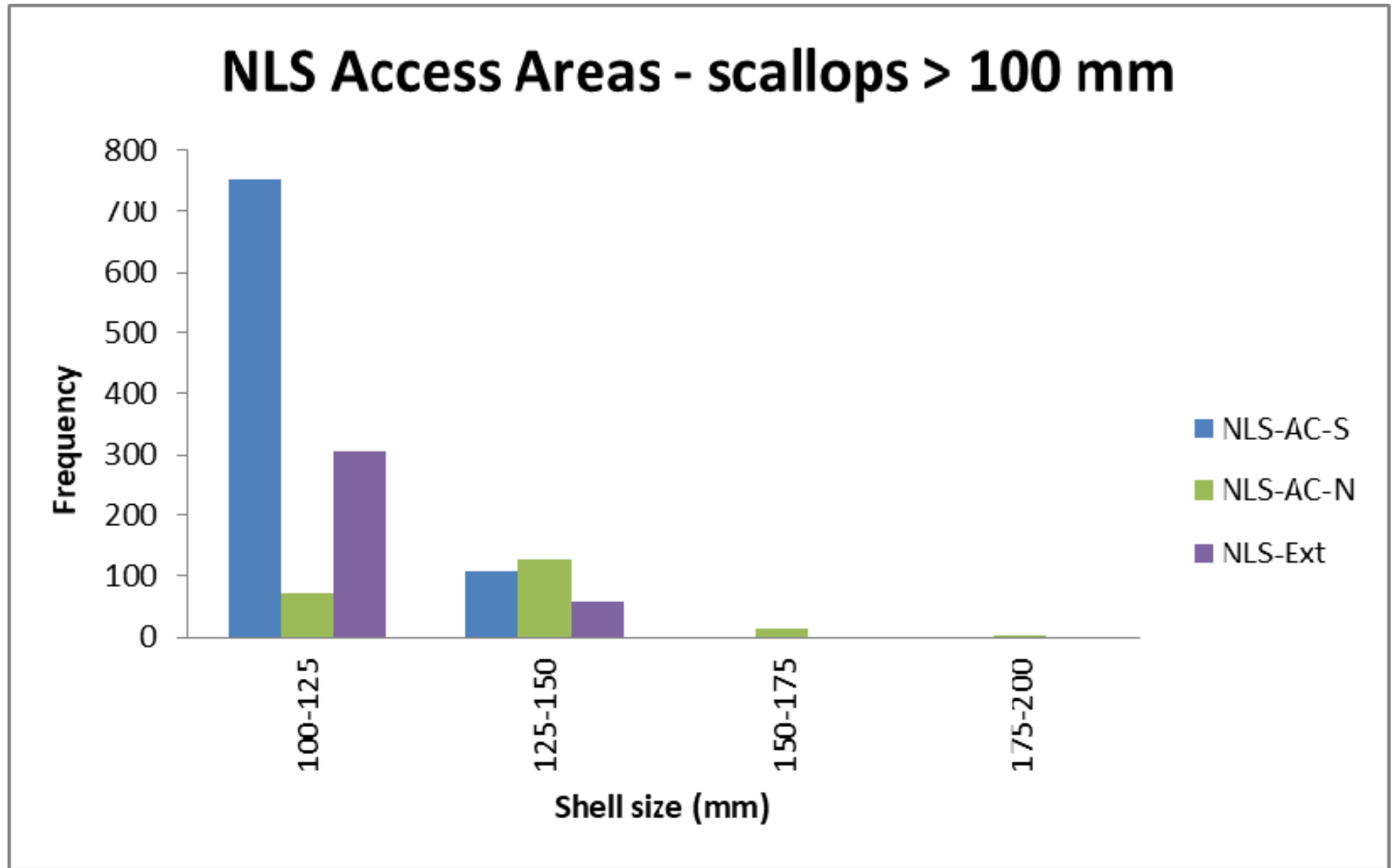
Nantucket Lightship Scallop Size Distribution



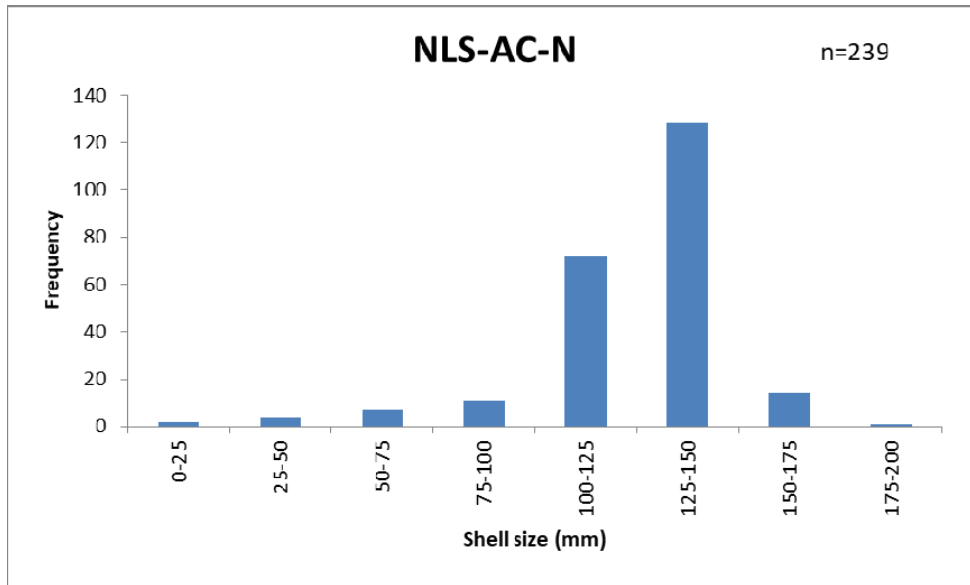
Nantucket Lightship Scallop Size Frequency



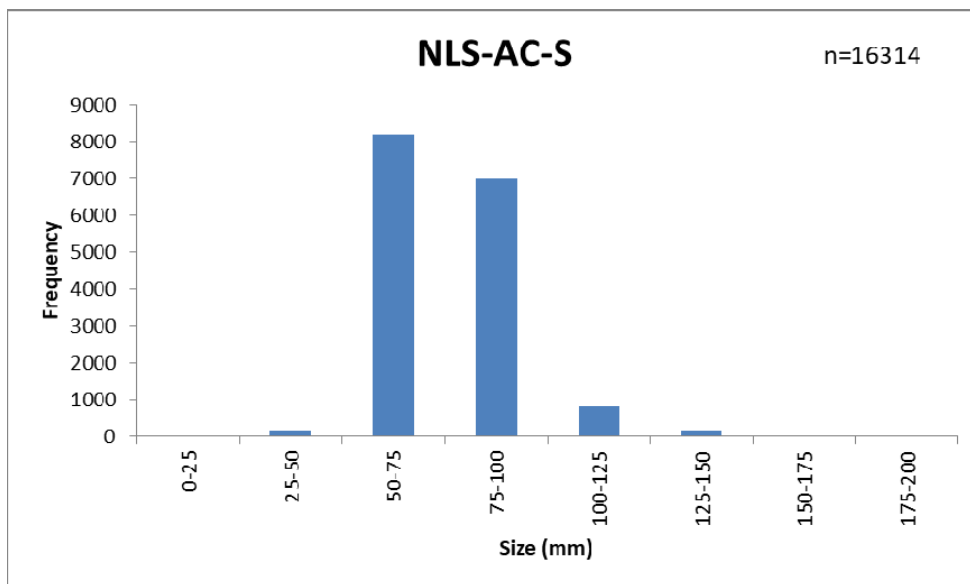
Nantucket Lightship Scallop Size Frequency



Nantucket Lightship Scallop Size Frequency

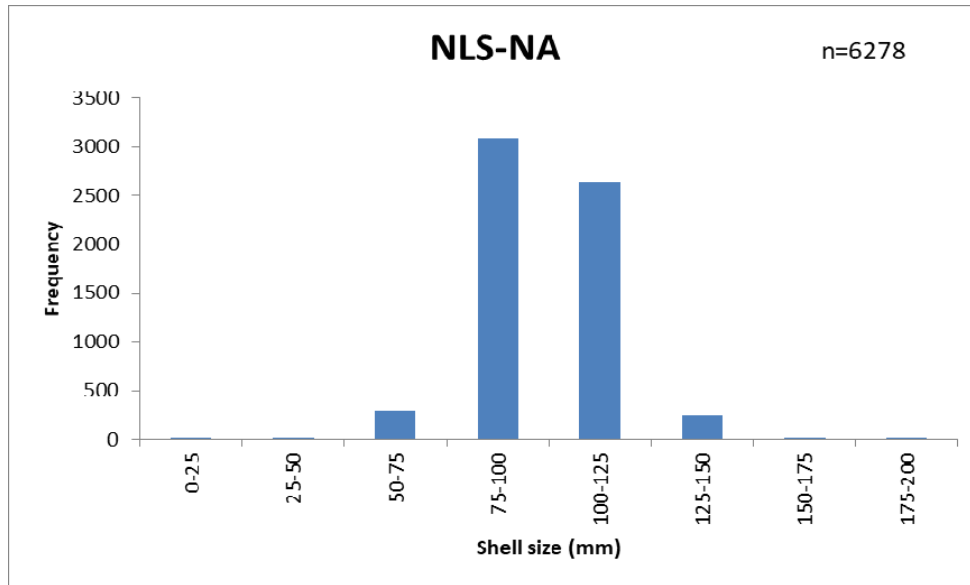


Bin	Frequency
0-25	2
25-50	4
50-75	7
75-100	11
100-125	72
125-150	128
150-175	14
175-200	1

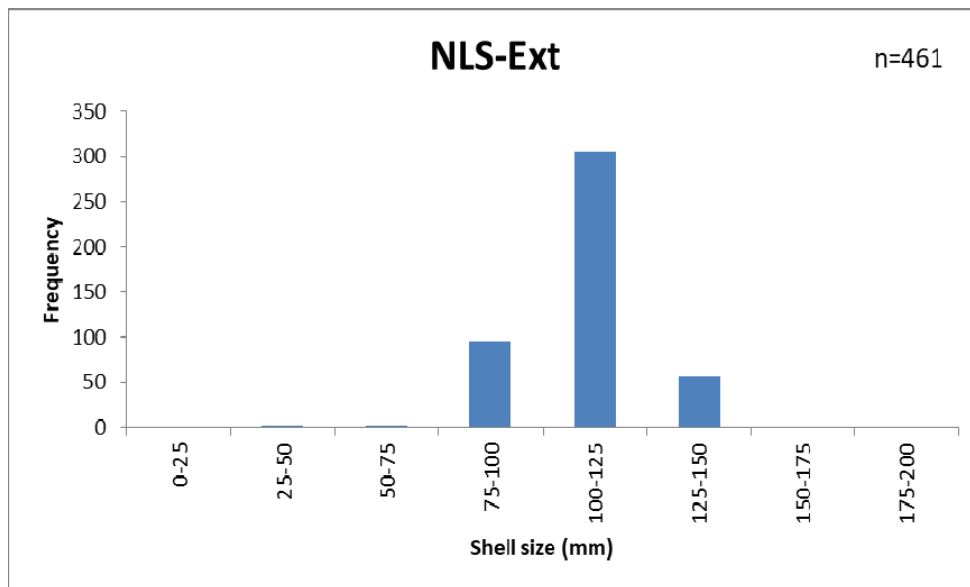


Bin	Frequency
0-25	1
25-50	162
50-75	8199
75-100	6977
100-125	808
125-150	164
150-175	3
175-200	0

Nantucket Lightship Scallop Size Frequency



Bin	Frequency
0-25	0
25-50	2
50-75	2
75-100	95
100-125	305
125-150	57
150-175	0
175-200	0

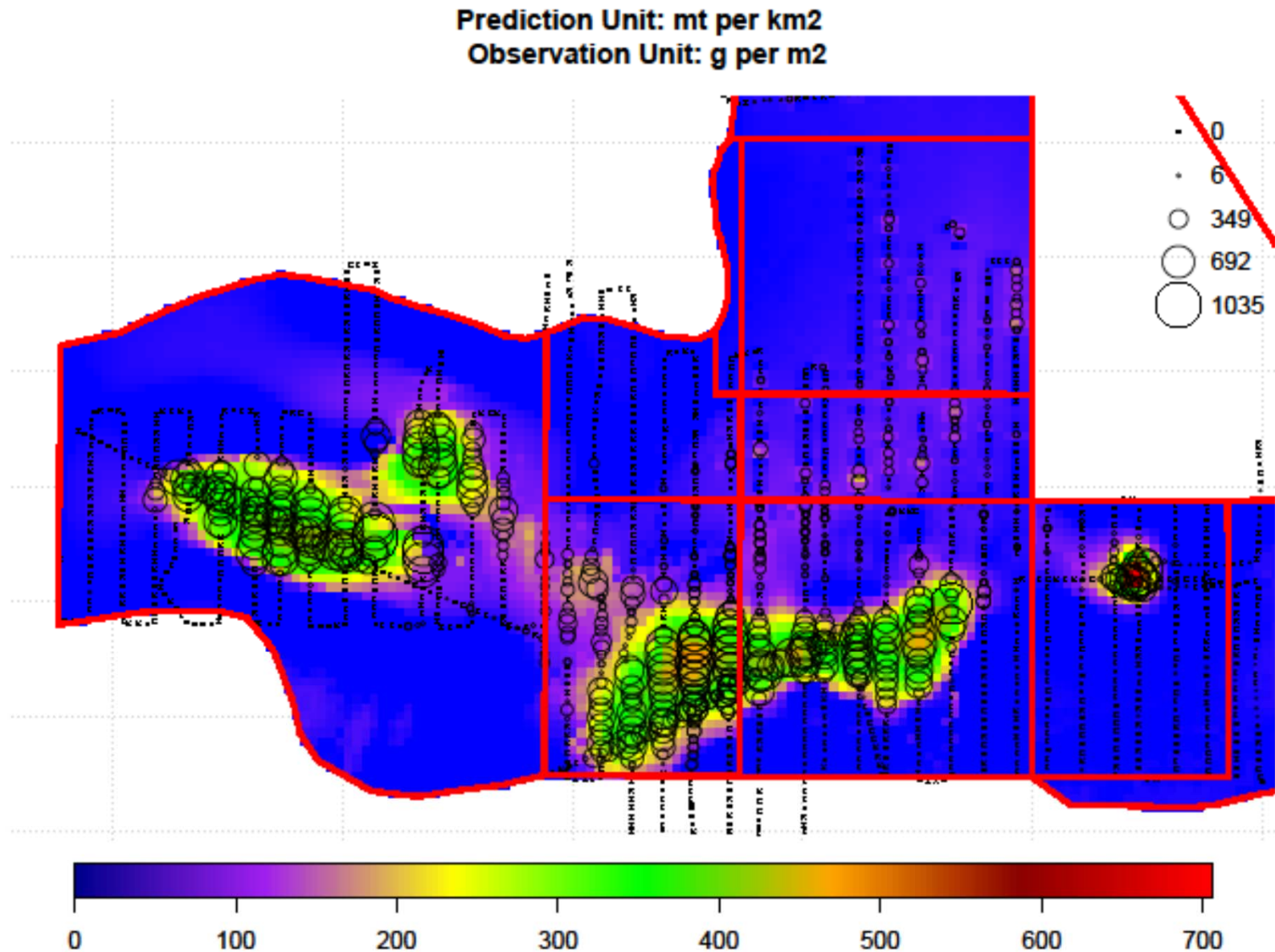


Bin	Frequency
0-25	0
25-50	2
50-75	2
75-100	95
100-125	305
125-150	57
150-175	0
175-200	0

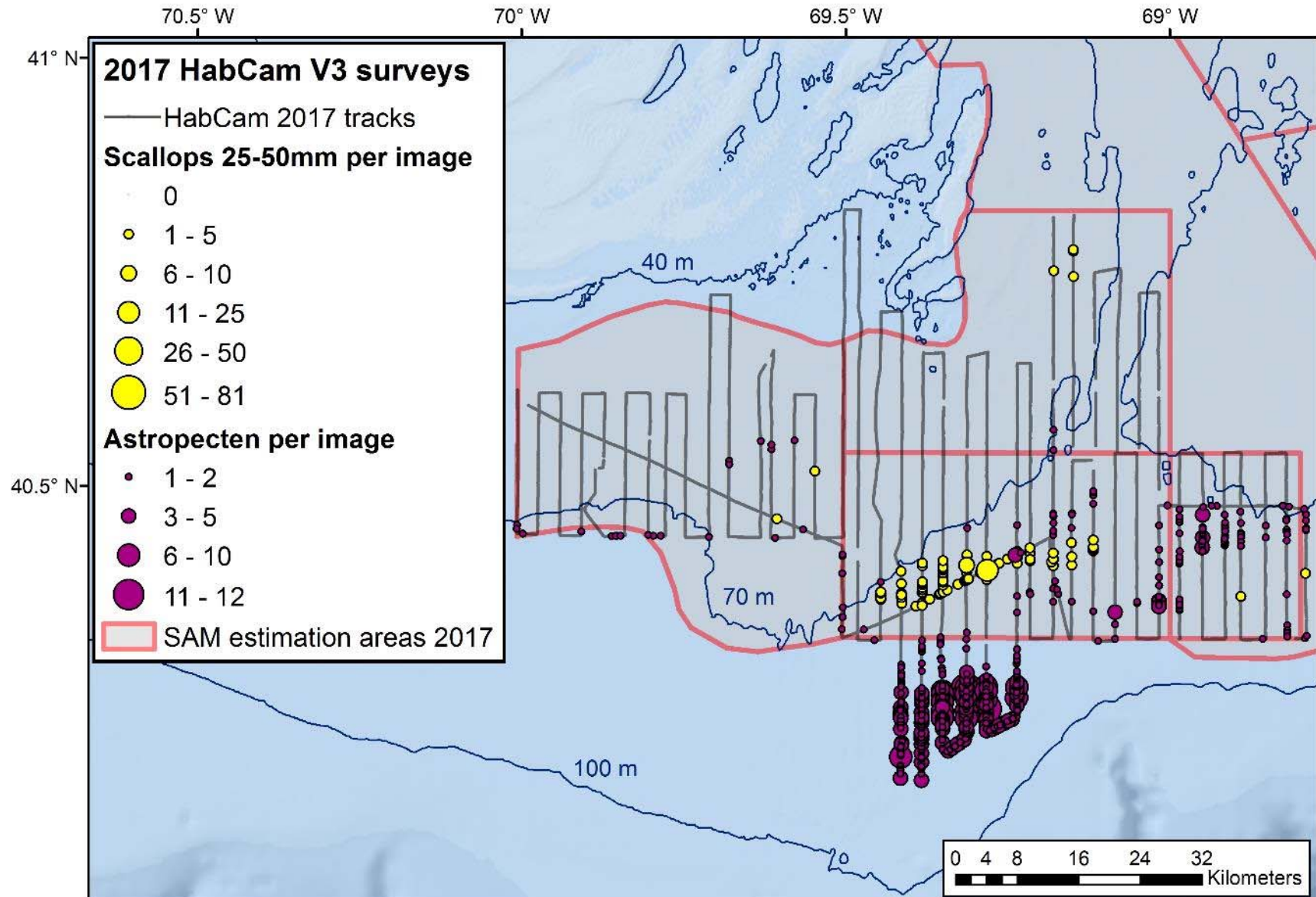
Nantucket Lightship: Biomass Estimates

SARC 50			VIMS 2016+2017		
Area	EST	SE	EST	SE	# Images Annotated
NLS-AC-N	6005.07	95.56	-	-	1566
NLS-AC-S	96722.34	4388.87	92520.25	8564.83	2375
NLS-NA	66465.09	2010.81	65819.28	10552.45	2278
NLS-EXT	9215.95	1448.47	8448.53	4129.34	2135

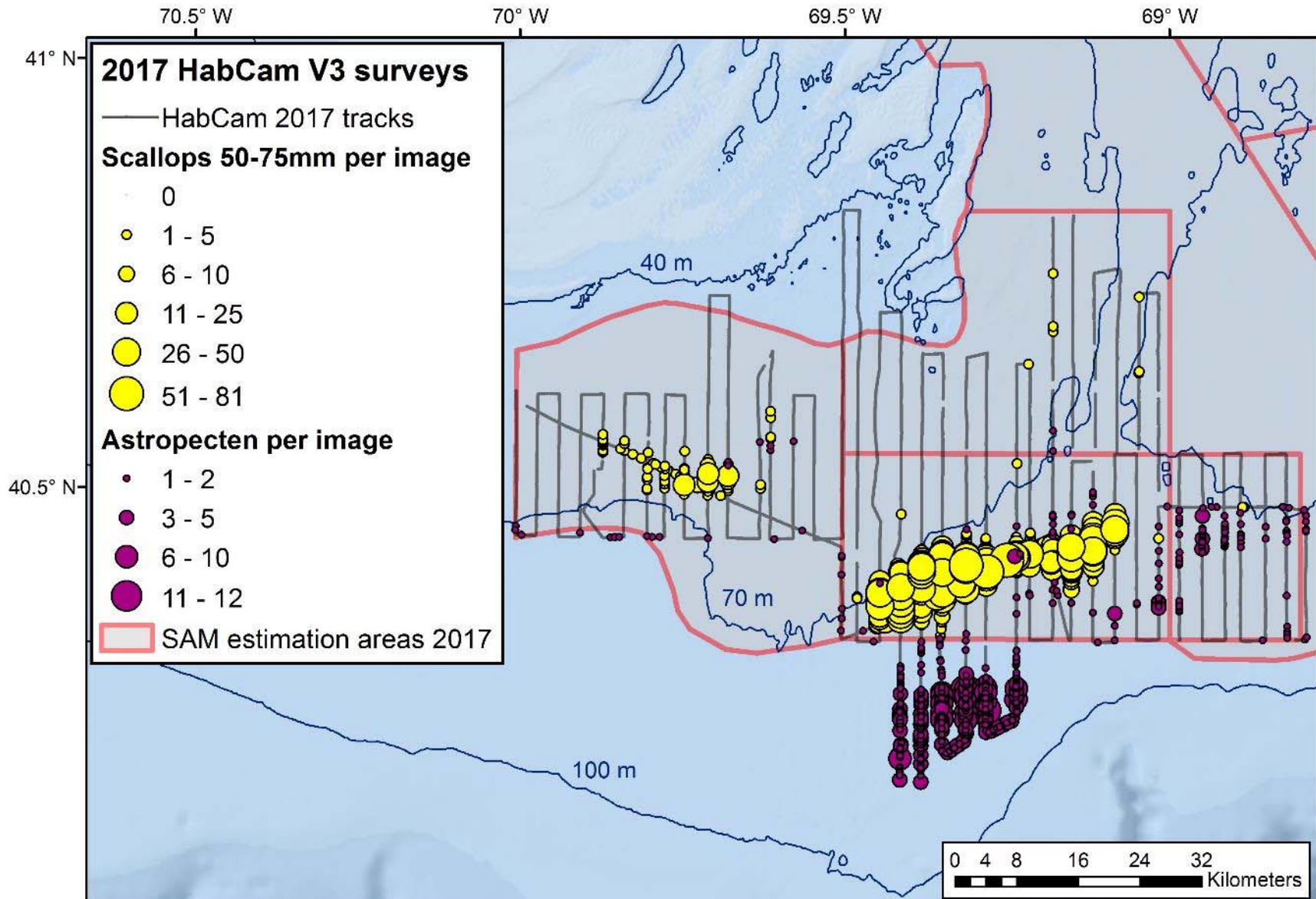
Nantucket Lightship: Biomass Estimates



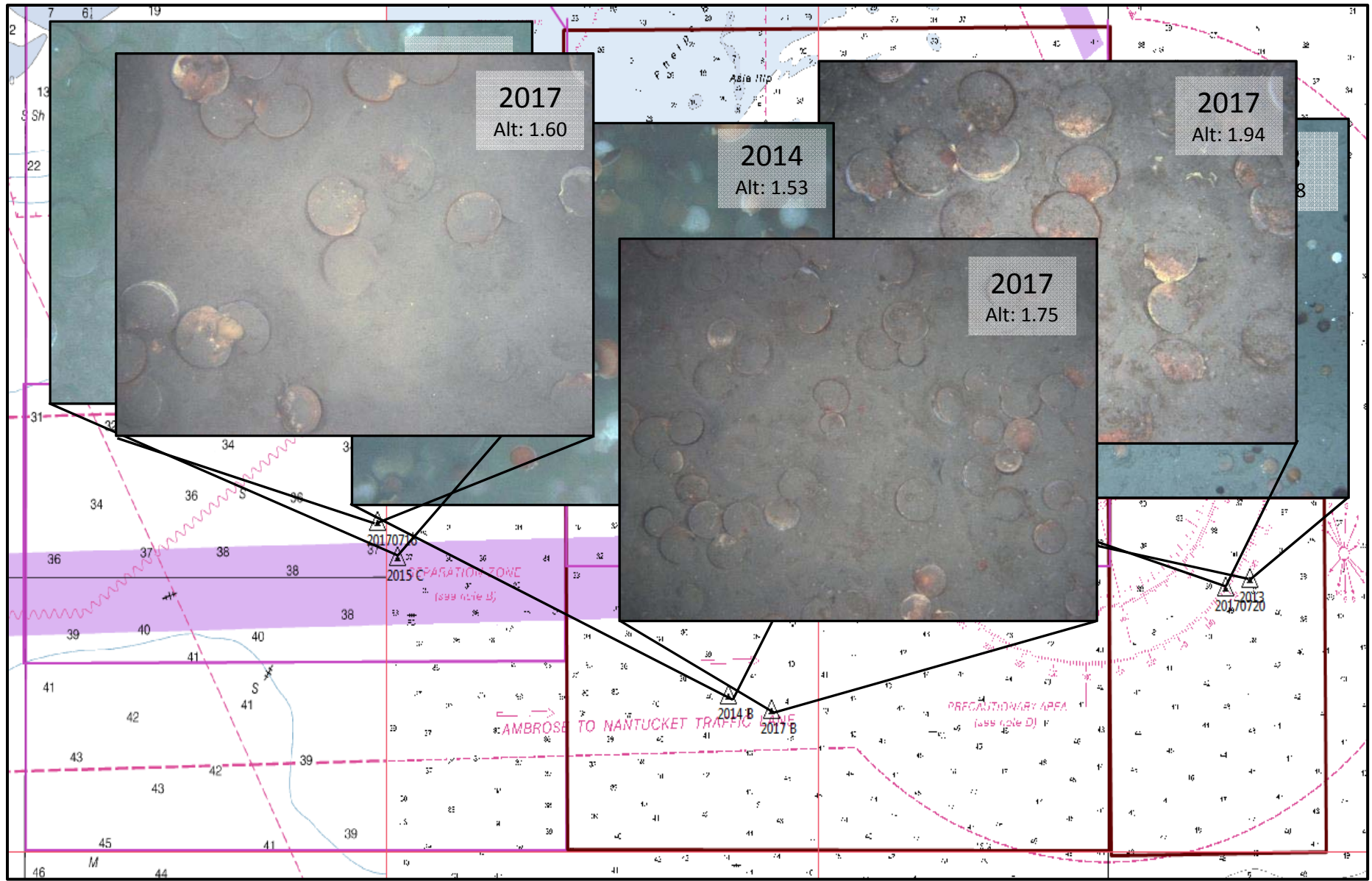
Nantucket Lightship: Scallops & *A. americanus*



Nantucket Lightship: Scallops & *A. americanus*

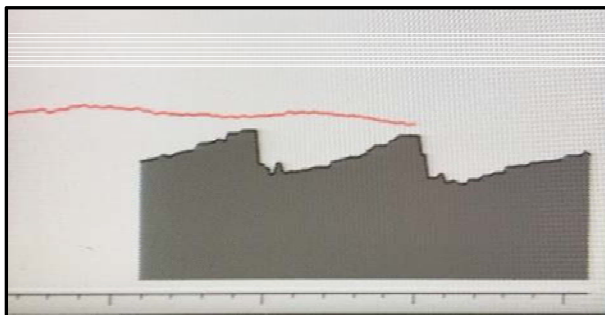


Nantucket Lightship: 2013-2017



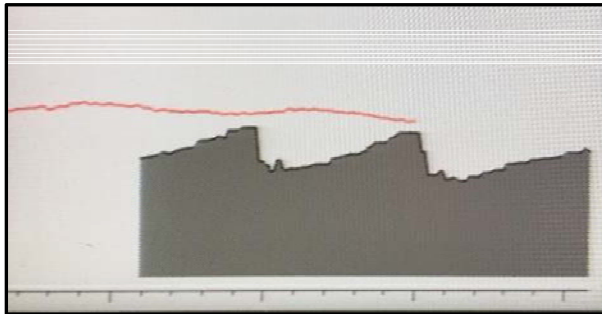
Upcoming work

- Biomass comparisons with VIMS dredge tows
- Time-series comparison of scallop distribution
- Time-series analysis of potential scallop predators



Acknowledgements

- Scallop RSA Program
- Crew of the F/V Kathy Marie | Capt. Paul Rosonina
- Lane Abrams & Jon Howland – WHOI
- Science party – CFF and RWU



Questions?

