Southern New England Cooperative Ventless Trap Survey

2014-2015

BOEM
Bureau of Ocean Energy Management

Roger Williams University
Incorporated 1956

The University of Rhode Island
Graduate School of Oceanography

Project Objectives

a. Establish a ventless trap survey protocol to assess the potential impacts of wind energy development in the RI/MA wind energy area;

b. Determine the seasonal and spatial patterns of lobster abundance within this development area;

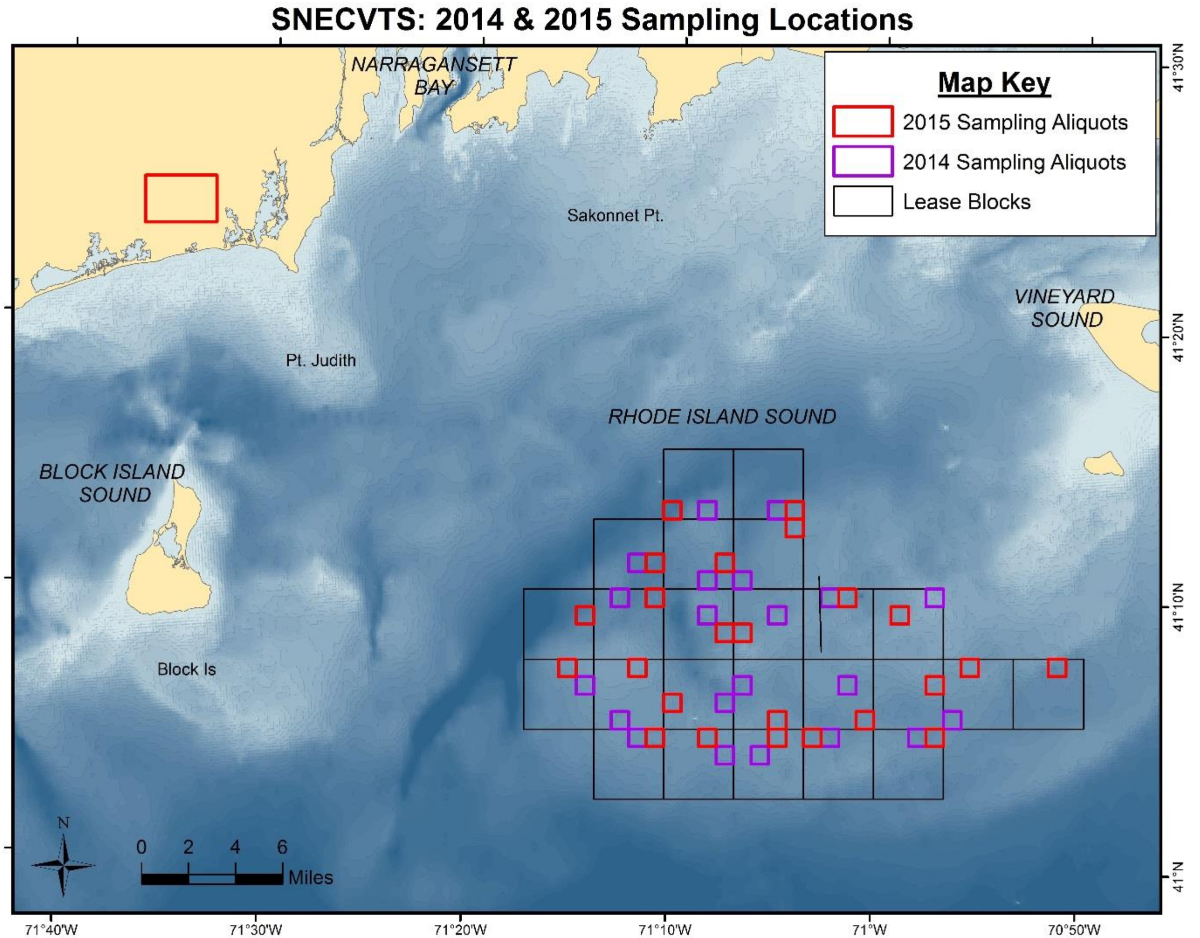
c. Conduct two years of pre-development monitoring that will allow Before-After and Control-Impact (BACI) comparisons to be made.

Lobster Tracks

2014 and 2015 Field Seasons

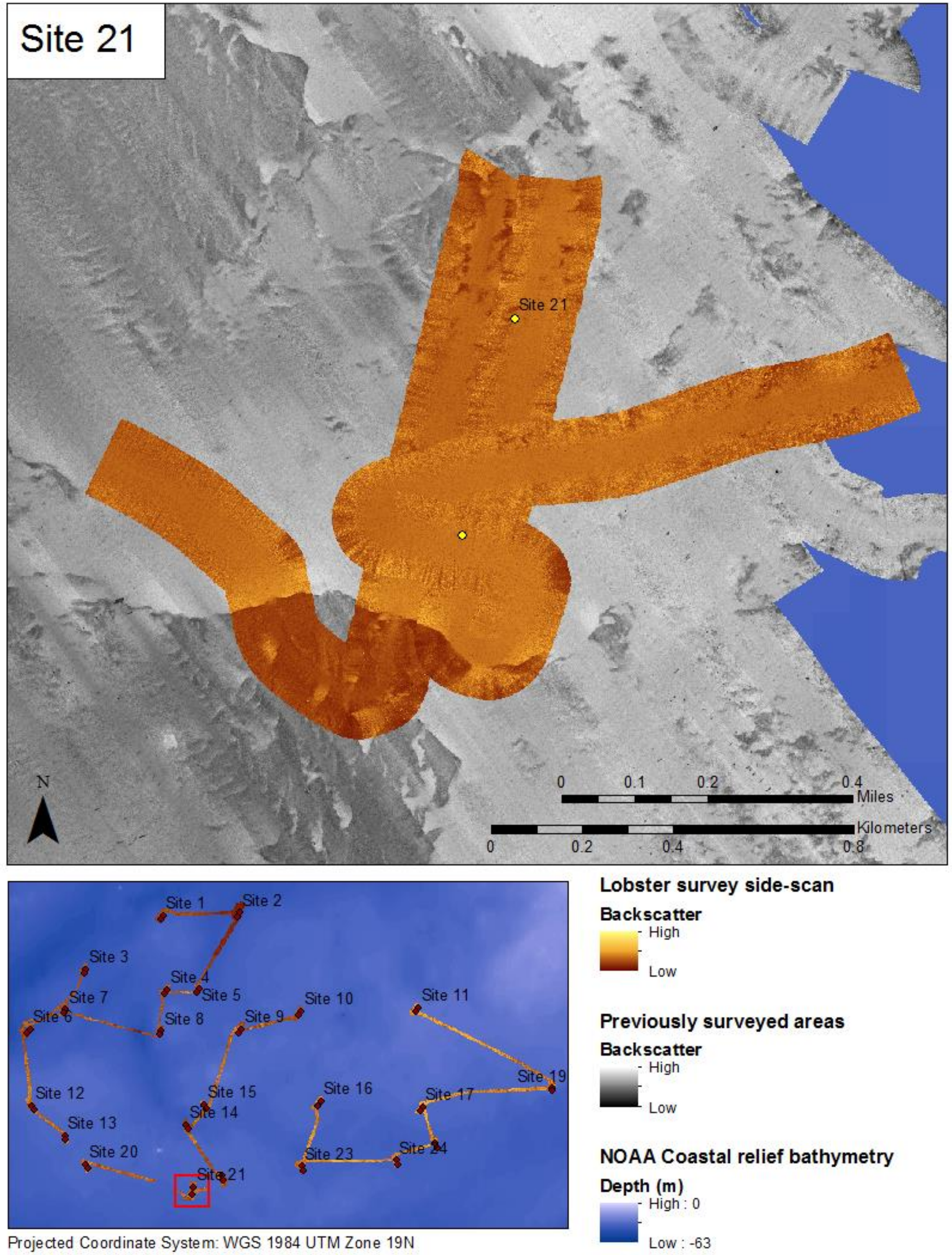
- One sampling station randomly selected within each lease block
- Three sampling days per month (May-September)
- Gear configuration:
  - 10-trap trawls
  - 6 ventless, 4 standard

  V-S-V-S-V-V-S-V-S-V
- 5-night soak time
- Bait: skates
- Habitat mapping conducted by King lab

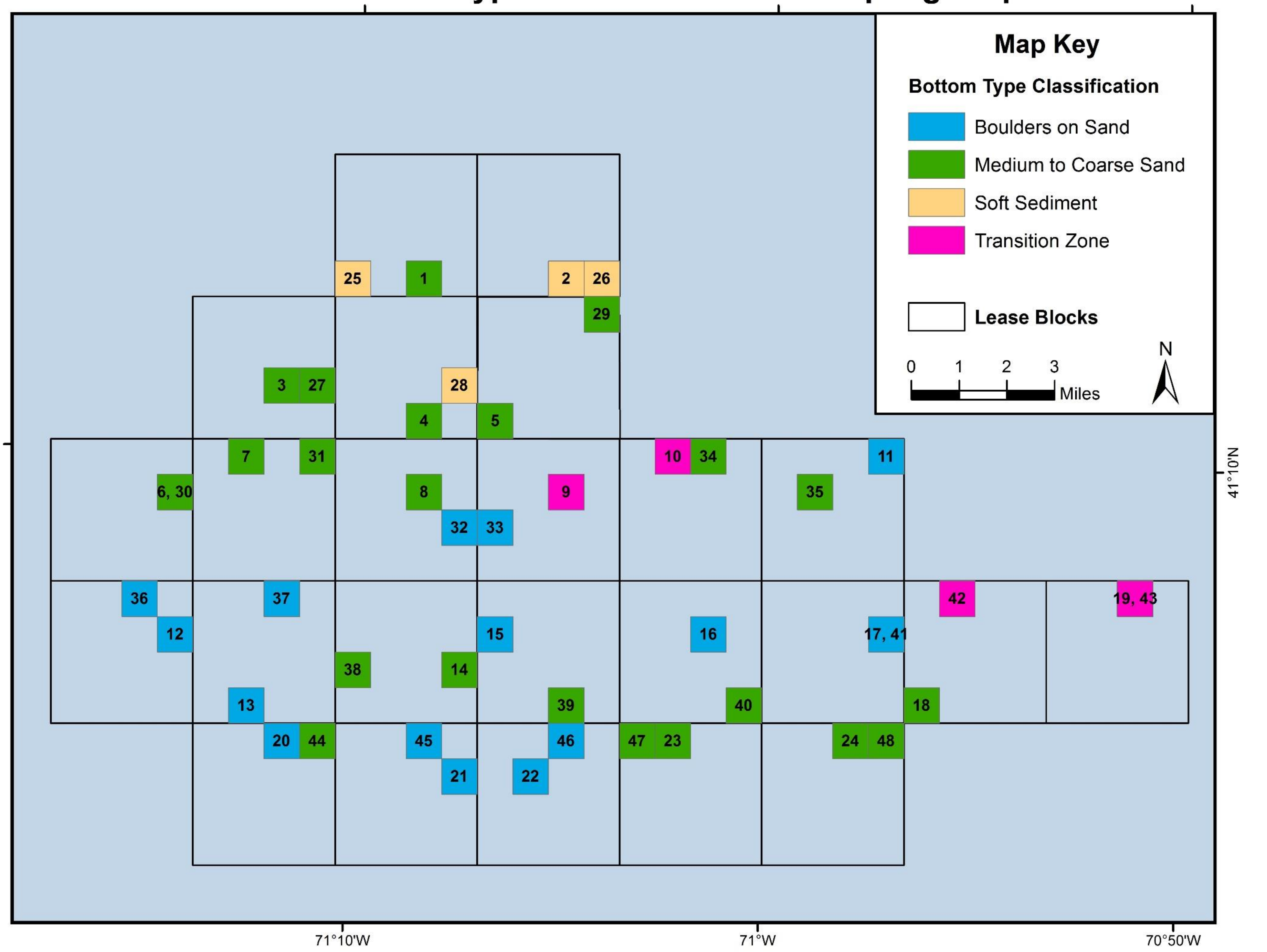


Habitat mapping conducted by John King's lab:

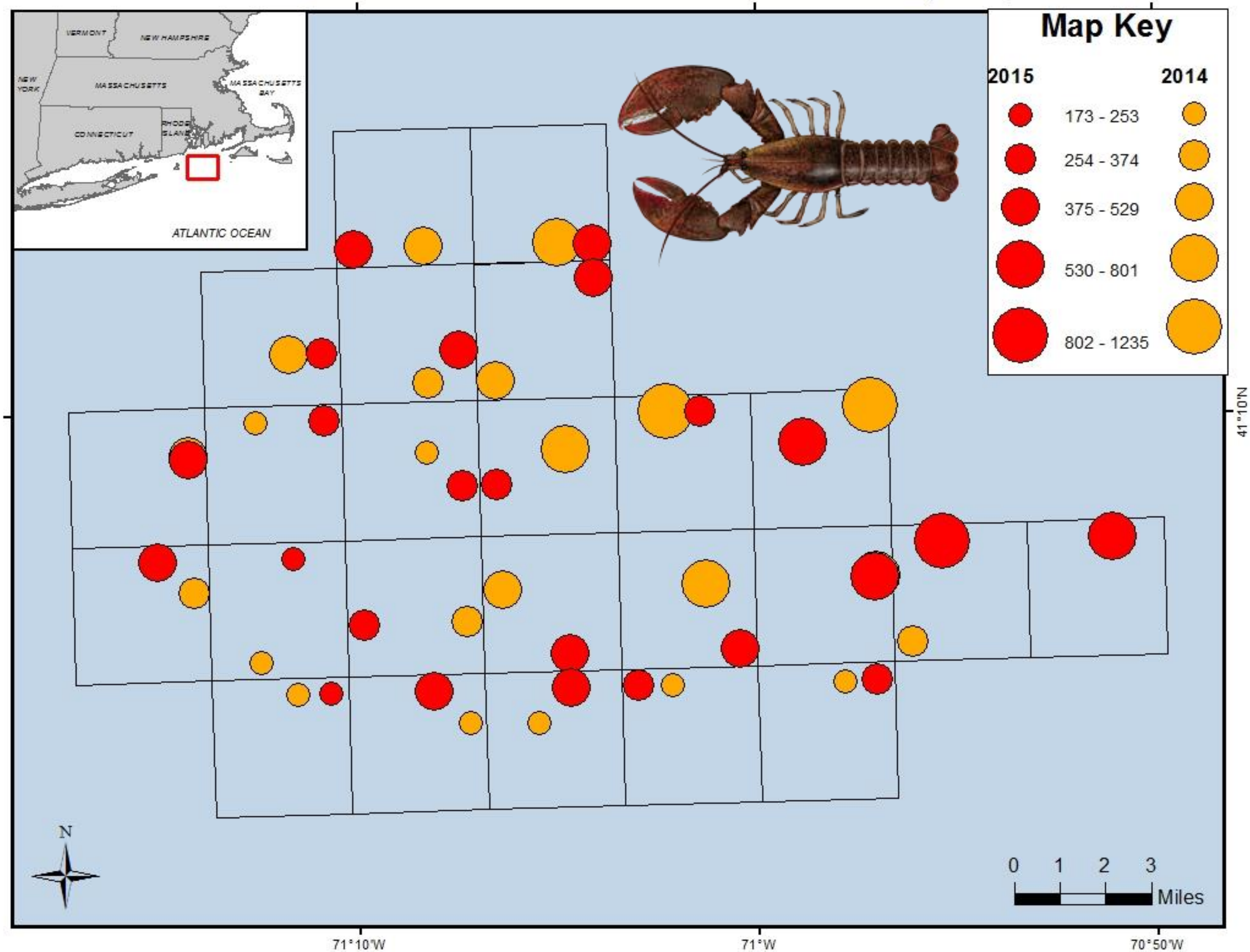
- Interferometric side-scan sonar
- Bottom photography
- Sediment grab samples



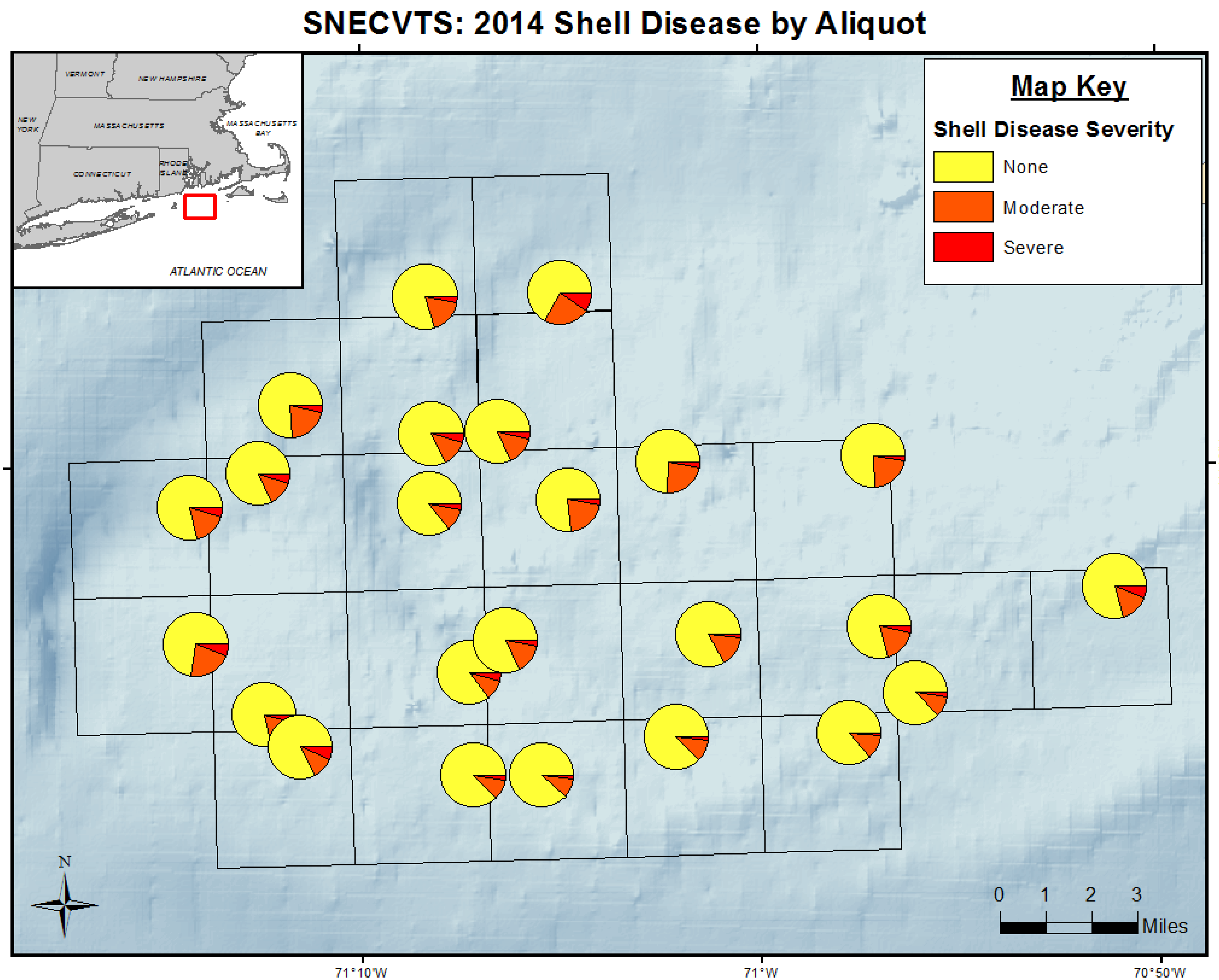
SNECVTS: Bottom Type Classification of Sampling Aliquots



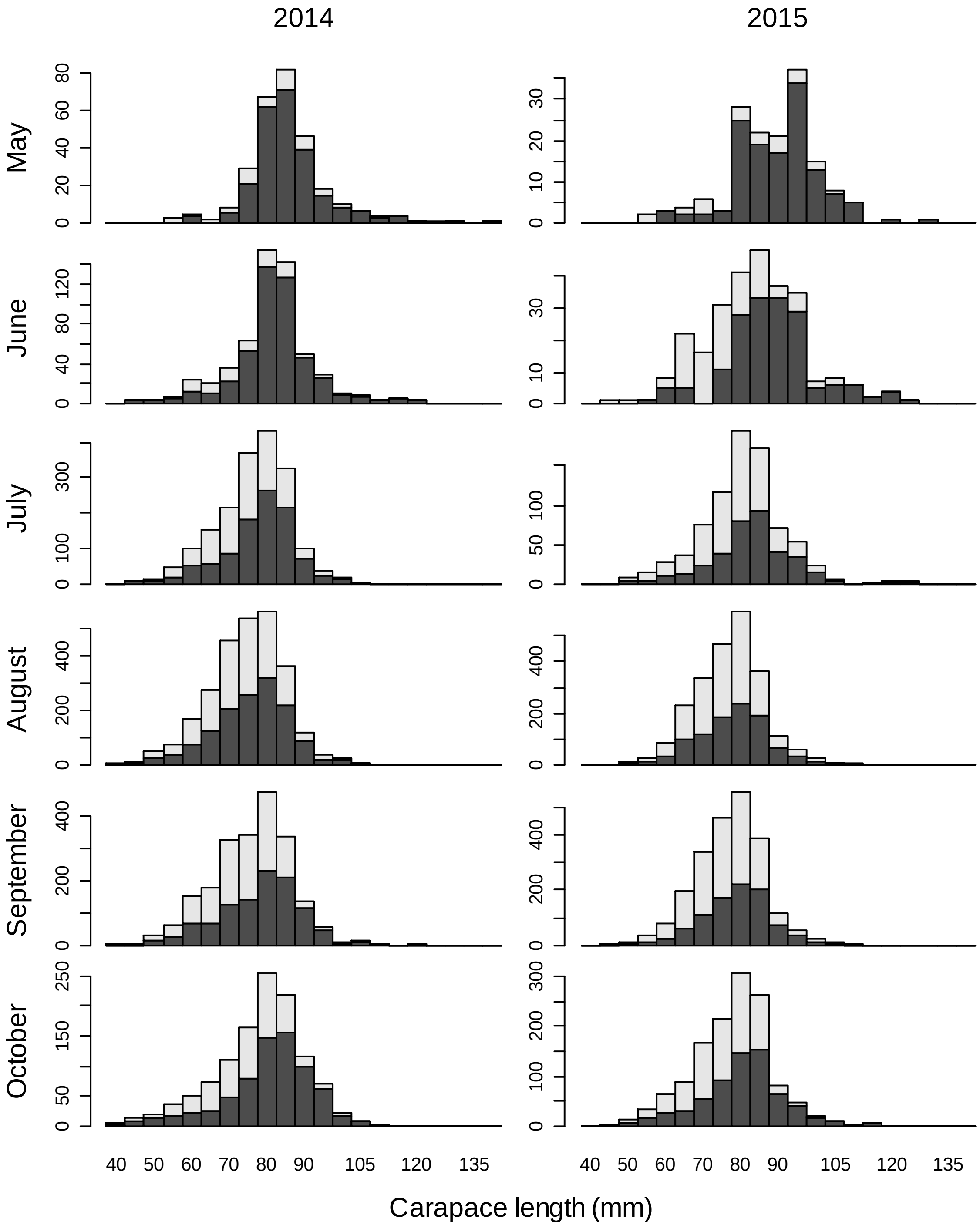
SNECVTS: 2014 and 2015 Lobster Abundance by Aliquot



Incidence of Shell Disease

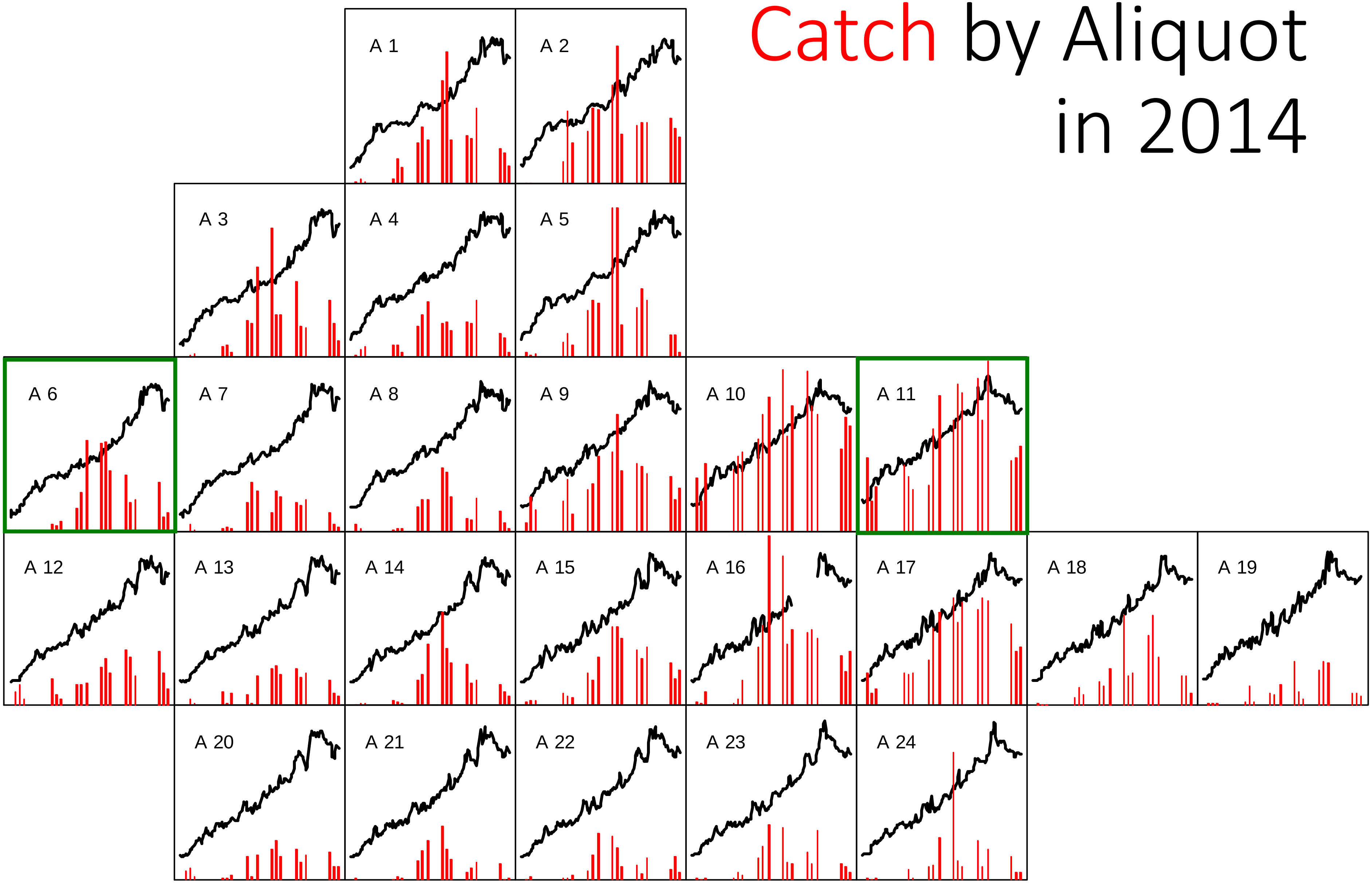


Length-frequency distribution of lobsters in ventless traps

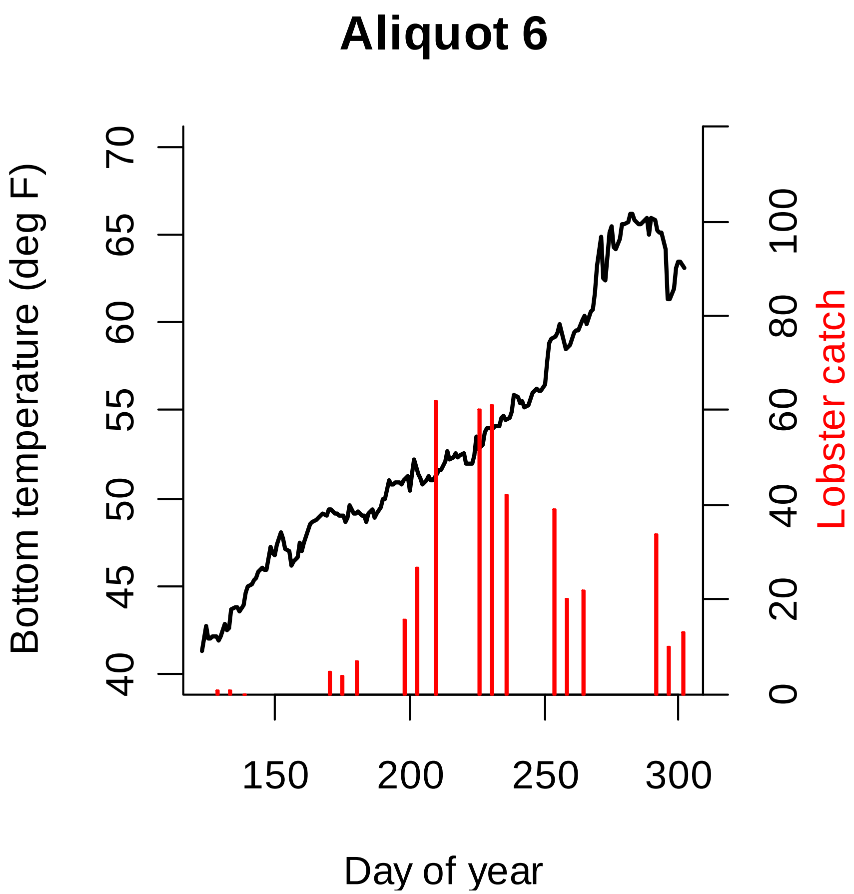


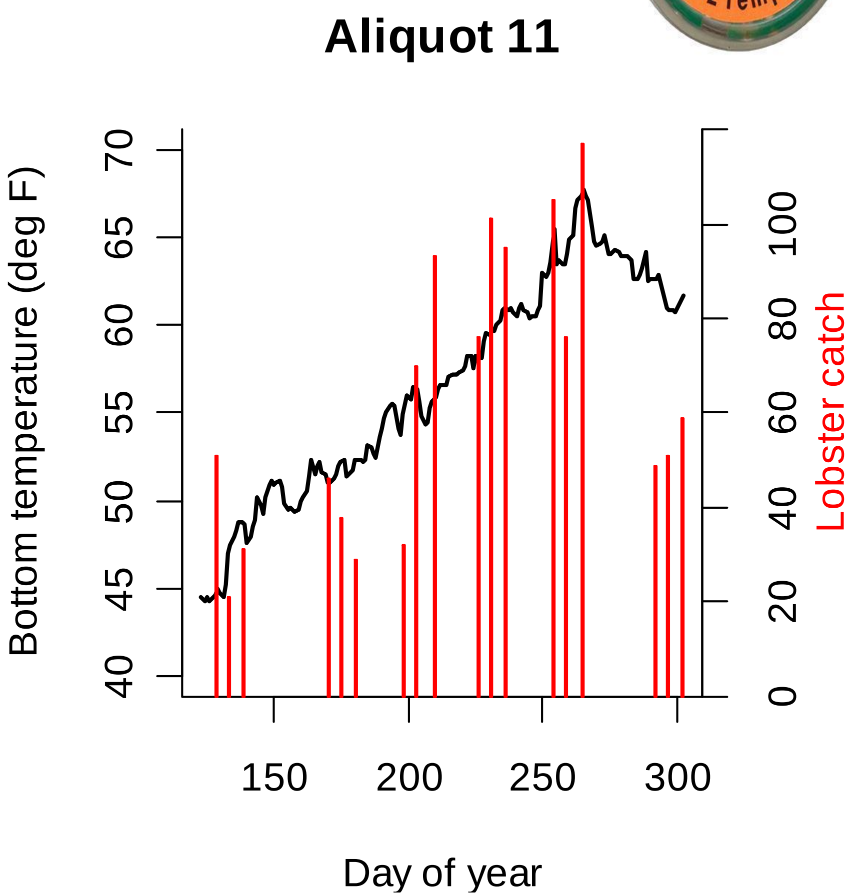
female
male

Bottom Temperature and Lobster Catch by Aliquot in 2014

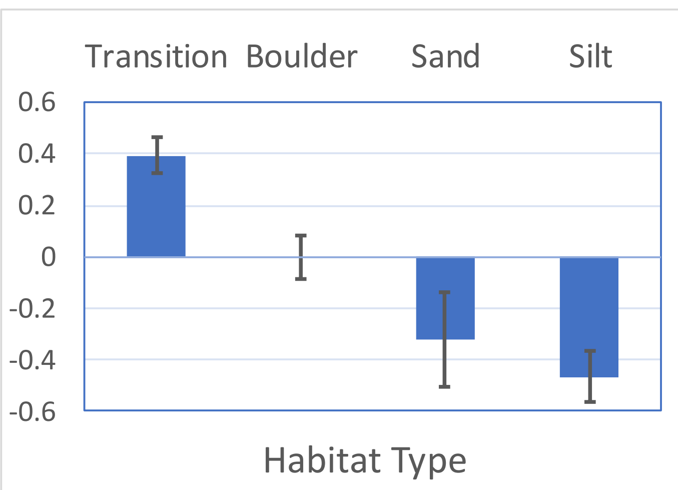


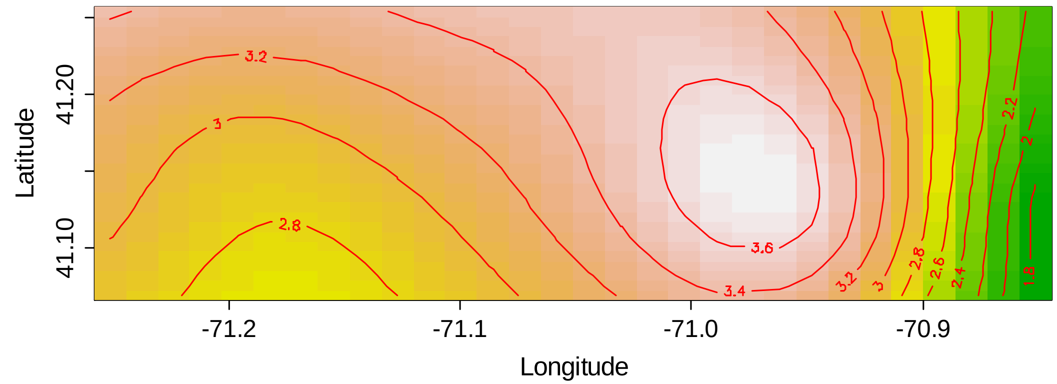
2014 Lobster Statistics

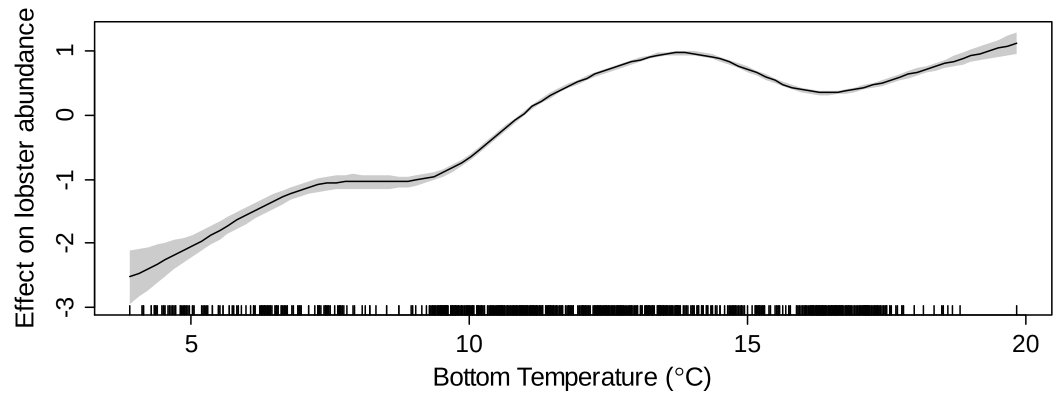


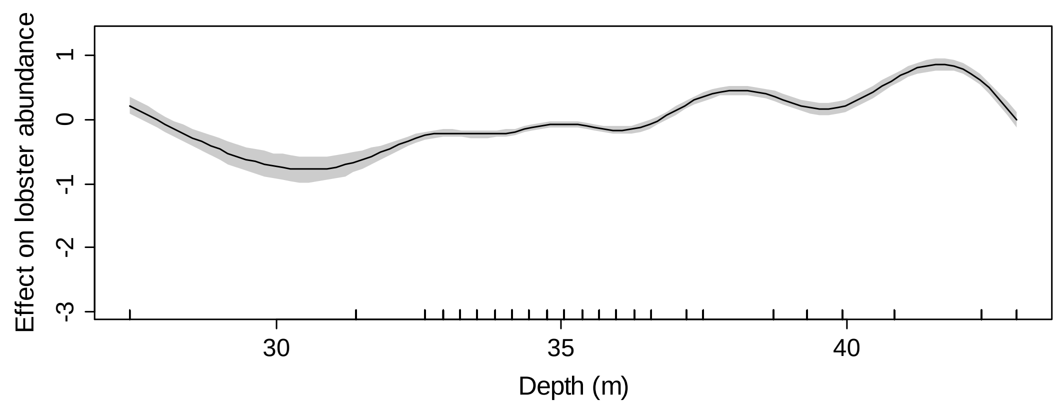


Generalized Additive Model of Lobster Abundance





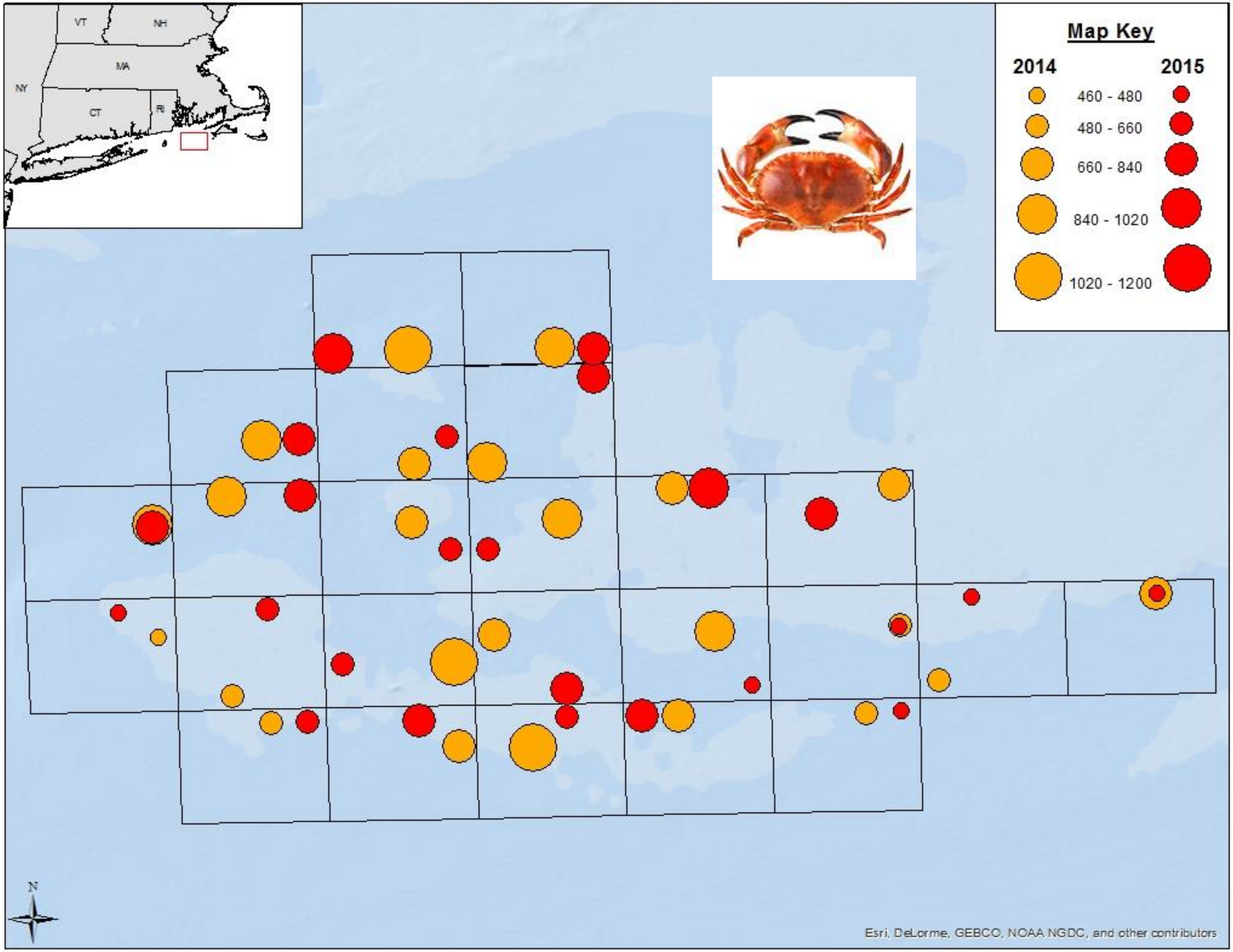


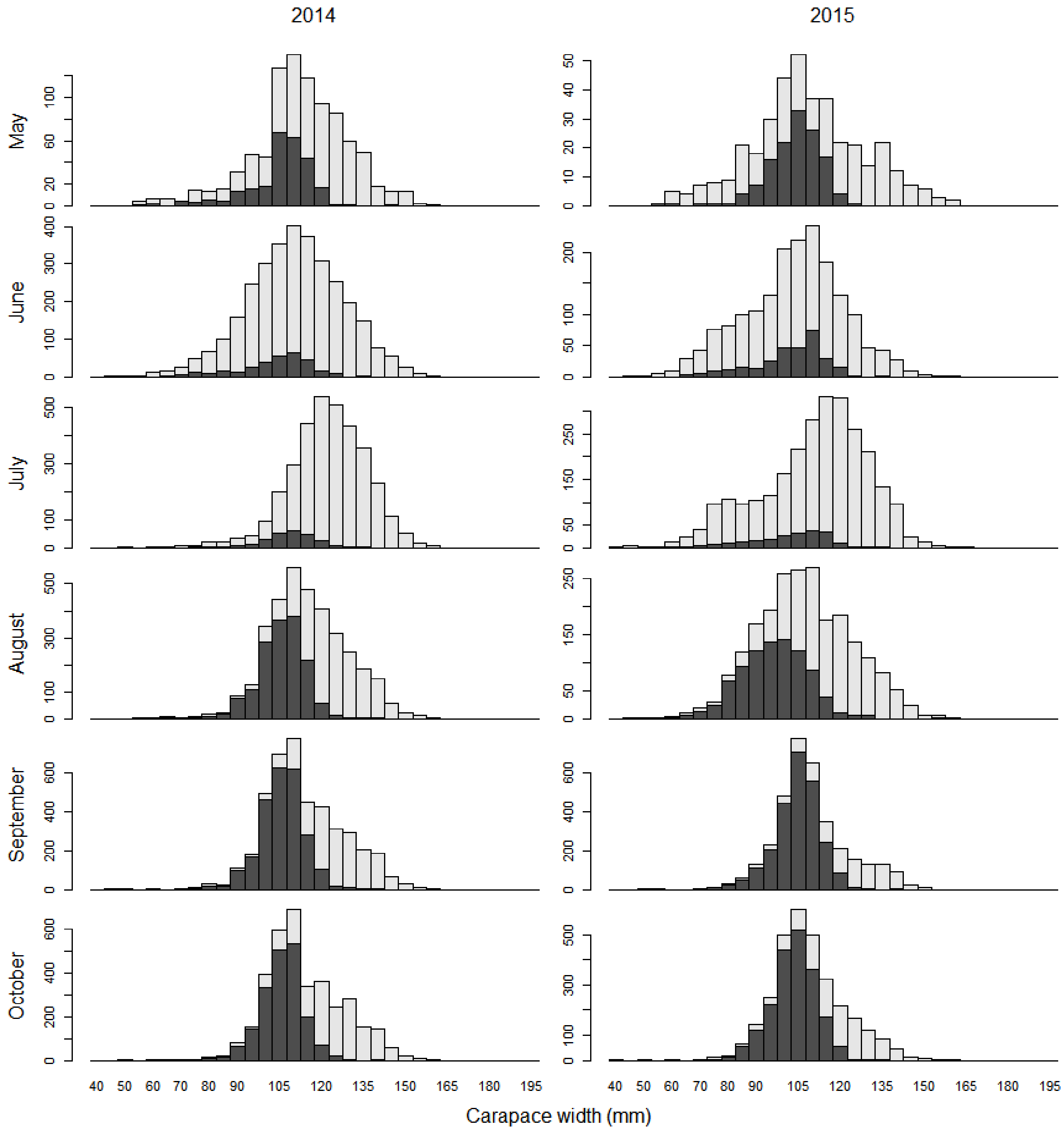


Top 10 Bycatch Species

		Total Abundance	
Common Name	Scientific Name	2014	2015
Jonah crab	*Cancer borealis*	31,295	22,208
Rock crab	*Cancer irroratus*	15,405	18,765
Red hake	*Urophycis chuss*	3,133	1,795
Black seabass	*Centropristis striata*	1,914	1,109
Cunner	*Tautogolabrus adspersus*	779	359
Ocean pout	*Macrozoarces americanus*	288	376
Conger eel	*Conger oceanicus*	294	289
Scup	*Stenotomus chrysops*	264	115
Sea raven	*Hemitripterus americanus*	48	165
Longhorn sculpin	*Myoxocephalus octodecemspinosus*	60	63

SNECVTS: 2014 and 2015 Total Jonah Crab Abundance by Aliquot





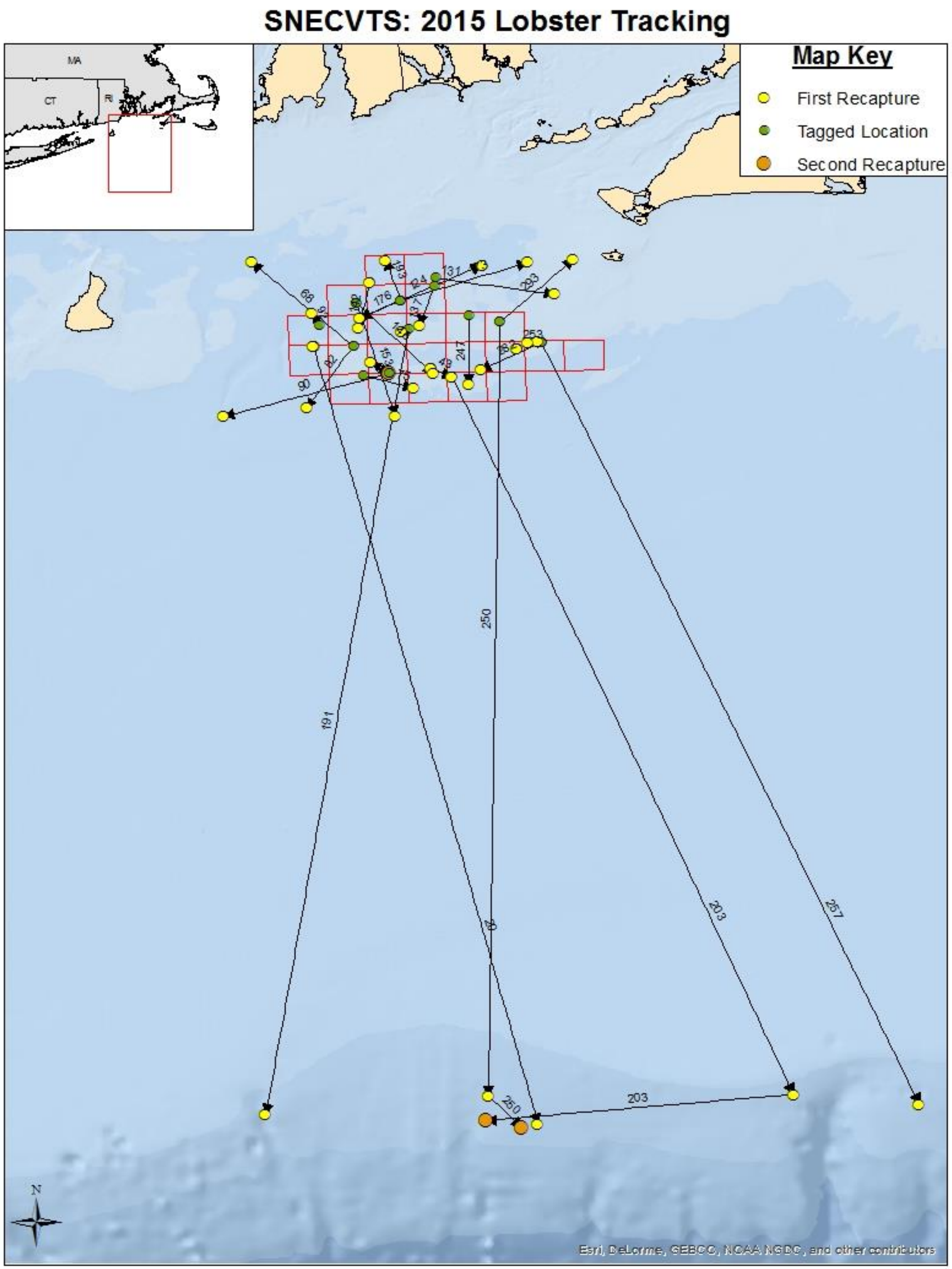
Length-frequency distribution of Jonah crabs

female

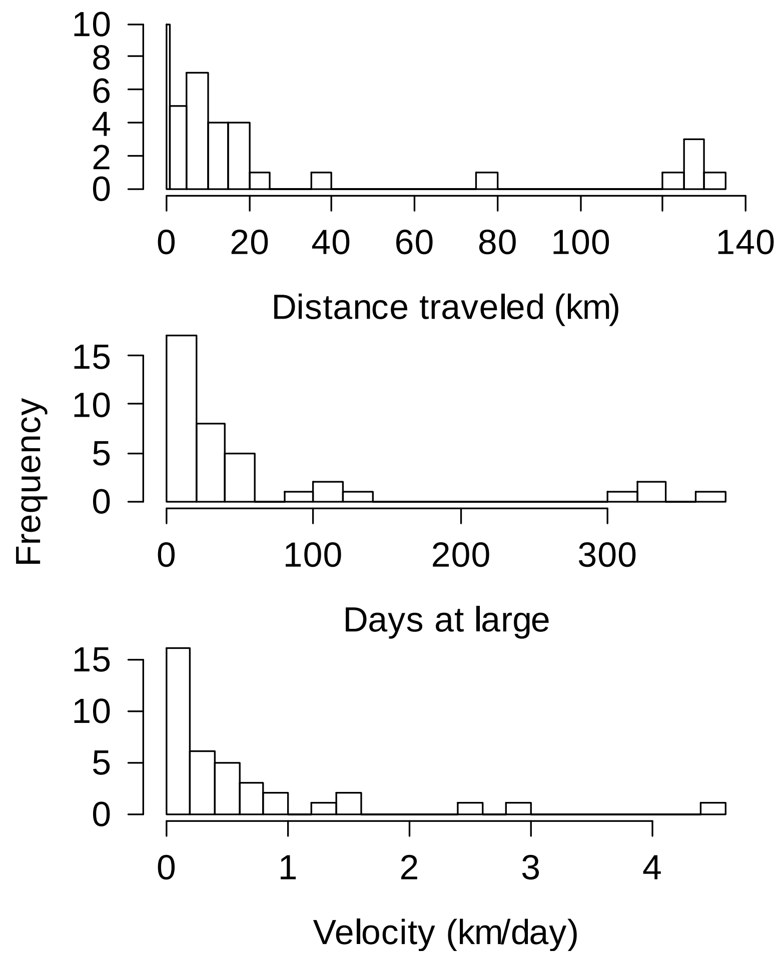
male

Pilot Tagging Study

- 300 lobsters individually tagged with numbered cable ties on 14 August 2015
- 13% recapture rate from August 2015 to August 2016
- 39 recoveries from SNECVTS sampling and other commercial lobstermen
- 3 double recaptures



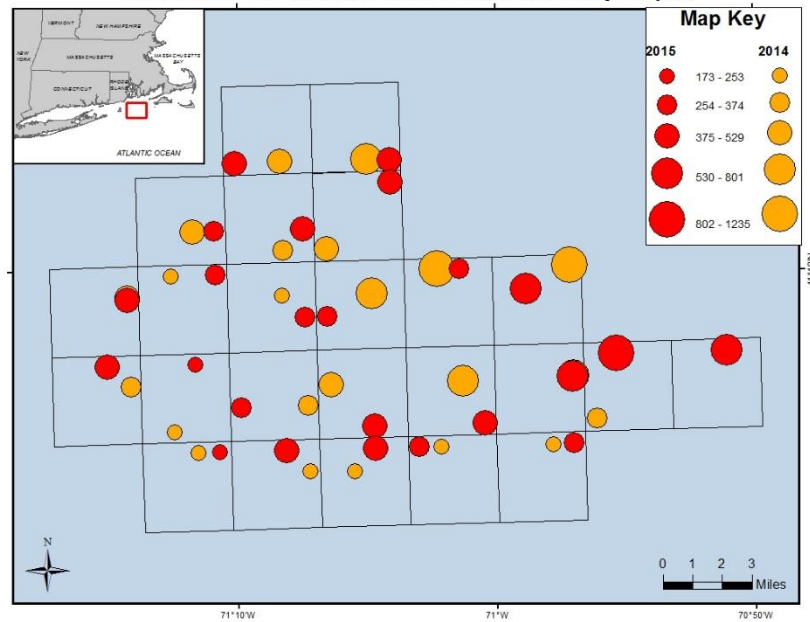
- Most recaptures were in the vicinity of the lease area;
- Five lobsters travelled over 120 km to the edge of the continental shelf.



Conclusions and Next Steps

- **A healthy lobster population exists in this area**
  - Broad distribution of lengths, including juvenile lobsters
  - Incidence of shell disease is lower compared with inshore areas
  - Refuge from warm summer temperatures that occur inshore
- **Lobster abundance was consistently higher in the eastern lease blocks**
- **Jonah & Rock Crabs are abundant in this area**
- **Continuous records of bottom-water temperature can be collected by the lobster fleet**

SNECVTS: 2014 and 2015 Lobster Abundance by Aliquot



- This monitoring survey established pre-construction conditions.
- Continuation of monitoring during construction and post-construction will assess possible impacts.
- Expansion of successful pilot tagging program.

SNECVTS Phase II -- 2018

- Continuation of sampling protocol from 2014-2015;
- Extension of sampling to include November, with reduction of sampling trips from three to two each month;
- Sampling stations will include two in the South Fork lease area;
- Monthly tagging of 300 lobsters with Spherion tags;
- Tagging of 100 lobsters with acoustic recording tags in August 2018.

Acknowledgements

Captains:

- Lanny Dellinger, Newport
- Brian Thibeault, Point Judith
- Greg Mataronas, Sakonnet Pt.

Project personnel:

- Brian Hooker, BOEM
- Anna Malek, CFRF
- John King, URI
- Corrine Truesdale, URI
- Monique LaFrance, URI
- David Taylor, RWU
- Saroj Mohanty, URI
- Alyssa Gavlik, URI
- Chip Heil, URI
- Dan Denaro, URI
- Matt Griffin, RWU
- Oliver Bender, URI

Final report: https://www.boem.gov/Spatial-and-Temporal-Distributions/


Thank you!
Questions?
FIRE ALARM