

NEAMAP

Mid-Atlantic / Southern New England

*A Collaborative, Fishery-Independent Trawl Survey
Operating in the Coastal Ocean*

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NEAMAP Program History

- Developed by ASMFC in the late 1990s as an “umbrella program”; compliment to SEAMAP in southeast
- Realized in 1998 with signing of MOU by states from ME - NC, NEFSC, & USFWS
- PURPOSE
 1. Coordinate among existing surveys
 2. Develop new surveys where the need exists
 3. Facilitate accessibility & use of “NEAMAP” data

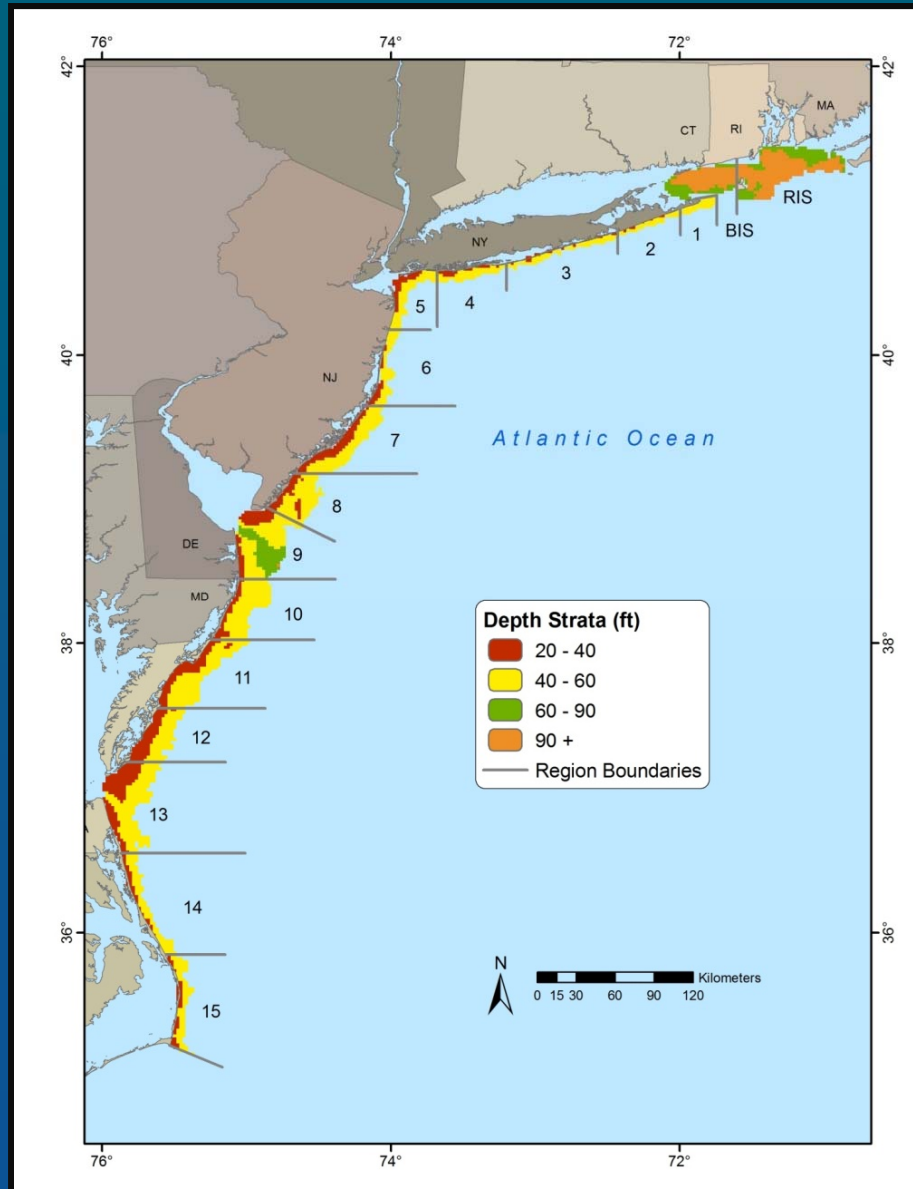
NEAMAP MA/SNE History

- Conceived & developed by ASMFC to SUPPLEMENT NEFSC sampling w *Albatross* in the inshore M-A/SNE
- “ESSENTIAL” once NEFSC acquired *Bigelow* & could no longer sample shallow coastal habitats
- VIMS has executed the survey since operations began in fall 2007 (8.5-year time-series)
- All aspects of design & protocols passed a full peer review in 2008



Survey Design

NEAMAP Survey Area



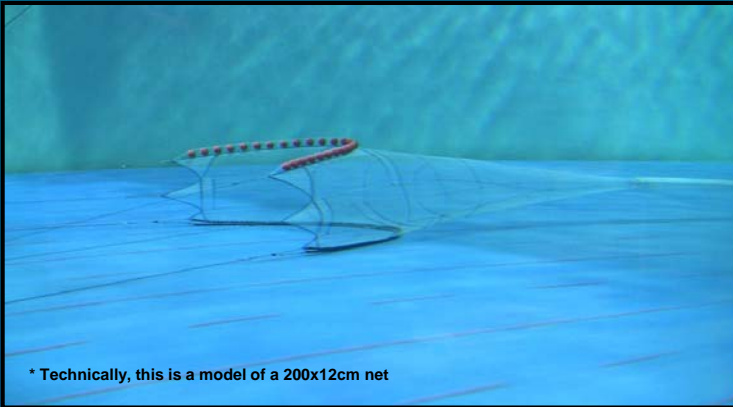
NEAMAP Sampling

- **Twice per year**
 - **Spring : ~ April 20 to end of May (S to N)**
 - **Fall : ~ Sept 20 to end of Oct. (N to S)**
- **Sampling Sites**
 - **150 per trip (1/30nm²)**
 - **Stratified random design**
 - **1.5nm x 1.5nm boxes**
- **Towing Protocols**
 - **20 minute tows**
 - **3.0 knots SOG**
 - **Stay in the box/maintain gear configuration**



NEAMAP Survey Trawl

400 x 12cm, 3-bridle, 4-seam

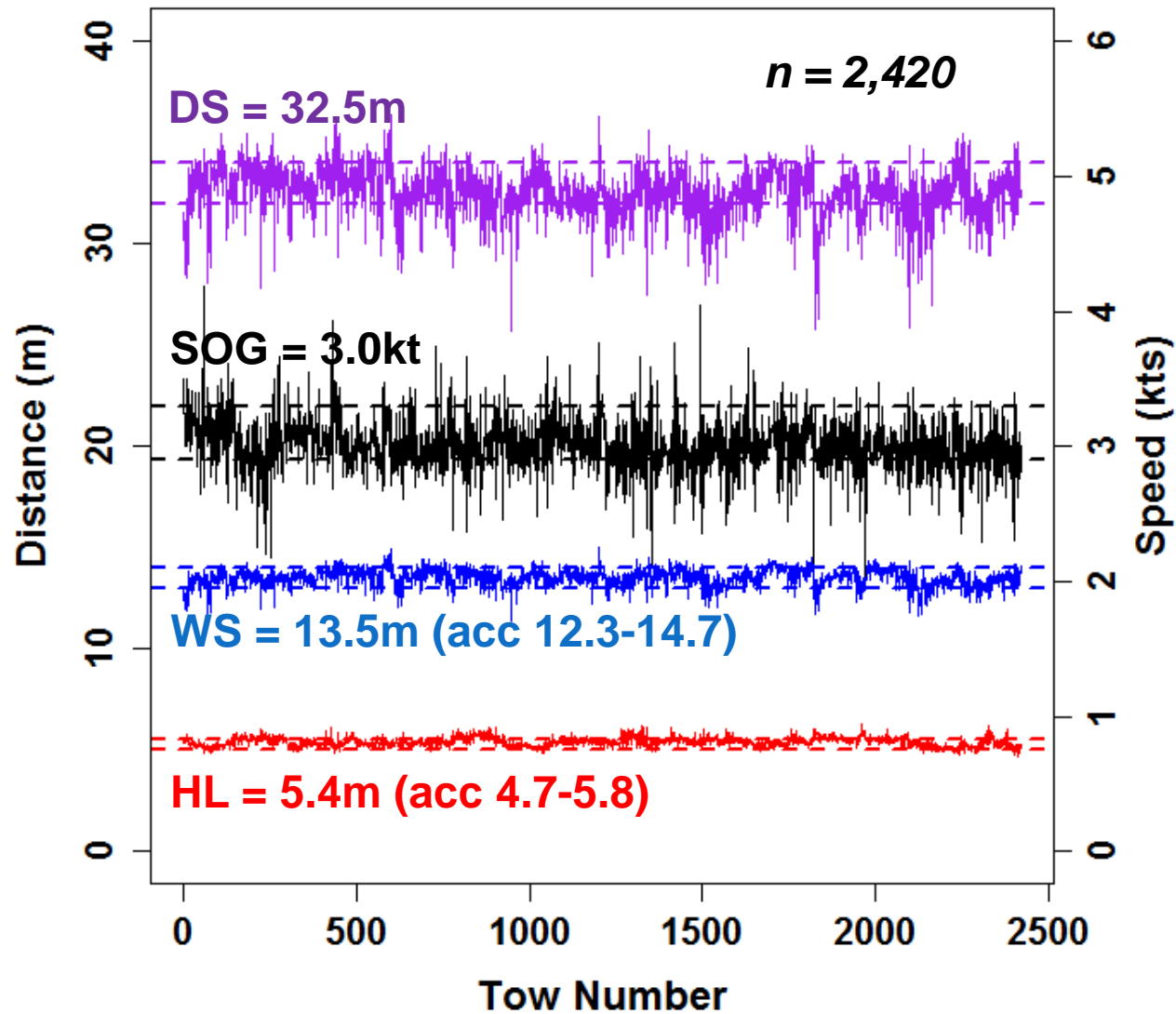


NEAMAP Survey Trawl

Versus NEFSC Survey Trawl...

	NEAMAP	NEFSC
SWEEP	3" Cookie	16" Rockhopper
DOORS	Thyboron, IV 66"	PolyIce
BODY	<u>No</u> 3 rd Top & Bottom	3 rd Top & Bottom

NEAMAP Gear Performance



VIMS

NEAMAP Survey Vessel

F/V Darana R



Data Collection

NEAMAP Station Data

Information Recorded During the Tow

- Site Number
- Region & Depth Stratum
- Date & Time
- Latitude & Longitude (every 2 sec)
- Vessel Speed & Direction (every 2 sec)
- Current Speed & Direction
- Warp Length
- Net Geometry (HL, WS, DS, BC)
- Water Depth



NEAMAP Atmospheric & Hydrographic Data

Recorded During the Haulback

Atmospheric

- Air Temperature
- Wind Speed & Dir
- Barometric Pressure
- Sea State & Type
- PAR (Sunshine)

Hydrographic (per 1m)

- Depth
- Water Temperature
- Salinity
- Dissolved Oxygen Conc.
- PAR (Sunshine penetration)

NEAMAP Catch Processing

Sort catch by species and size-class (ALL SPECIES)

- For All Fishes & Most Inverts
 - Record Aggregate Weight & Individual Lengths
 - Take additional information for “Priority Fishes”
 - Length
 - Sex
 - Diet
 - Weight
 - Maturity
 - Age



NEAMAP Priority Fishes

- Alewife
- American shad
- Atlantic cod
- Atlantic croaker
- Atlantic herring
- Atlantic mackerel
- Atlantic menhaden
- Black drum
- Black sea bass
- Blueback herring
- Bluefish
- Butterfish
- Haddock
- Monkfish
- Pollock
- Red drum
- Scup
- Silver hake
- Skates (all spp)
- Smooth dogfish
- Spanish mackerel
- Speckled trout
- Spiny dogfish
- Spot
- Striped bass
- Summer flounder
- Tautog
- Weakfish
- Windowpane fl.
- Winter fl.
- Yellowtail fl.

NEAMAP Catch Processing

Sort catch by species and size-class (ALL SPECIES)

- For All Fishes and Most Inverts
 - Record Aggregate Weight & Individual Lengths
 - Take additional information for “Priority Fishes”
 - Length
 - Sex
 - Diet
 - Weight
 - Maturity
 - Age
 - For “Priority Invertebrates”
 - Additional data collected varies by species



NEAMAP Priority Inverts

Individual length and weight, plus...

Long-finned squid

- Sex (2013)
- Maturity (2013)



Horseshoe crab

- Sex
- Maturity (2012)

American lobster

- Sex
- Maturity
- Egg stage (2012)
- Shell disease (2010)

Blue crab

- Sex
- Maturity
- Egg stage

Outreach

Dockside & At-Sea Demos

- Typically in 5 ports [New Bedford, Point Judith, Montauk, Cape May, Hampton]
- Approximately 260 guests
- Attendees have included...
 - **Senator Jack Reed (RI) & Staff**
 - **Senator Sheldon Whitehouse (RI) & Staff**
 - **Staff of Senator Charles Schumer (NY)**
 - **Staff of Rep. Barney Frank (MA)**
 - **Staff of Rep. Timothy Bishop (NY)**
 - CFRF Board of Directors
 - RI State Senators
 - RI Fishermen's Alliance Members
 - Commercial & Recreational Fishermen
 - RI DEM Staff
 - MAFMC Staff
 - NY DEC Staff
 - Students from URI, J&W, SMAST, VIMS
 - VIMS Council & Public Relations Center



Data Use

Data Use – NMFS Assessments

NEFMC

MAFMC

Species	Abundance	Length	Sex	Maturity	Age	Diet
Atlantic Sea Scallop	E	E				
Skates (Clns., Little, Winter)	E	E				
Winter Flounder	E	E	E	E	E	
Windowpane	P	P	P	P		
Spiny Dogfish	E	E	E	E		E
Atlantic Mackerel	P	P	P	P	P	
Bluefish	I	I	I	I	I	
Butterfish	I	I				
Long-Finned Squid	I	E				
Black Sea Bass	P	P	P	P	P	
Scup	I	I	I	I	I	
Summer Flounder	I	I	I	I	I	
Atlantic Sturgeon	ESA	ESA				

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MAFMC

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Winter Flounder	E	E	E	E	E	
Windowpane	P	P	P	P		
Spiny Dogfish	E	E	E	E		E
Atlantic Mackerel	P	P	P	P	P	
Bluefish	I	I	I	I	I	
Butterfish	I	I				
Long-Finned Squid	I	E				
Black Sea Bass	P	P	P	P	P	
Scup	NY	NY	I	I	I	
Summer Flounder	NY/VA	NY/VA	I	I	I	
Atlantic Sturgeon	ESA	ESA				

Data Use – ASMFC Assessments

Species	Abundance	Length	Sex	Maturity	Age	Diet
Alewife	I	I	I	I		
Blueback Herring	I	I	I	I		
American Lobster	I	I				
Atlantic Croaker	P	P	P	P	P	
Atlantic Menhaden	I	I	I	I		I
Black Drum	E	E				
Smooth Dogfish	E	E	E	E		
Spot	P	P	P	P	P	
Weakfish	P	P	P	P	P	

***** NEAMAP SNE/MA has supported an additional 40+ investigations to date**

Trawl Video