

NEAMAP, ChesMMAP, VIMS Juvenile Fishes & Longline Surveys

Survey Overviews
Trawl/Longline Survey Workshop

AFSC – March 2011

NEAMAP: Framework

- Conceived in ~1998 - ASMFC
- Dual Goals
 - Coordinate existing survey work
 - Fill sampling gaps / under sampled areas

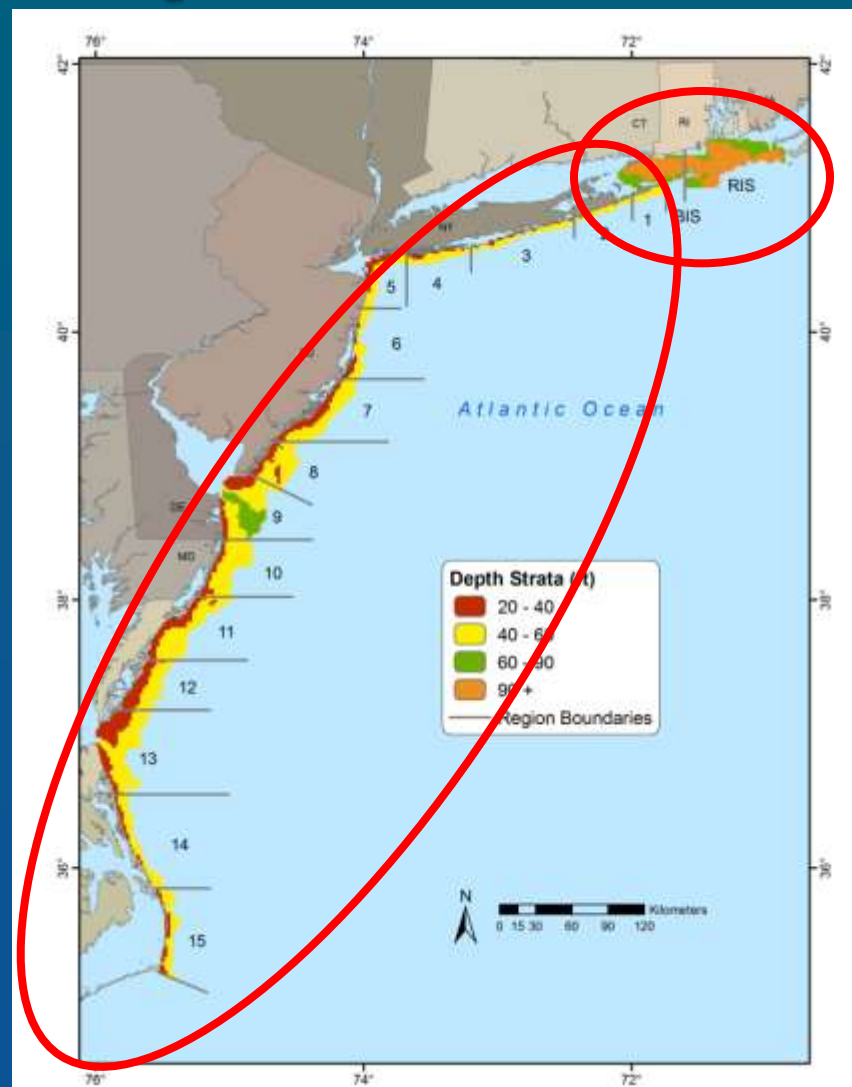
NEAMAP: Timeline

- 2006
 - Fall Pilot Survey - Success!
- 2007
 - Funding cobbled together for full-scale survey (Fall)
- 2008 - 2011
 - Twice-yearly sampling
 - Funded Year-to-Year by MAFMC RSA

NEAMAP: Survey Basics

Where?

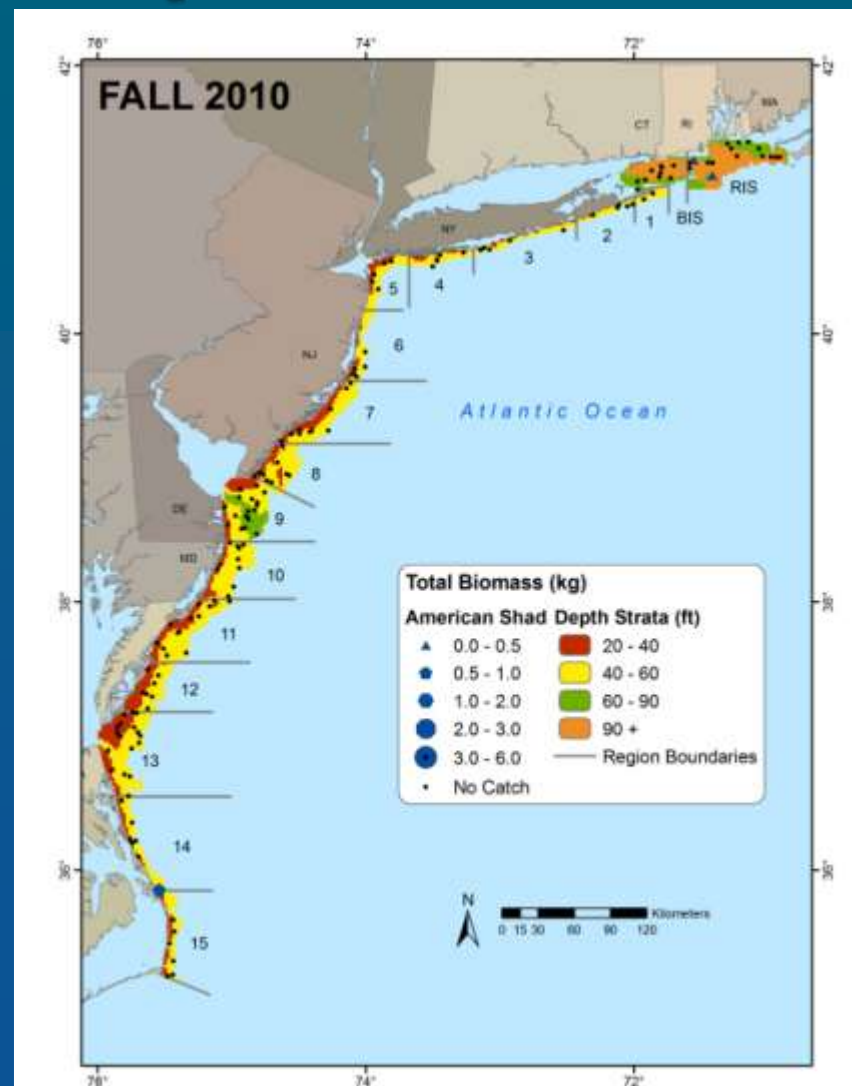
Why Here?



NEAMAP: Survey Basics

When?

How Many?



NEAMAP: Survey Basics

How?

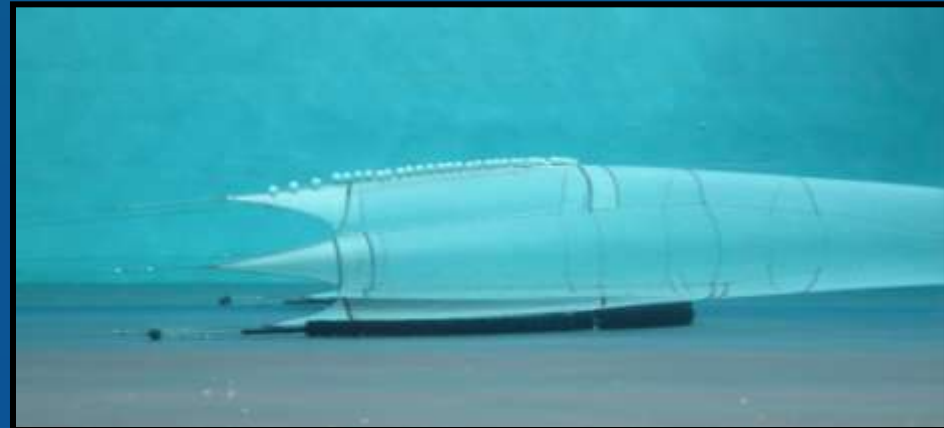
- *F/V Darana R*
- 95' Stern Trawler
- Capt. + 2 Crew
- 5-6 Science Crew



NEAMAP: Survey Basics

How?

- 400 x 12cm
- 4-seam, 3 bridle (120')
- 7.5cm cookie sweep
- 6cm mesh rear
- 1" knotless liner
- 13.5m x 5.3m
fishing dimensions



NEAMAP: Survey Basics

How?

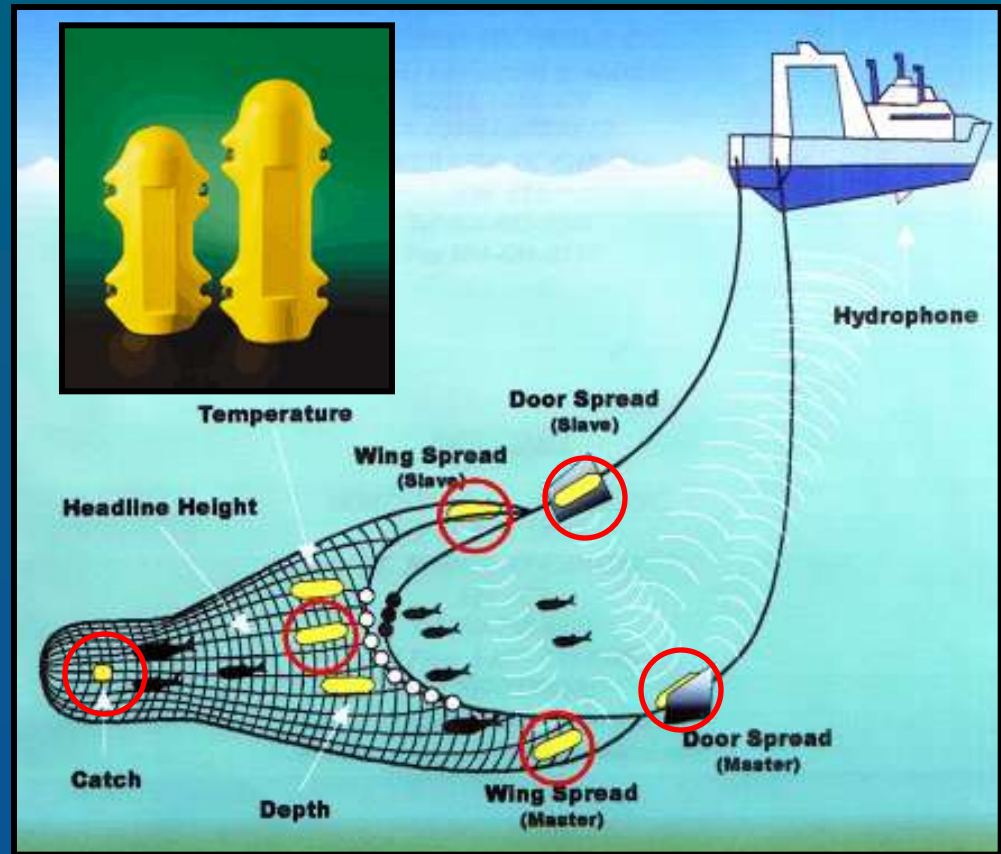
- 3 knots
- 20 minutes



NEAMAP: Survey Basics

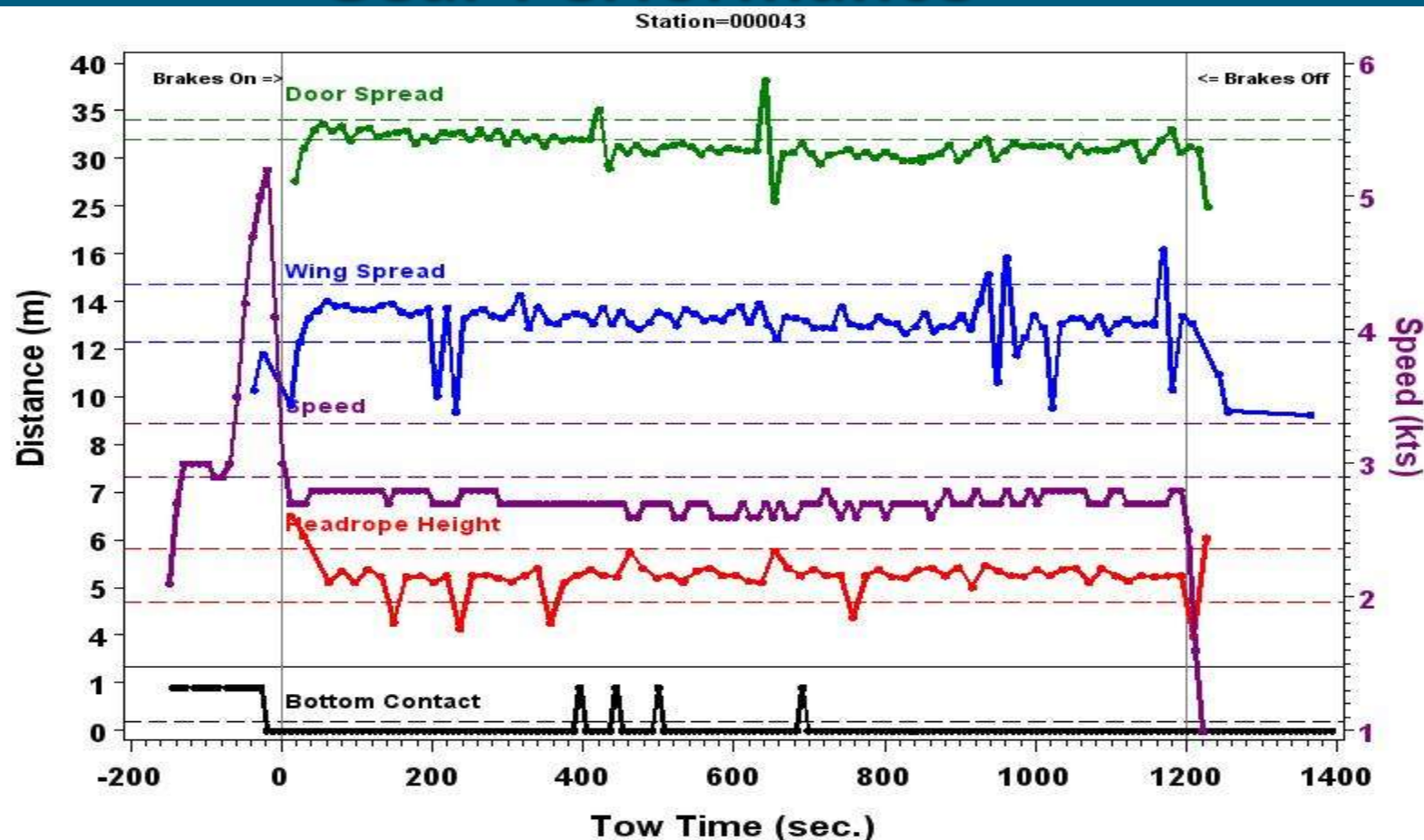
How?

- Sensors
 - Door
 - Wing
 - Height
 - Catch
 - Bottom Contact



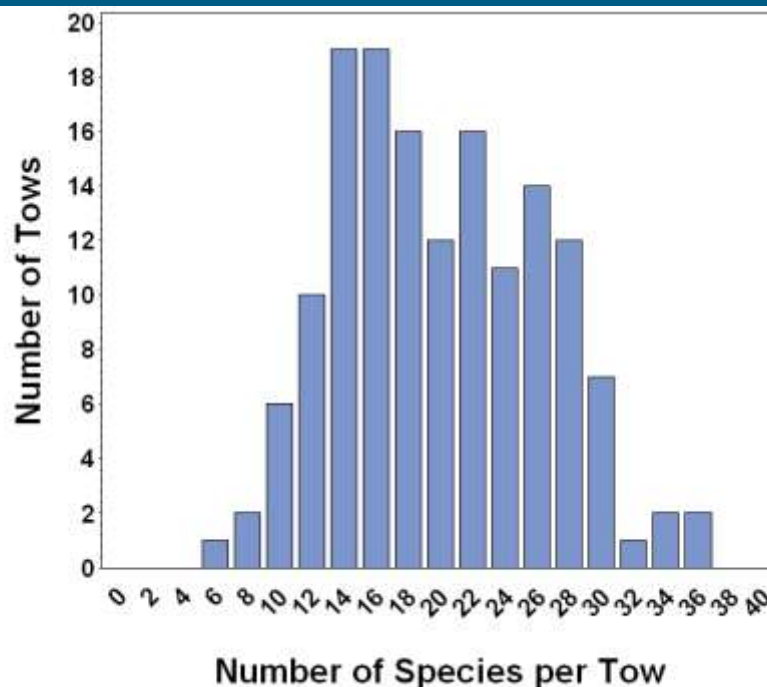
NEAMAP: Survey Basics

Gear Performance



NEAMAP: Catch Rates

Cruise	Biomass (kg)	Number
Fall 2007	332 (7 – 6,400)	7,350 (75 – 150,000)
Spring 2008	214 (6 – 2,300)	2,000 (58 – 41,000)
Fall 2008	287 (9 – 3,000)	4,900 (52 – 62,000)
Spring 2009	275 (31 – 4,000)	1,800 (114 – 27,500)



NEAMAP: Species Workup

1. Sort by Species and Modal Size Groups

2. Unmanaged Species:

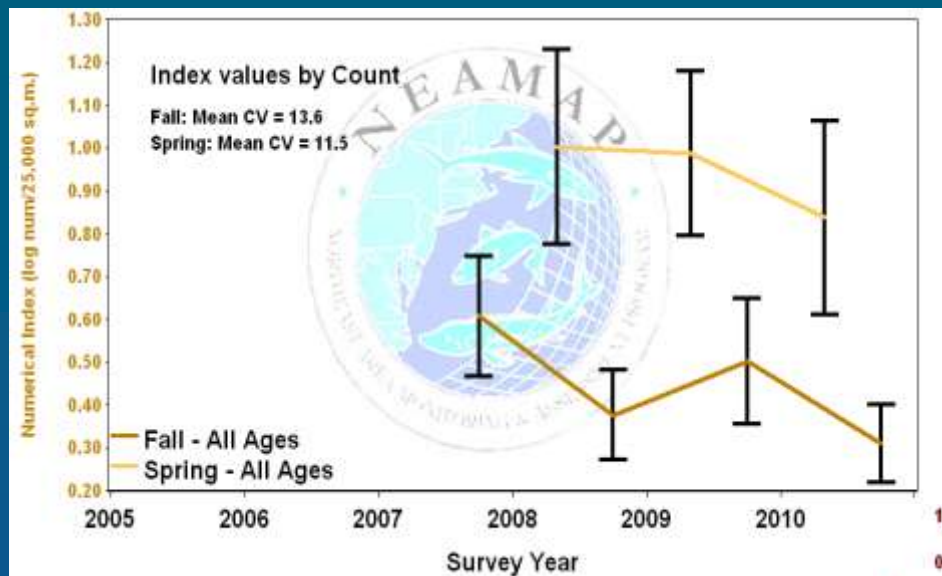
- Aggregate Biomass
- Individual Lengths
- Subsampling as necessary

3. Managed Species: (~32)

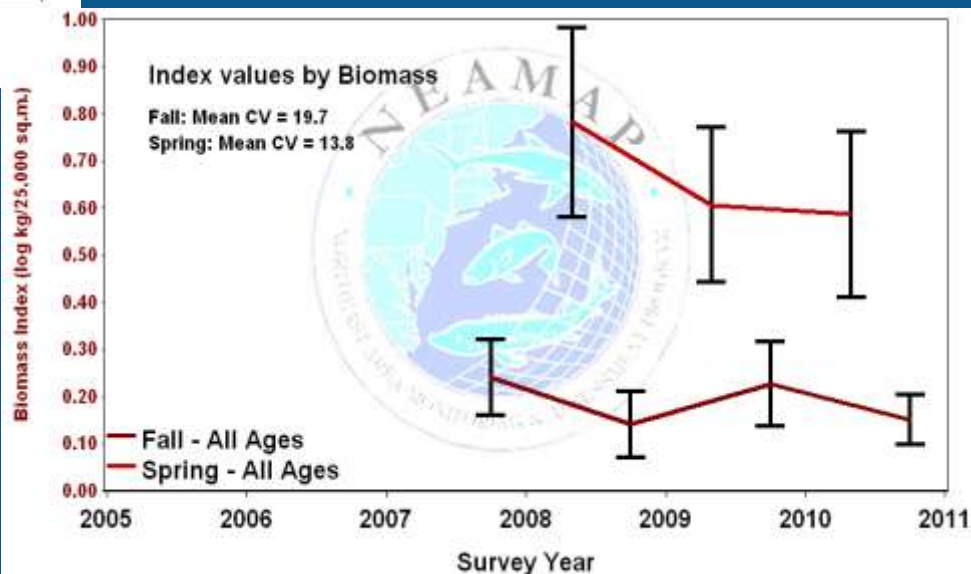
- 5 Specimens per Size Group
- Length-Weight-Sex-Maturity-Otolith-Stomach



NEAMAP: Data Products

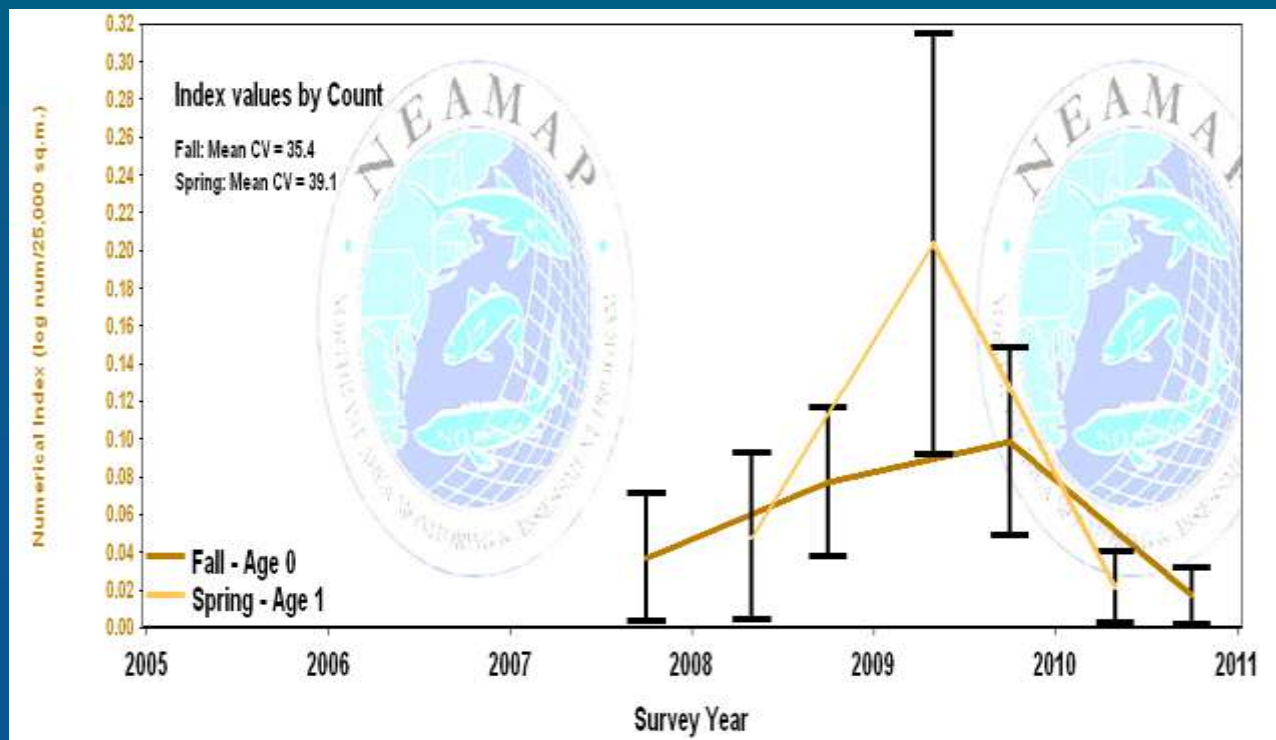


Abundance by Count and Biomass



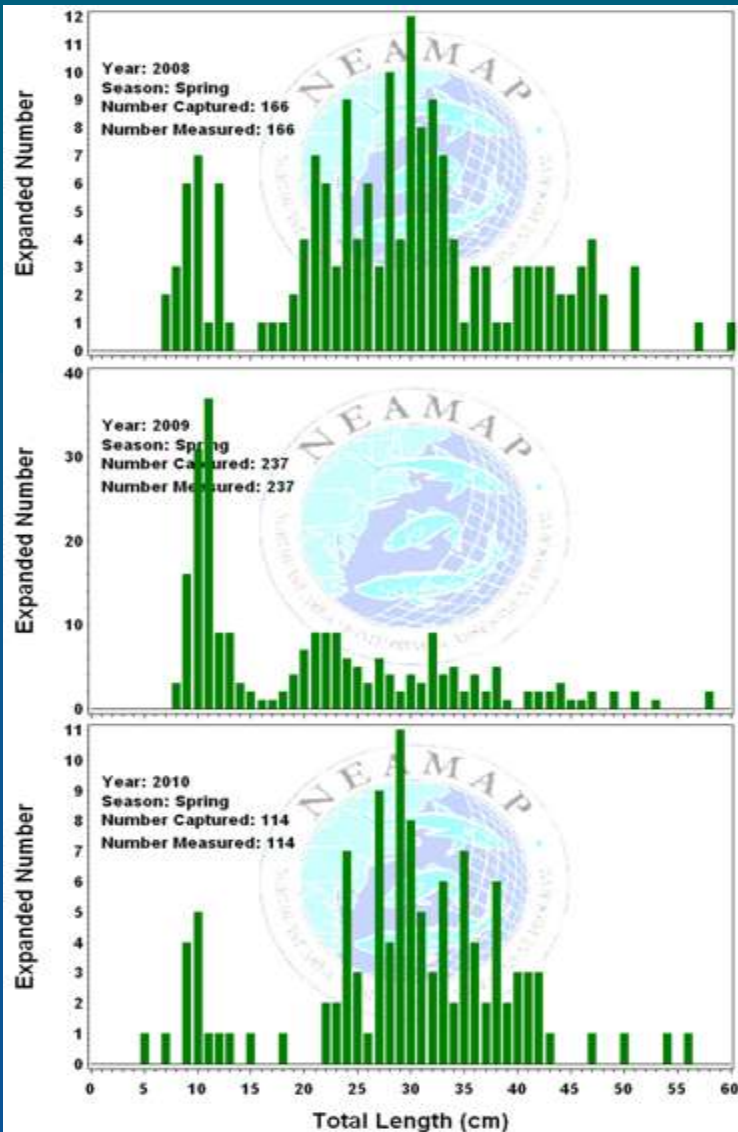
NEAMAP: Data Products

YOY Abundance by Count (and Biomass)

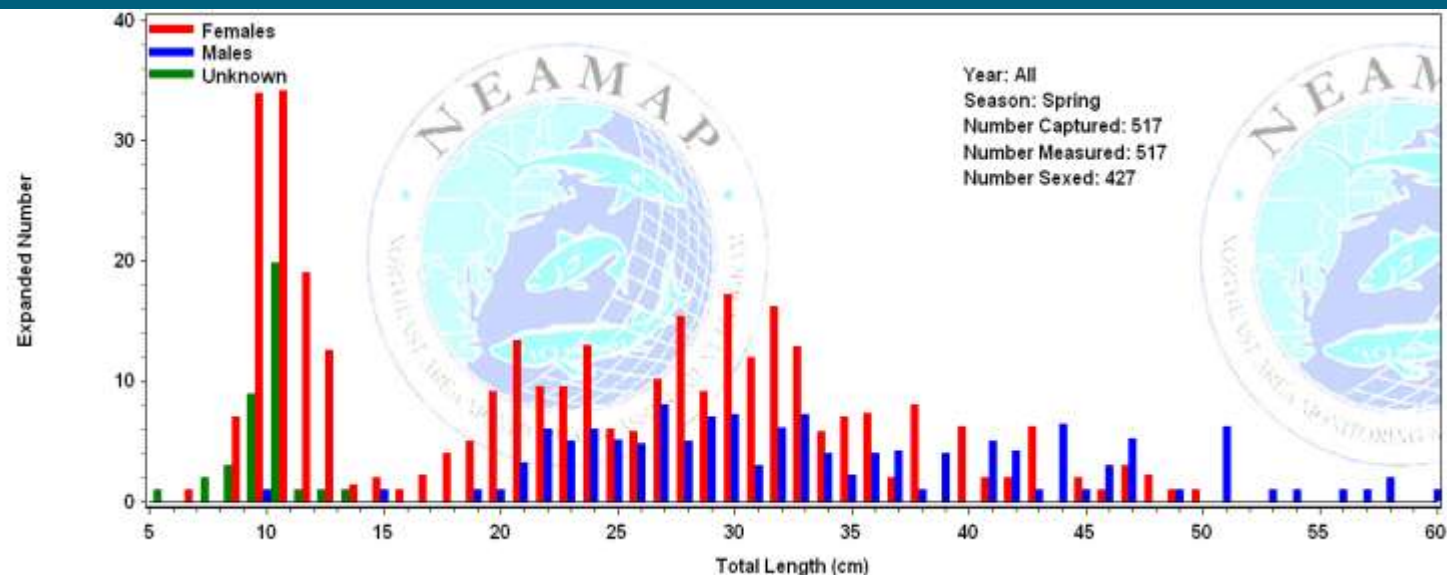


NEAMAP: Data Products

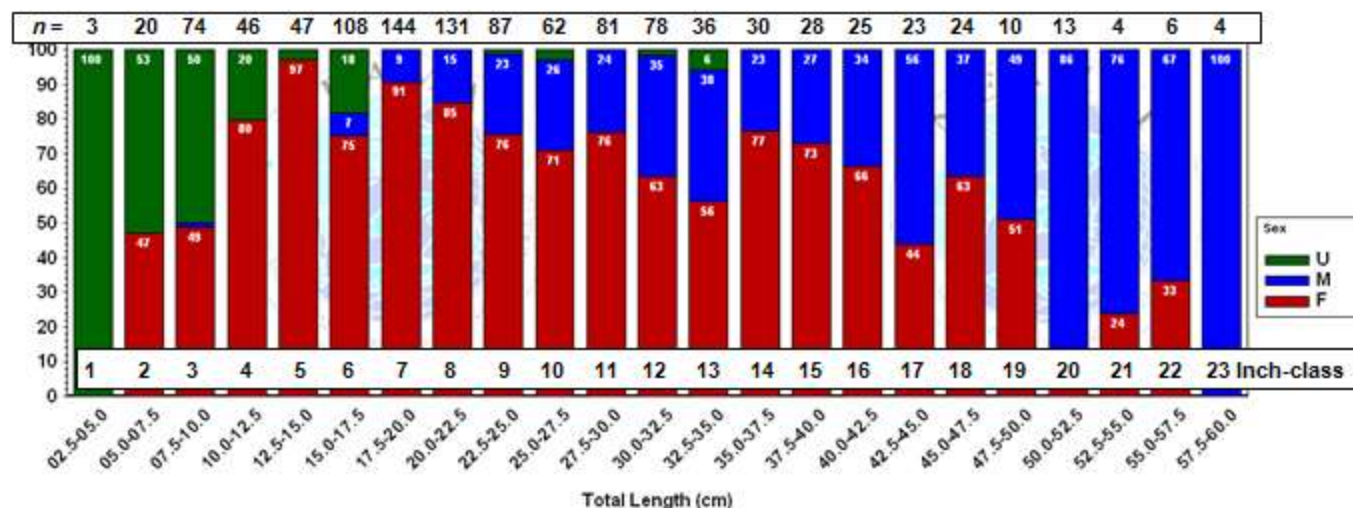
Length Frequencies



NEAMAP: Data Products

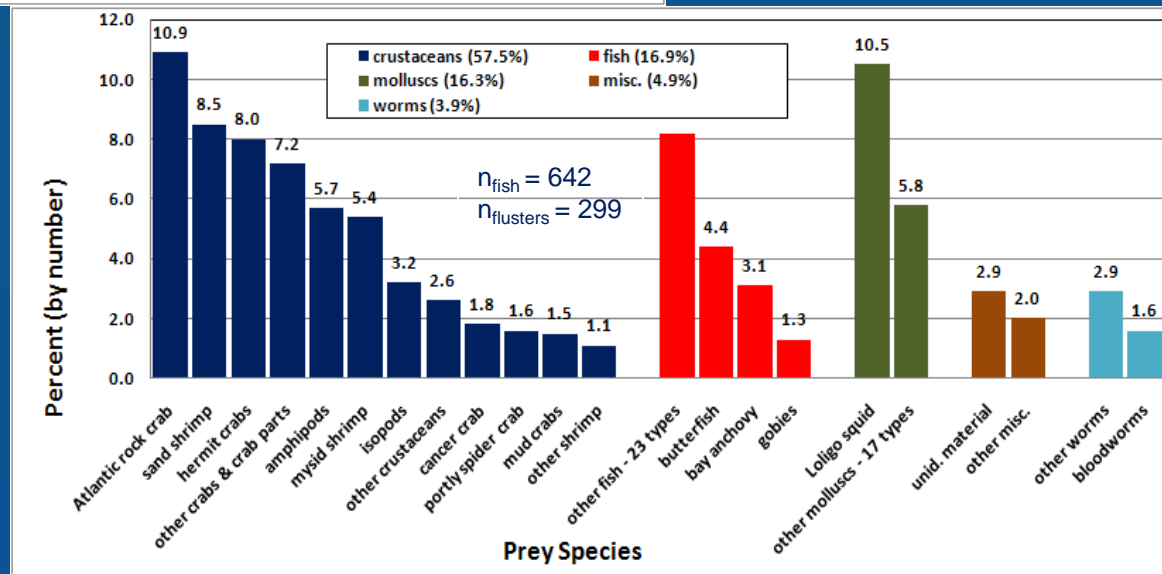
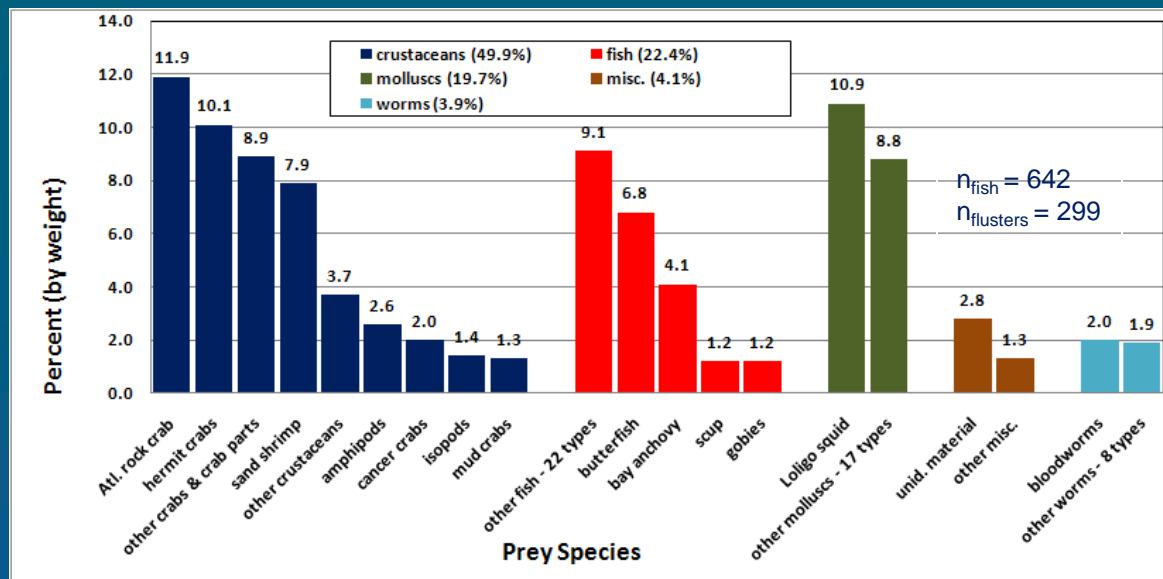


Sex-Specific Analyses



NEAMAP: Data Products

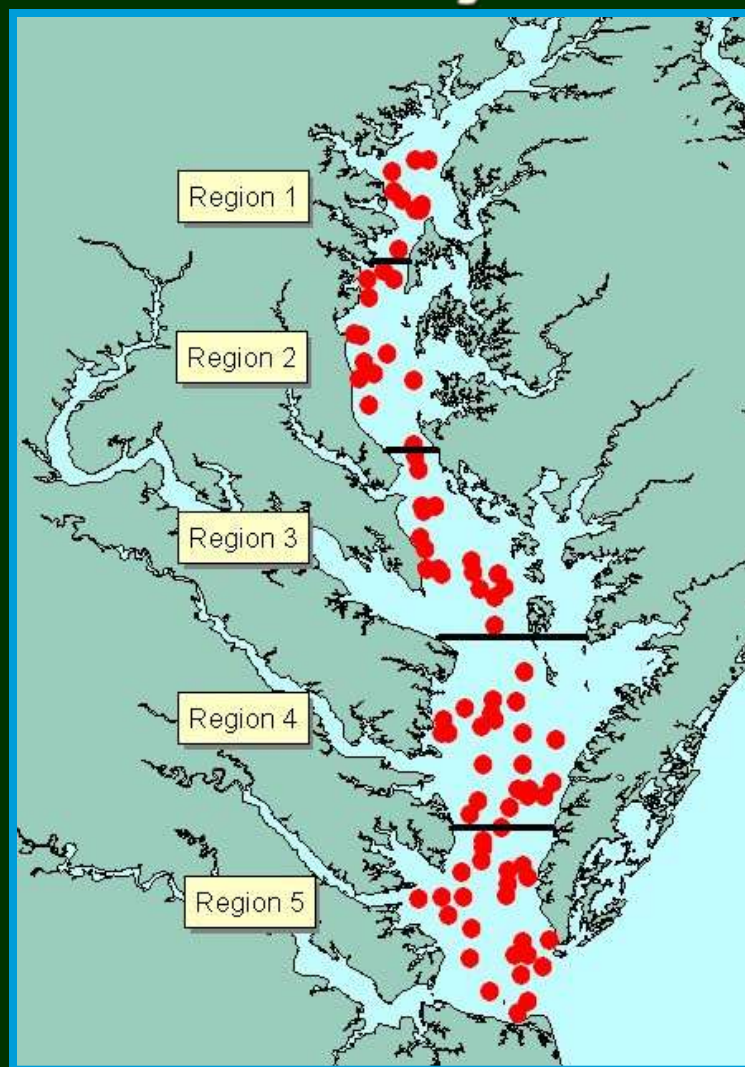
Diets



ChesMMAP: Survey Basics

Where?

How Many?



ChesMMAP: Survey Basics

When?

2002 - present



**Mar – May – Jul –
Sep – Nov**

ChesMMAP: Survey Basics

How?

- R/V *Bay Eagle*
- 65' multi-use R/V
- Capt. + 1 Mate
- 4-5 Science Crew



ChesMMAP: Survey Basics

How?

- 246 x 15cm
- 4-seam, 2-leg (20')
- loop chain sweep
- 7.5cm mesh cod end
- no liner
- 9m x 2m
fishing dimensions



ChesMMAP: Survey Basics

How?

- 3 knots
- 20 minutes



ChesMMAP: Species Workup

See Above

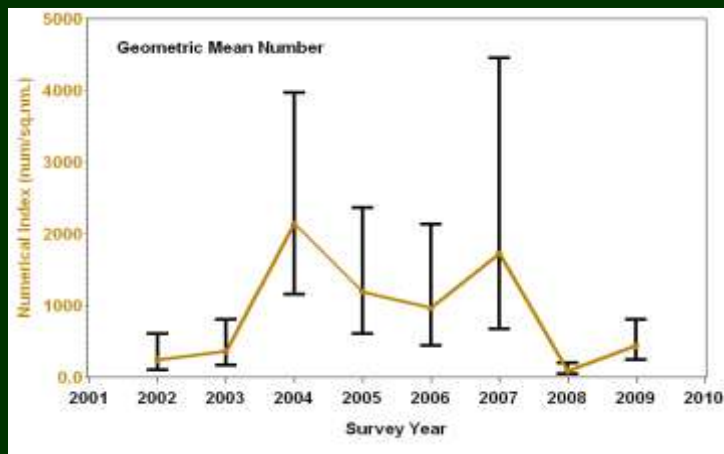
All Species:

- 3-10 Specimens per Size Group
- Length-Weight-Sex-Maturity-Otolith-Stomach

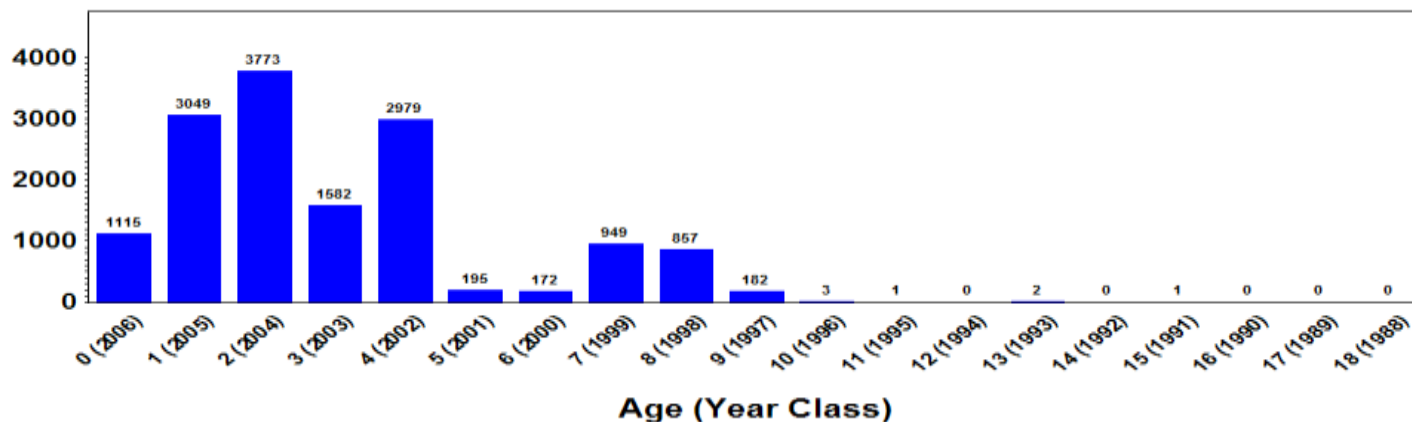


ChesMMAP: Data Products

See Above

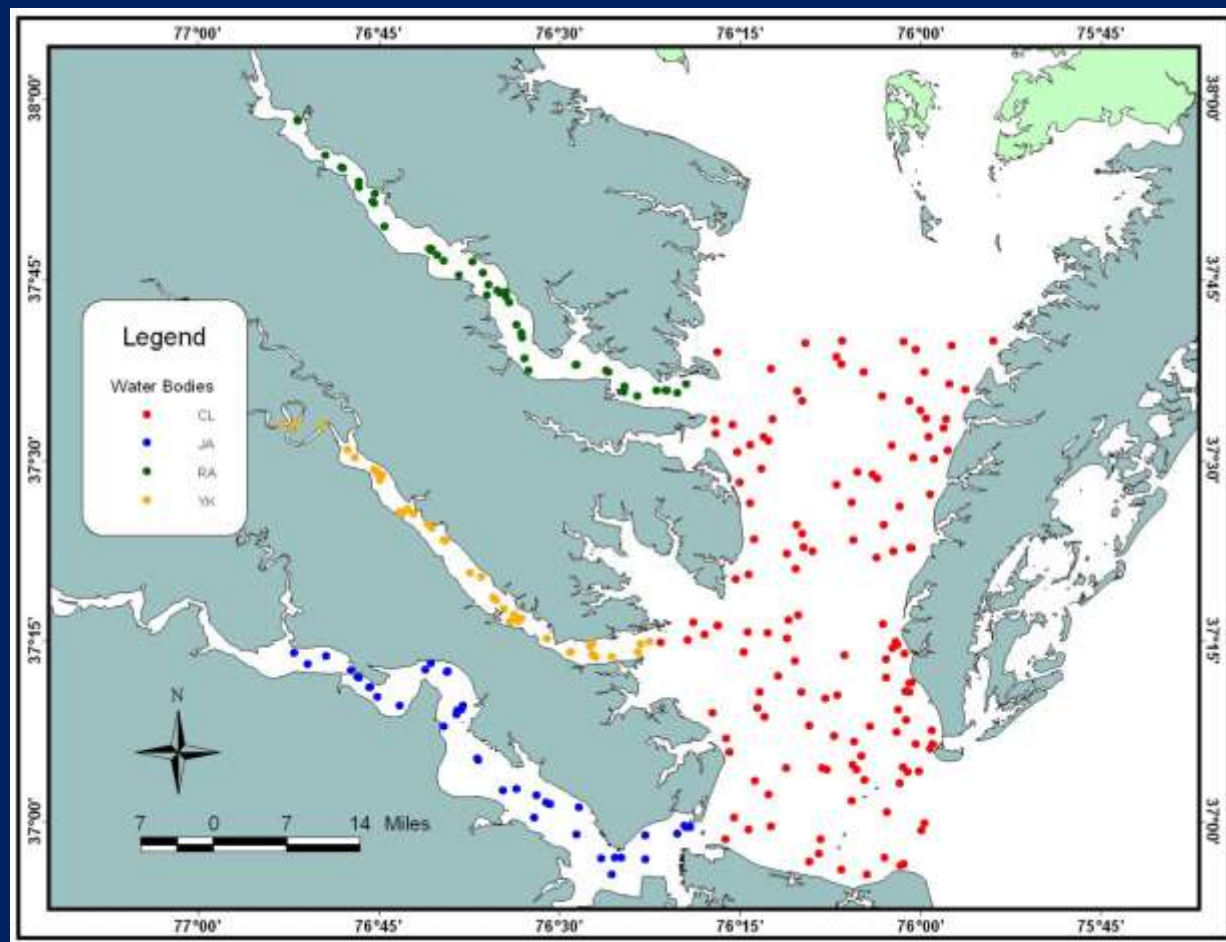


2006



Juv. Fishes T.S.: Survey Basics

Where?

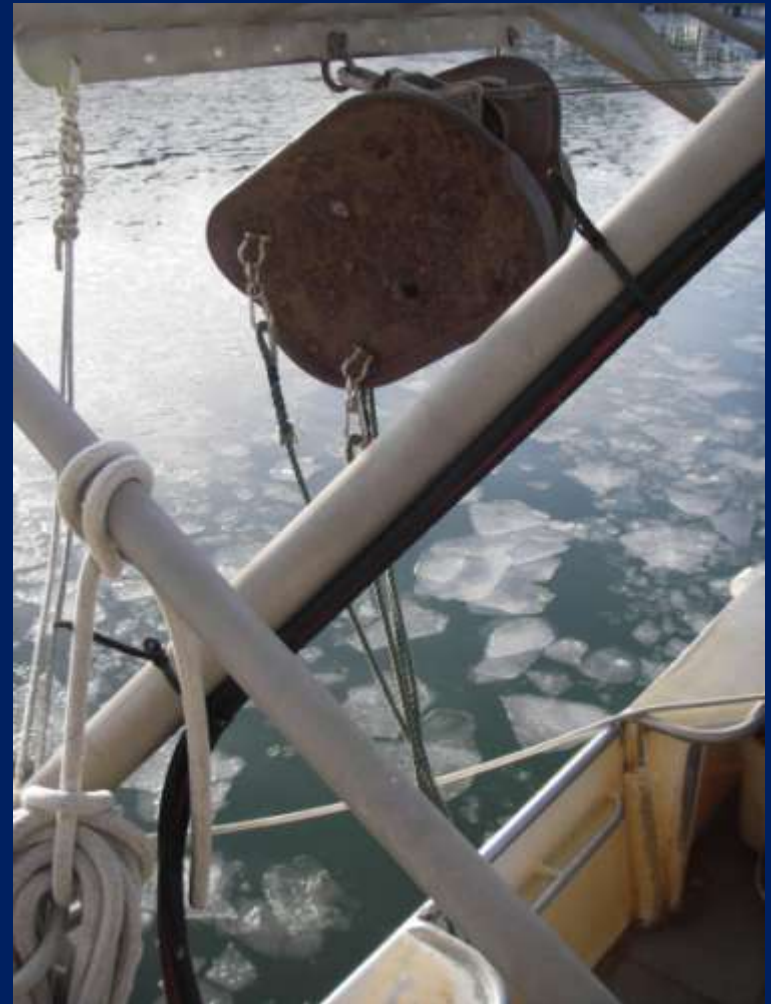


Juv. Fishes T.S.: Survey Basics

When?

1955 - present

12 Months



Juv. Fishes T.S.: Survey Basics

How?

- R/V *Fish Hawk*
- 29' dedicated R/V
- Capt. + 3
- New vessel in 2012



14 Vessels

Juv. Fishes T.S. : Survey Basics

How?

- 30' headrope
 - 1.5" mesh
 - loop chain sweep
 - ¼" liner
 - fishing dimensions:
~5.5m x 1m
-
- ~2.5 knots
 - 5 minutes



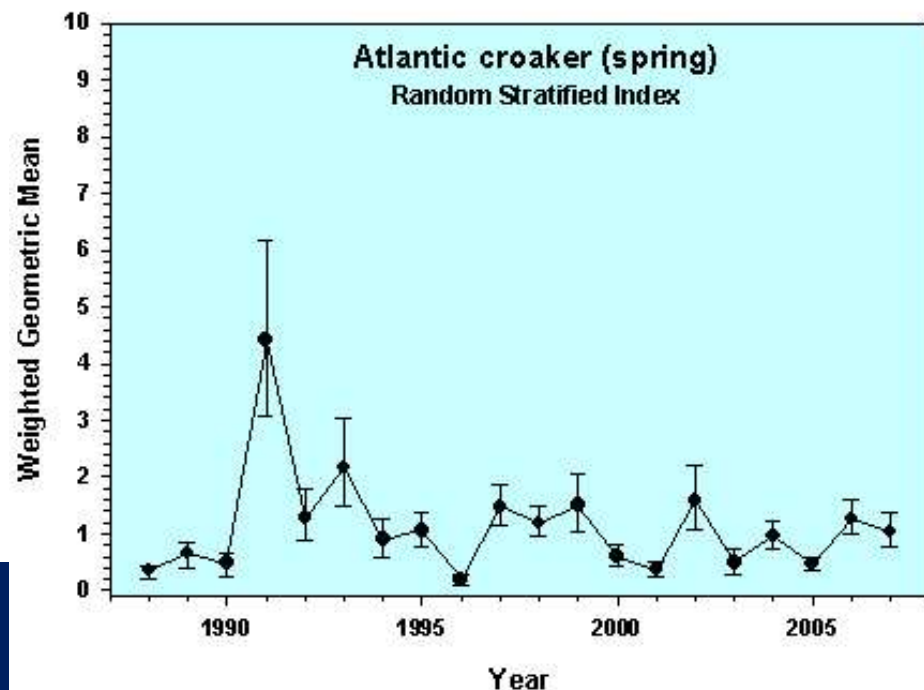
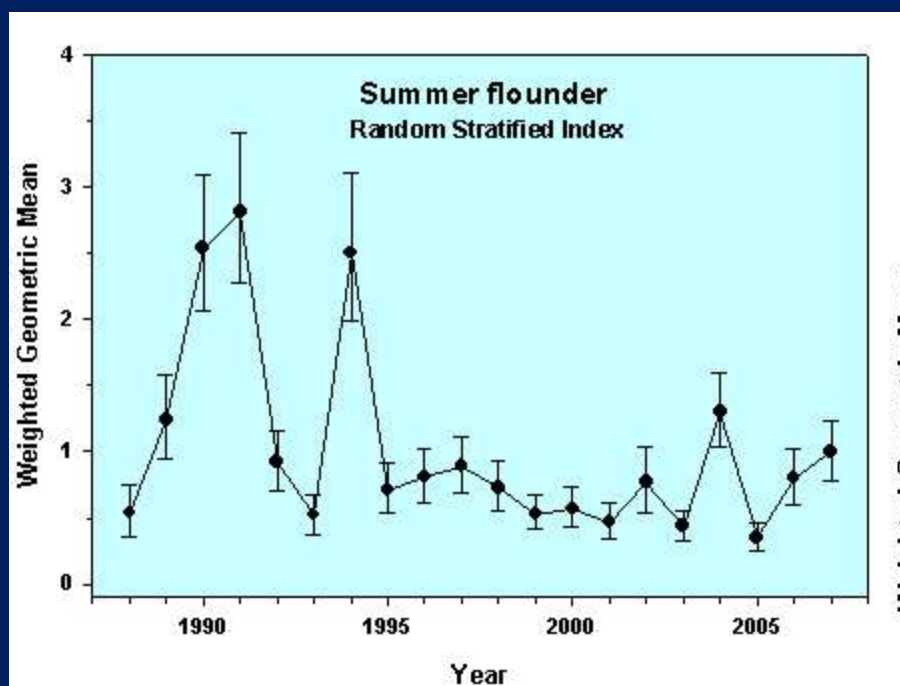
Juv. Fishes T.S. : Species Workup

Counts & Lengths Only



Juv. Fishes T.S. : Data Products

Indices of YOY Abundance



VIMS L.L. Survey: Survey Basics

Where?

9 Stations

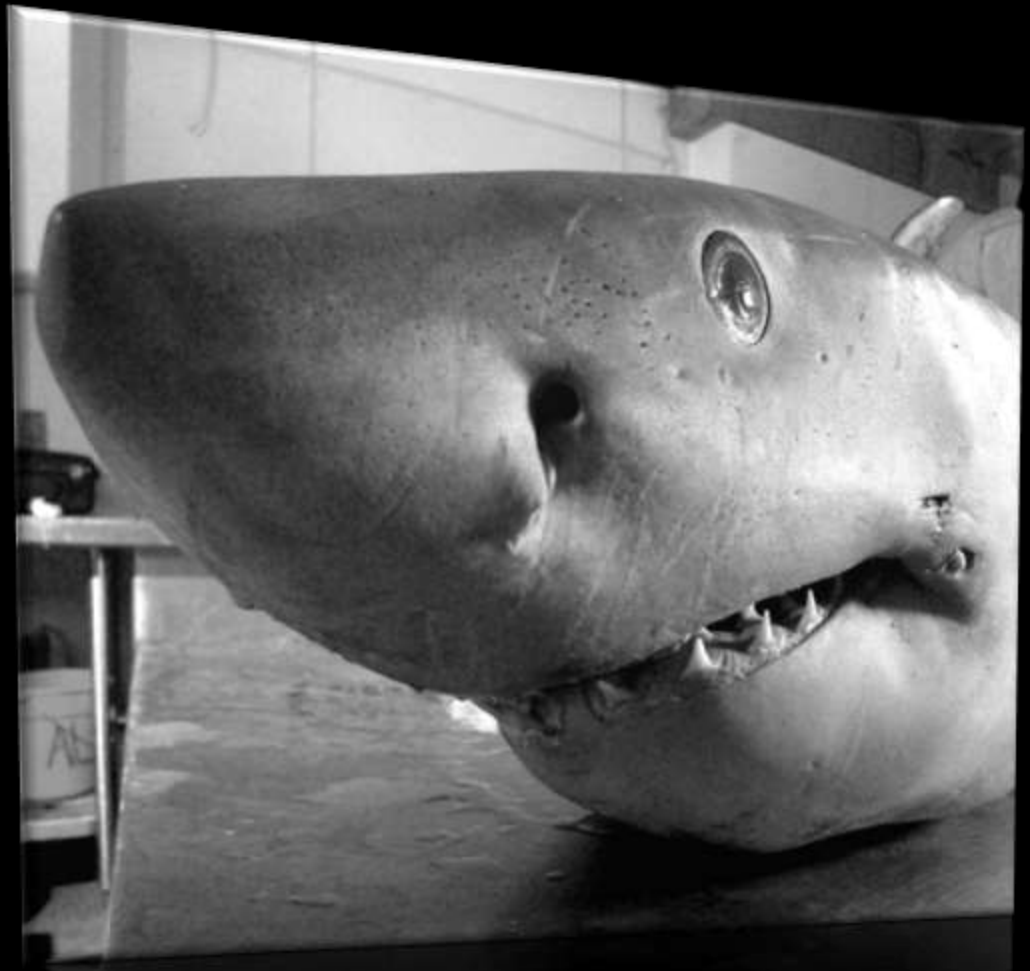


VIMS L.L. Survey: Survey Basics

When?

1973-present

May-Oct



VIMS L.L. Survey: Survey Basics

How?

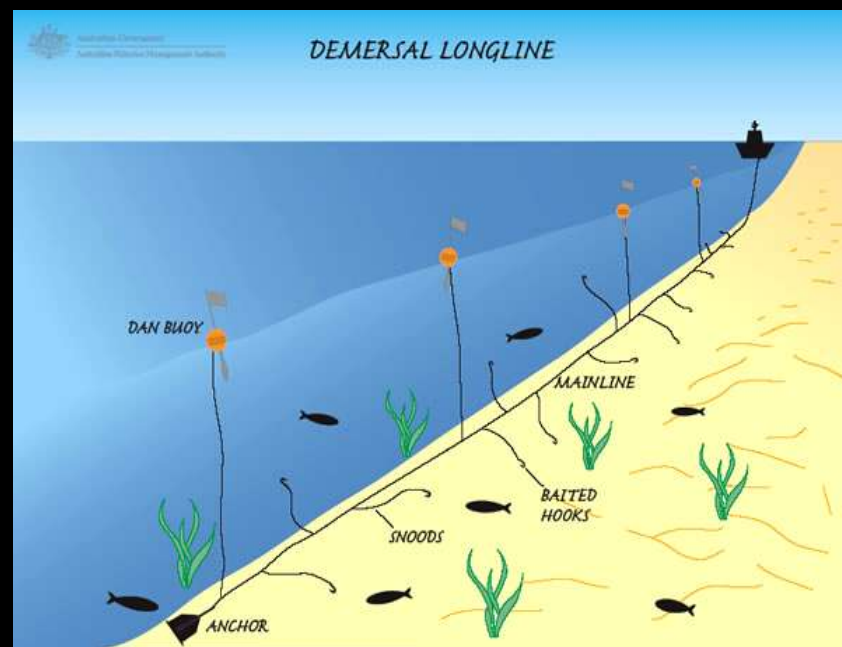
- *R/V Bay Eagle*



VIMS L.L. Survey: Survey Basics

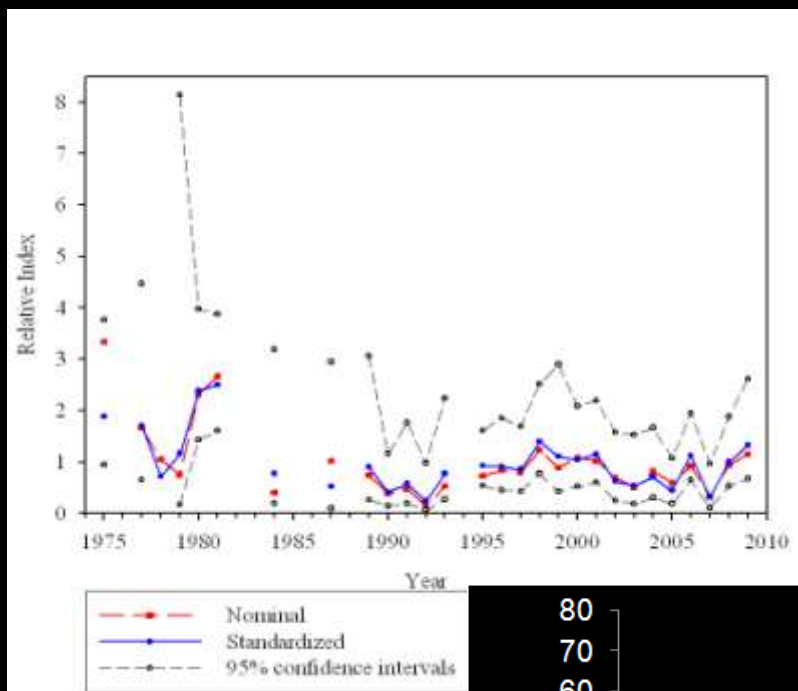
How?

- 100-200 hooks
- 1.25 nm
- 4 hour sets
- Atl. menhaden bait



http://www.afma.gov.au/information/students/methods/images/demersal_longline.jpg

VIMS L.L. Survey: Data Products



Sandbar shark length frequencies

