

ChesMMAP

Blue Crab Data Summary

Report to the Fisheries GIT

5 June 2014

Christopher Bonzek
Dr. Robert Latour
Dr. Romuald Lipcius



Survey Background

- **Initiated in 2002**
 - Seed funding from NOAA CBO and Virginia Environmental Endowment
 - Funding 2005 – Present 100% VMRC/Wallop-Breaux
- **Targets Late Juvenile to Adult Fishes**
 - Complements VIMS Juvenile Fishes Trawl Survey
 - Larger Net / Larger Mesh / Faster Tow Speed / Longer Tow Duration
- **Five Cruises Per Year**
 - Timed to Monitor Migrations of Various Species Into and Out of C.B.
 - March, May, July, September, November

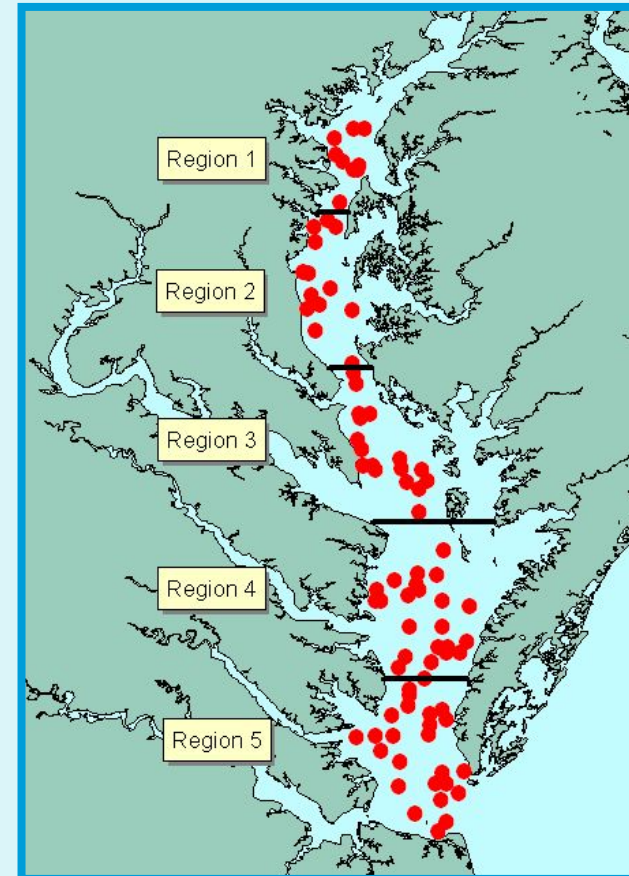
Survey Background (cont.)

- **Random Stratified Sampling**

- 5 Latitudinal Regions
- 3 Depth Strata per Region
- ~80 Stations per Cruise

- **Data Recorded**

- All Fishes and Invertebrates: Total Number and Total Biomass
- All or a Large Subsample Measured
- Nearly All Species: A Smaller Subsample is Examined for Length–Weight–Sex–Maturity. Otoliths and Stomachs Preserved for Later Analysis
- Water Quality Profiles at Each Station (Temp, Salinity, D.O.)

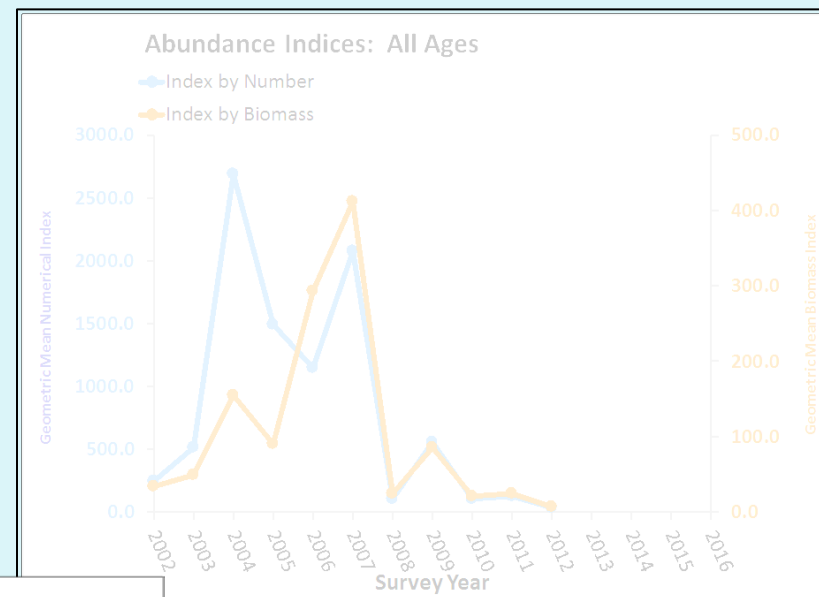
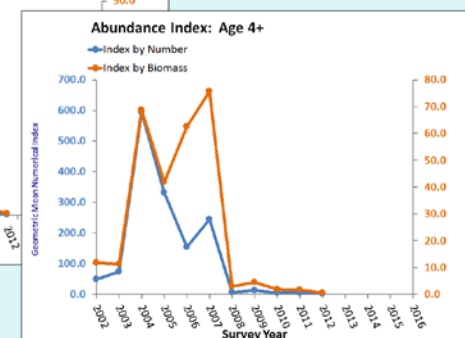
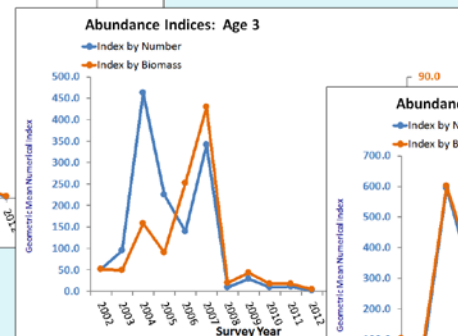
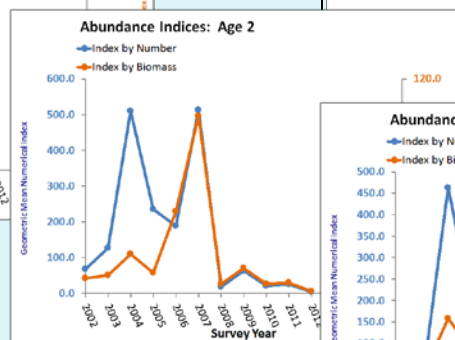
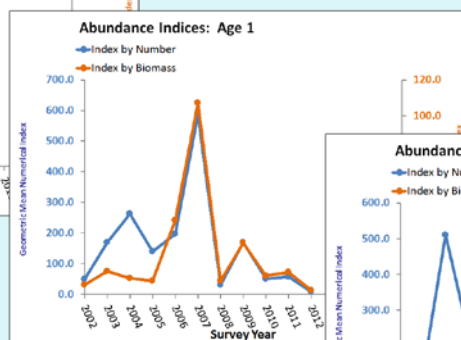
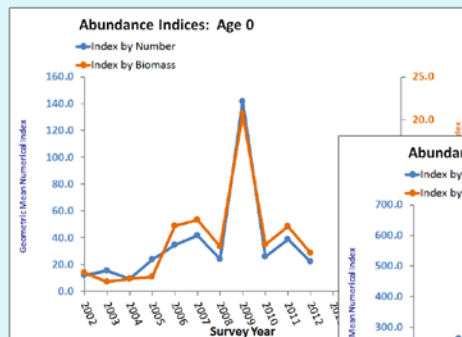


Data Products

Atlantic Croaker

- Abundance Indices**

- Overall
- By Age Class

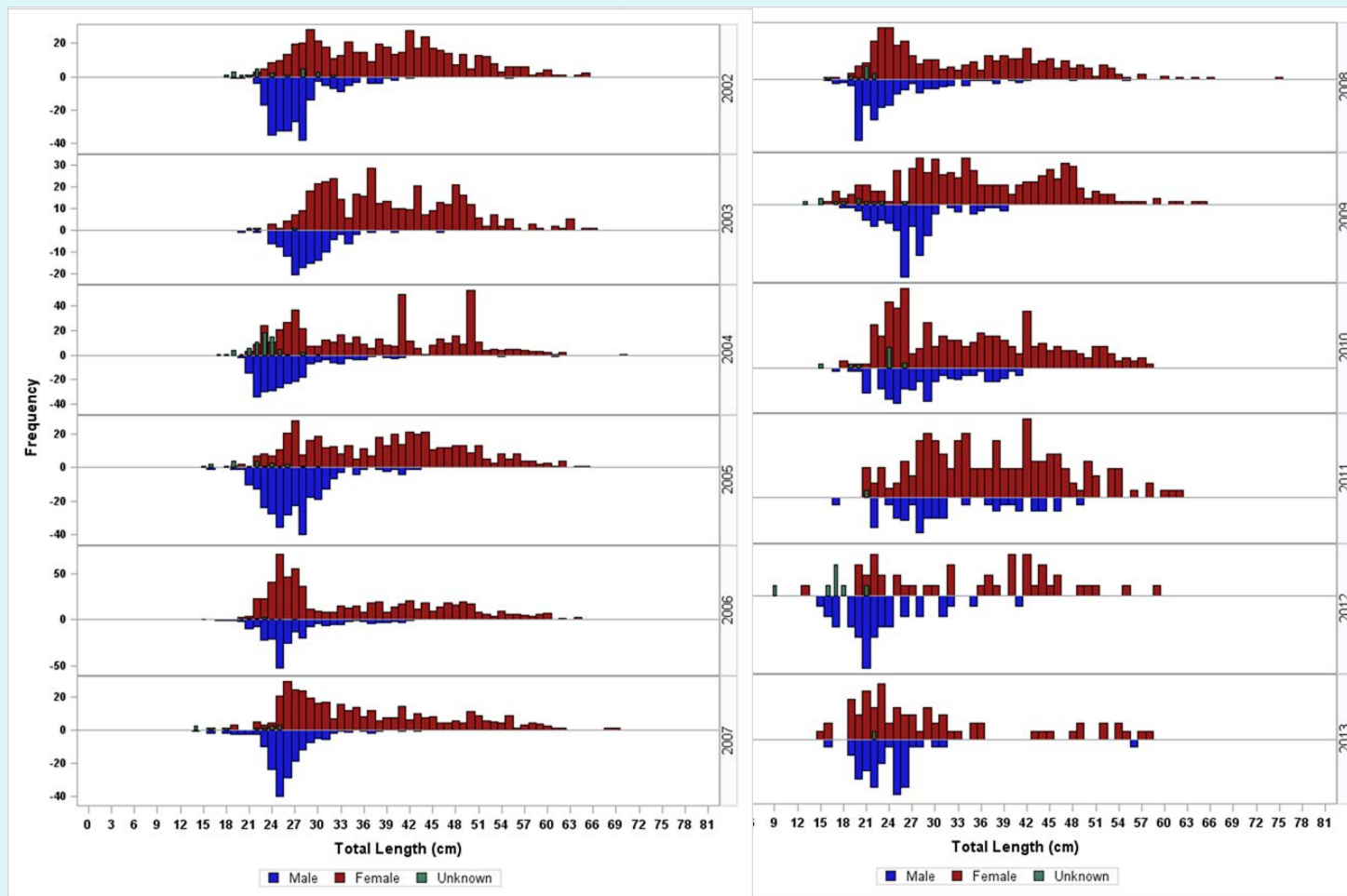


Data Products

- Length Frequencies

- Overall
- By Sex

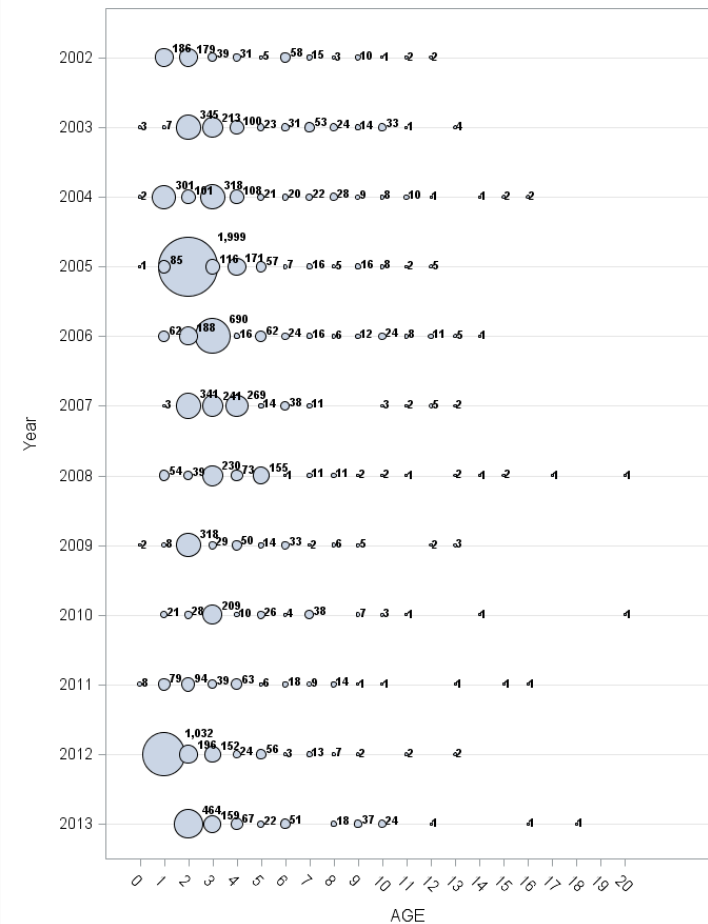
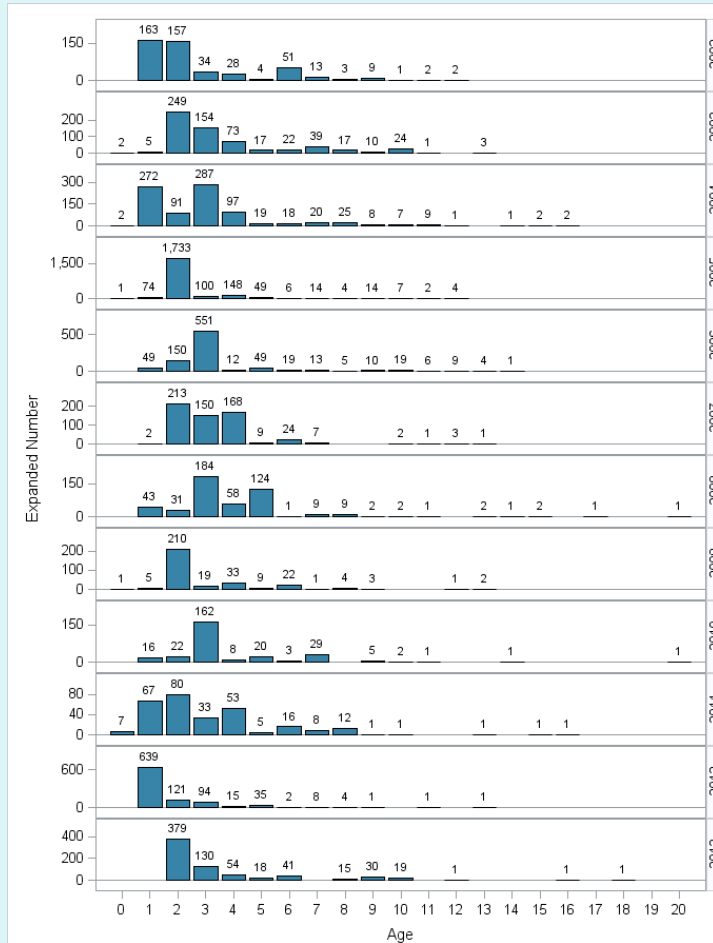
Summer Flounder



Data Products

- **Age Frequencies**

Striped Bass

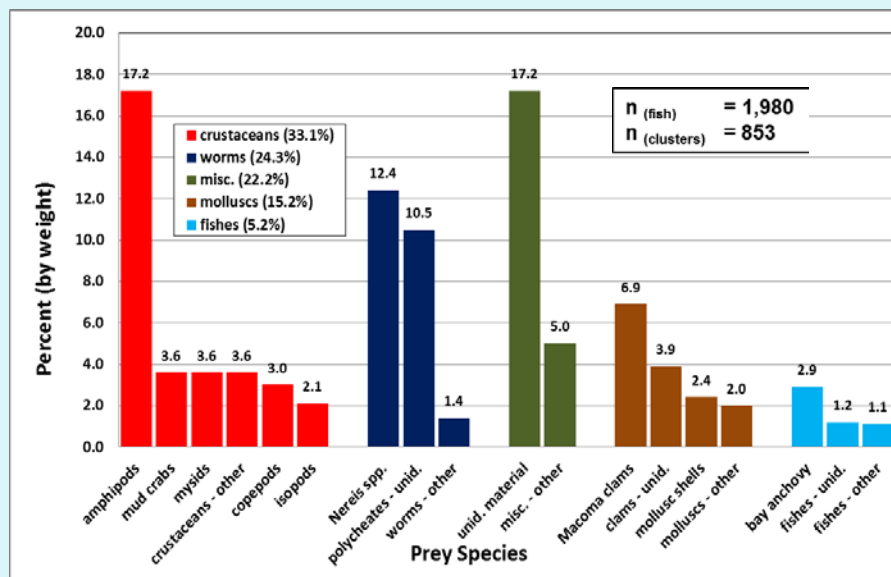


Data Products

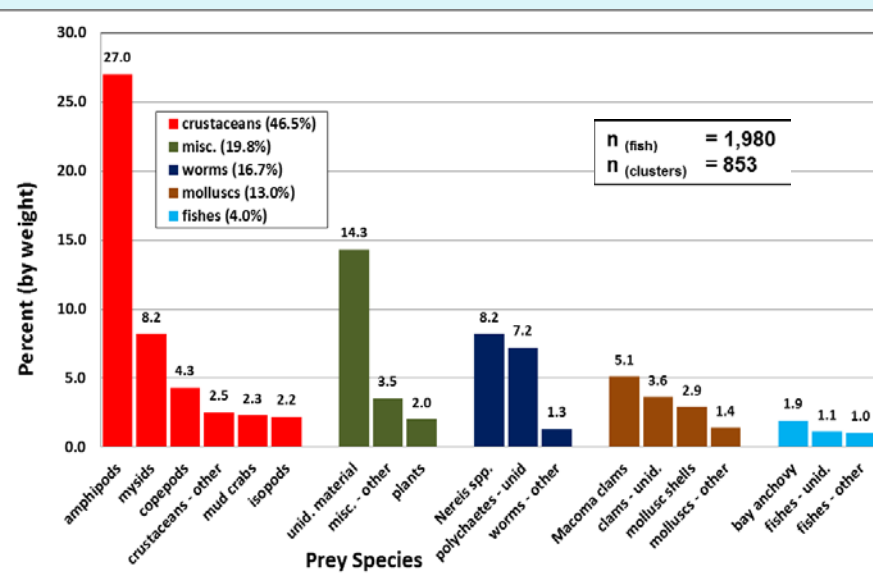
- Diet Indices

White Perch

By Percent Weight



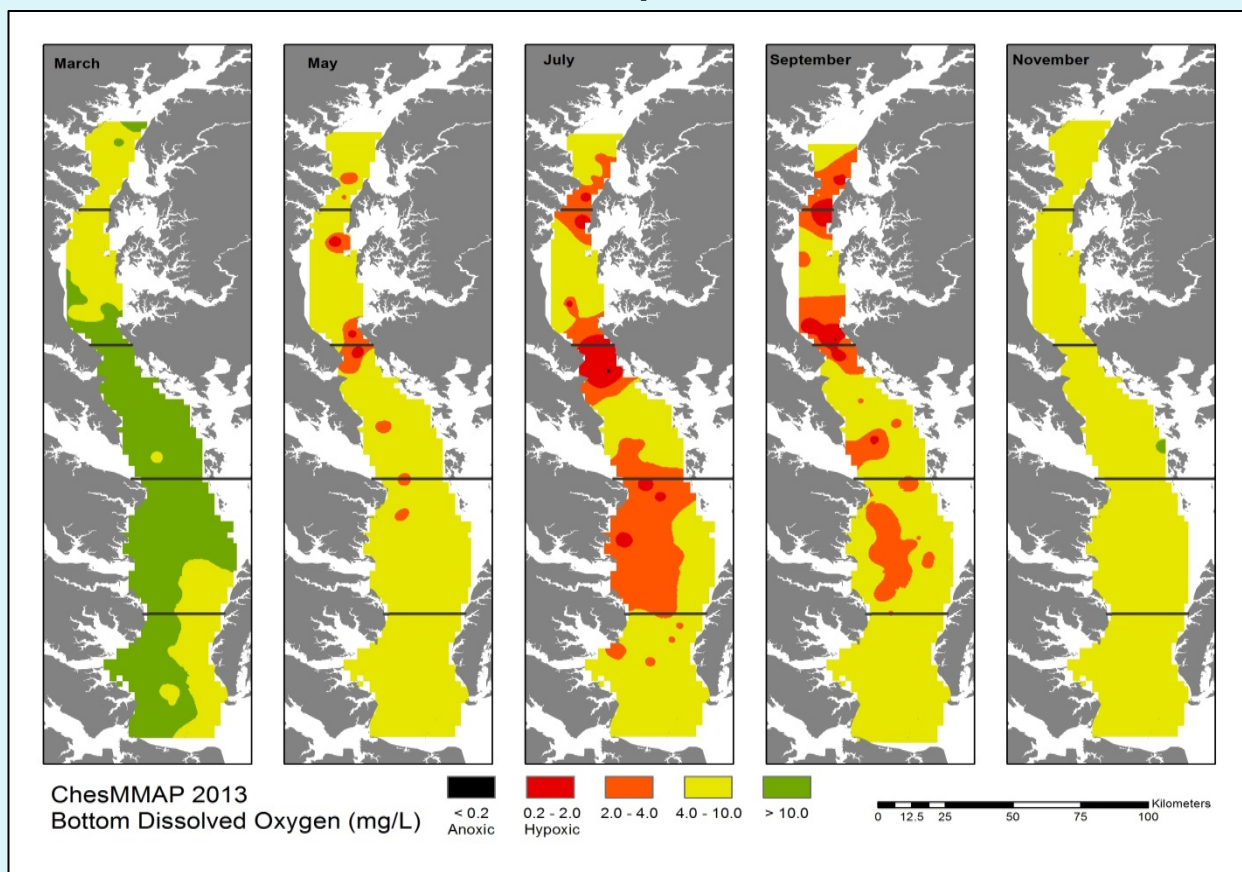
By Percent Number



Data Products

- Water Quality Indicators

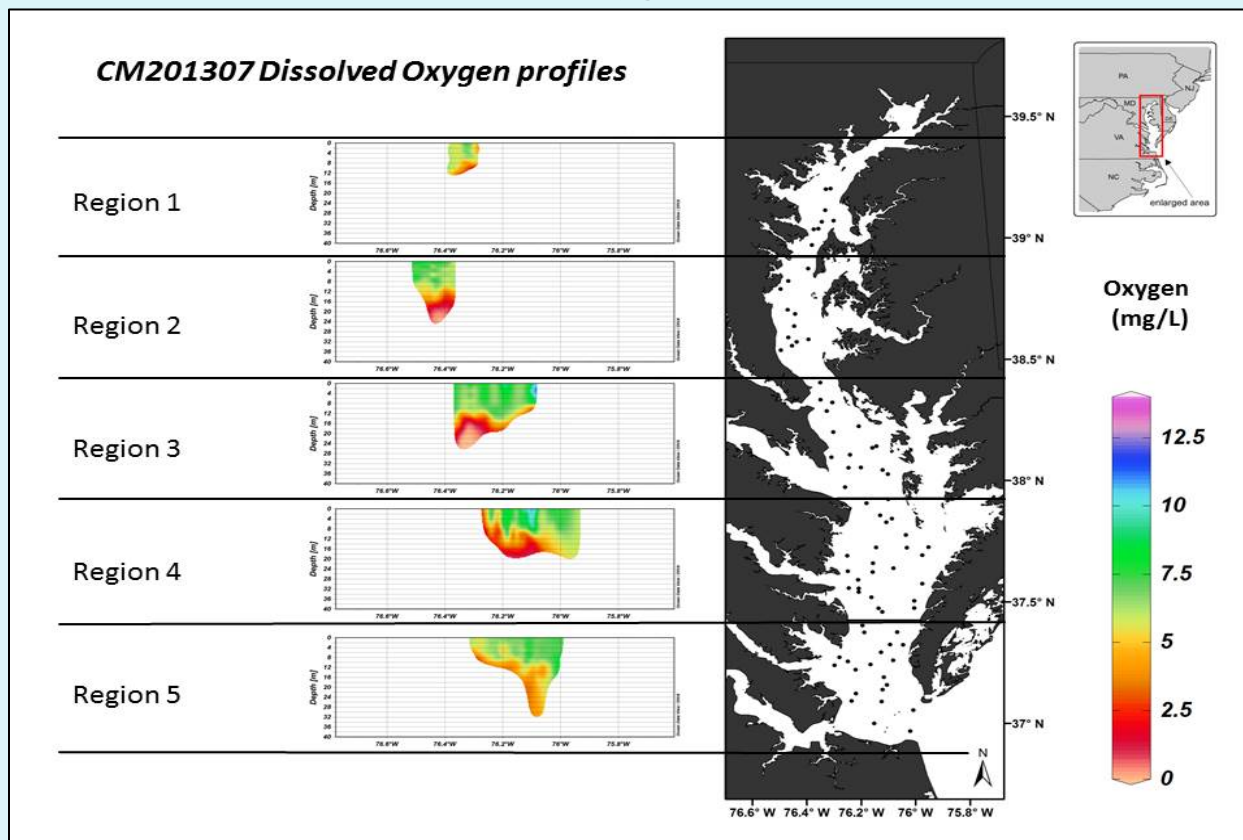
Dissolved Oxygen 2013



Data Products

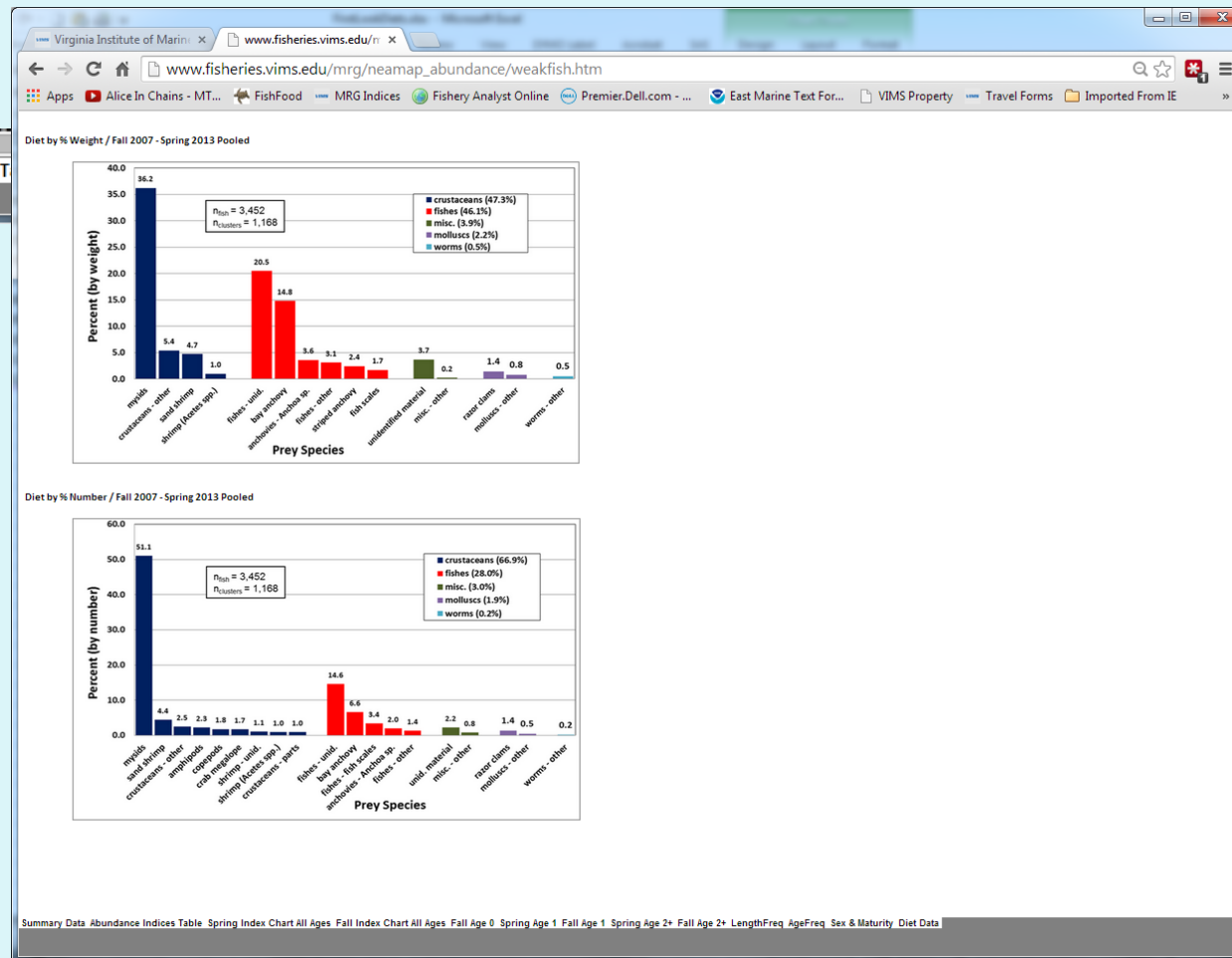
- Water Quality Profiles

Dissolved Oxygen – ~~July 2013~~ **July 2013**



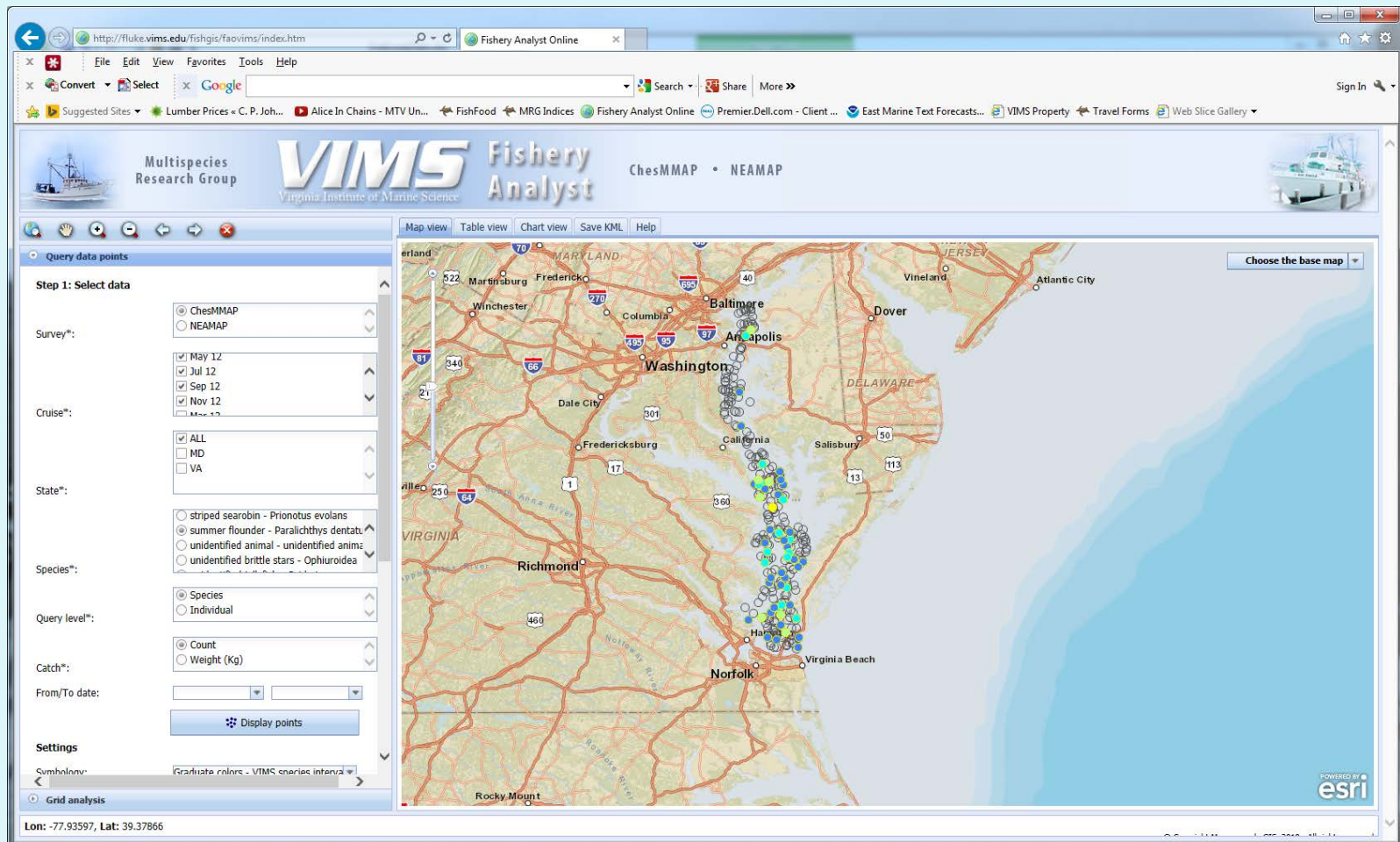
Online Data Products

- Abundance Indices and Data Summaries



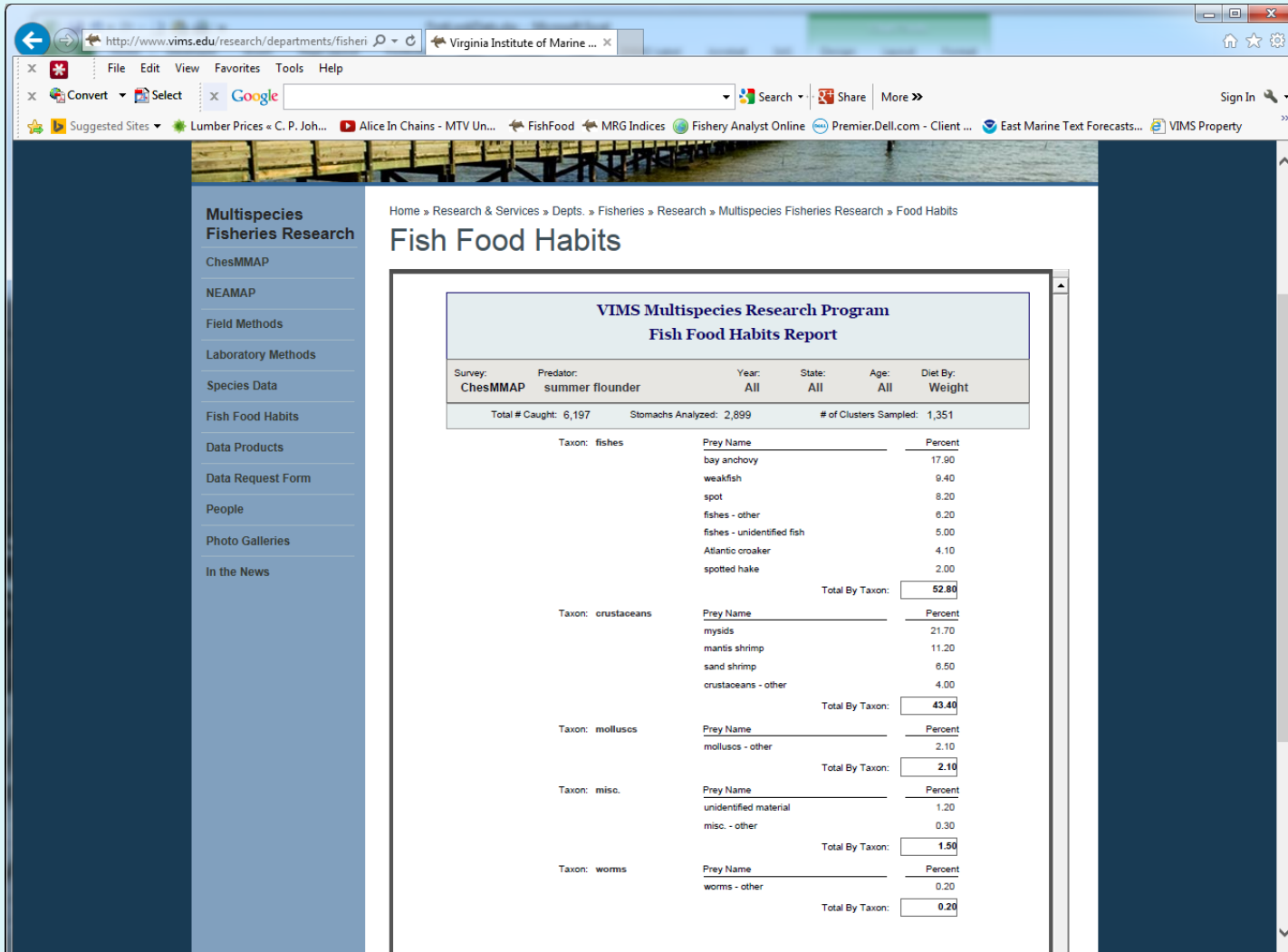
Online Data Products

- Fishery Analyst Online (GIS)



Online Data Products

- Food Habits Summaries



The screenshot shows a web browser window displaying the VIMS Multispecies Fisheries Research Food Habits Report. The browser's address bar shows the URL <http://www.vims.edu/research/departments/fisheri>. The page features a navigation menu on the left with links to various research areas, including Multispecies Fisheries Research, ChesMMAP, NEAMAP, Field Methods, Laboratory Methods, Species Data, Fish Food Habits, Data Products, Data Request Form, People, Photo Galleries, and In the News. The main content area displays the report title "Fish Food Habits" and a summary table of the survey data.

Home » Research & Services » Depts. » Fisheries » Research » Multispecies Fisheries Research » Food Habits

Fish Food Habits

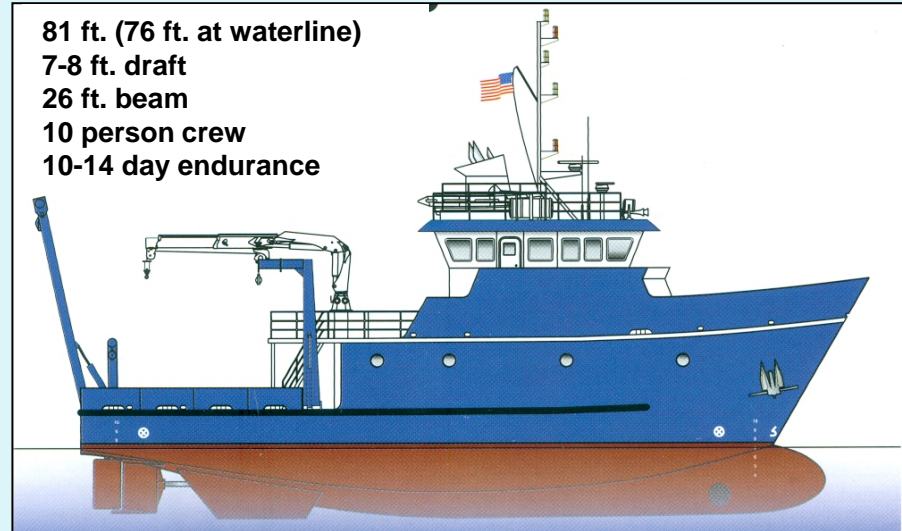
**VIMS Multispecies Research Program
Fish Food Habits Report**

Survey:	Predator:	Year:	State:	Age:	Diet By:
ChesMMAP	summer flounder	All	All	All	Weight
Total # Caught: 6,197		Stomachs Analyzed: 2,899		# of Clusters Sampled: 1,351	

Taxon:	Prey Name	Percent
fishes	bay anchovy	17.90
	weakfish	9.40
	spot	8.20
	fishes - other	6.20
	fishes - unidentified fish	5.00
	Atlantic croaker	4.10
	spotted hake	2.00
	Total By Taxon:	52.80
crustaceans	mysids	21.70
	mantis shrimp	11.20
	sand shrimp	6.50
	crustaceans - other	4.00
	Total By Taxon:	43.40
molluscs	molluscs - other	2.10
	Total By Taxon:	2.10
misc.	unidentified material	1.20
	misc. - other	0.30
	Total By Taxon:	1.50
worms	worms - other	0.20
	Total By Taxon:	0.20

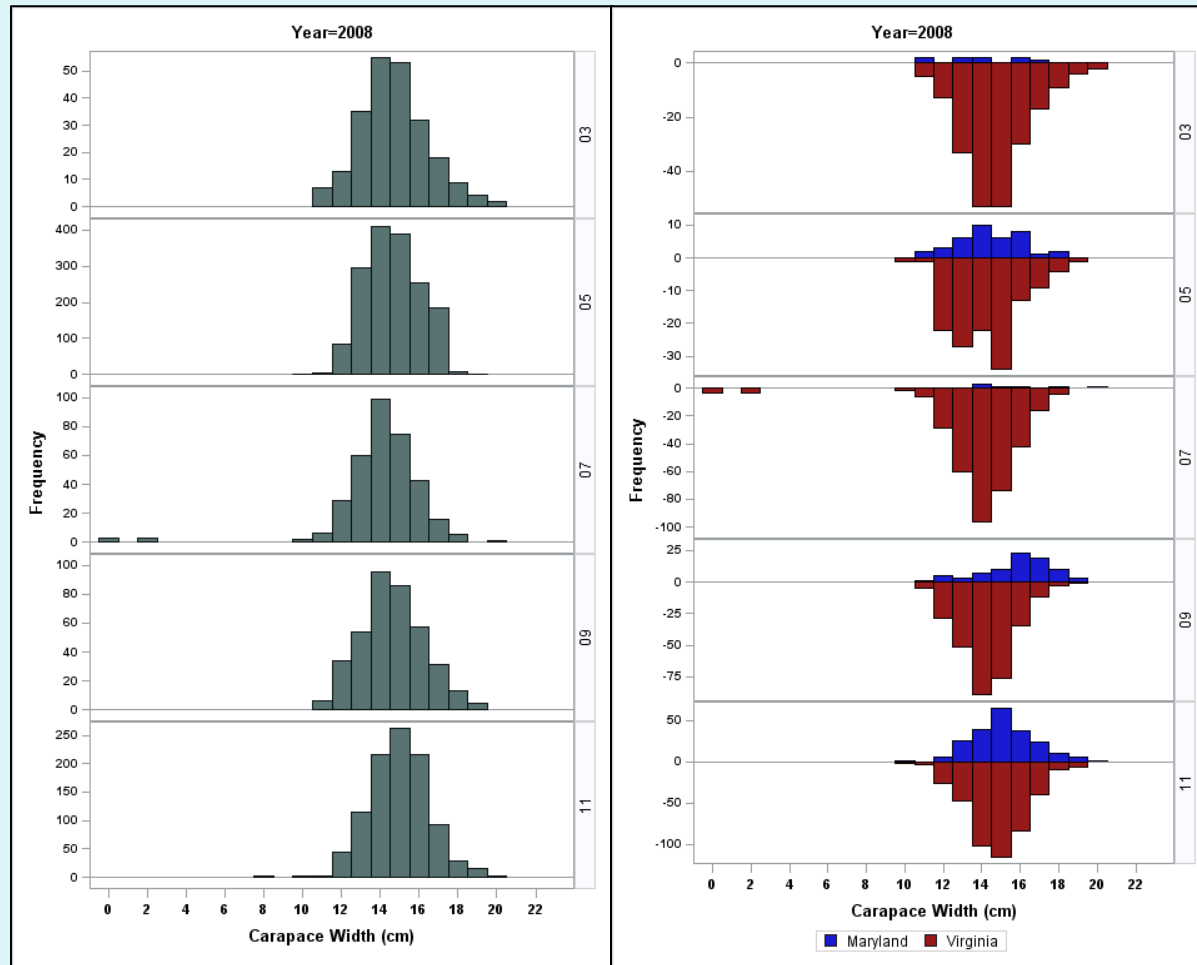
Future Enhancements (~2017)

- New VIMS Research Vessel
- Multi-Trophic Level Sampling
 - Improved Net for Currently Targeted Fishes & Inverts
 - Small-mesh Midwater Net for Prey-Field Enumeration
 - Plankton Net
 - Bottom Grabs
 - Hydroacoustics
- Multi-Level Sampling in 2014/15 for Student Dissertation Project



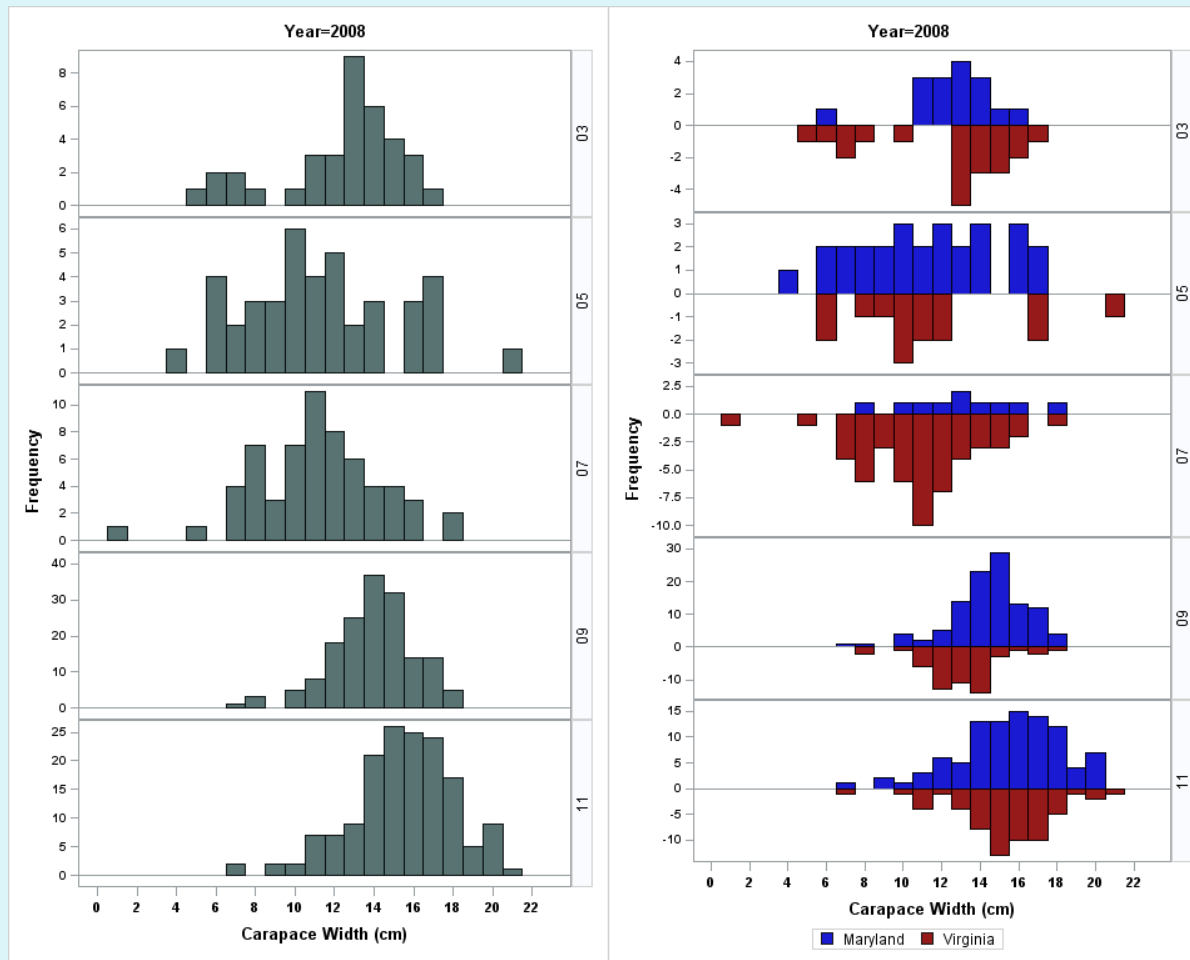
Blue Crab Data

- Majority of Blue Crabs Sampled Are Mature Females



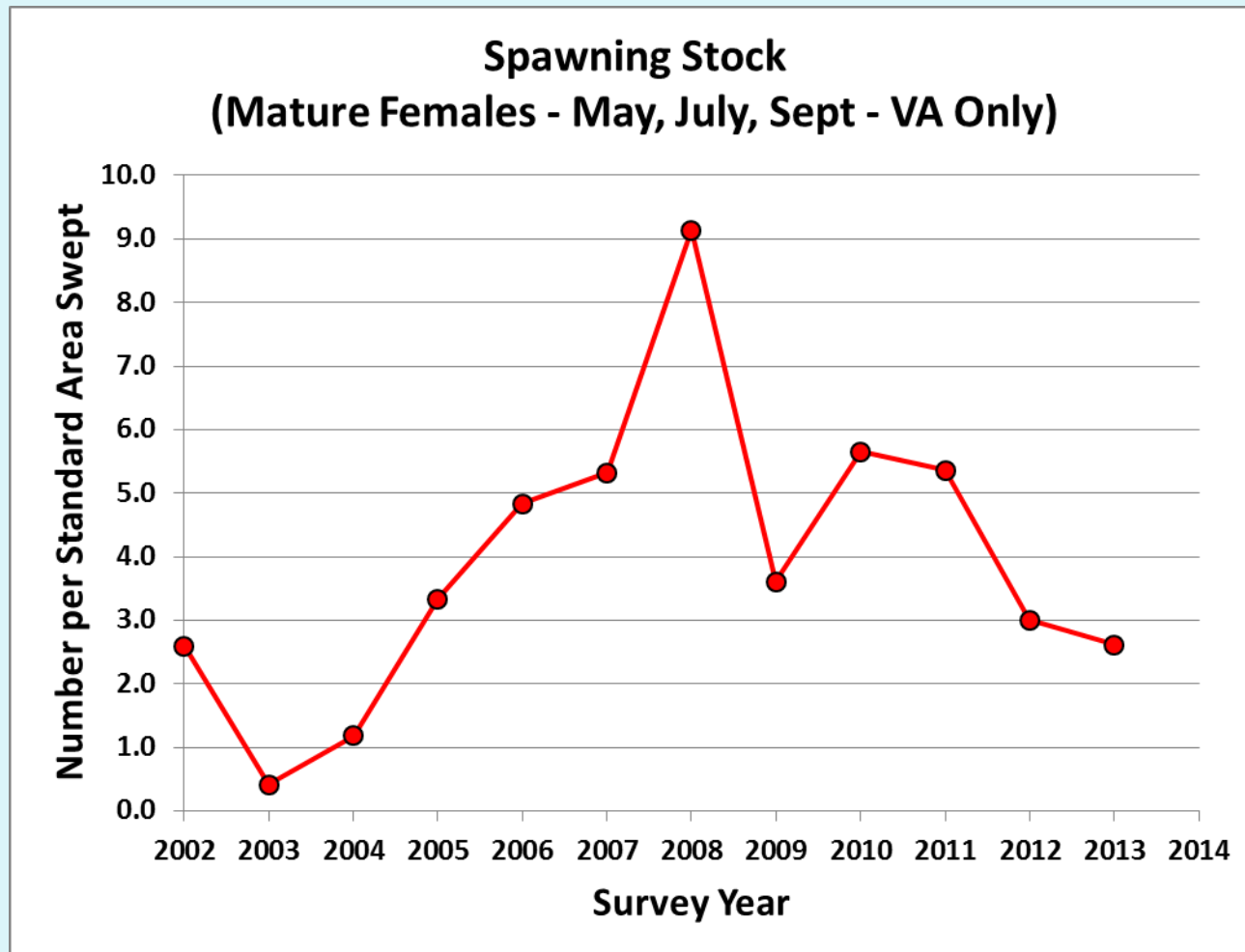
Blue Crab Data

- Mainstem-Dwelling Males ~60mm+ Also Well Sampled



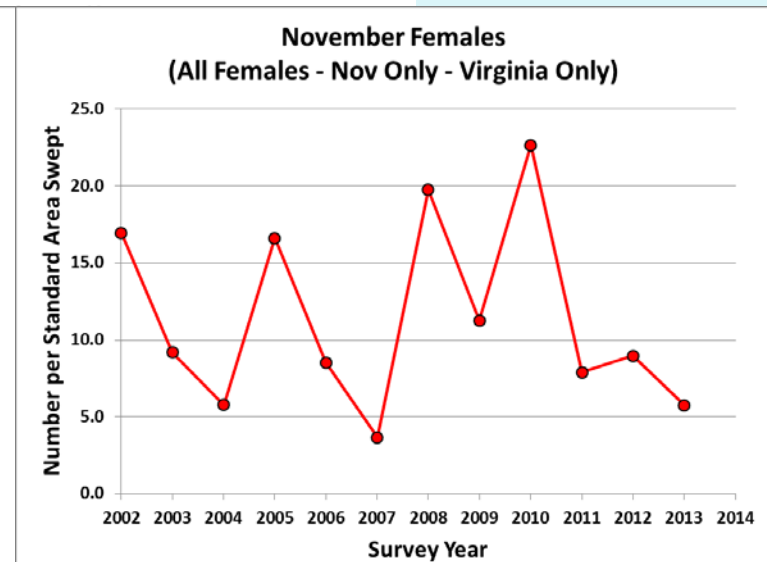
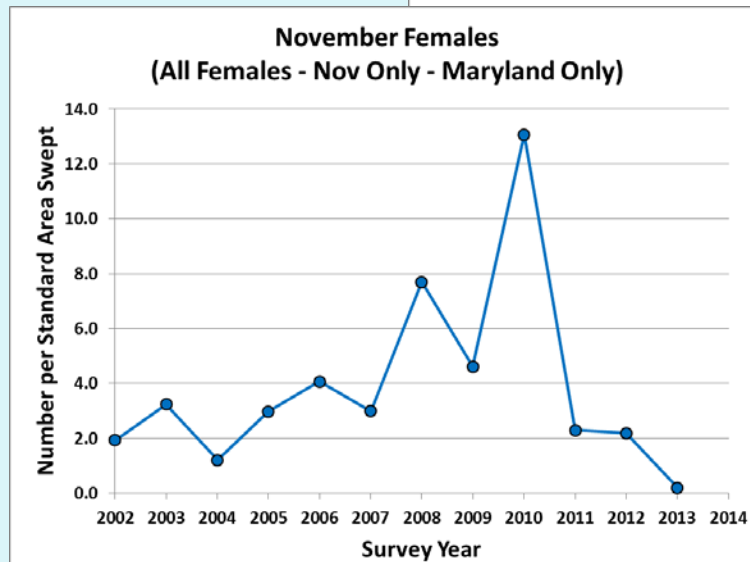
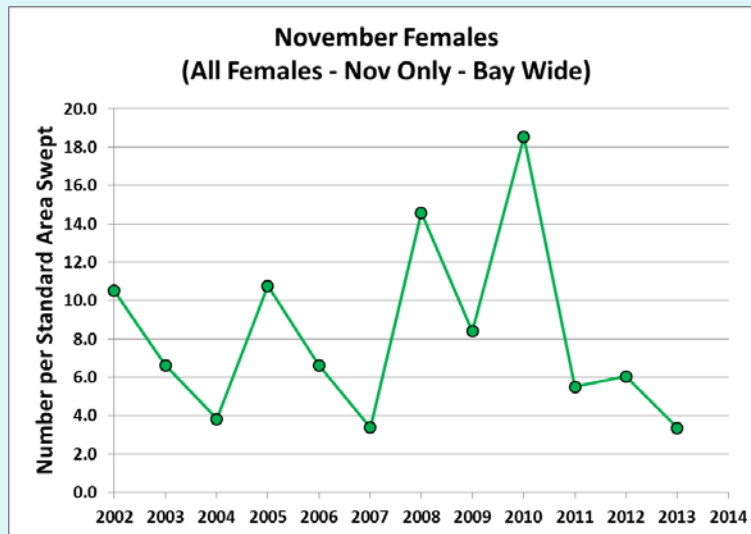
Blue Crab Data

- Abundance Indices:



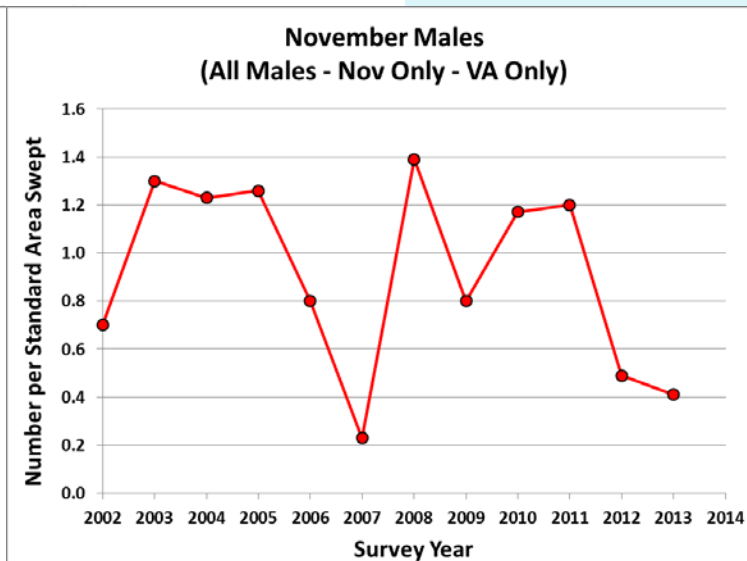
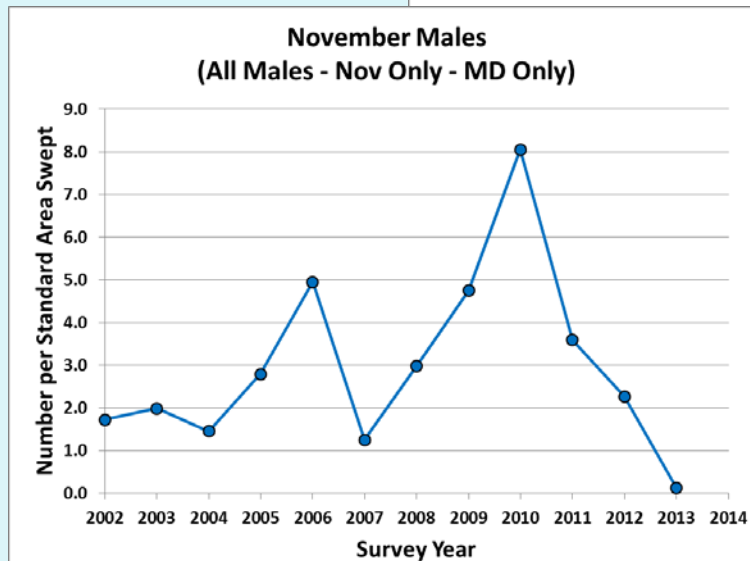
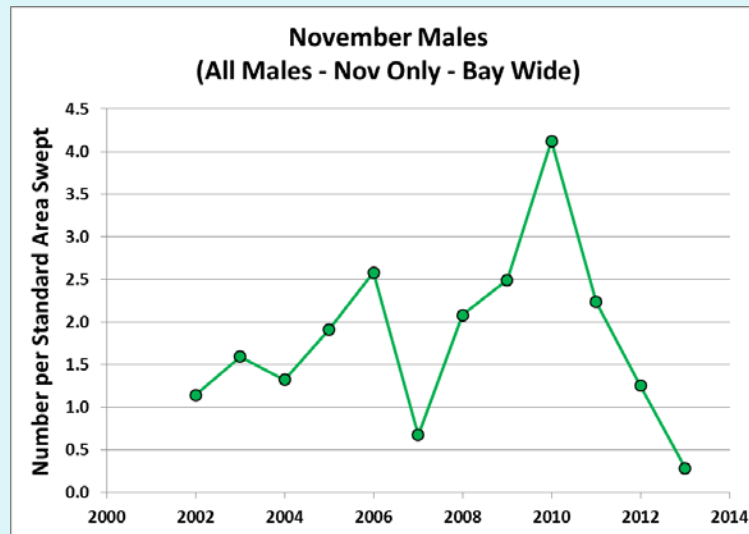
Blue Crab Data

- Abundance Indices:



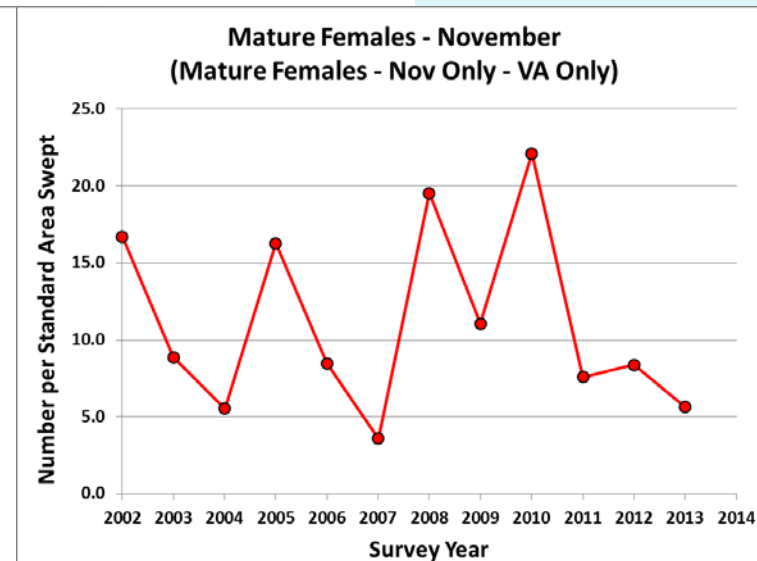
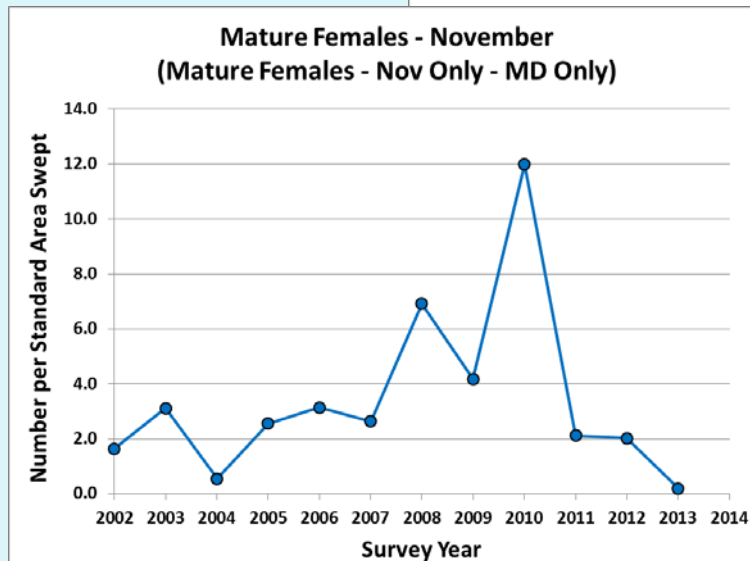
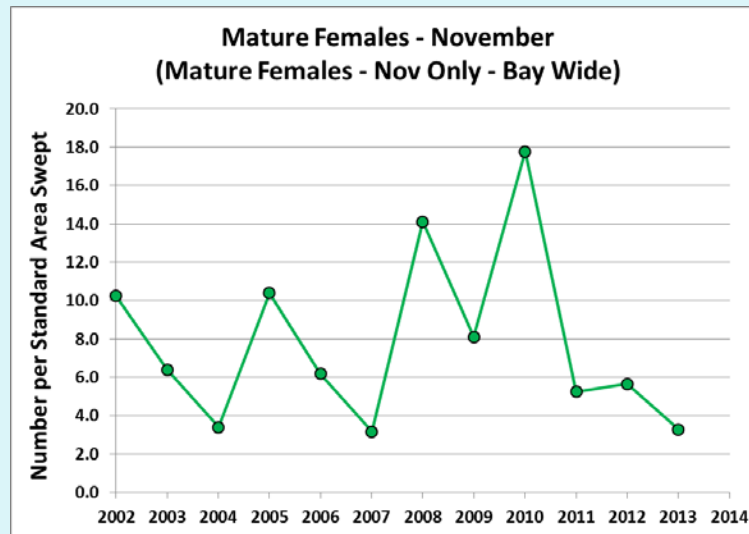
Blue Crab Data

- Abundance Indices:



Blue Crab Data

- Abundance Indices:



ChesMMAP:

In a Fog?



**Or Making a Big
Splash?**

