



# State Surveys in NER Assessments

Northeast Fisheries  
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## State Surveys

**State Agency research survey data are used as calibration indices in many NER assessments, and therefore directly influence status evaluation for many stocks, including:**

**Summer flounder, scup, bluefish, striped bass, weakfish, GOM winter flounder, SNE winter flounder, Cape Cod-GOM yellowtail flounder, American plaice, Monkfish, Tautog, River herring, American eel, Northern shrimp, Atlantic Sea scallop, American lobster, *Loligo* squid**

**Predominantly trawl surveys, but also seine, 'other' nets, trap, and video**



## State Surveys

**Comprehensive peer review of NER state agency trawl surveys:**

**ASMFC Special report #35 (1994): Proceedings of the Workshop on the Collection and Use of Trawl Survey Data for Fisheries Management**

**Further, the trends, statistical properties, and utility of state agency surveys by stock are considered during stock assessment peer reviews, typically every 3-5 years**



## State Surveys: Summer flounder

**State survey data are used extensively in the summer flounder stock assessment population model**

**3 NEFSC trawl survey series with full age compositions**

**2 NEFSC larval survey series providing aggregate stock indices**

**12 State/Academic trawl survey series with full age compositions**

**1 Academic trawl survey series providing an aggregate stock index**

**4 Stand-alone surveys of recruitment (age 0/YOY only)**



## State Surveys: Summer flounder

### **With ages:**

**MADMF Spring and Fall 1978-2012**

**RIDFW Fall 1981-2012**

**RIDFW Monthly Fixed Station 1990-2012**

**CTDEP Spring and Fall 1984-2012**

**NJDFW Apr-Oct 1988-2012**

**DEDFW 30 ft Bay Mainstem 1991-2012**

**NYDEC Peconic Bay 1987-2012**

**VIMS ChesMMAP 2002-2012**

**VIMS NEAMAP Fall and Spring 2007/08-2012**

### **Aggregate:**

**URI GSO Narragansett Bay-RI Sound, RI 1959-2012**

### **Decoder Key**

MADMF—MA Division of Marine Fisheries

RIDFW—RI Department of Fish and Wildlife

CTDEP—CT Dept of Energy & Environmental Protection

NJDFW—NH Division of Fish and Wildlife

DEDFW—DE Division of Fish and Wildlife

MDDNR—MD Dept of Natural Resources

NYDEC—NY Dept of Environmental Conservation

VIMS—Virginia Institute of Marine Science

URI GSO—Univ. RI Graduate School of Oceanography



## State Surveys: Summer flounder

### **Stand-alone recruitment indices (age 0, Young-of-the Year)**

**MADMF Seine 1982-2012**

**DEDFW 16 ft Estuary 1980-2012**

**DEDFW 16 ft Inland Bays 1986-2012**

**MDDNR 1972-2012**

**VIMS Juv. Trawl 1955-2012**

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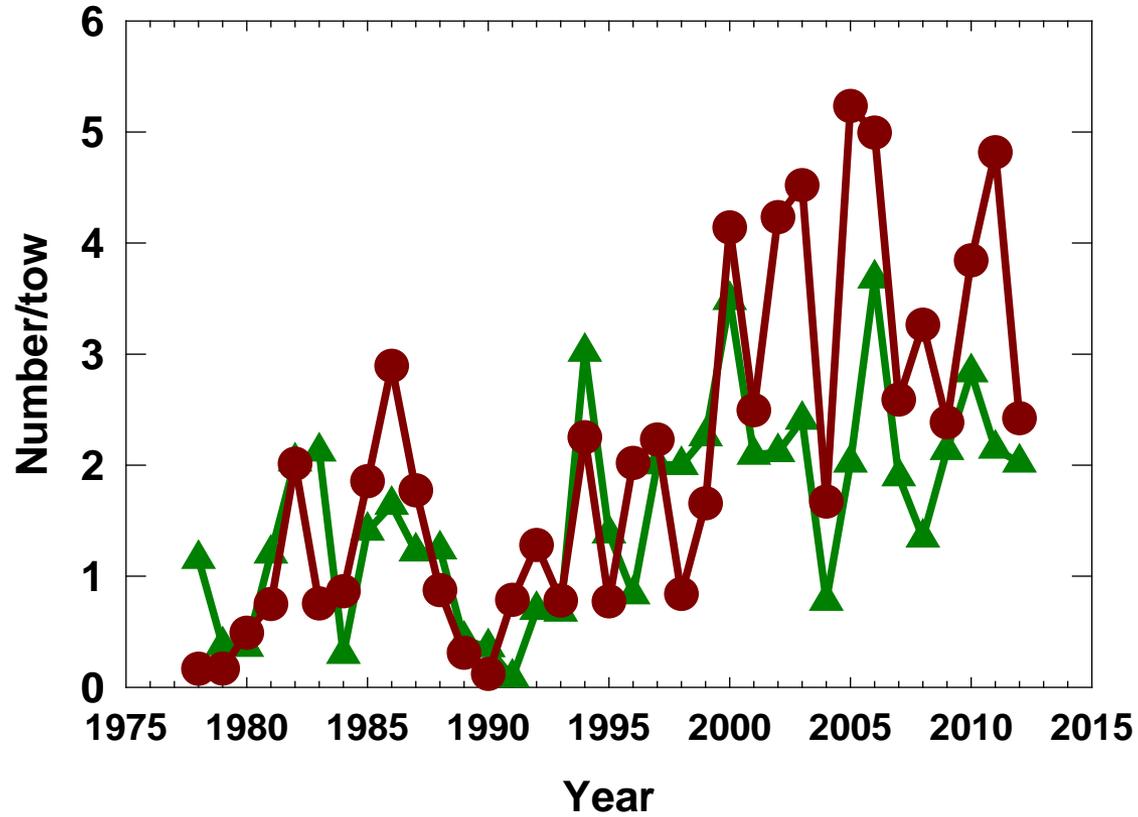
MDDNR—MD Dept of Natural Resources

NYDEC—NY Dept of Environmental Conservation

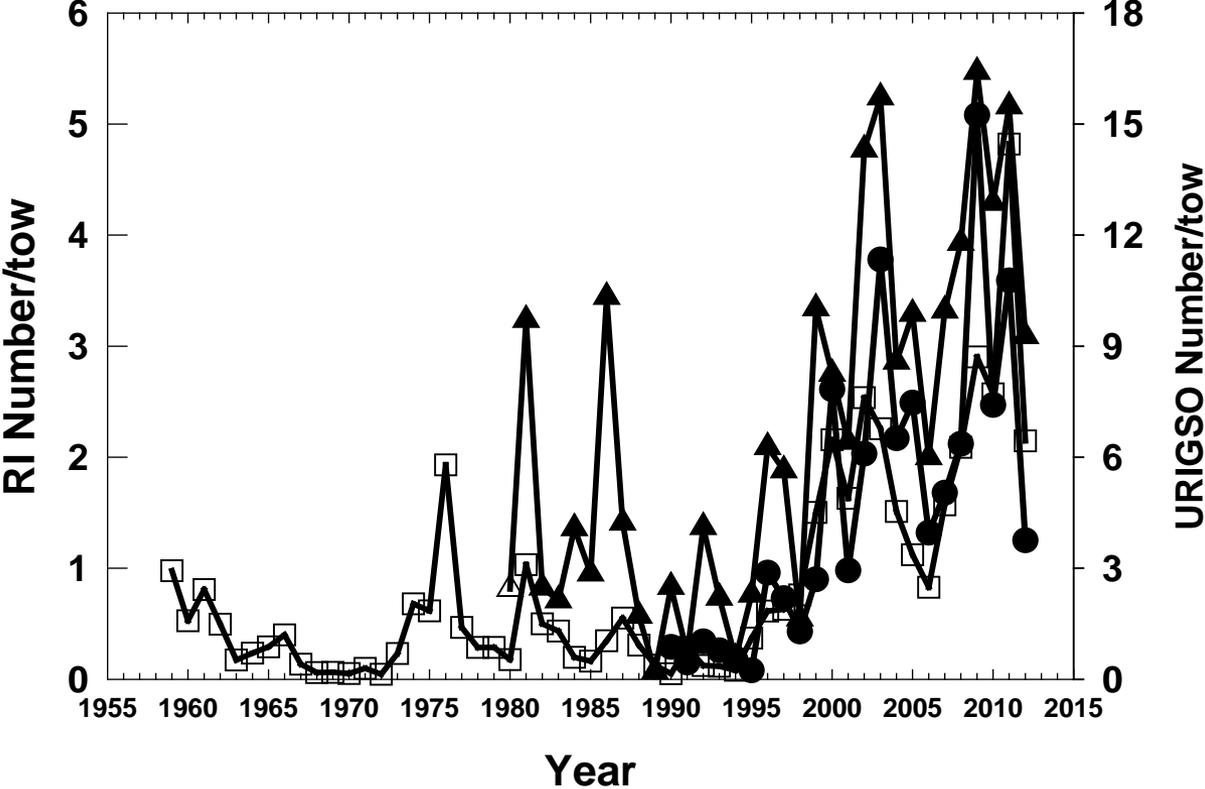
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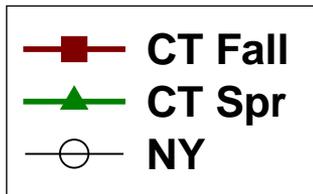
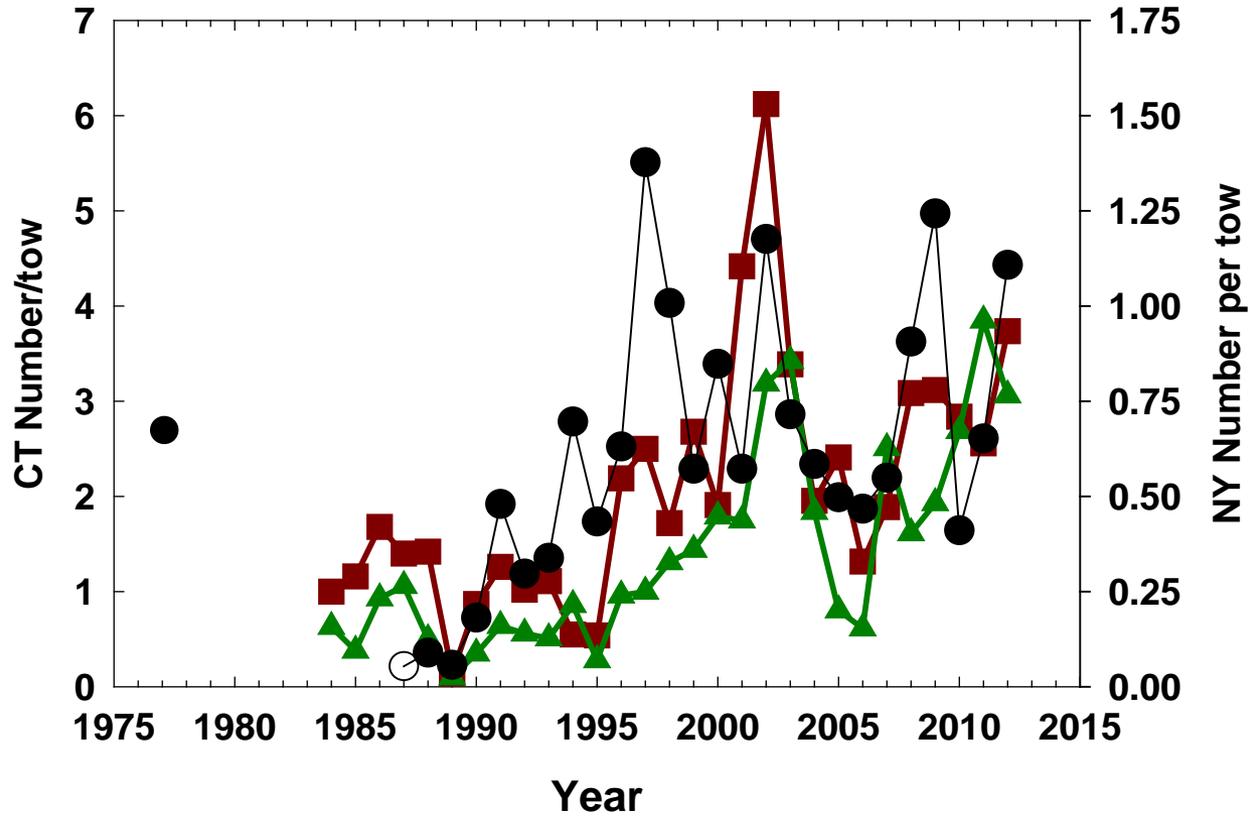
# MA Trawl Surveys



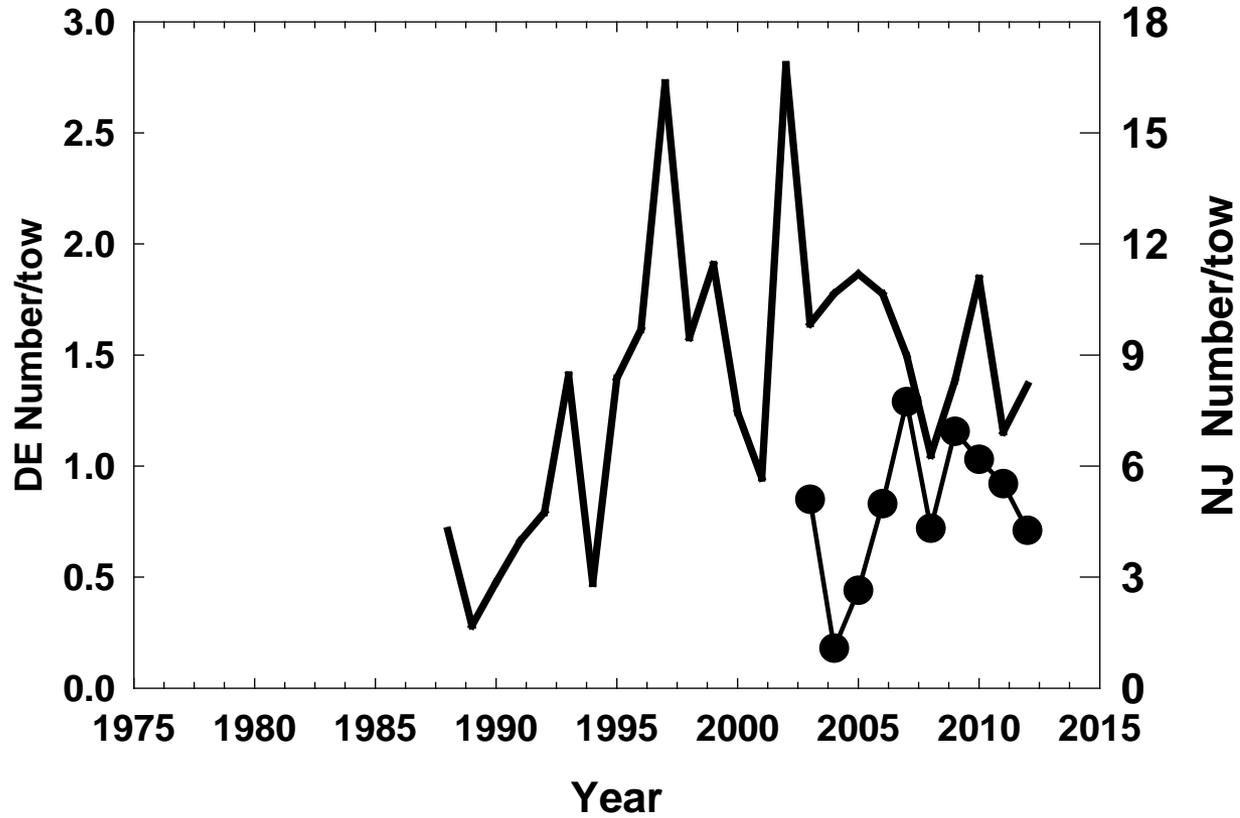
# RI Trawl Surveys



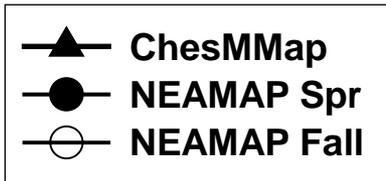
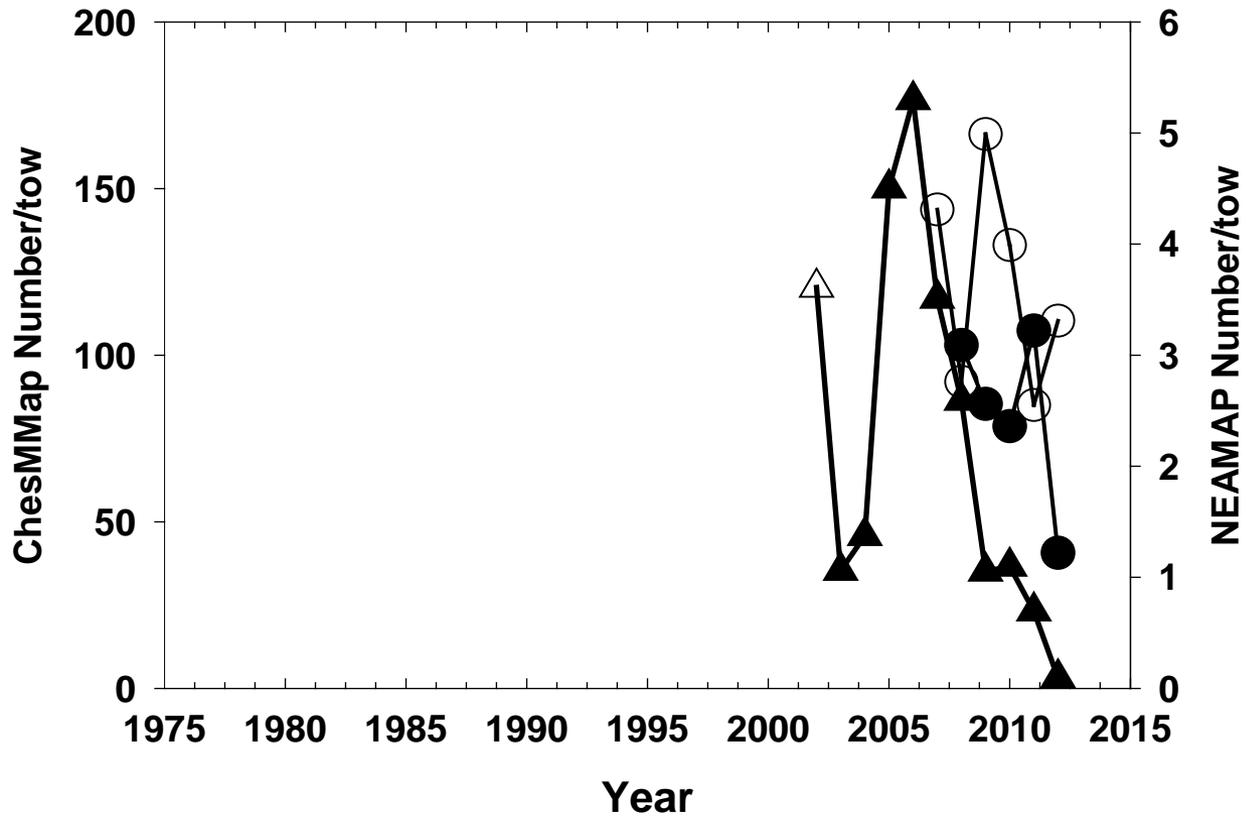
# CT and NY Trawl Surveys



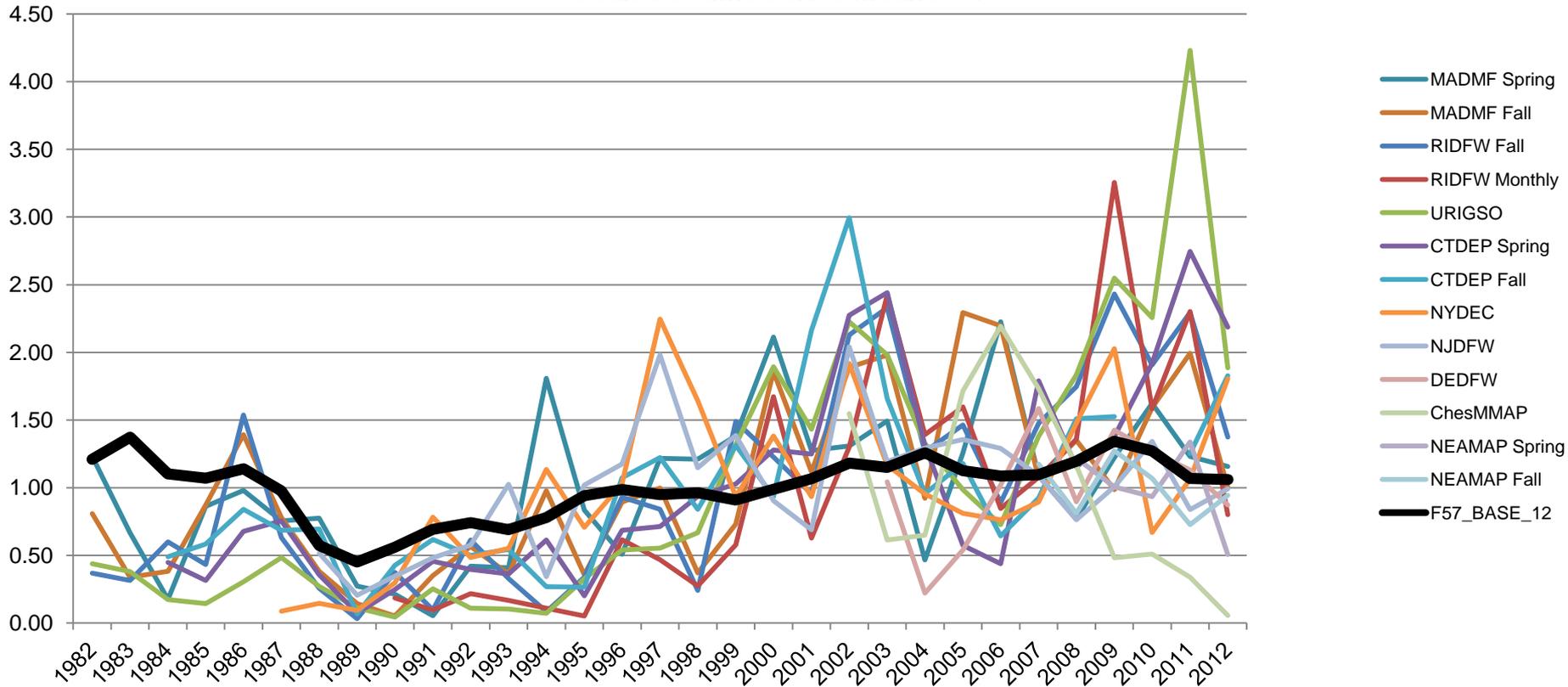
# NJ and DE Trawl Surveys



# ChesMMap and NEAMAP Trawl Surveys



**Summer flounder  
State/Academic Aggregate Indices  
Scaled to time series means = 1**



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## State Surveys: Summary

### **Strengths**

**Sample inshore areas that are not accessible by NEFSC surveys**

**Gather valuable biological data**

**Some (NJ, RI) are conducted year-round (temporally synoptic)**

**When integrated in models with appropriate weighting, provide useful indices of abundance**



## State Surveys: Summary

### **Challenges**

**Most are individually limited in geographic range**

**Some sample a limited length-age range**

**Some may accurately reflect local abundance, but are weakly correlated with coastal trends (e.g., recent ChesMMAF)**



## State Surveys: Summary

### **Potential Solutions**

**Modeling approaches to integrate and standardize (GLM, GAM)**

**Expansion of NEAMAP approach / philosophy**

**Common gear, sampling protocols**

**Calibration across vessels**