QUARTERLY PROGRESS MEETING – November 2019
Chesapeake Bay Program

Forage Fish

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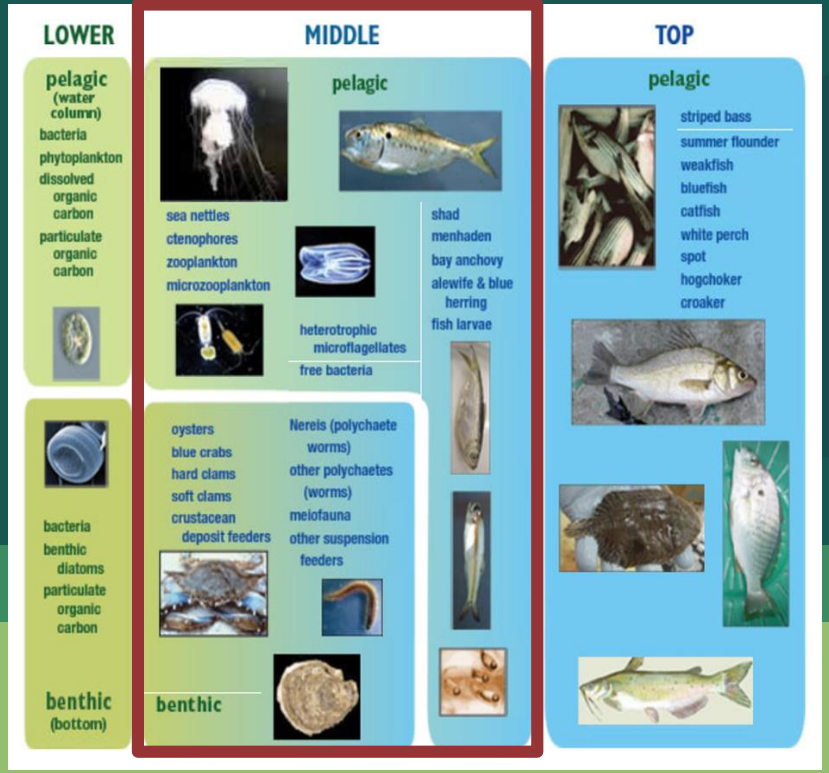
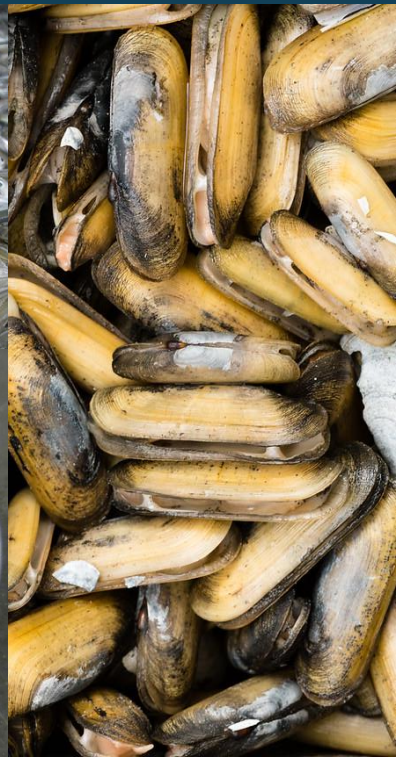
Through the Chesapeake Bay Watershed Agreement*, the Chesapeake Bay Program has committed to…*



Goal: Sustainable Fisheries

Outcome: *Continually improve the Partnership's capacity to understand the role of forage fish populations in the Chesapeake Bay. By 2016, develop a strategy for assessing the forage fish base available as food for predatory species in the Chesapeake Bay.*

How You Can Help



- Funded relevant research projects
- Indicator development challenges
- Engage managers and other CBP partners

Learn

What have we learned in the last two years?

Important Forage Species for the Chesapeake Bay

Representative Predators

Five predator species were selected by the Steering Committee of the 2014 Forage Workshop to serve as representative indicator species for the range of predators and lifestyle types in the Chesapeake Bay. The selected species included:

Striped Bass
anadromous, piscivore

Summer Flounder
mesohaline-polyhaline, piscivore

Atlantic Croaker
oligohaline-polyhaline, omnivore

Clearnose Skate
polyhaline, omnivore

White Perch
oligohaline, omnivore

To identify important forage in the Chesapeake Bay ecosystem, an analysis of a long term, fishery-independent survey (ChesMMAP) was conducted to quantify the gut contents of five representative predator species.

Forage species were considered important if the forage taxon or group composed at least 5% by wet weight of a predator's diet in at least one of the five ChesMMAP seasonal sampling cruises taken during any year of the study (on right).

Forage species are critical to sustaining production of economically and ecologically valuable fish species in the Chesapeake Bay.

Key Forage*

Bay Anchovy

Polychaetes

Mysids

Amphipods and isopods

Weakfish (juveniles)

Spot (juveniles)

Mantis shrimp

Razor clams

Sand shrimp

Atlantic croaker (juveniles)

Macoma clams

* Based on wet weight of prey in stomach analysis of 5 representative predators in the Chesapeake Bay (ChesMAPP)

Additional Important Forage

Managed forage species

Atlantic menhaden

Blue crab

Historically important

Shad & river herrings

Forage of Upriver Predators

Small bivalves

Atlantic Silverside

Mummichog

Additional species were added to the list of important forage by the participants of the Forage Workshop to include forage of under-represented freshwater predators, historically important forage, and managed forage (additional important forage above).

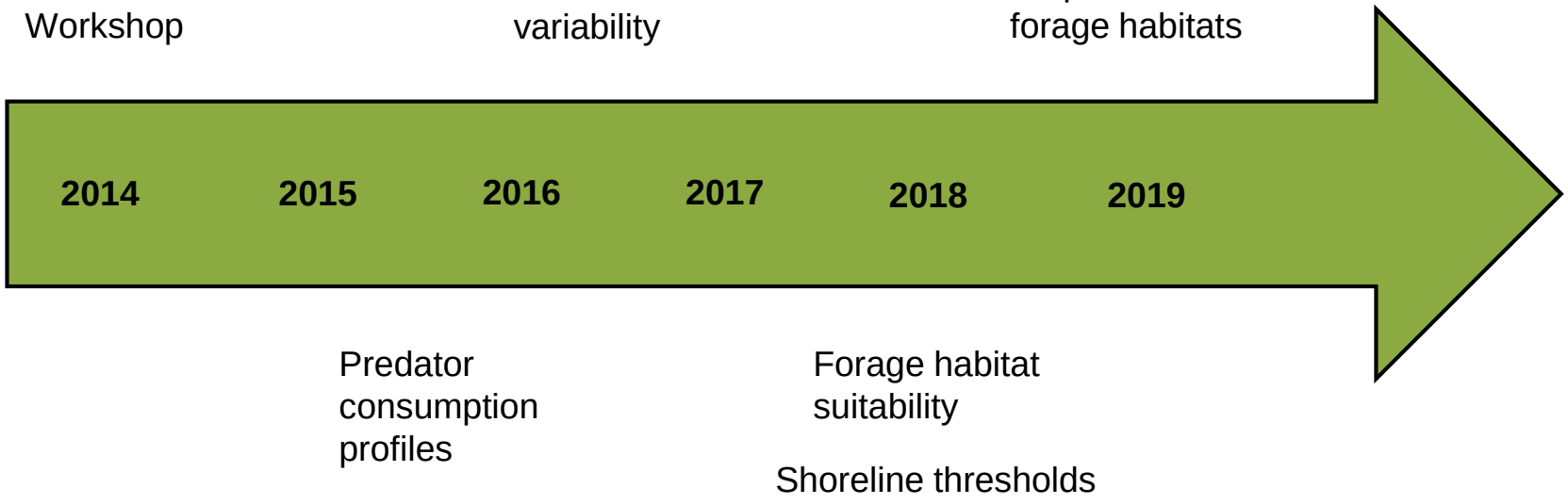
For more details on this analysis, please view the Scientific and Technical Advisory Committee's 2014 Forage Workshop Report.

Above data is based on the 2014 Scientific and Technical Advisory Committee Forage Workshop

Successes and Challenges

- GIT/NOAA funded 3 studies relevant to Chesapeake Bay forage
- Ongoing citizen science project to examine habitat use by forage fishes
- Challenge developing meaningful indicators

What is our Expected and Actual Progress?



On the Horizon

- Application of study results to indicator development
- Improved understanding of forage fish habitat use and productivity

A

Adapt

How does all of this impact our work?

Based on what we learned, we plan to …

Develop a simple suite of forage indicators

Help

How can the Management Board lead the Program to adapt?

Help Needed

- Linking forage indicators to other CBP outcomes
  - Who? What? How?
- Evaluate need for shallow-water monitoring
- Analytical training opportunities

Discussion