

# Invasive Catfish in Maryland waters of Chesapeake Bay

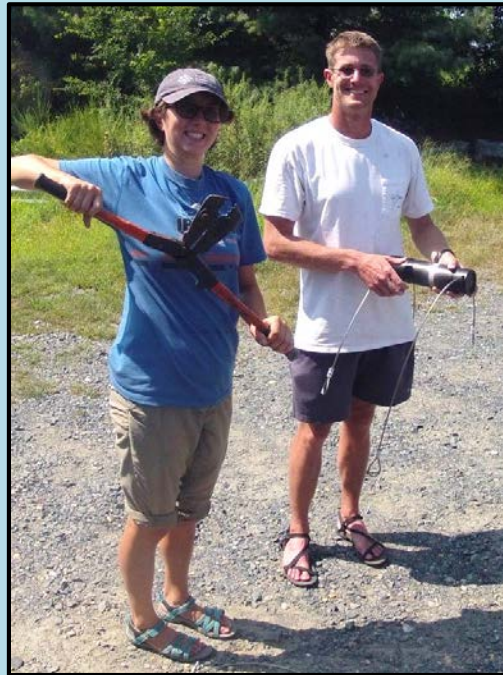


Dr. Matt Ogburn

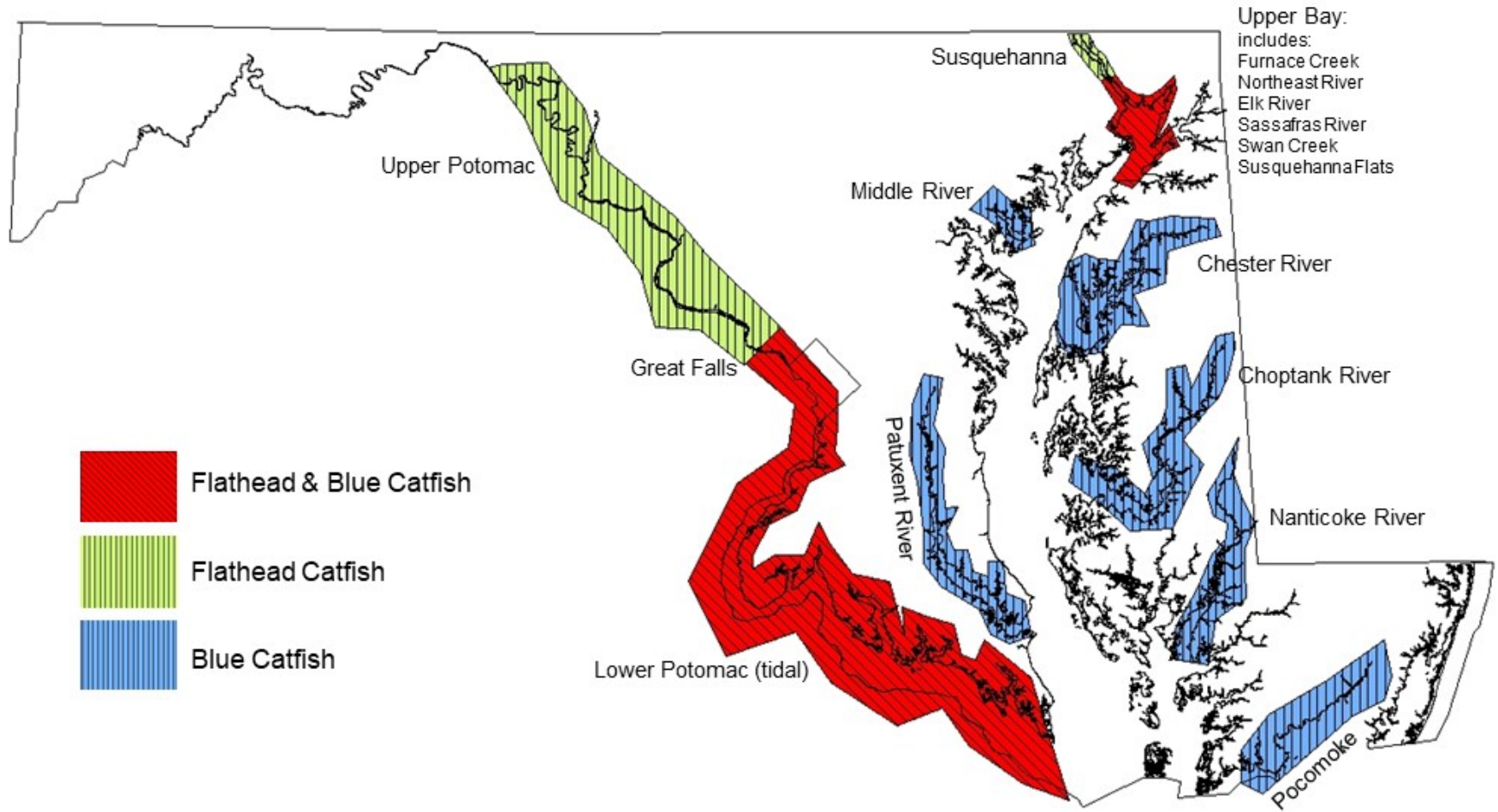
SERC Fisheries Conservation Lab (  @SERCfisheries )

# Acknowledgements

- Brooke Weigel, Miranda Marvel, Travis Flock, Angela Trenkle, Tuck Hines, Rob Aguilar, Midge Kramer, Mike Goodison, Paige Roberts, Kim Richie, Keira Heggie, Will McBurney, Laura Patrick, Patrick McCabe, Charles Bangley, MD DNR (esp. Mary Groves), DE DNREC, DDOE
- Funding: NOAA Chesapeake Bay Office, Smithsonian Institution, Edna Bailey Sussman Fund



# Maryland verified locations of invasive catfish



Blue catfish first reported in MD in late 1990s

# Research Questions

Are blue catfish impacting native fish communities and competing with white catfish?

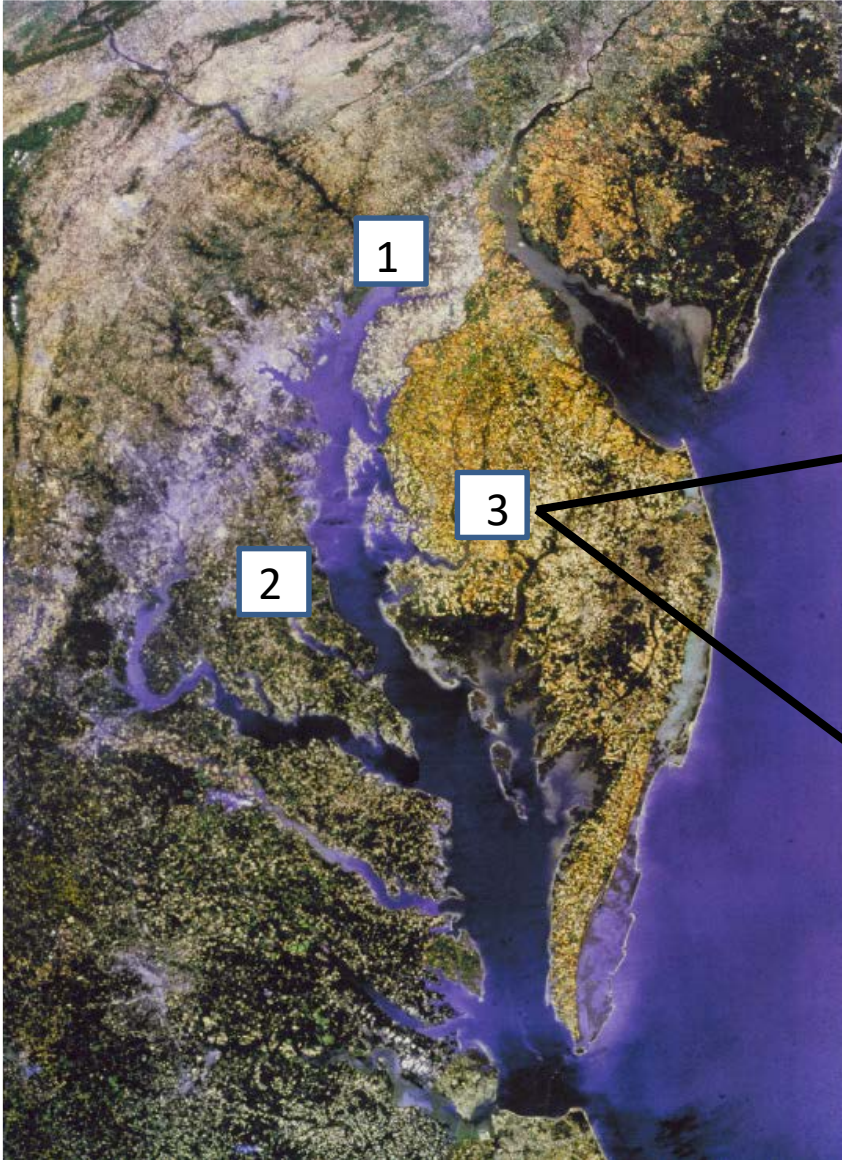
Are blue catfish as mobile in Chesapeake Bay tributaries as they are in their native rivers?

How do salinity and other environmental factors affect habitat use?



# Impacts on fish communities in Maryland – 2012-2013

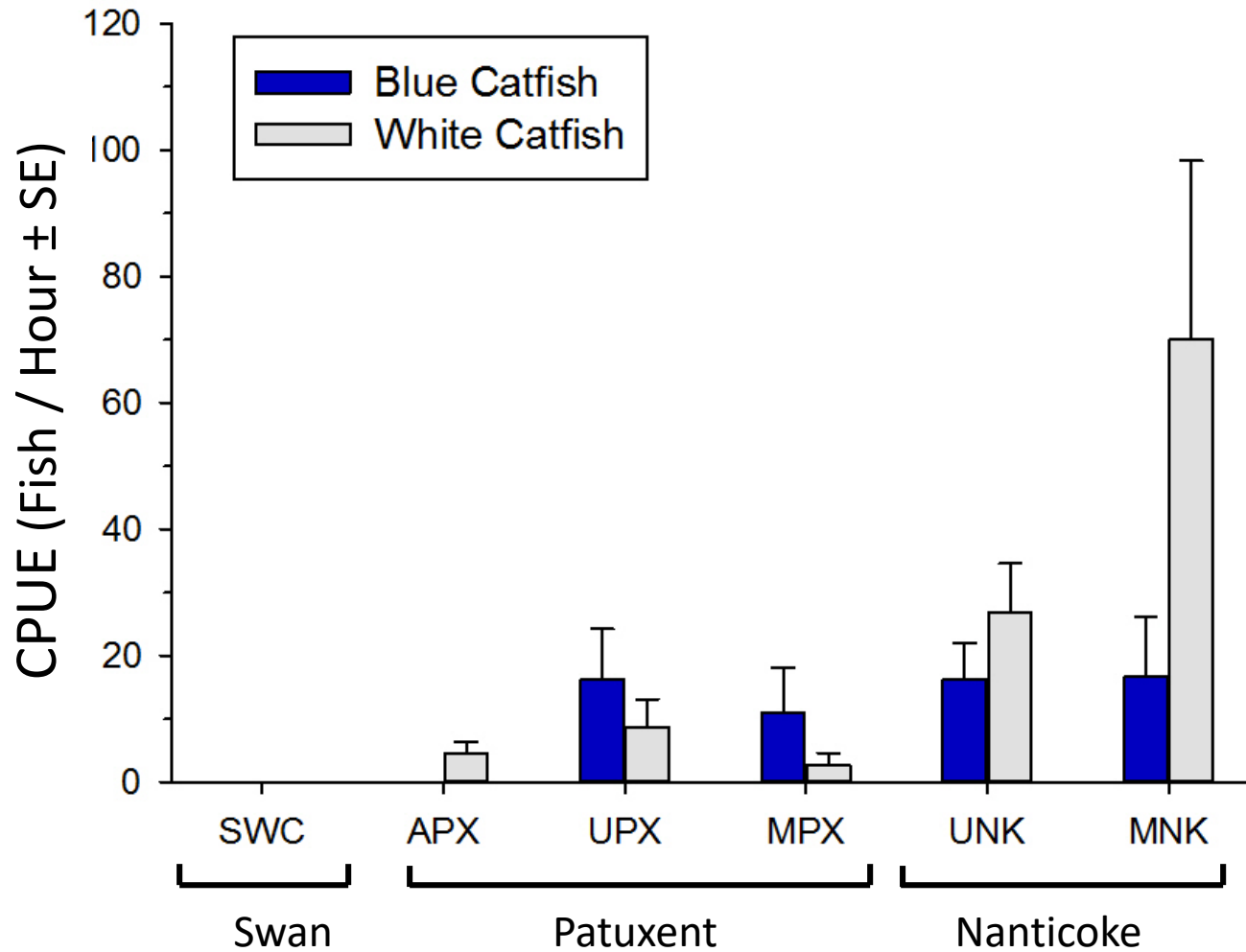
1. Upper Bay - Susquehanna Flats and Swan Creek
2. Patuxent River
3. Nanticoke River / Marshyhope Creek



Each site is broken into quadrats for randomized sampling



# Blue and White Catfish Abundances



Ogburn, unpublished data

# Example Blue Catfish Prey Items



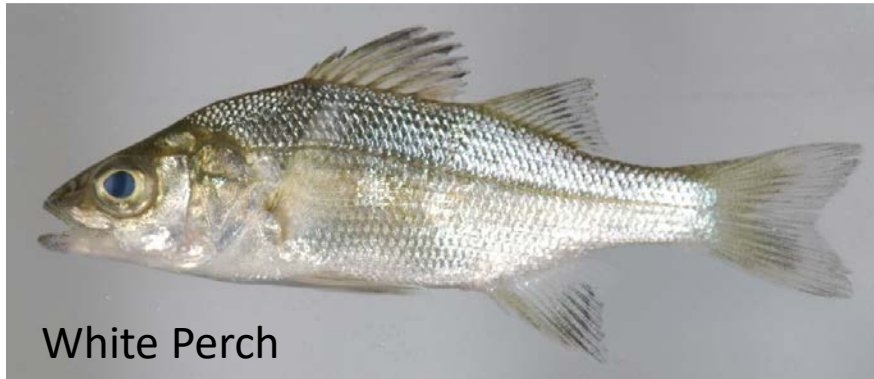
Chironomid larvae



Bivalves (*Corbicula fluminea*)



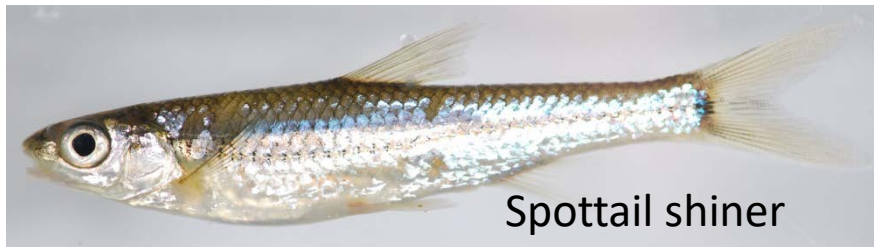
Amphipods (*Gammarus spp.*)



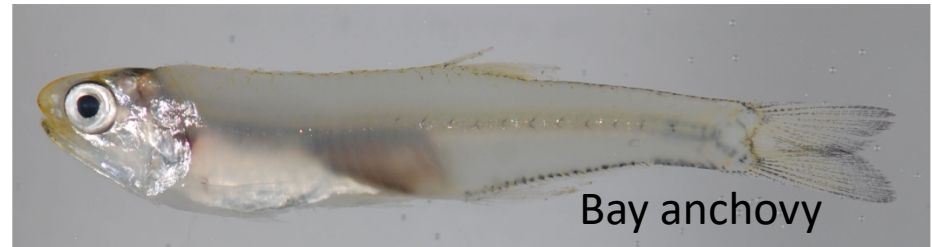
White Perch



Pumpkinseed



Spottail shiner



Bay anchovy



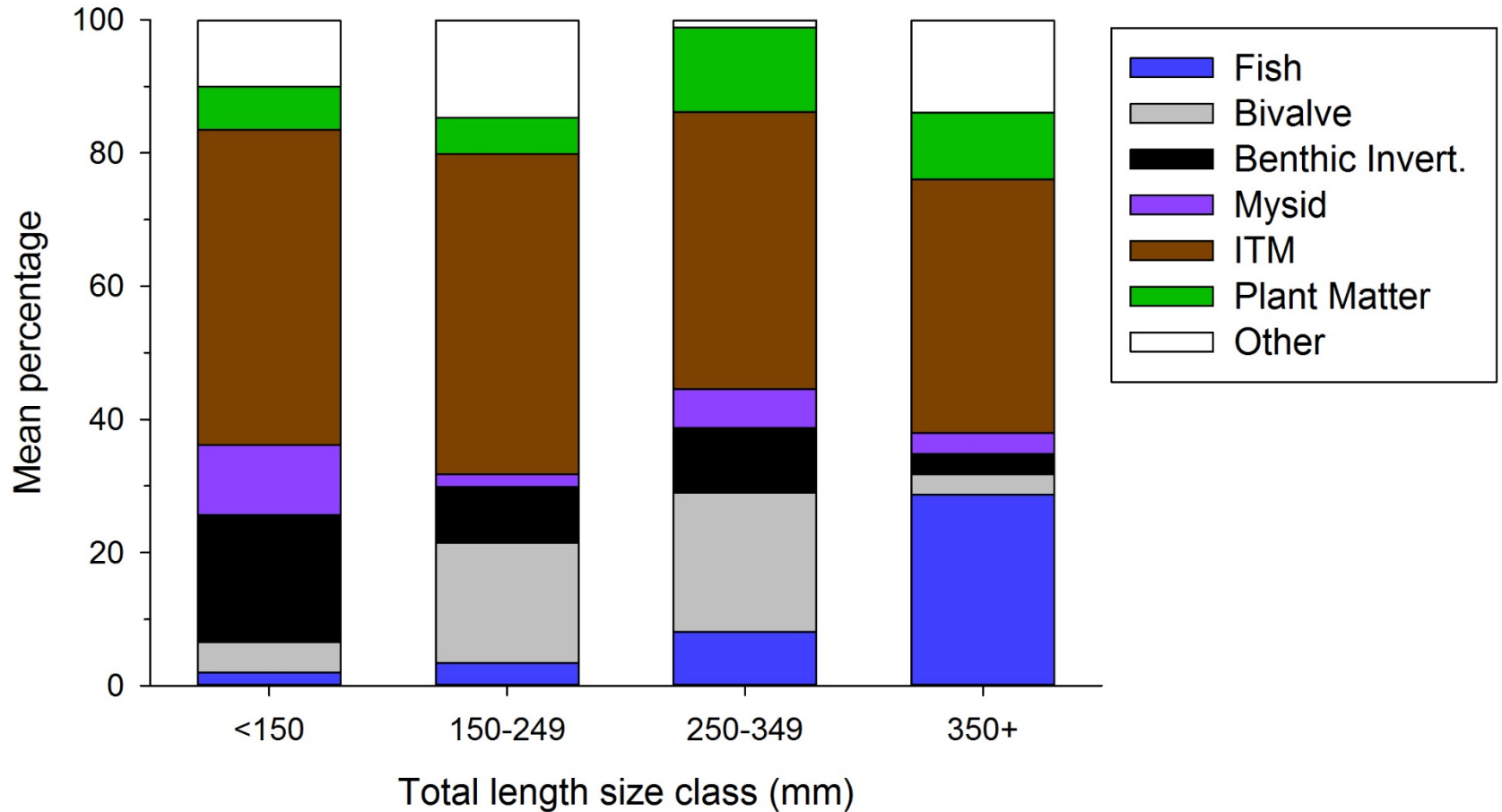
# Chesapeake Bay Barcode Initiative

<https://serc.si.edu/projects/species-diversity-chesapeake-bay>

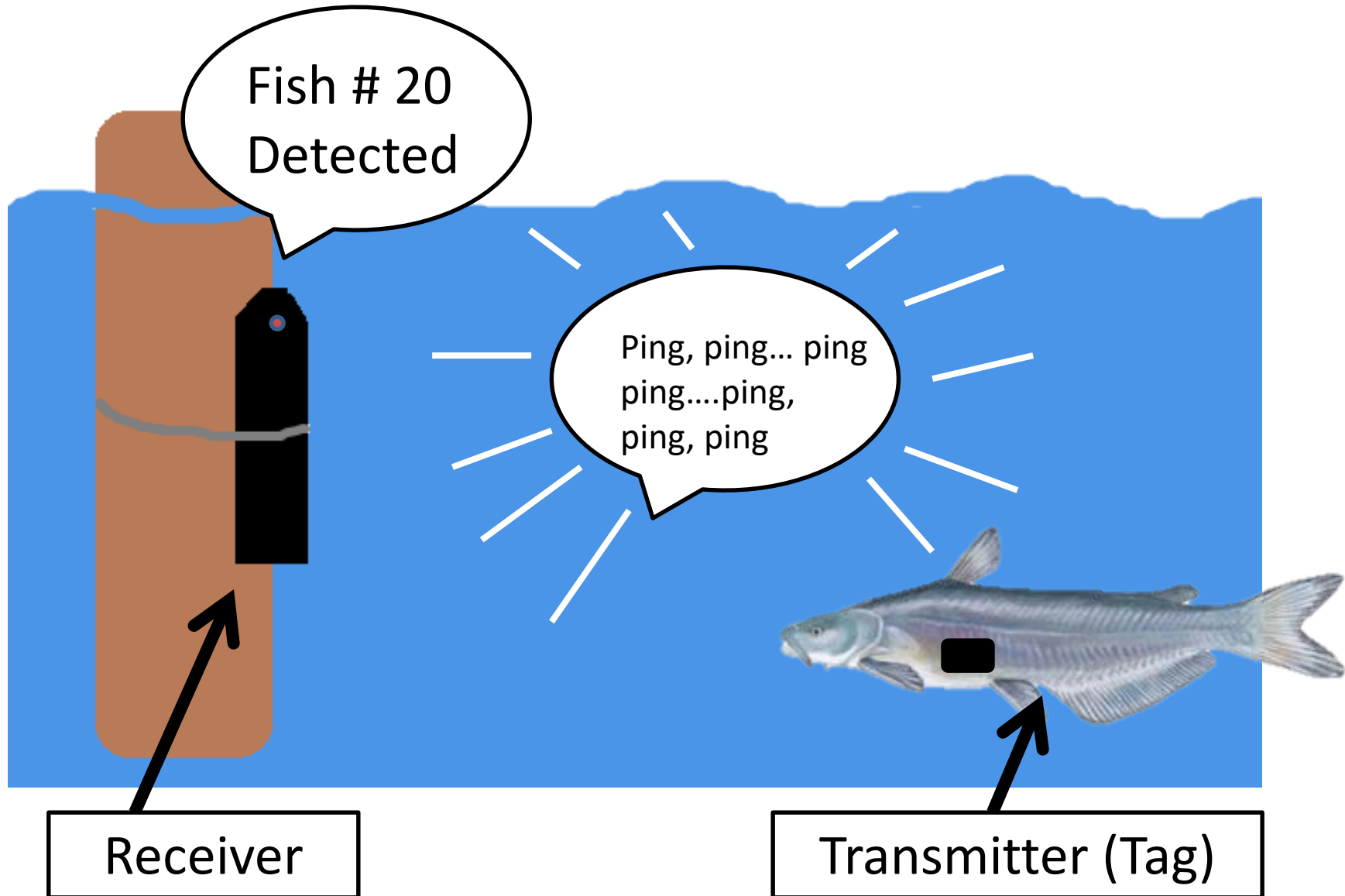




# Blue Catfish Diet Analysis



# Tracking Movement in the Patuxent River



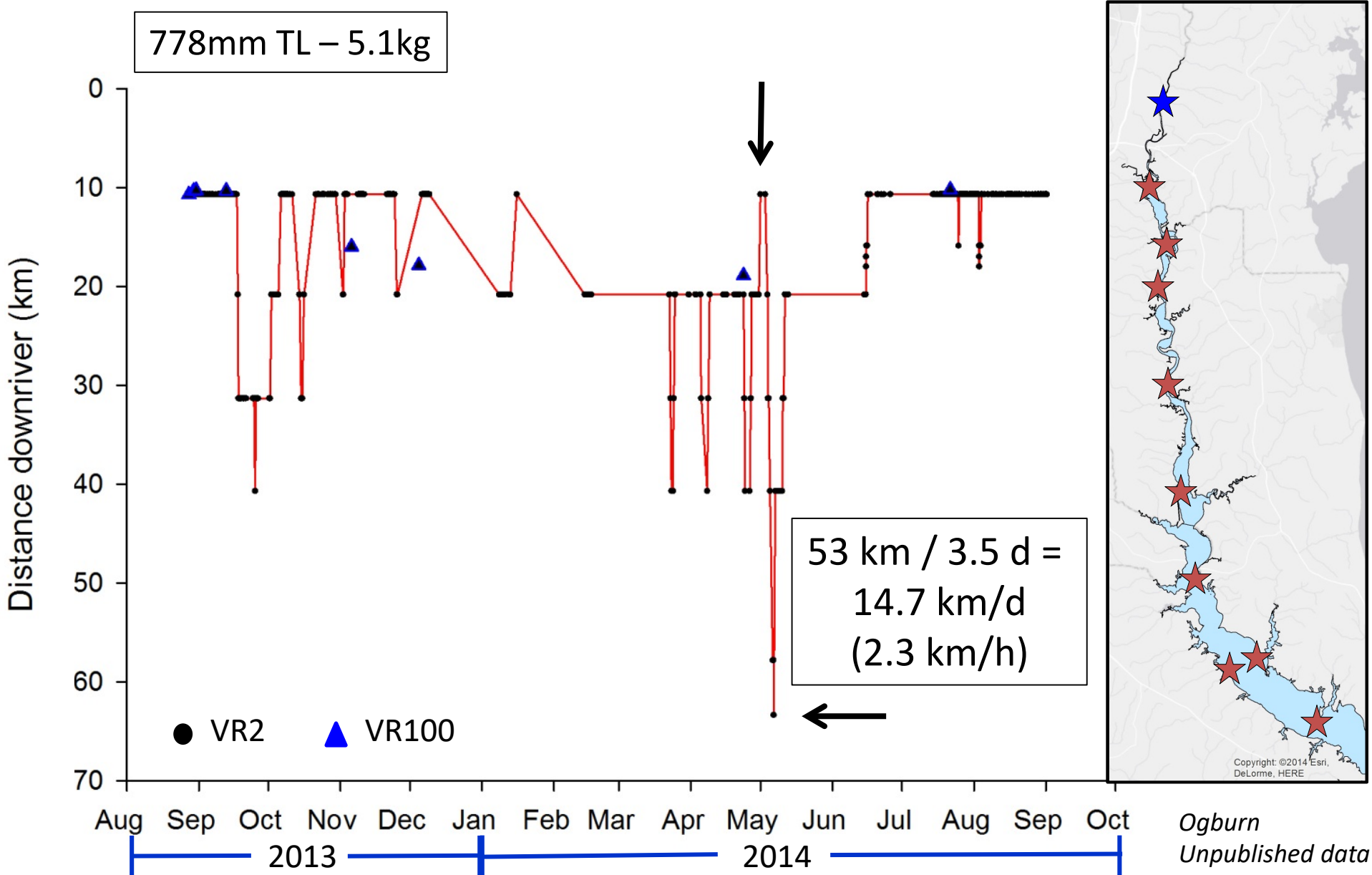


*MovementofLife.si.edu*

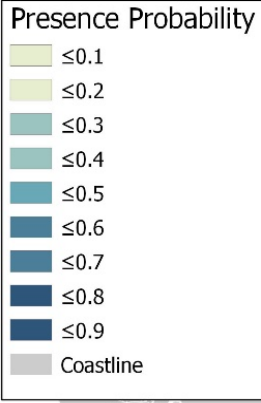
Twitter: @SmithsonianMoL



# Habitat Use and Movement of Fish #11020



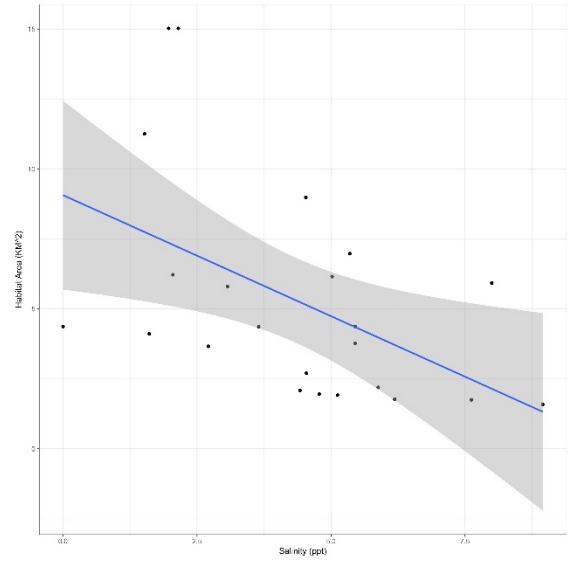
# Presence Probability of Blue Catfish May 1, 2011



Created By: Patrick McCabe  
Date: 12/11/2018  
Coordinate System: GCS WGS 1984

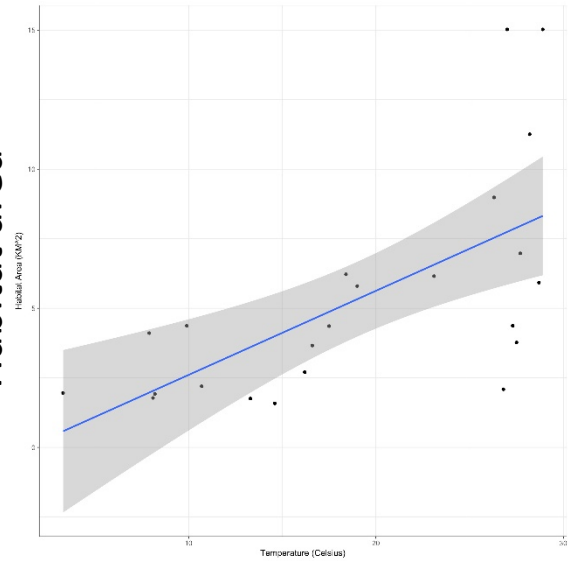


Habitat area



Salinity

Habitat area



Water temperature

# Research Findings and Gaps

- Blue Catfish diet overlaps with white catfish at small sizes, and shifts to mostly fish at larger sizes
- Individual Blue Catfish spend much of their time in freshwater tidal areas but frequently move along the length of rivers and into the bay
- MD needs more specific info on spawning locations and other aggregations where they can be targeted
- Lack of data on abundance, which is needed to track success of management efforts