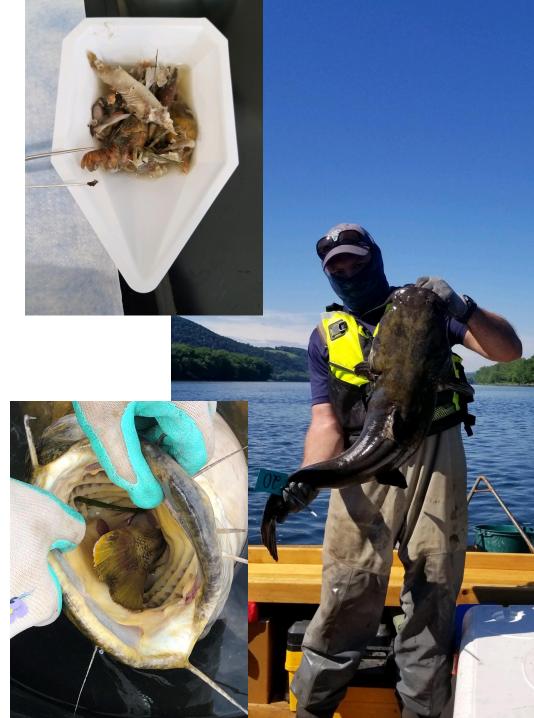
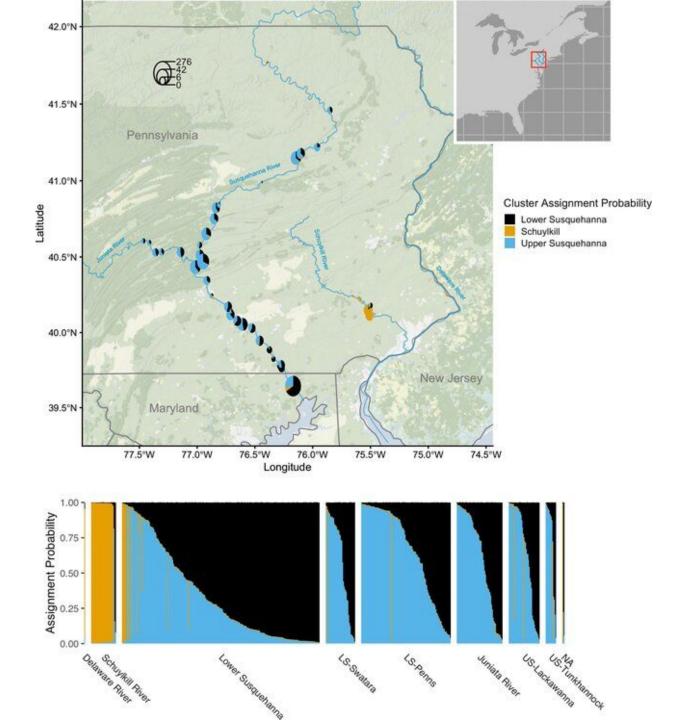
Multidisciplinary research update for Flathead Catfish in the Susquehanna River Basin

Geoff Smith
Pennsylvania Fish & Boat
Commission

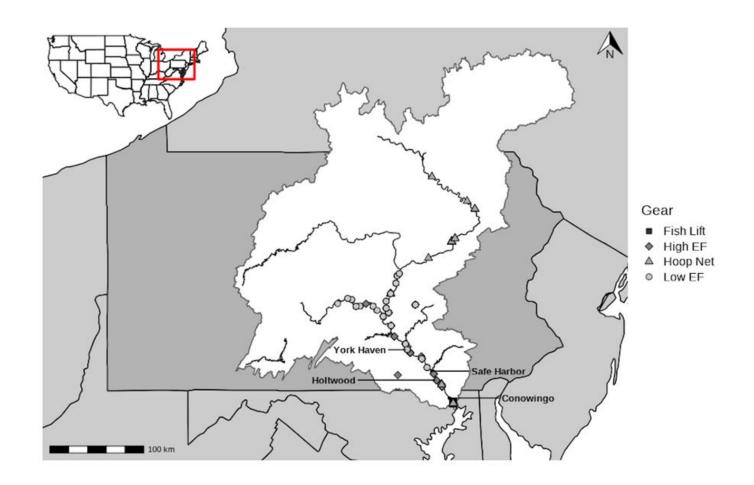


# Structural clustering of subpopulations and individual assignments

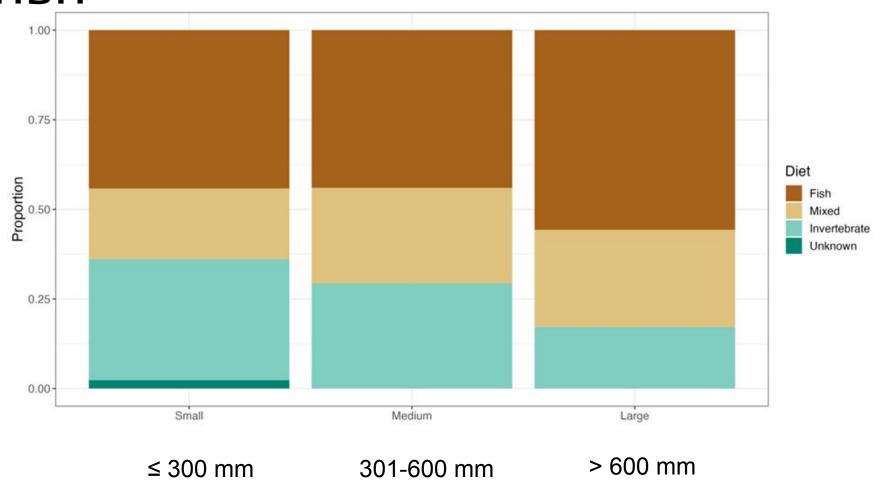
Waraniak et al. 2024. J of Fish Bio



## Study area – diet

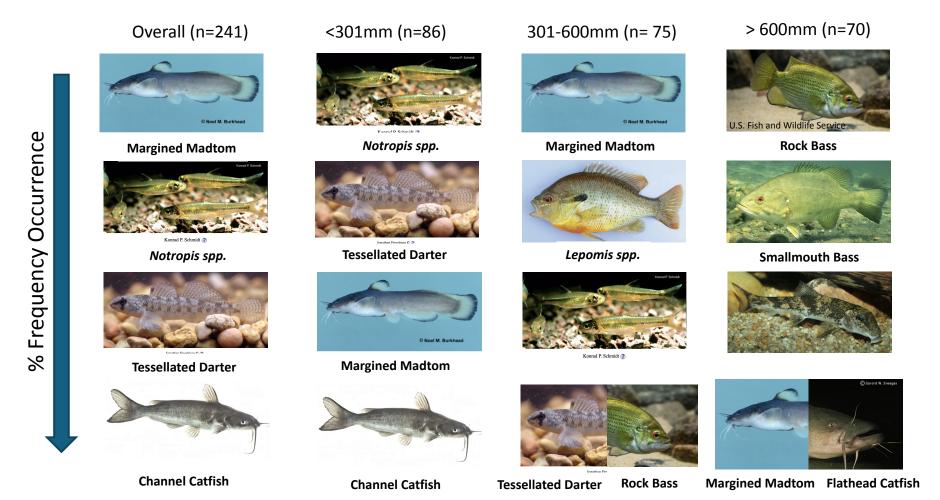


Proportion of prey types in diets of different length categories of Flathead Catfish

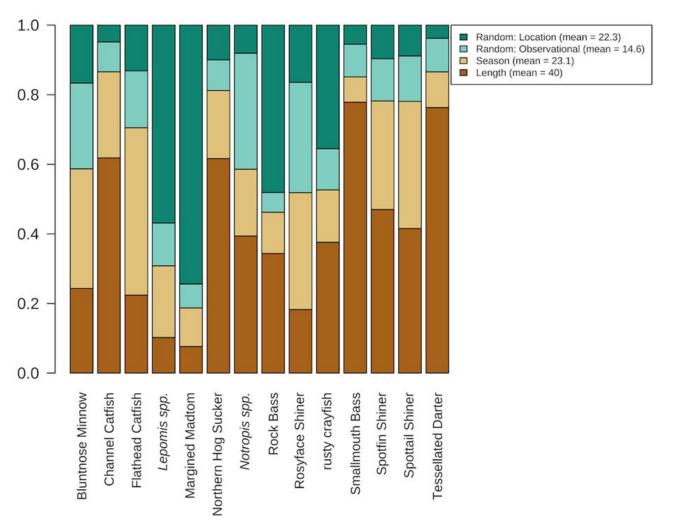


#### Frequency of occurrence of prey species in diets of different length categories of Flathead Catfish

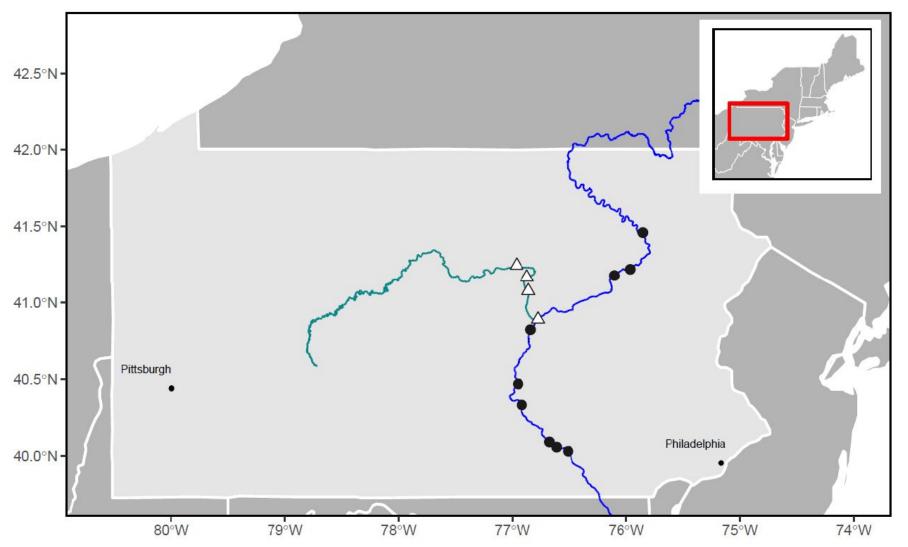
\* Same %FO



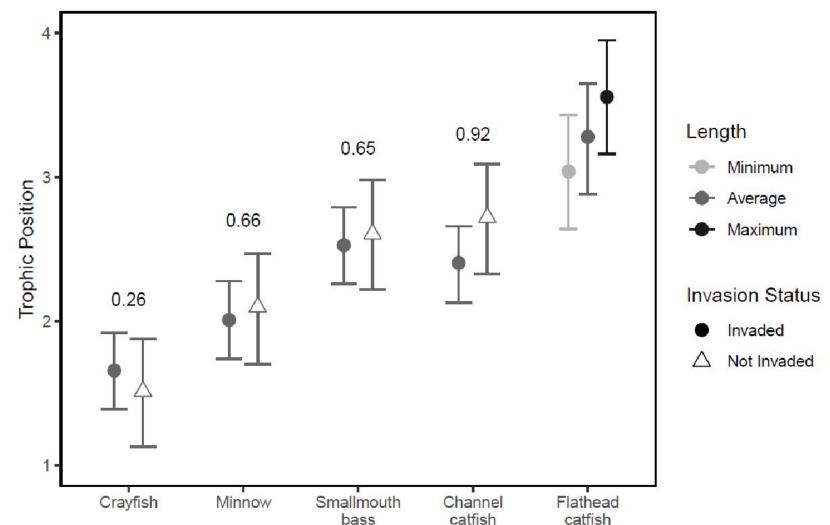
## Proportion of variance explained by fixed (length, season) and random (location, observation) effects of prey items in Flathead Catfish diets



### Study area – stable isotope analysis



## Change in trophic position



## Standard ellipse areas (corrected) for food web components

