

# Dynamics and role of non-native Blue Catfish in Virginia's tidal rivers

Project Update December 2014  
For GIT

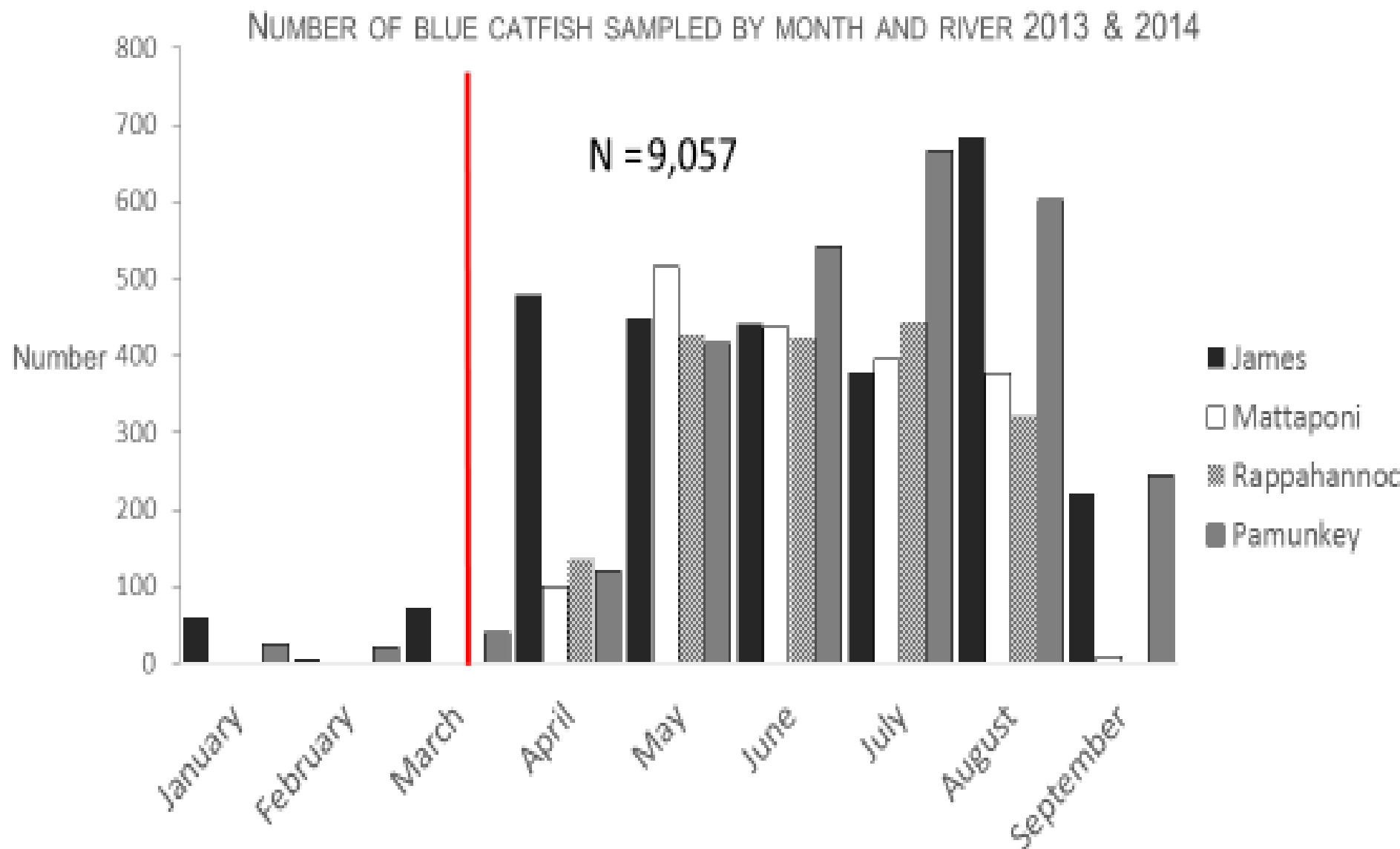
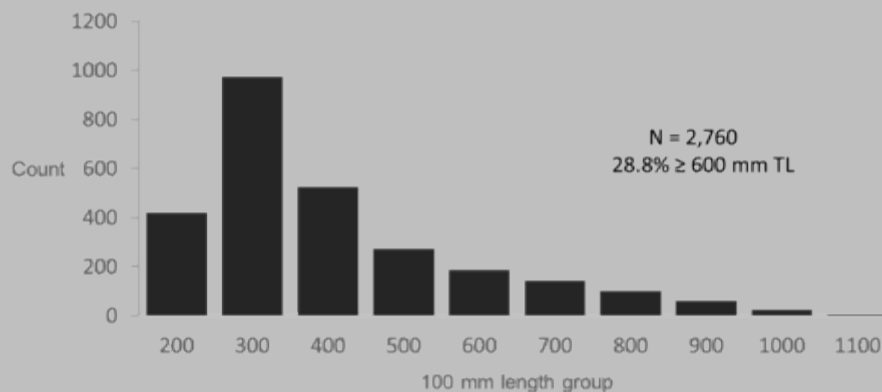


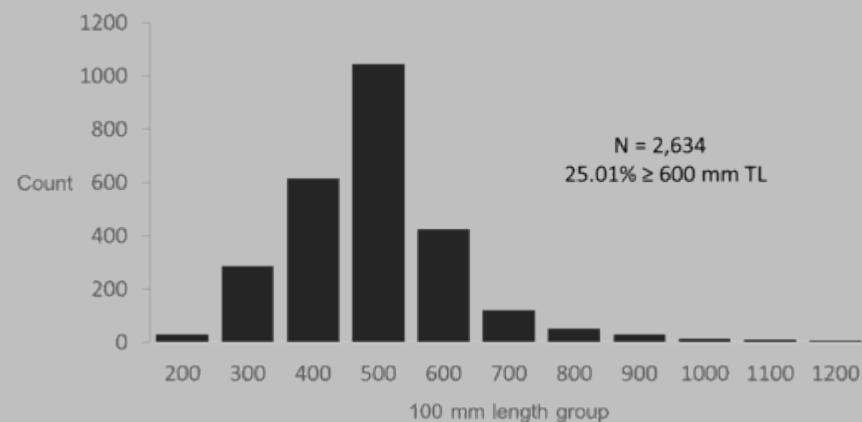
Figure 1. Total number of blue catfish sampled by month and river. Diets have been extracted from 9,057 catfish date with 4,935 containing diet items (54.48%). Low-frequency electrofishing becomes a possibility at the vertical red line, when water temps exceed 18 °C (Bodine and Shoup 2010).

River	N	% $\geq 600$ mmTL
James	2,760	28.8
Pamunkey	2,634	25.0
Mattaponi	1,832	18.5
Rappahannock	1,739	6.4

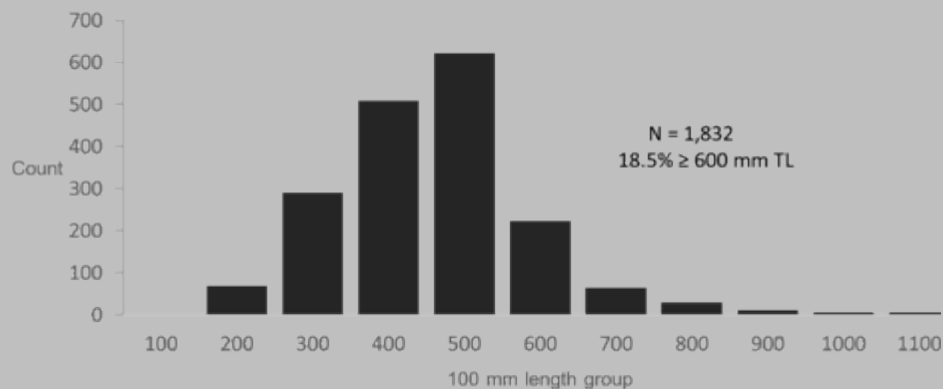
James River



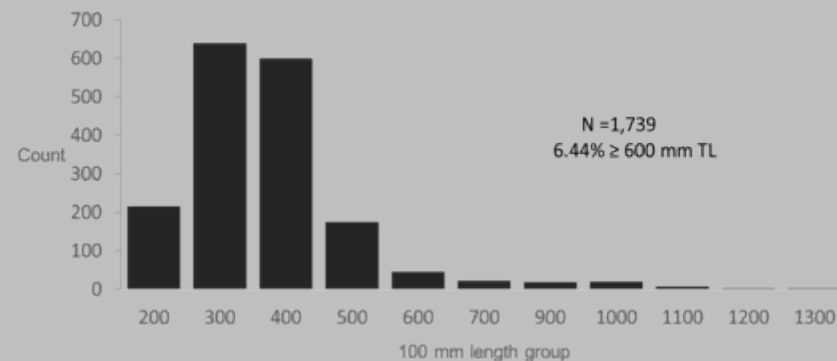
Pamunkey River



Mattaponi River

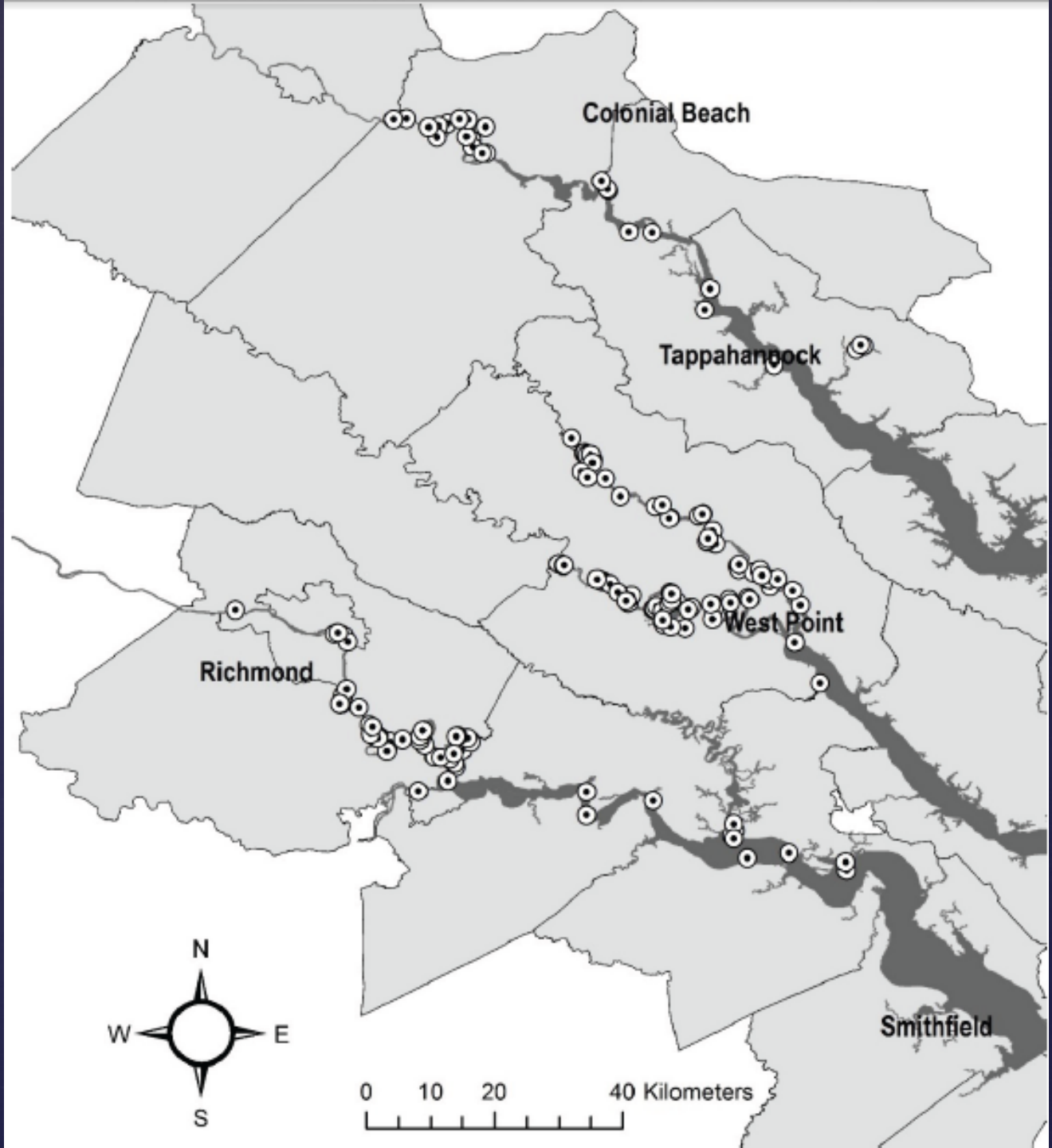


Rappahannock River



Blue catfish  
sampling  
locations

Not up to  
date





What are they eating?



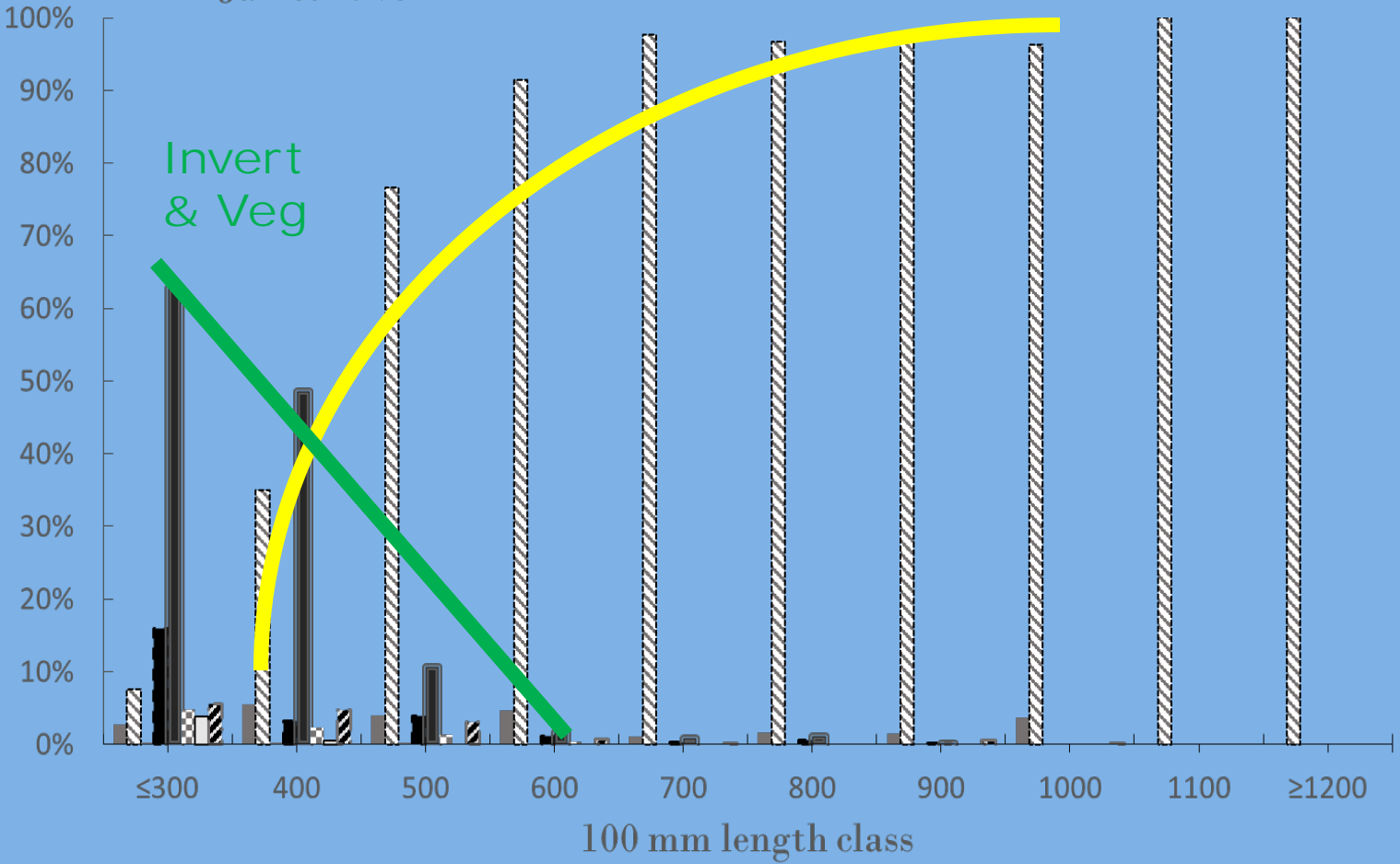


Percent by Weight

James River

Fish

Invert  
& Veg



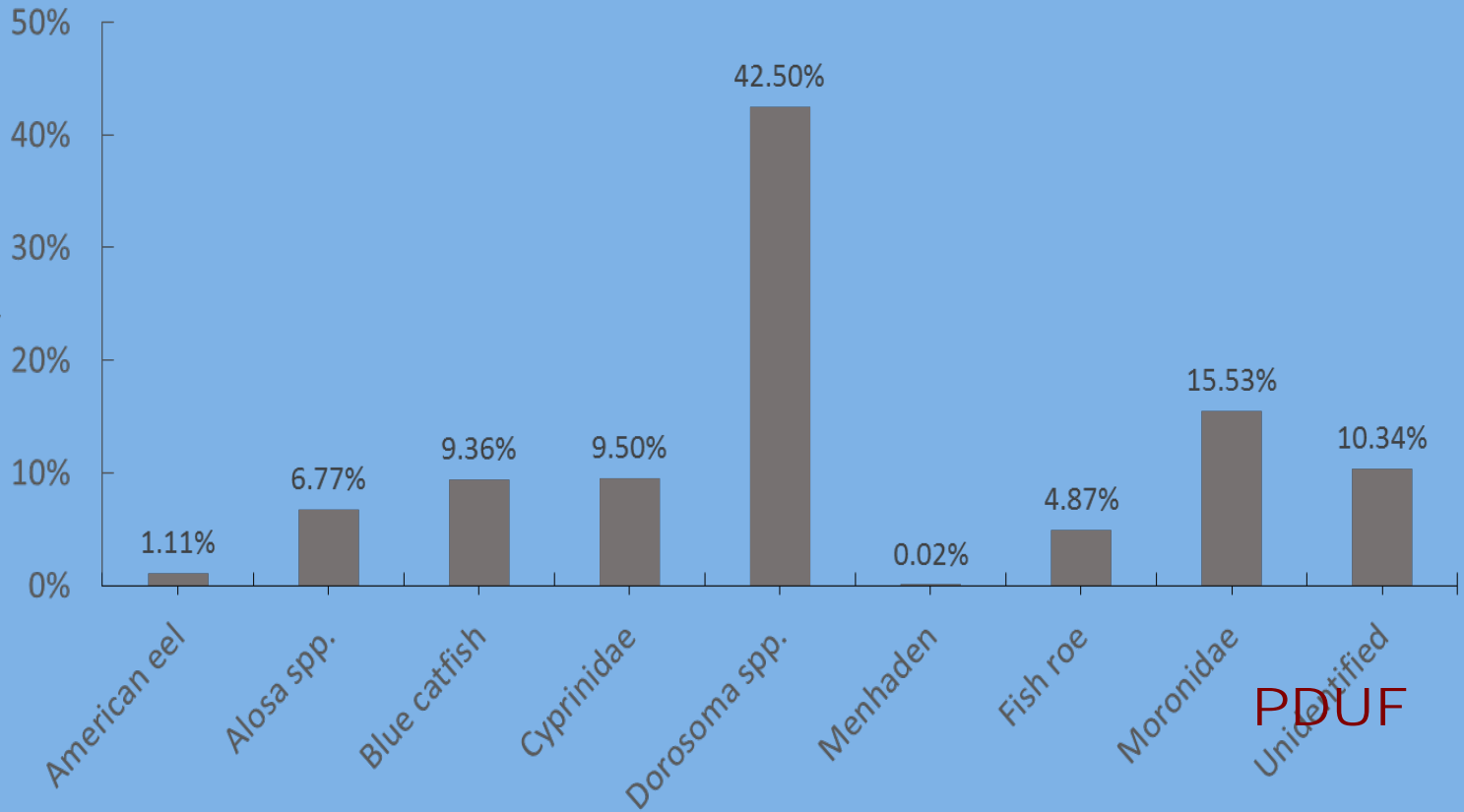
Crustacean Fish Mammal Mollusk Vegetation Other Amphibian/Reptile Debris and Detritus





# James River

Percent by Weight

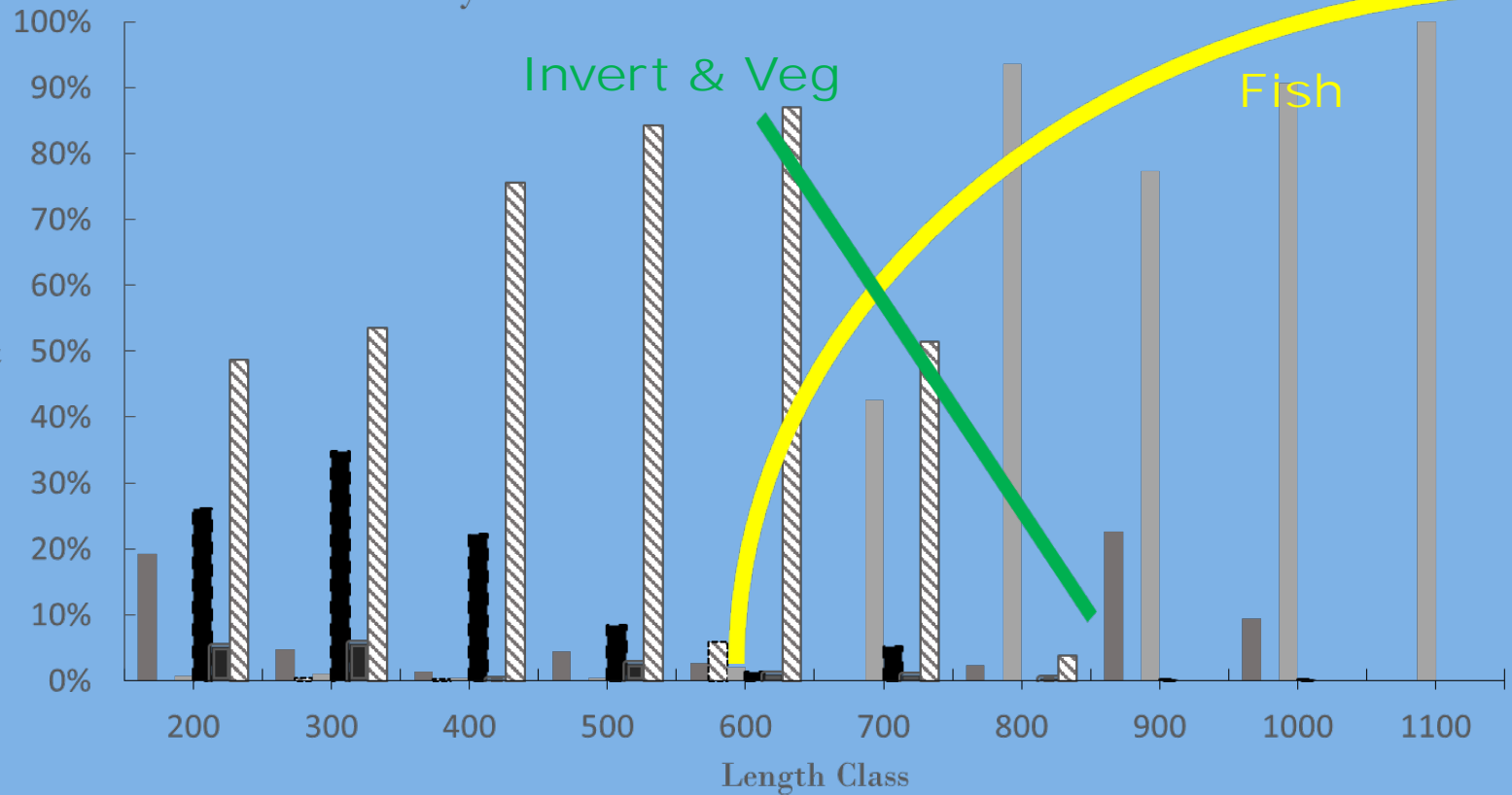


PDUF



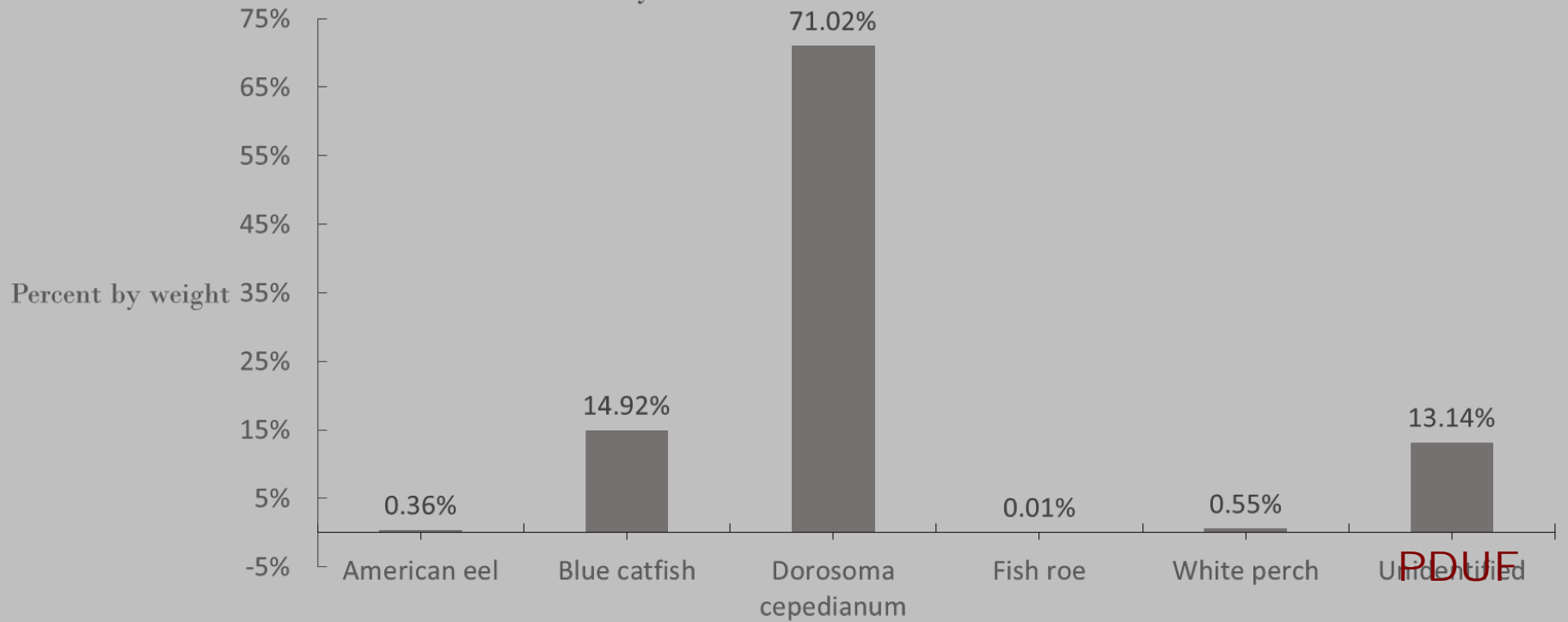
# Pamunkey River

Percent by Weight



Crustacean Debris and Detritus Fish Mollusk Other Vegetation

## Pamunkey River

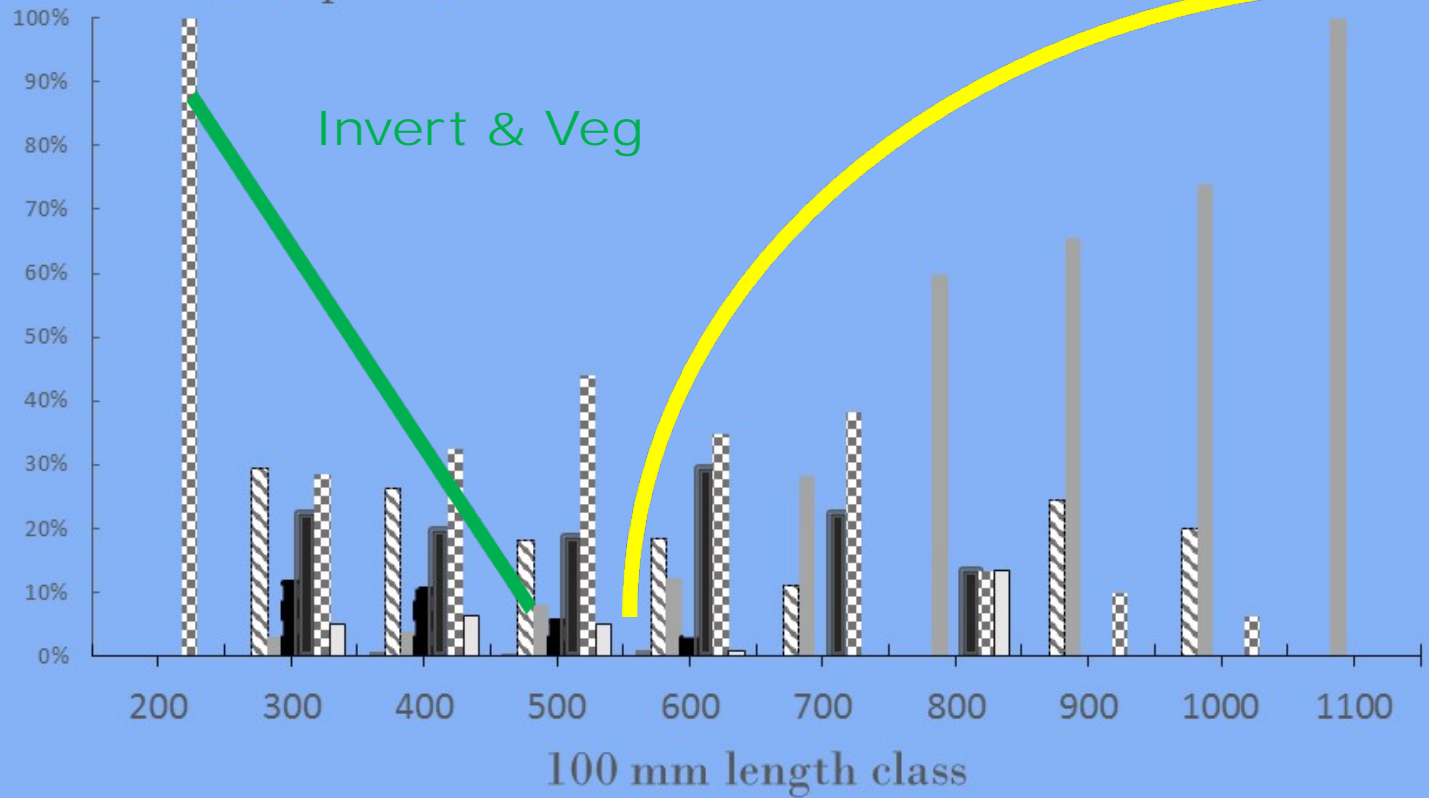


# Mattaponi River

Percent by weight

Fish

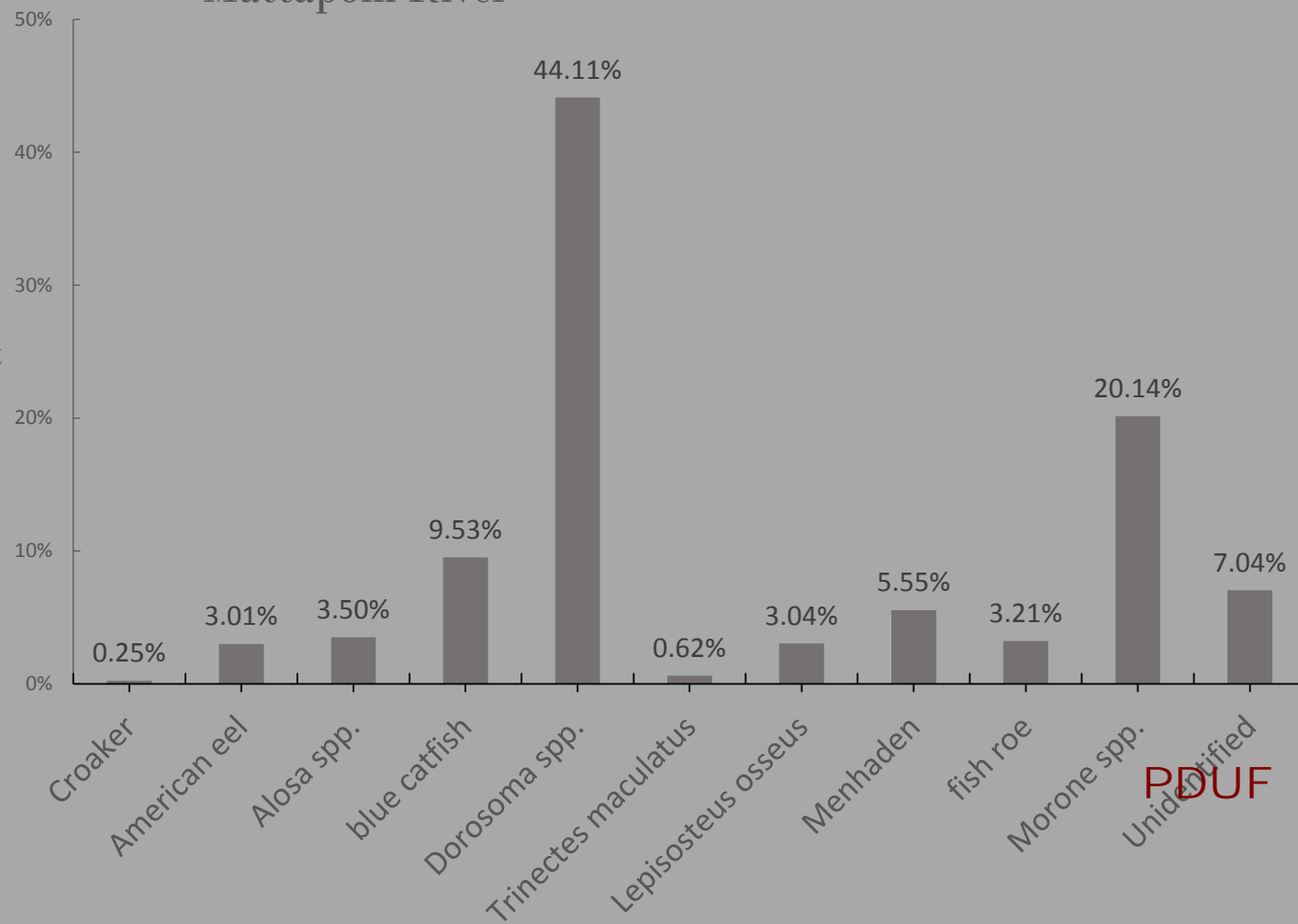
Invert & Veg



Amphibian Crustacean Fish Invertebrate Mollusk Vegetation Other

## Mattaponi River

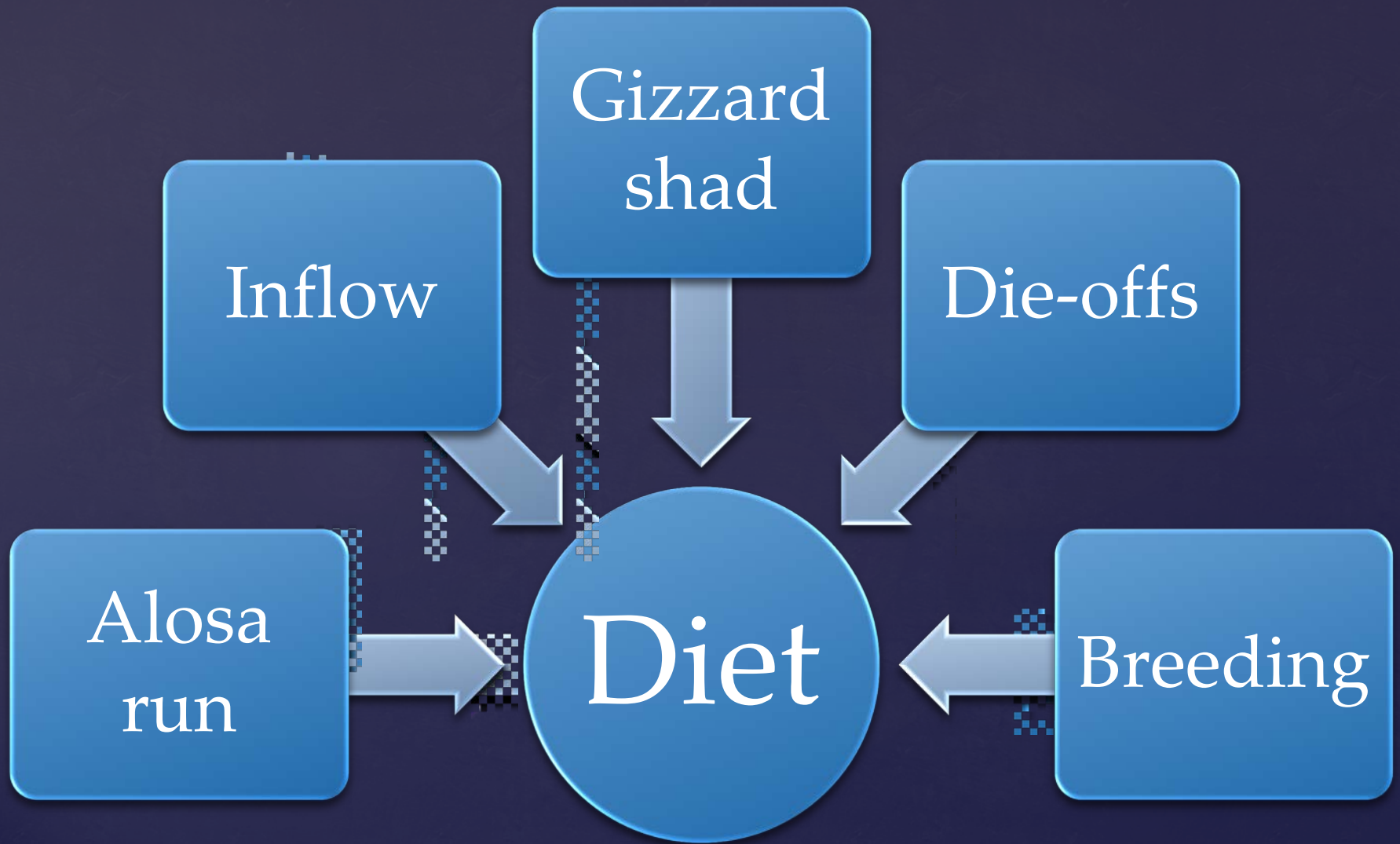
Percent by weight



PDUF











breeding



reduced  
freshwater  
inflow

Jan

Feb

Mar

Apr

May

Jun

Jul

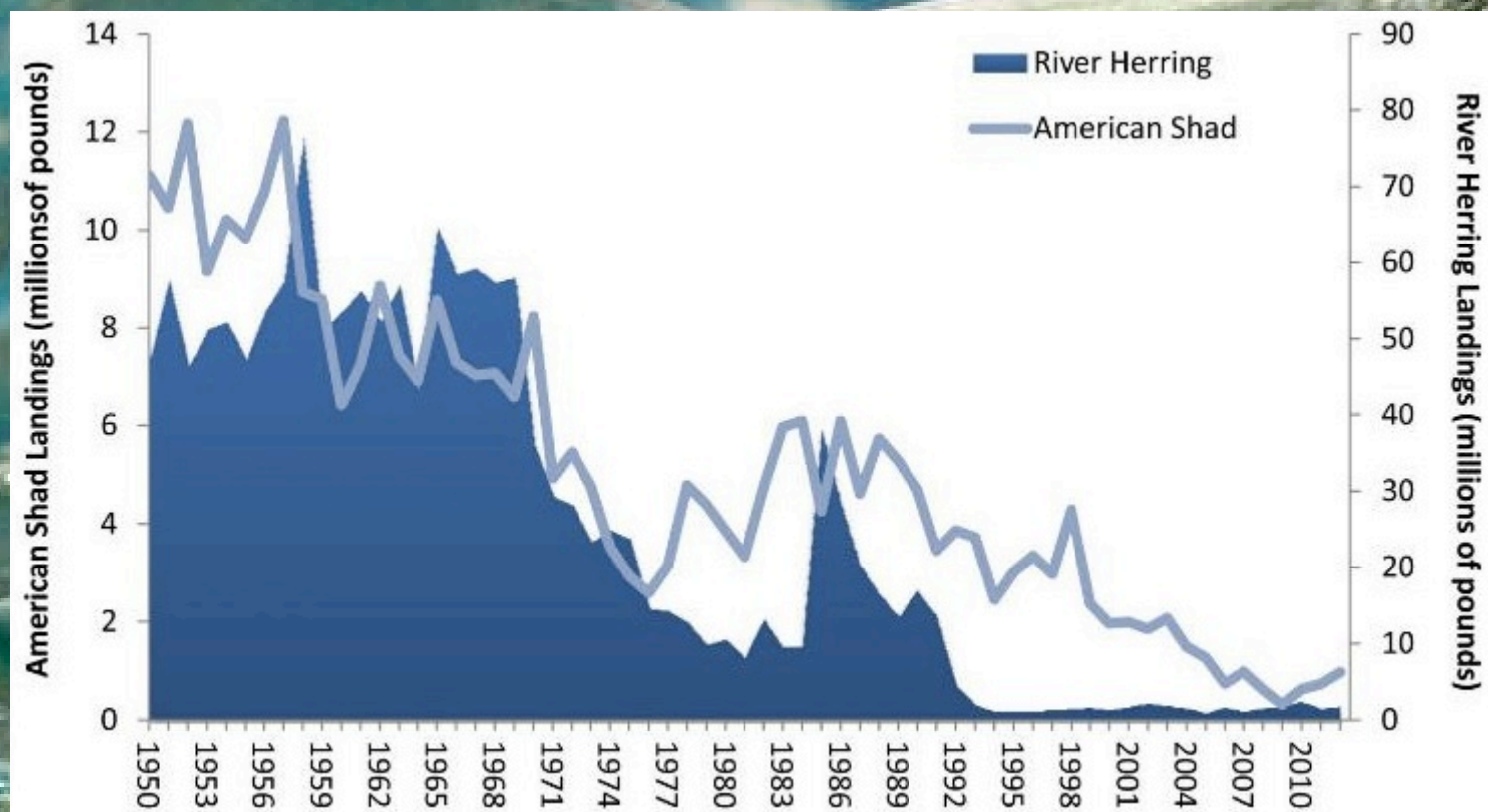
Aug

Sep

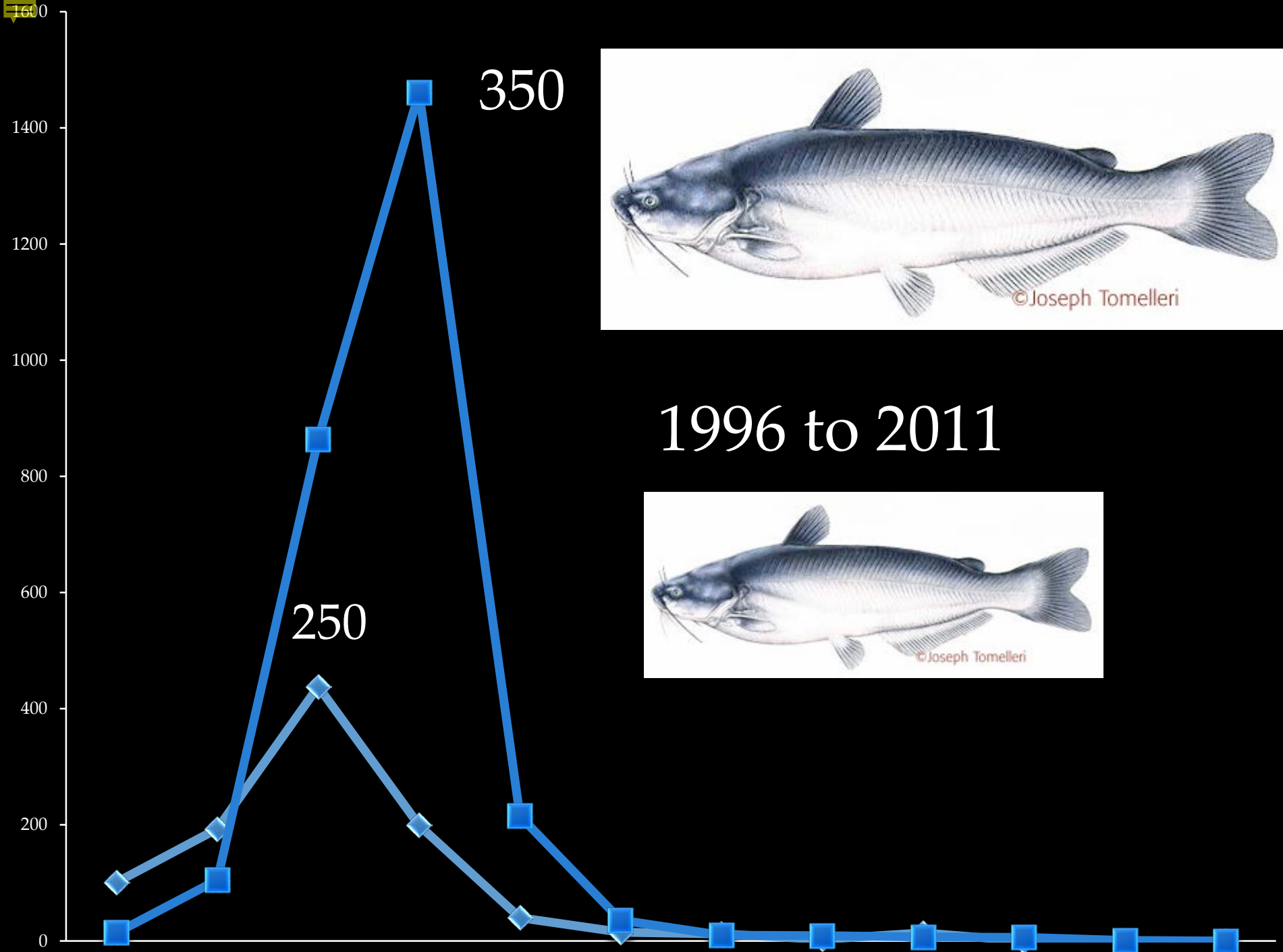
Oct

Nov

Dec

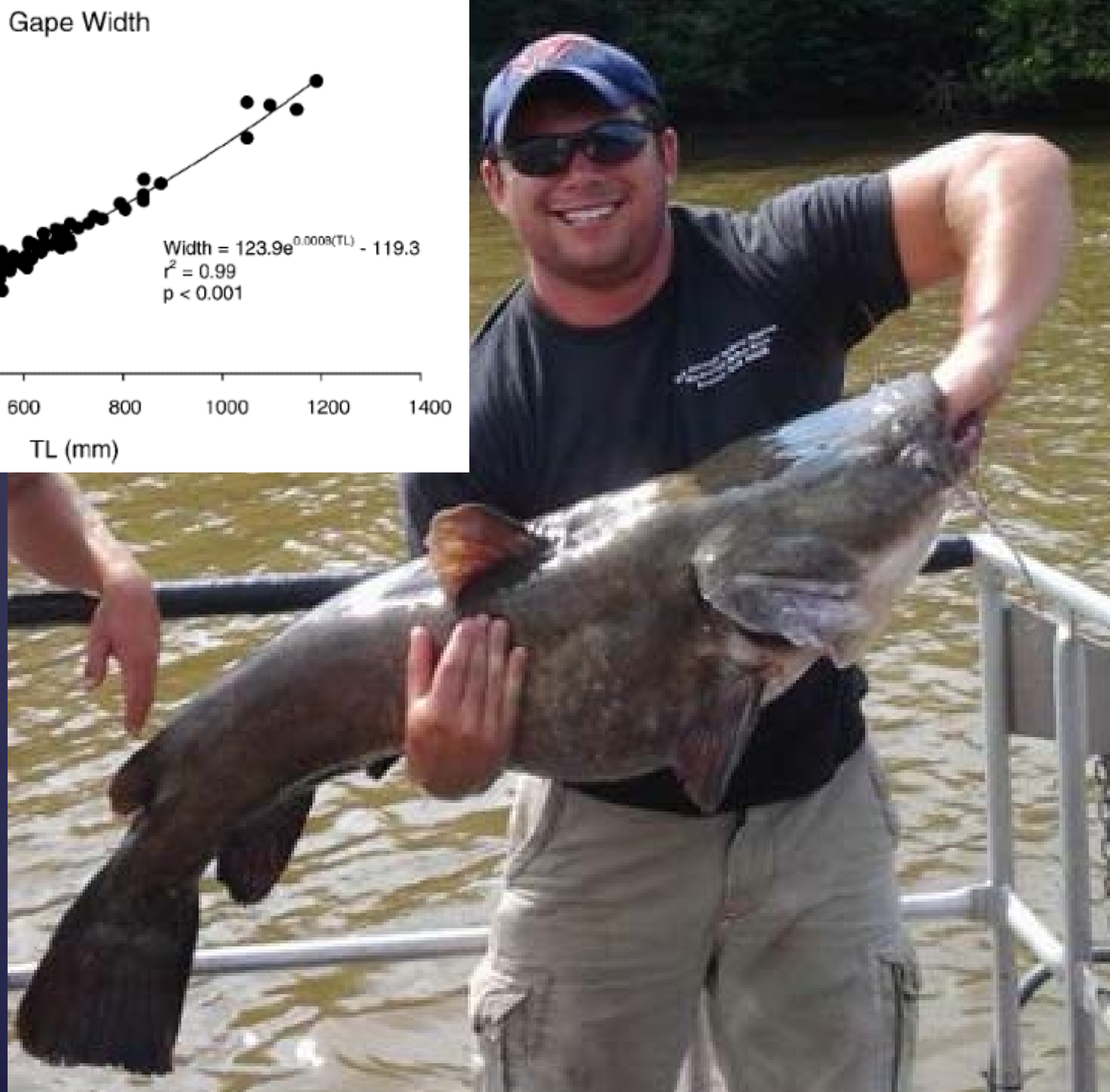
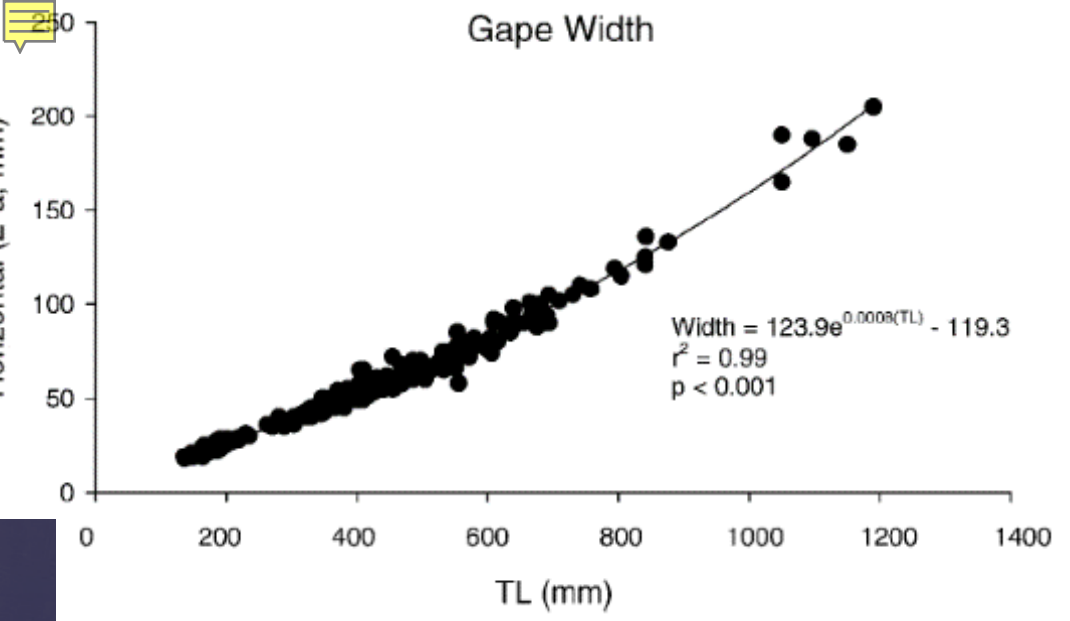






1996 to 2011





PDUF

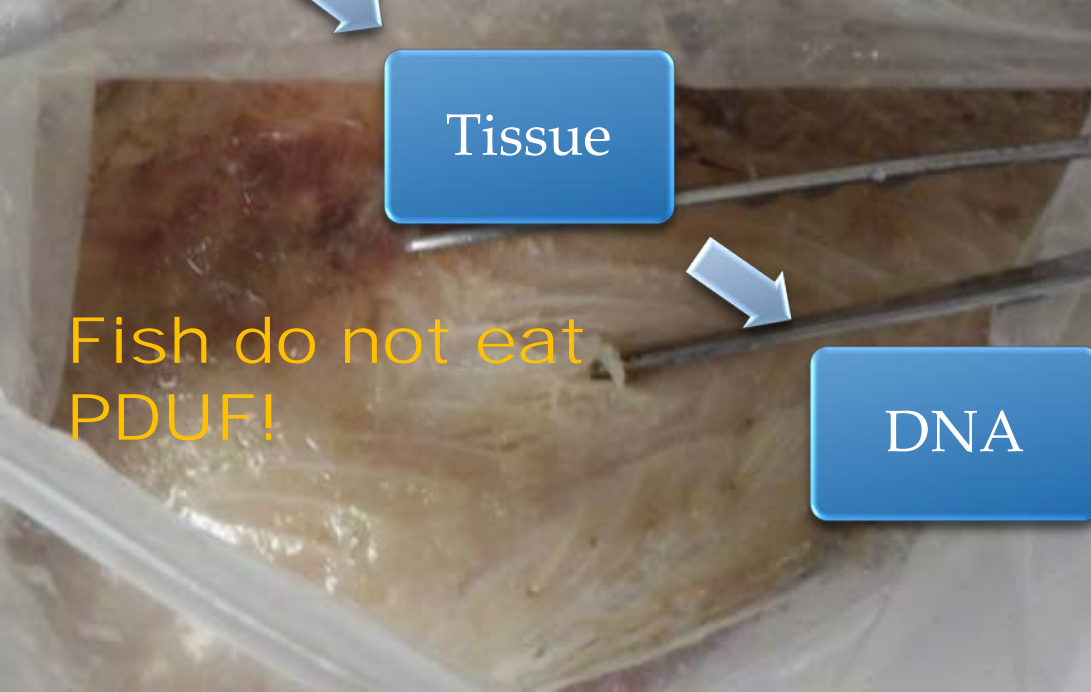
Tissue

Fish do not eat  
PDUF!

DNA

PCR

Sequence



Common Name	Species	Count
White Perch	<i>Morone americana</i>	31
Striped Bass	<i>Morone saxatilis</i>	2
Spottail Shiner	<i>Notropis hudsonius</i>	15
American Shad	<i>Alosa sapidissima</i>	2
Alewife	<i>Alosa psuedoharengus</i>	2
Blueback Herring	<i>Alosa aestivalis</i>	4
Alosine	<i>Alosa spp.**</i>	18
Blue Catfish	<i>Ictalurus furcatus</i>	12
Channel Catfish	<i>Ictalurus punctatus</i>	5
White Catfish	<i>Ameirus catus</i>	2
Bluegill	<i>Lepomis macrochirus</i>	2
Bluespotted Sunfish	<i>Enneacanthus gloriosus</i>	1
Tessellated Darter	<i>Etheostoma olmsted</i>	2
Gizzard Shad	<i>Dorosoma cepedianum</i>	11