

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

Project Update December 2014
For GIT

NUMBER OF BLUE CATFISH SAMPLED BY MONTH AND RIVER 2013 & 2014

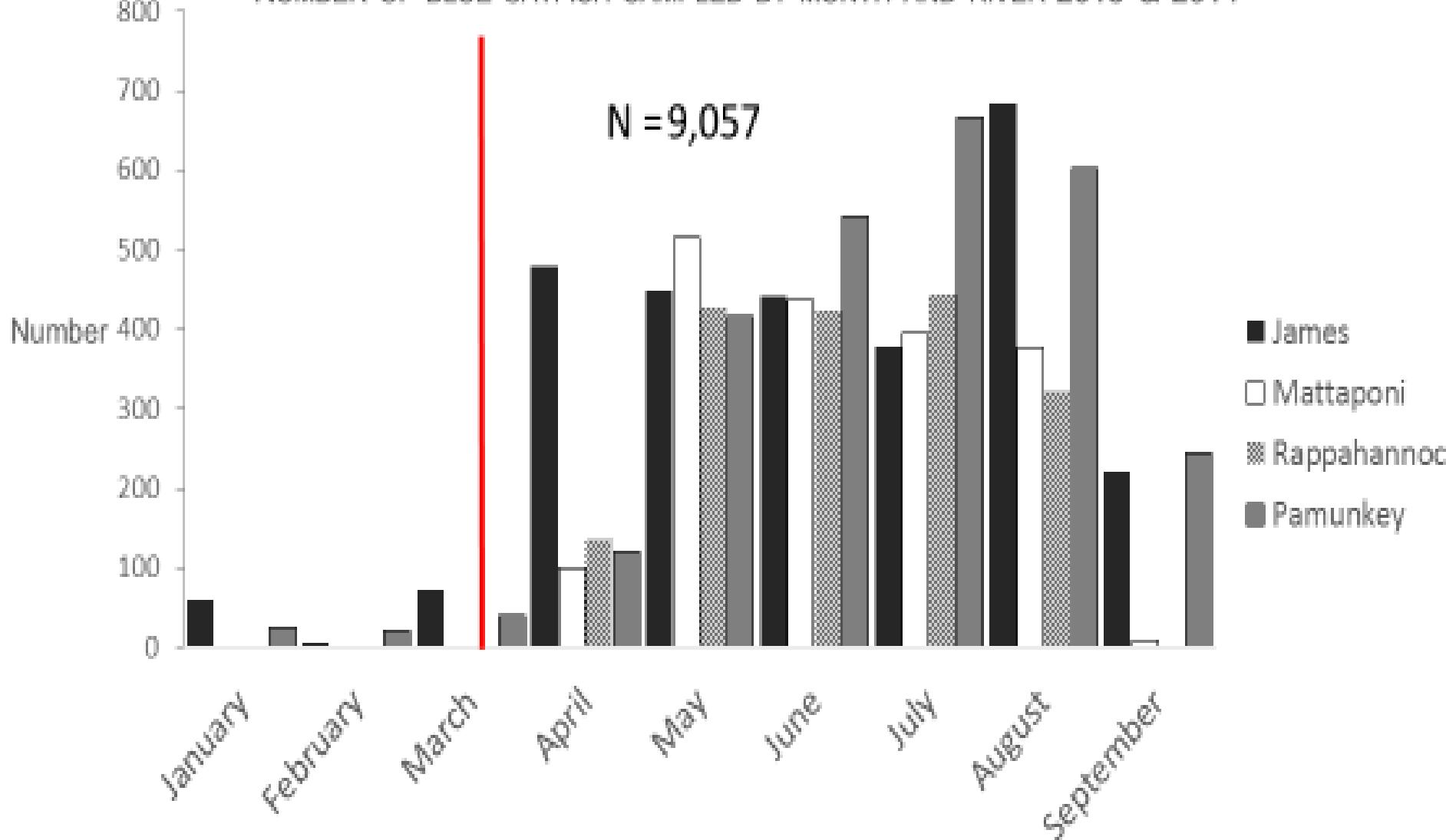
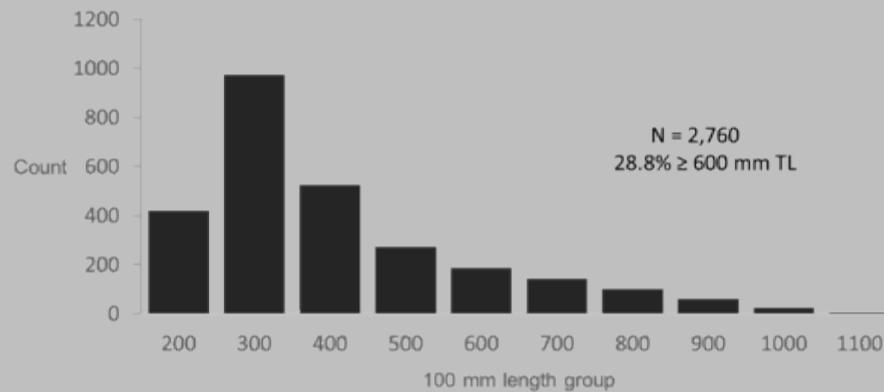


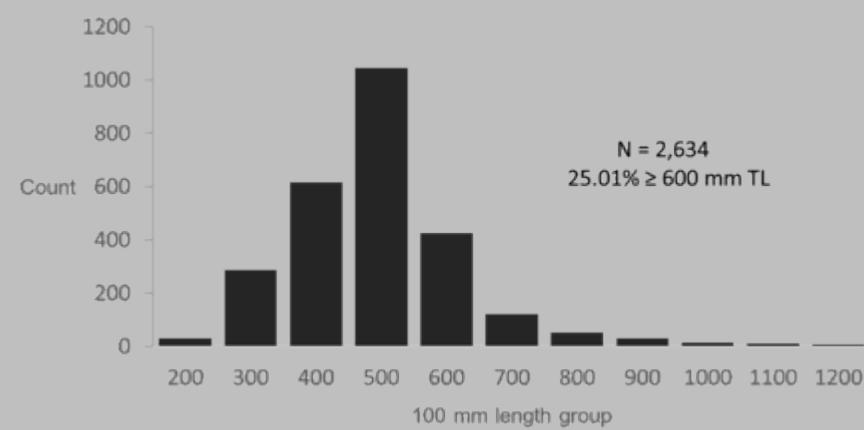
Figure 1. Total number of blue catfish sampled by month and river. Diets have been extracted from 9,057 catfish. Date with 4,935 containing diet items (54.48%). Low-frequency electrofishing becomes a possibility at the vertical red line, when water temps exceed 18°C (Bodine and Shoup 2010).

River	N	% ≥ 600 mm TL
James	2,760	28.8
Pamunkey	2,634	25.0
Mattaponi	1,832	18.5
Rappahannock	1,739	6.4

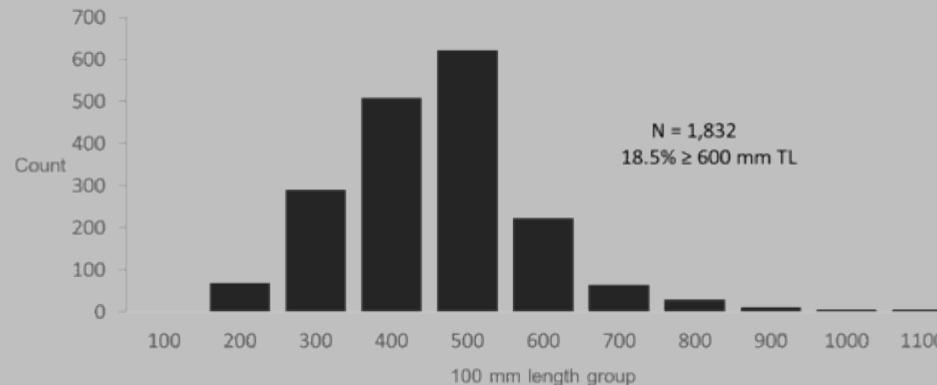
James River



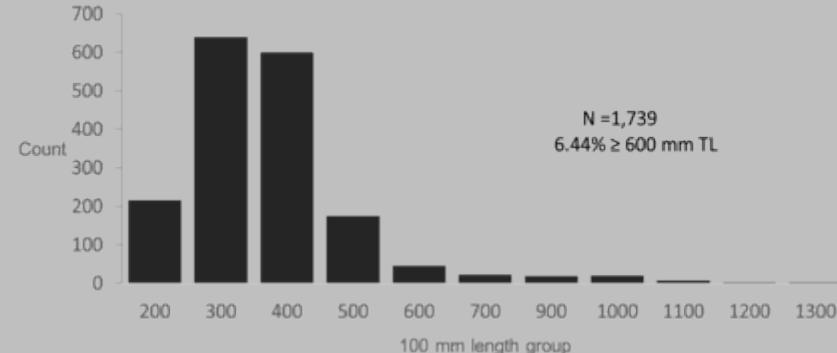
Pamunkey River



Mattaponi River

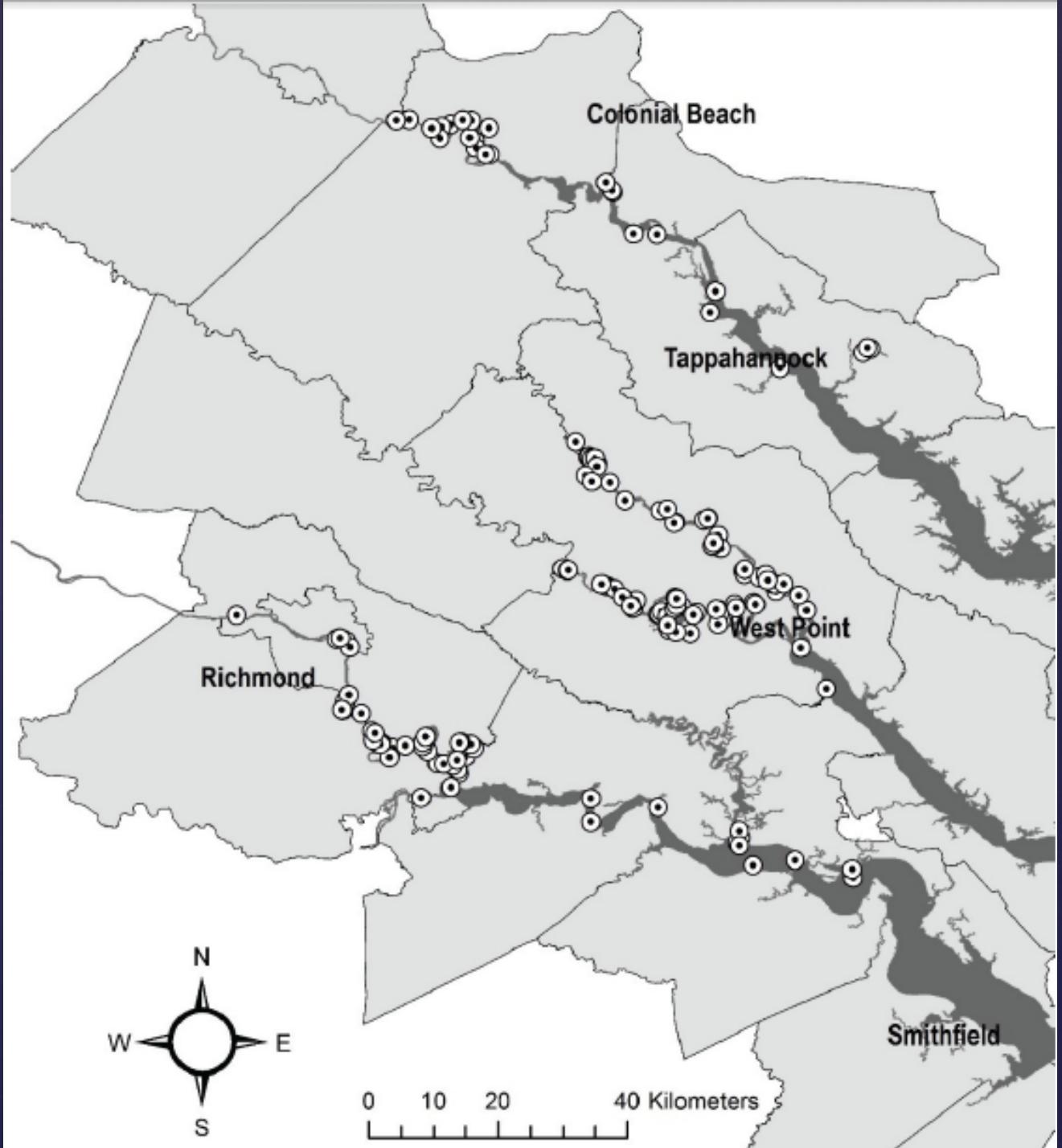


Rappahannock River



Blue catfish
sampling
locations

Not up to
date





What are they eating?





James River

Fish

Percent by Weight

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

Invert
& Veg

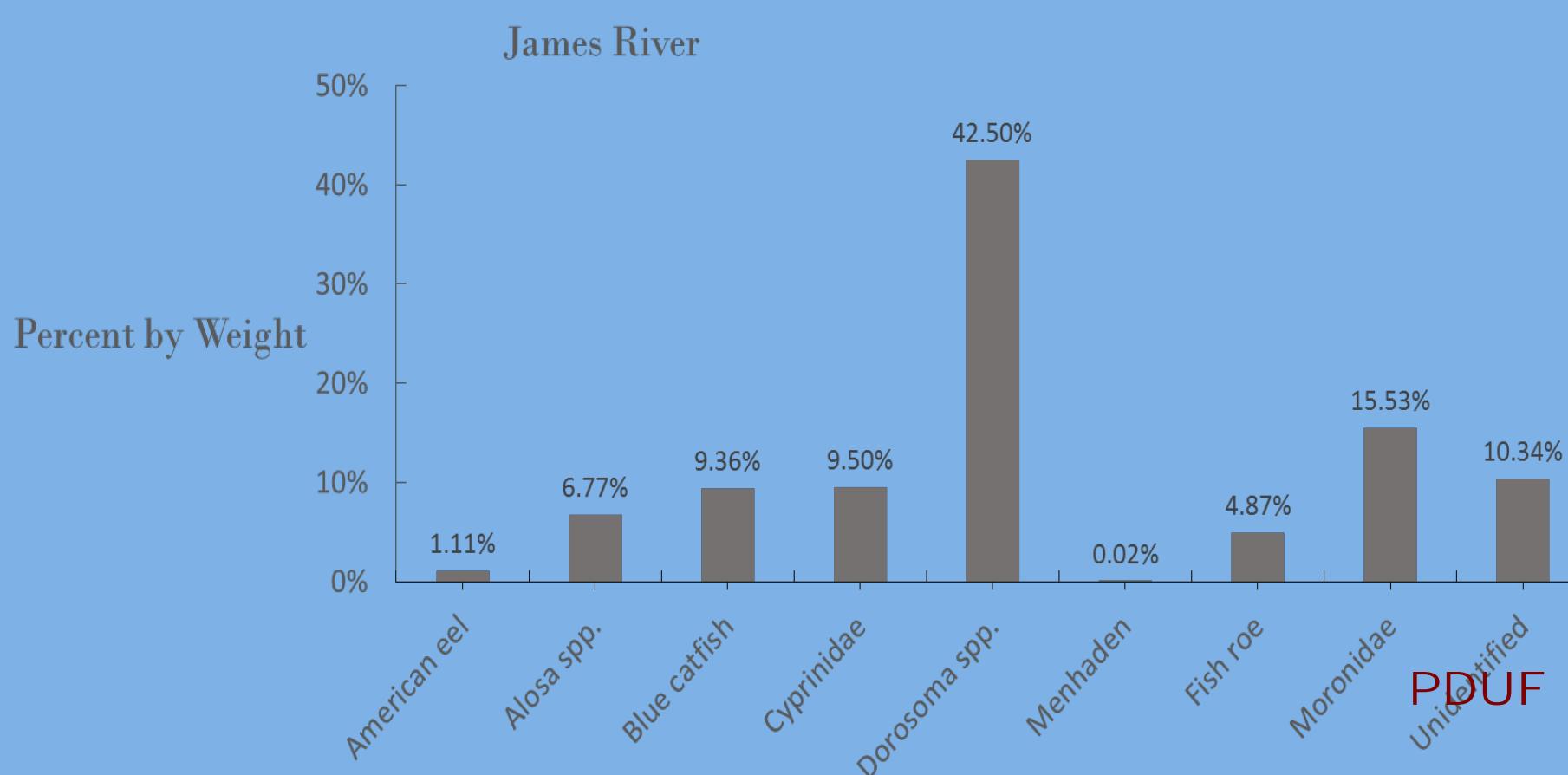
≤300 400 500 600 700 800 900 1000 1100 ≥1200

100 mm length class

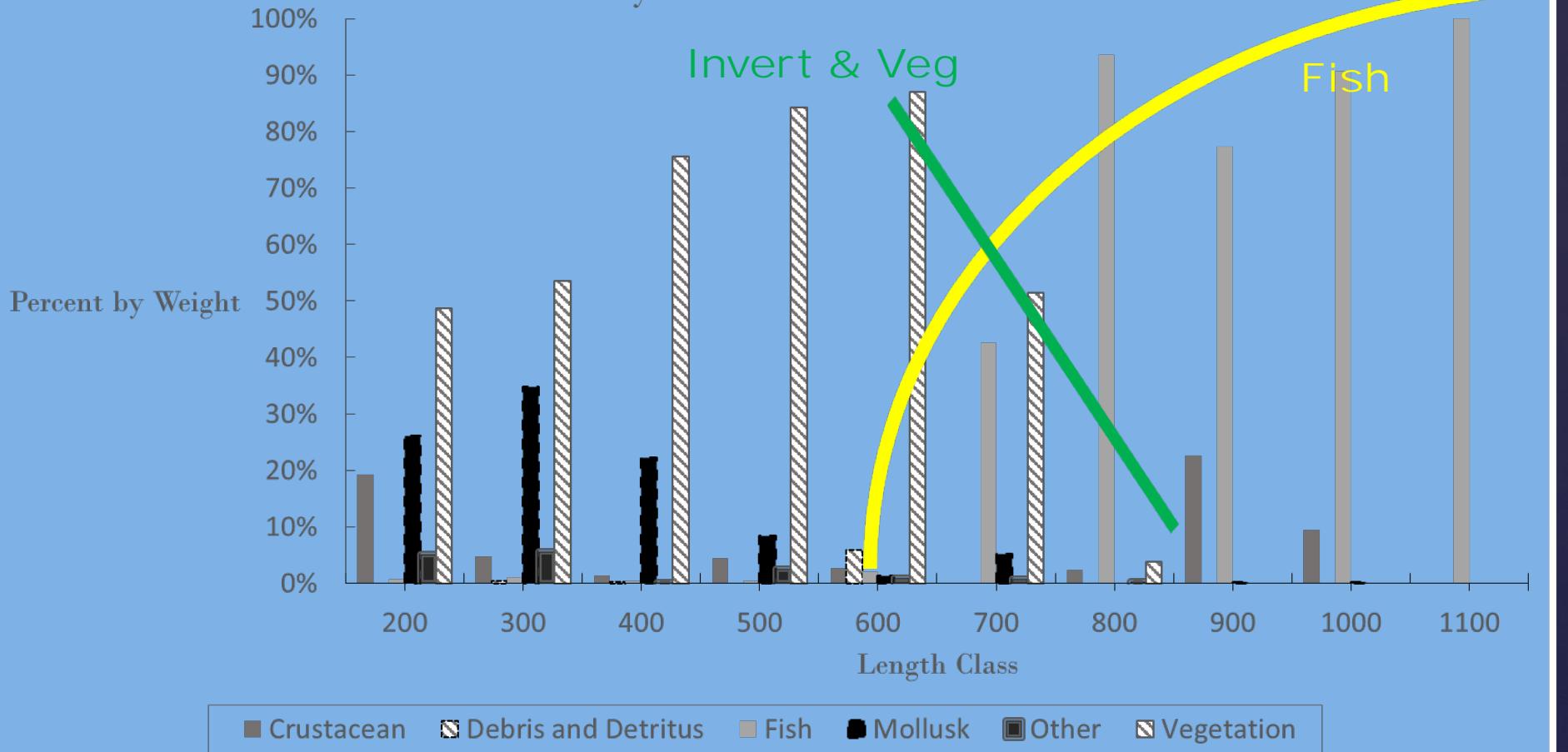
■ Crustacean ■ Fish ■ Mammal ■ Mollusk ■ Vegetation ■ Other ■ Amphibian/Reptile ■ Debris and Detritus



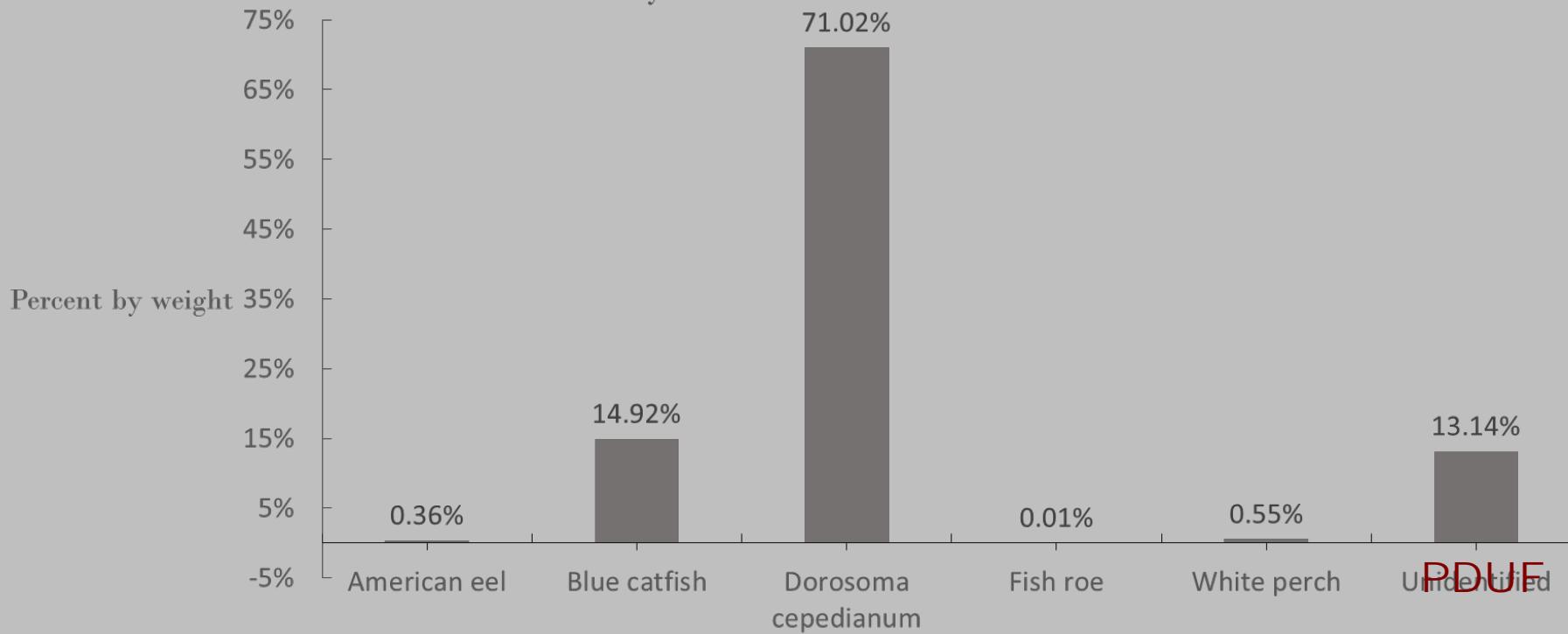
James River

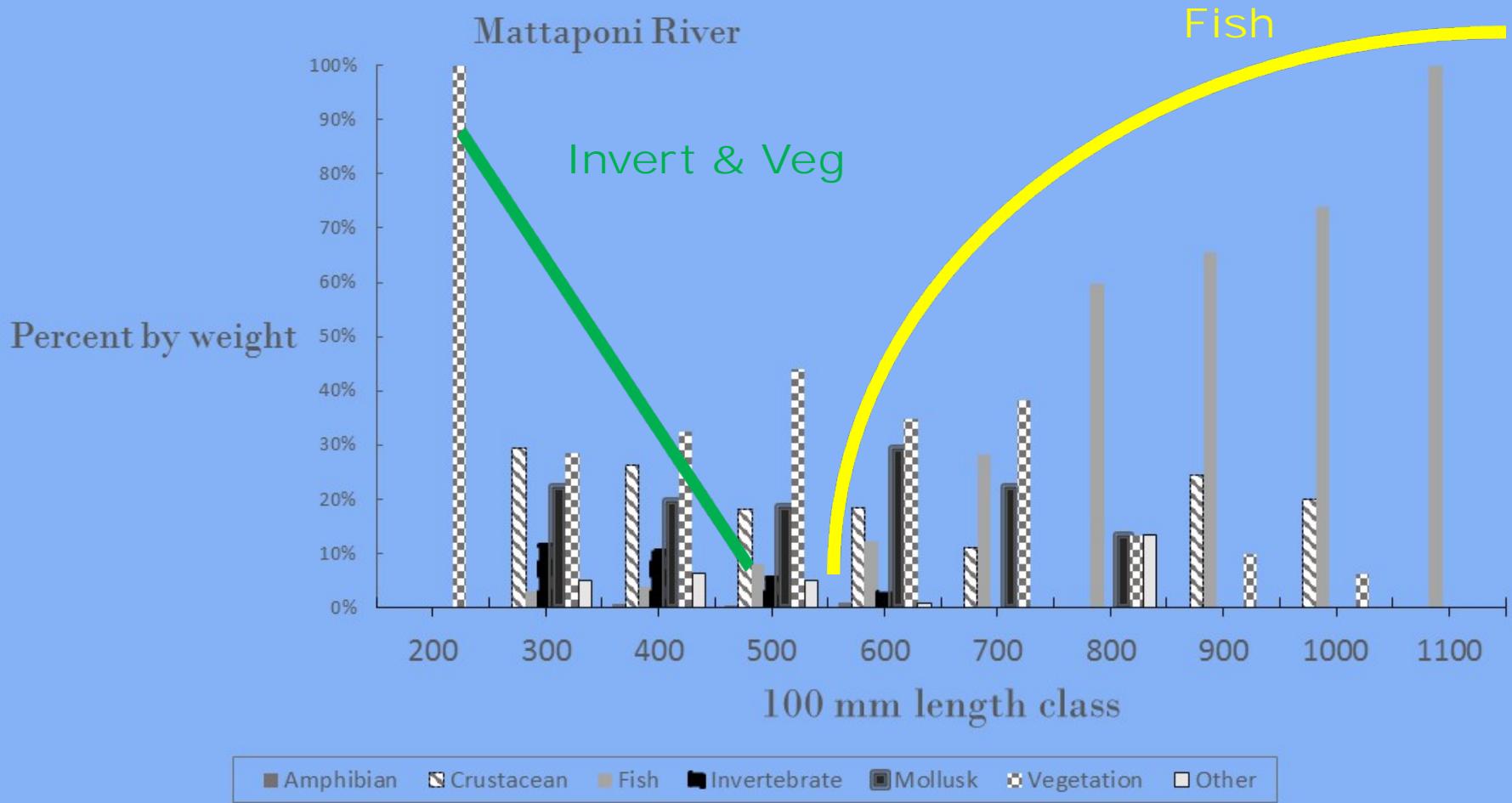


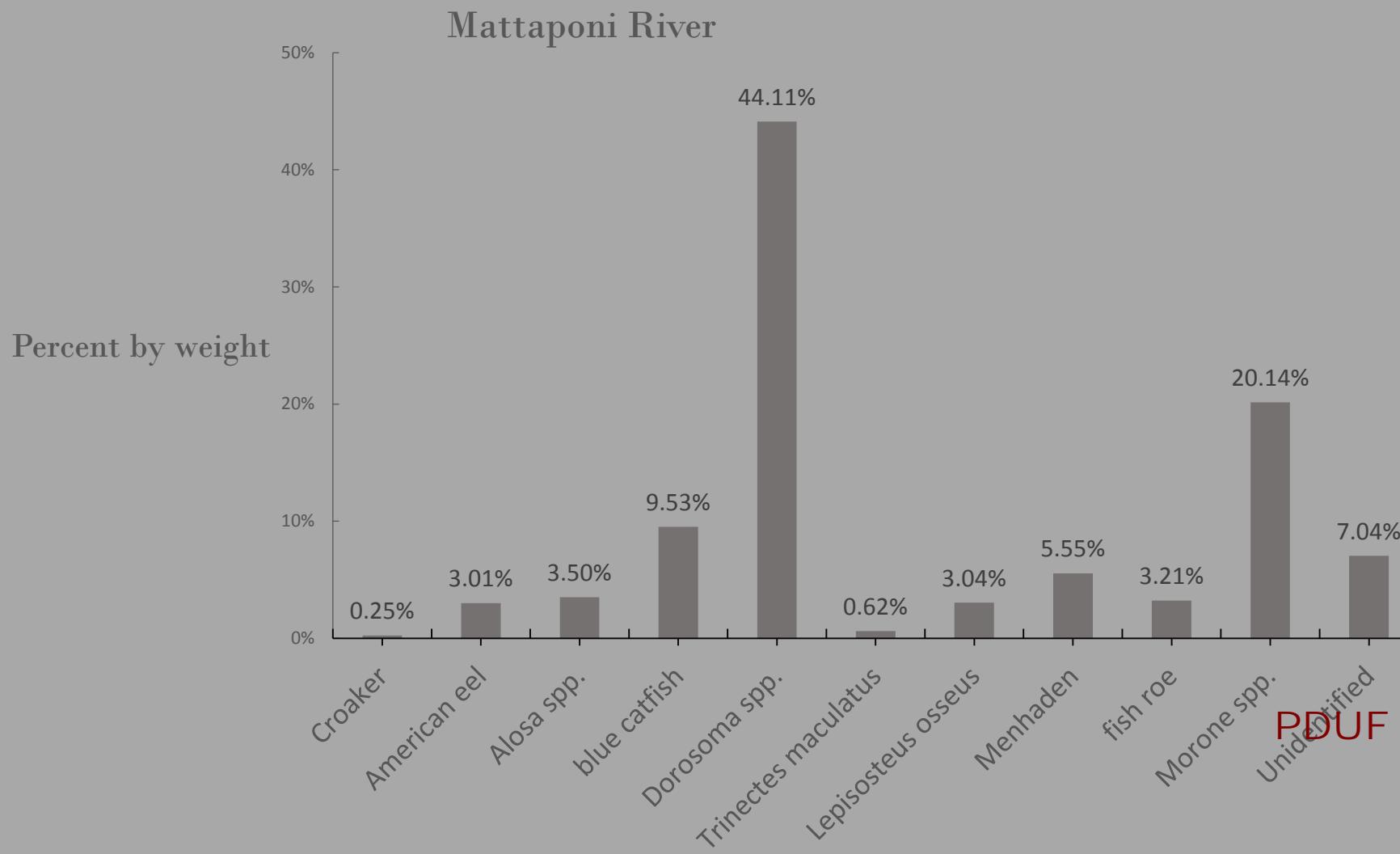
Pamunkey River

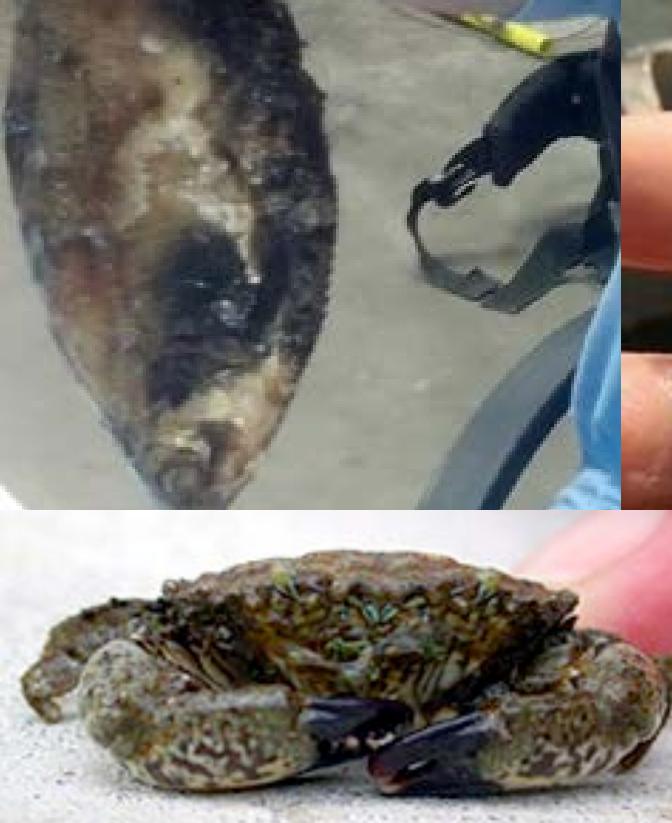


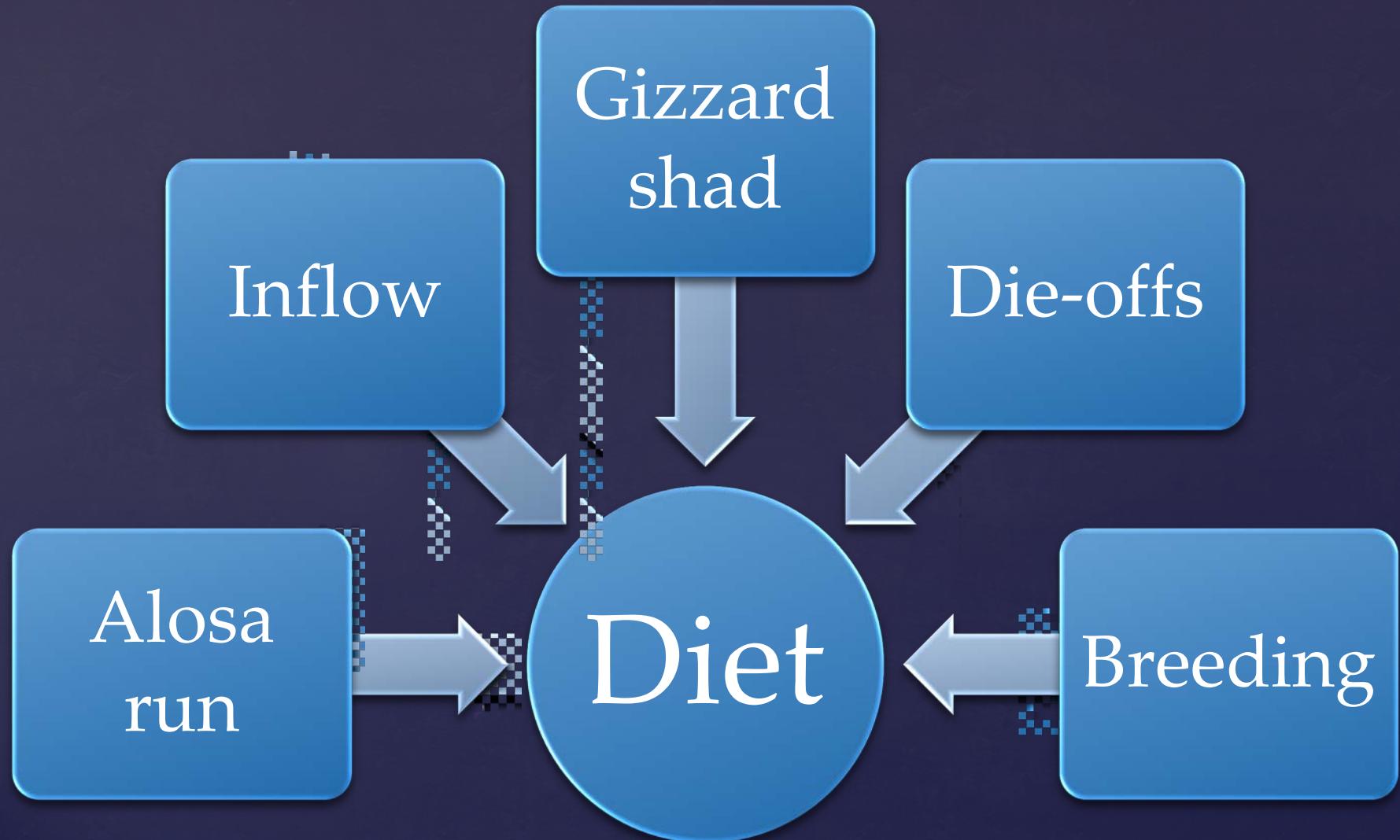
Pamunkey River













breeding



reduced
freshwater
inflow

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Sep

Oct

Nov

Dec

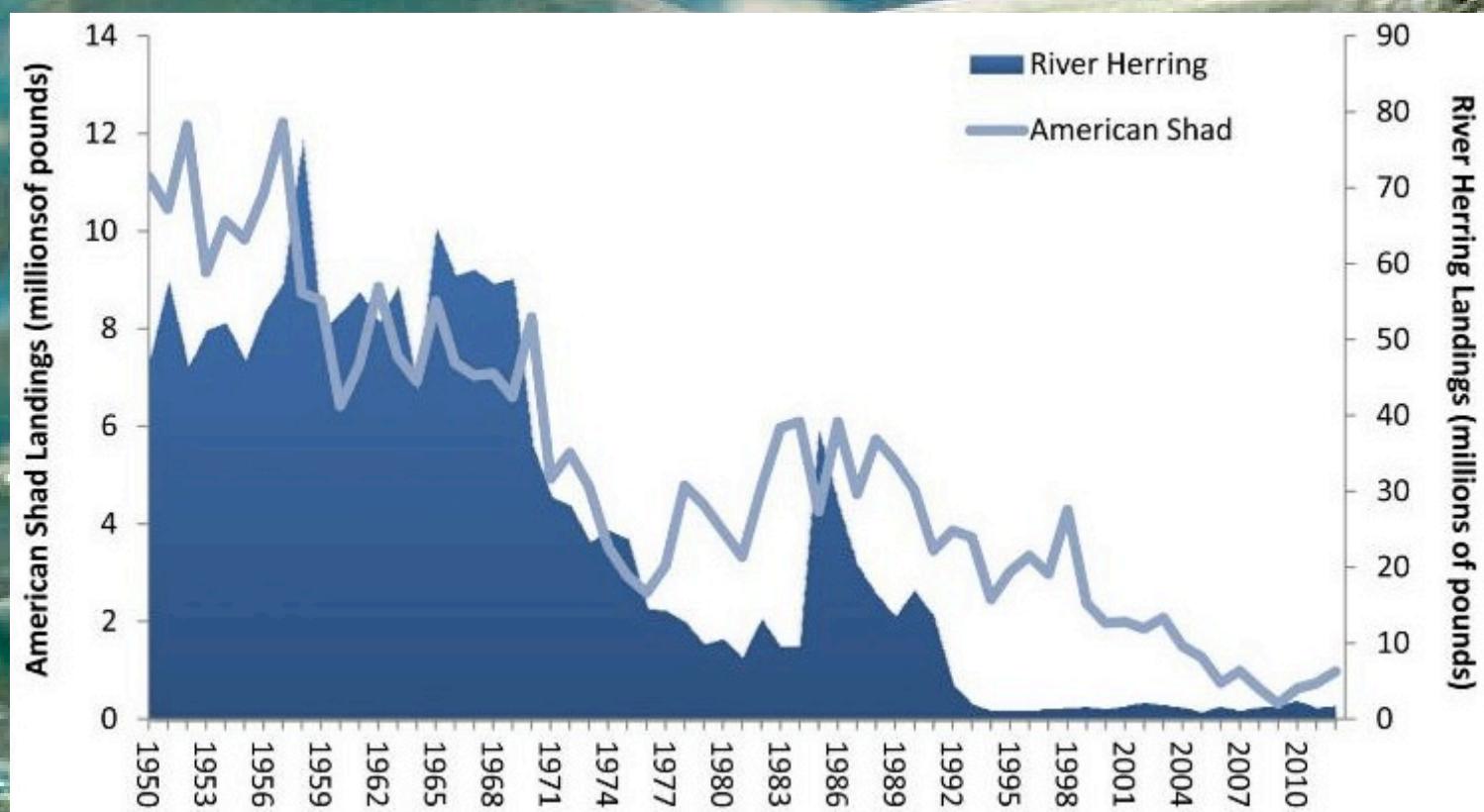
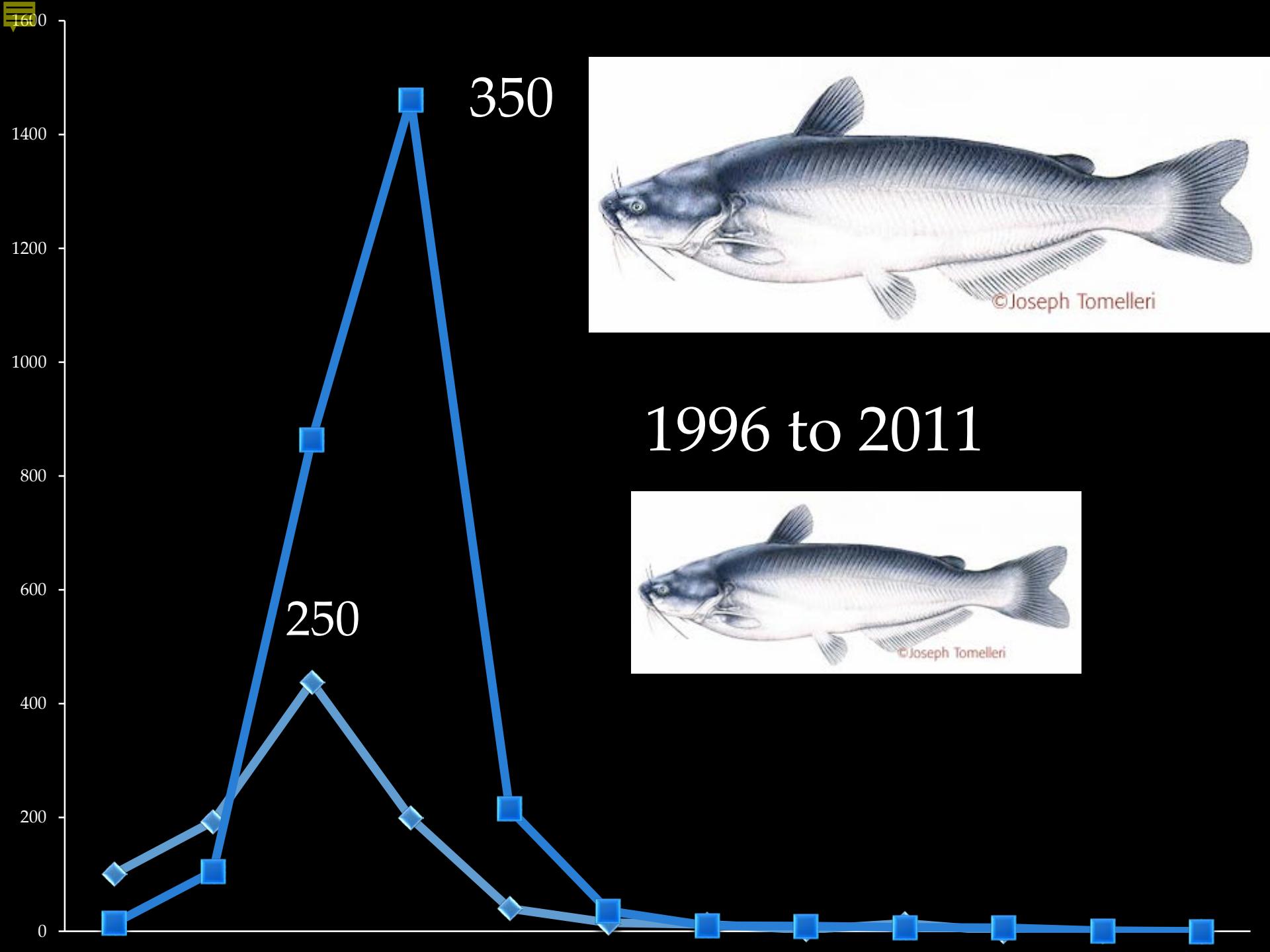
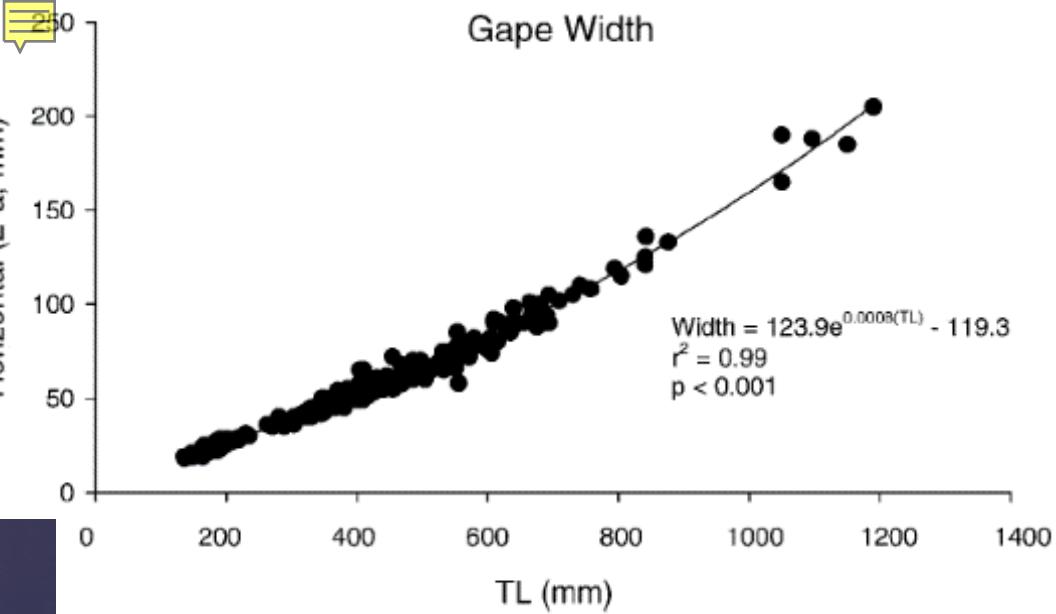


Photo: Flickr/@boetter







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 pseudoharengus</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 olmstedi</i>	2
Gizzard Shad	<i>Dorosoma cepedianum</i>	11