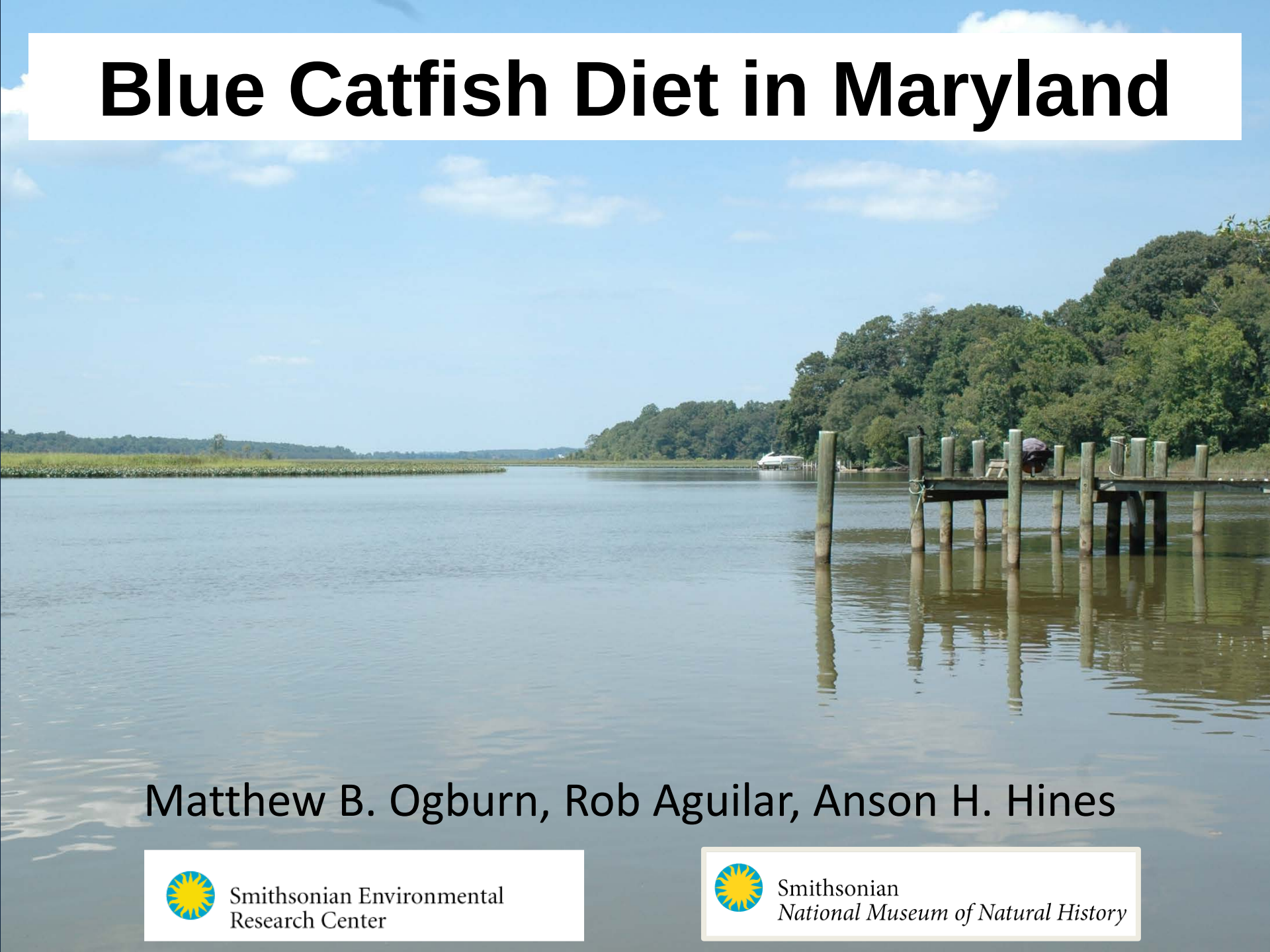
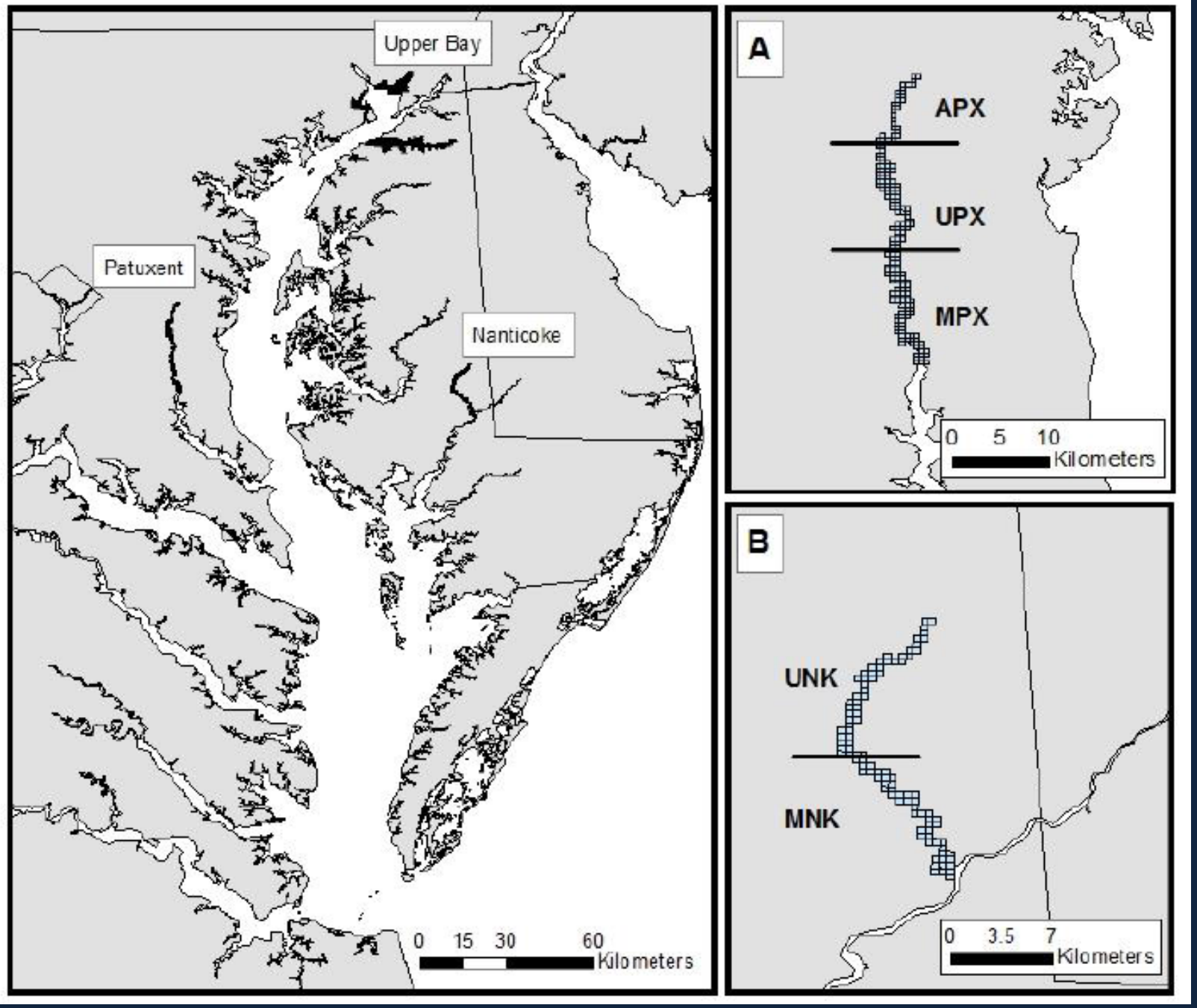
Blue Catfish Diet in Maryland

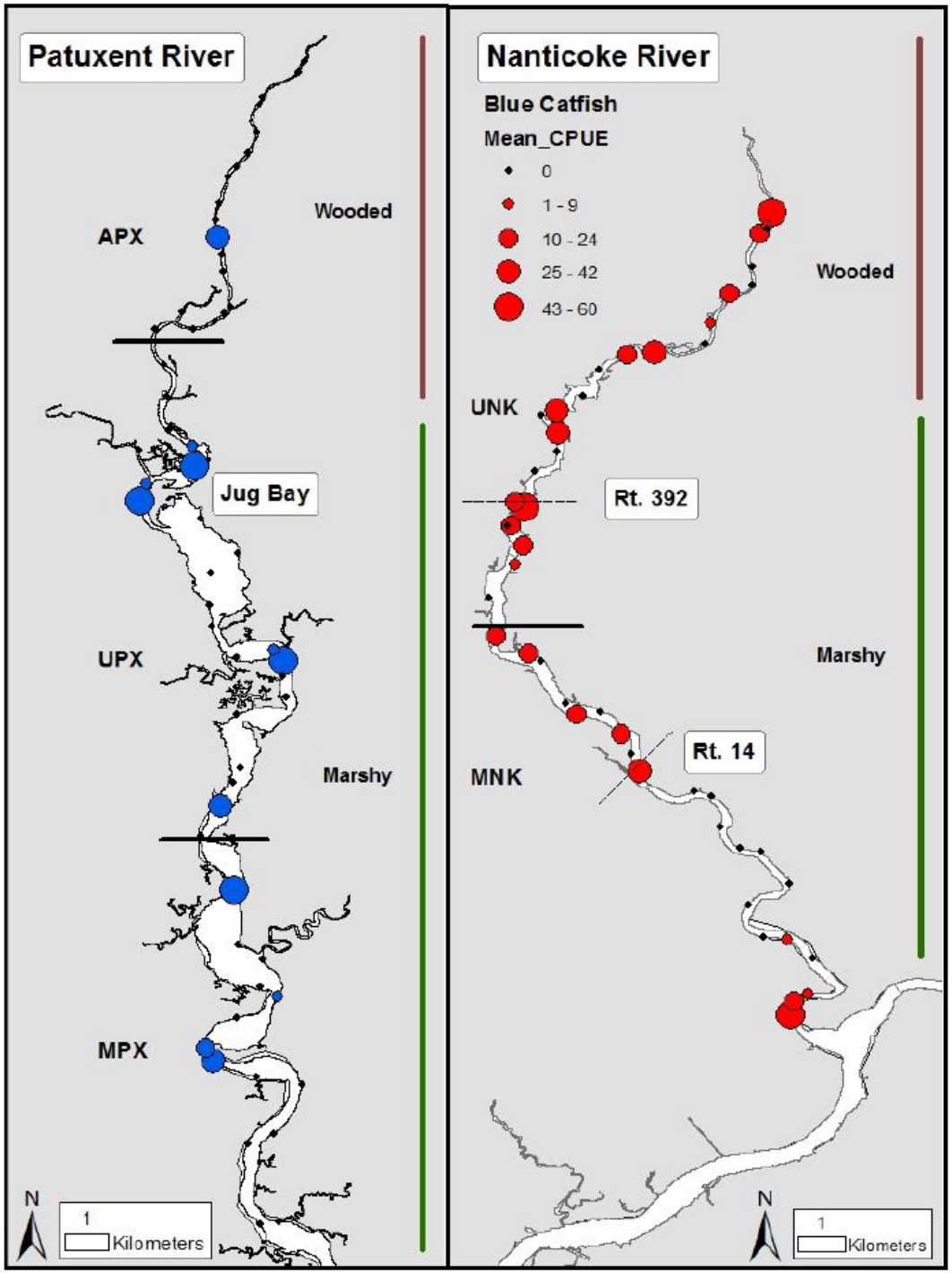


Matthew B. Ogburn, Rob Aguilar, Anson H. Hines

Smithsonian Environmental Research Center

Smithsonian *National Museum of Natural History*


Upper Bay
Patuxent
Nanticoke
0 15 30 60
Kilometers
A
APX
UPX
MPX
0 5 10
Kilometers
B
UNK
MNK
0 3.5 7
Kilometers


Patuxent River
APX
Wooded
Jug Bay
UPX
Marshy
MPX
N
1
Kilometers
Nanticoke River
Blue Catfish
Mean_CPUE
0
1 - 9
10 - 24
25 - 42
43 - 60
Wooded
UNK
Rt. 392
Marshy
Rt. 14
MNK
N
1
Kilometers

Catfish Processing

Measure and weigh

Dissect catfish

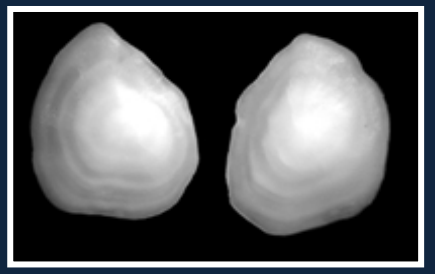
Stomach contents:

-Identify invertebrates

-freeze fish

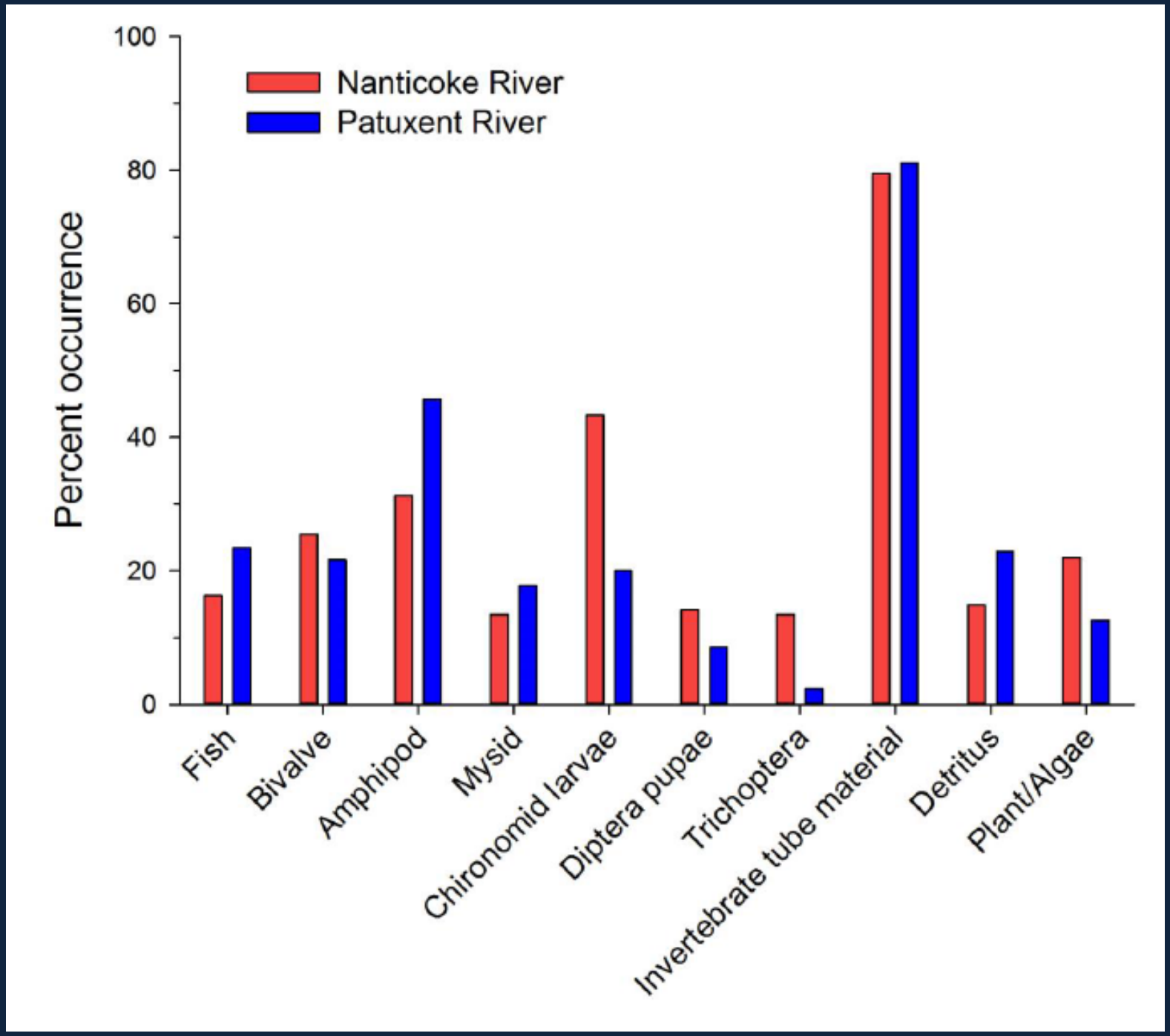
-score, weigh contents

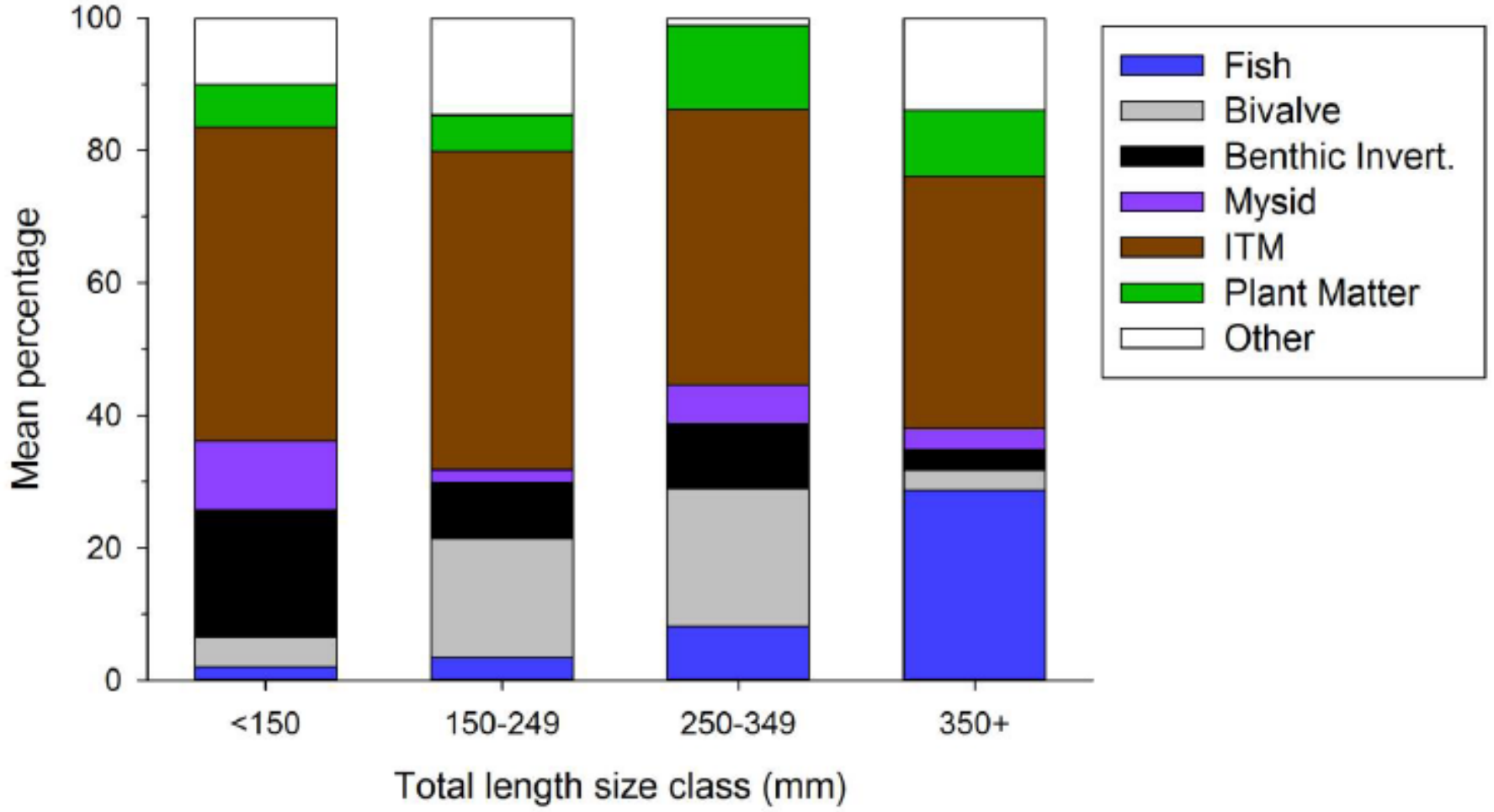
Extract otoliths



Tissue Samples:

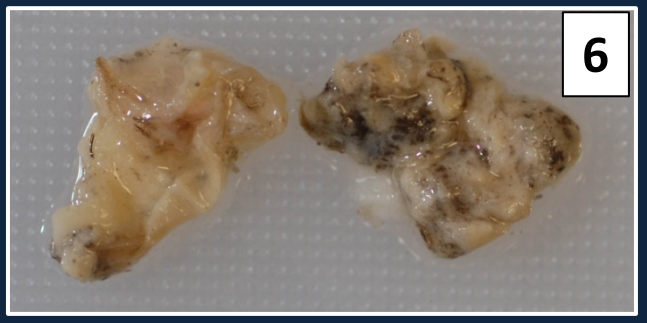
-Stable isotopes


Nanticoke River
Patuxent River
Percent occurrence
100
80
60
40
20
0
Fish
Bivalve
Amphipod
Mysid
Chironomid larvae
Diptera pupae
Trichoptera
Invertebrate tube material
Detritus
Plant/Algae

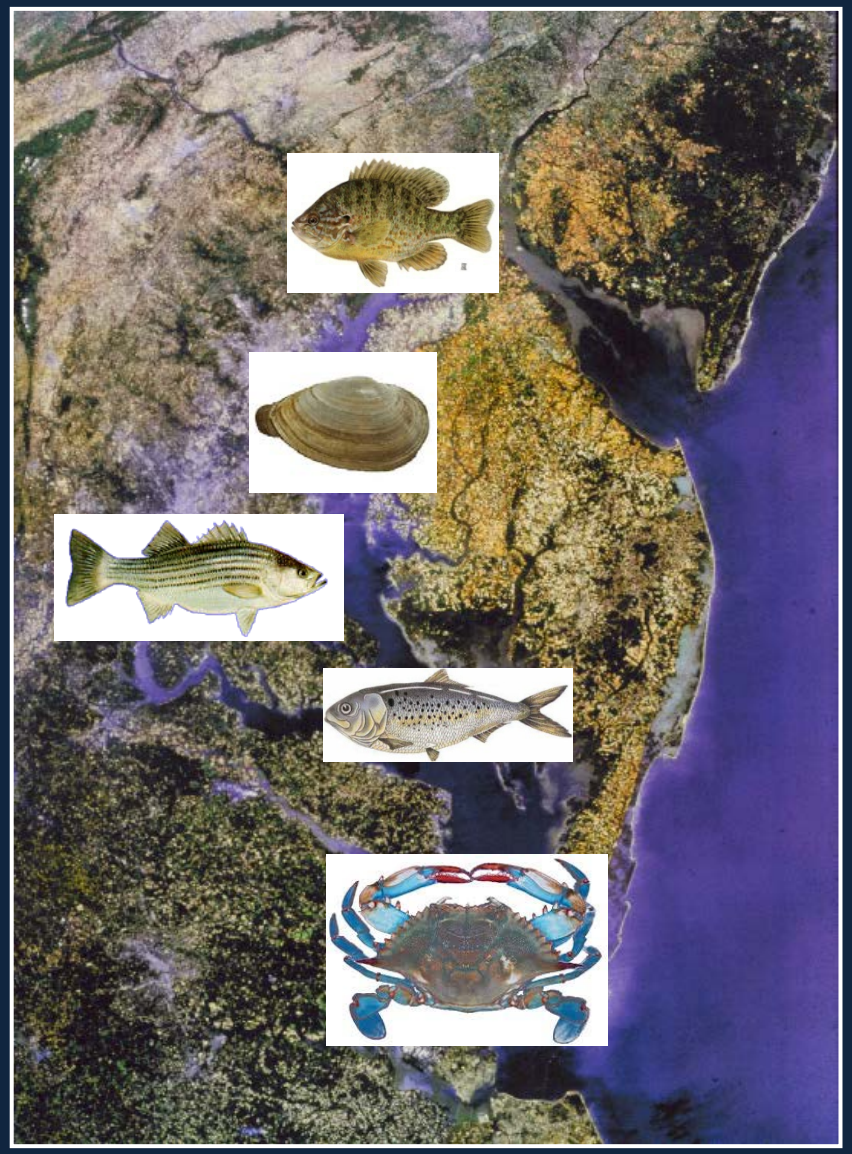

Mean percentage
100
80
60
40
20
0
<150
150-249
250-349
350+
Total length size class (mm)
Fish
Bivalve
Benthic Invert.
Mysid
ITM
Plant Matter
Other

Genetic barcoding gives species ID's

Classification	Score	% Success
Whole fish, pristine	1	100
Whole fish, slight digestion	2	91
Whole fish, moderate digestion	3	100
Fish tissue on spine	4	100
Spine/bones with some tissue	5	84
Loose tissue	6	72
Unidentified material	7	40



Chesapeake Bay Barcode Initiative



Approx. 210 fish species

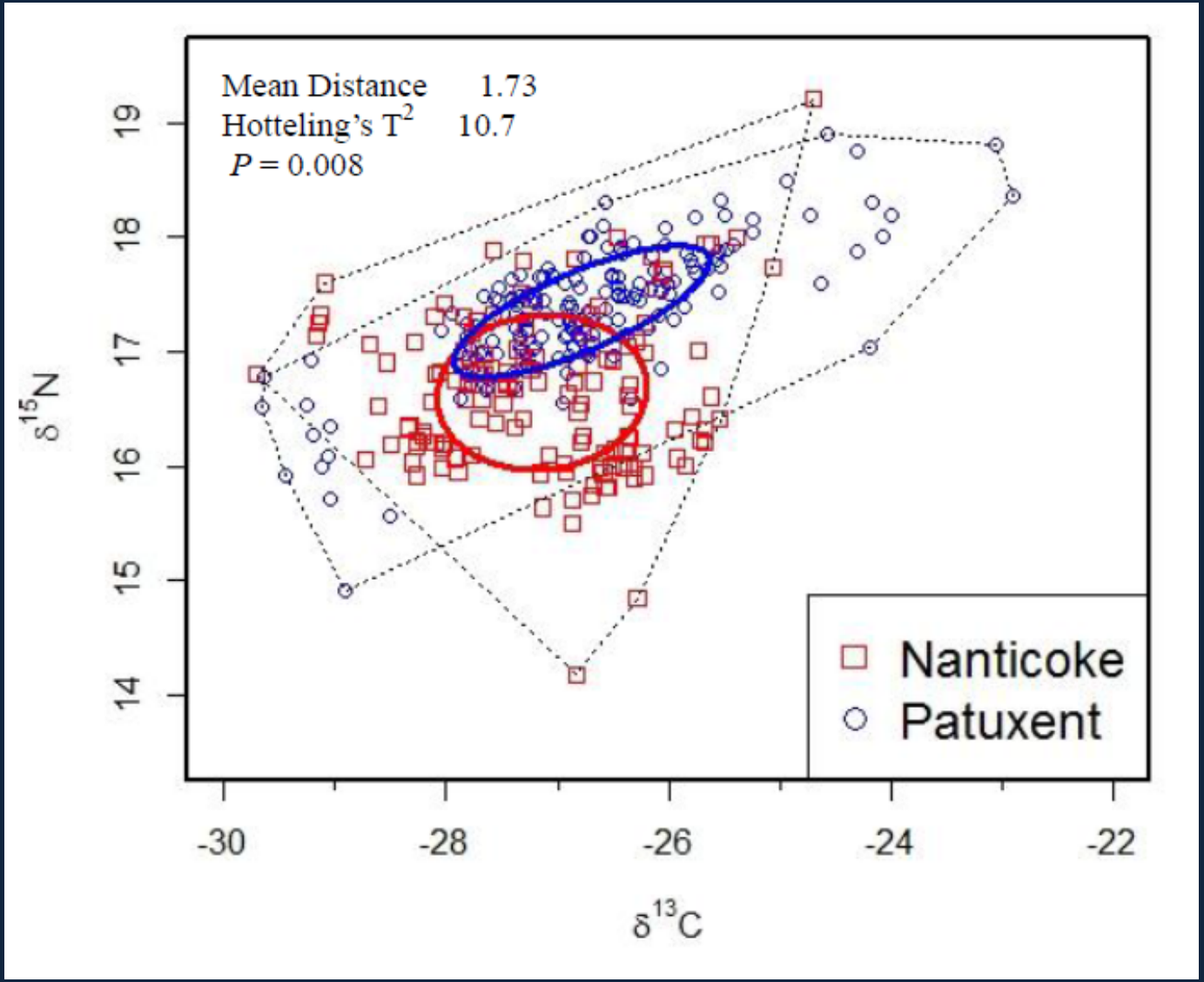
Classes:	3
Orders :	24
Families:	>50
Genera:	>100

Approx. 190 invertebrate species

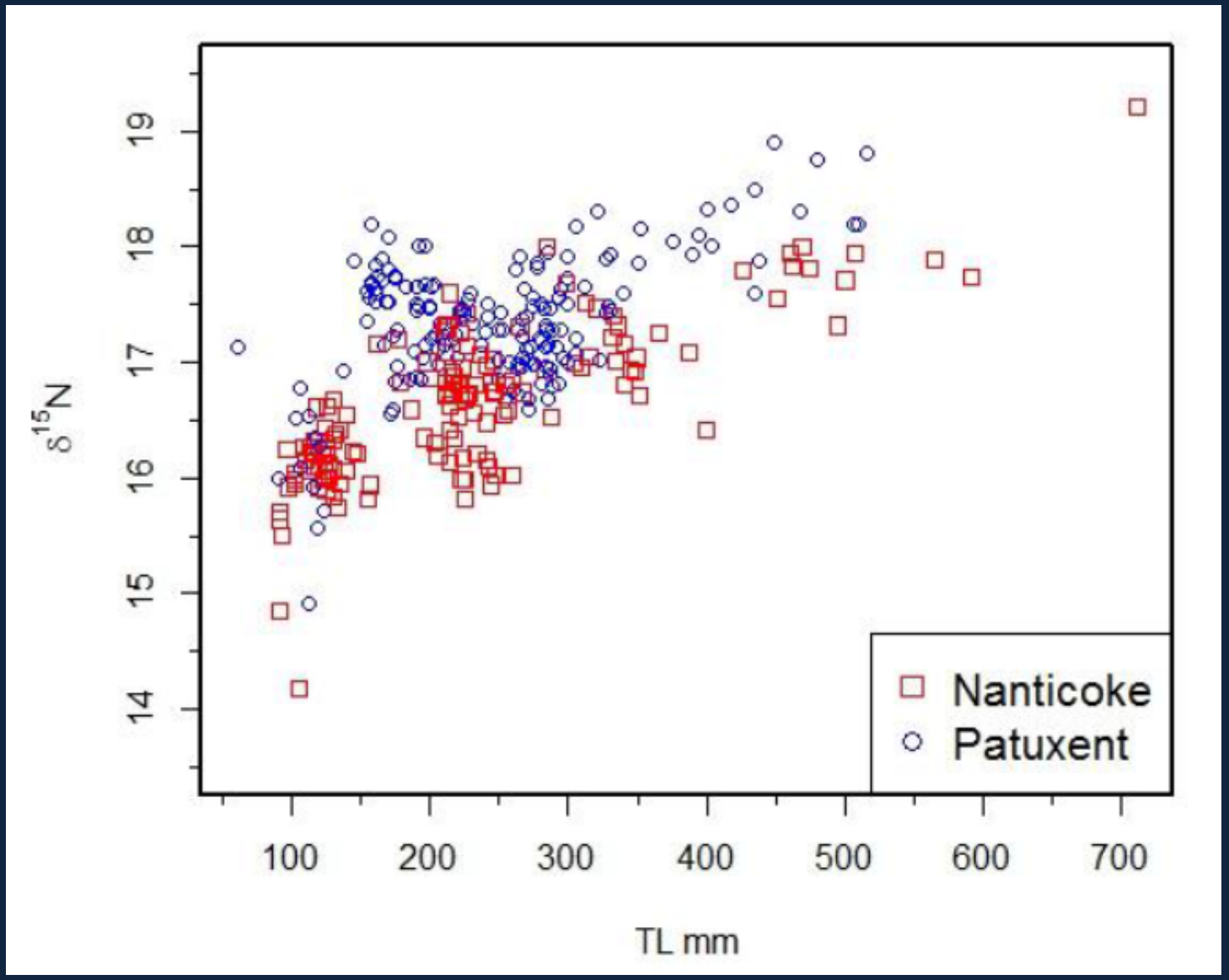
Most decapods and mollusks

A majority of potential blue catfish prey items have been barcoded

Stable Isotope Analysis



Stable Isotope Analysis



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