Habitat Use, Diet and Movement of Invasive Blue Catfish in the Patuxent River

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Catfish of the Chesapeake Bay

Native Catfish

- White Catfish
- Brown Bullhead
- Yellow Bullhead

Non-native Catfish

- Blue Catfish
- Channel Catfish
- Flathead Catfish
Native Range
Introduction and Range Expansion

First introduced to VA tributaries in 1974

Schloesser et al. 2011
Introduction of Blue Catfish into Chesapeake Tributaries

- Appeared in MD in late 90s
- Spreading range due to illegal transfer and natural movement, likely during major freshwater flow events
- Most Maryland waters of Chesapeake Bay are within their salinity tolerance (≤ 17)
Where do blue catfish occur in Maryland tributaries?

Hines et al. 2015 – Final Report to NCBO
What are Blue Catfish Feeding On?

- Benthic Invertebrates
- Bivalves (*Corbicula fluminea*)
- Mysids
- White Perch
- Pumpkinseed
- Spottail shiner
- Bay anchovy
How are Individual Catfish Moving Through Habitats in the Patuxent River?

Fish #11020 Detected

Ping, ping... ping ping....ping, ping, ping

Receiver

Transmitter (Tag)
15 fish tagged in 2013 (Late Aug - Early Dec)

8 tagged in 2014 (July)

$x = 514.2$ mm TL

Max = 793 mm TL
Habitat Use and Movement of Fish #11020

778mm TL – 5.1kg

Total: 434 km – 1.2 km/d
Absolute: 53 km

~60% with similar pattern...

53 km / 3.5 d = 14.7 km/d (2.3 km/h)

Unpublished data
Research Findings

• Blue Catfish are most often found in deep holes at bends in the river

• Diet is broad and shifts to include important fishery species at larger sizes

• Individual Blue Catfish spend much of their time in freshwater tidal areas but frequently move along the length of the river
Take Home Messages

• Blue Catfish and other non-native fish are changing the Patuxent River food web.

• Recent introductions of Blue Catfish and Snakeheads are of concern because they can be abundant and larger individuals feed on important fishery resources.

• If population control measures are attempted, they need to account for observed patterns of habitat use and movement.
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