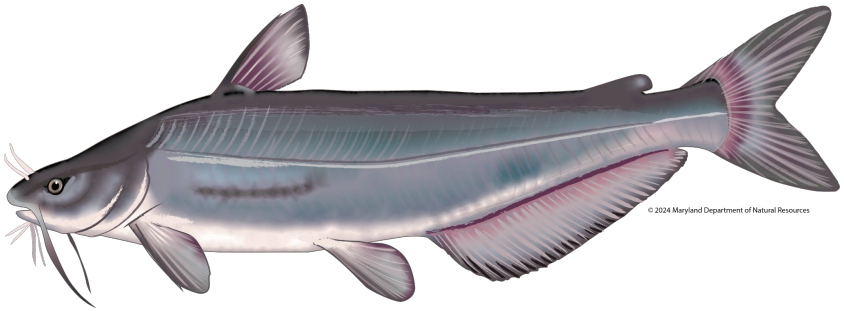
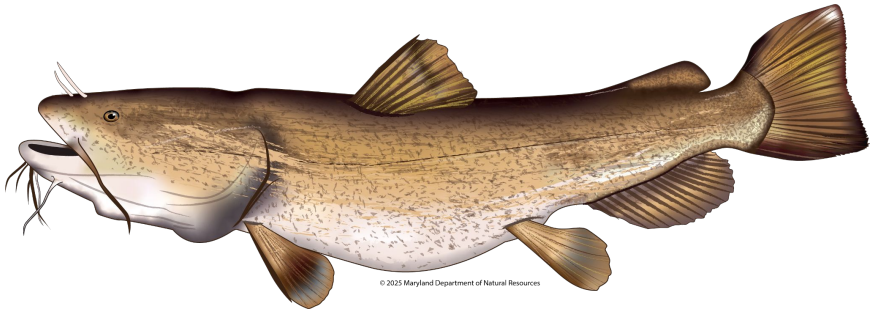




Invasive Catfish Workgroup: Maryland updates Fall 2025

Branson Williams, Invasive Fishes Program
Maryland Department of Natural Resources

October 16, 2025

Branson.Williams@maryland.gov

Fishery-independent monitoring

- LFE survey in tidal, freshwater rivers
- Commercial Electrofishing Chase Boat Pilot
  - four rivers completed in summer 2025
  - first estimates of relative abundance and population structure
  - aids development of SOP for long-term monitoring
  - collaborative efforts between managers and industry
- Collaborative monitoring of flathead catfish in Conowingo Pool and lower Susquehanna River with PA Fish and Boat Commission
- Continued monitoring of flathead catfish in non-tidal Potomac River (MD DNR; Western II Region)

Population models

- USGS Eastern Ecological Science Center researchers have developed a population matrix model for Patuxent River
  - Contact: Dr. Julien Martin (julienmartin@usgs.gov)
  - how does population respond to harvest over time?
  - model inputs use regional data; incorporating Patuxent River data as it becomes available

- Co-produced research to control invasive blue catfish in Chesapeake Bay
  - Contact: Dr. Tom Ihde (thomas.ihde@morgan.edu)
  - Consensus agreement to choose best package of approaches
  - Work together in a series of meetings to evaluate trade-offs (harvests, effects on other species, economic, benefits to other stakeholders, etc.)
  - Facilitated, Structured Decision Making approach

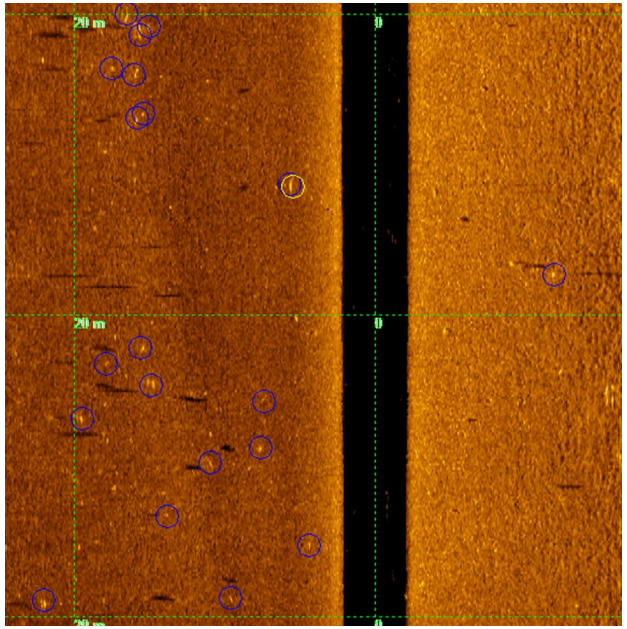
Possible interactions between BCF and Atlantic sturgeon nursery function

- Molecular assessment of a stressed Atlantic sturgeon nursery habitat: The Nanticoke River-Marshyhope Creek, Chesapeake Bay. Section 6 Award to MD DNR, DE Div FW, UMCES (Horne, Park, Secor). 2022-2026.
  - Contact: Dr. Dave Secor (secor@umces.edu)

Investigating eDNA evidence for blue catfish dominance Louis Plough (HPL)

Ian Park with juvenile Atl sturgeon in upper Nanticoke. Recent record sized fish caught in upper Nanticoke River.

Side scan targets in Marshyhope Creek ((J. Madsen, UDE), c. 0.5 m each.



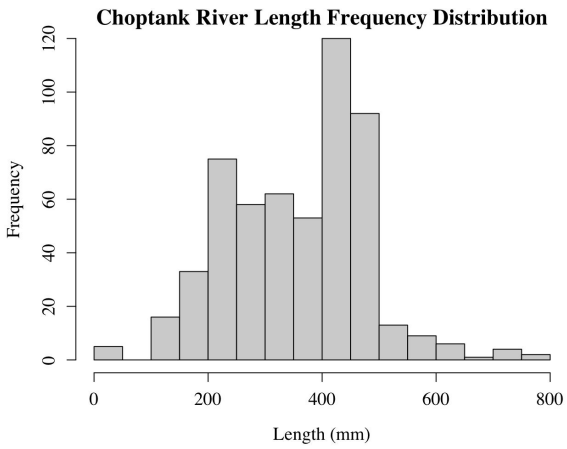
~1 fish per 30 sq m
~125 fish per acre[1]

[1]A VIMS study reported 220 blue catfish per acre in tidal James River

Targeted Removals

- Assessing the population structure, and the efficacy of targeted removal of Blue Catfish (Ictalurus furcatus) on the Choptank River MD.
  - Contact: Liam Hanley (lhanley1@gulls.salisbury.edu)

- Can targeted removals of large individuals alter population size structure for blue catfish in Choptank River?



Pre-removal (June 2025)

Removals
(Summer/Fall 2025)

Post-removal (June 2026)?

Other work

- Collaboration with Maryland Department of Environment, World Wildlife Fund Sustainable Feed Innovations to test nutritional composition of juvenile blue catfish. There is interest among zoos and wildlife rehab facilities to use the fish for piscivores. Samples processed and results are being analyzed/interpreted.
  - Contact: Branson Williams (branson.williams@maryland.gov)
- Morgan State University Patuxent Environmental and Aquatic Research Laboratory (PEARL) began work to estimate economic impact of harvest, recreational fishery for blue catfish. Survey instrument is developed and survey is expected to launch in 2026.
  - Contact: Dr. Scott Knoche (scott.knoche@morgan.edu)
- MD DNR continues to provide financial support to recreational fishing events and tournaments that promote the harvest of blue catfish (and other invasive fishes). Six events funded (up to $750) that engaged over 600 participants.