

A close-up photograph of a blue catfish being held by a person's hands. The fish is dark blue with lighter, silvery scales on its head and body. The person's hands are visible, one supporting the fish from below and the other near its head. The background is slightly blurred, showing what appears to be a boat or a dock.

Updates on Blue Catfish Health Assessments from the Patuxent River

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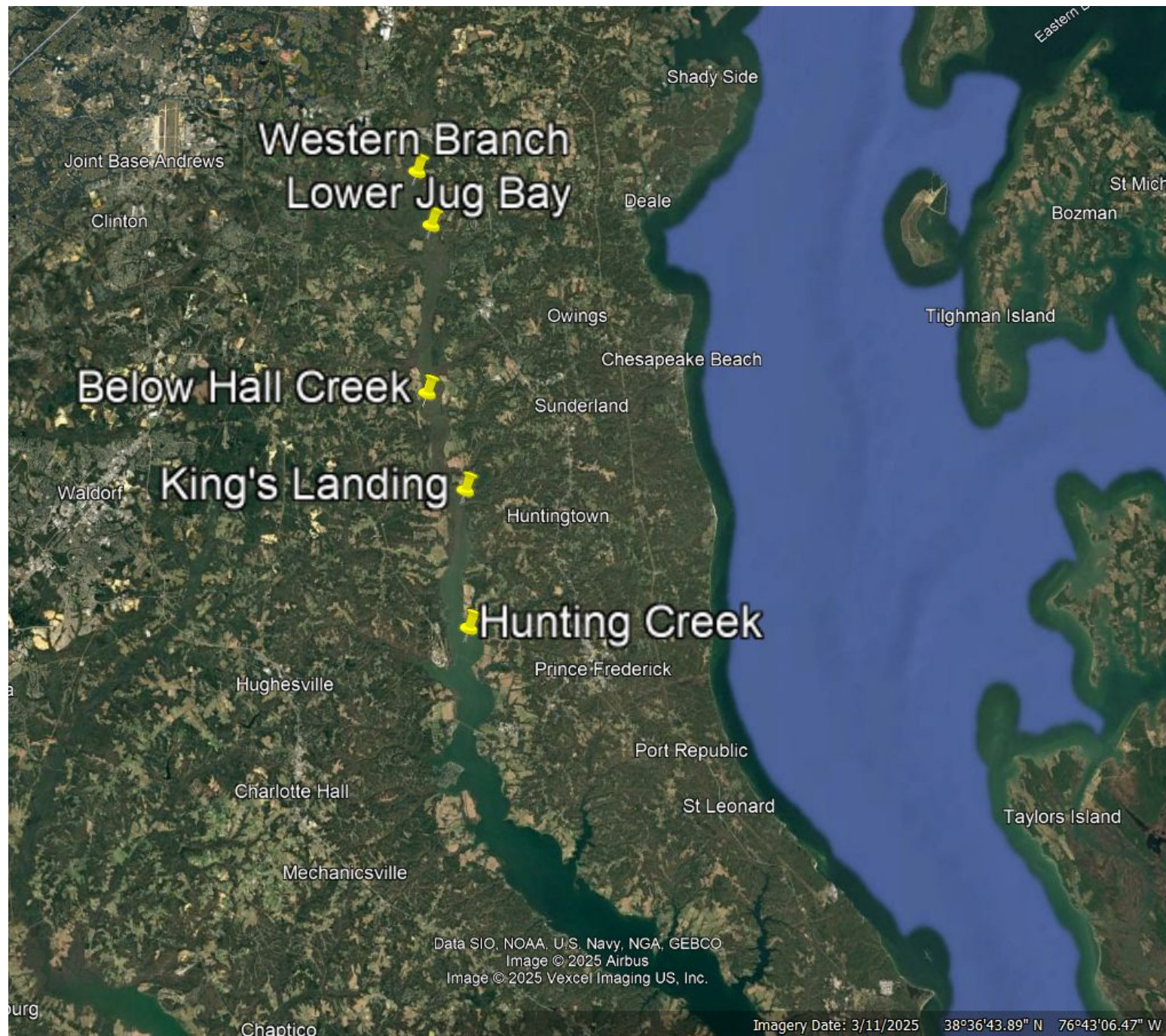
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2024 Health Assessment

- 2024
 - Weight, length, Health Assessment Index (HAI), condition factor
 - Weigh gonad & liver
 - Gonado- and hepatosomatic indices
 - Tissues for histology
 - Liver, gonad, spleen, kidney, gill
 - Liver – gene expression analysis
 - Contaminant metabolism, reproduction, stress/oxidative stress, immune function
 - Plasma
 - PFAS analysis
 - Muscle
 - Heavy metals
 - 5 collection sites
 - Hall Creek, Western Branch, Lower Jug Bay, Kings Landing, Hunting Creek

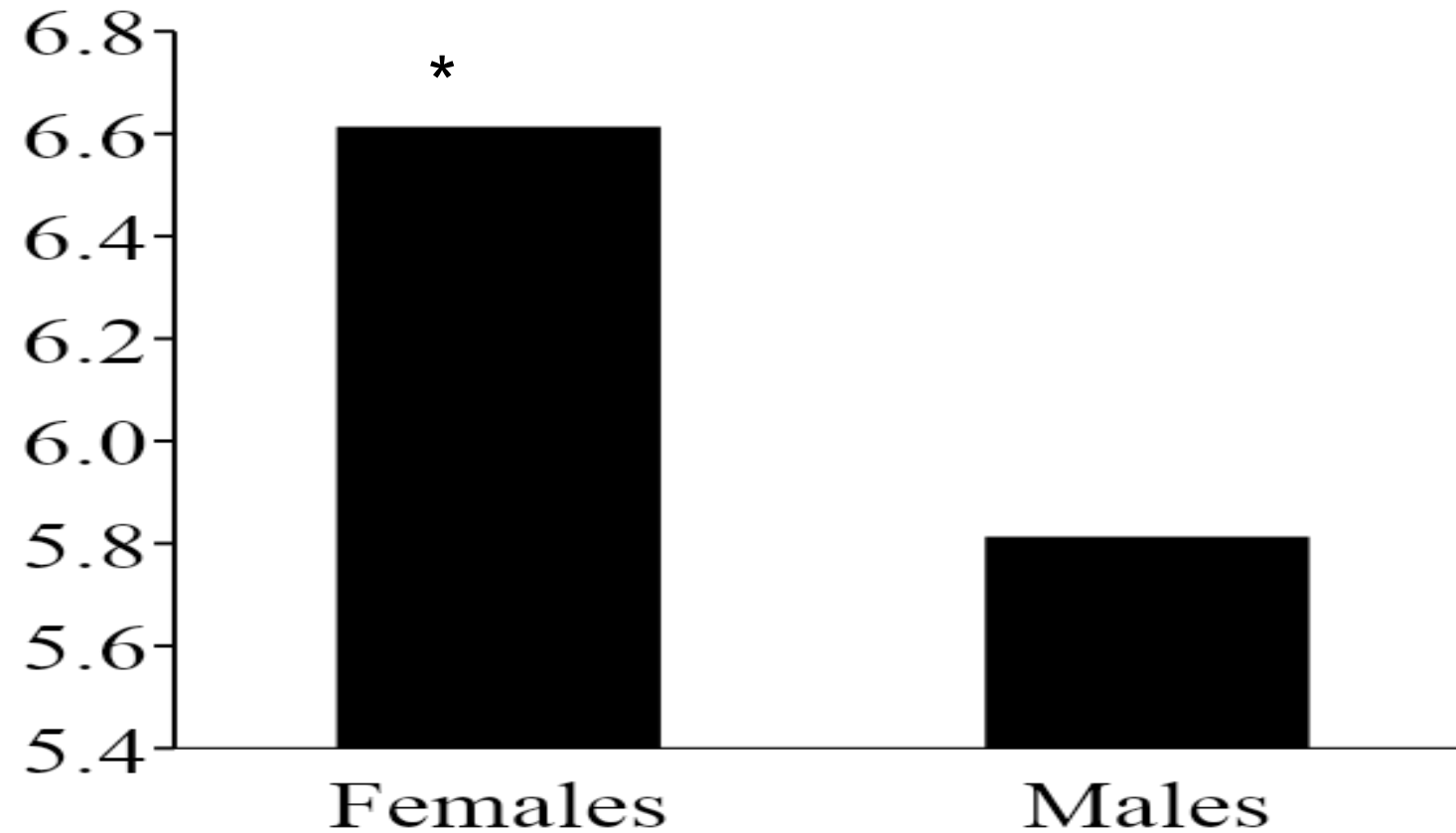


Preliminary Results

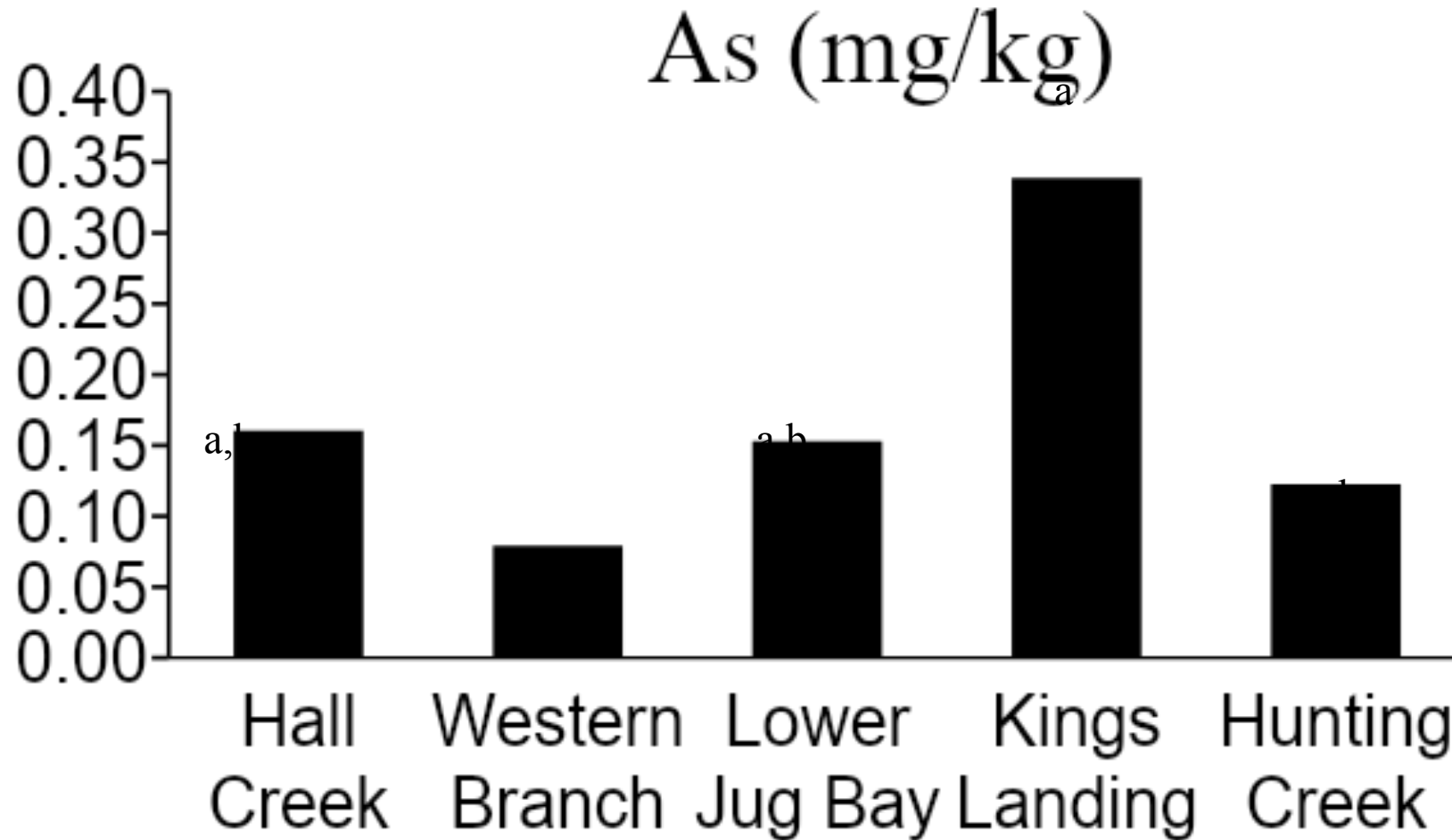
- Heavy metals analyzed
 - Ag (BD)
 - As (Avg = 0.178 mg/kg)
 - Cd (BD)
 - Cu (Avg = 0.181 mg/kg)
 - Fe (Avg = 5.73 mg/kg)
 - Hg (Avg = 0.045 mg/kg)
 - MeHg (Avg = 51.85 ng/g)
 - Ni (Most BD)
 - Pb (Most BD)
 - Zn (Avg = 6.16 mg/kg)

Biological Endpoint	p-value	Spearman's rho
Hg		
Gonad Weight	0.024	0.33
Liver Weight	< 0.001	0.57
Length	< 0.001	0.67
Weight	< 0.001	0.67
Ktl	< 0.001	0.56
MeHg		
Gonad Weight	0.026	0.32
Liver Weight	< 0.001	0.68
Length	< 0.001	0.76
Weight	< 0.001	0.74
Ktl	< 0.001	0.52
Cu		
Gonad Weight	0.011	0.36
GSI	< 0.001	0.50

Other observations: Sex Differences



Other Observations: Site Differences



2025 Health Assessment

- June 11 & 12
- Repeat 2024 health assessment
 - Muscle
 - Microplastic analysis
- Final report will also include 2020 health data



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