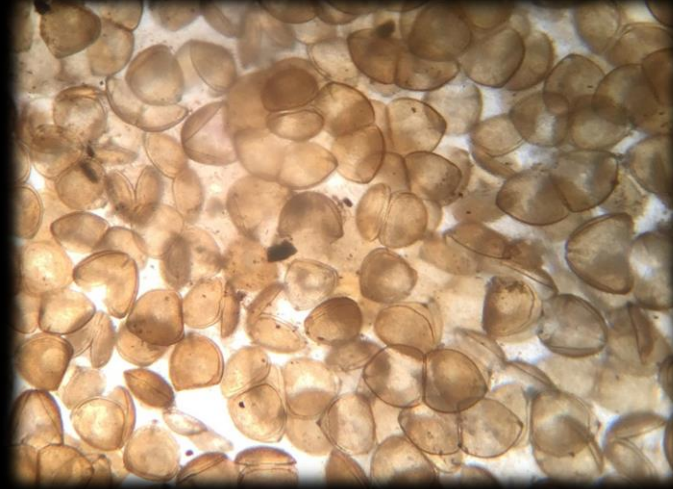


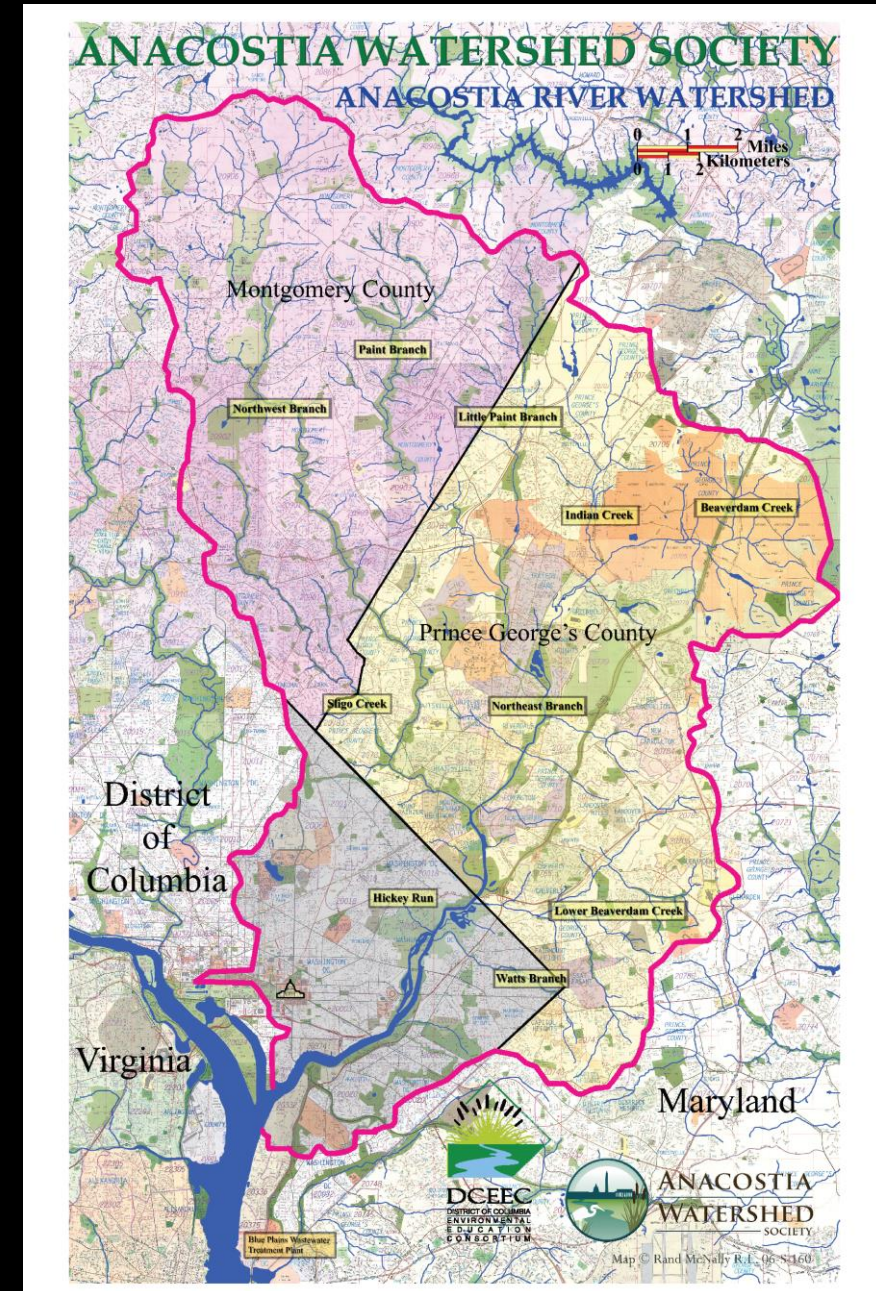
Freshwater Mussel Restoration in the Anacostia River



ANACOSTIA
WATERSHED
SOCIETY

Our mission: To protect and restore the Anacostia River and its watershed communities.

- Stopping and preventing pollution
- Reconnecting the community with the river
- Restoring natural systems



Why restore mussels in the Anacostia River?

2018 ANACOSTIA RIVER REPORT CARD				
		SCORE(%)	GRADE	TREND
Water Quality Indicators (Quantitative)	Dissolved Oxygen	48	F	↓
	Fecal Bacteria	63	D	↑
	Water Clarity	52	F	↑
	Chlorophyll <i>a</i>	80	B-	↑
	Submerged Aquatic Vegetation	100	A+	↑
	Stormwater Runoff Volume	59	F	↓
Remediation Indicators (Qualitative)	Toxics Remediation	43	F	↑
	Trash Reduction	56	F	↑
OVERALL GRADE		63	D	↑



Mussels improve water quality.



Mussels improve habitat.



A clean, healthy Anacostia River benefits us all!

What's been done so far?

- Maryland Department of Natural Resources survey (2015-2016).

Matt Ashton (MD-DNR), AWS staff and interns.

“Assessment of the freshwater mussel community of the tidal-freshwater Anacostia River”

by Matt Ashton, MD-DNR.



- Anacostia Watershed Society surveys (2016-2018).
Jorge Bogantes Montero, AWS staff, interns, and volunteers.



- U.S. Fish and Wildlife Service study (2018).
Fred Pinkney (USFWS), AWS staff and interns.



- Propagation of mussels from Anacostia River at the Harrison Lake National Fish Hatchery / Virginia Fisheries and Aquatic Wildlife Center.
Rachel Mair and fellow staff (USFWS).



What have we discovered so far?

Maryland / District
of Columbia



Eastern Elliptio (*Elliptio complanata*)



Eastern Floater
(*Pyganodon cataracta*)



Critically Imperiled-Imperiled/
SGCN

Eastern Pondmussel
(*Ligumia nasuta*)



Status Uncertain

Eastern lampmussel
(*Lampsilis radiata*)



Vulnerable/Watchlist

Paper Pondshell
(*Utterbackia imbecillis*)



Imperiled/State Rare

Atlantic Spike
(*Elliptio producta*)



Critically Imperiled-Imperiled/
SGCN

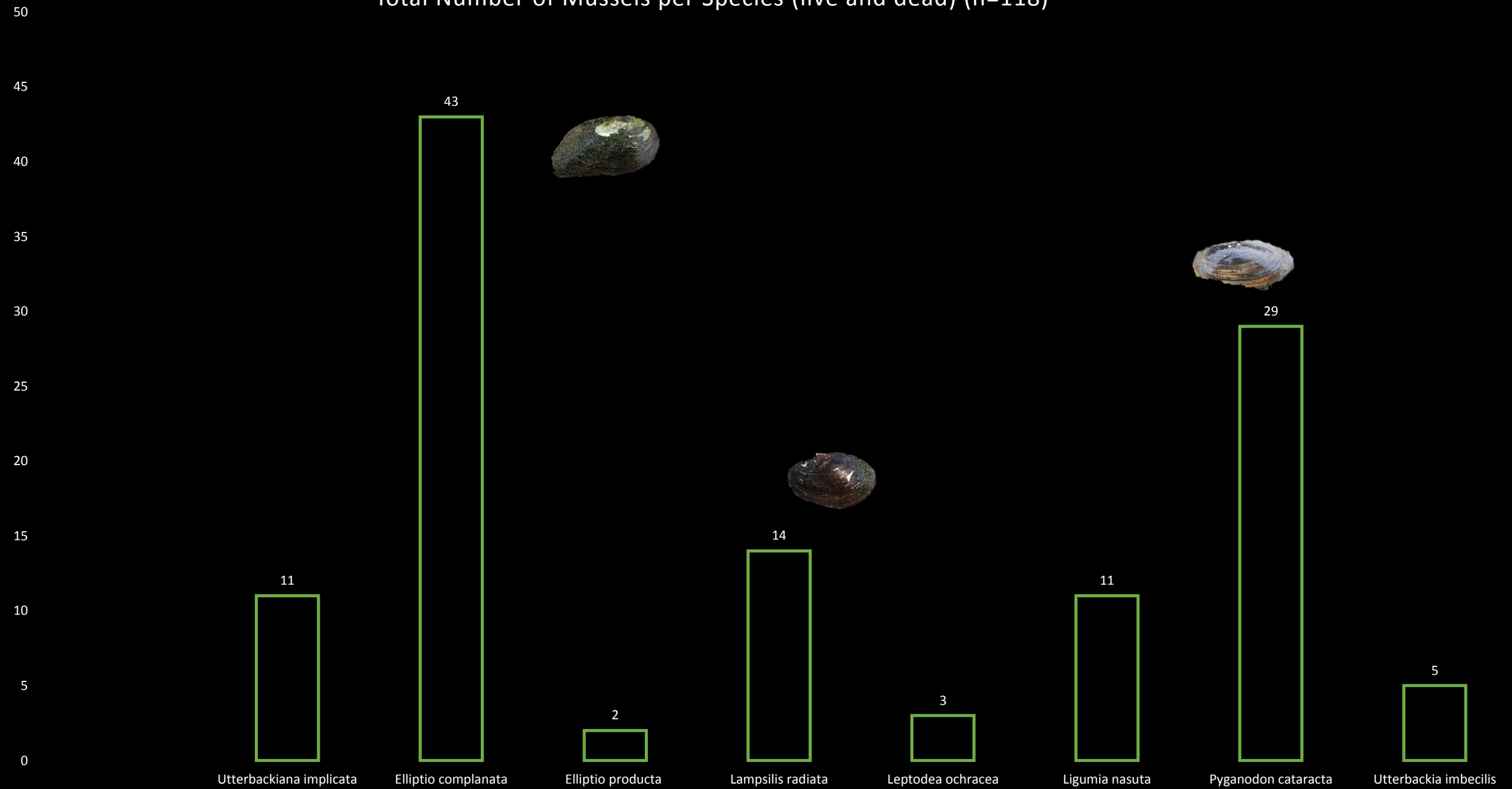
Tidewater Mucket
(*Leptodea ochracea*)



Vulnerable/Watchlist/SGCN

Alewife Floater
(*Utterbackiana implicata*)

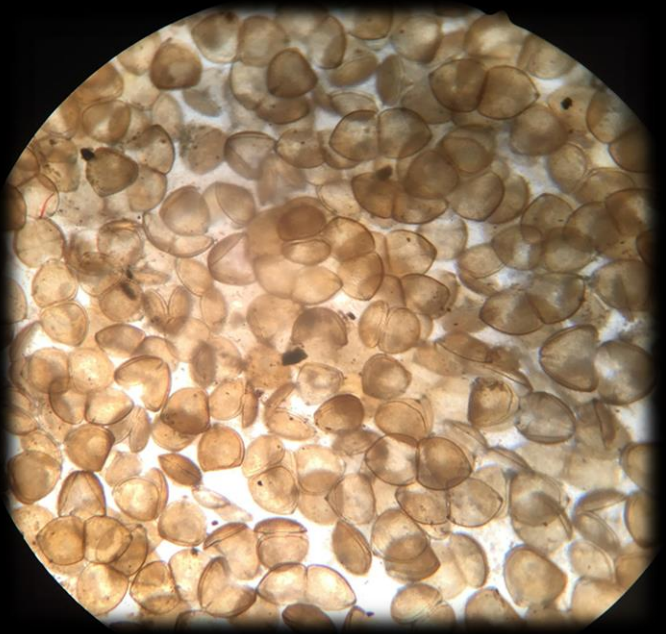
Total Number of Mussels per Species (live and dead) (n=118)



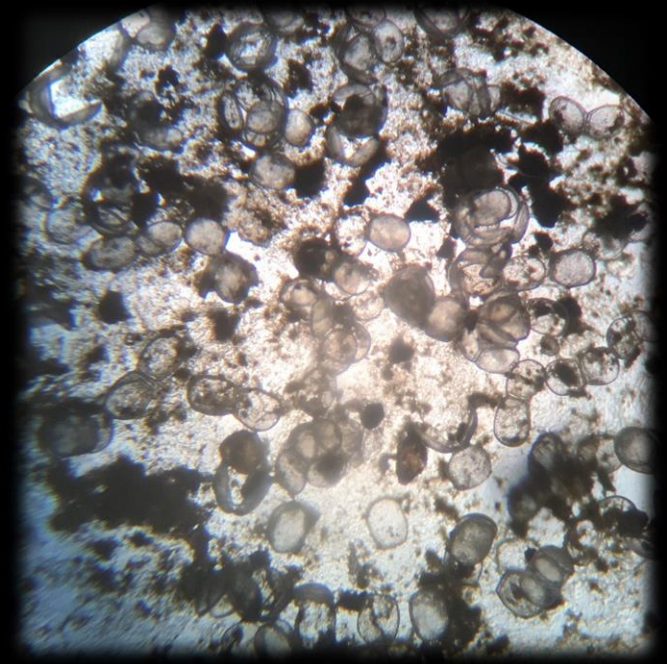
They are reproducing!



Eastern Floater, inside SAV cage at Buzzard Point



Glochidia of Alewife Floater, Kenilworth Marsh



Glochidia of Eastern pondmussel, Buzzard Point



Eastern pondmussel, Kenilworth Marsh

Cages for submerged aquatic vegetation serve as refuge!



Alewife floater



Eastern lampmussel



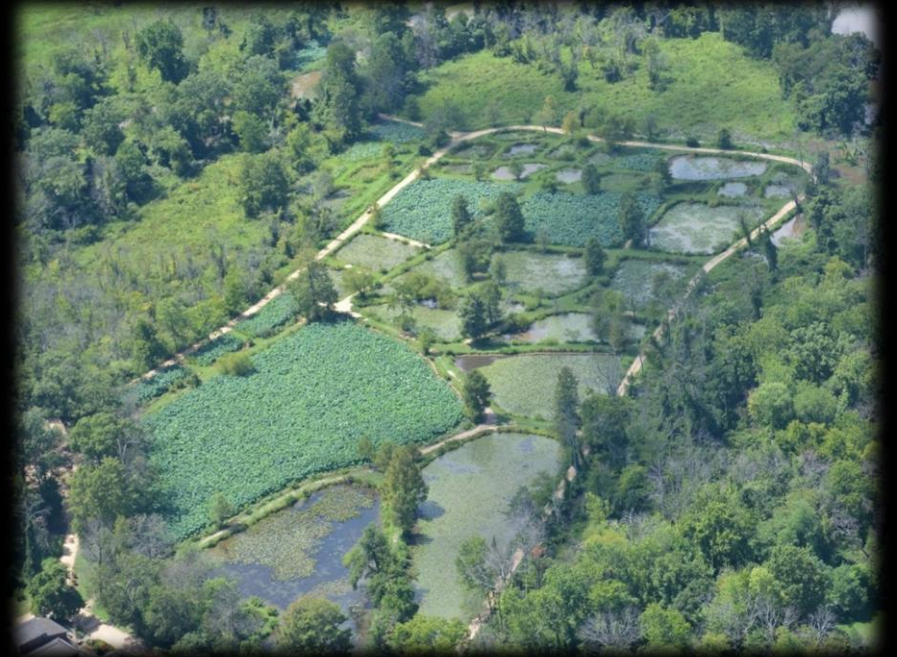
What are we planning to do next?

- Continued propagation in partnership with the Harrison Lake National Fish Hatchery
- Community engagement and education
- Continued inventory and monitoring (including tributaries)
- Determine suitability and long-term viability of release sites



Continued propagation . . .

- Floating baskets at 7 sites along the mainstem of the Anacostia
- 300 juveniles/basket
- Alewife floater (*Utterbackiana implicata*) and eastern pondmussel (*Ligumia nasuta*)
- 12 months, mortality and average growth will be measured
- Released into the river, sites TBD
- Post project monitoring, tagging using epoxy glue dots



Community involvement and education . . .

- Modeled after the Ohio River Foundation's "Mussels in the Classroom" program
- Similar to AWS' other three-part, hands-on education programs (classroom, field experience and boat tour)
- 5 schools and 250 students engaged
- Students care for juvenile mussels in their classrooms and then release them into floating baskets!



How can I get involved?

- Volunteer!
 - Help with maintenance and monitoring (beginning Fall 2018)
 - Assist with student experiences (beginning Spring 2019)



Musseling our way to a cleaner Anacostia River!



#musselpower

www.anacostiaws.org

@anacostiaws

