



Jim Page
Sr. Fisheries Biologist
GA DNR
Jim.Page@dnr.ga.gov

MANAGING ANS IN GEORGIA



ANS Program Overview – Wildlife Resources Division



- Structurally, WRD Fisheries Section has designated an ANS Coordinator to oversee and assist in coordinating ANS efforts performed around the state.
- This is a **TEAM EFFORT!!** We partner with:
 - WRD (all of Fisheries, Nongame/Wildlife Conservation, GM);
 - CRD, LE, and other DNR divisions;
 - Outside agencies (USFWS; GSARP; USGS; CISMA);
 - Academia (UGA, Georgia College, ABAC, etc.); and
 - Several local entities (cities and counties).
- **Program Goal:** To work with local, state, and federal agencies, along with members of the general public, to:

PREVENT

PLAN

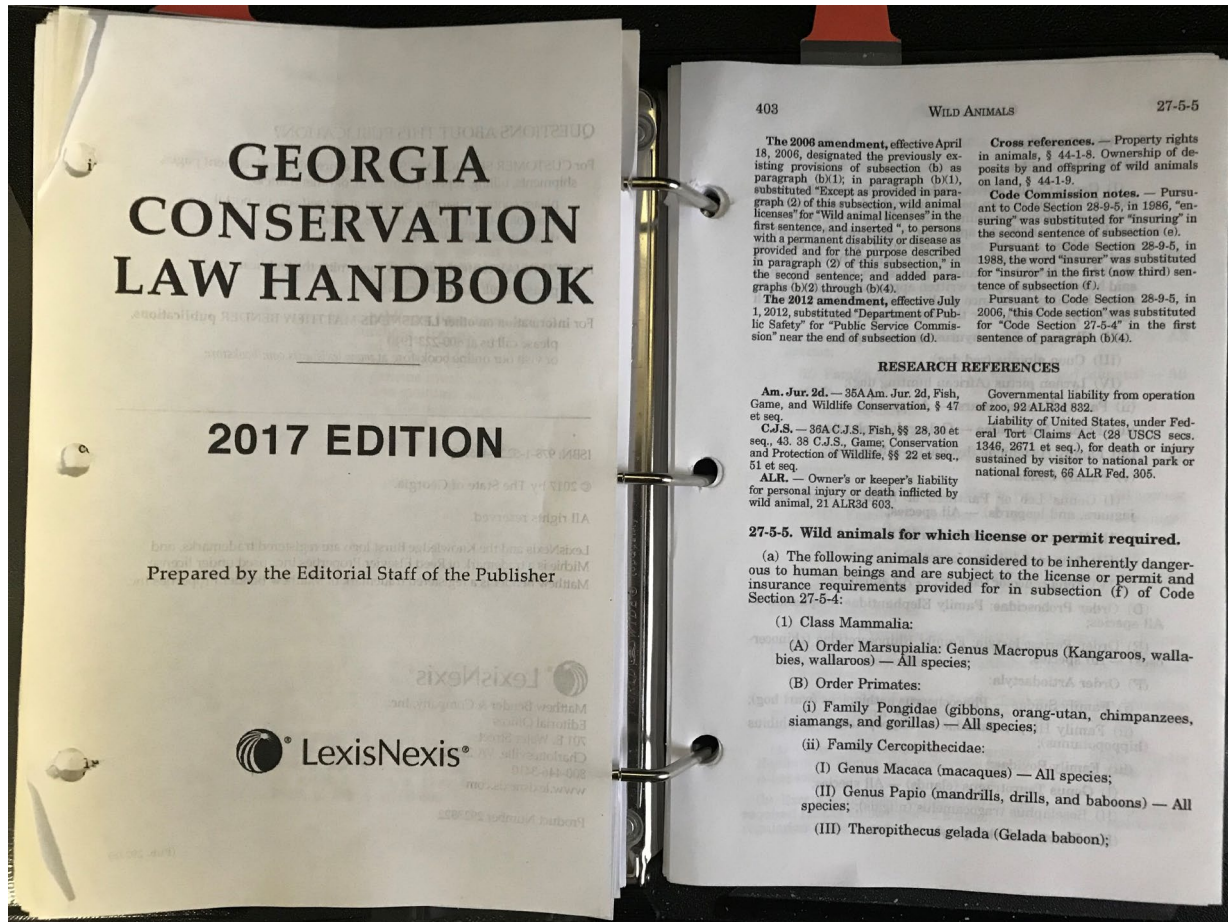
RESPOND

ANS Program Overview – Wildlife Resources Division

PREVENT

PREVENT (Efforts to Prevent ANS)

- **Creating and updating Laws/Rules** to prohibit species or require special permits to possess them. Recently passed Title 27-5-5 reform.



- **Education and Outreach efforts** to inform kids and adults about problems associated with ANS and how they can help PREVENT it.

PREVENT: Education and Outreach - Schools

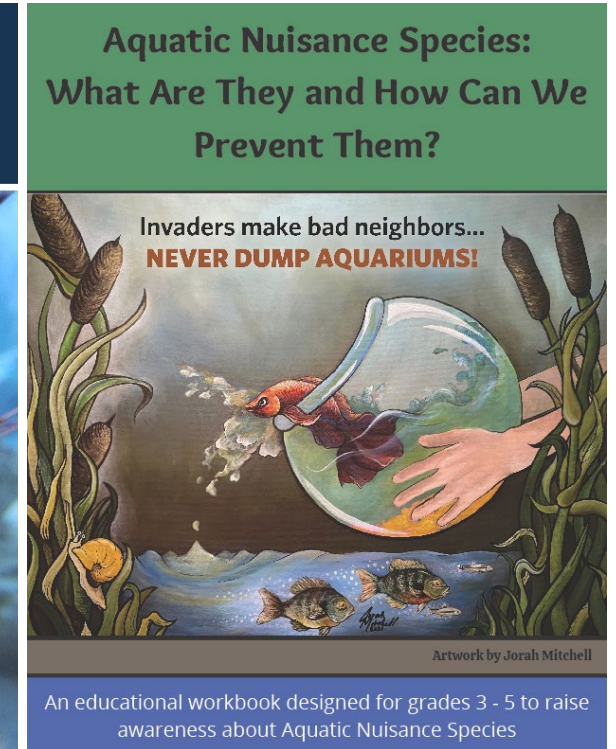
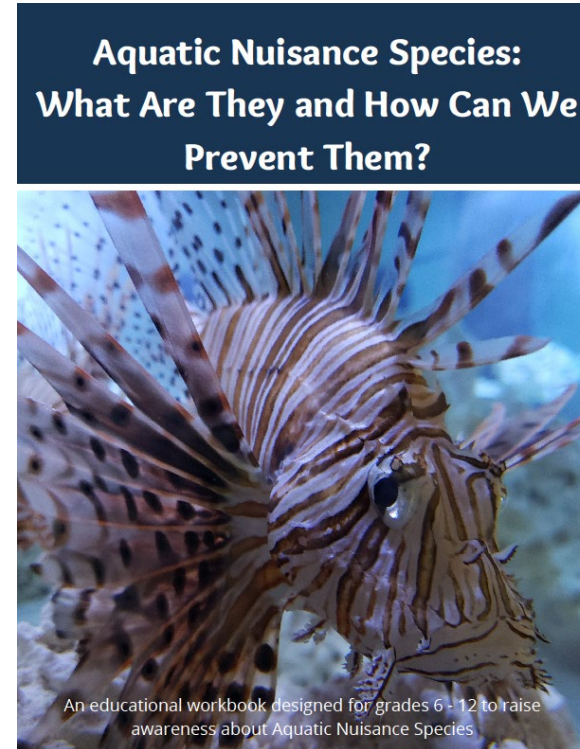
. Since 2017, we've spoken to over 15,000 students & adults.



REACHING KIDS IS KEY TO THE FUTURE OF OUR RESOURCES!!

PREVENT: Outreach Partners

- In Aug 2022, provided 24 pairs of ANS signs that GA Power put up at their boat ramps. We also continue to install these at various DNR ramps and all PFAs.



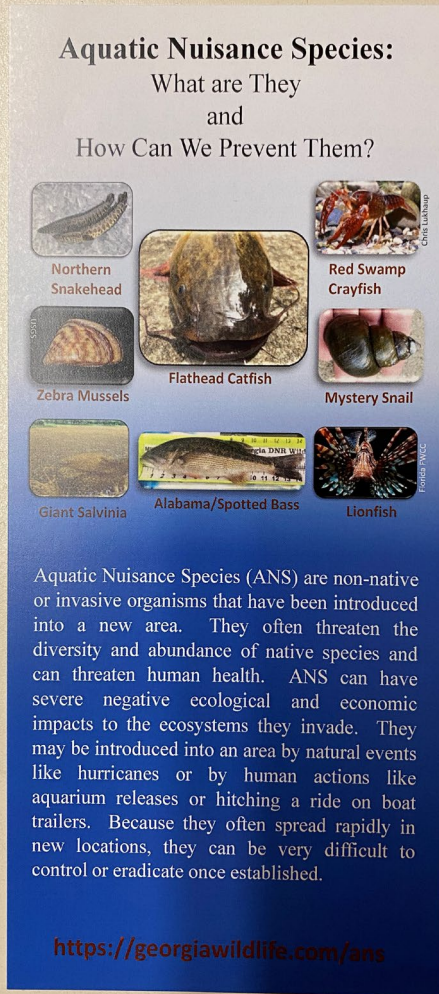
- In Sept. 2022, collaborated with GA AFS and other partners to finalize new ANS workbooks (young kids; older kids).
- GA AFS contributed \$\$ funds to aid in printing these.

PREVENT: ANS Outreach Displays

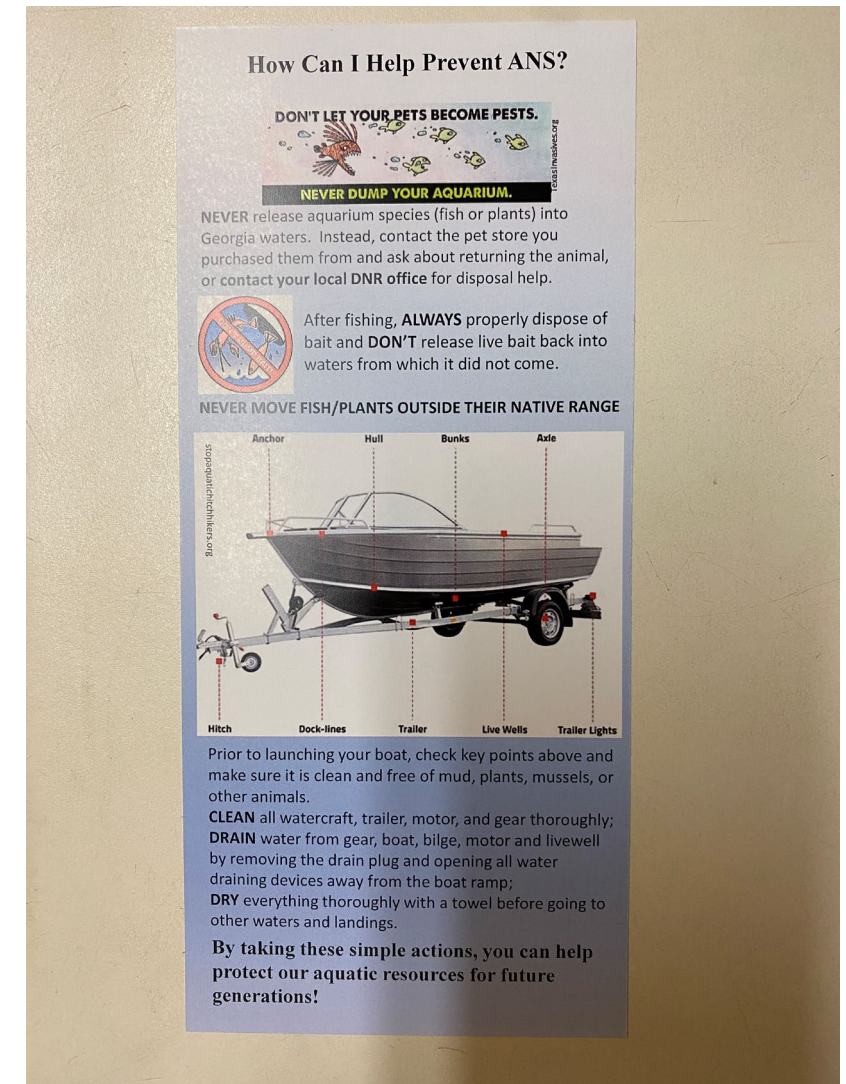
- Display tables have been created for partners (Visitor Centers, GA Parks, Charlie Elliott Ed. Center, GA Aquarium, etc.).
- New ANS display at the GO FISH Education Ctr.



PREVENT: ANS Outreach with Law Enforcement



- GADNR LED will distribute the new ANS rack card to all participants in their Boating Education Classes across the state.
- This will allow this important user group to have more information on how **THEY** can help with ANS prevention.

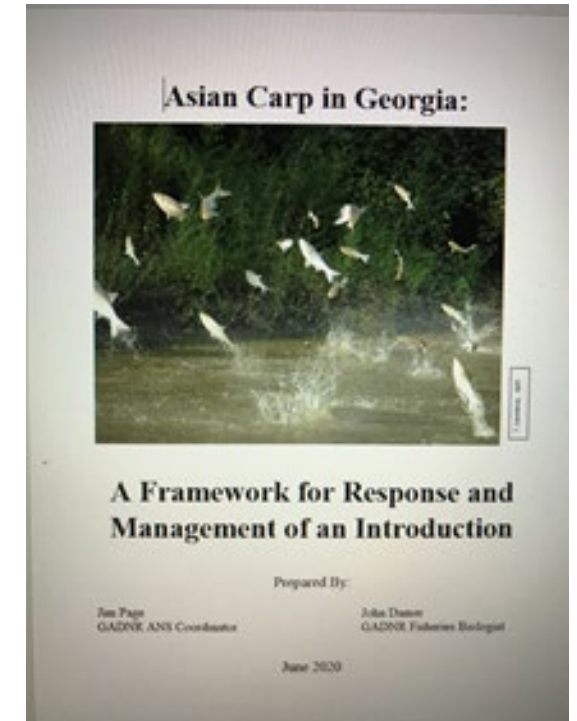


ANS Program Overview – Wildlife Resources Division

PLAN

PLAN (Efforts to Plan on Addressing ANS)

- Obtaining **GRANT FUNDING** from USFWS for use in conducting ANS efforts.

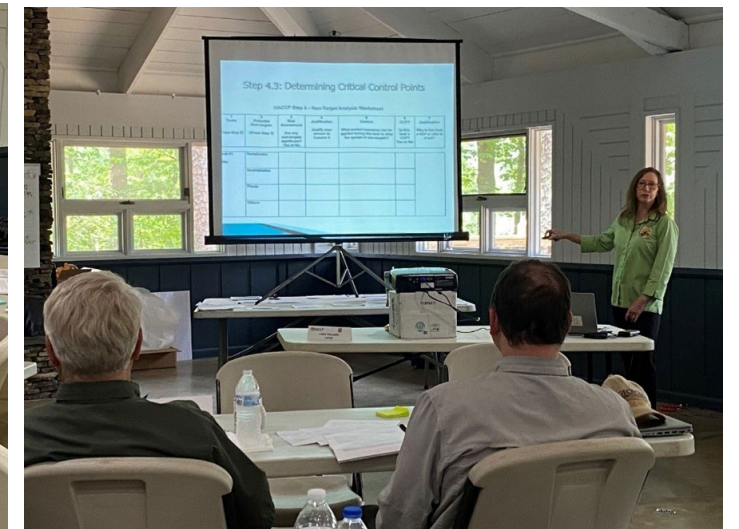


- Development of **RESPONSE PLANS** for some species. These provide a framework on legal backing, response options, and partner info.

- Follow and update the **STATEWIDE ANS MANAGEMENT PLAN** to identify and prioritize ANS.

PLAN: ANS Trainings

- Hosted **Watercraft Inspection Training** in May 2022 at Red Top...led by PSMFC and had participants from several federal, state, and private groups
- Hosted **HACCP Training** in May 2022 at Red Top...led by USFWS and attended by DNR biologists and technicians, along with other partners.
- Currently Developing an Online training for citizens



ANS Program Overview – Wildlife Resources Division

RESPOND

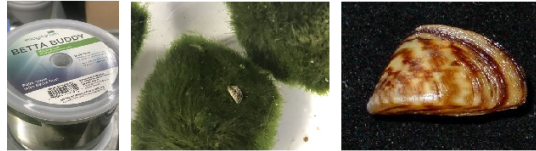
RESPOND (Efforts to respond to introduced ANS)

- By phone, computer, or boots on the ground, **WE AS A TEAM RESPOND** to reported introductions



ATTENTION AQUARIUM OWNERS

NATIONWIDE RECALL ON CONTAMINATED MOSS BALL PRODUCTS



On March 3, 2021, the Georgia Department of Natural Resources (GADNR), along with wildlife agencies across the U.S., were alerted about the discovery of highly invasive zebra mussels found inside containers of "Betta Buddy Marimo Ball," a moss plant for aquariums, along with other moss ball products. Investigative efforts by several state and federal agencies found a multitude of pet store chains and individual stores to carry several different contaminated moss ball products. National recalls have been issued on affected moss ball products. Unfortunately, many of these contaminated products have been shipped nationwide, including to stores throughout Georgia.

If zebra mussels, the infected moss balls, or infected water are dumped into public waters, the effects could be devastating. Zebra mussels cause millions of dollars in damage to boats and water intake pipes while also creating ecological harm to native mussels and other aquatic biota.

WE NEED YOUR HELP

YOUR HELP IS CRITICALLY IMPORTANT! If you have purchased and/or used moss balls in 2021, we urge you to visit the websites below to learn how to properly dispose of these items and disinfect aquarium(s).

- Nationwide guidance for aquarium owners and how to decontaminate aquariums: fws.gov/fisheries/ans/zebra-mussel-disposal.html
- Learn more about zebra mussels and other invasive species in GA: georgiawildlife.com/ans

WORKING TOGETHER, WE CAN PREVENT THE DAMAGE THAT ZEBRA MUSSELS CAN CAUSE.

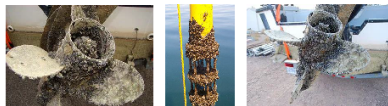


Photo Credits: USGS; SnapAquatic; Hinchliffe



RESPOND: Northern Snakehead

- In October 2019, report of Snakehead caught in private pond near Norcross, GA.
- DNR responded, conducted electrofishing in pond, treated pond, and confirmed presence of 34 snakehead.
- Started large public announcement campaign to inform folks about snakeheads (how to ID) and how they can report.
- Initiated an eDNA follow-up monitoring plan (Hunter Roop)



	Snakehead	Bowfin
Anal Fin	Very long, 18 rays, more than half the length of the dorsal fin	Short, 12 rays, less than half the length of the dorsal fin
Head	Pointed and flattened dorsally	Large and rounded
Jaw	Lower jaw protrudes past upper jaw with pointed teeth	Lower jaw is shorter than upper



Snakehead illustration by Susan Trammel, usgs.gov; Bowfin illustration by Duane Raver



RESPOND: Non-Native Catfish (Flatheads and Blues)

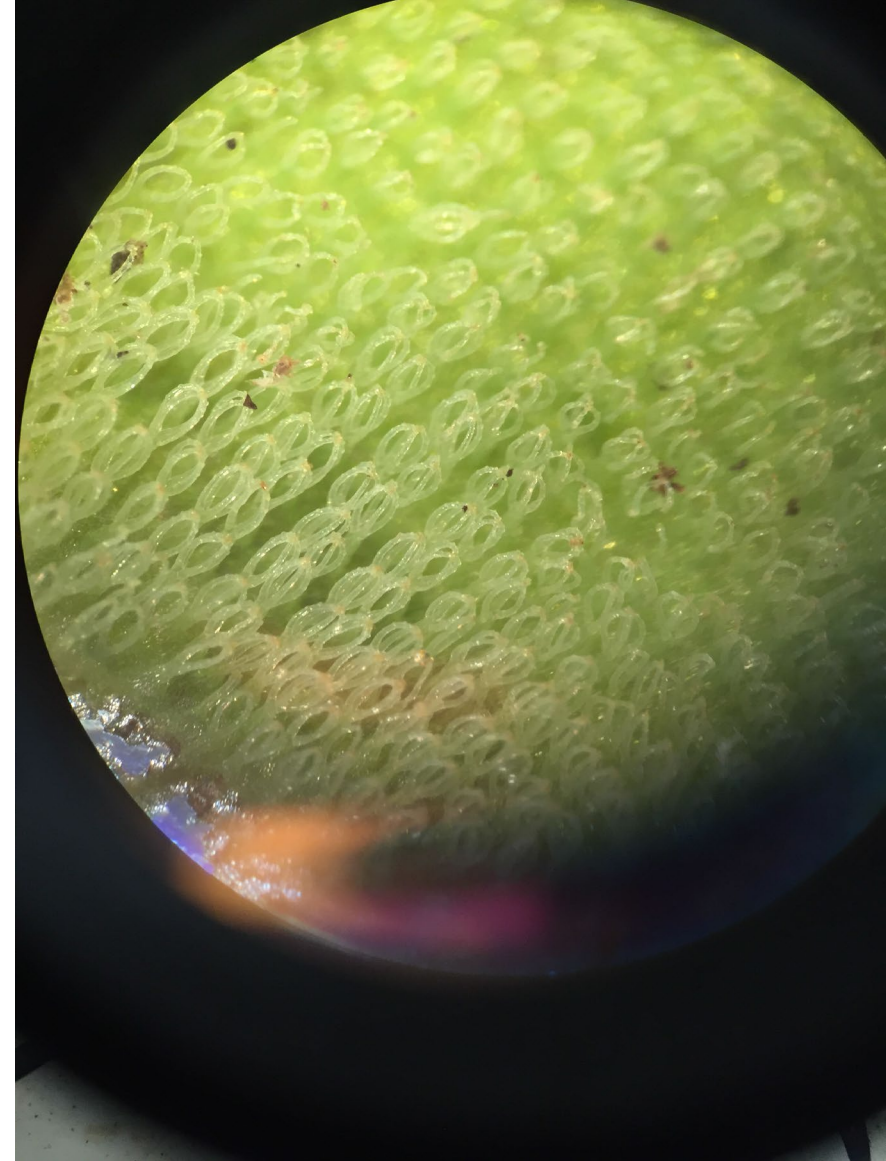


- In 1973, Flatheads introduced into Ocmulgee River....by late 1980s all throughout Altamaha.
- In 1996, flatheads discovered in Satilla River
- In 2007, starting removing fish full-time.
- In 2011, blue catfish discovered in Satilla River.
- Currently removing flatheads and blues each year from May – October from Satilla River



RESPOND: Giant Salvinia

- In 2015, we responded to report of Giant Salvinia in private pond in Evans County.
- Positive ID (easily distinguishable by egg-beater shape).
- Our practice is to eradicate **ANY** known introductions.
- Pond treated many times with SONAR and Diquat until complete kill.

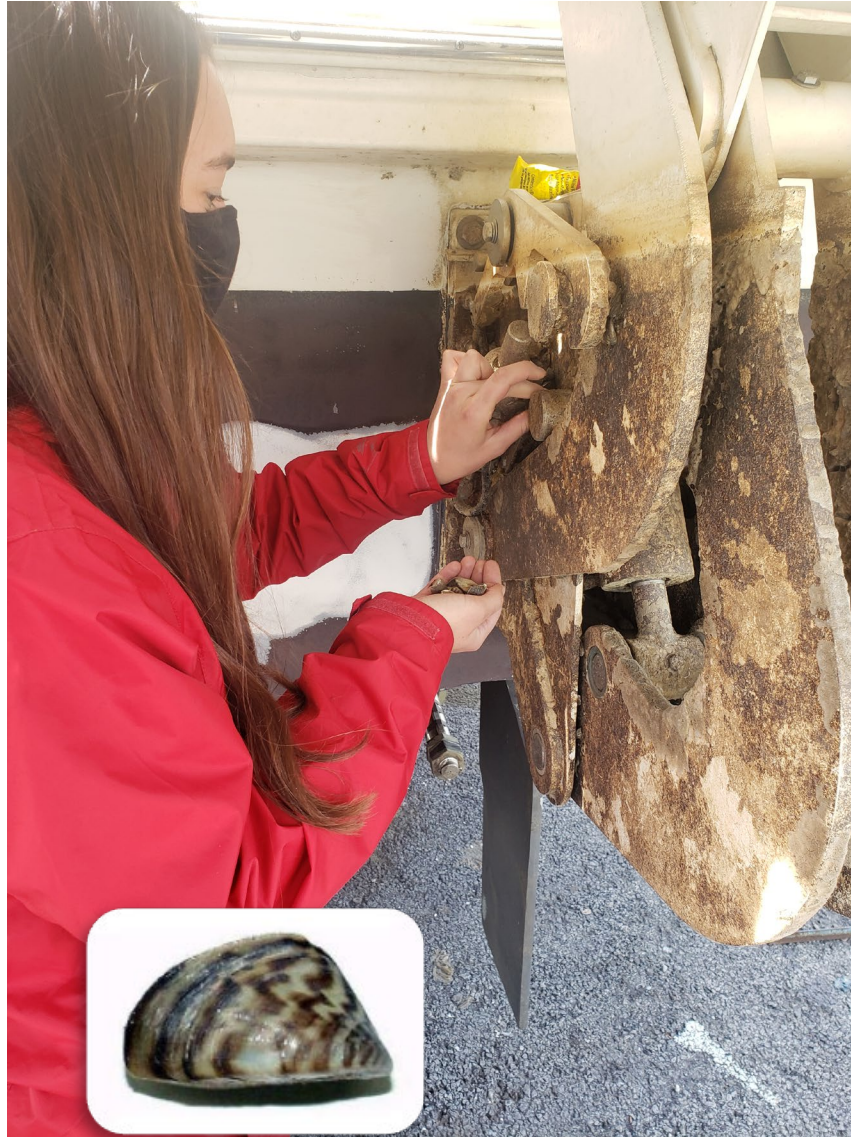


RESPOND: Zebra Mussel

- Three recent scares of mussels having potential to be released in GA

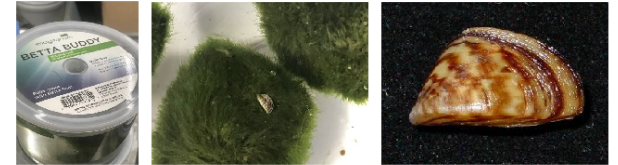
- 2021: Moss Ball incident (nationally)
 - Visited dozens of PetCo/PetSmart stores and got product off shelves
- 2021: Lake Lanier (boat from Tennessee)
- 2022: Lake Lanier (boat from Michigan)

**THANKFULLY NO KNOW INTRODUCTIONS
OF ZEBRA MUSSELS IN GA**



ATTENTION AQUARIUM OWNERS

NATIONWIDE RECALL ON CONTAMINATED MOSS BALL PRODUCTS



On March 3, 2021, the Georgia Department of Natural Resources (GADNR), along with wildlife agencies across the U.S., were alerted about the discovery of highly invasive zebra mussels found inside containers of "Betta Buddy Marino Ball," a moss plant for aquariums, along with other moss ball products. Investigative efforts by several state and federal agencies found a multitude of pet store chains and individual stores to carry several different contaminated moss ball products. National recalls have been issued on affected moss ball products. Unfortunately, many of these contaminated products have been shipped nationwide, including to stores throughout Georgia.

If zebra mussels, the infected moss balls, or infected water are dumped into public waters, the effects could be devastating. Zebra mussels cause millions of dollars in damage to boats and water intake pipes while also creating ecological harm to native mussels and other aquatic biota.

WE NEED YOUR HELP

YOUR HELP IS CRITICALLY IMPORTANT! If you have purchased and/or used moss balls in 2021, we urge you to visit the websites below to learn how to properly dispose of these items and disinfect aquarium(s).

- Nationwide guidance for aquarium owners and how to decontaminate aquariums: [fws.gov/fisheries/ans/zebra-mussel-disposal.html](https://www.fws.gov/fisheries/ans/zebra-mussel-disposal.html)
- Learn more about zebra mussels and other invasive species in GA: georgiawildlife.com/ans

***WORKING TOGETHER, WE CAN PREVENT THE
DAMAGE THAT ZEBRA MUSSELS CAN CAUSE.***

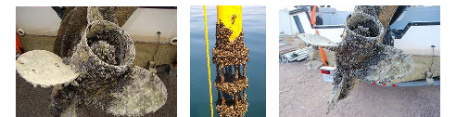


Photo Credits: USGS, StopAquaticInvasives

RESPOND: WeatherLoach

- UGA Warnell Staff/Students discovered WeatherLoach in McNutt Creek (Middle Oconee Riv.) in 2020.
- Since then discovered in several other creeks
- UGA Warnell School is leading efforts on WeatherLoach work (Wesley Gerrin)



Additional Examples of Commonly Reported ANS

BAR_TALR_04



Hybridization (e.g. Bartram/Alabama)



Tiger Shrimp



Hydrilla



Water Hyacinth



Asian Clam (Corbicula)



Asian Swamp Eel



Mystery Snails

Aquarium species



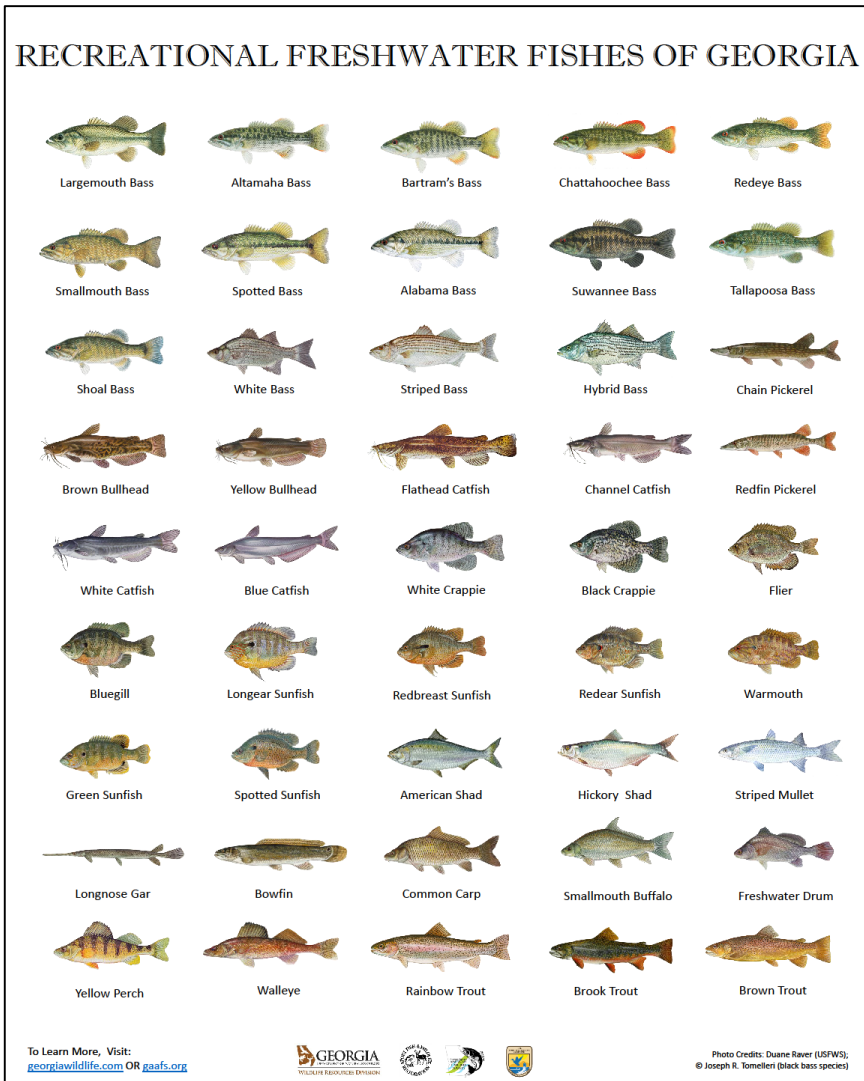
Summary

- Fortunately we don't have the multitude of Invasives that Florida has, and hopefully we never will.
- PREVENTION is a HUGE part of our current effort: from Regulatory to Education (An ounce of prevention is worth a pound of cure).
- Though we can't foresee every event, a PLAN continues to aid our efforts.
- Our RESPONSES are a TEAM effort, as One ANS Coordinator can't cover it all.
- None of this is possible without partners, so big THANK YOU to them (USFWS; GSARP; USGS; UGA; CISMA; GA Power; etc.)

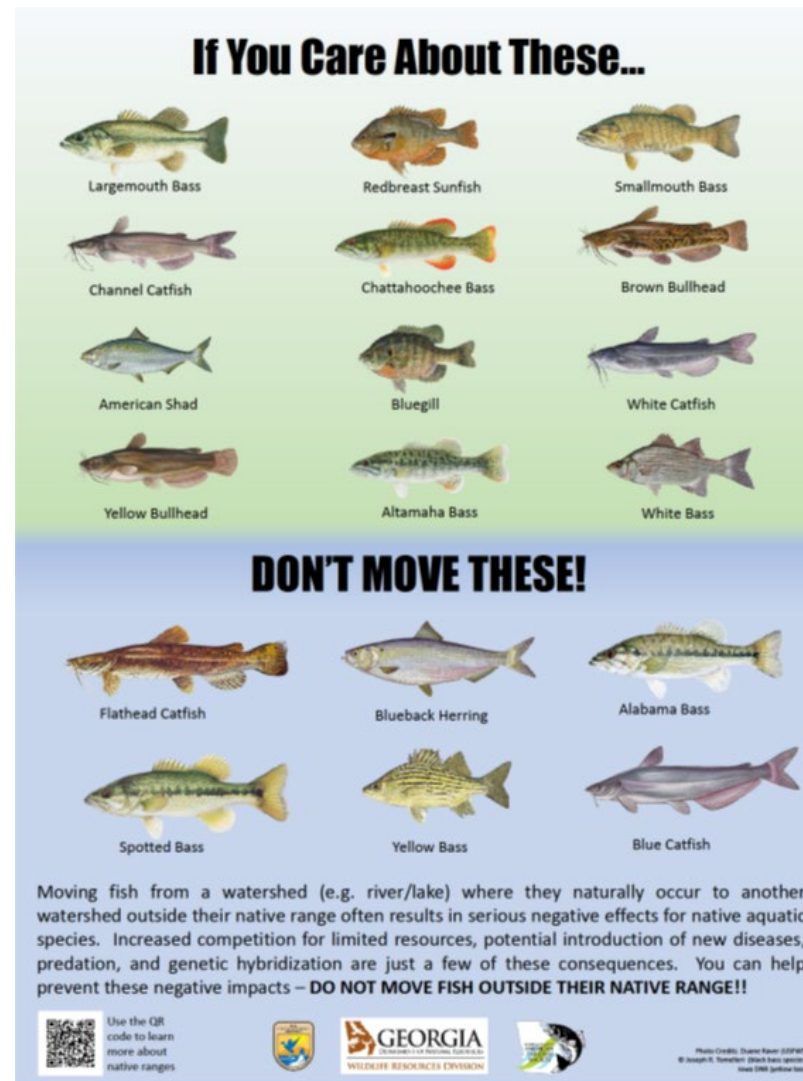


Coastal Georgia CISMA

Questions?



Recreational Fishes Poster



Don't Move ANS Poster



ANS Wanted Poster