

Satilla River Non-Native Catfish Removal: Strategies and Results

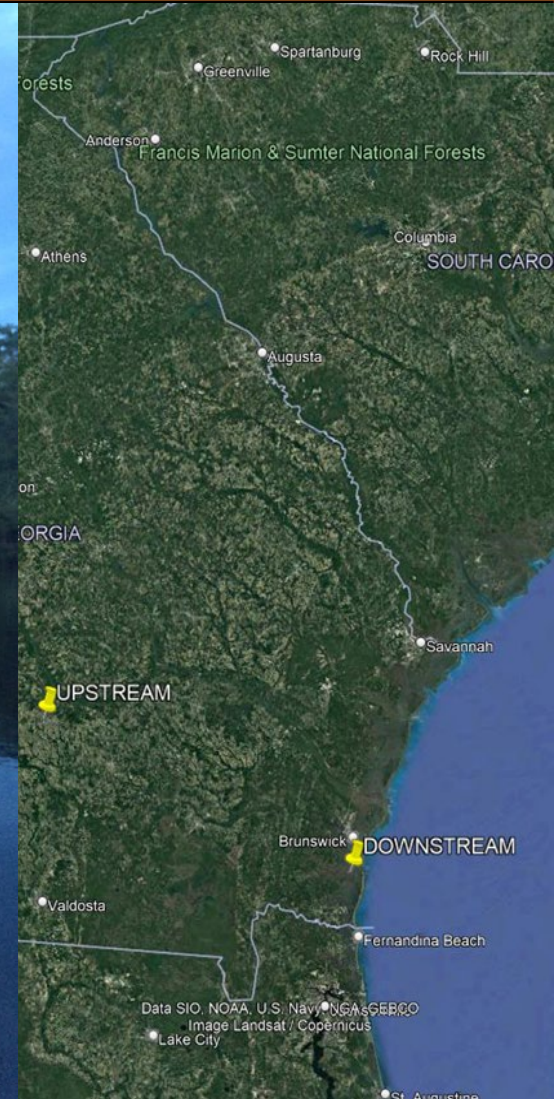


- The Satilla River is a blackwater system flowing unimpeded for approx. 225 miles (Fitzgerald – Atlantic Ocean)
- Historically, the river has been home to one of the best redbreast sunfish (*Lepomis auritus*) fisheries in the southeastern U.S.



Our Problem

- 1996: Flathead catfish are discovered in the Satilla River.
- Confirming flatheads in the river poses a question: **What will we do about it?**
- In 1996 part-time removal efforts start.
- **OBJECTIVE :**
REDUCE FLATHEAD POPULATION AND PROTECT NATIVES
- 2011: Blue Catfish are discovered in the river, so we remove as well.
- **OBJECTIVE 2:**
REDUCE BLUE CATS TO PROTECT NATIVES



Our Predators:

Flathead Catfish and Blue Catfish

- Flathead catfish are native to the Gulf Coast drainages (e.g. Coosa River in GA).
- Apex predator that can live 20+ years (prefer deeper waters but can live many places)
- As full grown adult, they can exceed 100lbs.
- Primarily piscivorous as adults and diet includes anything that will fit in their mouth, including endangered species like juvenile sturgeon.



- Blue catfish are native to the Mississippi River drainages.
- Largest catfish species in North America (150lbs).
- Apex predator that can live 20 years in coastal and inland waters. They prefer freshwater but can tolerate moderate salinities (15ppt).
- Opportunistic predator that eats lots of fish and inverts, including blue crabs and Asian Clam.

Our Approach



- Two boats are used: 1 is the shock boat; the other is the “pick-up” boat
- Electrofishing done via modified backpack shockers, two 12-volt batteries, and a single copper cable that is towed off the stern of the vessel.
- Several species of catfish are stunned, and staff selectively dip-net flatheads, leaving native fish.
- Harvested flatheads/blues are put in coolers, brought back to office, and data is collected.
- For each fish, length and weight are recorded. Sex is collected from a subsample of the catch, and otoliths may be removed from selected individuals for aging.



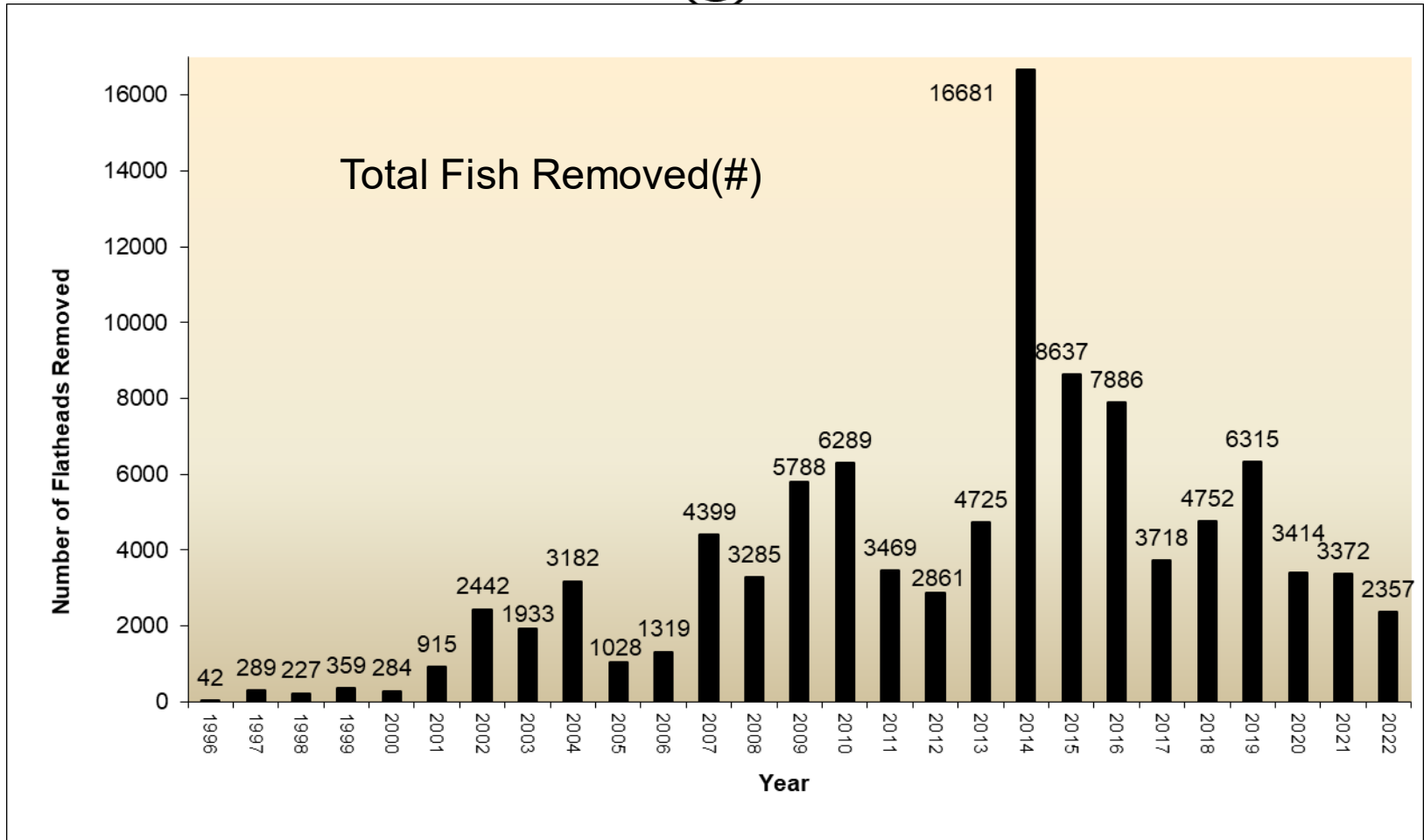
Our Challenges

Aside from the crazy South GA heat (100F+), other challenges we face:

- Low Water = dragging boats
- High Water = fish can go anywhere
- Downed Trees = continually use chainsaw.



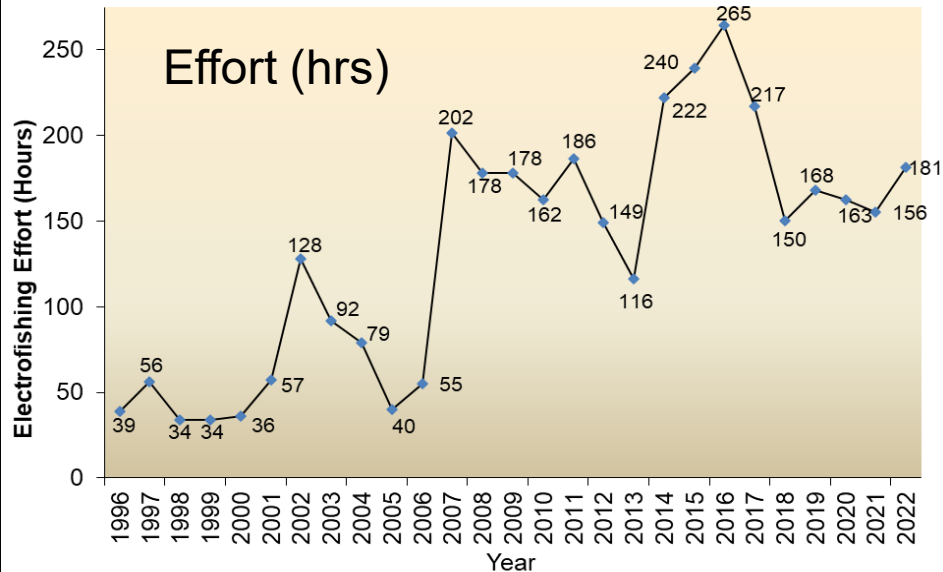
Our Results (1996-2022)



12,020 fish removed from 1996-2006 (11 years)
87,948 fish removed from 2007-2022 (16 years)

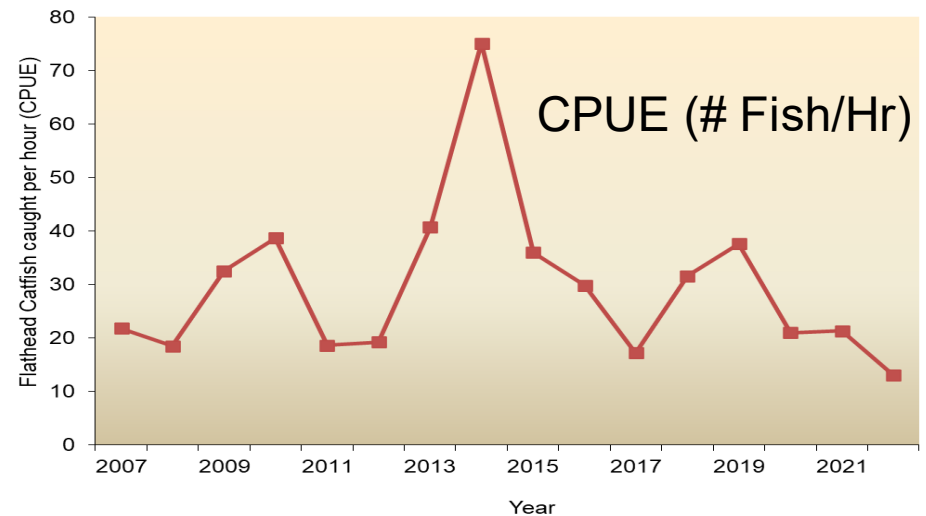
Since 2007 = Averaged 5,706 fish/yr

Our Results (1996-2022)

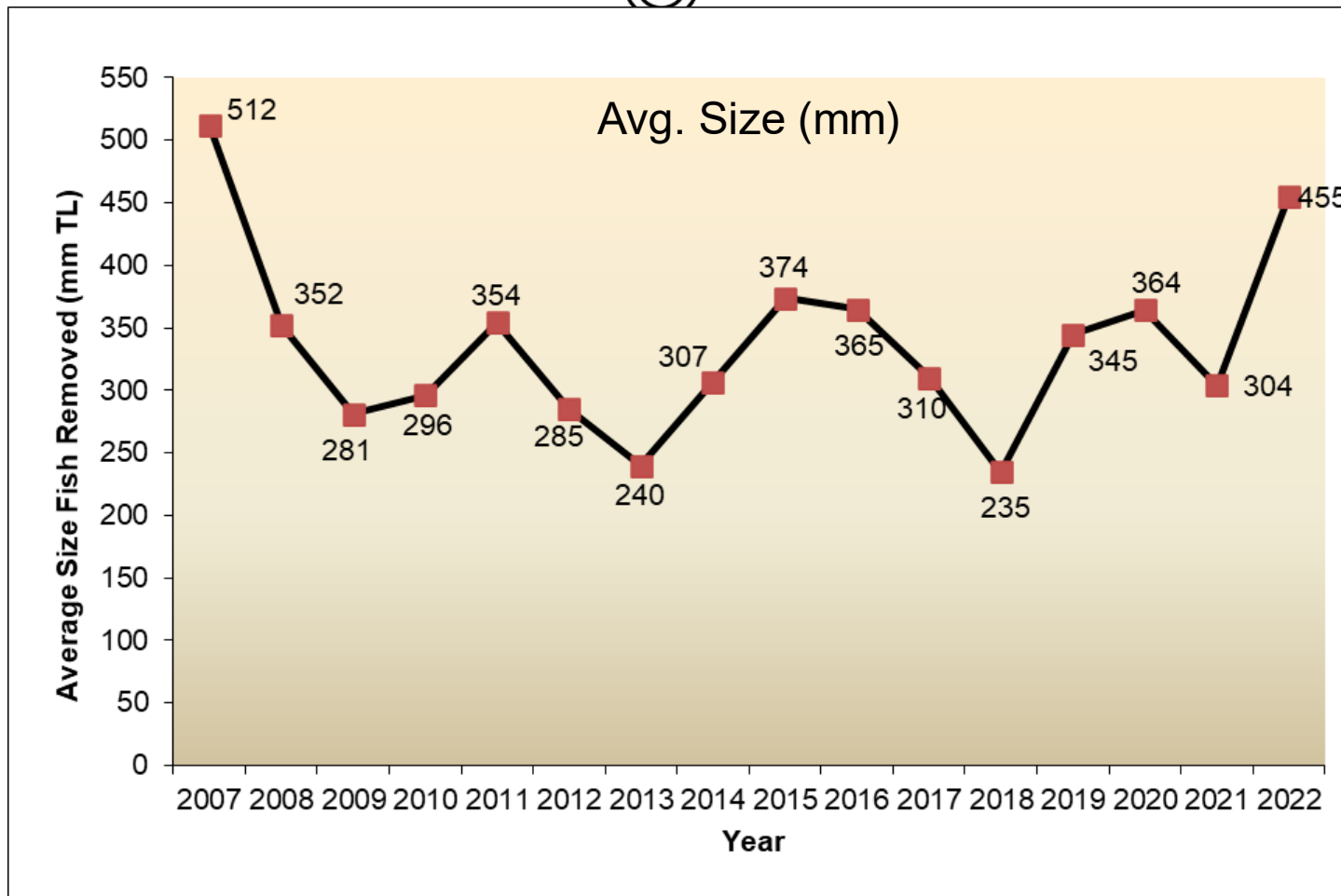


EFFORT and CPUE:

- Our goal is to make as many passes each year through the Hwy 121 – Woodbine stretch, typically targeting 200 hrs of effort for the season.
- In 2022, effort was strong through middle summer until water levels flooded, then slowed drastically.
- CPUE was down in 2022 (13 fish/hr).



Our Results (1996-2022)



Avg. Size rose in 2022, as not as many small fish were seen.

Singing the Blues



BLUE CATFISH

- GA DNR staff have removed blue cats since 2011.
- 2022 has shattered records – saw 2.5x as many blues as our previous high year.**
- Blues continue to primarily be seen in tidal waters.
- Impacts to native species in Satilla are certain; could be potential impacts to Flatheads as well (increased competition).

Blue Catfish - Annual Totals



Other Findings



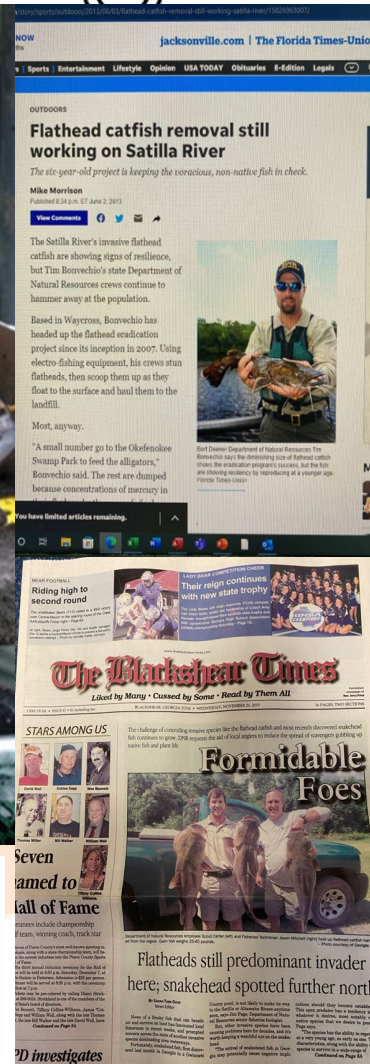
- A flathead catfish removed during electrofishing efforts regurgitated a fresh Atlantic Sturgeon, thus raising questions about the impact of protected species by non-native catfish.

- In recent years, GA DNR staff have seen gravid females less than 10" in length (including a 7.5" fish in 2017), suggesting potential compensatory mechanisms may be at play to overcome high removal mortality.



Our Future

- 2022 efforts were often hampered by high water levels.
- Public support remains extremely high for these removal efforts, and there's no doubt such efforts have been beneficial to native populations.
- The capture of the new **WORLD RECORD Redbreast** in 2022 in the Satilla certainly has been a welcome site, and several anglers have expressed they feel removal efforts have aided in such opportunities.



Thank You!

