LDWF Office of Fisheries

Louisiana - Aquatic Invasive Species report to GSARP, October 2019

General Summary

To help the public contact LDWF with ANS reports, Louisiana Department of Wildlife and Fisheries (LDWF) added an email contact aquaticinvasives@wlf.la.gov. This email along with our ANS Hotline has increased our ANS reports from the public to over 750 reports since the beginning of 2019. The hotline allows the public to record a voice message which is then emailed to the ANS coordinator for remote access. Both the email and hotline allow additional biologists to respond as needed.

In 2019, the LDWF outreach section had approximately 35 events where ANS displays and literature was available to the public. Of note were 2 cub scout day camps with 150 cub scouts ranging from 1st to 5th grade where the LDWF ANS coordinator had a display and presentation about invasive species. Another scout event with over 500 people had an ANS station. LDWF outreach and LDWF ANS Coordinator hope that the scouts and their families who are often in the outdoors report ANS sightings to LDWF. The potential parasite and toxins of apple snails was a main talking point at the scout events since the local area had many apple snails.

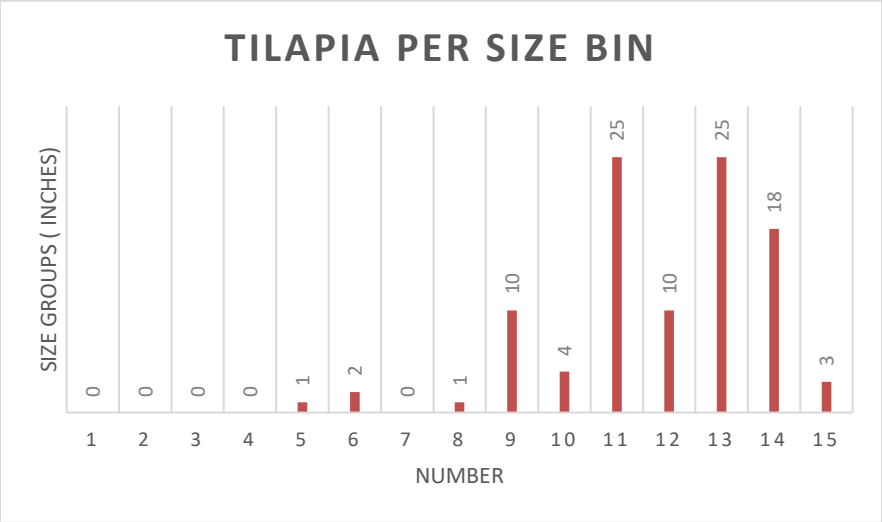
ANS coordinator Bobby Reed retired on April 1,2019. Robert Bourgeois who had previously served in this role assumed those duties again.

New 2019 Invasions

Asian Swamp eels: In late June 2019, LDWF was contacted with a report from a local university professor that they had caught Asian Swamp Eels in Bayou St John outside of New Orleans. They were identified as *Monopterus cuchina*. Sampling by LDWF and the local University professors have shown that the Swamp eels occur in about a 2 mile stretch of the bayou. LDWF has developed a management plan to try to contain the swamp eels to this local area. This plan includes periodic electro-fishing, juvenile eel trapping, habitat reduction through the spraying of invasive vegetation and stocking of known eel predators. LDWF biggest concern is that the eels will escape this area an impact the states crawfish and rice farms. There have been over 65 caught. The eels ranged in size from 43 mm TL to

815mm TL and represented many different size/age classes including juveniles which led us to believe we have a breeding population.

Tilapia: Nile Tilapia (*Oreochromis niloticus)* were reported in a private pond near Shreveport, LA. After discussion with the land owner, it was determined that he caught the fish in Texas and stocked his own pond. LDWF sampled the downstream lake. No tilapia were detected in any areas outside of the initial reported pond. LDWF treated the pond with rotenone and killed 99 tilapia. The varied in size from 4 to 14 inches. With fish that was carrying eggs in its mouth. LDWF will likely do a follow up sampling in the spring to ensure the population was eradicated.



Blue Tilapia (*Oreochromis aureus*) have been captured in the University Lakes of Baton Rouge. During a routine sampling event LDWF Inland Fisheries electofished 1 tilapia. Within a week, another tilapia was reported via a Facebook group. After discussion with the person who posted, it was determined that the second fish was below the weir of the University Lake in an outfall canal. Investigations into how these fish got in the lakes are ongoing. Surveys are being planned for mid to late November with continuation of them in the Spring. This drainage ultimately flows into Lake Maurepas and Lake Pontchartrain via Bayou Manchac and the Amite River.

Pacu: We had one report of a Pacu in the Covington area. It was caught by a fisherman using bread for bait. This fish was released back into the pond and visits did not yield any sightings of the fish. We will check in the spring to see if the fish is caught or sighted again. We do not expect it to survive the winter or for populations to become established as we have had random large pacu sightings in many locations. The pond is in a recreational park so it's likely it was an aquarium release. The pacu was reported to be not afraid of people and swam up to take pieces of bread intended for ducks.

Current status of established ANS:

Tilapia: There is an existing population of tilapia in the drainage canals and ditches around Port Sulphur, Louisiana following massive eradication efforts in 2008-2009. Following extensive rotenone applications, native predators were heavily stocked in the area in hopes of depleting any remaining tilapia. Approximately 30 tilapias were captured via electrofishing samples during the summer of 2017. All of these fish were determined to be 1or 2 years old via otolith aging and 6 of them were female. This area was not surveyed in 2018. It is not known how the extreme cold weather of 2018 may have affected tilapia populations in the area. As of the time of this report the 2019, survey of this area has not occurred but if manpower and conditions allow sampling should occur before the year ends.

Apple Snail: During 2019, the Louisiana Department of Wildlife and Fisheries (LDWF) received approximately 750 reports of apple snail infestations. The wet spring and early summer had people reporting apple snail egg clusters on house siding and yard trees some distance from the waterways. A crawfish farmer reported that they were catching 5 gallon buckets full of apple snails in his daily trap hauls. He will report back to us on if his crawfish catch was reduced by the infestation. Apple snails have been reported in the rice growing region of LA. So far no one has reported any impacts to the rice fields.

Asian Carp: Populations of bighead, black, grass, and silver carps are now successfully reproducing in the Atchafalaya, Mississippi, Ouachita and Red rivers. They continue to slowly spread into smaller coastal river drainages at this time. LDWF inland Fisheries Districts collected ichytoplankton samples during the months of May and June that will be used to determine the amount of Asian carp larval fish present n locations around the state. This study will be compared to previous samples to see if the distributions have changed. Some black carp were collected during sturgeon recovery operations in ponds in the Bonnet Carre spillway following the flooding from the Mississippi river.

Zebra Mussels: Zebra mussels were found in the waters of Blackhawk Scar lakes 2 to 3ft above the water. These mussels probably attached to the woody substrate during the Spring high water events. All mussels were dead.

Tiger Shrimp: In 2019, LDWF received 5 reports of tiger shrimp from commercial and recreational angler catches along the Louisiana coastline from the Texas state line to the Mississippi River. The sightings were in nearshore/bay areas during the months of September and October.

Lionfish: LDWF's GI-FRL Dive Team continues roving diver surveys in offshore areas during summer months of 2019. Lionfish presence/absence will be determined at each dive sight along with species richness. LDWF is working on a grant to analyze stomach contents via conventional visual methods as well as using genetic barcoding. This project will allow us to see what the lionfish are preying on as well as compare methods.

Aquatic Plant Control Program:

The program is housed within the LDWF's Inland Fisheries Section. Aquatic plant control plans were developed for 73 different waterbodies during 2019. Giant salvinia continues to be the most problematic AIS plant in Louisiana. Since 2010, LDWF has treated an average of 22,461 acres of giant salvinia per year with herbicides. LDWF uses an integrated approach to control aquatic plants, consisting of chemical, physical (AIS boom, drawdowns), and biological (insects and grass carp) methods in an effort to achieve a greater combined benefit. LDWF has an annual Aquatic Plant Control Program budget of $5,500,000 of which more than 50% of that is spent on giant salvinia alone for monitoring, treatment, and research.