LDWF Office of Fisheries

Louisiana's Aquatic Nuisance Species (ANS) Report MRBP Spring 2023

(Oct 2022 – April 2023)

New Reported ANS:
Mitten Crab
A Chinese Mitten Crab was reported near the mouth of the MS River. It was the first reported Mitten Crab since the 1990s. It was caught by a commercial crab fisherman. The Louisiana Department of Wildlife and Fisheries (LDWF) will monitor commercial crab catches for any additional occurrences.

Zebra Mussels
Zebra Mussels have been found to survive over the summer in areas where they were previously thought not to survive. The populations were found on telemetry receivers after being deployed under water for two years. The Zebra Mussels have persisted since that first observation. The mussels were detected on the Atchafalaya River near Morgan City and in the Wax lake Outlet near Vermilion Bay. These areas will be monitored as the telemetry receivers are serviced.

Update to recently reported ANS:
Peacock Bass:
A Peacock Bass was confirmed in the summer 2022. LDWF electro-fished the area but did not find the fish. This area is near a long-term sampling site so LDWF will be sample in this area in the early summer and Fall 2023.

Murray Cod:
As previously reported during our Spring 2022 update, there have been no additional reports or sightings of Murray Cod. LDWF has sampled 3 times in the area and has not seen the fish or any native species that could be mistaken for it. LDWF will continue to monitor the area in the future. This will be the last time this fish will be reported on but LDWF will continue to monitor the area.

Status of established ANS
Apple Snail:
Public reports for Apple Snails have slowed until the last week of March. The ANS coordinator went to three local areas where populations were previously present but found no snails. The disappearance of these populations may be due to a severe early freeze in Nov and/or a late freeze around the middle of March. LDWF will continue to monitor these three locations to see if the snails return.

Invasive Carp:
Since fiscal year 2020, LDWF has had projects funded through USFWS's Lower Mississippi River Invasive Carp Partnership and the Atchafalaya, Red, and White Rivers Invasive Carp Partnership. LDWF collaborated with Nicholls State University to investigate the presence of invasive carp larvae on rivers in the LMR. The objective of the study was to determine the extent of invasive carp spawning activity Mississippi River, Atchafalaya River, Ouachita River, Red River and Tensas River Basins within Louisiana. Figure 1 below shows the results of that survey where carp were present. This data indicates that invasive carp are reproducing in the majority of the Lower Mississippi River (LMR) Basin sites sampled in LA. Reproduction is taking place on the Red, Mississippi, Atchafalaya, and the Ouachita Rivers. Invasive carp spawned in all three of the months sampled with a peak occurring in May. No larvae were collected west of the Atchafalaya River in 2022 despite large numbers of adults present in some of the areas sampled.

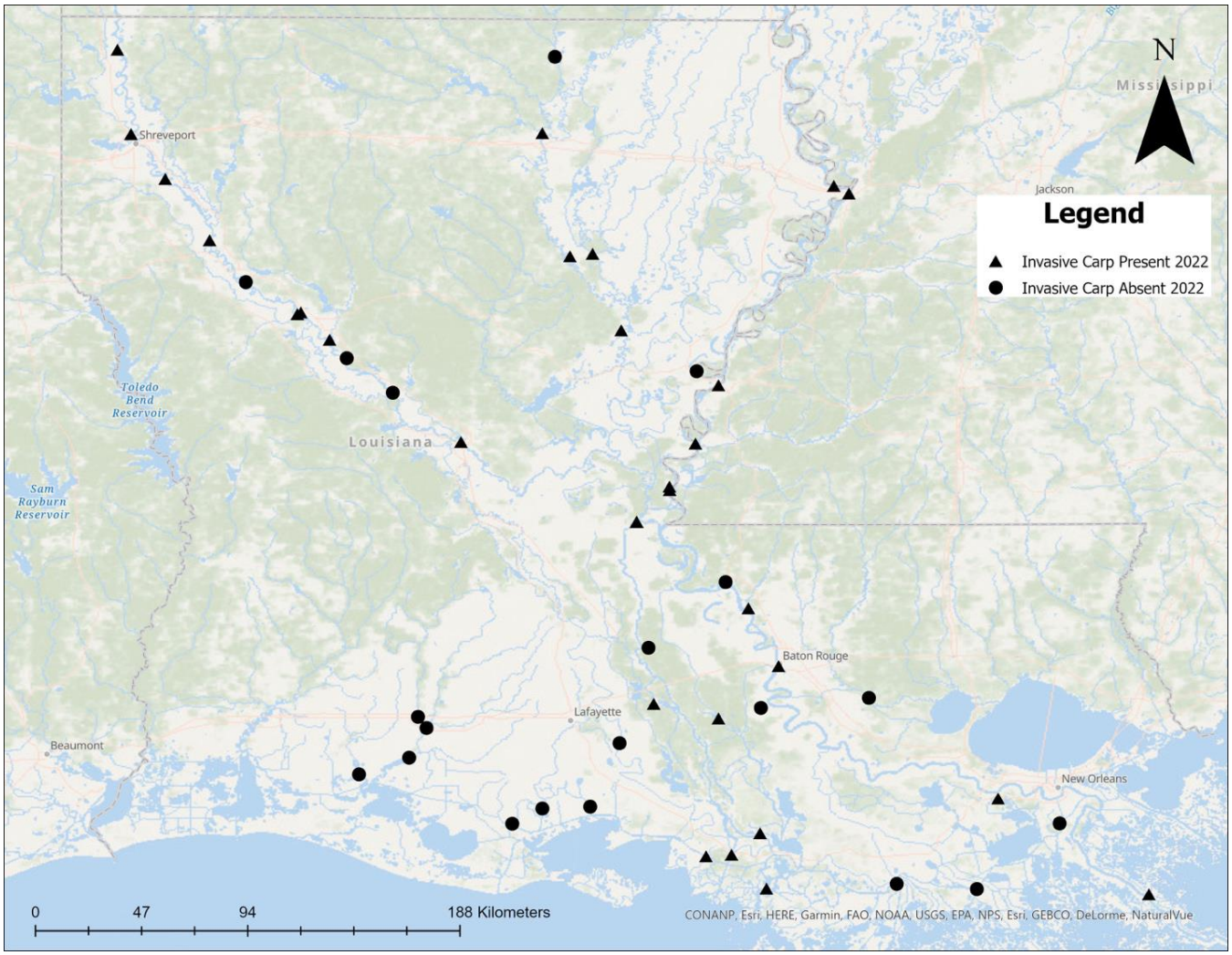

Figure 1. Ichthyoplankton sample locations where invasive carp have been identified (triangle) and where no invasive carp were identified (circles).

LDWF has collaborated with Louisiana State University (LSU) since 2020 to tag 200 invasive carp and set up a receiver array. The object of the project was to determine intrabasin and interbasin movement to inform placement of potential deterrent technologies and removal efforts. Figure 2 shows the receiver

array network and carp tagging locations. In 2022, there were nearly 158,000 detections from 79 unique carp across the array of 40 receivers. The maximum distance traveled and recorded by receivers was 572 km, and the mean distance traveled and recorded by receivers was 31 km.

A Silver Carp tagged in a backwater of the lower Atchafalaya River, south of Morgan City, LA has been detected in the Atchafalaya River Basin for over one year since its' initial capture and release in late 2021. Over the course of the year the fish has swam over 500 river kilometers, being detected on nine different receivers, utilizing the intercoastal waterway several times to transit between Wax Lake Outlet, and the Atchafalaya River, both north and south of Morgan City, LA.

Other fish appeared to make larger movements. Another Silver Carp was tagged in late 2021 in the North Prong of Schooner Bayou. This fish quickly transitioned into Vermilion Bay, at the mouth of the four mile-cutoff channel near Intracoastal City, LA. After being detected here continuously (~ 18,000 detections), the fish was next detected after a week of silence on another bay receiver – this time at the mouth of Avery Canal. Detections at Avery Canal appear in several day-long detection groupings spaced out over approximately one month. Total residence time in the bay for this fish was around three months. The next appearance occurred in the Lower Atchafalaya River followed by a rapid transit (~ 18 hours) north of Morgan City.

Other transmitters detected on our receiver array in southern Louisiana include a Grass Carp from the northern Mississippi River basin (Iowa), a Bull Shark, American Eels, and Red Drum. Additional orphan tags were detected, but have not yet been identified.

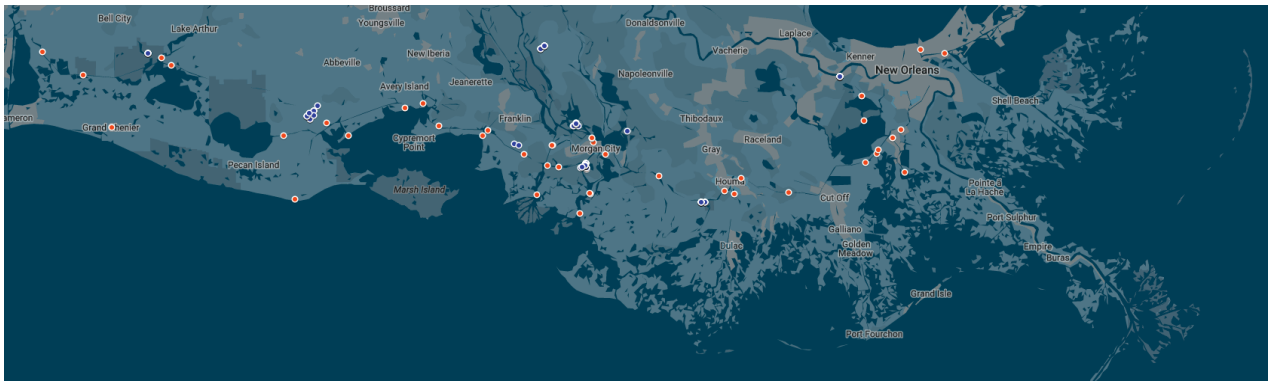

Figure 2. Map depicting receiver distribution (red points) and tagging locations (blue points) of invasive carp in coastal Louisiana.

LDWF collaborated with Louisiana Universities marine Consortium (LUMCON) to perform feeding trials on catfish of food pellets made from invasive carp. The project will be completed during the first quarter of 2023. Figures 3 and Table 1 show that LA sourced invasive carp are bigger than invasive carp from Illinois. The LA invasive carp also had higher lipid content than the Illinois invasive carp.

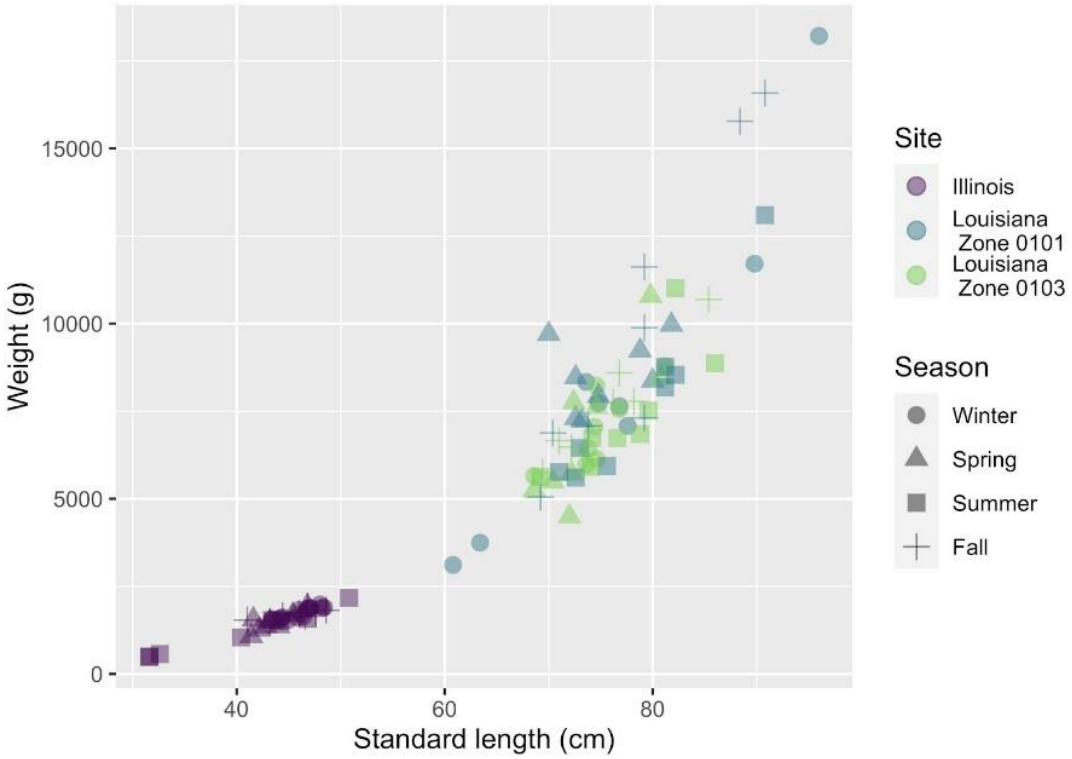

Figure 3. Weight (g) vs standard length (cm) of whole invasive carp sourced from Illinois (Peoria Pools), Louisiana fishing area 0101, and Louisiana fishing area 0103 throughout Winter, Spring, Summer, and Fall, 2022.

Table 1. Morphometric data from commercially caught invasive carp from Illinois (Peoria Pools), Louisiana fishing area 0101, and Louisiana fishing area 0103. Data incudes the average, minimum and maximum length (cm) and average weight(g).

REGION	AVERAGE LENGTH (CM)	MINIMUM LENGTH (CM)	MAXIMUM LENGTH(CM)	AVERAGE WEIGHT (KG)
ILLINOIS (PEORIA POOLS)	52.1	38.8	59.6	1.6
LA FISHING AREA 0101	89.1	71.0	109.8	8.6
LA FISHING AREA 0103	87.0	77.8	97.0	7.2

Asian Swamp Eels:
Asian swamp eels (*Monopterus cuchia*) were found in Bayou St John, New Orleans in June 2019. LDWF and a local university professor continue to monitor and sample the population. LDWF electrofishing did not detect any swamp eels. The sampling by the university only resulted in three swamp eels being captured. All three of them were captured in one of the 82 samples taken in 2022. It is believed that this is a population with very low numbers at this time.

Aquatic Plant Control Program:
LDWF continued with our control of invasive aquatic weeds using a variety of techniques. Aquatic plant control plans were developed for approximately 70 different waterbodies during the reporting period. A total of 34,763 acres of nuisance vegetation were treated in 2022. Giant Salvinia continues to be the most problematic invasive plant in Louisiana, with herbicides being applied to over 20,207 acres during that time. Additionally, 9,993 acres of Water Hyacinth were treated across the state during the reporting period. LDWF uses an integrated approach to control aquatic plants consisting of chemical, physical (booms and drawdowns), and biological (insects and grass carp) methods in an effort to achieve a greater combined benefit. In 2022, LDWF had an Aquatic Plant Control Program budget of $6,500,000, of which a large portion was spent on the monitoring, treatment, and research of Giant Salvinia.