GEORGIA
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

MARK WILLIAMS
COMMISSIONER

RUSTY GARRISON
DIRECTOR

Gulf and South Atlantic Regional Panel Update (GSARP) for Georgia
May 11 & 12th
Savannah, Georgia

Satilla River Flathead Catfish Removal Project:

Overview

- The Satilla River is one of the premier sunfish fisheries in the state of Georgia, with redbreast sunfish (*Lepomis auritus*) being one of the most sought after species.

- Flathead catfish (*Pylodictis olivaris*) were illegally introduced and first observed in the Satilla River in 1996.

- During the mid-2000's, standardized sampling and creel surveys revealed declines in abundances of redbreast sunfish and bullhead catfishes (*Ameirus spp*.) coincided with significant increases in the abundance of flathead catfish.

- In an effort to reverse the impacts of flathead catfish on native fish populations, the Georgia Department of Natural Resources (GADNR), Wildlife Resources Division (WRD) - Fisheries Management Section (FM) began removing flathead catfish from the Satilla River as time permitted. Despite these efforts, the number and size of flathead catfish per hour of electrofishing continued to increase. In 2006, FM instituted the Flathead Catfish Removal Project Georgia using legislatively appropriated funding. At present, the project funds two positions focused on long-term population control through direct removal of flathead catfish.

Removal Results

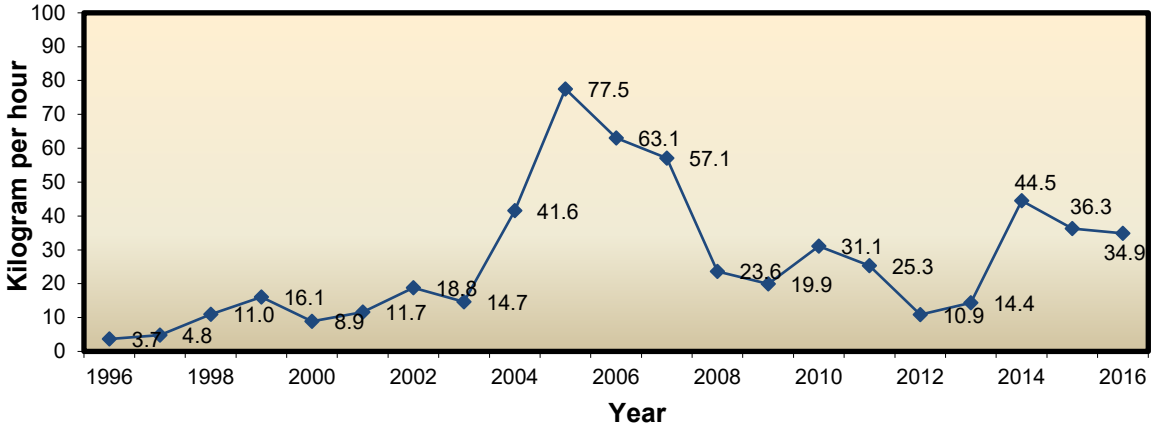
- During the current 2016 sampling season (May-October), 7,747 (20,188 pounds) flathead catfish have thus far been removed. Since 2007, more than 64,000 (131,000+ pounds) flathead catfish have been removed.

- The size structure of the population has declined with the average size fish removed progressively dropping from 5.8 pounds in 2007, to 0.8 pounds in 2013 but has increased some to 1.3 pounds in 2014 and 2.2 pounds in 2015. Average size fish captured in 2016 was 2.6 pounds.

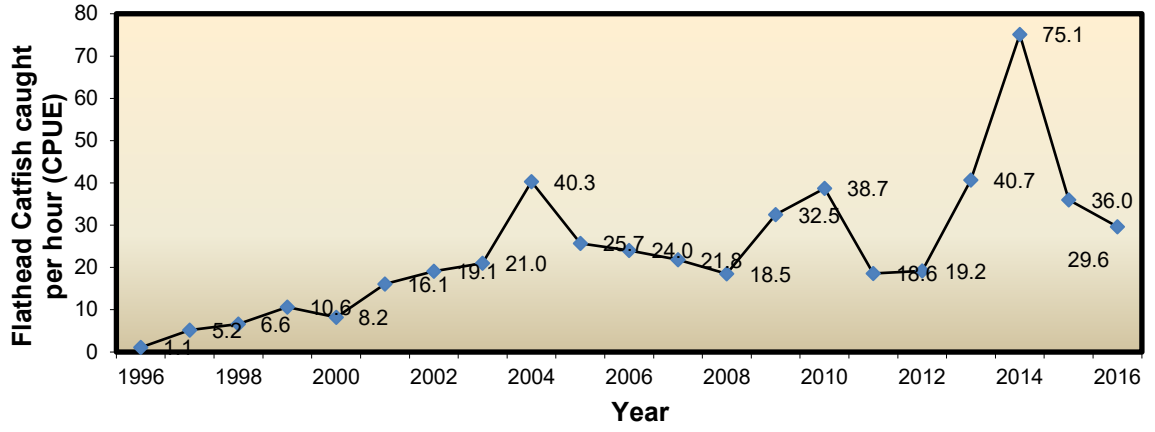
FISHERIES MANAGEMENT SECTION
P. O. BOX 2089 | WAYCROSS, GEORGIA 31502-2089
912.285.6094 | FAX 912.285.6115 | WWW.GEORGIAWILDLIFE.COM

The average length fish removed has declined from 512 mm TL in 2007 to 240 mm TL in 2013, but increased to 307 mm TL in 2014, and 375 mm TL in 2015. The average length in 2016 was slightly lower at 365 mm.

Biomass per effort also declined from 77.5 kg/hr in 2005, to 10.9 kg/hr in 2012 but also increased to 44.5 kg/hr in 2014, but declined slightly in 2015 to 37.1 kg/hr and in 2016 to 34.9 kg/hr (pictured below).



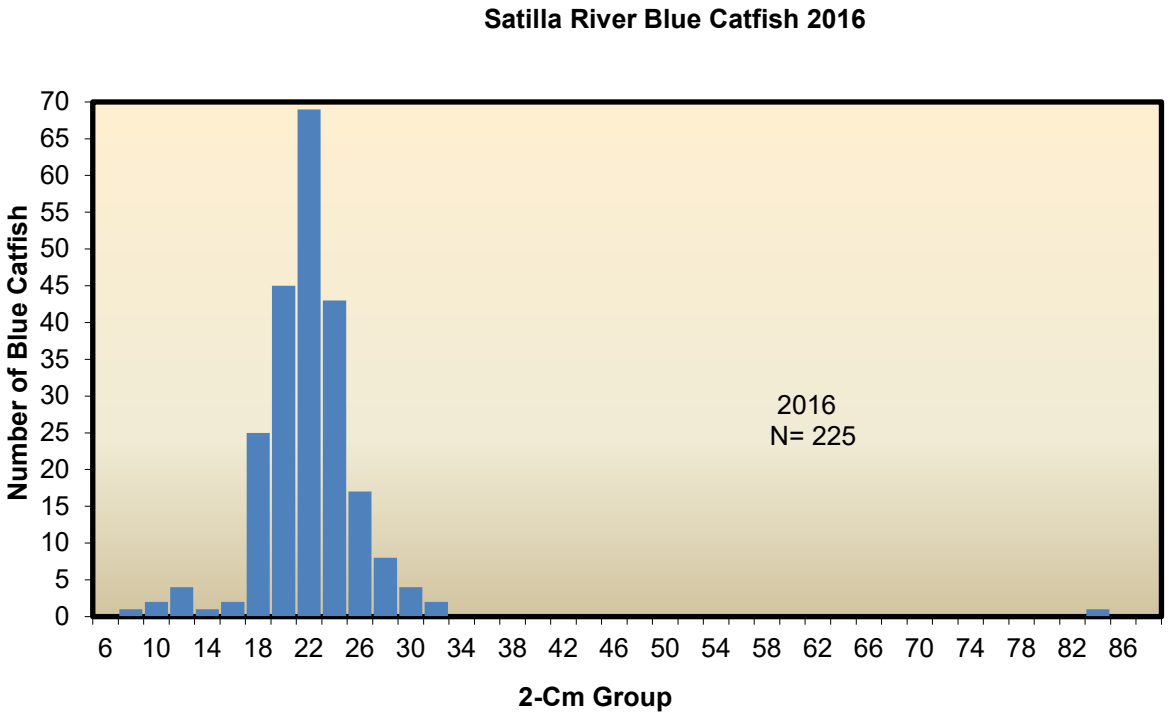
Catch per effort has fluctuated between 18 and 40 fish per hour since 2004 but steadily increased to 75.1 fish per hour in 2014, but declined in 2015 to 36.7 per hour and also declined in 2016 to 29.6 per hour (pictured below).



- Suppression of the flathead catfish population in the Satilla River has been demonstrated through measured changes in biomass, size and age-structure. However, higher recruitment and earlier maturation is being witnessed; and ongoing intensive harvest will be required to prevent the flathead population from rebuilding. It appears that successive high water period from the fall of 2012 until the spring of 2014, has helped the flathead population rebound.

Blue Catfish (*Ictalurus furcatus*) in the Satilla River

- Range expansion
- 7 individuals in 2011 in sampling
- 2 individuals in creel in 2014
- Explosion in recruitment 2016, 225 individuals harvested.
- 1-15lb, gravid female harvested (840 mm TL).
- The increase in observed blue catfish concerns resource managers, and thus continued monitoring and removal of the species will occur.



Asian Carp (Bighead and Silver) Risk Areas for Georgia

Asian carp continue to move up the Tennessee River system in Alabama. There are several small/medium sized creeks and larger rivers that flow out of Georgia, many from larger reservoir systems into the Tennessee River system and these include:

1) Higdon Creek-near Higdon, Alabama, in Dade County, Ga.
2) Cole City Creek flows in to Nickajack Lake, near Cole City, GA in Dade County, Ga.
3) Lookout Creek-flows into Chickamauga Lake, near Chattanooga, TN in Dade County, Ga.
4) Chattanooga Creek-flows into Chickamauga Lake near Chattanooga, TN in Dade County Ga.
5) Chickamauga Creek (also includes West Chickamauga Creek)- near Graysville, Ga, in Catoosa/Walker Counties.
6) Toccoa River (Lake Blue Ridge) near Epworth, Ga in Fannin County, GA
7) Nottely River (Lake Nottely) near Culberson, NC in Union County, GA
8) Hiawassee River (Lake Chatuge) near Haynesville, NC in Town County, GA.
9) Talluah River (Lake Burton) near Tate City Ga, Rabun County, GA.

There are many potential vectors for the spread of Asian carp into Georgia waters. The most likely of these vectors seems to be inter-basin transfer via angler bait bucket. Georgia biologists suspect that the alewife now common in Carters Lake may have come from one of several Tennessee lakes that have thriving alewife populations. This example shows the potential for illegal transport of bait across our state line. Georgia anglers routinely travel to the TN River and other areas to fish for trophy catfish. YOY Asian carp can be easily mistaken for gizzard shad, which are popular catfish bait. There is potential for anglers to inadvertently collect young Asian carp while cast netting for bait, and bring that bait to Georgia. We continue to monitor the movement of Asian carp up the Tennessee River system in Alabama and actively participate on the Ohio River Asian Carp planning team.

Recent Findings (Range Expansions):

Giant Salvinia (Evans County Ponds)

In January 2015, Giant Salvinia, *Salvinia molesta*, was discovered in a pond in Evans County, Georgia. Investigation of the area revealed that contamination of the approximately 3-acre pond originated from an upstream pond approximately 0.5 acres in size. Overflow water from the upstream pond makes its way through a drainage ditch and continues under Foskey Lane, ultimately discharging into the lower pond. Overflow water from the downstream pond then flows under Lex Strickland Road and discharges into a power line right of way area. The upstream pond had 100% coverage of Giant Salvinia and the downstream pond had approximately 50-60% coverage. Giant Salvina was also discovered downstream in the power line right of way. Control of the Giant Salvinia was achieved through the use of a combination of

liquid and granular fluridone herbicides (Sonar Genesis and Sonar One) at a rate of 40 ppb and 30 ppb respectively. Within 7-10 days, symptoms of herbicide control began to appear and complete control was achieved within 90 days. The infested areas will be monitored and retreated as necessary throughout the season. The power line has been re-treated several times with spot treatments. On going diligence by fisheries biologist Chris Harper, repeatedly making site visits to make sure the ponds and right of ways were clear. Over 300 hours of on-site field work has been performed to eradicate this species from the ponds and power line right of ways.Site visits in February, 2016 revealed no plants present. Considered eradicated!

Giant Salvinia is listed as a GSARP species of concern and is one of the top species of concern in the Georgia Aquatic Nuisance Species Management Plan. The plant was first discovered in Georgia in 1999 and prior to the current infestation in Evans County, had only been detected in four locations. The GADNR has been proactive in the management and control of this invasive species. The location of the ponds infected in Evans County is less than two miles from the Canoochee River. It was important to begin a treatment program to ensure that the plant does not spread to other ponds in the area or into Georgia's public waterways. All herbicide treatments and monitoring were conducted by Fisheries Management personnel.

Yellow Perch (Perca flavescens)

- 2nd report in past few years.
- First report by Dan Stiles (Law Enforcement) on May 7, 2016
- Looked at an angler's catch out of the Oconee River near Dublin, 6-inch fish.
- Reported November 13, 2016 in the Altamaha River, just upstream from Morgan lake and Goose creek.
- Angler Charles Leggit reported this range expansion.
- Caught on earthworm on the bottom.
- Found further upstream in Ocmulgee and several reservoirs.
- Presumed to need spring influence to do well.
- Disposition of fish: Frying pan.

Brown Haplo (Hoplosternum littorale)

- About a 10-inch specimen caught in the Flint River near Albany on October 26, 2016
- Fish was supposedly killed.
- Most likely a aquarium released fish
- They are well established in a large part of Florida. They don't handle cold water temps unless of course they over winter in springs where the water temps stay constant. The possibility exists that there may be a breeding population of them in the Flint due to thermal refuge areas (springs). This is the first documented case of these being found in the wild in our state.

Flathead Catfish (Pylodictis olivaris)

- Brent Hess and Paul Jones (WRD) reported a flathead catfish being collected at Gillnet Station 5 during annual Standardized Sampling on Nov 8th, 2016 in Bartlett's Ferry Reservoir, which is a mainstem reservoir of the Chattahoochee River.
- First known occurrence in this waterbody.
- Fish 673 mm TL and 3,650 g.

State wide grass carp ploidy surveillance

- In a proactive effort to monitor grass carp ploidy (diploid surveillance), and to minimize the potential establishment of wild grass carp populations in state managed waters, the GADNR, Fisheries Management Section (FM) is instituting a protocol to collect and test grass carp (*Ctenopharyngodon idella)* ploidy. This protocol was put into action in October 2014.
- From November 2014 until August 2016, 15 wild grass carp (7 from public small impoundments and 8 from public rivers) ranging in size from 68 to 104 cm TL were captured and submitted for triploid testing in Warm Springs, GA. All 15 of the fish tested positive as triploids including the latest entries from the Coosawattee and Etowah Rivers.

<u>Traveling Trunk Usage!</u>

- **Blackshear Elementary 4H day on November 17, 2016**
- Reached around 150, 5th graders from 3 Pierce County
- Talked about not moving aquatic hitchhikers, "Clean, Drain and Dry!", etc.
- The Python skin was a big hit.
- Handed out Asian Carp watch cards, etc.

Revamp GADNR WRD Website (Fall 2016)

- Received input from several regions.
  Summarized major Aquatic Nuisance Species Examples and potential future threats!
  1. Blueback herring
  2. Spotted Bass Hybridization with other black bass (Shoal, Largemouth, etc.)
  3. Flathead Catfish
  4. Zebra Mussels
  5. Asian Carp

- Also addressed major diseases and epidemics with neighboring States Trout populations.
    1. Whirling Disease
    2. Didymo
    3. Gill Lice
- Also Aquatic Vegetation issues and other non-game invasives
    1. Giant Salvinia
    2. Hydrilla
    3. Channeled Apple Snail

Contact:
Tim Bonvechio
Senior Fisheries Biologist

AFS Certified Fisheries Professional

Wildlife Resources Division
(912) 285-6484 (0ffice)

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