

Georgia's ANS activities and happenings



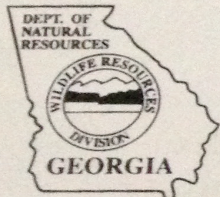
May 11, 2017

DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

Tim Bonvechio

Satilla River Flathead Catfish Removal Project (SRFCRP)

ATTENTION ANGLERS



Stocking of flathead catfish or any other fish species is illegal.
Violators can be prosecuted!!

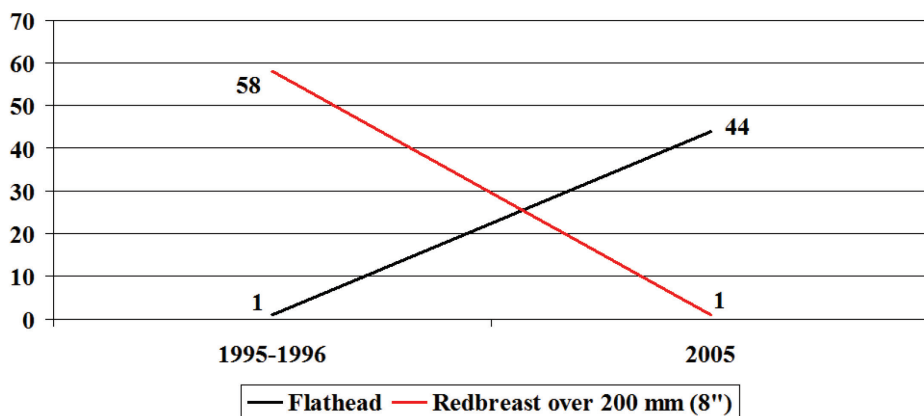
Do not release flathead catfish into rivers and lakes.
Exotic species can have severe negative impacts on native fishes.
Please report such fish stockings to any Georgia Department of
Natural Resources Wildlife Resources Division office.



Satilla River Flathead Catfish Removal Project (SRFCRP)



- The premier redbreast sunfish (*Lepomis auritus*) fishery in Georgia lies in the Satilla River.
- Flathead catfish (*Pylodictis olivaris*) were illegally introduced and first observed in the Satilla River in 1996.
- During the mid-2000's, stand 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.

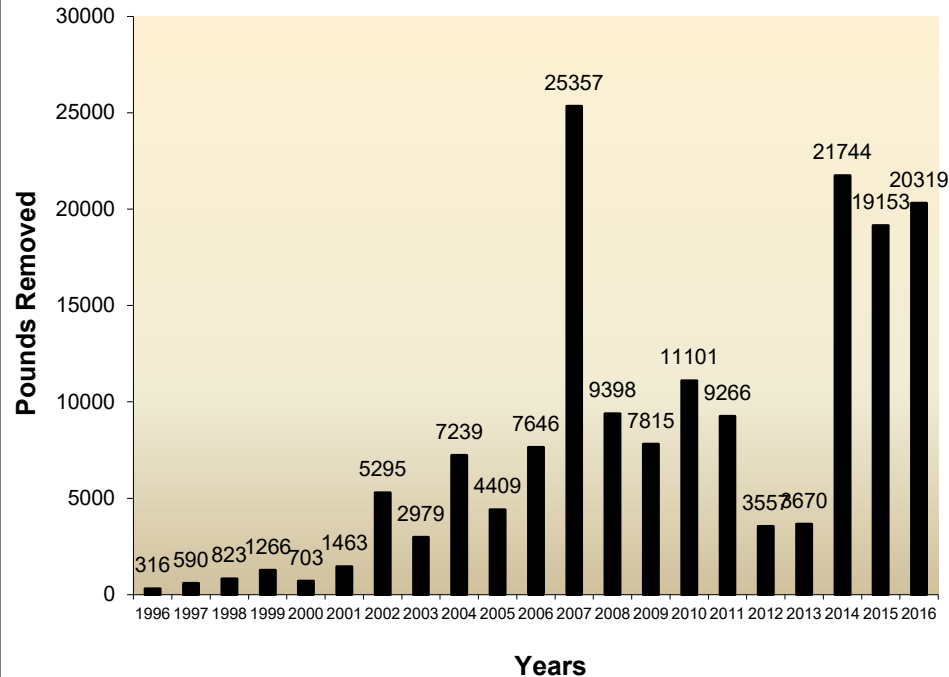
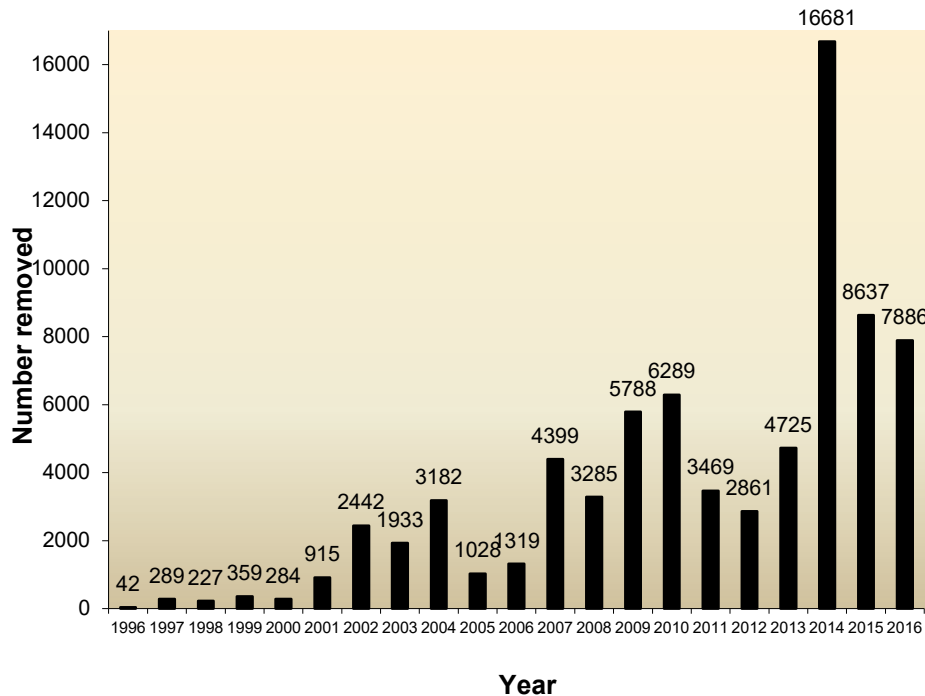


Satilla River Flathead Catfish Removal Project (SRFCRP)



- In an effort to reverse the impacts of the flathead catfish on native fish populations, the GADNR WRD Fish management section began removing flathead catfish from the Satilla as time permitted.
- In 2006, FM instituted the SRFCRP using legislative appropriated funding.
- At the present, the project funds 2 full time positions and 3 part-time positions focused on long-term population control through direct removal of flathead catfish.

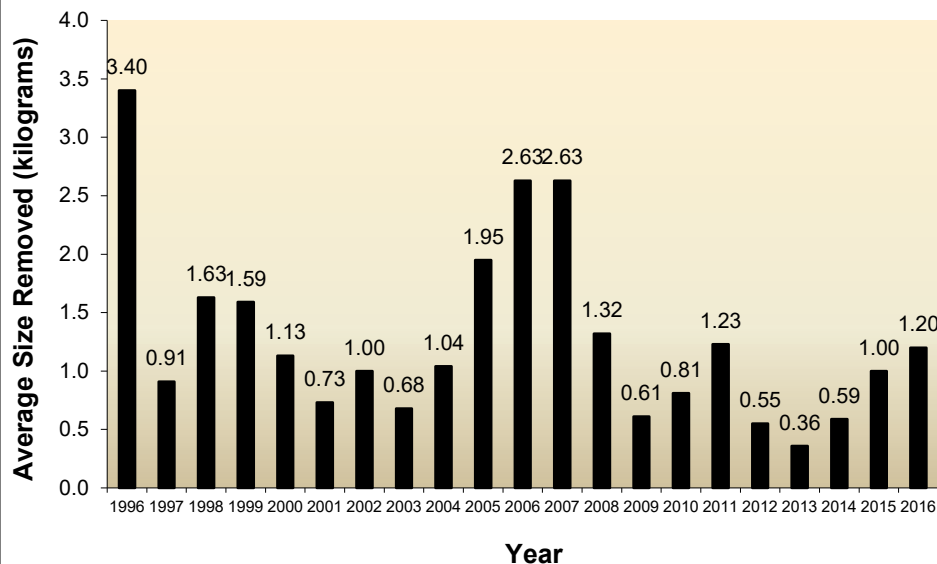
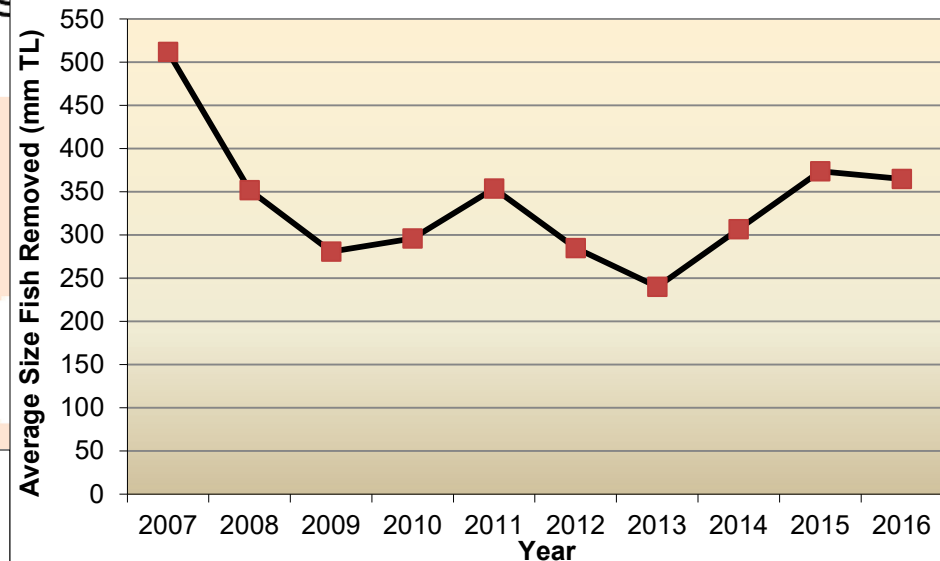
Satilla River Flathead Catfish Removal Project (SRFCRP)-Results



- During the 2016 sampling season (May-October), 7,747 fish were removed totaling 20,188 pounds (Graphs above include standardized sampling fish removed). Since 2007, more than 64,000 flatheads (131,000 pounds) have been removed.

Satilla River Flathead Catfish Removal Project (SRFCRP)-Results

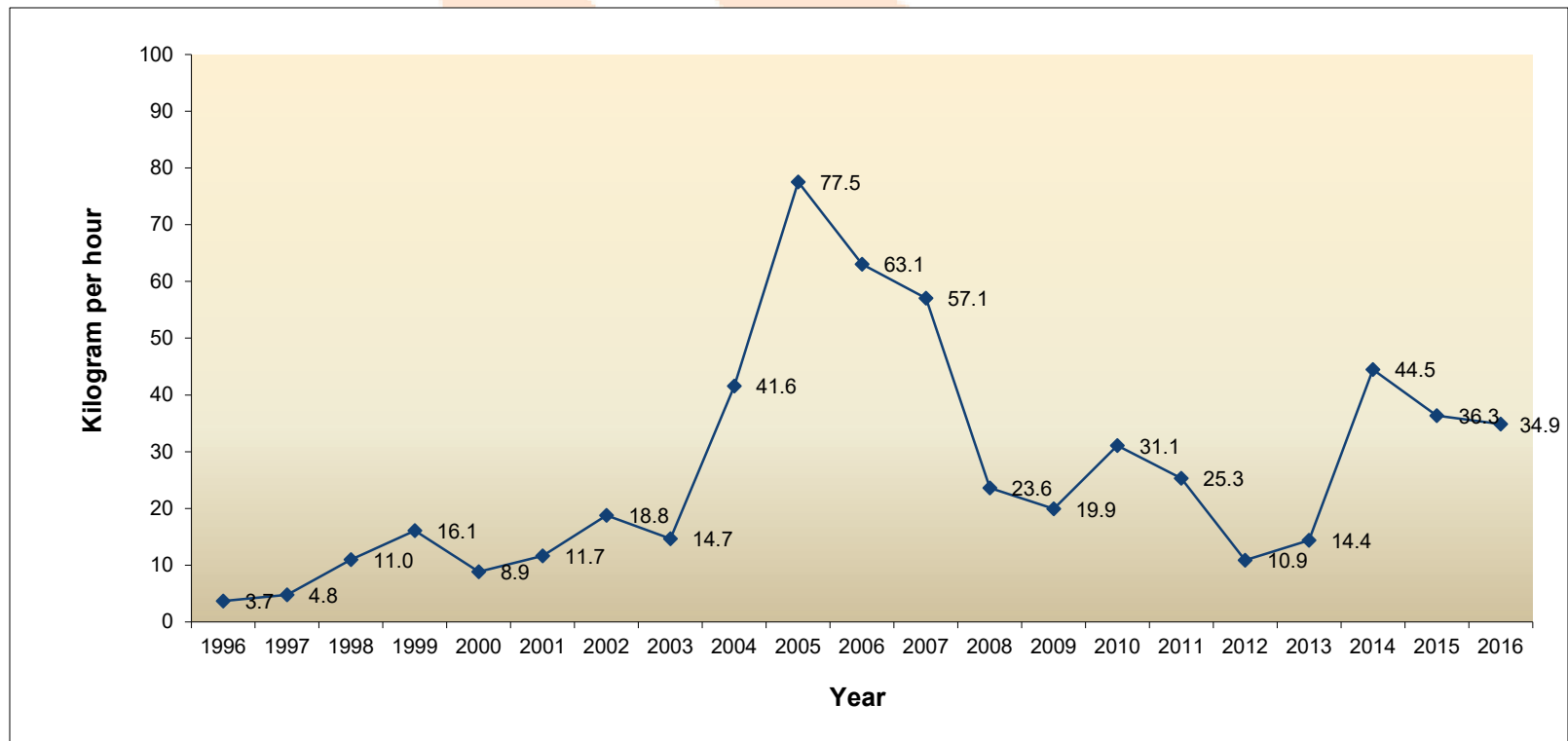
- The average length fish removed has declined from 512 mm TL in 2007 to 240 mm TL in 2013, but increased to 307 mm TL in 2014, and 375 mm TL in 2015. The average length in 2016 was slightly lower at 365 mm).



- 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, 2.2 in 2015 and 2.6 in 2016.

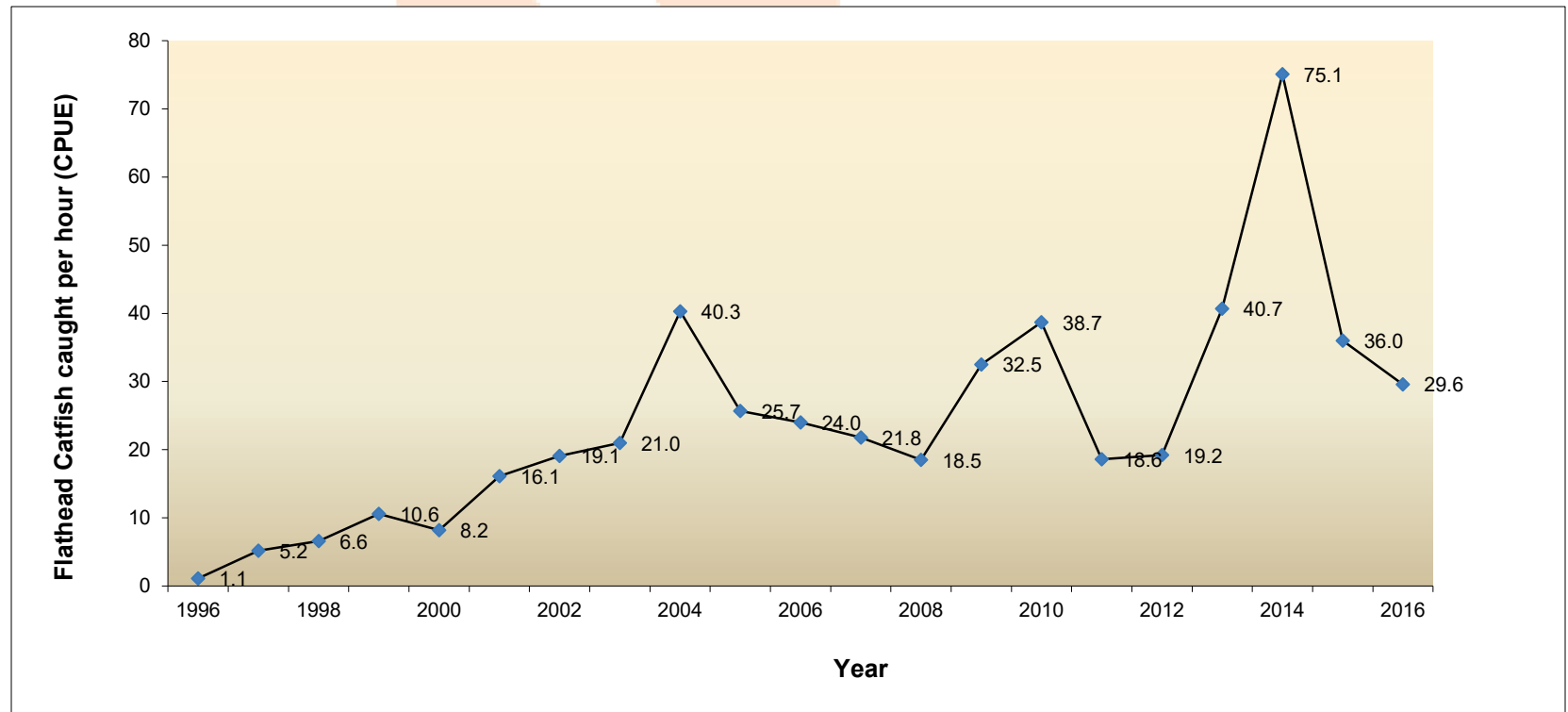
Satilla River Flathead Catfish Removal Project (SRFCRP)-Results

- 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, but declined slightly in 2015 to 37.1 kg/hr and in 2016 to 34.9 kg/hr.



Satilla River Flathead Catfish Removal Project (SRFCRP)-Results

- 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).



Satilla River Flathead Catfish Removal Project (SRFCRP)-Results

- Suppression of the flathead catfish (fhc) population in the Satilla River has been demonstrated in the responses of the redbreast sunfish fishery witnessed in 2014 & 2015. However, higher recruitment and earlier maturation of fhc is being observed; and ongoing intensive harvest is required to prevent the fhc population from rebuilding. It appears that successive high water period from the fall of 2012 until the spring of 2014 helped the fhc population rebound. The drought of 2016 & 2017 will not benefit the fhc's.



- 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



Notes of the *Southeastern Naturalist*, Issue 11/2, 2012

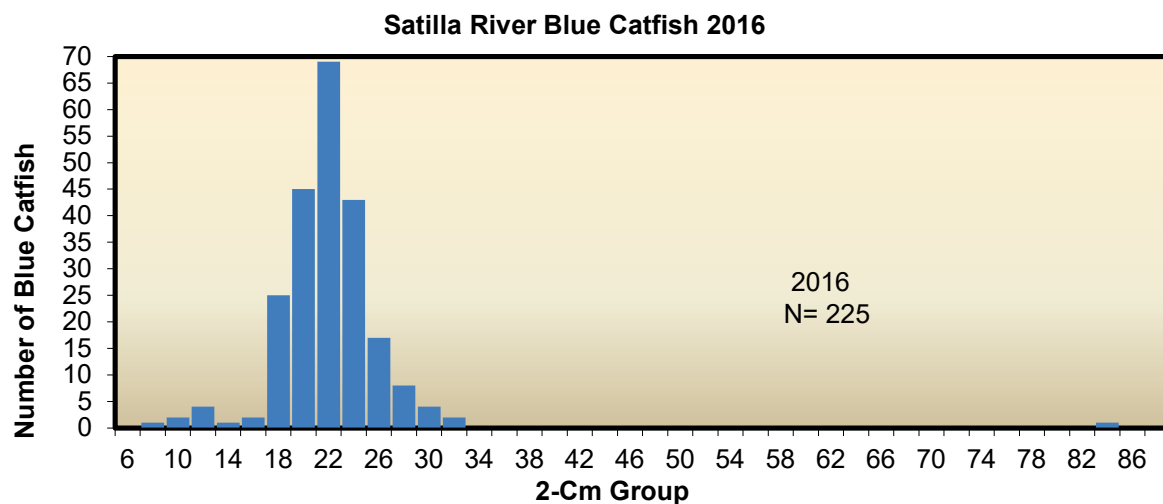
Non-indigenous Range Expansion of the Blue Catfish (*Ictalurus furcatus*) in the Satilla River, Georgia

Timothy F. Bonvechio^{1,*}, Bryant R. Bowen¹, Jason S. Mitchell¹, and Justin Bythwood¹

Abstract - Here we present evidence of the first field observation of the nonnative *Ictalurus furcatus* (Blue Catfish) occurring on the Satilla River, GA, in May 2011, and additional collections since then. This is the second large, non-native riverine catfish to be found in the Satilla River basin. *Pylodictis olivaris* (Flathead catfish) was first collected from the Satilla River in May 1996. The ecological effects of Blue Catfish on native mussel and fish species in the Satilla River are currently unknown, but competition with native catfishes is likely.

Range Introductions

- Explosion in recruitment 2016
- N= 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.



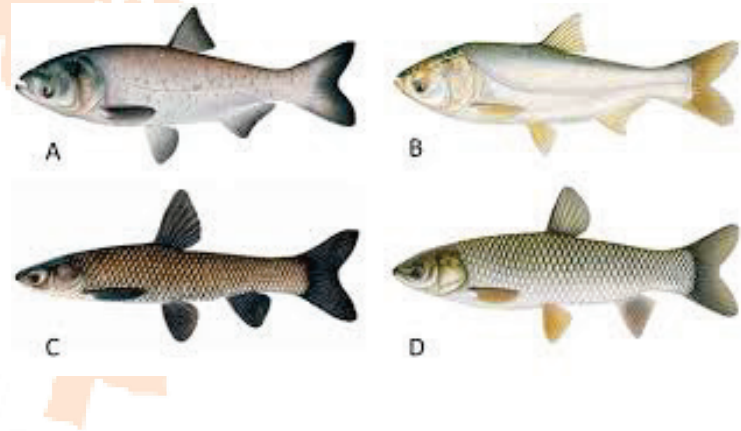
Asian Carp (Bighead and Silver) Risk Areas for Georgia



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

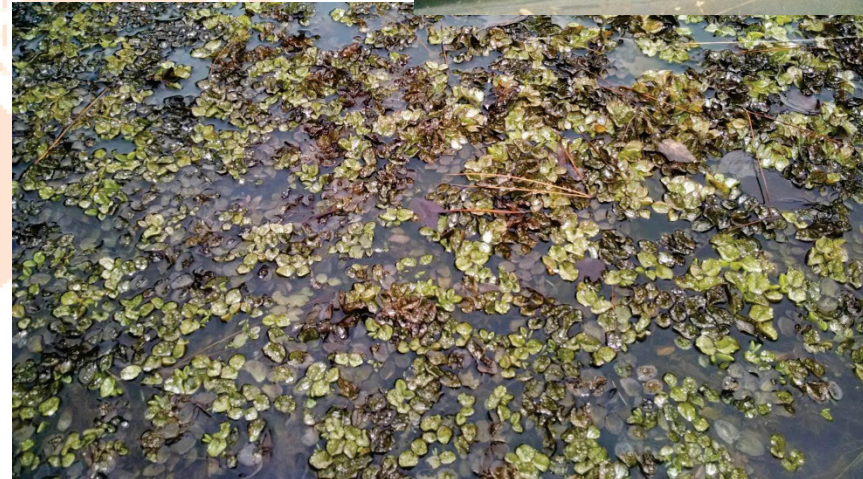
Asian Carp (Bighead and Silver) Risk Areas for Georgia

There are many potential vectors for the spread of Asian carp into GA waters. The most likely is inter-basin transfer via angler bait bucket. GA biologists suspect that the alewife now common in Carters Lake may have come from one of several TN lakes that have thriving alewife populations. This example shows the potential for illegal transport of bait across our state line. GA 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 TN River system in AL and actively participate on the OH River Asian Carp planning team.



Giant Salvinia (*Salvinia molesta*)

- Reported to Steve Mincey in private pond in Evans County On 1/22/15, a positive id was made by identified by several fish biologists in the Richmond Hill office including Chris Harper and Tim Barrett.
- Treated repeatedly with several herbicides in the spring, summer, fall and winter.
- On going diligence by Chris Harper and the Richmond Hill office repeatedly making site visits to make sure the pond and right away is clear of this nuisance exotic.
- Considered eradicated!





- **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.

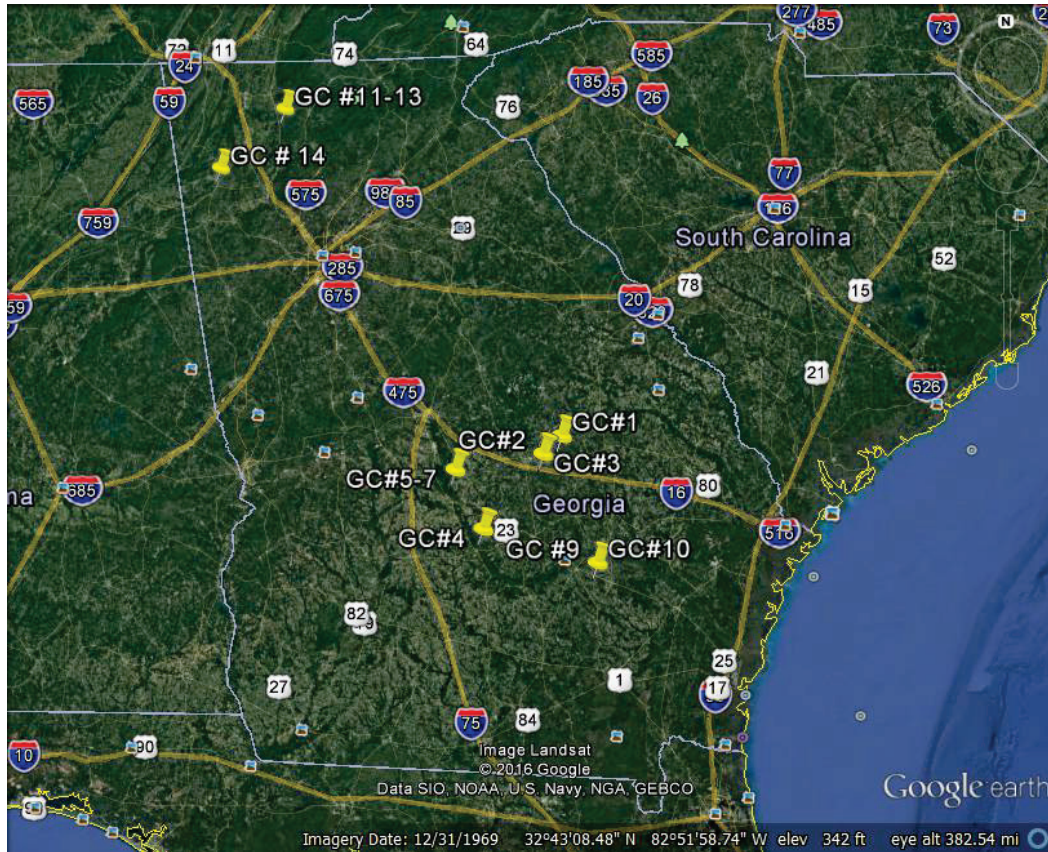


Grass Carp (*Ctenopharyngodon idella*) Ploidy testing



- 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) instituted a protocol to collect and test grass carp ploidy.
- The protocol was put into action in October 2014.

Ploidy Testing



- 14 Grass carp turned in for testing between 11/10/14 & 6/13/16
- Size of fish tested has ranged from 680 to 1045 mm TL.
- 1) Hugh Gillis PFA
- 2 & 3) Oconee River
- 4) Ocmulgee River
- 5-7) Ocmulgee PFA kfe pond
- 8) Lake Patrick (PPFA)
- 9 & 10) Mayers Lake
- 11-13) Coosawattee River
- 14) Etowah River

Revamp ANS issues on WRD Website with input from several WRD regional staff.



Aquatic Nuisance Species

- <http://www.georgiawildlife.com/Conservation/ThreateningInvasives>

Moving live fish, aquatic plants, or mussels from one body of water to another can cause irreversible damage to the ecological balance of Georgia lakes, rivers and streams.

AQUATIC NUISANCE

SPECIES: Examples In and Near Our State

The quality of largemouth bass, bream, and crappie fishing in Georgia mountain lakes has declined following the illegal introduction of blueback herring.



Products Delivered (threats)

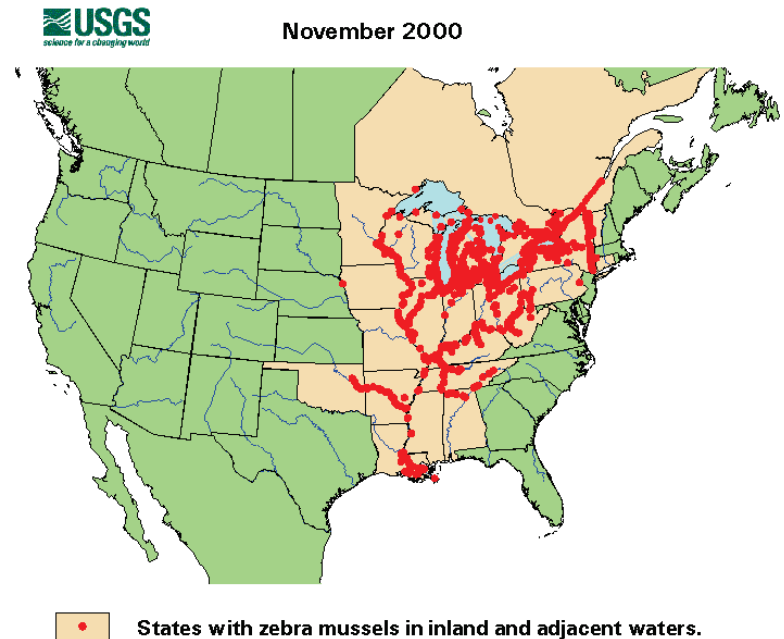


- Georgia's best smallmouth bass fishery, Lake Chatuge, was lost to illegally-stocked **spotted bass**. The only remaining smallmouth bass fishery, Lake Blue Ridge, also is threatened by spotted bass competition.
- The genetic purity of shoal bass is compromised due to the illegal introduction of **spotted bass** on the Flint River.

The popular redbreast sunfish and bullhead fisheries in the Altamaha River were decimated by the invasive and illegally-introduced **flathead catfish**. The Satilla River redbreast sunfish population also is threatened by the illegally-introduced **flathead catfish**

Products Delivered (threats)

- The **zebra mussel** is moving south. These mussels, introduced in the Great Lakes in 1985, are now found in Tennessee and Alabama, and are likely to be carried into Georgia on boats or by individuals. Zebra mussels could adversely impact Georgia's native mussels (many of which are endangered), clog intakes for drinking water, power plants and outboard motors; costing millions of dollars in damage, control and abatement.



Products Delivered (threats)

- **Asian Carp** (both **Bighead** and **Silver**) are exotic fish species invading and causing harm to native fishes and mussels throughout the Mississippi River basin and have the potential to invade up to 31 states, including Georgia. These fast growing filter feeders can dominate a fish community, impact native species, alter water quality and harm important commercial and recreational fisheries. Asian carp are now found in the Tennessee River basin; which falls (in part) in north Georgia. The U.S. Fish and Wildlife Service is monitoring Asian carp movements up the Tennessee River basin using eDNA. Asian carp have not yet been discovered to inhabit Georgia waters, but their proximity to state waters is of particular concern. Additional information [here](#) [1] and [here](#) [2].





Georgia Trout Populations are threatened by the following newly occurring invasive diseases:

Whirling Disease: This disease is found in rainbow trout from the Watauga River in North Carolina in 2015. Whirling disease can cause 90 percent or greater mortality of young rainbow trout and can have serious impacts to wild and hatchery trout populations. The disease is caused by the microscopic parasite *Myxobolus cerebralis*, which damages cartilage and skeletal tissue in trout causing diseased fish to swim in a "whirling" motion. While often fatal to juvenile trout, the disease is not known to affect humans or pets, and eating an infected fish is not known to cause any harmful effects. More info [here](#) [3]. For more information on preventing the spread of whirling disease, click [here](#) [4].



Products Delivered (threats)

Georgia Trout Populations are threatened by the following newly occurring invasive diseases:

- ***Didymo***: This disease, also called rock snot, is a freshwater diatom that produces thick algae mats along stream bottoms. The mats can be so thick that they can alter stream habitats and make fishing difficult. Didymo can be spread easily from one water body to another. This microscopic algae was recently found in North Carolina for the first time and is a threat to Georgia streams and rivers. More info [here](#) [5]. For more information on preventing the spread of Didymo, click [here](#) [4].
- ***Gill lice***: These lice, a parasitic crustacean that attach to the gills of trout, recently were found in trout in North Carolina. In high concentrations, these lice can impact respiration and the health and survival of the trout. More info [here](#) [6].





Source URL: <http://www.georgiawildlife.com/Conservation/ThreateningInvasives>

Links:

- [1] <http://www.iiseagrant.org/ais/asiancarp.php>
- [2] <http://www.iiseagrant.org/catalog/ais/bigwach.php>
- [3] http://www.protectyourwaters.net/hitchhikers/others_whirling_disease.php
- [4] <http://www.ncwildlife.org/Fishing/WhirlingDisease/AnglerGearCare.aspx>
- [5] <https://www.nps.gov/grsm/learn/nature/didymo-study.htm>
- [6] <http://www.ncwildlife.org/NewsArchives/TabId/2319/ArtMID/6635/ArticleID/1016/Biologists-Find-Gill-Lice-in-Brook-Trout-in-Cullasaja-River-Tributaries.aspx>
- [7] <http://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=298>
- [8] http://www.scseagrant.org/hab/pdf/ha_spring_03.pdf
- [9] <http://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=6>
- [10] <http://plants.ifas.ufl.edu/plant-directory/hydrilla-verticillata/>
- [11] <http://applesnail.net/>
- [12] http://applesnail.net/content/species_genera.htm