

# Hatchery Highlights

## U.S. Fish & Wildlife Service Warm Springs NFH News and Updates

October – December 2014



### Lake Sturgeon production news

Warm Springs NFH worked cooperatively with numerous state and federal partners to rear and distribute lake sturgeon. Warm Springs NFH works at the southern end of their historical range. We also conduct habitat and population surveys on sections of the Lower French Broad River and Holston River in Tennessee to assess effectiveness of the stocking program. Assessment work also continued for a third year on sections of the Coosa River, assisting with surveys for lake sturgeon stocked by Georgia Department of Natural Resources (GDNR).



The last of our FY 2014 year class lake sturgeon were distributed at Seven Islands Refuge Landing on the Lower French Broad River October 18, 2014. A total of 2,748 fish weighing 186 lbs., averaging 8.1 inches in length and marked by removing scute 3 and 4 on the right side of the body were distributed. Chad Shirey transported and stocked the fish this year in conjunction with the annual Lake Sturgeon Festival outreach event sponsored by the Tennessee Valley Authority. The purpose of this event is to educate the public on our expanding efforts in the region, and to promote the cooperative restoration efforts underway for lake sturgeon in the Southeast.



**Chad releasing sturgeon into the Lower French Board River**



**Releasing sturgeon**



**Lake Sturgeon Festival attendees chatting with vendors**

Carlos Echevarria and Josh Simmons traveled to Edenton NFH, NC on October 21<sup>st</sup>-23<sup>rd</sup> to assist with marking of their lake sturgeon prior to distributing the fish.



**Removing scutes of a LSN**

Lake sturgeon sampling and habitat assessment was conducted in the Upper TN River during October and November and in the Coosa River in December.

Carlos and Chad worked on the Upper TN River, October 28 – 30<sup>th</sup> to surgically implant lake sturgeon with acoustic transmitters in order to correlate movement with habitat utilization. Unfortunately, no sturgeon were collected due to higher than normal water temperatures.

Chad Shirey and Carlos worked with other partners during the annual sampling efforts undertaken along the Upper Tennessee River, November 3rd through the 7th. Boat crews on the TN River consisted of staff and volunteers from Tennessee Wildlife Resource Agency (TWRA), Tennessee Valley Authority (TVA), University of Tennessee (UT), Tennessee Technological University, and FWS personnel from Warm Springs NFH, Orangeburg NFH and Warm Springs Fish Health Center. Coordination and valued assistance was provided by Mark Cantrell, ES Ashville. Data collected during the sampling included substrate and habitat information at the collection sites. Tissue samples for genetic analyses were collected and all fish were scanned for or tagged with Passive Integrated Transponders (PIT) tags. A total of 52 lake sturgeons were collected by the crews.



Carlos and Brian Hickson (WSFHL) provided guidance and assistance to two University of Tennessee (UT) students Todd Amacker and Dan Walker with their diet and prey availability study on lake sturgeon. The purpose of the study is to learn more about their benthic prey base and foraging habits. Brian and Carlos demonstrated the proper techniques of nonlethal sampling of stomach content called gastric lavage. It's a technique relatively cost effective, non-labor intensive, relatively safe and effective on sturgeon species.



**Weighing captured sturgeon**



**Measuring sturgeon**



**Marked sturgeon (missing scute)**

Haile obtained scientific collecting permits allowing WSNFH staff to assist with sampling or collection of lake sturgeon in Alabama.

Chad, Josh and Carlos participated with sampling on the Coosa River, GA and Lake Weiss, AL in cooperation with GADNR staff John Damer and Mark Bowen on December 1<sup>st</sup> -5<sup>th</sup>; three lake sturgeon were collected on this assessment.



**Josh and Carlos working trotlines**



**Josh got one!**

The latest update to the Tennessee Lake Sturgeon Management Plan was received for review. Other lake sturgeon work underway during the quarter included data analysis for work on the upper TN River and work on the annual production report.

## **Mussels**

The mussel program continues holding mussels and host fish held from previous years for studies, these include eight mussel species from the ACF Basin and four from the Altamaha Basin. Some of these mussels have been in refugia for up to 12 years or more. Mussels are surviving and continue doing well. They are held in tanks

using pond water treated via the Alkalinity Enhancement Building and are fed from algae cultures maintained on station and organics present in the pond. The hatchery is also holding several native small ACF riverine fish species in addition to largemouth bass and bluegill for host fish studies. One water supply pond dedicated for the mussel program was drained to stabilize bottom sediments during the winter.

## **Ecosystem & Habitat Assessment**

Warm Springs NFH staff began rehabbing an unused 1.6 acre pond for butterfly and other pollinator habitat. While the initial focus will be on providing Monarch butterflies the milkweeds they need for reproduction, other species will benefit through the management of this site for pollinators. The pond pictured below has an unstable pond bottom that does not hold water and requires too much replacement water to be used as a production pond.



**Pond not useable for fish production now scheduled for butterfly and other pollinator habitat plantings.**

Bill Bouthillier and Haile Macurdy assisted with an assessment in the Coosawattee River concurrent with low flows resulting from a scheduled drawdown for a gate inspection by Corp of Engineers at the reregulation pool below Carters Lake on November 3<sup>rd</sup>. Staff from Athens ES office, Georgia DNR and Warm Springs checked water quality, conducted mussel surveys and electrofished shoals at several locations at and below the re-regulation dam. Ashville, ES office provided a boat and operator to access the remote shoals sampled during the day.



**Gate stuck in the up position**



**Examining water quality**



On December 8<sup>th</sup> Haile participated in an informal inspection and brainstorming session with other FWS representatives regarding green spaces and aquatic habitat along sections of the South Fork of Peachtree Creek in Atlanta. An overview was provided by members of the South Fork Conservancy group. The Conservancy is building support for this greenway and aquatic habitat in the heart of Atlanta. Participants included: Angelou Ezeilo (not pictured) and Racheal Woods with the Greening Youth Foundation, Sally Sears, South Fork Conservancy, Sallie Gentry, NWRS, Troy Wilson, Migratory Birds, Cindy Bohn, Alice Lawrence and Debbie Harris, Athens ES, Haile Macurdy, WSNFH.



**Photo credit:** Angelou Ezeilo, Greening Youth Foundation

Bill Bouthillier assisted the Fish Health Center by conducting periodic triploid grass carp inspections. He conducted inspections on October 1<sup>st</sup>, 8<sup>th</sup>, 22<sup>nd</sup>, November 19<sup>th</sup>, December 3<sup>rd</sup> and 10<sup>th</sup>.



## Sicklefin Redhorse

Our work with sicklefin redhorse represents a cooperative effort by Warm Springs NFH, the Eastern Band of Cherokee Indians, FWS Ecological Services, Asheville, NC, USGS, Conservation Fisheries Inc., Duke Power, Western Carolina University and others addressing research goals developed by the Sicklefin Redhorse Research Partnership. Our efforts are focused on rearing sicklefin redhorse for tagging, assessment and other studies. The two lots of sicklefin on station totaled 633 fish and averaged 2 inches in length in December.



[Photo credit:](#) Steve Fraley, North Carolina Wildlife Resources Commission.

Haile submitted a sicklefin production report for propagation and culture work undertaken during 2014.



**2014 year class sicklefin redhorse**

Sicklefin redhorse are redhorse sucker in the *Moxostoma* genus, their status as a distinct species is currently under review.

## Maintenance and Operations

During the quarter staff winterized culture systems, water supply lines and buildings to prevent below freezing temperatures from damaging equipment. Three forage ponds were harvested providing feed for use in the display pool and aquarium building through the winter. Ponds utilized for striped bass production were drained as a means of removing unwanted aquatic vegetation over the winter, air stones were removed for cleaning and pond bottoms were seeded with rye grass. The rye grass serves as a means of stabilizing bottom soils to prevent erosion and provides a nutrient base for zooplankton during striped bass production the following March.



Staff began replacing sections of corroded galvanized walkways in a pole shed with a composite decking. An additional section of the galvanized decking is also scheduled for replacement.



**Corroded Metal Decking and Replacement Composite Decking**

Preventative maintenance was undertaken at the Spring Building removing brush around the perimeter of the building and pressure washing the exterior walls ahead of a scheduled repainting in 2015.



**Spring Building Landscaped & Pressure Washed Ahead of Repainting**

Our staff also constructed new trotlines and repaired others for use with lake sturgeon assessment work. A two way radio was installed on our sampling boat to facilitate coordination with other boat crews during sampling operations. A new YSI model 5500D oxygen monitoring system with two probes was purchased to allow continuous monitoring of water quality during distribution of lake sturgeon, alligator gar and striped bass. Staff worked on leaf removal from landscaped areas and maintained roads and ditches ahead of fall and winter rains. Repairs were undertaken several times on an ancient ice machine that is beginning to show its age. Furniture was removed from the unused Quarters 3 building. Chemical towers at the wetlab were charged with baking soda and calcium chloride on several occasions.

## Administrative

Considerable effort was applied towards meeting year end requirements for personnel actions, budgeting and annual reporting requirements. Updates for staff EPAP's were completed. Target setting goals for FY 2015 work were completed in FIS. Annual fish distribution records were completed for FY 2014 in FIS. In October 2014, a 4<sup>th</sup> Quarter and 2014 Annual Report were submitted. Environmental Management System records were maintained and the Sustainable Use database was completed for 2014. Pesticide Usage for 2014 and Proposals for 2015 were prepared and submitted. Monthly vehicle and building energy use data was compiled and submitted for use in FBMS. Staff continued efforts to integrate FBMS guidelines into daily operations. Safety plans are currently under review and updating. Carlos took an online safety training for supervisor's course. Haile participated in the online diversity and inclusion webinar Oct. 27<sup>th</sup>.

Staff reviewed proposed work project templates and reviewed threatened and endangered species reporting. A summary of outreach and fishing events was submitted and an annual climate survey was completed. Staff also updated property management records. Hatchery Manager Carlos Echevarria participated in the Fisheries and Ecological Service Project Leaders meeting in Asheville, NC October 6<sup>th</sup> – 9<sup>th</sup>. He also participated in periodic project leaders conference calls. Staff took "use or lose" vacation time accumulated through the year in November and December

Bill Bouthillier attended a presentation by Alex Edwards at Columbus State University in October for his alligator gar work with us this year. Alex is currently working on preparing a finalized hard copy of his report for review and eventual circulation.

## Outreach

Friends of Warm Springs National Fish Hatchery held a meeting at the hatchery on October 3<sup>rd</sup>, to discuss their role and relationship with the hatchery. They also discussed joining the National Friends Group Chapter to obtain Internal Revenue Service non-profit organization status.

Carlos Echevarria, Bill Bouthillier, and members of the Friends Group participated in the annual "Help the Hooch" river cleanup along the Chattahoochee River at Columbus, GA October 4th. The hatchery set up touch tanks featuring turtles, tadpoles and crayfish. This event had over 3,000 children attend the after clean up watershed festival. This event is always well attended with lots of community support.



Proudly displaying the amount of trash picked on the river clean up



Kids enjoying the touch tank at Watershed Festival



On October 6<sup>th</sup>, staff biologist Bill Bouthillier gave a lecture on aquatic habitats to 60 fourth graders at St. Anne- Pacelli Catholic School and set several touch tanks with tadpoles, frogs, crayfish, and turtles.

The Annual Open House sponsored by WSNFH, was held for the community Saturday, October 11th. It featured exhibits and demonstrations from all WSRFC programs. Hatchery staff and Friends Group members cooked hotdogs and provided bottle water to the attendees, the food and water was donated by the Friends Group. Over 150 visitors were on hand to view the exhibits and to chat with staff members from the entire Warm Springs Fisheries Complex.

On October 22<sup>nd</sup>, several largemouth bass, striped bass and bluegill were provided to OxBow Meadows Environmental Education Center in Columbus, GA for their newly renovated exhibits.



On October 24<sup>th</sup>, Wisdom Way – a home school program was given a tour of the hatchery facilities which consisted of 16 adults and 27 children.

The Conservation Biology class from LaGrange College was given a tour on October 30<sup>th</sup>, 5 students and 1 professor showed an interest in our freshwater mussel program.

On November 14<sup>th</sup>, 18 students of a Vertebrate Diversity class and on November 18<sup>th</sup>, 21 students of a Fish Biology class from Columbus State University toured the station with a staff biologist.

On November 25<sup>th</sup>, Brent Albanese, Aquatic Ecologist with GA DNR came by to tour the hatchery facilities.



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