

Hatchery Highlights

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



April-June 2013

Alligator Gar, Our 7th Production Year is Underway at Warm Springs

Warm Springs NFH participates in the alligator gar restoration program covering the Mobile basin in Alabama and the Mississippi River basin in Tennessee. Working in cooperation with Private John Allen NFH (source of our fry) along with other state and federal agencies, Warm Springs NFH is able to achieve the management objectives for this top level predator. Following observations from recent production years, fry are obtained from Private John Allen NFH, once they are freely swimming and ready to forage. Carlos Echevarria (Hatchery Manager of WSNFH) brought back fry from Private John Allen NFH on May 9th, 2013. A total of 5,033 fry were stocked.

Through June we have approximately 3,150 fish on hand averaging between 4 and 5 inches in length. While survival to date is lower than the 72% all time high seen this time last year, we are still well above the averages of previous years.

Keeping with the protocol used over the past several years, we continue to offer the fish a high quality commercial ration and live brine shrimp on first arrival. The gar quickly take to the commercial ration and brine shrimp is discontinued after a few days. Gar exhibit uniform growth with little evidence of cannibalism. Once the fish are trained to take the commercial ration, scheduled feeding ensures they do not resort to picking at each other and setting up conditions favorable to disease outbreaks. Once the gar reach larger sizes, they will be tagged with coded wire tags and distributed into tributaries of the Mississippi River in Tennessee.



Young alligator gar hunting for food.

Striped Bass Phase I Production Completed

Warm Springs NFH staff distributed Gulf Coast striped bass fingerlings in support of restoration objectives set for the species throughout river systems of the southeast. Working in cooperation with state and federal agencies, fry were received, stocked into ponds, reared, harvested and then distributed between April 8th and May 17th, 2013. A combined total of 1,042,000 five day old fry were received from Florida's Blackwater SFH between April 8th and April 16th. This year, water temperatures were cooler than experienced during the same period in 2012.

Twelve ponds totaling 6.7 surface acres were stocked at rates ranging from 134,000 to 240,000 fry per surface acre. Following 30 to 36 days of culture, all ponds were harvested and distributed; no fish were held for Phase II production. The average rate of return was 34.5 %, equaling 53,657 fish per surface acre. Striped bass were not marked this year following guidelines set during the Morone Committee meeting held earlier in the year. A total of 359,500 Gulf Coast striped bass, weighing 126.9 pounds (average 2,833 fish per pound) were distributed to the following sites:

5/14/2013	Goat Rock Lake, GA	(ACF Basin)	4,966 fish	1.6 lbs
5/14/2013	Lake Oliver, GA	(ACF Basin)	10,846 fish	3.9 lbs.
5/14/2013	West Point Reservoir, GA	(ACF Basin)	45,649 fish	12.1 lbs.
5/16/2013	West Point Reservoir, GA	(ACF Basin)	79,936 fish	26.8 lbs.
5/15/2013	Lake Worth, GA	(ACF Basin)	4,310 fish	1.3 lbs
5/15/2013	Lake Seminole	(ACF Basin)	158,855 fish	66.4 lbs
5/17/2013	Lake Seminole	(ACF Basin)	54,938 fish	14.8 lbs.

Lake Sturgeon production news

Warm Springs NFH works collectively with numerous NGO's, universities, state and federal agencies to meet restoration goals for this species. Annually WSNFH personnel undertake wide ranging tasks to meet these goals such as; hatching, rearing, marking by scute removal, distributing and then assessing the success of stocked lake sturgeon. Working at the southern end of their historical range, Warm Springs NFH distributes fish near the confluence of the Lower French Broad River and Holston River in Tennessee. Propagation and care of lake sturgeon while at Warm Springs follows genetic management and quarantine protocols established for the species.

Carlos Echevarria and Chad Shirey traveled to Wisconsin between March 26th and April 5th in order to spawn lake sturgeon and transport fertilized eggs back to Warm Springs. This year the crew was able to collect eggs just ahead of an arriving snow storm and colder temperatures that would have delayed natural spawning activities of the fish in the Wolf River. A total of 95,438 eggs were obtained from five females, each fertilized by 5 different males and were stocked into our incubation system on May 2nd 2013. Variable egg quality was obtained from these eggs. As a result, Genoa NFH shipped an additional 24,000 fertilized eggs, collected from three additional females to Warm Springs on May 7th supplementing eggs collected earlier by Warm Springs NFH staff.



Carlos discussing lake sturgeon culture techniques with Tennessee Aquarium staff

Following a period of quarantine and culture, 8,559 fingerling lake sturgeon were transferred to other stations for continued culture prior to their eventual distribution in the Tennessee River later in 2013.

6/18/2013	Private John Allen NFH	3,105 fish	1.87 lbs.
6/18/2013	Mammoth Springs NFH	2,794 fish	1.58 lbs.
6/12/2013	Orangeberg NFH	1,150 fish	0.38 lbs.
6/12/2013	Tennessee Aquarium, TN	1,510 fish	0.50 lbs.

Approximately 4860 lake sturgeon are being held at Warm Springs for continued culture through the summer and fall of 2013.

Mark Dugo, from Jackson State University, MS picked up 19 FY 2012 year class lake sturgeon June 20th for physiological studies referencing nano particle uptake in tissue, metal isotope uptake and biomarkers.

Carlos is coordinating upcoming tasks associated with studies of lake sturgeon habitat and telemetry work scheduled to take place in the Tennessee River basin later in the year. Multiple partners are contributing expertise, funding and the resources required to successfully complete this project.

Fisheries Assistance & Habitat Assessment

Chad Shirey participated with an aquatic survey for invasive species in the Savannah River May 19th through the 22nd. This was a combined effort of Refuge, Fisheries and ES office personnel working near the mouth of the Savannah River.

Data collected through 2012 on the Saint Marys River, via use of Hydrolab sondes by WSNFH personnel, was finalized and forwarded to John Galvez, Peninsular Florida Fisheries Office, for use by the Saint Marys River Fisheries Restoration Committee.

Our work with Sicklefin redhorse represents a cooperative effort by programs at Warm Springs Regional Fisheries Center, the Eastern Band of Cherokee Indians, USFWS Ecological Services, Ashville, NC, Conservation Fisheries Inc. and others to rear fingerling sicklefin redhorse for tagging, assessment & other studies developing under the research agenda created by members of the Sicklefin Redhorse Research Partnership.

Sickefin redhorse are redhorse sucker in the *Moxostoma* genus, their status as a distinct species is currently under review. WSNFH currently has 25 individuals being reared to a size large enough for tagging operations at a later date.

Freshwater Mussels & Darters

Warm Springs NFH continues to hold eight mussel species from the ACF - *Elliptio crassidens*, *E. fumata*, *E. pullata*, *E. purpurella*, *Quadrula infucata*, *Toxolasma paulus*, *Villosa lienosa*, and *V. vibex*, and four mussel species from the Altamaha River Basin – *Alasmidonta arcuata*, *Elliptio dariensis*, *E. icterina*, *Lampsillis splendid*. The hatchery is also holding several native small ACF riverine fish species – *Cyprinella venusta*, *Percina nigrofasciata*, and *Noturus leptacanthus* for future host fish studies. Some of these mussels have been in refugia for up to 5 or more years.

Maintenance and Operations

Time was dedicated by staff for preventative maintenance of buildings and equipment along with the time required for setup, operation and maintenance of intensive culture systems required for high priority work with lake sturgeon and alligator gar. Work also included maintaining water treatment equipment for the entire Center. Ponds, roads and pond levees were also maintained.

Heavy equipment was serviced during the Quarter by Chad Shirey. Chad also serviced our utility carts, fish and egg transport trailers and equipment.

Several fiberglass fish transport tanks were repaired for wear and tear following the Spring production season.

Administrative & Meetings

Warm Springs NFH hosted in conjunction with WSRFC staff and personnel from International Affairs, Washington, DC, a three week visit by three Chinese biologists between Mar 25th and April 12th. Guangpeng Feng, East China Sea Fisheries Research Institute, Xiaomei Wang, Research Center of Resources and Eco-environment and Ke Wang, Yangtze River fisheries Research Institute worked with hatchery and fishery center staff through these weeks, providing a great opportunity to exchange ideas and information on mutually shared resource management issues and techniques.

June 1st marked a change at Warm Springs Regional Fisheries Center. Vincent Mudrak, Center Director, as well as Rosla Plant, Park Ranger and administrative support, retired after putting in many dedicated years of service to our Center and FWS. Vince and Rosla provided outstanding guidance and direction in details great and small through the years. We shall miss their daily insights and wish them the best in this new phase of their lives.

Volunteers:

During the Quarter we two students begin volunteering with us. Christian Siard, from Knoxville, TN volunteered May 20th through July 1st and was involved in alligator gar and lake sturgeon culture during his time with us. Christian's help was greatly appreciated! Nicole Plessinger, a high school student from Manchester began volunteering June 1st. She has a wide range of interests and is currently assisting with pond management and water quality data collection. Hatchery staff provided varied experiences to involve the students in projects such as care of lake sturgeon, monitoring water quality, pond management and maintenance tasks.



Christian Siard feeding alligator gar

Insert photo of Nicole here

Nicole Plessinger

Outreach:

Warm Springs NFH is a valued asset and venue to demonstrate the Service's commitment to environmental leadership. To that end the station provides facilities, kiosks, public access and some scheduled events that allow demonstration and communication of our goals and accomplishments. Seven scheduled tours visited our station during the Quarter with an estimated 460 kids and 74 adults. Kim Morris, Georgia Aquarium, met with hatchery staff in June to arrange a future visit to our station as part of a Creeks to Coasts Educator Workshop in July. Educators will visit the station and learn about work at the station and watershed issues of the ACF river basin. Additionally, staff also provided (volunteered) time for occasional off site programs as time permits. The primary onsite event during this quarter was the annual kids fishing event held in support of National Fishing Week.

On June 8th, staff and volunteers provided an exciting day for 266 kids and their families during the annual Kids Fishing event. Of these, 33 kids were fishing for the first time. This event is sponsored in support of National Fishing Day activities and strives to provide kids an introduction to fishing. The kids were scheduled to fish in three different hour long tiers to spread everyone out and make the experience enjoyable. A total of 1,189 catfish were taken during the event. In addition to all the Regional Fisheries Center staff and members of our Friends group, we had the able assistance of the Benning Bass Club assisting with the event. WenMarr Mgmt Corporation (Wendy's) provided food again for this year event and **Zebco donated 100 Zebco 33s (rods and reels) for door prizes.** Thanks to all for their assistance with this event!



Registering Saturday Morning



Benning Bass Club Volunteer



Waiting For a Bite



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