

Hatchery Highlights

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



Summer 2011

Alligator Gar, a Growing Success at Warm Springs

Warm Springs alligator gar program is part of a restoration program covering the Mobile and Mississippi river drainage basin. Close cooperation with Private John Allen NFH (source of our fry) along with other state and federal agencies is involved to undertake management objectives for this top level predator. Carlos Echevarria and Chad Shirey traveled to Mississippi April 19th – 21st, assist with brood stock collection and evaluation. Brood fish were collected by running gill nets set at night. Alligator gar brooders were then taken to Private John Allen NFH for spawning. On May 5th, 13,173 fry produced at Private John Allen NFH were transferred to Warm Springs for culture.

In our fifth production year, 2011 looks to be a great year for alligator gar production at Warm Springs. At the end of June 3,300 fish (25.1% survival) ranging between 5.5 and 7.5 inches are being reared in tanks. A large part of the success seen so far this year can be credited to use of a diet formulated for marine fish, having a high krill content and good floatability for use with fry and fingerlings fish. The diet was used at the critical time as young gar transition to feeding from brine shrimp to either larger forage, each other or commercial feed. The gar has exhibited uniform growth with little cannibalism this year. Once past the transition stage to commercial rations, a floating high protein steelhead trout diet is used. From an initial 13,173 fry received May 6th, 2011, 50% remained seven days later and after 55 days of culture 25% (3,300 fish) were on hand.

In order to help overcome existing space limitations of our existing holding house, staff and volunteers are expanding culture facilities dedicated for culture of alligator gar. Saturday, April 30th, twelve Fort Benning Bass Club volunteers framed in and decked the structure pictured below. Once all shade cloth is installed around the frame that encloses the 22 foot long raceway, the system will be ready for production.

Alligator Gar Raceway & Enclosure, April 2011



Uniformly sized 2.75 "Alligator Gar



Striped Bass Phase I Production Completed

The Warm Springs NFH staff distributed Gulf Coast striped bass fingerlings in support of objectives set annually at the Morone meeting by participants earlier in the year. Working in cooperation with state and federal agencies, fry were received, stocked into ponds, reared, harvested, marked and distributed between April 15 and May 20th, 2011. A combined total of 1,031,000 five to seven day old fry were received from Marion State Fish Hatchery and Welaka National Fish Hatchery between April 15th and April 21st.

Chad Shirey releasing STB at West Point Reservoir

Twelve ponds totaling 6.62 surface acres were stocked at rates ranging between 100,000 to 254,000 fry per surface acre. Following 28 to 32 days of culture all ponds were harvested and distributed, no fish were held for Phase II production. The average rate of return was 7.8%, equaling 12,173 fish per surface acre. All fish were marked with oxytetracycline at concentrations of 600 ppm for 6 hours prior to distribution. A total of 80,585 Gulf Coast striped bass, weighing 97.1 pounds (830 fish per pound and averaging 1.2 inches in length) were distributed.



Lake Sturgeon production news

The Warm Springs NFH works cooperatively with numerous state and federal agencies to secure, hatch, rear and distribute lake sturgeon meeting restoration guidelines for this species. Working at the southern end of their historical range, Warm Springs distributes fish that are stocked and monitored near the confluence of the Lower French Broad River and Holston River in Tennessee. Additionally, Warm Springs NFH annually produces and distributes fish to Georgia DNR for their lake sturgeon restoration and recreational fisheries program on the Coosa River of Georgia and Alabama.

Carlos Echevarria, Chad Shirey and Josh Simmons traveled to Wisconsin between April 26th and May 3rd to spawn a minimum of 5 females each with five males. Fertilized eggs were then transported back to Warm Springs for hatching and culture through the year. This is the hatchery's 9th year making this trip to the Wolf River area. Spawning of lake sturgeon (Photo: Josh Simmons center, holding an adult lake sturgeon) was delayed a few days due to colder than normal water temperatures this year.



Working in cooperation with Wisconsin DNR the Warm Springs staff obtained 92,425 eggs that were returned to Warm Springs. An additional 55,420 fertilized eggs were provided to Georgia DNR for their Coosa river program. In June 2011, the hatchery distributed a total of 24,731 fish to Pvt. John Allen, Orangeburg and Mammoth Springs NFH's, Tennessee Aquarium at Cohutta, GA and Summerville State Fish Hatchery, GADNR. The Warm Springs NFH retained 5,300 fry to be raised throughout the Summer and Fall of this year. Lake sturgeon fry averaged 1.25 inches in length.

Carlos and Chad participated in a survey to assess lake sturgeon survival in sections of Ft. Loudon and Watts Bar lakes, the Lower French Broad and Holston rivers near Knoxville, TN on June 20th through the 23rd in an attempt to recover some of the sturgeon stocked by our hatchery program. Trotlines were set

and run in multiple locations along the river by two boat crews assisted by Ed Scott, volunteer and Mark Cantrell, fish biologist with Ashville Ecological Services, Ashville, N.C. Unfortunately, no lake sturgeon was collected on this attempt.

Sicklefin Redhorse Production Highlights

Daily care and culture of this interesting species continued through the quarter. Warm Springs NFH is rearing these fish for telemetry, tagging and marking, and other studies developed under the research agenda of the Sicklefins Redhorse Research Partnership, comprised of Fish and Wildlife Service, U.S. Geological Survey, N.C. Cooperative Fish and Wildlife Research Unit, Western Carolina University, Eastern Band of Cherokee Indians, North Carolina Wildlife Resources Commission and Duke Energy Carolinas, LLC and the draft genetic management plan for the species.



Our work with Sicklefins redhorse represents a cooperative effort by our program in Warm Springs and others to provide culture and monitoring for these captive reared fish. Following a distribution the previous quarter to North Carolina's Marion Fish Depot of 15 fish averaging 4.6 inches Feb. 24, 2011, Warm Springs currently has 36 fish, now averaging close to 7 inches in length.

Mussels

Andy Hartzog (photo: holding a purple bank climber) returned to WSNFH in June after a six month absence as he attended classes for his graduate degree at Columbus State University in Columbus, Georgia. Andy is in the SCEP program and is working on freshwater mussel research. He will be continuing work and research on the development of propagation techniques and protocols, as well as gathering information on life history, habitat assessment and population status of the threatened *Elliptoideus sloatianus* (purple bankclimber). When not conducting mussel work, Andy is assisting hatchery staff with duties around the hatchery.



Maintenance and Operations

Piedmont NWR employee Wayne Smith arrived at and worked at Warm Springs with mulching equipment April 25 and 26th. Wayne cleared brush and undergrowth on two parts of the hatchery as an alternative to burning and to assist in clearing a site to be developed with a trailer pad for future volunteers.

Hatchery staff set wooden support beams for the alligator gar enclosure located in Pond 41. This work preceded arrival of Ft. Benning Bass Club, a volunteer group that finished framing and decking the enclosure as part of their annual environmental project requirements. Afterwards, the hatchery staff installed a 22 foot raceway with shade cloth, air, water lines and electrical needs.



Chad traveled out of state in June to pick up a surplus boat and boat motor that will be used for future assessment and brood collection work by Warm Springs NFH staff.

Chad worked to organize and coordinate a construction job scheduled at Orangeburg NFH at the end of July. Chad is overseeing this work as he is a heavy equipment operator and instructor for Fisheries and member of the MAT team.

Staff conducted grounds maintenance and vegetation control through the Quarter as required to manage the hatchery ponds for production, and to keep the site in good condition. This included disking ponds, spraying vegetation, equipment and facilities disinfection and general site cleanup. A near miss by a tornado late on April 28 knocked out power for a day but caused no known damage on station. The three generators onsite worked perfectly.

Considerable time is dedicated this time of year by staff for setup, operation and maintenance of intensive culture systems required for high priority work with lake sturgeon and alligator gar. Work also includes maintaining water treatment equipment for the entire Center.

Volunteers:

Kelly Kennedy signed on as a volunteer this spring and provided excellent assistance in all work activities onsite this spring. Driving from Newnan, Kelly volunteered two days a week contributing over 108 hours in a two month period. She assisted with monitoring water quality, pond management and fertilization, feeding fish, ground maintenance and also assisted Fish Health Center staff on several occasions working up fish samples.



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. In addition to facilitating onsite professional tours, staff also provided (volunteered) time for occasional off site programs as time permitted. The primary onsite event during this quarter is the annual kids fishing event held in support of National Fishing Week.

Over 200 kids participated in the Hatchery's Annual Kids Fishing Day on June 4th. Children between 3 and 12 years old come to learn to fish, in this case, for catfish. About 28 employees, volunteers, and interns were on hand to assist the participants in a fun-filled day. The Tech Center provided several touch tanks with an alligator, crayfish, turtles, salamanders, frogs, and snapping turtles for children to touch and observe. This day is a special day for the Hatchery and the Friends group, because it gives us all an opportunity to assist one another in teaching kids to fish and make new friends and partners. This event is co-sponsored by the U.S. Fish and Wildlife Service, Friends of Warm Springs Hatchery, and WenMarr Mgmt Corporation (local Wendy's). In spite of the hot weather all who came had good time.

Staff also assisted with several onsite Junior Ranger programs in June by facilitating a fishing event (bluegill).

In May, Bill Bouthillier visited St. Anne's school in Columbus, GA to teach over 200 children and 9 teachers about the importance of protecting our aquatic resources and the animals that inhabit them. He introduced the students and teachers from pre-K to third grade, to alligators, tadpoles, crayfish and turtles. The third grade classes recently learned about different aquatic animals and habitats, so this visit provided a great opportunity for the children to learn about stream and river ecosystems.

Bill Bouthillier conducted a tour for the Chattahoochee Valley Episcopal Ministry out of Columbus, Georgia. The organization is a student based group that engages the community. Fourteen teenagers and six k-3rd graders came with three adults to get a tour of the hatchery and some of the animals that live on the hatchery grounds.



Administration & Meetings

Upcoming changes in reporting guidelines of the Fisheries Information System (FIS) required a review of existing plans and agreements. Hatchery staff also participated in a review of our FIS program updates along with Region 4 Fisheries staff on April 20th.

Safety programs and necessary updates were undertaken. Included were updates for the Hurricane Preparedness Plan and editing the station's fire management plan to meet new FWS plan requirements. Safety and EMS team members reviewed and conducted onsite reviews of the facility. This included inspection and inventory of existing fire extinguishers to evaluate future purchase and maintenance requirements. A comprehensive draft energy audit report was received June 1st. The audit was an intensive survey that is currently being evaluated for recommendations to reduce WSRFC's energy foot print. The semiannual vehicle utilization report was submitted.

Haile Macurdy worked with water quality team members of the S.M.F.R.C. to deploy Hydrolab Sonde units along the Saint Mary's River. This effort is to establish baseline water quality data in suspected critical habitat areas of the river. Equipment and supplies were assembled to deploy one unit in July.



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