

Tishomingo National Fish Hatchery

Monthly Report
May 2016



Aquatic Species Conservation and Management

Female alligator snapping turtles began their annual nesting activities at the Tishomingo NFH, with the first nest found on May 10th. To date 22 nests have been found. Each nest was carefully excavated and eggs placed inside vermiculite-filled plastic trays in an environmental chamber to incubate for three months. Average clutch size has been slightly over 30 eggs per nest. Dr. Day Ligon (Missouri State University), PhD candidate Denise Thompson (Oklahoma State University), and hatchery staff will monitor the development of embryos inside each egg until late August when they begin to hatch.



Alligator snapping turtle nests.



Texas Parks and Wildlife took possession of 564, thirteen-month-old paddlefish from Tishomingo National Fish Hatchery (TNFH) on May 18, 2016. Thirty-seven of the paddlefish were implanted with radio transmitters by TNFH staff and Mike Montagne, Project Leader of the Texas Fish and Wildlife Conservation Office; then allowed to recover for three weeks before being transported to Caddo Lake in eastern Texas by Texas Parks and Wildlife staff. Radio receiver buoys placed around Caddo Lake will track the implanted paddlefish as they move throughout the lake system during the two year battery life of the transmitters.



Paddlefish are surgically implanted with transmitters at Tishomingo NFH.

On May 3rd, Tishomingo NFH staff received 5 boxes of alligator gar fry, which were shipped from Private John Allen NFH in Tupelo, MS. The sac fry were split into 5 tanks, fed a starter diet, and grew at a good rate during the month. All gar will be grown to about 12 inches, then tagged using coded wire tags, and stocked into Missouri and Oklahoma waters to augment existing populations.



Alligator gar fry attached to sides of tank via suckorial disk until swim up.

Leadership in Science and Technology

Doctoral candidate Denise Thompson from Oklahoma State University, presented “Reproductive Ecology of Alligator Snapping Turtles at Tishomingo NFH”, a summary of her research at Tishomingo NFH for her Master’s thesis, and now, for her Doctoral dissertation. This research is quite important to this species petitioned for listing under the Endangered Species Act.

Watching the alligator snapping turtles with a night-vision camera, Ms. Thompson has filmed their nesting activities. Female turtles perform scouting trips along pond banks, searching for the perfect spot for nesting. Excavation of a site for their nest comes next, followed by oviposit. During the fill and cover stage, the eggs are covered with a mix of clear fluid excreted into the dirt to form a hard packable protection around the eggs. These behavioral tasks indicate that the alligator snapping turtles do contribute a significant maternal investment contrary to earlier thoughts.



In addition to the staff of Tishomingo NFH, Dr. Day Ligon from Missouri State University, Dan Moore, science instructor from Murray State College, and staff from The Nature Conservancy attended Ms. Thompson’s presentation.

Denise Thompson measuring alligator snapping turtle.



FACILITIES

The demolition of Quarters #1 was completed in May. Damaged beyond repair by frozen water lines throughout the building, demolition was the most cost effective way to proceed.

Steve McEvoy, the Occupational Safety Specialist from the Regional Office at Albuquerque, NM, performed the 2016 Safety Inspection at the Tishomingo NFH on May 17th. Assistant Hatchery Manager, Ralph Simmons and Maintenance Worker, David Alberson joined Steve to inspect the buildings, equipment, chemicals, and safety plans for the station. Several updates to plans were discussed; chemicals were inspected for proper storage, labeling, and use; signs were pointed out to be updated or added; and a full debriefing of station inspection was presented to Hatchery Manager, Kerry Graves.



Old signs to be replaced on chemical building at Tishomingo NFH.

Visitors and Outreach

- 🐟 Hatchery Manager, Kerry Graves, travelled to Lubbock, Texas, to view the site where the 8th Annual “Vamos a Pescar, Let’s Go Fishing” event will be held in August. The site visit was to get information on the size of the area, logistics in getting fish to the area, and preliminary water quality and water flow data. The hatchery will be providing channel catfish for the event.



Buddy Holly Lake in Lubbock, TX. Site of “Vamos a Pescar” fishing event.

- Mr. Graves also visited the Prairie Stream Fish Culture Facility at Texas Tech University while in Lubbock to exchange information on captive rearing of prairie stream fish with Aaron Urbanzyk, who is a doctoral candidate at the university.

Brian Fillmore answering questions at Murray County Natural Resource Day presentation.



- The Tishomingo NFH was invited to educate children about the importance of conservation for the Murray County Natural Resources Day at North Portman Park in Sulphur, Oklahoma. Six classes of fourth graders, totaling some 160 children, spent the day at the park visiting several booths in a round robin session learning what different conservation agencies do to protect our natural resources. Students were provided information on the species being raised at the hatchery, and the importance of conservation of imperiled fish and turtles. The fourth graders were highly interested in the live alligator gar and alligator snapping turtles and asked many questions.

A portion of Lexington students watch channel catfish feed.

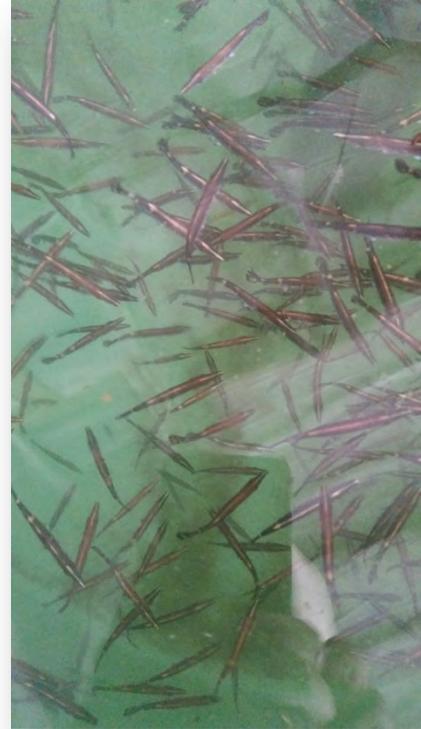


- Middle School students from Lexington, OK, visited the Tishomingo NFH for a tour. Their science teacher attended a presentation at the hatchery several years ago with a group of teachers travelling on a grant from the Math and Science Foundation. Each year following his visit here, he has requested tours for his Middle School students

at the conclusion of the school year. They were thrilled to see paddlefish since most of them had never even heard of this particular species.

- On May 24th, Assistant Hatchery Manager, Ralph Simmons, was invited to conduct a presentation on captive rearing and re-introduction of alligator gar. The presentation included information on gar history, habitat, distribution, population decline, and justifications for re-introducing for the 2nd largest freshwater fish in North America. The audience was comprised of the 2016 cohort of Master Gardener applicants, who were required to correctly answer questions on the presentation in order to achieve their Master Gardener credentials.

Alligator gar juveniles swim in a round tank at the Tishomingo NFH.



Work Force

The Tishomingo NFH welcomed two new employees in May. Joshua Davison is our new Animal Caretaker. Joshua worked here as a YCC when he was in high school. Following high school, he joined the Air Force and served in Afghanistan.

We also welcomed Sarah Spangler as our Pathways Intern in May. Sarah is a student at Missouri State University and research assistant to Dr. Day Ligon. Her studies with alligator snapping turtles have been an asset to the hatchery's turtle culture. Now as an Intern, she is looking forward to learning about fish culture as well.



*Tishomingo NFH Nature Trail
overlooking Pennington Creek.*

U.S. Department of the Interior

U.S. Fish & Wildlife Service

<http://www.fws.gov/southwest/fisheries/tishomingo/index.html>

Fisheries and Aquatic Conservation

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