

# Fleur de Lis Fisheries

U. S. FISH AND WILDLIFE SERVICES  
NATCHITOCHEs NATIONAL FISH HATCHERY

## Snapping Turtle Overwintering is Over at Natchitoches NFH

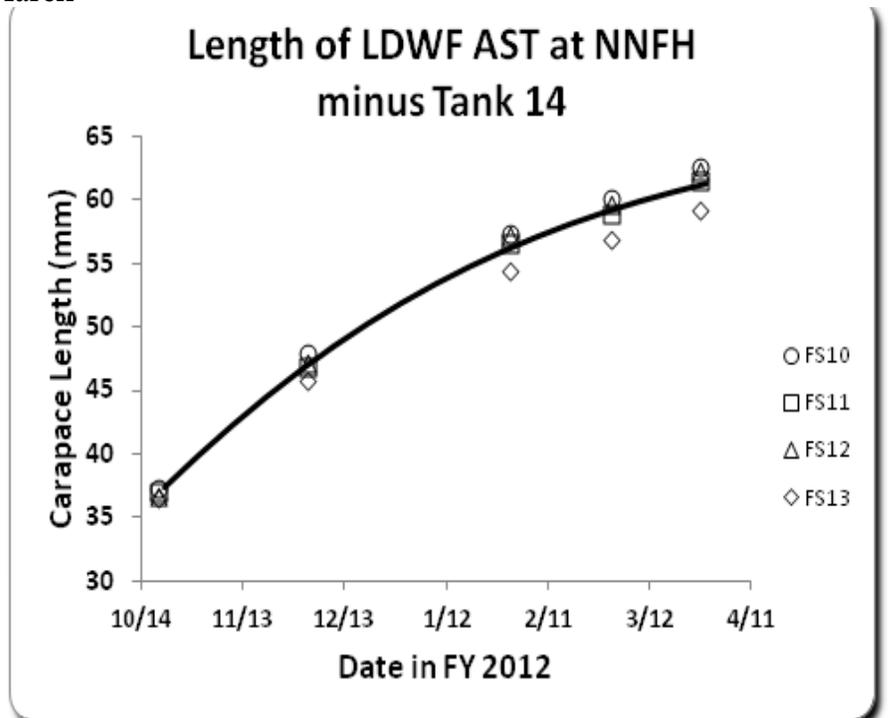
By: Jan Dean

We have reported in the October and January hatchery newsletters about our overwintering of hatchling alligator snapping turtles as the initial phase of a three-year turtle headstart program for the Louisiana Department of Wildlife and Fisheries. The turtles will now be reared by the LDWF for another two years before being released into areas identified in ongoing surveys as the places most suitable and needed for the juvenile turtles. They were reared in Natchitoches at about 80°F and fed a high-protein diet each day. They arrived October 17, 2011 and were picked up March 29, 2012. The feeding rate was not maximized as the objective was to overwinter them and not to maximize growth, yet they steadily increased in size. During the 160 days between initial and final measurements, they increased 66% in carapace length and 326% in weight, on average. Turtles are easy to rear compared to fish. We wish them well in their new home at the LDWF Monroe Fish Hatchery.

Length increase varied from 0.26 mm/day on the first day to 0.06 mm/day on the last day.



Monroe Fish Hatchery Manager Donna Bowman and Senior Fisheries Technical Advisor Robert Gough load turtles into an ice chest for their trip to the Monroe Fish Hatchery



# An Early Spring Hits Louisiana and Kicks off an Early Field Season.

By: Tony Brady

February and March of 2012 will be remembered in Louisiana for the much needed rain that was received and for the above average high temperatures experienced. The rain ensured that Natchitoches National Fish Hatchery will be fully operational and the warm temperatures ensured that the work got started early this year. Research on the Louisiana pearlshell mussel began on 14 February with the collection of 11 fish species from streams that are known to have Louisiana pearlshell mussels. The fish will be used to help determine which species is used by the Louisiana pearlshell mussel to complete its life cycle. The fish were brought to Natchitoches National Fish Hatchery and held in research aquaria awaiting gravid mussels to be found later in March. After collecting the host fish, two of four mussel beds selected to be monitored for gravid mussels were sampled. The other two streams were sampled on 15 February. These four mussel beds were monitored weekly (weather permitting) to find gravid mussels for the host study. The weekly monitoring confirmed the results from last



Mussel Biologist Tony Brady shows graduate student Angela Williamson what to look for when examining the gills of the Louisiana pearlshell mussel for glochidia.

siana pearlshell mussels to reproduce. The first mussels collected for this study were brought to the hatchery on 8 March. The female mussels from two beds were brought to the hatchery and divided up into the aquaria where they were allowed to naturally release their glochidia and expose them to the fish. On 13 March, the first glochidia were found in three of the tanks with the rest of the mussels releasing glochidia over the next week. Additional mussels were collected on 16 and 30 March and added to the research aquaria with the potential host fish. All mussels were returned to their home stream. Now it is a waiting game to see which fish species will produce the transformed Louisiana pearlshell mussels.



This Louisiana pearlshell mussel is developing her glochidia in her gills.

## Electrofishing Class in the Desert

By: Jan Dean

Assistant manager Jan Dean served as an instructor in the FWS Electrofishing Course for the National Conservation Training Center (NCTC) along with Alan Temple of NCTC. The March 5-9 class was held at the New Mexico Department of Game and Fish office in Las Cruces. Many of the twenty-three class participants were either employed by the New Mexico Department of Game and Fish or the Fish and Wildlife Service, though some were affiliated with various agencies or groups in California, Arizona, Ohio, Michigan and other places.

I first visited New Mexico back in the 1970s and was struck then with the ability to see landmarks at such great distances, even mountains 50 miles away. In Louisiana, one's vision is often limited by the trees, flat terrain and winding roads to about a quarter mile, except in certain situations. The arid landscape was also remarkable. A fellow in Hobbs, NM told me years ago, "You know when it rained forty days and forty nights? We got a trace." Well, this visit to the Land of Enchantment was about the same. The drive from El Paso to Las Cruces was pretty dry though beautiful in its own way. The Rio Grande River in El Paso seemed a little misnamed. The river bed was bone dry.

The office provided excellent facilities for the lecture and demonstration part of the class. The field trip proved a bit more challenging. We normally try to get the field trip location close to the classroom to avoid undue travel time and opportunities for folks to get lost. We made three trips in the evenings of over an hour drive each way to look for water and fish and a suitable place for the field trip. For two nights, we were backpack electrofishing by headlights under a beautiful moon just to locate a good spot for the class. Also, there were dust storms and high winds two days which postponed the field trip. Timing was getting really tight to make this work. We travelled to Caballo Lake -- which I read is famous for wind surfing, and I can believe that -- for the field trip. We only had two boats in the class because most folks were interested in backpack electrofishing. We did some resistance and voltage gradient measurements with backpack electrofishers and with the boats before the resident Game and Fish biologist calmly but firmly said that we

would have to get off the water...now! A dust storm was blowing in from the north about three miles away. Within a few minutes, the water was white capping, and biologists were racing to trailer their boats. We moved to the Rio Grande River below the dam at Caballo Lake to complete the field trip with several teams of backpack electrofishers using different electrical waveforms. We often don't have this many backpack units to compare and from which to obtain good fish collection data, so this class was exceptional in that regard. A comparison of frequencies and voltage settings from the Rio Grande closely matched what we had found in the classroom aquarium demonstration the day prior, so that was good confirmation of the effect of frequency on the power needed for successful electrofishing.

Overall, it was a good class experience. The participants seemed unusually engaged and asked probing questions throughout the class. The people who organized and hosted the class worked tirelessly to make it a success, and we obtained the best data yet from backpack electrofishers and even some good data on boat voltage gradients by distance from the anodes before the high winds drove us off the lake. It was a good place to visit but probably a bit dry for a Louisiana boy with webbed feet.



Checking the settings and capabilities of a backpack electrofisher at Caballo Lake, NM.

## Endangered Winged Mapleleaf Mussel Propagation Effort Continues at Natchitoches National Fish Hatchery

By: Tony Brady

Natchitoches National Fish Hatchery (NNFH) along with the Arkansas Ecological Services Field Office (AESFO), and the Arkansas Game and Fish Commission (AGFC) began a propagation program for the federally listed Winged mapleleaf mussel in October 2011. At the end of that chapter of this story, 400 channel catfish, inoculated with the larval Winged mapleleaf mussels called glochidia, were transported to Private John Allen National Fish Hatchery (PJANFH) and were being held over the winter. This chapter now picks up in March of 2012 when the catfish were picked up at PJANFH and hauled west back to Arkansas. Staff from NNFH, AESFO, AGFC, and Felsenthal National Wildlife Refuge then joined forces to place the inoculated catfish in mussel culture cages at two sites where aluminum platforms



A mussel culture cage is fixed together before it is filled with catfish and placed in the Saline River, AR.

were placed last October. Due to high water, only one platform was located, and four cages were placed in that platform. The remaining fish and cages were then taken back to NNFH. At the hatchery, assembled cages with inoculated catfish were placed in one of our in-pond raceways. We expect the transformed mussels (transformers) to drop off the fish and settle into the substrate lined base of the cage assembly. In addition to the cages, four of the catfish were placed in a research aquarium where they could be monitored for transformers dropping off the fish. A total of 696 transformers were collected from the aquarium for an average of 174 transformers produced per fish and an estimated total for all 400 fish of 69,600 transformers. The next chapter of this story will be written this fall when we see how many of these microscopic transformers have survived the summer.



Six mussel culture cages were placed in one of the in-pond raceways at NNFH to attempt to culutre endangered winged mapleleaf at the hatchery.