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FLEUR DE LIS FISHERIES

US Fish and Wildlife Service

Veronica dreamed about being an archer like her storybook characters, see her story inside and how Natchitoches NFH helped make that dream come true.

Natchitoches NFH Staff Helps 4-H Archer Overcome a Missing Hand to Shoot a Bow

By: Tony Brady

In September, Natchitoches National Fish Hatchery began hosting the Natchitoches Parish 4-H archery program at the hatchery. A total of 27 kids have participated at least once in the five practices that have been held. Most of these kids had never shot a bow and arrow before coming to the hatchery for 4-H practice. Of these 27 kids, one young lady, Veronica, was more determined than the rest to shoot her bow and arrow. Veronica was born with a congenital amputation of her left hand, leaving her with just a wrist joint at the end of her arm. Veronica, an avid reader, wanted to be like the heroes and heroines who were archers in some of her favorite books. Veronica came to 4-H practice with a youth recurve bow that she would hold in her right hand and draw the bowstring back with her left wrist. This method worked but was inaccurate because she could never get a consistent release of the string. After one practice where I had the archers shoot a mock 4-H competition to give them the feel of the target sizes and distances they would shoot, Veronica left discouraged because she had not done very well. Not wanting Veronica to quit archery, I approached her mother and

Veronica is shooting this bow using a wrist brace to hold the bow with her left arm.

A close up look at the wrist brace that allows Veronica to hold the bow.

asked if they would be open for me to try to develop a way for Veronica to hold the bow with her left arm and use her right hand to draw the string. Veronica and her mom agreed, and thus I began to research different aids that disabled archers were using for hunting and even in the Paralympics. Archery aids varied from bite tabs where the archer would use their mouth to hold the string while their good arm pushed to bow to draw it, to attachments that would hold the bow string while the archer aimed the bow. To assist Veronica, I got a wrist brace with metal splints and attached it to the handle of the bow. She was then able to place her left arm in the brace to hold the bow and then use her right hand to draw the bowstring back. The brace idea worked wonderfully, and after trying the brace with several different types of bows, Veronica discovered that the modern compound bow and a mechanical release was a suitable alternative to the recurve and long bows of her heroes and heroines. While practicing with the brace on my daughter's bow (since they have the same draw length), Veronica has been able to consistently hit the target at the three distances (10, 15 and 20 meters) used in the 4-H competition. When she gets her own compound bow, we will permanently attach the brace to the bow allowing Veronica to hold the bow steadier on her arm, thus improving her archery skills. I will say that over the past couple of practices with Veronica using the brace, there is nothing better than to see the smile that has replaced the disappointed look that she left the hatchery with just two weeks ago.

Bountiful Bream Harvest at Natchitoches NFH, October 2012

By: Jan Dean

Natchitoches National Fish Hatchery rears sunfish primarily for stocking public water bodies to support the fishing public of Louisiana through a Memorandum of Understanding with the Louisiana Department of Wildlife and Fisheries (LDWF). Last fall, we were unable to meet that request because of a severe drought that summer which resulted in the sunfish being moved from Natchitoches to a State fish hatchery. Thus, there were no broodstock to spawn in the ponds for the normal fall harvest. We stocked bluegill and redear sunfish this spring based upon the LDWF requests, and we began harvesting these fish and others in October when the water temperatures cooled some from the heat of the summer.

The initial plan was to harvest five redear sunfish ponds one week and then begin harvest of the seven bluegill ponds the next. The redear sunfish from the first pond of three ready to be harvested on the first day were so plentiful that they alone almost filled the fish holding house tanks. We did harvest the other two ponds, but over a hundred thousand redear were weighed directly into truck fish distribution tanks for stocking that day into a reservoir. The fish from those three ponds met the entire stocking request for redear sunfish on this year's list. The 272,975 redear went into two public reservoirs and one park fishing lake of Louisiana and into two small fishing lakes operated by the U. S. Forest Service. The other two hatchery redear ponds ready for harvest and actually drained into the harvest kettle were refilled for potential harvest later this year to meet part of the request for next year. Adult redear were stocked at Natchitoches for future broodstock, and over 35,000 fingerlings were sent to the Booker-Fowler and Beechwood LDWF fish hatcheries.

Redear sunfish being harvested at Natchitoches NFH.

Louisiana Department of Wildlife and Fisheries Truck being loaded with Bluegill.

Bluegill were harvested later that same week because the redear sunfish request was filled so quickly. The 256,219 bluegill were stocked into one Louisiana public reservoir and into the same two U. S. Forest Service fishing lakes. Future broodstock were stocked at Natchitoches and at the Booker-Fowler Fish Hatchery. Thus, besides the bluegill and redear sunfish stocked at Natchitoches for future broodstock and those sent to other hatcheries, there were 529,194 stocked to enhance public fishing in Louisiana reservoirs and small fishing lakes. More will be stocked later this year if the receiving reservoir is sufficiently filled to accept them.

Inventorying and Monitoring Mussel Survey Set for Pond Creek National Wildlife Refuge

By: Tony Brady

The US Fish and Wildlife Service's National Wildlife Refuges are currently in the process of inventorying all the different species occurring on their lands or are conducting ongoing monitoring of species that live there. At Pond Creek National Wildlife Refuge, Refuge Manager Paul Gideon wants to know what mussel species exist in the Little and Cossatot Rivers. In order to answer that question, Gideon contacted Tim Fotinos, the Inventorying and Monitoring Biologist stationed at Red River National Wildlife Refuge to initiate inventorying of the refuge mussels. Fotinos contacted Natchitoches National Fish Hatchery's mussel biologist Tony Brady about conducting the mussel survey for the Pond Creek NWR. Brady agreed to conduct the mussel survey with the assistance of fellow Region 4 dive team member Chris Davidson with the Arkansas Ecological Services Office. The Little River is home to the Rabbitsfoot mussel which is proposed for listing under the Endangered Species Act. In addition to the Rabbitsfoot mussel, the Little River has one of the last known populations of the endangered Ouachita rock pocketbook mussel. On 30 October, Brady and Fotinos visited Pond Creek NWR so they could determine what the survey would entail. Gideon gave a tour of the Little and Cossatot Rivers where Brady was able to develop ideas about how to do the survey. Brady will be working with Davidson to finalize the surveying protocol; the survey will begin most likely during the summer of 2013 when schedules and weather permit.

Ouachita rock pocketbook

Paul Gideon perpares to take Brady and Fotinos on a tour of the Little River.

A Rabbitsfoot mussel shell found along the edge of the LIttle River.

The One That Got Away

By: Jan Dean

The original idea was to use another title for this article, and a few came to mind involving terms like alligar and such, but this seemed to be a better assessment of the situation. Fisheries biologist Lee Holt of the Arkansas Game and Fish Commission is the chairman of the Southern Division American Fisheries Society Alligator Gar Technical Committee. Lee invited me up to Forrest City, Arkansas to do some sampling for gar and other fish in a small lake near the L'Anguille River in eastern Arkansas. Lee's old electrofishing pulsator had been replaced a few months ago by a new unit having the capability of independent controls for voltage, frequency and duty cycle (the percent of time the current is on when the unit is being operated). This Infinity pulsator or control box is made by Midwest Lake Electrofishing Systems of Polo, Missouri. Lee and I have been trying to get together for some time to evaluate his electrofishing boat which has double anode booms but with droppers hanging in-line beneath each boom instead of a more typical "Wisconsin ring" or spider array of anode droppers. Learning more about the resistance and power distribution for that boat would be instructive to Lee and others using such an arrangement. We also wanted to try various electrical waveforms for attracting and capturing gar, Asian carp and other species in the Hurd Lake which receives periodic backwater from the L'Anguille River. We made measurements of anode length, diameter, immersion depth and distance from the waterline of the boat bow, and we also performed a safety check of proper grounding and electrical continuity to prevent shocks to those in the boat. Then we launched the boat and made measurements of voltage, current, water conductivity and temperature to calculate resistance and power distribution for the boat and its electrodes. It is customary to then use a simple calculation to report resistances in terms of water having a conductivity of 100 µS/cm. The total resistance was 24.3 ohms, and the resistance of the boat hull was 10.9 ohms. That resulted in a percent power allocation to the anodes of 55%. The latter is pretty good, but we thought that we could increase that by shortening the long anode droppers. Not wanting to make any

Biologist Lee Holt with a paddlefish captured by electrofishing from a small Arkansas lake.

Spotted gar and Asian silver carp from a small lake off the L'Anguille River near Forrest City, AR.

permanent, irrevocable changes on the spot, we raised the booms to decrease the dropper immersion depth. That increased the power allocation to the anodes to 66%. With all of that information in mind, we made a few adjustments and began shocking with a few waveforms and power settings.

We shocked silver carp – an invader from Asia -- largemouth bass, white crappie, a few sunfish, freshwater drum, buffalo fish, shad and juvenile spotted gar. Perhaps the most unusual fish shocked, at least for me, was paddlefish. I have seen plenty captured from rivers via gill nets, but that was my first time to capture them by electrofishing. Then we went to the "honey hole" part of the lake to pursue what probably is an alligator gar. Lee was operating the boat, so I was on the front dipping fish and wasn't sure what was going on until too late. We did shock a pretty large gar right at the bow of the boat and which I missed. Although it was a good-sized dip net, the fish was estimated then – and fish usually grow with time and memory – to be about 2½ times as long as the dip net was deep, so I don't think that I could have caught it anyway. Still, it was frustrating to miss what likely was a fair-sized alligator gar. As some consolation, Lee said that he and others have also missed that fish. It remains "The One That Got Away."

Dive Teams from Region 4 and 6 Meet for Annual Dive Safety Symposium

By: Tony Brady

Dive Team member from both regions 4 and 6 met during the week of 15 October in Key West, Florida to complete annual requirements to maintain authorized diver status for the US Fish and Wildlife Service. The requirements include a swimming test and demonstration of safe dive skills. A large part of the annual dive safety symposium is the work project that is planned to help take advantage of having a large number of USFWS divers together in one location. This year's work project was the removal of the invasive Lionfish. Lionfish were first introduced into the Atlantic Ocean along the South-

Regional Dive Officer Glenn Cullingford prepares to enter the water in seach of Lionfish.

east coast of the United States in the 1980's. Today, Lionfish are known to live along the coast from North Carolina to South America including the Gulf

One of the Lionfish that was harvested during the dives.

of Mexico. These fish reach sexual maturity in less than a year and spawn throughout the year with spawning activity occurring every 4 days. A single female Lionfish can produce over two million eggs a year. Lionfish can reach densities of over 200 adults per acre. Studies have shown that these generalist carnivores can consume over 70 species of fish and many invertebrates. Lionfish, in dense population, have proven to consume more than 460,000 prey fish per acre per year. In order to combat the growing numbers of Lionfish, groups like REEF, the National Oceanic and Atmospheric Administration, the US Fish and Wildlife Service and State conservation agencies have been working on ways to best control the population numbers of Lionfish. While Lionfish are not susceptible to traditional hook and line, traps or nets, their bold nature does make them vulnerable to spear fishermen. Organized events called Lionfish rodeos or roundups are being held in many places to help remove large numbers of Lionfish. The impact of these Lionfish rodeos was evident in Key West because the dive team members were only able to locate about 15 fish in a day and a half of diving. While 20 fish doesn't sound like a large impact, assuming roughly a 1:1 sex ratio then removing 7 females resulted in 14 million eggs not being produced over the next year. Now that is starting to make an impact.