

FLEUR DE LIS FISHERIES

US Fish and Wildlife Service



Teaching archery is a great way to connect kids to nature.

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Mussel Survey Conducted on the Amite River for Restoration of Popular Boat Launch

By: Tony Brady

On the Banks of the Amite River in Louisiana just off Louisiana highway 42 sits Fred's, a popular restaurant for boaters and land lovers alike. Next to Fred's is an old boat launch that is in need of some major restoration. A drop-off at the end of the poured concrete has claimed its share of boat trailer axles and lower units over the years. In response to the growing number of requests, the Louisiana Department of Transportation and Development (DOTD) has plans to repair the boat launch to make it safe for boaters and their trailer axles. The Amite River is one of the last known rivers where it is possible to find the endangered freshwater mussel known as the Inflated Heelsplitter. Because there was a possibility of the Inflated Heelsplitter being near the boat ramp, a mussel survey was needed before the project to repair the boat launch could proceed. Natchitoches National Fish Hatchery (NNFH) was contacted by the Louisiana Ecological Services Field Office (LESFO) to conduct the initial survey and to assess if a larger survey was needed. On 1 July, staff from the DOTD, LESFO, and NNFH met at the boat launch, and after learning more about the proposed project, the NNFH biologist snorkeled the project area and the area just downstream looking for any mussels that may be impacted due to the project. Eleven live mussels comprising two species were collected during this survey. Of the 11 mussels collected, 10 were a species known



Brady holds up one of the mussels found during the survey.

as the Bankclimber and the 11th mussel was a Three Horn Wartyback. In addition to the 11 live mussels collected, one empty Yellow Sandshell was collected. None of the mussels collected were federally listed species. All live mussels were returned to the Amite River upstream of the boat launch. Based on the finding of this survey, no additional survey work was required before the repairs to the boat launch could proceed.



Brady discusses the area to be surveyed with DOTD employees.



The total collection of mussels and shell found during this survey.

Upper Colorado River Electrofishing Workshop

By: Jan Dean

Natchitoches National Fish Hatchery Assistant Manager Jan Dean served as co-instructor with Dr. Jim Reynolds for an electrofishing workshop in Grand Junction, Colorado August 18-21. The main objective was to help evaluate the Standard Operating Procedure (SOP) being used by the Upper Colorado River Endangered Fish Recovery Program. Primary species of interest are the Colorado Pikeminnow, Humpback Chub, Razorback Sucker and Bonytail, all unique to the Colorado River and its tributaries. Participants in the sampling effort on the Colorado River included boats, rafts and personnel from the Bureau of Reclamation, Fish and Wildlife Service, Utah Department of Wildlife Resources, Colorado Parks and Wildlife, and Colorado State University.

The overall sampling program in the Upper Colorado River has multiple purposes. One purpose is to capture, study and protect the endangered species mentioned above, and another is to remove undesirable fish not native to the area. Thus, electrofishing power levels should be only that needed to collect the target species and not so high so as

to cause fish injury or stress. Having multiple purposes complicates the determination of the appropriate threshold power level for effective fish sampling.

The SOP has been in the works for some time. Pat Martinez, now retired from the Colorado Division of Wildlife and the Fish and Wildlife Service, has been instrumental in developing the SOP for the Upper Colorado River sampling program. In fact, he started on the fleet standardization about eight years ago. Biologists have been using the SOP, which

includes electrical current and power goals for capturing fish, for about the past two years. Pat worked with renowned electrofishing expert Larry Kolz to both standardize the fleet and to develop the SOP. The rafts, boats and electrofishers have been standardized to a degree beyond any other fleet I have seen.

After establishment of the SOP, the desire of the Fish and Wildlife Service, the Bureau of Reclamation and others was to have an electrofishing workshop for the fish biologists involved in the Upper Colorado River Endangered Fish Recovery Program and an assessment of the SOP. Dr. Jim Reynolds, himself a renowned electrofishing expert, was asked to teach this workshop and to evaluate the SOP. The initial plan was for Jim Reynolds and Pat Martinez to do this in March 2013. Weather conditions were not appropriate at that time, so it was postponed; in the interim, Pat retired. Jim then contacted me a few months ago to help him with the workshop. The fact that both my salary and my travel were to be paid by others helped enable my participation, so I was all in.



Launching rafts in the Colorado River for the workshop field trip.

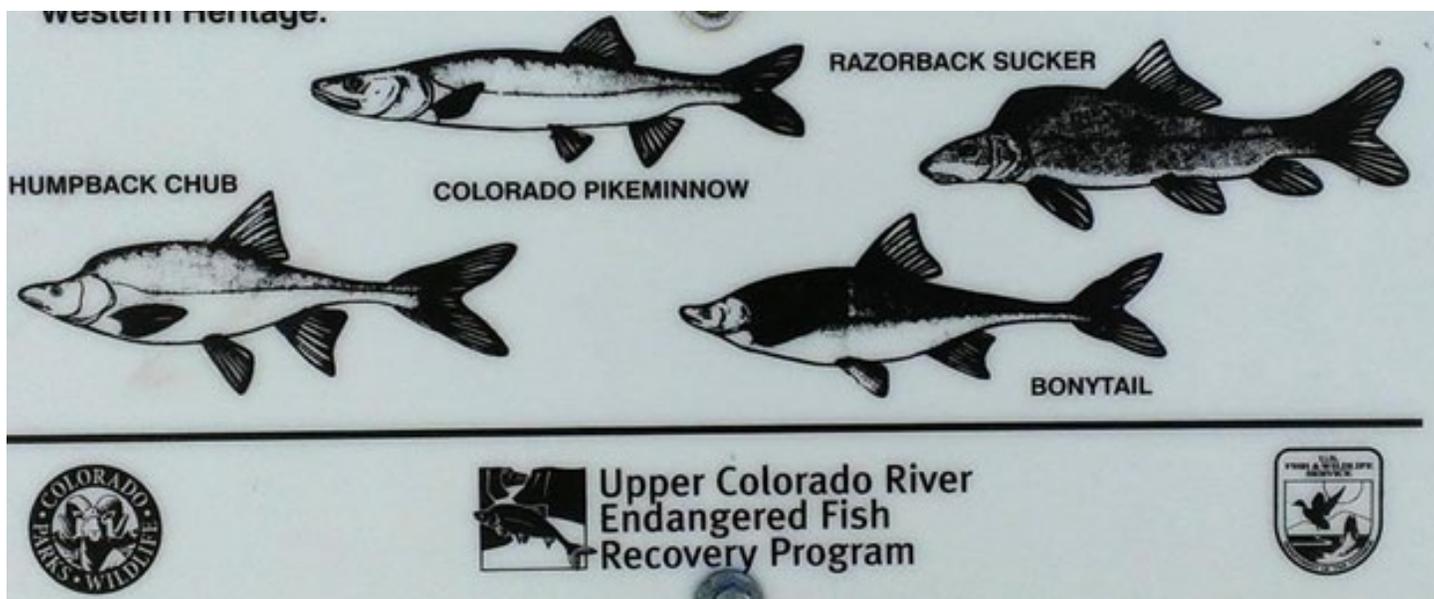
Jim and I met weekly on the phone and exchanged written plans and the agenda in preparation for the workshop. The final plan was for one main day of instruction in a classroom setting then two field trips and a last day of summary. One field trip was at Highline Lake a few miles west of Grand Junction. There, we made electrical measurements on the four rafts and five boats brought to the workshop by participants so that we could determine resistance, power distribution to the anode and intensity of the electrical field at selected distances from the positive electrodes (anodes). Every raft or boat crew was assigned a part of the lake in which to sample fish at various power settings to determine threshold power, the minimum required for good fishing and for rapid fish recovery. Each crew also measured and recorded the water conductivity and temperature. Later, the electrical field intensity measures were used to estimate threshold power settings, and these were compared to threshold power settings based on reported fishing success by each crew during the Highline Lake field trip. The night after the first field trip, Jim and I crunched numbers until after midnight in preparation for a brief report to the class the following morning before heading out again, this time to the Colorado River. Jim and I had worked independently on different parts of the puzzle (data), so neither knew the full results from the first field trip until we shared each part during that morning presentation. To our delight, the independent methods for estimating threshold power settings



Boat electrofishing with spherical anodes in the Colorado River during the workshop field trip.

agreed remarkably well, especially for the electric current used by each boat. Also, the results for one raft agreed closely with what Pat Martinez and Larry Kolz had found for that same raft. All of that gave us confidence in the methods used and the results obtained during that one field trip.

Then it was off to the nearby Upper Colorado River for more extensive evaluation of thresholds for successful fishing in the real habitat of interest. Each raft and boat was assigned three, half-mile segments of the river for quickly determining threshold settings and then to capture fish so that the catch per unit of time could be calculated for each species for each river segment. Jim planned this study carefully because the river is a different world than the lake, and rafts could only go downstream whereas boats could go upstream



Four target species for the Upper Colorado River Endangered Fish Recovery Program.

or down. Again, each crew measured water conductivity and temperature in each river segment for use in the final analysis. Water conductivity is a critical factor in electrofishing and is used to determine initial power settings in the SOP which was being evaluated in this study.

With all of the data from 27 sampling segments, it was an even later night crunching numbers before the final morning of the workshop. Some results are still being analyzed, and the report is being prepared, so final results cannot be presented here. However, we learned several important pieces of the puzzle to help us answer the objectives of the workshop. We are pretty confident at this point in saying that the power guidelines in the existing SOP are close to, and slightly lower than, what we found in this quick assessment under actual river conditions with four rafts, five boats and nine crews. We also employed new equipment and techniques to estimate threshold power levels and found the results to be good predictors of power levels for fishing success via more conventional methods. We learned more about electrical field

intensity at distances from the spherical anodes. And very importantly, it was a great opportunity for biologists from multiple organizations to come together to learn from each other how better to sample fish in the Upper Colorado River. It was a unique experience to test a standardized raft/boat fleet with a standardized sampling protocol, all under actual river sampling conditions with the experts in that environment. It was a true learning experience for all and may result in a more accurate and simple SOP for fish collection in the Upper Colorado River. I am grateful for the opportunity to be a part of this collaborative effort. All electrofishing workshops are educational; this one was special in its focus and in its potential for good.



Jim Reynolds planning Colorado River field trip for the workshop.

Archery Taught at Local Ducks Unlimited Greenwing's Event

By: Tony Brady

The Ducks Unlimited Greenwing program is an opportunity for young duck hunters to be part of one of the nation's largest waterfowl conservation groups. On August 16th, the Natchitoches Chapter of Ducks Unlimited held its annual Greenwing event at the Natchitoches Shooting Range. Last year at this event, Natchitoches National Fish Hatchery participated in the event by providing a presentation on freshwater mussels. This year, however, the hatchery was asked to host the archery portion of the event. The hatchery staff was happy to host the archery session, and with help from two 4-H archers, the Greenwings learned about archery shooting techniques and safety. Greenwings under the age of 9 were giving a shooting demonstration by Natchitoches Parish 4-H archery member Jordan Brady. Brady reviewed the 11 steps to archery success as she proceeded to hit bullseye after bullseye. Greenwings, 9 years old and up, were allowed to get in some target practice after going over the safety rules and proper technique for shooting a bow. During this event, 75 kids were not only exposed to archery but to many different conservation programs in Central Louisiana. For more information about Ducks Unlimited Greenwings, check out the

following website <http://www.ducks.org/how-to-help/greenwings/du-greenwing-program>



And her aim is true.

SIDE NOTE: I have often wondered how much of an impact the hatchery makes as we continue to participate in programs such as the Greenwings event or host the hatchery's annual open house. This year as I assisted in the Greenwings event, I had a significant number of kids point at me and tell their parents "That's the guy from the fishing derby," then the parents would come up and tell me how much they and their kids enjoy the activities in which the hatchery is involved. There were even some parents/grandparents that told me how much they enjoyed the mussel presentation from the last Greenwing's event. This positive feedback is a true testament to the outreach program and activities undertaken at Natchitoches National Fish Hatchery.



4-H archer Jordan Brady gives a shooting demonstration.

Biologist Tony Brady Receives Two 4-H Awards in 2014

By: Gwen Fontenot,

Associate 4-H Extension Agent for Natchitoches Parish

Tony Brady, Fishery Biologist with the Natchitoches National Fish Hatchery in Louisiana, has focused his efforts on expanding and enhancing recreational opportunities for Americans; thus connecting numerous people, especially youth, to the outdoors through archery.

Through his work, he has made the Hatchery an integral part of the community, supporting the Kids Fishing Derby and the local high school's fishing team, honoring current and retired members of the military, and most notably, volunteering for the 4-H Youth thus creating the first Natchitoches Parish Archery project club. Through his ingenuity and motivation, the 4-H archery program is off and running with regularly scheduled classes.



Tony working with one of the 4-H archers.

Recently, Tony received the 2014 Louisiana 4-H Salute to Excellence Award. Sponsored by the National 4-H headquarters and the Louisiana 4-H Volunteers Leaders Association, this award recognizes 4-H volunteers who demonstrate exemplary service to 4-H, while promoting service through volunteerism as both an opportunity and a privilege. Tony also received the 2014 State Wildlife and Fisheries/Outdoor Skills

leader. This award is sponsored by the LSU AgCenter 4-H Youth Development Program and the Louisiana 4-H Foundation. One adult is chosen each year as the recipient based on their experiences and accomplishments as an outdoor skills leader; community involvement; and other leadership roles.

As a Natchitoches Parish 4-H Archery Project Club Leader, Tony helps 4-H members gain knowledge and skills in the archery discipline project by teaching members a series of lessons; and enabling them to participate in competitive events. However, most importantly, he is providing youth with the opportunity to learn life skills, self-worth, and conservation efforts.



Tony teaches archery at Black Bayou Lake NWR