

FLEUR DE LIS FISHERIES

US Fish and Wildlife Service



Natchitoches National Fish Hatchery and the Friends in Support of the Hatchery hosted their annual open house and kids's fishing derby to kick off the month of June.

Annual Open House and Kids Fishing Derby is a Huge Success

By: Tony Brady

Natchitoches National Fish Hatchery (NNFH) and the Friends in Support of the Hatchery (FISH) welcomed June by hosting our annual Open House and Kid's Fishing Derby on June 1st. The Open House is always held on the first Saturday in June to coincide with the National Fishing and Boating Week. The Hatchery and FISH spent months planning and organizing the hatchery's largest outreach event. This year's event proved to be one of the highest attended Open Houses on record. Through the course of the day, 400 people were connected with the outdoors by attending the Open House. Included in those were 165 kids who participated in the kid's fishing derby. With over 300 pounds of Channel catfish caught from the two stocked hatchery ponds, these kids created lifelong memories. The success of



Everyone had a great day at the open house and kid's fishing derby.



This young man is proud of his catch.

such an event is always credited to the volunteers who help, and this Open House was no different. Members of FISH help plan and organize while other groups such as Walter B. Jacobs Park and the Alexandria Zoo provided additional entertainment by displaying different Birds of Prey or showing off animals housed at the zoo. Lunch was provided for everyone, thanks to volunteers from the Cane River Waterway Commission and the Coast Guard Auxiliary. The Provencal BASS Club did a great job as always hosting the Pitch, Flip, and Cast contest. A long list of small businesses from Natchitoches helped support the Open House, and without them there would not have been the high level of enjoyment that folks have come to expect from our Open House.

Tony Brady Receives Legends Award

By: Jan Dean

My supervisor, Allan Brown, sent in late March a notice about nominations for the Legends and Beacon Awards at the national level. The American Recreation Coalition (ARC) established its Legends award to recognize outstanding Federal employees for their contributions towards enhancing our Nation's outdoor recreation programs. Natchitoches National Fish Hatchery biologist Tony Brady has been devoting a lot of his personal time to helping foster the development of archery instruction in multiple ways, so that seemed a good match for the criteria set forth by the ARC for their Legends Award. Long story short, we submitted Tony for this award and he won for the Fish and Wildlife Service! He was flown to Washington, D.C. to receive the award during Great Outdoors Week, June 1-9. While in D.C., Tony made a presentation to personnel in the Fish and Wildlife Service Washington Office. The official write-up for the award is below. Congratulations, Tony.



Tony Brady (center) pictured here with Rowan Gould (right) who is the Deputy Director of Operations of the U.S. Fish and Wildlife Service and Mike Weimer (left) , Division Chief of Fisheries & Aquatic Resource Conservation.

“Tony Brady is a Biologist at Natchitoches National Fish Hatchery in Natchitoches, Louisiana. There he has worked diligently to make 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 Development program, where he has created a youth archery program. Through his extraordinary efforts, Tony has connected numerous people, especially youth, to the outdoors through archery, recognizing that children who may not feel comfortable in their abilities to play some other sports can find success and self-confidence, while also learning about conservation, through the sport of archery. Tony attended the “Archery as an Outreach Tool” class offered at the National Conservation Training Center in June 2012, began serving as the Natchitoches Parish 4-H archery coach, built an archery range on the Hatchery grounds, obtained \$3,000 worth of donated equipment and, by September, had 26 youth participants in two practices. Children from the program have competed successfully at the regional and state level. He also helped start the archery program at Northwestern State University (NSU) Middle Lab School and assists the NSU archery team. In addition to teaching archery to youth, Tony has trained and certified several Louisiana school teachers to teach archery in their schools. He has also assisted the Louisiana Department of Wildlife and Fisheries with their archery certification class. Tony is currently pursuing funds through Friends In Support of the Hatchery, the nonprofit Friends Group for Natchitoches NFH, to purchase additional equipment. The archery program is off and running solely because of Tony's motivation, ingenuity and tenacity — and many children have benefited from his tireless efforts.”

“Necessity is...”

By: Jan Dean

Yes, you know the full saying, “Necessity is the Mother of Invention.” As reported last month and in previous editions of the hatchery newsletter, we cooperated this spring with the Louisiana Department of Wildlife and Fisheries in a study aimed at producing three-inch largemouth bass fingerlings for stocking in public waters for the angling public to eventually enjoy catching. That study involved sixteen of our ponds, and those results were reported on last month. We also had another fourteen ponds of largemouth bass that were harvested in early June. Actually, one of those non-study ponds was harvested May 15 so that hatchery personnel from both Natchitoches National Fish Hatchery and from Booker-Fowler (State) Fish Hatchery could develop mutually-agreed protocols for the study. Specifically, we used those fish to establish the methodology for obtaining samples, measuring fish and obtaining counts, or the number of fish per pound. Total harvest weight of bass from the fourteen non-study ponds was 494 pounds for 188,678 fingerlings, equaling an average count of 382 fish per pound. Several of this non-study ponds experienced high numbers of crawfish, thus reducing the total harvest of Largemouth bass. The harvest of non-study ponds was delayed because the study ponds had priority; the objective was to harvest the study ponds at approximately 60 days after stocking.

Now to the “Necessity” part of the article. I anticipated that our small crew might be busy with other tasks when it came time to monitor bass size for harvest. This sampling is normally done by two persons with a minnow seine; we generally either seine along the pond shore or at the concrete harvest kettle. How could one do this alone if no one was available to help when this needed to be done? Obviously, this could not be accomplished with a typical seine. One would literally have to be in two places at once. Multi-tasking is one thing -- this was just not going to work. So, another methodology and tool had to be designed, built and used. A frame was made of PVC pipe (see the photo) and a “basket” for capturing and holding fish was constructed of ¼ inch hardware cloth and

attached to the frame. Actually, the first basket was made of window screen, because that was available at the time, and some fish were caught when it was tried, but the mesh size was thought too small such that it created too much drag when pulled through the



The one man “Bass Snatcher” is ready for use at one of the bass ponds.

water. The fish had too much time to escape before the net could be pulled up for investigation of its contents. When the hardware cloth was attached with rivets, it was time for a trial run. Much to my disappointment, very few fish were caught in the first study ponds tried. As a last resort that day, it was used on several non-study ponds, and the results were much more promising. Bass were caught and measured in some nine ponds, without help from anyone else. The next day and a week later, seining resulted in very low catches in the study ponds and better catches in the non-study ponds. Eventual harvest results largely agreed with catches from the “bass snatcher” and from seining. By far, more bass were harvested from the non-study ponds. The study ponds were stocked at lower, some at much lower, rates than were the non-study ponds. The latter were stocked with fry at the typical rates of 75,000 per acre, or about 60,000 per pond. The bottom line is that the single person “bass snatcher” device worked better than first thought. It is not perfect, for sure, but it enables one person to assess pond fish size. One advantage is that it allows an estimate of fish size without a ruler. The hardware

cloth has four squares to the inch, so a fish covering six squares is about 1½ inches long, for example. The capture technique is to extend the frame out away from the kettle as far as possible before lowering it into the water, then allowing it to sink or forcing it down and pulling it into the kettle quickly before raising it and capturing the fish in the basket. It is a little work, but it allows one-person sampling. With only one person around at times, something like this was “necessary.”



Largemouth bass fingerlings collected using the Bass Snatcher.

Refuges and Fisheries Join Forces to Host Inaugural Hunting and Fishing Camp for Kids

By: Tony Brady and Nova Clarke

Black Bayou Lake National Wildlife Refuge (BBLNWR) held their inaugural Hunting and Fishing camp on June 24th and 25th from 8:30 am till noon. The goal of the camp was to introduce children to ethical hunting and fishing practices expected on the refuge as well as to other recreational opportunities available on the refuge. To gauge interest in the

camp, the camp was open to 25 children, ages 8-16. The response, however, left BBLNWR with a waiting list of kids wanting to attend the camp. Refuge Manager Brett Hortman coordinated the camp as well as taught some of the sections. Day one was the Fishing portion of the camp, and the kids got to learn things like knot-tying, fish identification



The archery class being taught by Natchitoches NFH staff and volunteers at Black Bayou Lake NWR Hunting and Fishing Camp.



North Louisiana Refuge Complex Project Leader Joe Saenz and Zone Office Mark McGuinn teaching knot-tying.

and different types of baits. To cap off the first day, the kids got to fish in the back pond with Dana Norsworthy from the Louisiana Department of Wildlife and Fisheries. On day two of the camp, the kids learned about tree stand safety, how to follow a blood-trail, waterfowl identification and hunting from Gypsy Hanks, complex biologist, and her husband, John, who is a Louisiana Department of Wildlife and Fisheries biologist. By now, I know you must be wondering where Fisheries comes into play in this camp since there was no mention of them in the fishing portion of the camp. Since deer hunting on the refuge is restricted to archery hunting only, Hortman wanted the kids to get a feel for shooting a bow and arrow, so he contacted Natchitoches National Fish Hatchery and asked if their archery instructor would be willing to assist by setting

up an archery range and introducing the sport of archery to the campers. During the course of 45 minutes, the kids were taught basic archery safety and 11 simple steps to help make them a successful archer. After shooting a few rounds of arrows, the kids were given a shooting demonstration by refuge employee Mike Simmons. The response Hortman received afterwards was that the camp was a huge success with archery being one of the favorite activities according to the campers.



Archery instructor Tony Brady oversees a group of young ladies taking aim with their bows.

Cajun Gar back to LSU

By: Jan Dean

We received approximately 4000 alligator gar fry from Dr. Chris Green of Louisiana State University on May 15, 2013. The parents were from Rockefeller Refuge down in Cameron and Vermillion parishes of Southwest Louisiana. These coastal fish were spawned at LSU, and the eggs hatched May 7, so the fry we received were eight days old. Dr. Green was conducting some studies at LSU including the effect of rearing the gar in lighted versus dark conditions and an examination of salinity tolerance in larval gar. He transported some gar to Dr. Steve Lochman at the University of Arkansas at Pine Bluff to compare bioenergetics of inland versus coastal alligator gar.

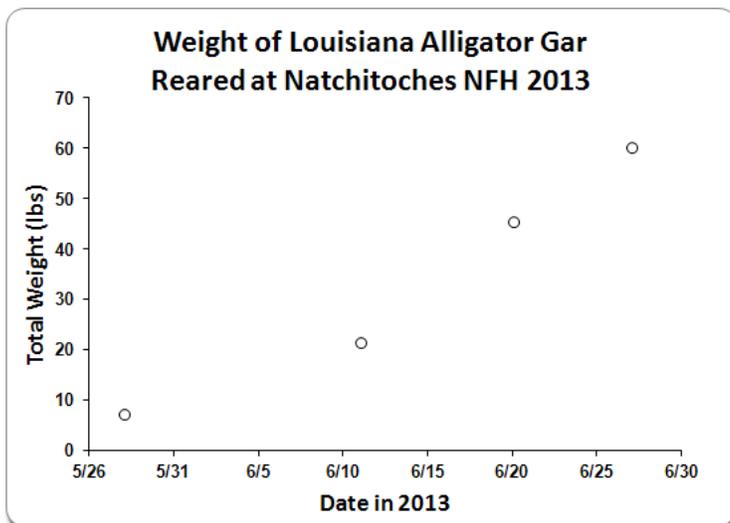
This year, we reared these Louisiana gar as well as what we called Mississippi alligator gar obtained from Ricky Campbell of Pvt. John Allen National Fish Hatchery in Tupelo, MS. Those parents were captured from the St. Catherine Creek National Wildlife Refuge just off the Mississippi side of the Mississippi River. The strains are considered different, so the gar were reared in separate hatchery buildings and on separate water recirculation tank systems. Biologist Tony Brady euphemistically referred to the Louisiana gar as Cajun gar and to the Mississippi gar as Redneck gar. Enough said about that. I've lived in both states. The Cajun gar were reared in a new tank system set up recently in our hatchery fish holding house. Attached is a graph of the increase in weight during



Alligator Gar cultured at Natchitoches NFH.

part of their stay here at Natchitoches. The increase in total weight averaged 7.3 percent per day from May 28 to June 27. Dr. Green and a graduate student picked up the gar on June 27 to take them back to LSU. The 2053 alligator gar weighed 60.3 lbs. Estimating that we began with 4000 fry, the return was about 51 percent from fry stocked May 15 to final harvest on June 27.

Dr. Green will finish rearing the Cajun gar at LSU and implant each one with a Passive Integrated Transponder (PIT) tag for future identification. The gar will be stocked at Rockefeller Refuge and used in an ongoing Mark-Recapture study there. The Cajun gar reared last year at Natchitoches were used for the same purpose. We hope that they contribute to the alligator gar population at Rockefeller Refuge and that they provide useful information on abundance, growth and movement.



The Butterfly Net Boat

By: Jan Dean

The word butterfly in French is papillon, but that is in modern, Parisian-type French. The word in Cajun French is paupier. Let me back up a bit to explain how a butterfly relates to fish.

Back in 2011, Columbia Fish and Wildlife Conservation Office Project Leader Dr. Tracy Hill asked me to travel to Columbia to conduct research on electrical waveforms and power settings for the capture of Asian Carp, specifically Silver and Bighead Carp. We conducted a brief tank study with both species and found some parameters promising for attraction and capture of Asian Carp. We then mapped the electrical field of their electrofishing boat and subsequently applied information from the tank study to a small river which contained Silver Carp. The information gained resulted in improved catches of silver carp using the Columbia FWCO electrofishing boat. That was reported in the September 2011 edition of this newsletter.

Because the Columbia FWCO folks work in rivers, and because Asian Carp are such strong swimmers and jumpers, it occurred to me back in 2011 that what might improve catches of these “flying” fish would be a combination of electrofishing booms and nets on the side of the boat, aka butterfly nets. Tracy and Assistant Project Leader Wyatt Doyle were way ahead of me on that one. They were already working with a specialty net manufacturer, Greg Faulkner of Innovative Net Systems, to produce such a net. Greg is from South Louisiana, so he called it the paupier net. I found out just this year that Greg had wanted early on to electrify the paupier net, so we had the same idea though we approached it from different origins – he from the net, and me from the electricity. Wyatt and Tracy had both parts in mind all along.

This year, the two components were put together, and the Columbia FWCO began some initial testing. In some cases, they caught lots of Asian Carp, but the



Tracy Hill and Jan Dean discuss aspects of the paupier net, boat and electrofisher.

results varied due to certain conditions such as water conductivity, the ability of water to conduct an electrical current. Conductivity depends upon the salts dissolved in the water; that varies between water bodies and even in high water versus low water conditions on the same river. Wyatt and Tracy asked me back up to Columbia to quantify electrical parameters and to help devise an operational protocol for the boat. We used the excellent voltage, current and power metering of the Midwest Lake Electrofishing Systems Infinity electrofishing box to measure resistance of the system in various electrode configurations and in two rivers differing in water conductivity. We combined that with information on the power output of the electrofisher and with fish catches to produce some operational guidelines for use in waters of different conductivities. We also built three different voltage gradient probes in four days to measure the electrical field around the electrodes. There were several other modifications in the four days I was there with them on the rivers. We only got the opportunity to work together one day, but biologist Jeff Finley was instrumental in designing and building the capacity of the boat to do the job. The Columbia FWCO folks move quickly, very quickly. I won't give details here, but the catches of Asian Carp were impressive at times. I've always enjoyed titles or names with multiple meanings, and this boat and system deserved something special. I think Wyatt settled on the name, the Magna Carpa. As the Magna Carta was a special

document in England which was used in the formation of our own Constitution, so too will the Magna Carpa be used as a model for others to come. The electrical field in front of the net acts almost like a magnet to draw the fish, and magna means "high" as in magna cum laude, "with high praise." The Butterfly Net Boat will receive high praise in the days ahead as it is modified and improved. It has started on a promising path.



The results of a seven minute run for the Magna Carpa. The starboard side was electrified for this run, whereas the port side was not. The starboard catch was almost totally Asian carp except for a few gar. The port side contained few carp but at least four nice paddlefish which were released unharmed just after this quick photo. In front center is Columbia FWCO Assistant Project Leader Wyatt Doyle flanked by technicians Adam McDaniel and Jeremiah Smith. Jan is in the back.