



# U.S. FISH AND WILDLIFE SERVICE COLUMBIA FISHERY RESOURCES OFFICE ACCOMPLISHMENT REPORT

*...Dedicated to Conserving Big River Ecosystems in America's Heartland.*

## **Aquatic Species Conservation and Management** **Twelve and a Half Miles of Gillnet**

The end of March marked the end of winter gillnetting for the Pallid Sturgeon Monitoring Project. Gillnetting started during early December and continued throughout the winter months. Monitoring the lower Missouri River for pallid sturgeon has been a major task for the Columbia FRO and other agencies involved with sampling the upper portions of the river (South Dakota Game and Fish, Nebraska Game and Parks, Missouri Department of Conservation, and Missouri River Basin USFWS offices). Fishery Biologists Andrew Plauk, Corey Lee, Jeff Finley, Geno Adams, Nick Fronahuer, Cliff Wilson, Nick Utrup, Wyatt Doyle and Jennifer Johnson all braved some harsh winter weather to run over twelve and half miles of gill nets since the beginning of December.

Gill nets are used during the colder months when river fishes can easily tolerate any stress they may experience from being entangled. Experimental gill nets with 4 different mesh sizes ranging from 1 ½ inches to 4 inches are the standard gear for this aspect of the pallid sturgeon monitoring project. Dead-set (anchored in one location overnight) trammel nets and larger mesh gill nets are also set as non-standard (wild) gears to target larger sturgeon (typically pallids) and to compare effectiveness of the standard gear while reducing by catch of smaller, non reproductive sturgeon. When the water warms up, other gears, including trawls and drifted nets replace the stationary gears in our year-round pursuit of pallid sturgeon and other Missouri River fishes.

Only nine pallid sturgeon and seven hybrids (a pallid and shovelnose cross) were captured during the winter season among thousands of shovelnose sturgeon. The shovelnose data has yet to be entered, though based on the amount of gloves we've worked to shreds; an estimate of 4,000 shovelnose is likely a conservative figure. We were hoping to capture large wild (non-hatchery origin) pallid sturgeon for transport to Gavins Point National Fish Hatchery. Wild fish are needed for brood stock to increase



genetic diversity of the stocking program. Unfortunately, the nine pallids that were captured here were either not yet reproductively mature or they were they were of hatchery origin and represent a family of genetically identical fish previously stocked. Sampling for broodstock continued through the month of April with several different gears including baited setlines, trawling, drifting trammel nets and large mesh gillnets.

While the endangered pallid sturgeons are obviously not encountered on a daily basis, many other interesting fish were captured. The lower Missouri River is known for its large catfish. Two very large blue catfish (Both over 70 lbs!) were captured within two weeks of each other.



Andy Plauck wrestles with 70 lb Blue Catfish



Albino shovelnose sturgeon

Another fish that raised eyebrows on a cold, nasty day was a 14 inch albino blue catfish, the first our crew has ever seen. A week later, on another blustery day, an albino shovelnose sturgeon was captured, another first for our crew. Albinism is a rare occurrence in riverine fishes and having captured two emphasizes the amount of effort this project is placing on finding the elusive and extremely rare pallid sturgeon. Monitoring fish populations, both endangered and abundant accomplishes the Service's native species conservation and management goal.

Andy T. Plauck

### **Fourteen Lake Sturgeon Captured in One Day on the Osage River**

During the week of March 13, Fishery Biologists Corey Lee, Geno Adams, and Biological Science Technician James Williams captured 14 lake sturgeon while gill netting in the Osage River as additional sampling for the Long-term Pallid Sturgeon Monitoring Project. The largest of the fish was just less than four feet in length. The confluence of the Osage River has been previously recognized by the Columbia FRO as a hot spot for catching lake sturgeon in the lower 250 miles of the Missouri River.



*Rare in Missouri, one net produced ten lake sturgeon.*





Eight of these fourteen fish were confirmed as stocked fish, implanted with a coded-wire tag (CWT), that the Missouri Department of Conservation (MDC) had released in the Missouri River to restore a native population. All of these fish were PIT tagged by the Columbia FRO crew before being released for collaboration in recapture studies with MDC, showing movement and survival. This is part of a successful 20+ year stocking program by MDC because this fish is considered a state endangered species in Missouri.

Work on this project allows the Columbia FRO to assist the Service's Fishery Program to achieve its goal of identifying priority actions to eliminate the threats causing declines of native species.

Corey W. Lee

## Public Use

### Another Day With Wildlife

On April 2, 2006, Fishery Biologist Jennifer Johnson and Biological Science Technician Dustin Martin represented the Fish and Wildlife Service at Columbia Missouri's annual "A Day with Wildlife" celebration. This marks the second year Columbia FRO has



*Jennifer demonstrates the unique attributes of a shovelnose sturgeon to a family during their visit to the Columbia Day With Wildlife.*

participated in the event organized by the Missouri Department of Conservation featuring booths from both government and non-government organizations related to natural resources. Popular activities included archery and marksmanship workshops along with a children's fishing clinic. This free event provides local residents an opportunity to enjoy a fine spring day and explore the numerous outdoor activities Missouri has to offer. The Columbia FRO used the event as a springboard to promote the goals and current activities of the Fisheries Program. Jennifer and Dustin displayed a workboat and trawl equipment used in Missouri River fisheries projects. The Columbia

FRO provided live shovelnose sturgeon, allowing kids to get up close and personal with this odd looking fish. This gave biologists a chance to educate attendees on general life history characteristics of river fish and what role they play in the river ecosystem. Jennifer and Dustin fielded questions from visitors regarding current Station activities such as the Pallid Sturgeon Recovery Project, Habitat Assessment Project and Mitigation efforts along the Missouri River.

Cooperative participation with other natural resource agencies in local events helps promote the Service's commitment to maintaining America's natural resources and supports the "Public Use Goal" of the "Fisheries Program Vision for the Future."

Jennifer L. Johnson



### **“People Eat That?”**

When my scalpel opened up the belly of the sturgeon, the ripe black roe oozed from the incision. A child stated “What is that black stuff?” I replied it was the eggs of the sturgeon. Also known as roe, which is processed into caviar, a delicacy in some cultures, to which the child replied “Gross! People eat that?”

Paxton-Keeley Elementary School sits adjacent to the Columbia FRO office providing the opportunity to partner in education with area children. Last year we invited the first grade classes over to see some of the fish from the Missouri River. The students and teachers of the school expressed their desire to learn more about fish in the second grade so we stepped it up a notch.

This year the students were learning about the physical characteristics of different animals and how they are adapted to living in various surroundings. Jennifer Johnson, Andy Roberts (malacologist with Columbia ES) and I displayed a variety of different body forms of fish and mussels found in the Missouri River. In all over 100 students watched a video of lures used by mussels, handled different mussel shells and learned the body forms and important organs of Asian carp, smallmouth buffalo, paddlefish, river carsucker and shovelnose sturgeon during a dissection exercise.



*Jeff Finley dissects a shovelnose sturgeon for 2<sup>nd</sup> grade students.*

We are grateful for the opportunity to work closely with our neighbors, the students and staff of Paxton-Keeley Elementary. It is a joy to partner with our local schools and shape the minds of tomorrow’s natural resource managers thus fulfilling our goal to facilitate shaping future leaders through promotion and outreach.

*Jeff M. Finley*

### **Celebrating Wetlands**

Project Leader Tracy D. Hill traveled to Washington DC during the week of 6 March to participate in the Celebrating Wetland activities sponsored by the Washington Office Fisheries and Habitat Conservation. The purpose for the week long event was to help educate members of Congress on the important work that the Service’s Fisheries program does to conserve, restore, and enhance the nation’s aquatic resources. Fisheries and Habitat Conservation set a goal to visit over 200 members of Congress to express our appreciation for funding provided in the 2006 budget to restore aquatic habitat. The key message of “Providing Habitat CPR for Healthy Fish and Wildlife, Healthy Habitat, Healthy Economies and Healthy People” was delivered by fisheries staff to over 220 members. In addition to the opportunity to interact with elected officials, the week’s







activities also included the Third Annual Hook and Cook Reception. The reception capped off the week of “Celebrating Wetlands”. This event addressed the Fisheries Vision priority for “Public Use”.

*Tracy D. Hill*

## Leadership in Science and Technology

### There’s More Than One Way to Hook a Fish.

One of the many attributes of the U.S. Fish and Wildlife Service is that we employ people from many different backgrounds and experiences from around the Nation. As we work with other Natural Resource Agencies we learn even more. This can have positive outcomes when we can apply lessons and techniques from one region to another. Collaboration was evident when biologist at Columbia FRO were tasked with developing a better set line design which was durable, easier to deploy, safer to use and allowed us to sample a large area for pallid sturgeon broodstock once water temperatures prevented the use of entanglement gear.



Andy Starostka and myself worked together to come up with a more durable and safer alternative to the “jump boxes” used at the LTRM (Long Term Resource Monitoring) stations and historically used at our office. Andy’s experience working in Alaskan waters and around long line boats provided insight to the use of large ganion clips, a heavy main line and tuna leader for the construction of our stageings (also known as ganions and droppers depending on local vernacular). The technique uses 4” ganion clip with swivel, a durable stiff material called “Tuna Leader” with a working strength of 800 lbs and aluminum crimps to secure the hooks to the leader and leader to the swivel. The gainions are clipped on to 3/16” braided nylon rope at 10 foot intervals.

The weakest link in the process is the hook, a 4/0 stainless steel O’Shaggassey. If tangled in debris or rocks we no longer lose mainline, leaders or swivels as the main line can be secured to the boat and pulled loose. The hook will straighten out long before the line breaks which can be easily bent back into shape or replaced. We now lose less time and gear in the process of searching for the elusive pallid.

Safety was another consideration high on our list. Jump boxes either work flawlessly or are a terrible nightmare—with nothing in between. The hooks are pre-baited, permanently affixed to the main line and organized into a box where they literally pop out of the box as tension is placed on the line when set. If a hook gets tangled the deck hand



must attempt to right the line or risk loosing the whole set in a tangled ball of twine over the boat. When this happens it takes time and patience to untangle which is not always an option in the swift waters of the Missouri. Using our new design, the mainline is fed out of a tub or bucket without any hooks on it. The clips are pre-baited and either arranged in a rack or laid on the deck. As the line is set the 10” intervals are marked where the ganions can be clipped as the line is set. This keeps all hooks out of the boat and resists tangling the line. When retrieved the ganions are unclipped as the line is retrieved and the main line shucked into a tub or bucket without any hooks.

In a recent training exercise with other agencies, critical information was shared to make this process even safer. South Dakota Game, Fish and Parks employees suggested we anchor our boat, attach a float to the down stream end of the main line and clip ganions as the current pulls the line down stream. This prevents the deckhand from trying to “hold the boat” if they fall behind and still keeps hooks out of the boat. Once all the ganions are attached to the floating line, the deck hand with drop an anchor on the upstream end of the set line, weigh anchor on the boat and then proceed to the end of the line to attach a weight or anchor to the end and set the line in place.



*Geno Adams deploys the new set line design in the Missouri River.*

Applying lessons learned and collaborating with other resources agencies allows us to increase safety, apply more effort and work more economically. Communicating this information is one way we can work toward serving stakeholders as leaders in science and technology.

*Jeff M. Finley*

## Partnerships and Accountability

### **Columbia FRO Biologist Participates in the National GIS Workshop**

Columbia FRO biologist Nick Utrup attended the 2006 National GIS Workshop at the National Conservation Training Center on March 7 through 10. This biennial workshop was developed to provide continuing education, training, and professional networking to Service staff and managers to efficiently and cost-effectively apply geographic information systems (GIS) technologies to agency applications. This year’s workshop was a huge success and involved more than 150 Service personnel representing all regions of the Service. Topics covered during this workshop included: Geodatabase development and management, tips and tricks while using ArcGIS tools, beginner and advanced remote sensing, software demonstrations, and various lectures on GIS use in the Service as well as other agencies. In addition to the various lectures and workshops



there were five plenary sessions/keynote speakers, a poster session, and an open GIS steering committee meeting.

A common thread throughout the workshop was the immediate importance and future direction of GIS technologies, especially in the federal government. Former Wyoming Governor Jim Geringer addressed the workshop about the importance of GIS from a social, economic, and environmental perspective in Wyoming as well as the rest of the country. Some of the most important and immediate uses of GIS technologies were addressed by the GIS Emergency Response Team (Kevin Winter, Miranda Miller, Sean Triplet, and Ken Bottle) when they discussed their role in the aftermath of hurricanes Katrina and Rita. Geographic information system technology played a vital role in the rescue operations in the Gulf Coast region and is continuing to play a pivotal role in the ongoing cleanup and restoration efforts.

The Service is currently working with other agencies to (1) develop standards for data sharing (2) reduce data redundancy and improve overall efficiency by working to provide proper documentation (or metadata) of all published GIS data, which is also mandated by Executive Order #12906, and (3) incorporating GIS technology in ongoing initiatives. A GIS is not an end unto itself, but a powerful tool to accomplish other tasks. Both the visual display of information as well as the analysis of data are essential to the management and preservation of our natural resources and the communication necessary for appropriate actions across political and expertise boundaries. Some of the major benefits that flow from these items are:

- Cost reduction by improving mapping and/or database management.
- Effectiveness gains by applying state-of-the-art spatial analytical methods to existing operational activities.
- Improved credibility by providing accurate spatial data to validate management actions and proposals.
- Improved habitat and land based information.
- Improved communication with public and private organizations.

Participation in the National GIS Workshop and building professional relationships relative to the further development and use of GIS technologies is consistent with Objective 5.2 (Leadership in Science and Technology) and Objective 1.1 (Partnerships and Accountability) of the Service's Fisheries Program Vision for the Future and is essential to the future conservation of Americas Fishery Resources.

*Nicholas J. Utrup*

## **Workforce Management**

### **Minorities in Agriculture Natural Resources and Related Sciences 21<sup>st</sup> Annual Conference**

Project Leader Tracy D. Hill traveled to St. Louis, MO on 31 March to participate in the Career Fair being held in conjunction with the MANRRS Conference. The National Society for Minorities in Agriculture, Natural Resources and Related Sciences





(MANRRS) is a unique organization that promotes and fosters the involvement of minorities in agriculture, natural resources and related science fields and is made up of a national office with chapters established at various colleges and universities throughout the United States. The Annual National Career Fair & Training Conference is designed to develop partnerships between minority students in agriculture and natural resources with professionals from academic institutions, government agencies and industry, by promoting professional development, networking, and career placement in a nurturing environment.

Dr. Hill and staff at the Columbia FRO polled field station managers from across the Fish and Wildlife Service to determine the number of employment opportunities that existed with the Service. These opportunities were described and made available at the Career Fair to approximately 1,000 students.

To be as effective as possible when carrying out the mission of the Fish and Wildlife Service, it's imperative that hiring practices mimic society in the workforce and employers must be flexible enough to adjust to changing demographics. Dedication to mission accomplishment and workforce diversity are one in the same objective. Students are important components of the Service's Fishery Program Vision for the Future and is consistent with the "Public Use" and "Workforce Management" priorities.

*Tracy D. Hill*

### **Columbia FRO Staff**

Tracy D. Hill – Project Leader  
Joanne M. Grady – Branch Chief, Fisheries Conservation  
Wyatt J. Doyle – Branch Chief, Corps Operations  
Andrew B. Starostka – Team Leader, ANS/Habitat Assessment  
Jeff M. Finley – Team Leader, Outreach/Mitigation  
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