



U.S. FISH AND WILDLIFE SERVICE COLUMBIA NATIONAL FISH AND WILDLIFE CONSERVATION OFFICE ACCOMPLISHMENT REPORT

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

Aquatic Species Conservation and Management

Regional Director Released Pallid Sturgeon

It is always a privilege to share one's work with others who are truly interested. This was the case when Regional Director Tom Melius visited the Columbia National Fish and Wildlife Conservation Office (NFWCO) recently. Tom quickly returned to his roots helping crews pull trot lines in the rain on the Missouri River. It was a good day for all of our team to get to know Tom and draw encouragement from the fact that he was a fellow "fish squeezer. We (Wyatt Doyle, Tracy Hill and staff) were joined by Tom Bell (Manager of the Big Muddy Refuge), Charlie Scott (Columbia Ecological Services Supervisor) and Rob Jacobson (USGS Research Hydrologist) in explaining the history and current restoration efforts on the Missouri River.

Tom was able to see one of the most modified reaches of the river that includes a new mitigated chute at Big Muddy Refuge's Jameson Island Tract and the historic natural chute created at the Lisbon Bottom Tract during the 1997 flood. Recovering the pallid sturgeon is the primary goal of the extensive mitigation and research efforts currently underway on the Missouri River. Through Tom's visit, we hope to have gained another ally in our campaign to scratch this fish off the Endangered Species List.



Columbia NFWCO's Missouri River biologist Wyatt Doyle and Regional Director (Tom Melius) examine a pallid sturgeon.

Wyatt Doyle





2008 Pallid Sturgeon Population Assessment and Monitoring Reports

Columbia NFWCO's, Andrew Plauck and Patty Herman each completed an annual report for the Pallid Sturgeon Population Assessment and Associated Fish Community Monitoring Project. Columbia NFWCO monitors the lower 250 miles of the Missouri River, which are divided into two segments. Comprehensive reporting of the previous year's collection effort is required annually for each segment. Plauck and Herman spent two weeks of March and the beginning of April compiling and analyzing data, building graphs, writing and editing text for each of the 150+ page reports.

By summarizing the previous year's data and comparing it to past years, biologists can look for trends in fish populations. Standard sampling for this project in 2008 captured 18 pallid sturgeon. Additional sampling effort captured another 85 pallid sturgeon. Of the 103 total pallid sturgeon captures from all projects, 87 were of hatchery origin. Higher numbers and increased catch rates indicate the initial success of the pallid sturgeon stocking program in the Missouri River.

While our program focuses on pallid sturgeon, data are recorded for every species captured. We captured over 15,000 fish in our 2008 standard sampling effort, a notable decrease from 2007. This is likely due to the extreme and extended high water events experienced in 2008 that prevented crews from completing our standard sampling in Segments 13 and 14. Because our gears (nets, trawls and trot lines) specifically target benthic fishes, it is no surprise that shovelnose sturgeon made up the majority of the capture (nearly 6,700 fish). Small bodied fish, such as emerald and red shiners, juvenile catfish and other chubs and minnows were also captured in high numbers.

The information included in these reports enables biologists to interpret results and detect trends from the hundreds of datasheets completed in the previous year. Along with providing valuable information to U. S. Army Corps of Engineers, these reports also give us a chance to look back at the countless days on the water collecting this data. Recovery of the federally endangered pallid sturgeon is a priority for the Columbia NFWCO. Continued collaboration with multiple state and federal agencies along the Missouri River will enhance the recovery effort for pallid sturgeon throughout their range. Standardized sampling and reporting also allows biologists to detect changes between years and throughout the Missouri River drainage. The pallid sturgeon population assessment project meets the native species goal of the Fisheries Program's *Vision for the Future*.

Patty Herman and Andy Plauck



Aquatic Habitat Conservation and Management

Digging to Restore Missouri River Fish Habitat

Many species of concern like pallid sturgeon, blue sucker, plains minnow, western silvery minnow, sicklefin chub and sturgeon chub are hard to find in the Missouri River. These native fishes have declined in abundance partially due to the loss of valuable floodplain and shallow water habitats which has affected spawning, growth, recruitment and survival. Shallow water habitats have been lost as social interests, such as navigation, flood control, irrigation and hydropower took priority for river management over fish and wildlife.



Construction of Tadpole Island chute near Columbia, Missouri to provide shallow water habitat for native Missouri River fishes.

In an attempt to amend the loss of and start recovering native fishes, the U.S. Army Corps of Engineers (USACE) was authorized to acquire and develop habitat on public and non public lands to mitigate for habitat losses. One method of habitat restoration used was digging side-channel chutes near historic island complexes. In the lower Missouri River, two chutes were dug, one at North Overton Bottoms and the other at Tadpole Island, both near Columbia, Missouri. In order to evaluate the success of this habitat restoration, the U.S. Fish and Wildlife Service, Columbia NFWCO monitored the fish community during 2006-2008. Additionally, two naturally formed chutes near Glasgow and Portland, Missouri were monitored to serve as comparisons to man-made habitat.

The monitoring efforts of the Columbia NFWCO were part of a large cooperative project consisting of Army Corps of Engineers, Iowa Department of Natural Resources, Nebraska Game and Parks Commission, and Missouri Department of Conservation which monitored a total of twelve man-made and naturally formed chutes and five backwaters between Sioux City, Iowa and St. Louis, Missouri.



The pilot channel at Tadpole Island three months after construction has flowing water and bank erosion to increase shallow water habitat for native fishes.

Recently, the cooperating agencies completed a final report of the three year monitoring program to evaluate how the design and morphology of each chute affected the fish community. Biologists learned that chutes which were shallow and wide generally had more native river species present, as well as more juvenile fishes. Most man-made chutes, such as Overton and Tadpole, were constructed as pilot channels that were narrow and deep with swift water velocities, and expected to erode over time with high water events. Currently though, fewer species and lower numbers of juvenile fishes were found in the man-made chutes



when compared to natural chutes. Through a variety of data analysis techniques, biologists are now more aware of the habitat conditions necessary to bolster efforts aimed at recovering fish populations. Recommendations provided to the USACE will give river engineers the tools they need to enhance fish habitats in existing chutes and improve the designs of future habitat restoration projects.

The success of the mitigation program has established side-channel habitats solely for the protection of fish and wildlife populations. As man-made habitats evolve, these restoration projects will continue to add to the diversity of habitats on the Missouri River and hopefully aid in the recovery of threatened and endangered species.



Small-bodied and juvenile fishes collected in natural side-channels of the Missouri River.

Joshua Schloesser and Joe McMullen

Partnerships and Accountability

Missouri River Cooperating for Recovery (CORE) Team Meeting

Project Leader Tracy Hill traveled to Minneapolis, Minnesota on April 14th to attend a meeting of the Missouri River Cooperating for Recovery (CORE) meeting. The CORE group promotes and facilitates implementation of the US Army Corps of Engineer’s Missouri River Recovery Program. The CORE team uses adaptive management to make policy decisions to implement the Missouri River Biological Opinion and the Bank Stabilization and Navigation Project Fish and Wildlife Mitigation Project so as to sustain the values of the river for the American public. The primary focus of the meeting was to review various aspects of adaptive management as it relates to shallow water habitat construction projects and recovery efforts for the piping plover and least tern. The group also had the distinct privilege of being addressed by Andrew Tyre of the University of Nebraska-Lincoln. Dr. Tyre is a renowned expert on adaptive management and had some suggestions for the group.

Fish and Wildlife Service personnel participation in the CORE team ensures cooperation and agreement for recovery efforts of the Missouri River. The effort is consistent with and supportive of the “Partnerships and Accountability”, “Aquatic Species Conservation and Management”, and “Leadership in Science and Technology” priorities of the Fisheries Program Vision for the Future.

Tracy Hill



Public Use

The Traveling Sturgeon Show

On the surface a fish biologist, fireman, and heavy equipment operator don't seem to have much in common, but on a cool, rainy April night they joined forces for a common goal – to educate and inspire. The occasion was “Tons of Trucks”, an annual event held in Columbia, Missouri. This family oriented event gathers large trucks for the community to view and learn about. Beyond teaching children and parents about trucks, it also gives them a glimpse into the careers of the men and women who drive those trucks.



A group of children gather around to learn about shovelnose sturgeon at the 2009 Tons of Trucks event.



Patty Herman explains the physics of trawling to some curious children.

Although the event is called Tons of Trucks, there was one large boat on

display as well. We brought our 26-foot trawl boat for the children to experience, along with some really cool Missouri River fish. For some children the massive boat was a little intimidating at first, but once they climbed aboard those fears subsided as they took pleasure in honking the horn and pretending to drive the boat. As usual, the live fish stole the show. Hundreds of interested on-lookers, young and old alike, stopped by to witness the unusual looking shovelnose sturgeon. Some brave children even had the opportunity to touch and hold these prehistoric fish.

Columbia NFWCO was well represented at this year's Tons of Trucks, with Andy Plauck, Patty Herman, Cliff Wilson, Chris McLeland and Colby Wrasse all participating. Despite the cold rainy weather, the event still had hundreds of participants who hopefully learned a lot about Missouri River fish and the U.S. Fish and Wildlife Service's mission.

Tons of Trucks is the brainchild of Columbia Parks & Recreation and Parents as Teachers. The event is part of their ongoing effort to get families outside while teaching young children through direct experience.

This was the second year Columbia NFWCO participated in Tons of Trucks. Events such as this give us a great opportunity to spread our message while educating the community.

Colby Wrasse, Patty Herman, Andrew Plauck, Chris McLeland and Cliff Wilson



Andy Plauck and Cliff Wilson showing the interesting traits of the shovelnose sturgeon to an intrigued participant.



Enthusiasm of Young Fishermen

A young boy yelled out “when do we get to fish?” immediately as biologists Joshua Schloesser and Tracy Hill stepped out of the truck at a fishing clinic for the Boy Scouts. The group of ten kids and their parents were so excited to fish a local pond that stories of who caught the biggest fish last time were wagered against each other.

With fishing poles and hooks swinging around from anxious anglers, a safety talk was necessary so everybody would have a safe and enjoyable day. When the kids understood that hooks are sharp and how to cast safely, they baited up and let the bobbers fly. Before everyone even got their line in the water, the first bobber went under and the boy walked backwards dragging the bluegill onto shore. Apparently he hadn’t grasped the idea of the reel.

After about an hour of fishing, a mixed bag of bluegills, nice white crappies and even some largemouth bass were thrown in a bin for a lesson on how to clean their prized catch. One parent exclaimed, “no one has ever showed me how to clean fish the right way” as everyone gathered around for a demonstration. With all eyes on the fish at the cleaning board, a biology lesson on why bluegills look different than white crappies was eagerly accepted. Naturally, as the filets come off the young boys were fascinated with the guts and what the fish were eating.

There was no doubt that the time spent teaching not only the kids, but the parents as well, about fishing and fish biology brought out the enthusiasm in these young fishermen. A little time with a fun group of kids and their parents brought increased awareness to the value of our fisheries resources.

Joshua Schloesser

FWS helps Ridgeway Elementary 2nd graders assess stream health at Rockbridge State Park.

Joanne Grady and Aaron Walker teamed up with other volunteers to give 2nd graders a morning in the field exploring the often overlooked side of Rockbridge State Park. Forty students from Ridgeway Elementary School scurried out of the classroom to experience the outdoor event. They had recently completed a classroom unit on natural science and were eager to have some hands-on experience. One of the activities the kids enjoyed was handling aquatic insects that live in Gans Creek. They were able to view the insects under a dissecting scope and identify them using a key while Joanne explained their importance. Another activity that the kids enjoyed was identifying and handling stream fish from Gans Creek. Aaron described

the different life histories and rolls that fish serve in the ecosystem. We discussed fish and insects as ‘indicator species’ of a stream’s health and asked the children to rate the stream based on their study. Gans Creek received a thumbs-up from the enthusiastic group.



Second graders from Ridgeway Elementary identify stream fishes with Aaron Walker of Columbia NFWCO.



Joanne Grady helps a second grader from Ridgeway Elementary School identify a stream invertebrate.

Volunteer Mark McGimsey also guided the kids through a nature hike to the opening of Connor’s cave on one of the parks many trails. Topics discussed on the hike included caves, karst topography and water quality. Our streamside site was located just downstream of the cave system and could easily be impacted by people using their sink holes as trash dumps. Parent chaperones appeared to find the event useful as well; they asked as many questions as the 2nd graders. After experiencing the aquatic insects, stream fish and the hike, the morning was concluded with a well deserved picnic lunch.

Ridgeway Elementary School is unique in central Missouri because it is a magnate school for Individually Guided Education which uses multi-age classrooms. Second graders participate in the week long spring nature study while their third grade peers take standardized tests. We look forward to serving and interacting with our friends at Ridgeway Elementary in the future. They’ve already asked us for a repeat performance next year! This educational event demonstrates our commitment to the “Public Use” goal of the “Fisheries Program Vision for the Future”.

Aaron Walker and Joanne Grady

Columbia NFWCO Attends Vet School

It was a beautiful spring day in early April for the University of Missouri – Columbia Veterinary School Open House. Not only were potential veterinary school students invited to attend but so was the general public. A variety of demonstrations, including dog agility training, wildlife rehabilitation and underwater equine therapy were held throughout the day. Jennifer Ballard, a STEP student with Ecological Services asked our office to participate by presenting our sturgeon research posters. Tracy Hill and Chris McLeland represented Columbia NFWCO during the morning shift and Colby Wrasse and Patty Herman worked the afternoon. Diana Papoulias from USGS Columbia Environmental Research Center also joined us and brought along some of her research. A slide show of Missouri River fish played in the background and spurred many questions from the attendees. As usual, the most popular part of our display for kids and adults alike was the souvenir “squishy” sturgeon. Cooperative participation with community organizations to provide educational events also 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.”

Patty Herman



Workforce Management

Prepared for the Workplace, Prepared for Life

Most of us have heard the familiar words “Be Prepared”, but how many of us practice that in our everyday lives? Columbia NFWCO in Columbia, Missouri got one step closer to being fully prepared for anything. On April 3, 2009 we gathered with a Boone County paramedic and 911 dispatcher for CPR and First Aid Certification. Our crews do amazing work on the Big Muddy, gathering data on the elusive pallid sturgeon which helps us understand their habits and habitats; but with sharp hooks, fish spines, extreme heat and bitter cold, the Missouri River can be a very dangerous place. It is not uncommon for crews to be more than an hour or two away from medical attention, which only adds to the danger. However, our staff is now better prepared to deal with situations that arise with this recertification of their First Aid skills. Some basic injuries were covered such as minor cuts, scrapes and burns and also some more advanced methods such as administering emergency medication through the use of an epi-pen. CPR



Staff from Columbia NFWCO try their hand at performing CPR on the mannequins as instructors look on.

certifications were updated as well, making the fisheries staff at the Columbia NFWCO all the more prepared to deal with situations that could arise, regardless of the location.

The certification couldn't have come at a better time since April was also the U.S. Fish and Wildlife Service's safety awareness month. Although we hope never to need this training in the field, if an emergency happens, we are now better prepared to ensure the safety of our staff.

Mark Corio

Columbia NFWCO Staff

Project Leader: Tracy D. Hill
Administrative Assistant: Debra Turner
Branch Chiefs: Wyatt Doyle, Joanne Grady
Team Leaders: Jeff Finley, Andy Starostka
Crew Leaders: Brian Elkington, Andy Plauck, Clayton Ridenour, Joshua Schloesser, Cliff Wilson

Lead Technicians: Patty Herman, Joe McMullen, Colby Wrasse
Technicians: Adam McDaniel, Chris McLeland, Aaron Walker
STEP Student: Mark Corio, Jeremiah Smith
Experience Works: George Fadler