



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

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

PARTNERSHIPS AND ACCOUNTABILITY

Columbia FRO lends a helping hand to Missouri Department of Conservation

Biological Science Technician Tammy Knecht traveled to Kansas City on November 28 to assist Jason Dattilo and Patty Herman of the Missouri Department of Conservation with Pallid Sturgeon Assessment sampling on the Kansas River. Tammy led the operation of the jet boat crew over a three day period. Due to extremely low water levels on the Kansas River the shallow draft jet propulsion boat operated by Columbia FRO was needed to safely navigate and avoid hidden danger. Sampling was a success despite adverse weather conditions.



The Population Assessment Crews sample for endangered pallid sturgeon on 2,300 miles of the Missouri River and tributary rivers. Many federal and state agencies work together for the common goal of conserving native sturgeon population. These cooperative efforts have led to increased knowledge of pallid sturgeon abundance, reproduction, recruitment, and distributions along the Missouri river.

This partnership with MDC will increase the amount of sampling that can be done when water levels are extremely low. This involvement follows the "Partnerships and Accountability" in the Fisheries Vision.

Tammy Knecht





Enforcement Sweep of Commercial Sturgeon Fishing on the Mississippi River

Columbia FRO provided sturgeon identification assistance for an enforcement sweep of the middle Mississippi River. Law enforcement officers from four states, special agents from multiple US Fish and Wildlife Service offices, and biologists from Missouri Department of Conservation and Columbia FRO took part in the operation. This sweep was intended to check commercial sturgeon fishermen and equipment to ensure compliance with regulations. The detail began with introductions, assignment of teams and a presentation by Andy Starostka from the Columbia FRO on identification of Midwest sturgeon species.

Cold temperatures and high winds hampered the detail, causing damage to several boats, and one injury when an officer fell on an ice covered deck and damaged his knee. Due to the inclement weather, few fishermen were contacted on the water, though some nets were found. The operation was still considered a success and will lay the foundation for future law enforcement sweeps of commercial sturgeon harvest on the Mississippi and Missouri Rivers.

This project will assist the Service's Fishery Program with meeting its Partnership and Accountability goal of developing collaborative conservation strategies for aquatic resources.

Andy Starostka and Jeff Finley

MICRA Executive Board Winter Meeting

Project Leader Tracy Hill traveled to Omaha, Nebraska on 6 December to attend the winter meeting of the Mississippi Interstate Cooperative Resource Association Executive Board. The purpose for the meeting was to review the activities of the various subcommittees of MICRA (Paddlefish, Gamefish, and Mussel) and plot the direction and course of the group for the coming year. In addition to establishing and approving a working budget for the committees' activities during 2007, the meeting provided an excellent opportunity for MICRA's Executive Board to address Asian Carp issues and to learn about the National Fish Habitat Action Plan. The meeting participants also spent considerable time discussing the Paddlefish/Sturgeon subcommittee's upcoming annual meeting that will focus on issues related to harvest of shovelnose sturgeon.

A multi-agency partnership effort to address fishery conservation issues in the Mississippi River Basin is consistent with the core principals of the Service's Fishery Program and is essential to protect, enhance and restore native riverine species in this system. Service participation in this association is consistent and supportive of the "Partnerships and Accountability", "Aquatic Species Conservation and Management" and "Aquatic Habitat Conservation and Management" priorities of the Service's Fisheries Program Vision for the Future.

Tracy Hill



AQUATIC SPECIES CONSERVATION AND MANAGEMENT

Pallid Sturgeon Captures on the Missouri River

The sturgeon monitoring season got off to a great start! Every winter we set approximately 30,000 feet of gill and trammel nets on the lower 250 miles of the Missouri River for the Pallid Sturgeon Population Assessment Project. Unseasonably warm weather during December 2006 provided field crews an opportunity to work without the dangerously cold temperatures typically associated with winter sampling.

We are very lucky to have added several new technicians in 2006 eager to see their first pallid sturgeon and more than willing to brave cold mornings on the river. As luck would have it, technicians Lee Erickson, Tammy Knecht, and Derek Eisenbrei along with volunteer Chris Clemens were able to see multiple pallid sturgeon in their first week of gillnetting! In December a total of six pallid sturgeon were captured.

One memorable morning in December a large pallid sturgeon was pulled onto the deck of the boat. The fish was quickly removed from the net and placed in a holding tank. Biologist Andy Plauck knew that a pallid about that size was captured very close to that location last year. A quick scan of the uniquely numbered PIT (passive inductive transponder) tag proved it to be the same fish. Pallid sturgeon #460E3A112D was captured in January of 2006 behind the exact same wing dike. The fish had grown about a half inch and gained over a half pound. Could the recapture of this sturgeon in the exact location and about the same time of year be an indication of a specific habitat preference for pallids? Ongoing cooperative research with the U.S. Geological Survey in pallid telemetry tracking may confirm some of our observations and suspicions about habitat selection and preference. With discoveries such as this one we hope to increase our understanding of the Missouri River Ecosystem and aid in the recovery of this endangered species.

Because it was of hatchery origin, stocked by the Missouri Department of Conservation in the early 1990's this fish could not be used for broodstock. Field crews all along the Missouri River are actively looking for wild fish for artificial propagation as tool to keep the species around until we can determine how to recover self-sustaining populations and promote natural reproduction. Hatchery fish cannot be used repeatedly for broodstock to avoid swamping the genetic pool with related fish. Columbia FRO anticipates catching wild pallid sturgeon later this spring for hatchery use.

Our efforts to recover the endangered pallid sturgeon fit into the Fisheries Program's Vision for the Future. Recovery of endangered species and monitoring other native species' populations are high priorities for our office.

Andy Plauck



State and Federal Collaboration Continues to Improve the Missouri River

Each year representatives from State and Federal agencies involved in pallid sturgeon monitoring on the Missouri River meet to discuss the year's successes and determine if revisions to the standard protocol are necessary. Representatives including: Columbia FRO, four State fish and wildlife agencies, and two other USFWS offices form the Pallid Sturgeon Population Assessment and Monitoring Team (PSA). The PSA team has been actively sampling with a standardized protocol since 2003, however, 2006 marks the first year of full implementation throughout the entire River. Along with full sampling coverage, the team now has a centralized database maintained by the Missouri Department of Conservation and a statistician in place to provide recommendations for adaptive management. Biologists are currently in the process of analyzing results from gear comparisons and pallid sturgeon captures from the past three years to determine if improvements may be made in sampling protocols and stocking plans. The PSA captured over 200 pallid sturgeon basin wide in 2006 including several juvenile wild fish that are thought to be about three years old. These few captures are an example of the program's successful ability to document new wild production as it relates to the recovery of the species.

The recovery of the endangered pallid sturgeon will only be through the continued collaborative efforts of Columbia FRO and its' State and Federal Partners in the combined vision towards better science and forming long-lasting partnerships in Aquatic Species Conservation.

Wyatt Doyle

Paddlefish Conservation and Management Symposium

Project Leader Tracy Hill traveled to Omaha, Nebraska on 23 December to attend the Paddlefish Conservation and Management Symposium held in conjunction with the 67th annual meeting of the Midwest Fish & Wildlife Conference. The symposium's purpose was to update Mississippi River Basin biologists and managers on the current status and trends of paddlefish populations. Scientists throughout the country provided new information which has been collected since 1983, when the first paddlefish symposium occurred. Dr. Hill gave a presentation during the symposium titled "Summary of the National Paddlefish Stock Assessment Project 1995-2004". The presentation highlighted efforts of the Columbia FRO to manage the MICRA national paddlefish stock assessment database. Approximately 100 individuals from state, federal, university and nongovernmental organizations participated in the symposium.

Service involvement in this symposium provided an opportunity to ensure that species conservation and management is an integral component of management actions. Aquatic species conservation and management is an important focus area of the Strategic Vision for the Service's Fisheries Program.

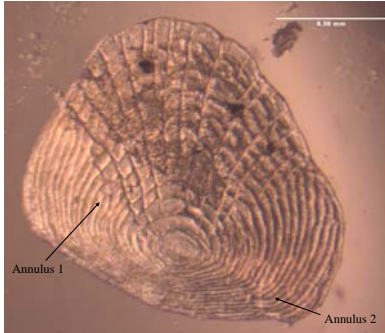
Tracy Hill





LEADERSHIP IN SCIENCE AND TECHNOLOGY

Columbia FRO Compiles Missouri River Chub Ages



Scale of 2 year old sturgeon chub. Annuli noted by arrows.

Columbia FRO Biologist Jennifer Johnson and Biological Science Technician Lee Erickson are nearing the completion of a three year *Macrhybopsis* spp. chub ageing project. Over 1,350 chubs were collected throughout the Missouri River from Montana to Missouri over three seasons for age and growth analysis. Johnson and Erickson aged each scale independently by placing the scales between two glass slides and examining them through a microfiche reader. In instances where the assigned age was different between the two readers, scales were read a second time (by both readers). After the scales were aged, Biological Science Technician Brian Elkington measured growth between the scale

annuli using Image J software which allows a Scion Color Digital Camera connected to a dissecting scope to capture images of the scale and display them on a computer screen. Age and growth data will be summarized in a three year report for the Missouri River Pallid Monitoring program. Growth differences between years and throughout the River will give biologists information to relate to environmental factors affecting native river species.

Columbia FRO's effort to utilize state-of-the-art scientific tools and equipment to promote the conservation efforts of big river ecosystems supports the 'Leadership in Science and Technology' and 'Aquatic Species Conservation and Management' goals of the 'Fisheries Program Vision for the Future'. Age and growth studies will aid in understanding the affects of management actions on the ecological community.

Jennifer Johnson, Lee Erickson, and Brian Elkington



AQUATIC HABITAT CONSERVATION AND MANAGEMENT

New Procedures to Rank Low-Water Crossings in Threatened Niangua darter Range



Nick Frohnauer measures culvert in low water crossing to assess fish passage.

Fishery Biologists Joanne Grady and Nick Frohnauer met with Missouri Department of Conservation fishery biologists, stream specialists and Niangua darter researchers to assess data collected from low-water crossings throughout the range of the Niangua darter. The group examined data collected from fifty-four road crossings which occur over streams within the range of the threatened Niangua darter. The crossings were examined to determine if they were jump barriers, velocity barriers or behavioral barriers for the darter. Jump barriers were any culverts perched above the water level.

Velocity barriers are tentatively defined as culverts with velocities exceeding 2 feet/second. Behavioral barriers will exist at crossings which have culverts within the water but at some distance from the stream bottom, as darters are benthic fish without swim bladders. This analysis in combination with Niangua darter population information gathered by MDC will be used by the group to rank crossings and watersheds for structure replacement projects.

A new index proposed at this meeting is Percent Passable Face. Where wetted culverts do not present a jump barrier to the darter, the sum of the culvert width corrected for percent blockage, is divided by the length of the crossing. It is theorized that the smaller this number, the harder fish will have to work to find an opening.

This project supports multiple Fisheries Strategic Vision Goals including: Partnerships and Accountability, Aquatic Species Conservation and Aquatic Habitat Conservation.

Joanne Grady



Missouri River Agency Coordination Team Meeting

Fish Biologist Jennifer Johnson traveled to Omaha, Nebraska on December 6th to attend the quarterly meeting of the Missouri River Recovery Agency Coordination Team (ACT). The meetings are intended to brief state and federal agencies on the progress of this program. Under the Missouri River Fish and Wildlife Mitigation Project, the Corps has restored and developed a variety of aquatic and terrestrial features in the Missouri River and its floodplain to enhance habitats for fish and wildlife. Monitoring will enable the ACT to determine whether the mitigation sites are performing as expected. Columbia FRO continues to partner with state agencies to conserve and increase native fish populations in the Missouri River and to identify and take appropriate actions that will help achieve desired resource goals and outcomes. Participation in this activity is consistent with the “Aquatic Habitat Conservation and Management” component of the Service’s Fisheries Program Vision for the Future.

Jennifer Johnson

WORKFORCE MANAGEMENT

Communication in Natural Resources



of Missouri

Dr. Adrian Andrei, Assistant Professor of Wildlife Science, contacted Columbia FRO to assist him with teaching a communications course specific to fish, wildlife and natural resource related professions.

Fishery Biologist, Jeff Finley provided a seminar and activities on selecting media outlets for communication, citing studies conducted on Americans, their perceptions of natural resources and how to make conservation issues “news worthy”. The students quickly picked up on how most people are only interested in natural resources if it directly affects their health and welfare. In a hands-on activity, the students were able to apply content from Dr Andrei’s course in selecting appropriate communication techniques for different applications.

Dr. Andrei’s course is ground breaking for the University. His realization that effective communication is lacking in many students entering the natural resources workforce is a reflection his level of dedication and attention to detail. Our partnership with Lincoln University to train and develop the workforce of tomorrow mirrors the Workforce Management goal of the Fisheries Program Vision for the Future.

Jeff M. Finley





College Students Spent Summer Gaining Fisheries Experience

Columbia FRO was fortunate to have college students from three universities working with them this past summer. The seven students acquired skills that will assist them in their future fisheries careers while working with Columbia FRO staff. While assisting crews in the field they have learned how to: identify big river fish species, fish with a variety of gear types, and collect and record data. In the shop they have learned how to repair and perform maintenance on boats, nets, and trucks. In the lab they learned how to press and read fish scales for aging fish and to how to key out fish species that were unidentified in the field.



Chris McLeland poses with a flathead catfish collected in Tate Island Chute.

Chris McLeland and Kyle Winders assisted the Habitat Assessment and Monitoring Project's (HAMP) crew. They are both working on B.S. degrees in fisheries and wildlife at the University of Missouri-Columbia (UMC) and continued on with us this fall as STEP students. Chris will be graduating in May of 2007 and is well on his way to a career in fisheries research. Kyle is currently Vice President of the Fisheries and Aquatic Sciences Society (FASS) at UMC. He will be graduating in December and looks forward to graduate school and a future in fisheries management.



Kyle Winders holds a hatchery reared pallid sturgeon captured in a trawl.

Dustin Martin assisted with both the MICRA and HAMP projects. He graduated in December from UMC with a Bachelor of Science degree in fisheries and wildlife and is attending graduate school in Nebraska. We look forward to seeing how far he will go in his career.

Courtney Culler assisted the HAMP project and became a master net mender. He will be graduating in May 2007 from UMC. He looks forward to graduate school then a life filled with bass fishing and a little fisheries research work on the side.

Breanna Hicks assisted Columbia FRO with the Mississippi Interstate Cooperative Resource Association (MICRA) national paddlefish stock assessment project by performing data entry and by retrieving coded wire tags from paddlefish rostrums. She will be graduating in May 2009 from Lincoln University with a Bachelor of Science degree in agriculture and an emphasis on natural resources. She enjoyed her summer with us and has decided on a career in wildlife research.

Cody Luebbering assisted crews for both the Population Assessment (Pallid) project and the Mitigation project. Cody came to us from Saint Thomas, Missouri where he grew up with the Osage River in his back yard. He will be graduating in December 2007 from Lincoln University with a Bachelor of Science degree in agriculture and an emphasis on natural resources. He will be returning to the Columbia FRO as a STEP student in the summer field season. We appreciated his river experience and his inexhaustible energy while performing fieldwork.

Nick Siepkner assisted the Pallid projects crew this summer. If he doesn't become a professional bass angler he will be graduating in December of 2008 from South Dakota State University with a Bachelor of Science degree in wildlife and fisheries sciences. After graduation he plans on going to graduate school and working in fisheries management.



These students are dedicated to pursuing professional careers and with the experience they get both here and at college they will be well prepared to enter the fisheries field after graduation. We appreciate the time we've had to mentor them. The experience and dedication of these students fully support the Service's Workforce Management Goal of the Fisheries Program Vision for the Future.

Cliff Wilson

Navy Veteran Joins Columbia FRO as Volunteer



Volunteer Chris Clemens holds his first pallid sturgeon from Missouri River near St. Charles.

We are pleased and proud to announce the addition of Chris Clemens, volunteer extraordinaire, to the Columbia FRO team. Chris is a Texas native with a B.S. in engineering and a M.S. in military science from New Mexico State University. He

worked as a nuclear propulsion officer on Navy surface ships before relocating to Missouri. When our staff started to warn him about the dangers of gillnetting in winter ice on the Missouri River, Chris informed us that the Navy had sent him to Alaska, where EVERYTHING freezes on the deck. "The main difference between Alaska and Missouri is that in the long days of Alaska, the sun shines almost 24 hours a day. Missouri's winter is a biological rollercoaster. It'll be very cold for a short time and then warm back up." Chris's main task at Columbia FRO is the development of a Friends Group to support our station. In addition, he is working on grants and assisting with field work.

Chris is a shining example that workforce management, as outlined in the Fisheries Program Vision for the Future, extends beyond our salaried employees.

Chris E. Clemens and Joanne M. Grady

We wanted to get to know Chris a little better so we asked him a few questions.

Q: I understand that on a recent field trip near St. Louis, you helped catch and process an endangered pallid sturgeon. How did you feel about that experience?

A: It was a great privilege. I felt honored because most people are not exposed to endangered species and can't fully understand the realism that these fish may not be here tomorrow.

Q: Why are you here with us instead of volunteering at the public library or Meals on Wheels? What do you want to achieve with your time here?

A: I'm here to find a new career field and see what is so exciting about fish and wildlife. I want to develop a better grasp of conservation as a whole and try to make a difference in my life. Those other volunteer opportunities are not my cup of tea. I always had a thing for fish and wildlife. By volunteering here I will get the best of both worlds.

Q: What do you want other people considering volunteering to know?

A: Volunteering is for everyone and anyone; not just for the elderly or folks with too much time on their hands. It's a way to help make a difference, better yourself and gives you a chance to make new friends.



Brownies in the Lab

Brownie Troop 893 visited the Columbia FRO in December to catch a glimpse of the laboratory duties of a fishery biologist. The group is led by Elizabeth Wilson, a teacher at our neighboring school, Paxton Keeley Elementary. The girls began their afternoon adventure with a slide show of fish found in the Missouri River and then moved to the lab where they took a look at juvenile sturgeon under microscopes. They also aged fish by looking at annuli rings in their scales, assembled a fish identification puzzle and made fish print tee shirts using a sturgeon mold. The young ladies enjoyed their afternoon in the lab and were a buzz with excitement and discovery. Their experience can best be summed up by a quote from one budding young scientist “Looking at stuff under the microscope makes me feel like a smart grown up.”



A Brownie holds a young sturgeon during a laboratory visit to Columbia FRO.

It is never too soon to plant the seeds of natural resources in the eager minds of our youth. These young ladies, albeit only in single digit grades, may well remember the lab experience at Columbia FRO when applying for college in the future. Workforce management, as outlined in the Fisheries Program Vision for the Future, starts today for tomorrow.

Jeff M. Finley

Columbia FRO Staff

- Tracy D. Hill – Project Leader
- Debra Turner – Administrative Assistant
- 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
- Nicholas J. Utrup – Team Leader, Pallid Population Assessment
- Nicholas K. Frohnauer – Fishery Biologist
- Andy T. Plauck – Fishery Biologist
- Cliff D. Wilson – Fishery Biologist
- Jennifer L. Johnson – Fisheries Biologist
- Tammy L. Knecht – Fisheries Biological Sciences Technician
- Derek L. Eisenbrei – Fisheries Biological Sciences Technician
- Lee M. Erickson – Fisheries Biological Sciences Technician
- Brian Elkington – Fisheries Biological Sciences Technician
- Chris E. Clemens - Volunteer