



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

...Dedicated to the Conservation of Big River Ecosystems in America's Heartland.

Partnerships and Accountability

Presentation at Carnival of Communication

Fishery Biologist Wyatt Doyle represented participating agencies of the Pallid Sturgeon Monitoring Program by presenting results of pallid sturgeon collection since the

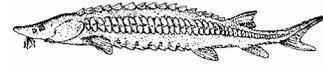


programs inception. Two other State and Federal Biologists presented additional data in an effort to inform funding agencies, agency leadership and other Missouri River stakeholders about where sampling efforts have taken the program and its vision for the future. The Columbia Fishery Resources Office (FRO) has been part of pallid sturgeon monitoring since 1999 and continues to provide leadership in recovery of the species.

Fishery Biologist Wyatt Doyle with pallid sturgeon.

Our ability to work in collaboration with multiple agencies and share information to non-scientists promotes accountability and enhances our ability to recover the species through ensured funding and identification of common goals.

Wyatt J. Doyle



Aquatic Species Conservation and Management

Pallid Sturgeon Recovery Team Considers Stocking Question

Project Leader Tracy Hill participated in a Pallid Sturgeon Recovery Team conference call on 1 April. The purpose for the call was to discuss the Middle Basin Workgroup's recommendation to stock approximately 9,800 hatchery reared juvenile pallid sturgeon (HRJPS) of Upper Basin origin into RPMA 4 (Gavins Pt. Dam to the mouth at St. Louis, MO). The need for the call was precipitated by the decision of the Montana Fish, Wildlife and Parks Fish Health Committee not to allow the 2004 year-class of HRJPS from Garrison Dam NFH or Gavins Point NFH to be stocked in Montana waters. Due to limited hatchery facility space and rapidly approaching 2005 broodstock collection and propagation efforts, the 2004 HRJPS needed to either be stocked or disposed of as excess propagated stock. After consideration of the information available, the Recovery Team concluded that it was willing to support the Middle Basin Workgroup's recommendation to stock Upper Basin Fish into RPMA 4. The Team acknowledged that this was a decision made with great urgency as a result of unexpected circumstances. Greater attention will be given in the future to planning for such possible scenarios.

Continued collaborative efforts of the Recovery Team in making decisions to maximize recovery efforts of this species are in keeping with the "Native Species Goal" of the "Fisheries Program Vision for the Future".

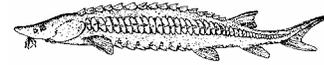
Tracy D. Hill

Pallid Sturgeon Stocked in the Missouri River

Approximately 4,900 endangered pallid sturgeon were successfully stocked into the Missouri River during the month of April. Upon final approval from the States and various Service Regions, 2,546 fish were stocked near Sioux City and 2,345 were stocked near Kansas City. Average length of these pallid sturgeon was 7.6 inches with a total weight of 300 lbs. Twenty-one families were represented in these stockings. The pallid sturgeon were raised at Garrison Dam National Fish Hatchery. The fish were tagged with Passive Integrated Transponder (PIT) tags, coded wire tags and red elastomer tags, which allow the fish to be identified as hatchery origin fish. Tracy Hill, Project Leader at the Columbia Fishery Resources Office (FRO), coordinated the hatchery stocking for the Fish and Wildlife Service with state agencies. This stocking is a partnership effort of the Service and many other agencies to recover pallid sturgeon from endangered status. Addition pallid sturgeon stockings from Gavins Pt. and Neosho National Fish Hatcheries are planned for later this summer.

Activities associated with pallid sturgeon enables the Columbia FRO to fulfill the Fisheries Program's Strategic Vision priorities for "Aquatic Species Conservation and Management" and "Partnership and Accountability". This work also allows the Service to recover endangered species by utilizing sound science, effective partnerships and careful planning.

Tracy D. Hill



Pallid Brood-stock Collection for Missouri River Stocking Program

In late March, Missouri River biologists, hatchery managers and geneticists identified an eminent need to collect pallid sturgeon brood-stock from the Lower Missouri River as an alternative to using broodstock from the Yellowstone River in North Dakota. Collecting



and hauling fish in warmer water temperatures presents a danger to the pallid sturgeon, therefore, the group recommended that an immediate effort be made to collect next year's stocking class from local sources. In response, Columbia Fisheries Resources Office (FRO) concentrated its efforts to finding mature pallid sturgeon to be used for propagation at Gavins Point National Fish Hatchery. In the first three days of sampling, biologists

collected five mature fish for the stocking program. This catch exceeds the previous five months effort where only 3 adult fish were captured. These were the only pallid sturgeon collected which could be used for propagation from six multi-state crews working from Nebraska to the Mississippi River. Temperatures have now exceeded the safe collection threshold, meaning these fish will be the only available broodstock from the Lower Missouri for 2006 stocking. A collaborative effort by Missouri Department of Conservation's Blind Pony Hatchery allowed fish to be promptly transported to South Dakota.

Endangered pallid sturgeon restoration within the Missouri River will be enhanced by having a 2005 year-class of fish representing genetic diversity from the lower river. Columbia FRO crew's ability to identify sites to collect these fish was paramount to quick collection and relationships between State and Federal hatchery partners were strengthened through this important collaborative effort.

Wyatt J. Doyle

Wild Pallid Sturgeon Captured

On April 29, Fishery Biologists Corey Lee, Wyatt Doyle, and Nick Frohnauer captured another wild pallid sturgeon near Overton Bottoms. This is the second wild pallid captured by the Columbia FRO in less than one month. Collecting wild pallids to use as broodstock for the Lower Missouri River to preserve the genetic integrity of the species was deemed the highest priority for sampling during a recent Middle Basin Pallid Sturgeon Workgroup Meeting. Lower Missouri River broodstock are being kept at Gavin's Point National Fish Hatchery where it has been proposed that they will be used to produce future year classes of this endangered sturgeon.

Columbia FRO's efforts to identify and collect wild pallid sturgeon for future broodstock production directly supports the "Fisheries Program Vision for the Future" goal of "Aquatic Species Conservation and Management" by working to recover fish populations protected under the Endangered Species Act.

Corey W. Lee



Public Use

Columbia FRO Participates in Missouri River Relief Education Day

Fishery Biologists Geno Adams and Jeff Finley traveled to the Columbia Bottom Conservation Area (St. Louis) on April 29 to take part in an educational event sponsored by Missouri River Relief. Presenters ranged from the Missouri Department of Conservation and the University of Missouri to the Watershed Institute of Kansas City and the Friends of the Big Muddy. The event was attended by over 700 fifth graders from St. Louis Public Schools and allowed friends of the Missouri River to come together and increase awareness of issues currently threatening the river. The U.S. Fish and Wildlife Service Columbia FRO provided a station entitled “Live River Fish” allowing kids to get up close and personal with Missouri River fish such as longnose gar, freshwater drum, shovelnose sturgeon, river carpsucker, smallmouth buffalo, blue suckers, and channel, blue, and flathead catfish. 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, while strengthening the bond between the U.S. Fish and Wildlife Service and the public through our outreach program.

Geno Adams displays a longnose gar to a group of fifth grade students at the Missouri River Relief Education Day.



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Geno Adams

Columbia FRO on Display at Missouri’s “A Day with Wildlife”

On April 3, 2005, Fisheries Biologist Nick Frohnauer and Biological Science Technician Jennifer Johnson represented the Fish and Wildlife Service at Columbia Missouri’s annual “A Day with Wildlife” celebration. The event was organized by the Missouri Department of Conservation and featured booths from both government and non-government organizations. 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. Nick and Jennifer displayed a workboat and various nets used in Missouri River



Technician Jennifer Johnson oversees children exploring a net boat.



fisheries projects. Children were allowed to explore the boat and often asked questions about the velocity meter and other unique characteristics of the boat. The children also enjoyed playing in hoop and fyke nets and figuring out how the gillnet and otter trawls worked. The Fish and Wildlife Service's "Fishing ABC's" coloring books were also a big hit. Nick and Jennifer fielded questions from visitors regarding current Station activities such as the Pallid Sturgeon Recovery Project and Mitigation efforts on the Big Muddy National Fish and Wildlife Refuge.



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."

Nicholas K. Frohnauer

Leadership in Science and Technology

Leadership in Trawl and Net Design

Columbia FRO hosted Master Net Designer, Greg Faulkner, from Innovative Net Systems to explore new trawling capabilities on the Missouri River. Mr. Faulkner has world wide trawling experience and has spent his life solving trawling problems and designing trawling nets. New challenges including; assessment of dike modifications, evaluation of Corps mitigation projects and pallid sturgeon monitoring on the Missouri River have created a need to explore new techniques for sampling in big rivers. Mr.



Faulkner was contracted by Columbia FRO to train our staff as well as other State and Federal collaborating agencies on trawling techniques and to use his oceanic expertise to introduce innovative sampling gears for the Missouri River. Mr. Faulkner's visit will take him across 600 miles of the Missouri River talking to over six participating agencies about new ideas relevant to each state's unique habitat types. Columbia FRO has been working with Innovative Nets

for three years to develop trawling techniques and has lead other agencies in boat design and trawl use for pallid sturgeon collection. Mr. Faulkner's involvement in trawl design in India enabled our programs to be among the first to use a newly invented net material being produced in that country. It is the newest durable net material on the market today.

Master Trawl maker, Greg Faulkner, explains the fine art of tuning otter boards.



His innovation and our understanding of our sampling needs set the stage for the leadership of this station in big river trawling on the Missouri River.

Leadership in big river trawling technology will advance our efficiency, allow us to sample specific habitats and increase our ability to evaluate aquatic habitats crucial to recovering pallid sturgeon populations and assessing other fish communities.

Wyatt J. Doyle

New Habitat Coding System for Corps Projects

As a way to better analyze river habitats, a new habitat coding system is being developed for all Corps projects on the Missouri River. The new system will allow for habitat analysis on a detailed level. The skeleton of the code is based on systems used by the Benthic Fishes Project and the Long Term Resource Monitoring Project on the Mississippi River. The current coding system consists of three layers; Macro, Meso, and Micro habitats. This system has been used for several years by the Sturgeon Monitoring Project yet lacked an intuitive and clear system of coding habitats at the Micro level. Current work will extend the microhabitat coding to a minimum of six digits and may be extended up to nine digits to meet the needs of the Habitat Assessment Project. The first three digits will describe the habitat complex, or the general area being sampled, such as a sand bar or wing dike complex. The next three digits will describe the precise area within the habitat complex where the sampling gear was deployed. The objective is to create a system that is easy to use in the field, simplifies data analysis and queries, and has the flexibility to be modified to meet future needs. By converting the habitat codes to a numeric system, data analysis and data queries are simplified when using statistical programs such as SAS.

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

Andrew B. Starostka

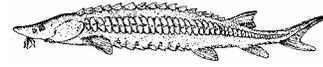
Aquatic Habitat Conservation and Management



Mitigation Sampling Begins

Columbia FRO in cooperation with the U.S. Corps of Engineers, and state natural resource agencies of Iowa, Kansas, Missouri and Nebraska initiated the 2005 monitoring and evaluation season for the Missouri River Fish and Wildlife Mitigation Program. The goal of this program is “to understand the physical and biological responses to Mitigation Project actions within an adaptive management context”. Columbia FRO’s responsibility is to





collect fish, biological and ecological data from two selected mitigation sites, Tate Island near Portland Missouri and Overton Bottoms near Rocheport Missouri. Gear types used in this plan include: bow operated otter trawls, large (3') hoop nets set in singles and tandem, and electrofishing. Nets are fished overnight in random locations inside and adjacent to the mitigation sights and moved daily for three consecutive days. Trawling takes place in 8 random locations throughout the site and eight, 15 minute electrofishing runs are made as well. These efforts will be repeated monthly throughout July.

Information gathered from these efforts will assist river managers in making habitat improvement recommendations and provide base line data critical in supporting the Aquatic Habitat Conservation and Management Goal of the Fisheries Program Vision for the Future.

Jeff M. Finley

Shovelnose Collection for Telemetry Study

Columbia Fishery Resources Office (FRO) collected over 30 gravid shovelnose sturgeon for a tagging study to be conducted in 2005. USGS/CERC (Columbia Environmental Resource Center) is embarking on a telemetry project to provide answers about sturgeon spawning cues in over 400 miles of the Lower Missouri River. The USGS lab will evaluate spawning cues, reproductive viability, movement and hormonal responses to temperature in these fish. Columbia FRO will continue assisting the lab in its efforts to recapture these fish shortly after they spawn. This represents our 2nd year helping to collect and recapture fish for this study.

Through these partnerships we can begin answering questions in large systems like the Missouri River. By combining our expertise in fish sampling with technology we hope to propel our understanding of sturgeon species as they relate to water flow and spawning habitat.

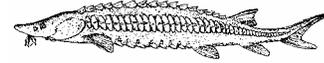
Wyatt J. Doyle

Workforce Management

Columbia FRO Welcomes New Fishery Biologist



Fishery Biologist Cliff Wilson joined the staff of the Columbia FRO on April 4th, 2005. He had previously worked for Columbia FRO in an emergency hire position and then logged over 330 hours as a full-time volunteer. Cliff received his B.S. degree from the University of Missouri-Columbia majoring in Fisheries and Wildlife Biology with a minor in Biological Sciences. Before coming to Columbia FRO he worked as a scientific aide for USGS Columbia



Environmental Research Center. While with USGS he assisted with water bath exposure studies examining the effects of atrazine on the reproductive success of medaka and fat-head minnows. He was also involved in reproductive studies with black carp, grass carp, and shovelnose sturgeon.

Cliff's experience with Columbia FRO, energy, expertise and unparalleled dedication fully support the Service's Workforce Management Goal of the Fisheries Program Vision for the Future.

Cliff D. Wilson

Biological Science Technician Attends Seminar on Micromodeling

Biological Science Technician Jennifer Johnson of the Columbia Fishery Resources Office (FRO) attended a seminar presented as part of the University of Missouri's Fisheries and Wildlife Seminar Series. The seminar was presented by Rob Davinroy a Chief River Engineer from the U.S. Army Corps of Engineers Applied River Engineering Center. Davinroy's seminar focused on "Modeling Tools and Design Stories for Environmental Restoration of the Mississippi River". Micromodeling is an applied engineering tool which uses a small-scale physical model to simulate sediment conditions in rivers and streams. Since the introduction of micromodels in 1994 by the St. Louis District Corps of Engineers, this technology has been used to address a variety of sedimentation problems and issues. Micromodeling has been applied to navigation design in the Mississippi River, restoration of side channels, bridge scour in rivers and streams, improvements to detrimental flow conditions at locks and dams, siltation at water supply intake, and the effects of dredging.

The seminar provided knowledge of new technology currently being used on the Mississippi River which maybe applicable to the Missouri River. Restoration of side channels and habitat creation in the lower Missouri River could benefit from such micromodeling studies. The seminar provided Columbia FRO staff with information that may be used as a tool to aid in aquatic species conservation and management.

Jennifer L. Johnson



Columbia FRO Staff

Tracy D. Hill – Project Leader
Joanne M. Grady – Assistant Project Leader
Louise M. Mauldin – Fishery Biologist
Wyatt J. Doyle – Fishery Biologist
Andrew B. Starostka – Fishery Biologist
Corey W. Lee – Fishery Biologist
Nicholas K. Frohnauer – Fishery Biologist
Jeff M. Finley – Fishery Biologist
Colby J. Wrasse – Fishery Biologist
Geno Adams – Fishery Biologist
Cliff D. Wilson – Fishery Biologist
Jennifer L. Johnson – Fisheries Biological Sciences Technician
Casey L. Bergthold – Fisheries Biological Sciences Technician