Accomplishment Reports From The Columbia Fishery Resources Office

October 2004

Partnerships and Accountability

Missouri River Partnership Briefings

Jennifer Johnson of the Columbia Fishery Resources Office attended the Missouri River Briefings held at the Columbia Environmental Research Center, Columbia, Missouri on October 12th. Graduate students from the University of Missouri along with researchers from the U.S. Fish and Wildlife Service, U.S. Geological Survey, and Missouri Department of Conservation presented updates and summaries of ongoing Missouri River projects. Participants were exposed to the wide range of research occurring on the lower Missouri River. Jennifer gave a brief description of her project proposal at the meeting. Participants gained a better understanding of the many aspects of research occurring through question and answer sessions.

Contact: Jennifer Johnson

Partnership with Kansas State University to analyze long-term dataset begins.

Wyatt Doyle with adult pallid sturgeon collected in Missouri River.

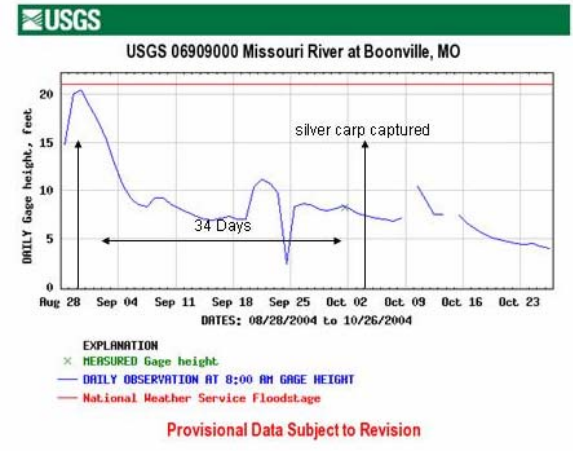
Fishery Biologist-Wyatt Doyle and USGS/ Kansas State Assistant Cooperative Unit Leader-Dr. Craig Paukert, began to cooperatively analyze a long-term Missouri River pallid sturgeon data set. Information from these analyses will enhance abilities of researchers to quantitatively define gear efficiency, habitat selectivity, and complex ecological functions related to important Missouri River fishes. Initial analyses will be reported at upcoming Missouri River conferences. Partnerships are essential for effective fisheries conservation and management. The combined efforts of the US Fish and Wildlife Service Columbia Fishery Resources Office and USGS Cooperative Unit will enable the agencies to more efficiently tackle the challenges facing pallid sturgeon restoration on the Missouri River. Specifically this project will assist the Service's Fishery Program with meeting its Partnership and Accountability goal of developing collaborative conservation strategies for aquatic resources.

Contact: Wyatt Doyle

Aquatic Species Conservation and Management

Young-of-year Asian carp captured in Missouri River scour hole

Small young-of-year silver carp were collected from a scour hole at Overton Bottoms by Columbia FRO. This scour hole is connected to the Missouri River during high water events. The captured silver carp measured 27 to 37 mm in length making them much too small to be spawned during the expected spring spawning season. According to aquaculture literature, silver carp of this size should be 14-30 days old. In the natural environment, growth rates would be slower. The USGS water gauging station at Booneville, Missouri documents a near flood stage high water event that peaked 34 days before the capture of these fish. Many large river fish use rising water levels as spawning cues. Collection of these juvenile silver carp may indicate the ability of this species to spawn multiple times during the year when conditions are favorable. On July 12, 2004 silver carp up to105 mm were captured from the same scour. The fish captured in July were progeny of the spring spawn which most likely occurred in the months of April or May.



Contact: Andy Starostka

Multiple pallid sturgeon collected in single trawl haul with guest sampler.

Dr. Craig Paukert, Kansas State Cooperative Fisheries Unit, and fingerling pallid sturgeon collected in Missouri River.

On 13 October 2004, the Columbia Fishery Resources Office hosted Dr. Craig Paukert, Kansas State Co-Op Assistant Unit Leader. Dr. Paukert spent the day trawling with Biological Technician Corey Lee and Fishery Biologist Wyatt Doyle on the Missouri River at Franklin Island, downstream of Boonville, MO. Otter Trawling and Beam Trawling are standard gear types in the protocol for the Pallid Sturgeon and Associated Fish Community Assessment Project which is funded by the U.S. Army Corps of Engineers. During the sampling, two endangered pallid sturgeon, one juvenile (378 mm) and one fingerling (133 mm), were captured in one of the otter trawl hauls. Both pallids were hatchery reared and had elastomer tags in the rostrum. The juvenile pallid was also PIT tagged. This was the first time the Columbia FRO has captured two pallid sturgeon in one single haul for any gear type. This was also the first fingerling pallid sturgeon the Columbia FRO has captured. Work on this project allows the Columbia FRO to help the Service's Fishery program achieve its goal to identify priority actions to eliminate the threats causing declines of native fish species.

Contact: Corey Lee

Public Use

Port Louisa NWR, Keithsburg unit fish survey field work completed.

Tim Julison of the Port Louisa NWR assisted Columbia FRO with fish sampling.

Andy Starostka of the Columbia FRO, completed a fisheries survey on the Keithsburg unit of the Port Louisa NWR during the month of October. The purpose for the survey was to assess recreational fish populations and monitor for Asian carp with assistance from refuge personnel. Sampling consisted of 10 trap net-nights, 2 gill net-nights and over one hour of electrofishing effort. Low water levels limited sampling effort to the south end of the unit near the boat ramp. Preliminary results indicate good populations of both recreational fish and native backwater species. Largemouth bass up to four pounds, crappie approaching two pounds and large northern pike were captured during sampling. Several largemouth buffalo and bowfin were also captured. No Asian carp (bighead, grass or silver carp) were captured or observed during the survey. The unit was last sampled in 1996. Survey work on the Port Louisa NWR enables the Columbia FRO to meet the Service's Fishery Program goal of increasing recreational fishing opportunities on Refuges. Aquatic nuisance species compete with native species for food and habitat resources. Efforts to provide aquatic nuisance species detection and monitoring address "Aquatic Species Conservation and Management"- a priority of the Fisheries Program's Vision for the Future

Contact: Andy Starostka

Leadership in Science and Technology

Independent Science Review of the Pallid Sturgeon Monitoring Program

Project Leader Tracy Hill and Fishery Biologist Wyatt Doyle traveled to Sioux Falls, South Dakota to participate in a scientific review of the pallid sturgeon monitoring project. The Army Corps of Engineers contracted with Sustainable Ecosystems Institute (SEI) to conduct the independent science review of the pallid sturgeon population assessment and monitoring program. SEI conducts their reviews in an open forum unlike the anonymous review process that is typical of the peer review process. The review consisted of a scientific panel composed of the following individuals, Dr. Michael Bozek from the University of Wisconsin, Dr. Deborah Brosnan with SEI, Dr. Henriette Jager with Oak Ridge National Laboratory, Dr. Jim Quinn with University of California at Davis and Dr. David Secor with the Chesapeake Biological Laboratory. The scientific review was attended by 23 individuals representing the following organizations: Army Corps of Engineers, Nebraska Game and Parks Commission, Missouri Department of Conservation, South Dakota Department of Game, Fish and Parks, and Sustainable Ecosystems Institute. This is an example of inter-regional collaboration to improve information standardization and optimize species restoration efforts in Region 3. This effort assists Columbia FRO in fulfilling the Fisheries Program's Vision for the Future priorities for "Leadership in Science and Technology" and "Aquatic Species Conservation and Management".

Contact: Tracy Hill

Aquatic Habitat Conservation and Management

Service partners with states on Missouri River mitigation program

Aerial photo of Lower Hamburg Bend chute constructed by U.S. Army Corps of Engineers as part of the Missouri River Mitigation Program.

Columbia FRO is a member of the Army Corps of Engineers (USACOE) Missouri River Agency Coordination Team and a member of the monitoring and evaluation subcommittee. Over the past year the FRO and Columbia ES office have worked collaboratively with the USACOE and state fish and game agencies to establish a monitoring an evaluation program. Under the Missouri River Fish and Wildlife Mitigation Project (Water Resources Development Act of 1986 and 1999) the total amount of land authorized for mitigation is 166,750 acres. A variety of aquatic and terrestrial habitats acquired by the USACOE have been restored and developed in the Missouri River and its floodplain to enhance habitats for fish and wildlife. Monitoring and evaluation of these sites is essential to the overall success of the program. Monitoring will enable the Agency Coordination team to determine whether the mitigation sites are performing as expected. It will allow river managers to recommend improvements to existing sites and make informed decisions on the development and design of future sites. Proposals to evaluate fish communities in restored and constructed chutes and their associated backwater habitats were submitted by the Iowa Department of Natural Resources, Nebraska Game and Parks Commission, Missouri Department of Conservation, and Columbia FRO this fall. Discussions at the October technical committee meeting focused on sampling sites and protocols to ensure that field work conducted by participating partners will be uniform and reporting will be cohesive. Fish community monitoring and evaluation of mitigation sites is anticipated to begin in the spring of 2005 and will be funded by the USACOE. The 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.

Contact: Louise Mauldin

New Low Water Crossing to Benefit Niangua Darter Completed.

Downstream view of former low-water crossing over Thomas Creek.

After two long years, the first open span low water crossing to benefit the Threatened Niangua darter has been completed. The structure on Lakota Road spans Thomas Creek in Dallas County, Missouri. The old structure was a series of box culverts placed on top of at least two previous structures. The stream disappeared into a large gravel deposit above the old structure and reappeared in a plunge pool below the downstream end of the structure. Niangua darter could not travel through the old structure leading to a fragmentation of the population. Niangua darters had not been documented upstream of this low-water crossing, although stream conditions would support the fish. Free passage past this structure should open two miles of stream to Niangua darter habitation.

The new structure consists of 16 pre-cast concrete slabs. There is one pier located mid-stream which is tied into the stream bedrock. The structure is designed to pass water and fish at all stream stages and to be overtopped during spring flood events. This project will serve as a model example of low water crossing design in Osage Basin streams. This new bridge was made possible through a partnership of the Columbia FRO, Missouri Dept. of Conservation, Dallas County Commission, Missouri

Natural Heritage Foundation, Federal Emergency Management Agency, Missouri State Emergency Management Agency, Great Rivers Engineering and the U.S. Army Corps of Engineers.

Newly completed open-span low water crossing over Thomas Creek will allow Niangua darters and other aquatic species to pass freely.

Contact: Joanne Grady