



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

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

AQUATIC HABITAT CONSERVATION AND MANAGEMENT

Columbia FRO partners with Middle Meramec Conservation Opportunity Area

The Middle Meramec conservation opportunity area (COA) team works in a priority area of Missouri's comprehensive wildlife conservation strategy. The team includes state, federal, and private organizations and meets regularly to discuss priorities, actions, funding, and ideas for the Middle Meramec COA.

The Middle Meramec COA includes the middle reach of the Meramec River and its tributaries. It is located southeast of St. Louis in Missouri's Ozark region. This COA has many natural features including rugged landscapes, embedded glades, fens, caves, and springs. The area contains several endangered or species of concern such as: Indiana bat, gray bat, Hine's emerald dragon fly, spectaclecase mussel, and cerulean warblers. See <http://www.mdc.mo.gov/documents/coa/23.pdf> for more information on this COA

The team has set priorities on reforestation of river bottomlands, addressing aquatic issues, using GIS to guide conservation planning, and increasing outreach efforts in the Middle Meramec COA. Fishery Biologist Nick Frohnauer and other team members submitted a grant application for outreach, aquatic fish passage, GIS work, and organizing a Middle Meramec summit. The grant opportunity was solicited by the Doris Duke Foundation and administered through the Wildlife Conservation Society's wildlife actions opportunity fund. Our proposal beat out 420 others to make it into the top 80 full proposals. Final funding decisions will be announced in February.



Example of crossing with perched culverts in Missouri Ozarks

Nick Frohnauer





Fish passage structure completed in Southwest Iowa

Columbia FRO partnered with Hungry Canyons Alliance, Iowa Department of Natural Resources, Natural Gas Pipeline Company, and the Natural Resource Conservation Service to modify a grade control structure (GCS) in southwest Iowa to provide fish passage.

Southwest Iowa is unique in that it is made up of loess soils. They can be highly productive, but are very susceptible to erosion. Many of the streams in this region are experiencing erosion problems. This not only causes problems for landowners, but also has put approximately 800 bridge crossings at risk for structural damage. This



Downstream view of Seven Mile Creek water control weir before structure modification.



Newly created riffle approach to Seven Mile Creek weir.

became readily apparent after flooding events in the early 1990's. The region received Emergency Watershed Protection (EWP) Program funds to build GCS to protect these crossings. These structures were constructed of a concrete sheet-pile and grout riprap with a 4:1 (rise/run) slope. An unanticipated consequence of these 4:1 structures was the inability of fish to pass over the structure. This has caused population declines in numerous fish species.

The Seven Mile Creek project was an offshoot of another project occurring downstream. The Natural Gas Pipeline Company of America (NGPC) had a pipeline across Seven Mile Creek in Montgomery County that was exposed and at risk of damage due to streambed erosion. NGPC was teaming up with HCA to build a new weir to protect the pipeline and at the same time it was decided to replace a nearby EWP 4:1 structure that was blocking fish migration. The structure was attractive for replacement because it was the first structure upstream from the confluence of the West Nodaway River.

The new structure was built with a 20:1 slope and the old structure was modified to a 20:1 slope. The standard building specs for these GCS now include grouting the rock weir structure and offsetting large boulders down the middle third of the structure. The grout prevents rock slippage to increase longevity of the structure. The large boulders help create velocity refuges for migrating fish. Iowa DNR research with Iowa State University has shown that these structures are effective in allowing fish movement upstream. An additional benefit is that these structures improved macroinvertebrate diversity and population sizes.

Nick Frohnauer



Strategic Habitat Conservation Briefing

Project Leader Tracy Hill traveled to Minneapolis, MN on 11 January to attend an inter-Regional Discussion Forum on the Strategic Habitat Conservation Framework. The purpose for the briefing was to review and discuss the message being delivered to DOI leadership regarding strategic habitat conservation implementation and identify and refine the Service's conservation business model anticipated by strategic habitat conservation. The meeting provided an excellent opportunity for employees from all programs of the Service to gain a better understanding of the functional elements of the strategic habitat conservation framework and the challenges it will pose to Service leadership. The meeting was attended by Service personnel from Regions 3, 4, 5 and 9.

Service involvement in Strategic Habitat Conservation provides opportunities to optimize trust resource responsibilities for fish and wildlife conservation. This outcome is consistent with the "Aquatic Habitat Conservation and Management" priority of the Fisheries Program Vision for the Future.

Tracy Hill

PARTNERSHIPS AND ACCOUNTABILITY

Middle Basin Pallid Sturgeon Workgroup Meeting

The Middle Basin Pallid Sturgeon Workgroup met 17 January in St. Charles, MO. The purpose of the meeting was to coordinate recovery activities for pallid sturgeon in the Missouri River below Gavins Point Dam. The group had a full agenda and made several recommendations to the Pallid Sturgeon Recovery Team. The meeting kicked off with reports from state, federal and university resource personnel working on pallid sturgeon in the lower Missouri and middle Mississippi Rivers. Meeting participants were alarmed to learn that mortality rates for pallid and shovelnose sturgeon in the middle Mississippi River are 31% and 37% respectively. Recovery Team Leader George Jordan presented some recommended changes regarding how the pallid sturgeon range will be defined. The Recovery Team is proposing four Management Units to replace the six current Recovery Priority Management Areas. Meeting participants also planned and discussed broodstock collection activities for the spring 2007 field season. Meeting attendance was down slightly from previous years' meetings as a result of an ice storm that hit the Midwest during the previous week. Interagency participation in the Middle Basin Pallid Sturgeon Work Group ensures cooperation and agreement for recovery efforts of pallid sturgeon in 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



National Pheasant Fest 2007

The Fisheries, Refuges, Ecological Services, and Private Lands programs of the USFWS were well represented during Pheasant Fest 2007. The fisheries program was represented by Joanne Grady and Lee Erickson of Columbia FRO and Pam Thiel from the La Crosse FRO. The 3 day event drew a record setting crowd of 24,510 people to Des Moines, Iowa despite snowy conditions Sunday. The event provided an opportunity to inform the public about ongoing projects. Asian carp, zebra mussels, farm pond management, and paddlefish were the most popular topics drawing questions from the crowds. The fish identification puzzle and paddlefish mount were a hit with the youngsters who enjoy fisheries.



Pam Thiel of LaCrosse FRO, President Roosevelt, and Joanne Grady of Columbia FRO at Pheasants Forever Fest.

Special guest James Foote “Theodore Roosevelt historian” was one of many presenters at this event. James told tales of the great President by quoting him and briefly translating what he meant regarding conservation. The historian graced the fisheries booth with his presence and brought smiles to all who visited. Mr. Foote is now well acquainted with our fisheries program and would be an asset to all of our Outreach efforts!

This was a great opportunity for our office to create stronger relationships with conservation groups, concerned citizens and other FWS programs. Events like this help lay a foundation for future partnerships, an objective highlighted in the “Partnerships and Accountability” Goal of the Fisheries Program Vision for the Future.

Lee Erickson

Following the Footsteps of a Proven Winner

It started at 4:30 a.m. on January 10th when Fishery Biologist Jeff Finley and Volunteer Chris Clemens left Columbia for Neosho National Fish Hatchery. They went to meet Kay Hively, the Friends Group liaison for the hatchery. Kay began the Friends of Neosho National Fish Hatchery group many years ago and has been instrumental in the group’s development. She shared ideas that did (and didn’t!) work over the years and provided us with several helpful references. The hatchery’s Friends Group is a shining example of how these volunteer efforts can benefit FWS programs. The long awaited hatchery visitor center is on the drawing board largely due to the Friends Group’s efforts. Chris is excited about the potential opportunities a “Friends of Columbia Fishery Resources” could provide. The group would allow people in Central Missouri to participate in projects and events with Columbia FRO and to learn about and support the FWS. We are grateful to the Friends of Neosho Hatchery and the wonderful hatchery staff for all their advice and assistance with our fledgling group.

Joanne Grady and Chris Clemens





AQUATIC SPECIES CONSERVATION AND MANAGEMENT

Shovelnose Sturgeon Populations Evaluated at Annual MICRA Meeting

The MICRA sturgeon and paddlefish committee meeting held in St. Louis, MO served as a platform for biologists, law enforcement, and regulatory representatives from 11 States, numerous Federal agencies and Universities to discuss the sustainability of roe harvest on the Mississippi, Arkansas and Missouri Rivers. The meeting summarized a decade of monitoring and research on paddlefish, shovelnose sturgeon and pallid sturgeon within the Mississippi basin. Columbia FRO summarized the results of shovelnose sturgeon catches for the lower 800 miles of the Missouri River including efforts from Nebraska Game and Parks and the Missouri Department of Conservation. This was the first look at the data summarizing four years of intensive effort under the COE Pallid Monitoring and Assessment Program. The results showed a wide variability in catch rates of shovelnose throughout the Lower Missouri River with more shovelnose being captured in the lower 200 miles. Despite some commercial fishing pressure from the State of Missouri, the shovelnose population only appeared depressed near the confluence of the Mississippi River. State and Federal agencies are concerned with the increase in the price of caviar (\$450 per pound/ retail) for shovelnose and the effects the demand will have on native sturgeon and paddlefish populations. There is an extensive effort to monitor changes in shovelnose and paddlefish populations and to evaluate the effects of incidental take of the endangered pallid sturgeon. The Service's continued collaboration with State partners enhances our ability to provide direction in managing commercial and sport species while protecting endangered species.

Wyatt Doyle

LEADERSHIP IN SCIENCE AND TECHNOLOGY

Columbia FRO offers a new technique for pallid sturgeon monitoring



State and federal partners along the entire length of the Missouri River involved with the Pallid Sturgeon Population Assessment and Associated Fish Community Monitoring Program for the Missouri River recently met to discuss the basin-wide implementation of a new fish community sampling gear, the push trawl. The push trawl was designed by Columbia FRO biologist Jeff Finley as a practical method for sampling fish in the complex side channel and shallow water habitats of the Missouri River and has since been used as a replacement for the labor intensive bag seine in the U.S. Army Corps of Engineers Shallow Water Habitat Mitigation Project. The design of the push trawl allows it to be deployed off the front of the boat and pushed through the water. The push trawl

Wyatt Doyle and Jeff Finley record data from fish collected in the push trawl.



lets biologists be more adaptive in targeting fish habitat that would otherwise be too difficult to sample because of variations in depth and woody debris in shallow water habitats. Paired comparisons of push trawls to mini-fyke nets (another standard sampling method) in 2006 have shown a two fold increase in sampling efficiency (fish catch per one unit of effort) when using the push trawl. Full implementation promises to increase our ability to sample shallow and high water velocity areas never before sampled in big rivers, and will enhance the program’s ability to document fish community use and sturgeon recruitment throughout the year. Basin-wide implementation of the push trawl is expected to be July 1, 2007.

The push trawl is the fourth trawl design introduced by Columbia FRO for use in big river sampling since the Pallid Sturgeon Recovery Program began. Our scientific expertise and role as a leader in science and technology inspires us to seek out and employ more efficient methods and approaches so that we may constantly improve fisheries conservation and pallid sturgeon recovery in the Missouri River.

Nick Utrup

PUBLIC USE

Fishery Management at DeSoto National Wildlife Refuge



Steve Van Riper holds walleye collected in DeSoto Lake.

The Columbia Fishery Resources Office, DeSoto National Wildlife Refuge, Iowa Department of Natural Resources and the Nebraska Game and Parks Commission met to discuss results and future stocking/assessment plans at DeSoto Lake. It was a great opportunity for agency biologists to provide pertinent recommendations to managers at DeSoto National Wildlife Refuge. The meeting focused on an intensive 3 year fishery management project that started in 2006.

Sampling information gathered from each of the agencies in 2006 was compiled by Columbia FRO Biological Science Technician Brian Elkington and used to assess and discuss the research and fish stocking strategy for 2007. The first creel survey since 1989 was also accomplished in 2006 at DeSoto Lake. This was an important step in understanding the fishery. It was estimated that the DeSoto Lake fishery, over the course of the April-October fishing season, brings in approximately \$970,000 to the local economy. The creel survey results also showed us an immense fishing pressure for crappie at DeSoto Lake. The team discussed and agreed on the continued addition of cedars trees to the lake bed for crappie habitat. The walleye fry stocking program will continue as well as the channel catfish stocking in 2007, however largemouth bass stocking was suspended. Data indicate that largemouth bass stocking was not adding to the native year class. All three agencies are going to provide sampling effort at DeSoto Lake in the hopes of continually honing and improving the fishery.

Brian Elkington



Missouri River Awareness, One Sporting Goods Shopper at a Time

The Missouri River is besieged with heavy ice flows as temperatures in central Missouri remain well below freezing. Columbia FRO field crews use this time to work on reports and projects in the cozy confines of the heated office. One such project undertaken this January will help build the experience of our volunteer staff and strengthen the relationship with Bass Pro Shops of Columbia, one of our partners in outdoor education.

We established a cooperative partnership with the store prior to their 2004 grand opening by collecting Missouri river fish for their display aquarium. In turn, Bass Pro Shops offered space on the support pillars of the 8000 gallon tank for educational material relative to the Fish and Wildlife Service and Missouri river restoration.

Taking the lead on this project is our station's volunteer photographer, Ashley Berkler. As a journalism student at the University of Missouri, she has great intuition for creating media to catch the public eye. Her posters will help visitors understand the ecology of some of the big river species on display. Ashley has worked with biologists at the Columbia FRO to find the best pictures of various riverine species. After designing an attractive layout, Ashley researched each species for interesting facts, identifying characteristics and colloquial names commonly used to describe these fish. In addition she included scientific concerns, such as the suspected decline of shovelnose sturgeon due to overharvest for caviar. Her posters will be printed off on heavy stock, laminated and taken to the aquarium where they will be featured in a "fish of the month" display.

Volunteering her time to create this project speaks volumes for Ashley's dedication and commitment to outreach. Volunteers and partners are a critical component of our office's outreach efforts. Ashley's posters will be seen by hundreds of people weekly, most of whom are only somewhat familiar with the vast diversity swimming in our local waters. This project highlights the "Public Use" goal of our Strategic Plan by "working with partners to identify and implement outreach and education activities regarding the concept, value, and importance of responsible recreational fishing to the American public."

Andy Plauck

Shovelnose Sturgeon
Scaphirhynchus platyrhynchus

Original Image by Maynard Rocce

Shovelnose Sturgeon
Scaphirhynchus platyrhynchus

Shovelnose Sturgeon are an important commercial fish in Missouri. They are harvested for their eggs, which are used for caviar. The shovelnose harvest rate has risen dramatically since the decline of Caspian sea sturgeon in Russia. Caviar accumulates toxins therefore it's not the healthiest snack.

SHOVELNOSE STURGEON ARE THE SMALLEST AND MOST ABUNDANT OF THE ANCIENT STURGEON SPECIES FOUND IN MISSOURI. SHOVELNOSE STURGEON ACCOUNT FOR 90% OF THE STURGEON CAUGHT IN THE STATE.

MUCH SMALLER THAN THEIR ENDANGERED COUSIN, THE PALLID STURGEON, SHOVELNOSE STURGEON RARELY EXCEED THREE FEET AND WEIGH LESS THAN THREE POUNDS.

Missouri Record:
Four pounds, Des Moines River, 2001

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Columbia Fishery Resources Office
www.fws.gov/midwest/
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WORKFORCE MANAGEMENT

Fisheries Academy in One Word

A college professor once required me to summarize each chapter of an assigned text into one single word and then explain in a paragraph why I chose that particular word.

Fisheries Academy was a chapter in the text of my career I'll not soon forget. The Academy began with an overview of the history and culture of the USFWS. Our agency is steeped in fisheries tradition, proving we have taken the leading role in conserving our Nation's natural resources for the past 135 years. We were given the insightful opportunity to interact with staff from our Washington Office and gain greater understanding about their role within the agency. I realize now the political and fiscal battles they fight for us I had previously underestimated. Their presentations of budgets and hierarchy transitioned fluidly into the Fisheries Information System. FIS, is a powerful tool recently upgraded to a living database to be used for accountability and directing funds. Learning the basics of this system and how it's used in the Regions and at the WO and has elevated FIS on my list of "things I had better know how to do".



2007 Fisheries Academy Class

Our "Queen of Celebration" Dr. Mamie Parker provided words of encouragement to the group prior to presentations from each attendee. I was impressed with the diversity of talents, skills, character and personalities encompassed within our Nationwide Fisheries workforce. The Academy helped us all forge bonds of friendship and closeness in our two weeks of companionship.

After a wonderful weekend touring the monuments in D.C., we returned to NCTC to compose HACCP plans and learn how to incorporate them into our field work and stocking efforts. As the week came to a close we listened to the occupational guidance and general advice for living from Fisheries Biologist (Retired) Buddy Jensen based on his colorful career with the USFWS and was guided along the professional pathway of a truly inspirational Project Leader, Karen Kilpatrick from Natchitoches NFH. To finish the week, Project Leader Stewart Jacks, Arizona FRO impressed upon the class a conservation ethic and a professional code of conduct reinforced by Chris Horsch, Branch Chief NCTC, in an intimate discussion of the future.

I could write a book about the experience at Fisheries Academy, the pride it instills into our workforce and the clarity of how we function as the world's leading authority on Fisheries. Rather than do that, I will summarize this chapter in the text of my career in just one word ... INSPIRING.

Jeff M. Finley



Natural Resources Student Job Fair

Fish Biologist Jennifer Johnson attended the Student Job Fair of the 2007 Missouri Natural Resources Conference in Osage Beach, MO. The Student Job Fair is an excellent opportunity to reach a highly diverse category of students from across the Midwest. Columbia FRO used this forum of over 200 natural resource students to establish contacts with aspiring biologists in aquatic conservation and advertise employment opportunities while promoting Columbia's Fishery Program and work on the Missouri River. Job Fair attendees were eager to ask questions and learn about the Service's job opportunities. Increasing students' awareness of opportunities within the office will enhance our ability to hire competitive employees in the future. Jennifer answered questions from the public on a variety of subjects including the endangered pallid sturgeon, the invasive Asian carp, aquatic species, and habitat conservation.

Participating in Public Outreach events such as this enables the Columbia FRO to assist in achieving "Workforce Management" priorities of the Fisheries Program Vision for the Future.

Jennifer Johnson

Chemist Volunteers at Columbia FRO

On December 20 Alyson Lanciki of South Dakota State University (SDSU) volunteered 10 hours at Columbia FRO. Alyson is a PhD Student at SDSU in Chemistry and wanted to gain some fisheries field work experience. Alyson was shown the ropes by Biological Science Technician Tammy Knecht, Lee Erickson, and Fishery Biologist Andy Plauck. The crew spent the day on the Lower Missouri River gill netting for the Pallid Sturgeon Monitoring Program. During the course of the day Alyson was able to see a plethora of fish caught in the gill nets, including the endangered pallid sturgeon. When asked about her experience Alyson said "I wish I could do this more often... this is a great job and a lot of fun". The crew was thrilled to have a helping hand and expose a chemist to the fisheries world.



Tammy Knecht and Alyson Lanciki holding a pallid sturgeon caught in a gill net on the Lower Missouri River.

Allowing other disciplines to volunteer and participate in the fisheries field will encourage recruitment. The "Workforce Management" goal of the Fisheries Program was met by filling a gap on the gill netting crew.

Tammy Knecht



Journalism Student Joins Columbia FRO as Volunteer Photographer

We are excited to announce the addition of Ashley Berkler, volunteer photographer, to the Columbia FRO team. Ashley is an Iowa native working on a bachelor's degree in journalism at University of



*Ashley Berkler, Volunteer Photographer,
Columbia Fishery Resources Office*

Missouri-Columbia (UM-C). Prior to volunteering with us she worked for Maquoketa Caves State Park near Belleview, Iowa. She developed a Junior Cave Explorers program for the park, conducted cave tours of the parks' 14 caves, and led

campground programs. Ashley has been eager to spend time in the field with our crews. She's photographed our biologists sampling on the Missouri River for the Mitigation program and instructing an UM-C Fisheries class. Ashley's main task at Columbia FRO has been the development of a deck of playing cards featuring fish species of the Missouri River. She is also working on fish information posters for Bass Pro Shops (see story by Andy Plauck above). Ashley will be tackling our web page next. We appreciate Ashley's enthusiasm, outreach experience, and journalistic skills!

Joanne M. Grady

Columbia FRO Staff

Project Leader:

Tracy Hill

Administrative Assistant:

Debra Turner

Branch Chiefs:

Joanne Grady, Wyatt Doyle

Team Leaders:

Jeff Finley, Andy Starostka, Nick Utrup

Biologists:

Nick Frohnauer, Jennifer Johnson, Andy Plauck, Cliff Wilson

Technicians:

Brian Elkington, Derrick Eisenbrei, Lee Erikson, Tammy Knecht

STEP Students:

Chirs McClelland, Veronica Smith, Kyle Winders

Volunteers:

Ashley Berkler, Chris Clements

We wanted to get to know Ashley a little better so we asked her a few questions.

Q: Why did you choose to volunteer with us? Why are you here instead of volunteering at the public library or Meals on Wheels?

A: I would like to work with the National Park Service as an interpreter after I graduate. My supervisor at the Iowa DNR recommended that I volunteer with a federal agency.

Q: How did you discover the Fish & Wildlife Service as a volunteer opportunity?

A: I found your posting for a volunteer photographer at volunteer.gov.

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

A: It's fun. The people are nice and I've learned a lot.

Q: What other activities are you participating in?

A: I edit video for the Tuesday 10 pm news at KOMU. I also occasionally anchor the local morning updates which air during the TODAY show.