



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.

Partnerships and Accountability

What I Did on My Spring Break...

Many college students choose spring break destinations with beaches, oceans and sun tans. Some are a little more devoted to their career development. Spring break for several University of Missouri-Columbia (MU) students involved torrential downpours, thirty mile-an-hour winds, and long days on the Missouri River.



University of Missouri student Tony Overman holding a shovelnose sturgeon from the Missouri River. Tony volunteered during his spring break.

The university's Fisheries and Aquatic Sciences Society (FASS) as well as The Wildlife Society (TWS) programs give students an opportunity to become involved in the natural resources field. The programs encourage members to volunteer with different natural resource agencies in order to gain some hands-on field experience. This year, technician Chris McLeland from Columbia National Fish and Wildlife Conservation Office (NFWCO) participated in several FASS and TWS meetings at MU. Chris gave short presentations on Columbia NFWCO's current Missouri River projects.

Chris was successful in recruiting eight students from FASS and TWS to help our office with Missouri River sampling. These

partnerships have been beneficial to us in the past. Two of these students were already seasoned "river rats" after helping out with last year's pallid sturgeon broodstock collection effort.

The original intent was to add a crew to specifically collect pallid sturgeon broodstock. Strong storms, rising water levels and river temperatures put sampling crews into high





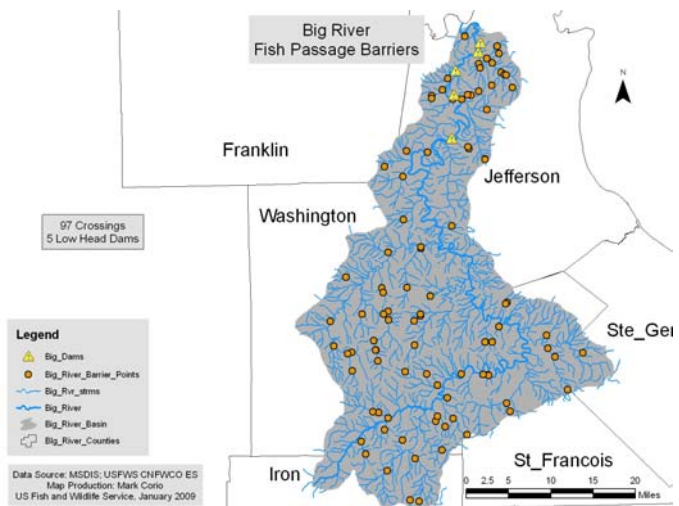
gear. We decided during the week to double up on sampling effort so we could finish our gill net sampling before the water reached our temperature limit of 55 F°. During the first day of sampling with the students, a federally endangered pallid sturgeon was captured. This was a great opportunity for the students to experience a “work up” of the rare fish. When a pallid sturgeon is captured, the field crew has to take measurements for morphometrics, check for hatchery-placed tags, and photograph the fish. While only two of the students were able to see a pallid sturgeon, all of the volunteers were able to handle the more common shovelnose sturgeon.

Unfortunately, several inches of rain in portions of the Missouri River basin caused river levels to rise rapidly and subsequently only three days of field work occurred. A few of the volunteers accepted the invitation to clean gillnets when crews were flooded off the river. This dedication shows that these students truly are interested in a career in the natural resources field. This experience will give all of these students a reference that will look great on their resume. In return for their help, we are planning a “Thank You Cookout” when the weather gets warmer. Partnering with this group allowed our office to double their effort during a week when help is hard to find. Partnerships like this are an important component of The Fisheries Program’s Vision for the Future.

Andrew Plauck

Missouri Natural Resources Conference

On February 4-6, 2009 I attended the Missouri Natural Resources Conference at the Tantar-A resort at the Lake of the Ozarks in south central Missouri. As a University of Missouri-Columbia student studying Parks, Recreation and Tourism as well as GIS technology, this is the big conference of the year where I can go to meet with natural resource professionals from the state of Missouri. As a Student Temporary Employment Program (STEP) participant, this conference gave me the opportunity to present the research I had been assisting Columbia NFWCO with during the summer of 2008. The research was conducted on stream crossings in the Big River watershed southwest of St. Louis, MO. It consisted of using GIS to locate stream crossings that were barriers to fish passage within that watershed. Once these barriers were located, field crews would go and measure each crossing so that calculations could be performed to determine whether or not the crossing was a barrier. Further analysis was then done to identify fish passage barriers that are also serving as sediment catches, holding contaminated sediments from upstream sources.



This map illustrates the stream and river crossings within the Big River Basin that were found to be barriers to fish passage.



The majority of my time at the meeting was spent as a regular student, visiting informational booths and talking with professionals about ongoing research, projected studies, where to go fishing and whether or not the groundhog had lied about the six more weeks of winter (the weather was a warm, breezy 70 degrees in early February!). But on the last day of the convention I switched gears from student to BioScience Aide as I prepared for my presentation of the work the Fish Conservation crew at Columbia NFWCO had worked so diligently to complete. After some very interesting and informative presentations on alligator gar (*Atractosteus spatula*) and shovelnose sturgeon (*Scaphirhynchus platyrhynchus*) it was my turn to take the stand. I explained the reasons for our research and the threatened and endangered species that were benefiting from our studies, such as the federally endangered pink mucket (*Lampsilis abrupta*) and the state listed crystal darter (*Cyrstallaria asperella*). I also explained how the implementation of the small span bridges we recommended, as opposed to the commonly used pipe and box culverts, saved the road crews money in the long run because of the span's ability to withstand floods. The conference was a great experience for me as a student, because there are few places where a larger number of natural resources professionals from a wide array of federal, state, and local agencies can be found. As an employee of the U.S. Fish and Wildlife Service, I was able to communicate with the public and cooperating agencies about the work we have been doing to benefit fish and people, and more importantly the progress we have made.

Mark Corio

Agency Coordination Team Meets in Papio-Missouri River NRD

Clayton Ridenour and Joe McMullen traveled to Wherspann Lake in the Papio-Missouri River Natural Resources District near Omaha, Nebraska during January for a meeting of the Agency Coordination Team (ACT) about Missouri River mitigation. Formation of the ACT was provided as an essential element of an Adaptive Management driven *reasonable and prudent alternative* (RPA). It was listed in the Service's Biological Opinion to the U.S. Army Corp of Engineers on their operation and maintenance of main-stem Missouri River, to reduce jeopardy to endangered pallid sturgeon. The ACT includes biologists, engineers and real-estate experts from the Service, Corp and State agencies, as well as representatives from Tribes and NGOs. The goal of the ACT is to identify and implement the goals of the Biological Opinion. They meet at least twice per year to develop targets and/or evaluate the Corp's progress towards avoiding jeopardy, increasing species status or habitat conditions, or implementation of effective conservation actions. Participants at the January meeting provided updates to mitigation efforts (e.g., habitat restoration, land acquisition) and species status and the ACT developed an agenda for their next meeting in March. Attending and participating in the ACT fulfills the Partnerships and Accountability goal of the Fisheries Vision for the Future.

Clayton Ridenour



Aquatic Habitat Conservation and Management

HAMP Completes Annual Report

Columbia NFWCO's Habitat Assessment and Monitoring Program (HAMP) recently completed the 2008 annual report. This 300 page document reports analysis results from the 2008 field season and included between year comparisons. This was the fourth year of fish sampling for HAMP which monitors the fish community's response to in-stream channel modifications. The overall goal of HAMP is to monitor fish response to shallow water habitat creation within the lower Missouri River. When the river was modified for navigation and flood control, much of the natural shallow water habitat was lost as the river became deeper, straighter and swifter. With the loss of critical shallow water habitat came declines in many species of fish and wildlife. It is hoped that modifications to dikes within the river will recreate shallow water habitat that will benefit native fishes.



Technician Adam McDaniel displays a shovelnose sturgeon collected during the HAMP 2008 field season.

While we have learned much over the four years of HAMP, many questions remain. The project continues to evolve to meet these challenges. Columbia NFWCO works with the U.S. Army Corp. of Engineers and Nebraska Game and Parks on HAMP.

Colby Wrasse

Leadership in Science and Technology

Poster Palooza: Columbia Claims 1st Place at Conference

Columbia NFWCO took top honors again (2nd straight year) for best science poster presentation at the Missouri River Natural Resources Conference in Billings, Montana during the week of March 23rd. Fish Biologist Clayton Ridenour was lead author, and Joe McMullen and Tracy Hill were co-authors, on the award winning poster titled "Shallow-water Habitat According to Young Sturgeon in Lower Missouri River". Their findings will provide significant guidance to biologists and managers working to restore habitat for endangered pallid sturgeon.

The Columbia NFWCO was a significant contributor to the professional poster session at the conference with six other well planned and presented topics. Andy Starostka provided a presentation on Humminbird® sidescan sonar to demonstrate their off the shelf utility in big river research and monitoring. This sonar is affordable and simple to use, and produces high resolution digital images that can be used to study the river bottom. Colby Wrasse presented "Use of Near Channel Floodplain Habitat by Small-bodied and Young Fishes". His poster was important to the scientific community



because it shared findings from a rare opportunity to examine the fish community composition and relative abundance on floodplains during the summer floods of 2008 on lower Missouri River. Andrew Plauck presented “Dispersal and Recapture Success of Hatchery Reared Pallid Sturgeon in the Lower Missouri River”. The poster documented recapture of marked pallid sturgeon and the distance they traveled from their stocking location. Joe McMullen authored two posters: “Fish Assemblages and Habitat Use in Side Channels on the Lower Missouri River”, and “Assessment of Side Channels as Habitat Restoration for Age-0 Sturgeon in the Lower Missouri River”. His presentations were aimed at providing biologists and engineers with information on how mitigated river habitat functioned, and provided recommendations for improving habitats for fish. Joshua Schloesser presented a summary on how to allocate trotline effort in a standardized protocol to monitor pallid sturgeon populations. This critical study design component prevents under- or over-sampling study sites and will improve monitoring efforts to detect change in pallid sturgeon abundance.

Communicating results of studies is a critical final step in the scientific process. Studies like those presented by Columbia NFWCO summarize the effort of significant resources in many field offices and represent an important tool to help accomplish the Service’s Mission. Exchanging ideas and results supports Adaptive Management to guide new research and management decisions.

Clayton Ridenour, Joe McMullen, Colby Wrasse, Joshua Schloesser, Andy Starostka and Andrew Plauck

Aquatic Species Conservation and Management

“Don’t Move a Mussel” Comes to Missouri

As fish biologists working with the U.S. Fish and Wildlife Service, we get to routinely sample different bodies of water, from lakes to rivers and streams, in a three state area. Although this makes the job more exciting, we may be unintentionally bringing hitchhikers, namely exotic species, along for the ride. Earlier this month Columbia NFWCO biologist Brian Elkington attended a workshop to ensure this does not happen.

The training, called “Don’t Move a Mussel” is a program that helps describe methods that can be used to reduce the risk of transferring exotic mussel species from one habitat to another through boat inspection and decontamination. The training, hosted by the Missouri Department of Conservation and originally put in place by the Pacific States Marine Fisheries Commission and the 100th Meridian Initiative, allowed us to practice inspecting boats and learn about possible decontamination methods. These procedures ensure that all the adult and larval zebra mussels have been removed from the boat prior to its next launch. Using the training I received there, we can be sure that Columbia NFWCO’s efforts to help aquatic ecosystems in the region is not also a disaster waiting to happen through the release of these exotic species.



This workshop was a great opportunity to work towards achieving the “Aquatic Species Conservation and Management” goal of the ‘Fisheries Program Vision for the Future’ by preventing the spread of exotic species into new habitats.

Brian Elkington

Public Use

“When I grow up, I want to be a...”

Almost every child dreams about what they want to do with their lives and what profession they would like to pursue. Frequent choices we hear, and may have dreamt of when we were younger, include astronaut, fire fighter and president of the United States of America! In the six years I worked for the Boy Scouts of America summer camp



Aerial image of Grandview High School used for the Career Day Presentation on March 19, 2009.

program, before starting with the U.S. Fish and Wildlife Service, I don’t think I ever heard a child say, “I want to be a Geographic Information Systems (GIS) Technician!” Because of this, I jumped at the opportunity to visit my old high school and speak to them about what I do with GIS for the Columbia NFWCO. GIS is an extremely versatile and useful mapping and spatial analysis tool that can be applied to nearly every project, the only downfall is the education and experience required to become proficient with the program. While at the high school, I spoke

with approximately 120 students about the education requirements, job roles, salary potential, and the benefits of working with GIS, and also of working with the Service. There was a little bit of confusion when I told them I didn’t work directly with fish, nor did I spend my days managing wildlife but the interest was high, as GIS is something many of the students had never heard of before. Even a few teachers sat in with the students to come away with a better understanding of the program. The students were most interested in the map I made of their school using satellite imagery, and I heard some oohs and ahs when I displayed the infrared image of their football field.

Explaining to the public how the Service integrates technology with field survey methods shows that we are trying to obtain the most accurate results more efficiently and more economically. But more importantly, instilling in young people an interest in working with and conserving the outdoors ensures that these natural resources will be around for their children and their grandchildren to enjoy as well.

Mark Corio



Boy Scouts Learn About the Missouri River

Our office has interacted with local Boy and Girl Scout of America organizations many times. We were excited about the chance to meet with them again when contacted by a scout-master in near-by Jefferson City. We told the scout-master that we could talk about the Missouri River and show the scouts some live fish and the gears we use to catch them.

Before the event, we were able to collect a few shovelnose sturgeon from the Missouri River and transport them to their meeting location. We parked our boat trailer near the building and set a few nets up for a demonstration. After the scouts went through their greetings, we began telling the boys about the Missouri River. Some of them had fished the river, which flows through the state's capital, but no one knew of how the river had been changed from its natural state. We explained how dams and channelization have affected the river and its aquatic life. We discussed our office's role in monitoring fish in the Missouri River, particularly the federally endangered pallid sturgeon. The scouts and their leaders had many questions about fishing on the Missouri River. When the questions ran out, we went outside to see the fish.

When all of the scouts had surrounded the boat, we pulled out the nets and explained how the fish are entangled in the different sizes of gillnet mesh. Their interest peaked when the cover was lifted off the hauling tank. They had all fished and seen bass and catfish, but the ancient looking sturgeon was definitely a new face for them. It was a great opportunity to talk about the differences and similarities between species of fish. Even the parents asked great questions about the fish we catch and the work we do on the Missouri River. To round off the evening, technician Chris McLeland gave a short lecture on the upcoming Wonders of Wildlife event occurring in May. Given that some of the classes would qualify these young scouts to earn different merit badges, they were eager to listen.

Overall, this was another great opportunity to interact with people who will be using the local natural resources. Columbia NFWCO is glad to partner with the Boy Scouts of America to educate children about the land and creatures around them. *Action 3.3.2* in the Public Use component of the Fisheries Program's Vision for the Future states a need for outreach and education concerning recreational fishing.

Andrew Plauck and Chris McLeland



No More Trash!

While boating on your favorite river, have you ever been disgusted by the trash littering the shoreline and thought “someone should clean this up”? That “someone” happens to be Missouri River Relief (MRR). This grassroots organization of dedicated and highly motivated volunteers cleans miles of shoreline in Missouri and beyond. Along the way they also raise awareness and educate anyone who is willing to listen.



Missouri River Relief and a host of volunteers tackle the massive dumpsite on the Osage River. The flume is constructed from a culvert recovered from another clean-up event. Volunteers filled trash cans with debris and pushed them down the slide.

On March 7th, Patty Herman and Colby Wrasse from Columbia NFWCO assisted MRR with a clean-up on the Osage River.

One of the logistical issues of a river clean-up is getting volunteers safely to and from sites along the river. Our office assists with the effort by providing safe and educational boat rides for volunteer groups. Patty and Colby couldn't resist getting in on the “fun” and filled many bags with trash. The picturesque Osage River is one of Missouri's largest and most popular waterways, but unfortunately it has a lot of trash lining its banks. The March clean-up focused on a dumpsite directly across from the Mari-Osa public access.

For decades careless people have used a high bluff overlooking the river as a community dump. Over the years this trash heap has grown enormously and has gradually slid down the hillside towards the river – an incredible eyesore! The acres of trash here included almost anything one could imagine: refrigerators, washing machines, jars, bottles, tires, toys and even the proverbial kitchen sink. Cleaning up this mess was going to be quite a chore. Luckily we had over 160 enthusiastic volunteers who were ready to roll up their sleeves and do some dirty work. During this one day clean-up we removed an amazing 13-tons of trash, but still barely made a dent in the huge dump.



Students from Lincoln University in Jefferson City, MO volunteer to help clean the banks of the Osage River.

This is the ninth year of operation for MRR. Thus far MRR has organized 46 clean-ups, and with the help of over 10,000 volunteers has removed 480 tons of trash. Columbia NFWCO looks forward to helping MMR beautify Missouri rivers. To learn more about Missouri River Relief visit their webpage at: <http://www.riverrelief.org/>

Colby Wrasse and Patty Herman



Workforce Management

Region 3 Fisheries Program Project Leaders Meeting

Project Leader Tracy Hill and Branch Chief for Missouri River Studies Wyatt Doyle traveled to Springfield, Missouri during the week of March 30th to participate in Region 3's Fisheries Program Project Leaders Meeting. The purpose for the meeting was to bring together key staff from the field, Regional and Washington offices to discuss how to more effectively manage the fisheries and aquatic resources of Region 3. The meeting also provided the program a chance to address common challenges and opportunities. The meeting was a great opportunity to network with Project Leaders and management staff from across the Region as well as view presentations from a variety of topics ranging from conserving aquatic habitat to aquatic invasive species prevention strategies.

Development and leadership training for an effective workforce are essential to the current and future operations of the Service's Fish Program. Leadership training efforts such as this are consistent with goals and objectives of the Service's Fisheries Vision for the Future and are critical for the agency to address the increasing concerns for protecting the nation's aquatic resources.

Tracy Hill

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

